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Bwrdd Iechyd Prifysgol
Bae Abertawe
Swansea Bay University
Health Board



Meeting Date	25 August 2020		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 attain improvements in reduction of targeted infections. Adherence to best practice in infection prevention and control precautions is critical. Delivery Units must focus on achieving compliance with staff training in this area and on auditing compliance. It is acknowledged that staffing shortages can present a challenge for staff accessing IPC training. Lack of decant facilities, when occupancy is at acceptable levels on acute sites, compromises effectiveness of the '4D' cleaning/decontamination programme. Maintaining cleaning hour provision on acute sites due to vacancies, sickness. Mitigation - sharing the resource available, reducing the risk in some areas by increasing the risk in others. A funded three-month programme of proactive deep cleaning, with a contracted hydrogen peroxide vapour disinfection service has commenced in Health Board acute hospitals. COVID-19 may have an impact on <i>C. difficile</i> infections, which may relate to antimicrobial treatment for respiratory tract infections. <p>Escalation from Infection Prevention & Control Committee held on 7th August 2020: Assistant Director of Operations – Estates escalated to the Committee that access to operating theatres to undertake mechanical air handling unit annual HTM compliance checks was an ongoing issue due to operating theatre service pressures. Operating department schedules/lists will need to engineer access for checks to be completed. Should this not occur, the Health Board will carry the risk of surgery being undertaken in operating theatres that are potentially no longer in compliance.</p>			
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 31st July 2020 and agree actions. 			



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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	31 July 2020																														
Summary of Current Position																															
<p>The Health Board has been under significant pressure as a result of the current COVID-19 (SARS 2) pandemic. This is having a significant impact on the health of the Health Board’s population and its staff. Services have been under significant pressure as a consequence.</p>																															
COVID-19 (SARS 2):																															
<ul style="list-style-type: none">From 1st March 2020 to 31st July 2020: 1,965 positive cases of COVID-19 (SARS 2) from 20,307 tests.																															
<table><tr><th>Location</th><th>No. COVID-19</th><th>Location</th><th>No. COVID-19</th></tr><tr><td>SB CTU*</td><td>1312</td><td>Gorseinon</td><td>13</td></tr><tr><td>Morryston</td><td>398</td><td>NPT CRT</td><td>2</td></tr><tr><td>Singleton</td><td>114</td><td>Swansea ACT</td><td>1</td></tr><tr><td>Neath Port Talbot</td><td>53</td><td>HMP Swansea</td><td>10</td></tr><tr><td>Cefn Coed</td><td>30</td><td>GP</td><td>30</td></tr><tr><td>LD</td><td>2</td><td></td><td></td></tr></table>				Location	No. COVID-19	Location	No. COVID-19	SB CTU*	1312	Gorseinon	13	Morryston	398	NPT CRT	2	Singleton	114	Swansea ACT	1	Neath Port Talbot	53	HMP Swansea	10	Cefn Coed	30	GP	30	LD	2		
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<p>* mostly staff/essential workers, but started testing Care Homes w/c 15.04.20</p> <ul style="list-style-type: none">The number of cases in the table above identifies confirmed cases only. There have been cases of COVID-19, clinically confirmed by X-Ray, that have tested negative.Possible outbreaks or incidents of COVID-19 (SARS 2) associated with MH AMAU, MH Ward A, MH Ward D, MH Cardigan Ward, SH Ward 12, SH Ward 9, SH Ward 7, NPTH Ward A, NPTH Ward C, CCH Ysbryd y Coed Unit.There have been at least 39 care homes within the Health Board that have reported cases of COVID-19 SARS 2 (with more than 220 confirmed cases amongst patients and staff).																															

- From 01/08/20 to 11/08/20, there have been 7 confirmed COVID-19 (SARS 2) cases from a total of 1710 tests processed by the laboratory.

Targeted Intervention Infections

In 2019/20, the SBU Health Board cumulative incidence was amongst the highest in Wales for *Clostridium difficile*, *Staph. aureus* bacteraemia, and *Pseudomonas aeruginosa* bacteraemia.

