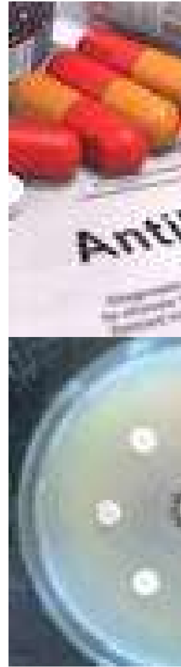
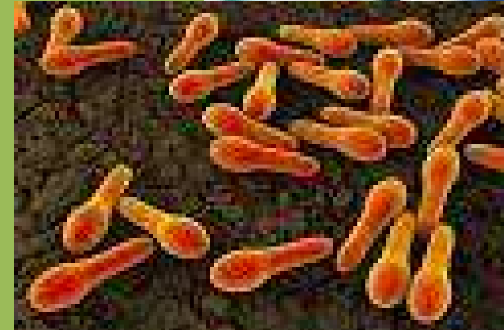
GIG CYMRU NHS WALES

Bwrdd Iechyd Prifysgol Cwm Taf Morgannwg University Health Board

Infection Prevention & Control Annual Report





CONTENTS

No.	Title	Page No.
1.	Executive Summary	3
2.	Healthcare Associated Infections: Statistics & Performance	
	(A) *C. difficile* Infection	4
	(B) *Staphylococcus aureus* Bacteraemia	6
	(C) *Gram negative bacteraemia*	9
	(D) Line Associated Infections	12
3.	Surveillance	
	Surgical Site Infection Surveillance	13
	Critical Care Surveillance	13
	Other Surveillance / projects	13
4.	IPC Policies Approved	13
5.	Internal Audit Programme and Performance	
	(A) Hand Hygiene Audits	14
	(B) Bare Below the Elbow	16
	(C) Environmental Cleanliness Audits	18
	(D) Personal Protective Equipment (PPE)	18
6.	Outbreaks and Incidents	19
7.	COVID-19	21
8.	Antimicrobial Stewardship	21
9.	Education and Training	26
10.	Decontamination	29
11.	Challenges this year and Priorities for 2017/2018	30
12.	Glossary	32

EXECUTIVE SUMMARY

Cwm Taf Morgannwg University Health Board (CTMUHB) is committed to delivering safe and effective care for all and embraces the philosophy of Cwm Taf Cares. Healthcare Associated Infections (HCAI) remain a key patient safety issue and results in a significant burden of disease and financial cost to the NHS in Wales. CTMUHB is committed to reducing HCAI and adopts a zero tolerance to all preventable infections. There are effective management arrangements, assurance systems and reporting processes in place to support and drive the infection prevention and control (IP&C) agenda.

We are focussed on the goal to be the best in Wales and we are making incremental changes to improve patient safety and deliver the national reduction expectations set by Welsh Government.

The Infection Prevention and Control Team (IP&CT) works across all areas in secondary care but have minimal input into improving IPC practice in primary care. To effectively deliver a sustainable integrated whole system approach to reduce HCAI and AMR, a dedicated team including an IP&C resource is required.

The infrastructure continues to strengthen across the Health Board which is supported by a comprehensive range of infection prevention and control policies and procedures which act as a resource for staff.

This annual report is produced to provide detailed analysis of the surveillance data, audit, education / training and policies developed to support and direct patient care, collected and produced by the Infection Prevention & Control Team (IP&CT) for the time period from April 2020 – March 2021.

Due to the pandemic, COVID preparedness and response has been the main focus for the IPC team for the past year and therefore some elements of the IPC work has not been completed fully.

Key achievements

- IPC team structure aligned to support new ILG model.

- Recruitment of additional IPC Nurses to provide a comprehensive IPC service.

- The IPC Team have been integral to the COVID planning and response to the COVID pandemic working collaboratively with a range of multi professional colleagues.

Healthcare associated infections (HCAI): statistics and performance

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.

Welsh Government (WG) reduction expectations for April 2020 – March 2021.

Due to the COVID pandemic, the reduction expectation set for 2019/20 were extended for 2021/21.