• 2020/21

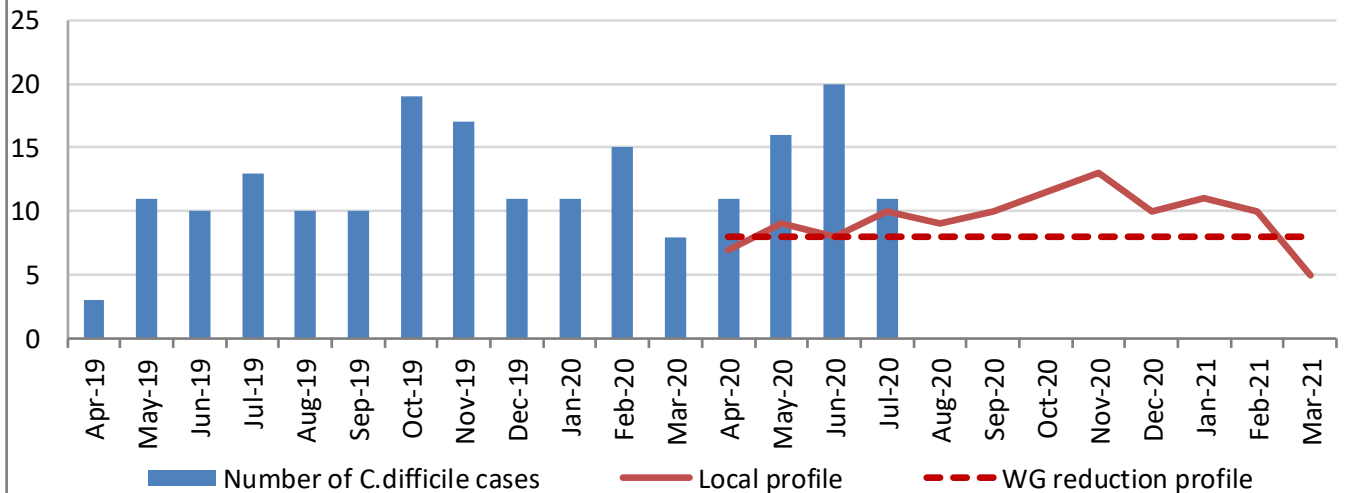
For 2020/21, the Health Board has proposed an IMTP reduction expectation to Welsh Government, consistent with the third year of the 3-year reduction aims of a 15% reduction in *Clostridium difficile*, a 10% reduction in *Staph. aureus* bacteraemia and a 5% reduction in gram negative bacteraemia. Welsh Government has yet to publish the national infection reduction goals for 2020/21. Until this is published, the Health Board continues to use the 2019/20 reduction goals as its reference for progress to date.

There will be significant pressure on the Health Board to improve its infection reduction position in relation to these key infections during 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.