Number and rate of *C. difficile, S.aureus* bacteraemia, *E. coli* bacteraemia, Klebsiella sp. bacteraemia and Pseudomonas aeruginosa bacteraemia per 100,000 population, April 2020 – March 2021.

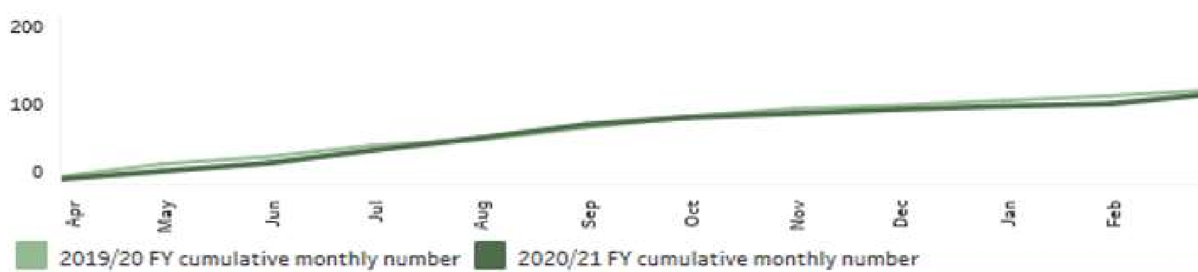
	Rate of C. difficile/ 100,000 population		Rate of MRSA bacteraemia/ 100,000 population		Rate of MSSA bacteraemia/ 100,000 population		Rate of E. coli bacteraemia/ 100,000 population		Rate of Klebsiella sp. bacteraemia/ 100,000 population		Rate of Pseudo aer bacteraemia/ 100,000 population	
	No. of cases	Rate	No. of cases	Rate	No. of cases	Rate	No. of cases	Rate	No. of cases	Rate	No. of cases	Rate
Cwm Taf Morgannwg	112	25.16	6	1.35	110	24.71	316	70.98	96	21.56	20	4.49
All Wales	880	28.04	47	1.50	733	23.35	1882	59.96	620	19.75	148	4.72

(A) *Clostridium difficile* Infection (CDI):

The reduction expectation set for 2020/21 was 21 per 100,000 population which equates to no more than 94 cases.

112 C. Difficile cases were reported for this period and the provisional rate for C.Difficile is 25.16 per 100,000 population. Despite not achieving the reduction expectation, -4% fewer cases were reported compared to 2019/20.

Cumulative monthly numbers of C. difficile for April 2020 – March 2021 compared to the equivalent period in 2019/20.



Of the total cases, 48% were healthcare associated infections (HCAI) which is 3% less than 2019/20 and 52% were community acquired (CAI).

<u>Rhondda Taf Ely ILG</u>
RGH had a total of 29 cases which is 10 fewer cases compared to 2019/20 – 45% HCAI.

- 19 cases were identified in hospital – 53% HCAI.
- 10 samples were sent from GP practices, 70% were CAI.

<u>Merthyr Cynon ILG</u>
PCH had a total of 28 cases which is the same as 2019/20 – 50% HCAI

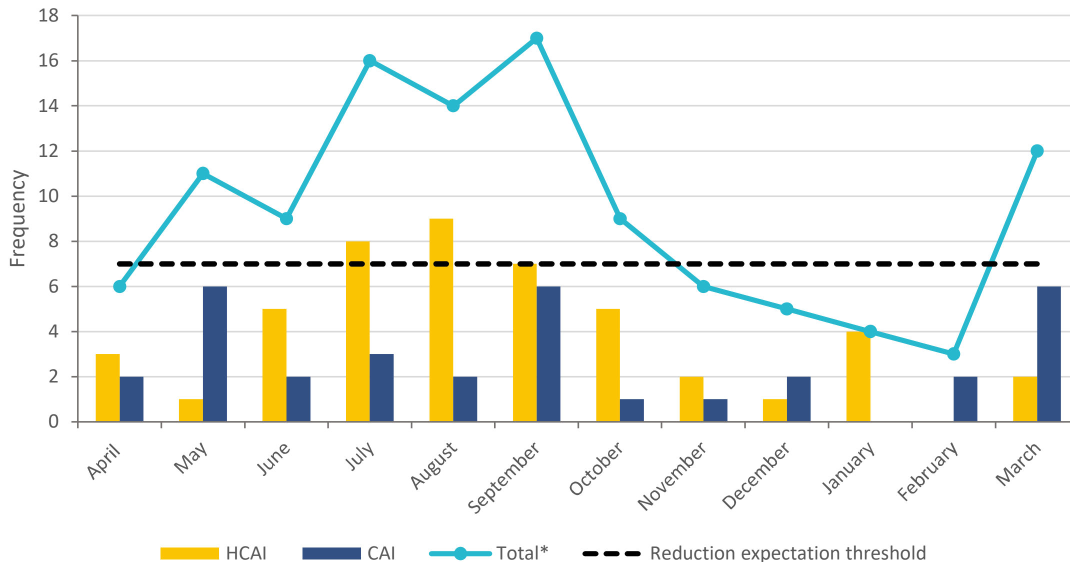
- 24 cases identified in hospital, 50% HCAI
- 4 samples sent from GP practices which is a 50% reduction compared to last year. 50% CAI.

<u>Bridgend ILG</u>
POW had a total of 55 cases which is 5 more than 2019/20 – 47% HCAI

- 37 cases were identified in hospital, 68% HCAI
- 18 samples sent from GP practices, 94% CAI.
-

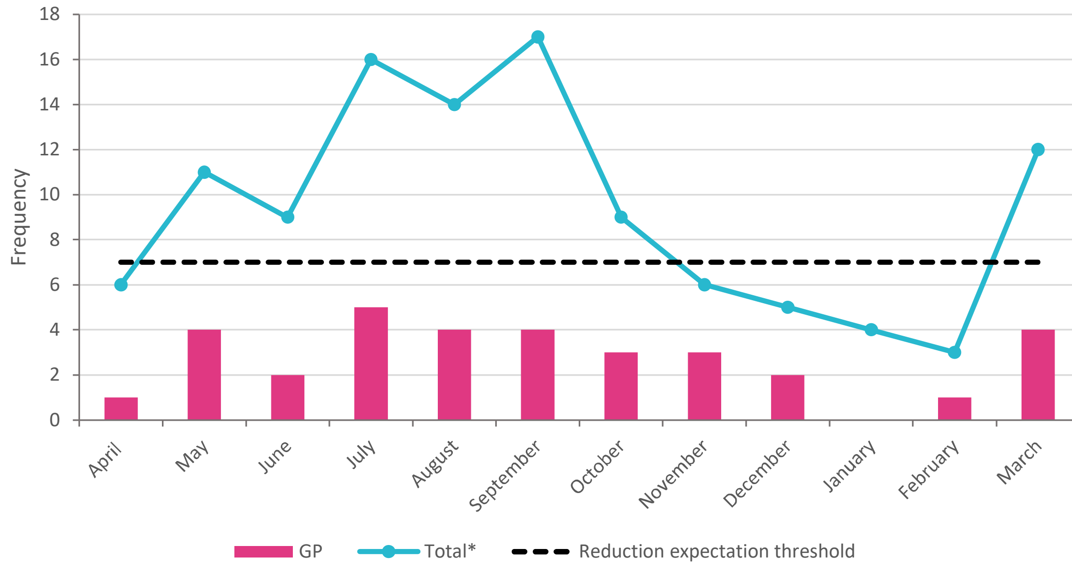
The RCA process for investigating and learning from C.Difficile cases must be strengthened in RTE and MC ILG and re-introduced in primary care. Reducing C. difficile infection in primary care is key to reducing the overall C. difficile rate.

Distribution of *C. difficile* infections, by type of inpatient infection+: FY 2020/21, Cwm Taf Morgannwg University Health Board (Threshold ≤7 cases/month)



+HCAI and CAI infections relate to infections identified in inpatient settings, GP infections were identified in primary care settings in the community
*Total includes infections identified in GP practices

Distribution of *C. difficile* infections, specimens from GP practices: FY 2020/21, Cwm Taf Morgannwg University Health Board (Threshold ≤7 cases/month)



Total includes samples sent from inpatient areas

CDI Mortality Data

A serious incident (SI) notification is submitted for all C. difficile deaths when it is included on the death certificate.