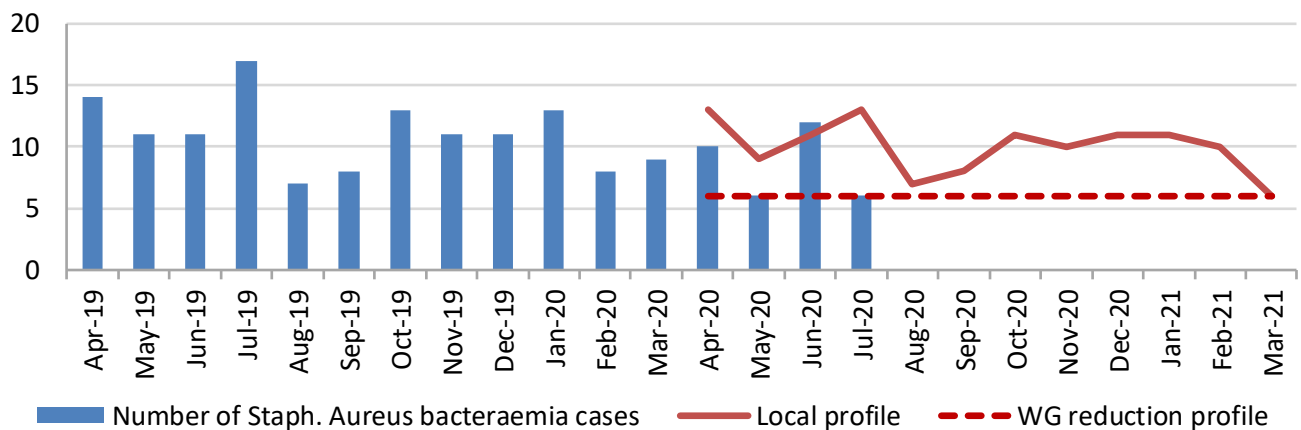
Measures	WG National Goal for NHS Wales (WHC/2019/019 - 8 July 2019)	IMTP Profile July 2020	July 2020 (to 31/07/20)	Cumulative cases YTD Apr-Jul (to 31/07/20)	Number of cumulative cases above or below cumulative WG trajectory
<i>Clostridium difficile</i>	< 8 cases/month 25/100,000 pop.	10	11	58	+ 26
<i>Staph. aureus</i> bacteraemia	<6 cases/month 20/100,000 pop.	13	6	34	+ 10
<i>E. coli</i> bacteraemia	< 21 cases/month 67/100,000 pop.	31	25	70	- 14
<i>Klebsiella spp.</i> bacteraemia	<6 cases/month	5	5	26	+2
<i>Pseudomonas aeruginosa</i> bacteraemia	<2 cases/month	4	1	8	+ 1

The following graphs demonstrate the Health Board monthly position in relation to proposed IMTP profiles and Welsh Government reduction profiles.

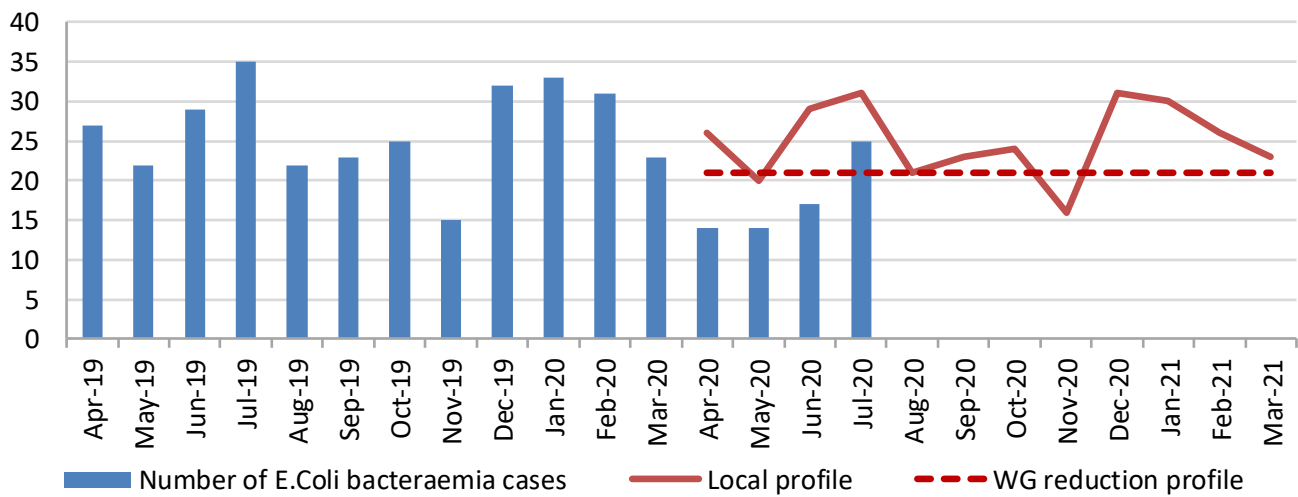
Number of C.difficile cases (Monthly)