Direct attributable cause of death (CDI on any part of death cert.)++

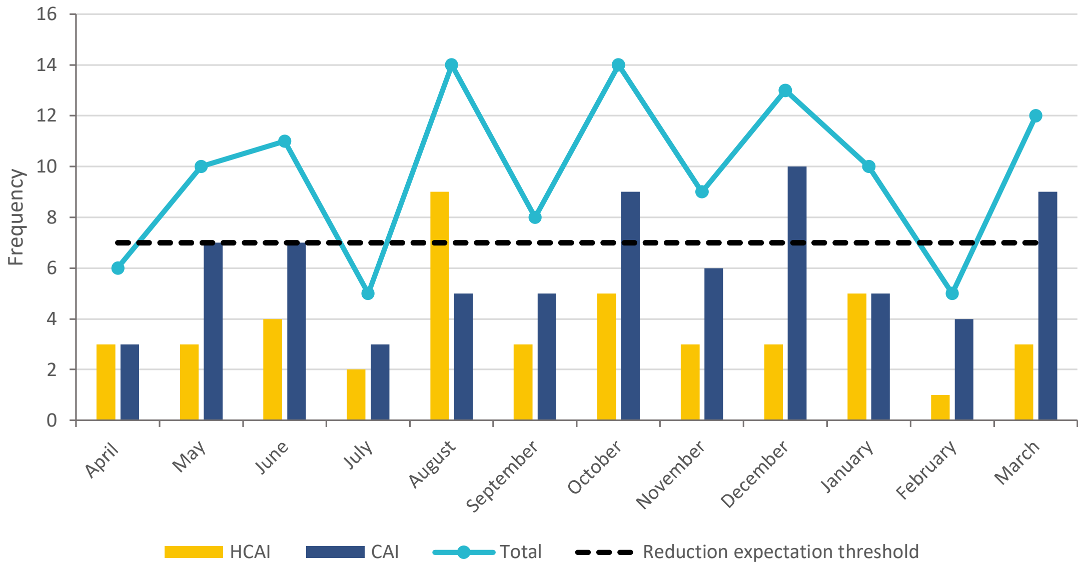
	2019/20	2021/22
RGH	1	2
PCH	1	2
POW	8	7
Total	11 (9%)	11 (10%)

(B) *Staphylococcus aureus* Bacteraemia (MSSA & MRSA)

The reduction expectation set for 2019/20 was a combined target of 20 per 100,000 population, which equates to no more than 89 cases.

A total of 116 cases of S.aureus bacteraemia were reported which is 18% fewer cases compared to the previous year. CTM did not achieve the reduction expectation and ended the period with a rate of 26.06 per 100,000 population.

Distribution of *S. aureus* bacteraemia.

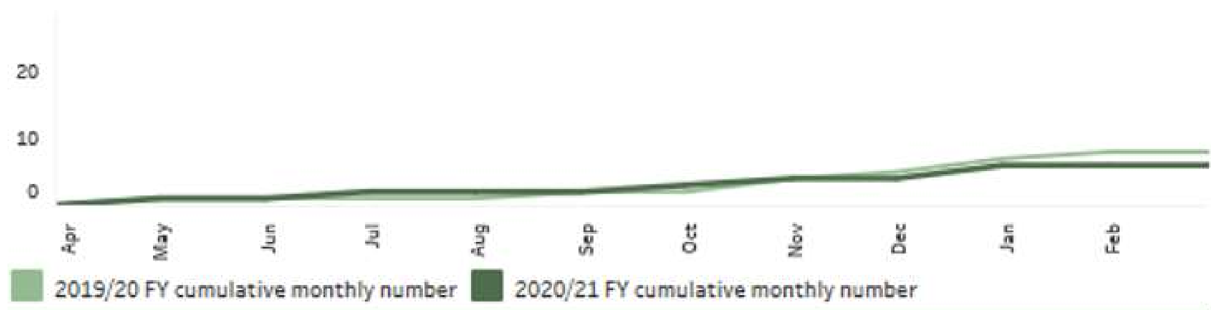


MRSA
The Welsh Health Circular (2019) 019 describes WGs zero tolerance approach to MRSA bacteraemia.