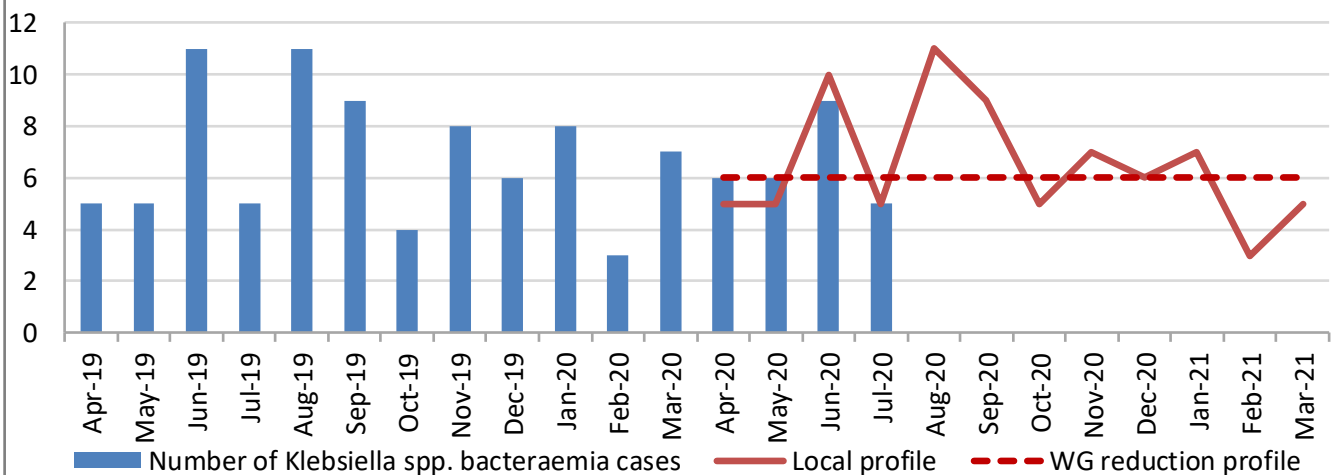
Number of Staph. aureus bacteraemia cases (MRSA & MSSA combined) (Monthly)



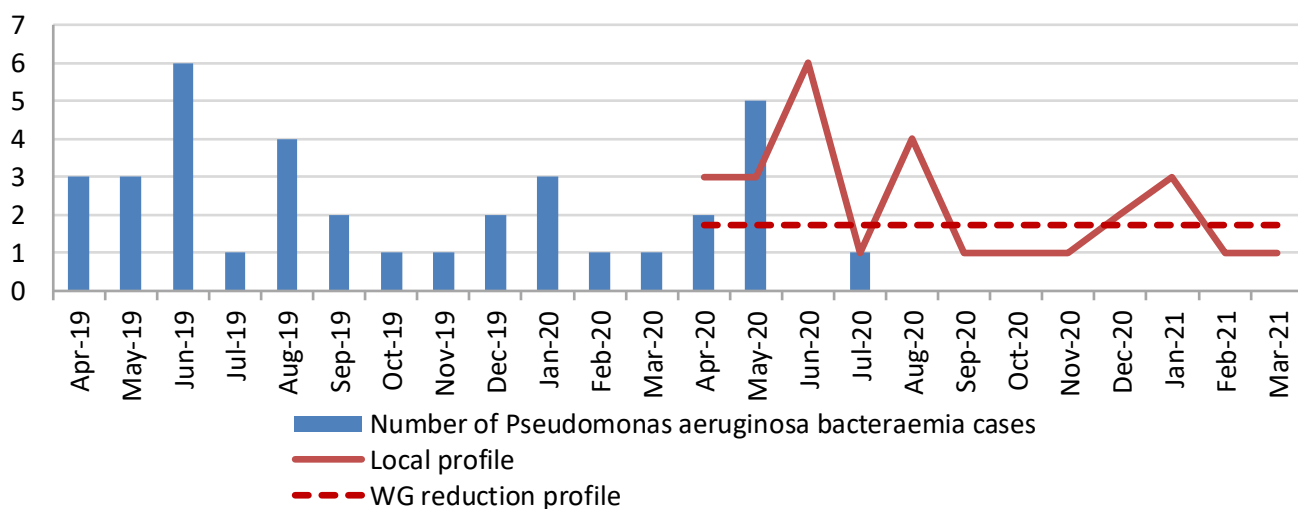
Number of E.coli bacteraemia cases (Monthly)



Number of Klebsiella spp. bacteraemia cases- (Monthly)



Number of Pseudomonas aeruginosa bacteraemia (Monthly)



Achievements

- A 4 weekly *C. difficile* scrutiny panel has been established and local action plans driven by the Delivery Units, with IPC support, will provide the focus on improvement. Each Delivery Unit will be supported in their development and implementation of unit-specific *C. difficile* Improvement Plans.
- A short-term 3 month contract for a proactive hydrogen peroxide vapour (HPV) service has received Health Board approval. This contract commenced on 29th June in Neath Port Talbot Hospital (which had empty bay availability to facilitate a decanting process). This is a mobile, proactive service across the Health Board. The service has commenced a proactive programme in Morriston Hospital and Singleton Hospital. There are weekly planning meetings to agree decontamination plans for the following 2 weeks. To date, there have been 267 successful HPV processes undertaken across the three acute sites (114 in Singleton Hospital, 83 in Neath Port Talbot Hospital, and 70 in Morriston Hospital).
- To support the proactive HPV programme, the IPC team has trained a number of Support Services Assistants (SSA's) and Supervisors on how to effectively clean patient care equipment. The Head of Support Services has agreed a pilot of SSAs undertaking the cleaning of items generally undertaken by nursing staff.
- IPC resource – a 7 day service is now implemented.
All new recruits into the IPCN team have commenced their posts. These new staff have commenced a period of training and development into this broad specialty, and will begin a process of competency review in line with a nationally acknowledged competence assessment.
- IPC nurses, who will work with Primary Care and Community Services, mental health and learning disabilities commenced their induction programme on 6th July.
- Initial meetings with Delivery Units have commenced to discuss implementation of an integrated Infection Prevention & Control Service following a proposed Health Board Infection Prevention & Control Framework, which was presented approval by the Infection Prevention & Control Committee on 7th August 2020. Focused work plans will be developed per delivery unit in conjunction with the IPCT and these will be presented to ICC with regular progress updates.

COVID

- The IPCNT continue to provide support and advice to clinical and non-clinical staff in all issues relating to COVID-19 and other infections.
- The Swansea Bay University Health Board Infection Prevention and Control Service has supported the care home network on an advisory basis. Support and advice has been provided through regular attendance at the weekly West Glamorgan Regional PPE and infection control work stream meeting and the Environmental Health Officer network. In addition, the service has delivered direct support via question and answer sessions, completing FAQs and sharing resources including guidance and videos.
- Throughout the COVID-19 pandemic, the infection prevention and control team have provided support to primary care services including Gorseinon hospital, HMP Swansea, General Practices, GP Cluster Hubs, Community Testing Units, the Field Hospitals, the Acute Clinical Teams and Community Dentistry.
- The ICNs have undertaken regular visits to Gorseinon hospital to provide support and informal training for staff about all aspects of caring for patients with COVID-19 and maintained communication via telephone calls, particularly during outbreaks of COVID-19 on the site. HMP Swansea have also received advice via the telephone regarding individual patient management.