It is often very difficult to determine if the MSSA/MRSA bacteraemia is healthcare associated as this organism can form part of the patient's own flora unless it can be directly linked to a recent procedure or intervention that the patient has undergone.

6 cases of MRSA were reported for CTM during the 2020/21 period, which is a 25% decrease compared to the same period last year, ending the year with a rate of 1.35 per 100,000 population.

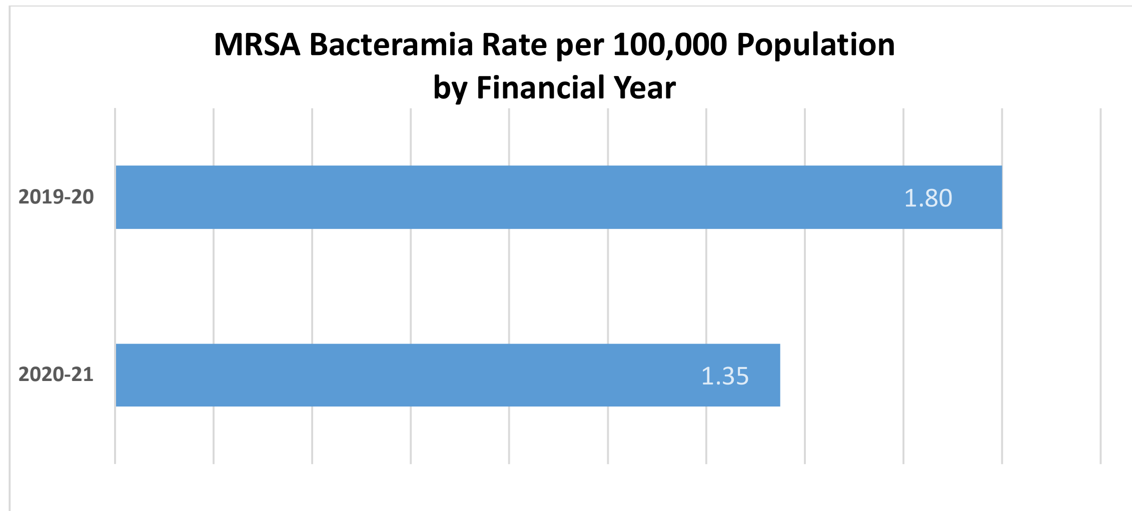
Cumulative monthly numbers of MRSA Bacteraemia for April 2020 – March 2021 compared to the equivalent period in 2019/20.



Rhondda Taf Ely ILG
No cases reported.

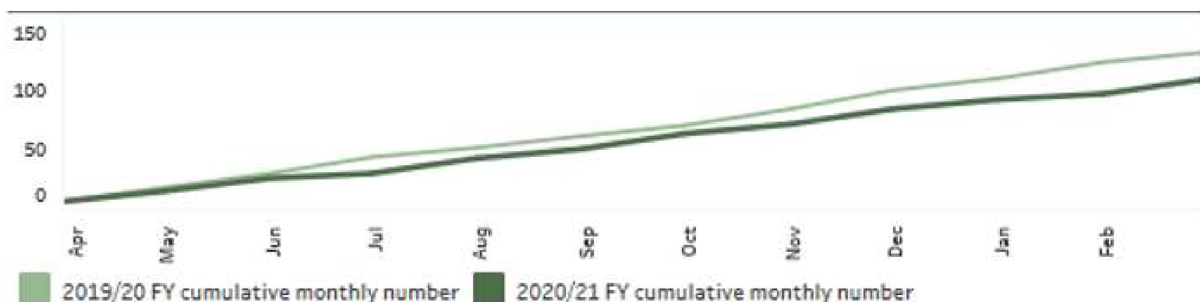
Merthyr Cynon ILG
2 cases reported, both HCAI. 1 case is deemed preventable and associated with an invasive device.

Bridgend ILG
4 cases reported, 2 are healthcare associated infections. 1 of the cases is linked to an invasive device and deemed to be preventable.



MSSA
111 cases of MSSA bacteraemia were reported in 2020/21 which is a 17% reduction compared to 2019/20, with a population rate of 24.71 per 100,000 population.