- The IPC nurses have visited individual General Practices who intended to continue seeing their own patients as well as visiting six of the eight identified GP Hub locations. Additional ongoing support was provided via Microsoft Teams meetings, email and telephone calls and included advice relating to patient pathways, appropriate PPE use and environmental decontamination.
- The IPC team provided support to the community testing units on both the Margam and Liberty stadium sites during the set-up of the service and throughout their operation. IPCNs have visited the sites, provided education for staff regarding PPE use and the process for sample collection, observed practice, reviewed SOPs and have had regular telephone calls and email correspondence with the service manager throughout the pandemic.
- Audits of PPE, hand hygiene and the care environment have been undertaken by the IPC team in collaboration with Nursing and Medical students from Swansea University in July 2020. The results were presented to ICC in August. Overall, the students reported that staff on the wards were very welcoming, receptive to feedback and there was clear communication between staff groups. Compliance with bare below the elbows was very good in the majority of areas across the sites. Students reported that there was not clear signage regarding which PPE was required in all departments and that the increased use of gloves appeared to be resulting in a reduction in hand hygiene being performed in line with the WHO 'My 5 moments'. Following the audits students participated in guided group reflection with all stating that they felt that this was a worthwhile experience, which they would be keen to participate in again in future.
- Colleagues from Capital Planning included the IPC team in the development of the field hospitals at an early stage and IPCNs undertook regular visits to the sites throughout their development. The IPCT provided advice in person, via telephone and email to ensure that the projects strived to achieve the required IPC standards, and where these were not achievable, appropriate actions were in place to mitigate risk. Since the commissioning of the Llandarcy site the IPCNs have attended all staff induction sessions and provided education relating to Hand Hygiene, environmental cleanliness, decontamination of equipment, appropriate use of PPE and management of patients with loose stool. Thus far, the IPC team have provided 23 training sessions to in excess of 260 staff with further sessions to be delivered over coming weeks. The ACT received IPC face to face PPE training at the start of the pandemic with updates via Skype as national guidance has changed. Many ACT staff have also attended the induction sessions in Llandarcy field hospital.
- Community dental services have been supported by the IPC Decontamination lead with advice via Microsoft Teams, telephone and email regarding PPE, Ventilation, decontamination of equipment and the environment and waste management. PCCS and IPC have met to support plans to reinstate services.
- The education planner is on the SharePoint training link, and details the IPCT training programme available to specific staff groups and sessions accessible to all staff across SBU for the time period January- December 2020.

Challenges, Risks and Mitigation

- Challenging to sustain improvements in reduction of targeted infections.
- *C. difficile* infections continue to be on an upward trend, and significantly above the Welsh Government expected number of monthly cases. This may be related to an association with respiratory infections (possibly secondary to COVID). The Health Board IPC team has met with Public Health Wales' DIGEST team (Difficile Genomics Sequencing and Typing) to discuss reviewing the *C. difficile* isolates from SBU Health Board cases to facilitate a more

detailed epidemiological review of cases to be undertaken. Results of this more detailed review will be reported at the 4-weekly C. diff scrutiny panel on 13th August.

- *Staph. aureus* bacteraemia continues to be an issue in the first four months of this financial year.
- It has been important during COVID-19 activity, that the Health Board does not lose focus on those other infections for which the Health Board is under Targeted Interventions.
- Achieving a sustained improvement will be compromised as the Health Board continues to face significant challenges due to current demands on services. The design of the estate, disinvestment in planned and preventative maintenance, and lack of isolation facilities make managing patients with known or suspected infections a challenge. Compounding the above has been the lack of dedicated decant facilities on hospital sites, which compromises effective decontamination of patient care areas, and impacts on the provision of clean and safe patient care environments. There has however been a dedicated decant ward identified on the Morriston site which is a significant achievement and maintaining this during the winter period is key in achieving reductions. This situation has been improved temporarily as a result of the COVID-19 impact on routine service provision, which has created empty patient care areas. This has provided an opportunity for a planned proactive deep cleaning and hydrogen peroxide vapour (HPV) disinfection of patient care areas, which the Health Board has funded a contracted service for a three-month period.
- The COVID situation has provided an opportunity for decanting areas to be able to undertake a proactive deep cleaning programme. When full service resumes, the lack of decant facilities, when occupancy is at acceptable levels on acute sites, compromises effectiveness of the '4D' cleaning/decontamination programme will continue to be a challenge.
- There is an improved position in domestic hours in that there are no historical vacancies for Singleton or Morriston however recruitment continues to increase staffing to meet the agreed uplift to meet the National Minimum Standards of Cleanliness.
- The outbreak of extensively antibiotic resistant, Carbapenemase producing organisms (CPO), which began on Ward G, but involved 6 other wards, including wards in Neath Port Talbot and in Singleton, was declared closed at a Health Board Outbreak Group meeting held on 26th May 2020. There had been a **total of 24 confirmed *Klebsiella pneumoniae* with the same genetic strain (ST307)**. At the time of preparing this report, there have been no new cases identified since the last new case on 18 March 2020. A report will be prepared by the Delivery Unit and presented at a future Infection Control Committee meeting.

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; also prepare for a potential second wave of infection... **Target completion date: September 2020. 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:** The IP&C team is working with the Digital Intelligence team to develop processes which will enable data in relation to healthcare associated infections to be available via the Ward Dashboard. This work has been delayed by challenges with the national ICNet system; the Digital Intelligence Team is working on alternative processes to access the relevant data. Once process developed, IPC and Information Intelligence will undertake validation with data published by Public Health Wales. **Target completion date:** 31 December 2020. **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.

***Clostridium difficile* infection**

- **Action:** Further investigation into the increasing trend in *C. difficile* to identify possible contributory factors, including antimicrobial stewardship challenges and leading the *C. difficile* strategy group. Each Delivery Unit is to develop a *C. difficile* infection reduction Improvement Plan, which will be monitored by the *C. difficile* Scrutiny Panel. **Target completion date:** August 2020. **Lead:** Matron IPC and Delivery Unit Directors. **Impact:** reduction in *C. difficile* cases.

Review of Infection Prevention & Control Service

- **Action:** Service redesign of Corporate IPC service, which will move the service to one that has a greater focus on proactive priorities. For this to succeed, the devolution of responsibility IP&C to Delivery Units will be critical to demonstrate that infection prevention & control is the responsibility of all. The Infection Prevention & Control Framework will underpin this process. **Target completion date:** September 2020. **Lead:** Assistant Director of Nursing IPC. **Impact:** Corporate IPC service will provide appropriate expertise, guidance and advice to all Delivery Units to support their compliance with Standard 2.4, Health and Care Standards for Wales, that *“Effective infection prevention and control needs to be everybody’s business and must be part of everyday healthcare practice and based on the best available evidence so that people are protected from preventable healthcare associated infections”*.

Domestic staff recruitment

- **Action:** Recruitment process for additional cleaning staff progressing. **Target completion date:** September 2020. **Lead:** Support services manager. **Impact:** Increased domestic staffing to provide cleaning hours required.

Meeting national minimal standards of cleanliness

- **Action:** Additional cleaning hours have been funded to meet National Minimum standards of Cleanliness. The next steps will determine the staging of funding and recruitment of additional staff. **Target completion date:** March 2021. **Lead:** Support services manager. **Impact:** Agreed staged approach to increasing funding for increased domestic staffing to provide cleaning hours required to meet national minimum standards.

Decant

- **Action:** Solutions for decant to be identified for Morriston and Singleton. **Target completion date:** *set back as a result of COVID-19* to September 2020. **Lead:** Assistant Director of Nursing IPC 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 to be 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 September 2020. **Lead:** Assistant Director of Nursing IPC, Support Services, and Procurement. **Impact:** Environmental decontamination in line with the ‘4D’ programme: **D**eclutter, **D**ecant, **D**eep-clean and **D**isinfect, 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:** 30 November 2020. **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 *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/>).

Estimated costs related to healthcare associated infections, from 01 April 2020 – 31 July 2020 is as follows: *C. difficile* - £580, 000; *Staph. aureus* bacteraemia - £238,000; *E. coli* bacteraemia - £83,900; therefore a total cost of **£901,900**.

Recommendations

Members are asked to:

- Note reported progress against HCAI priorities up to 31st July 2020 and agree actions.