Cumulative monthly numbers of MSSA Bacteraemia for April 2020 – March 2021 compared to the equivalent period in 2019/20



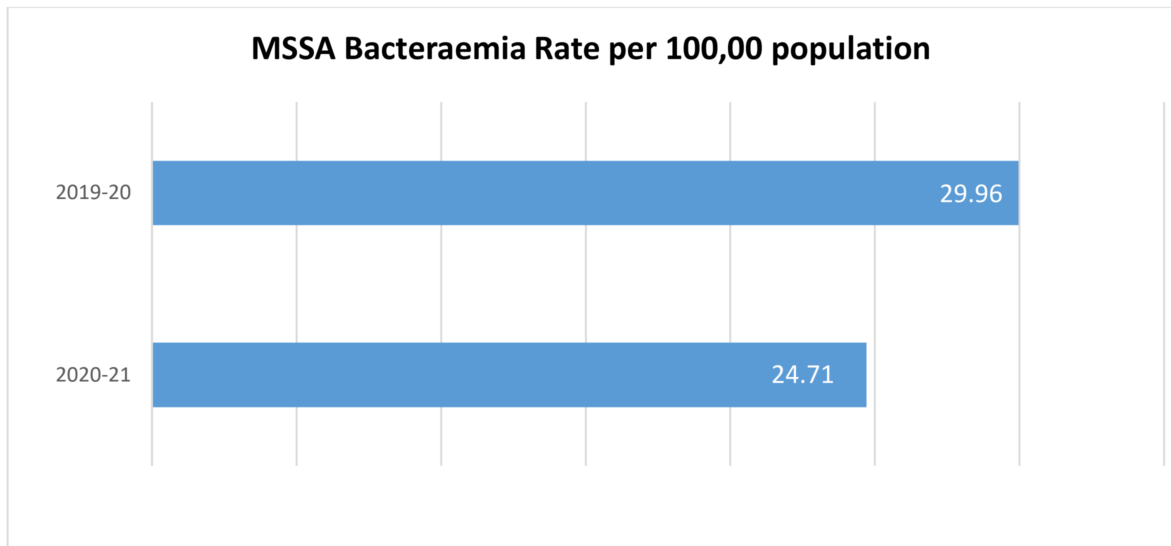
A total of 111 cases of MSSA bacteraemia were reported during 2019/20, 36% were healthcare associated infections HCAI, 64% CAI.

Comparable numbers of healthcare associated MSSA bacteraemia were reported across the 3 ILGs with a slightly higher number of community acquired cases reported from RTE ILG.

9% (10/111) of the total MSSA bacteraemia were deemed to have a preventable source. Of the 10 cases,

- 4 were associated with peripheral cannulae (PVC)
- 5 were associated with central lines
- 1 was associated to a urinary catheter

Further work is critical to improve management of indwelling devices and develop a robust root cause analysis process to reduce preventable infections.



(C) E.coli bacteraemia

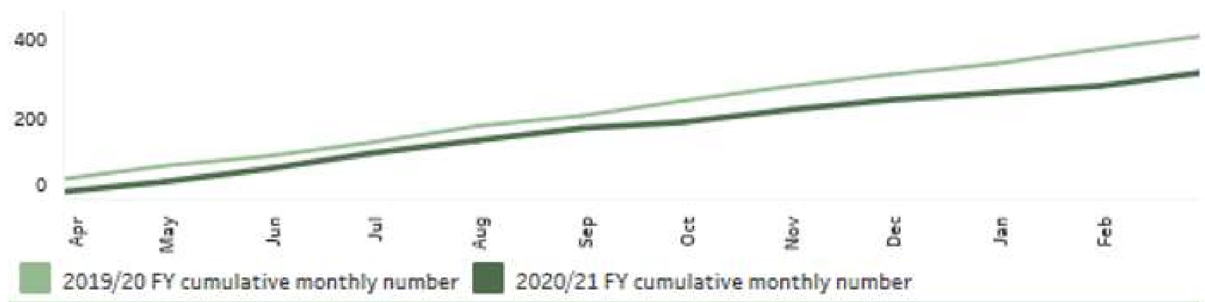
The WG reduction expectation set for CTMUHB for 20/21 was a rate of no more than 67 cases per 100,000 population. This equates to 298 cases per year.

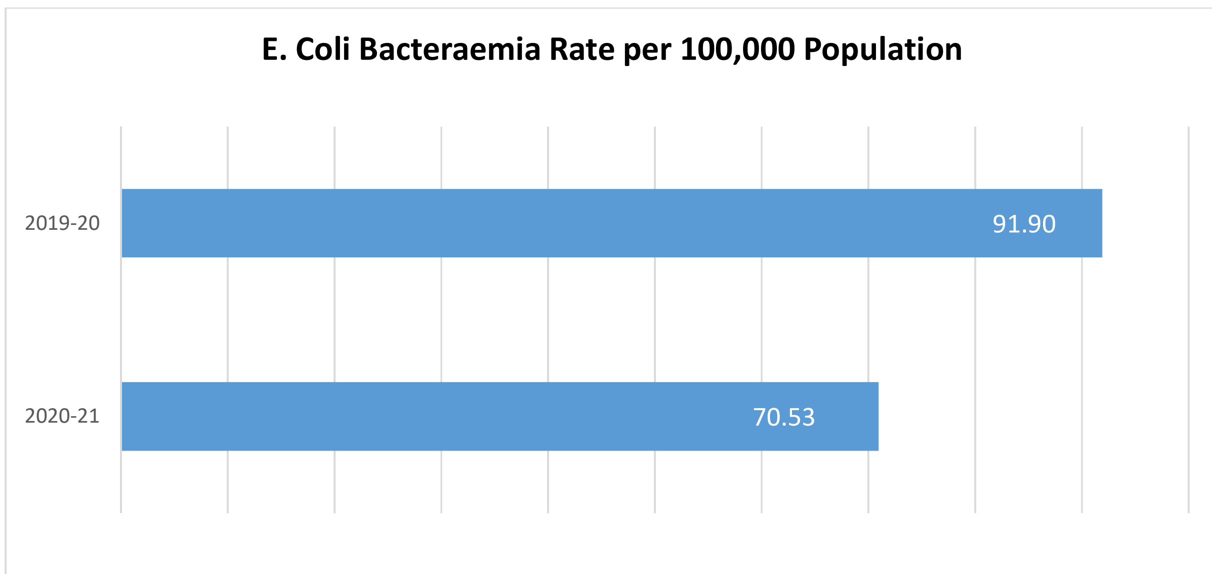
323 cases were reported during the 2021/21 period with a rate of 70.44 per 100,000 population. Despite not achieving the reduction expectation set, 23% fewer cases were reported compared to the previous year.

Of the 323 cases reported

- 75 cases were healthcare associated infections (23%)
- 248 cases were community acquired infections (77%)
- 24 cases associated with a urinary catheter (7%)
- Each of the ILGs had a similar number of cases.

Cumulative monthly numbers of E. coli Bacteraemia for April 2020 – March 2021 compared to the equivalent period in 2019/20





(D) Klebsiella sp. bacteraemia

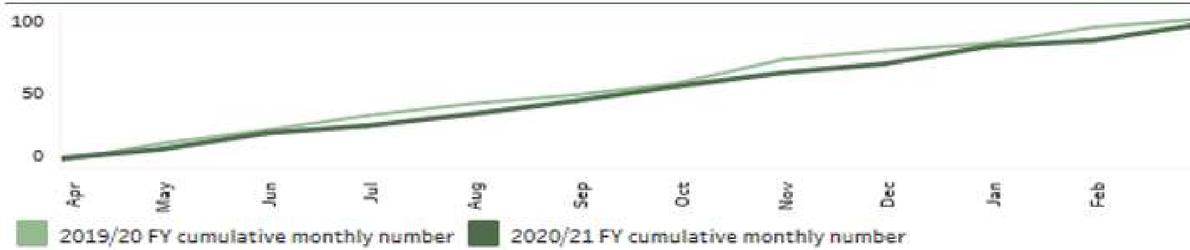
A 10% reduction based on 2018/19 numbers was expected in 2020/21, which equates to no more than 69 cases per year.

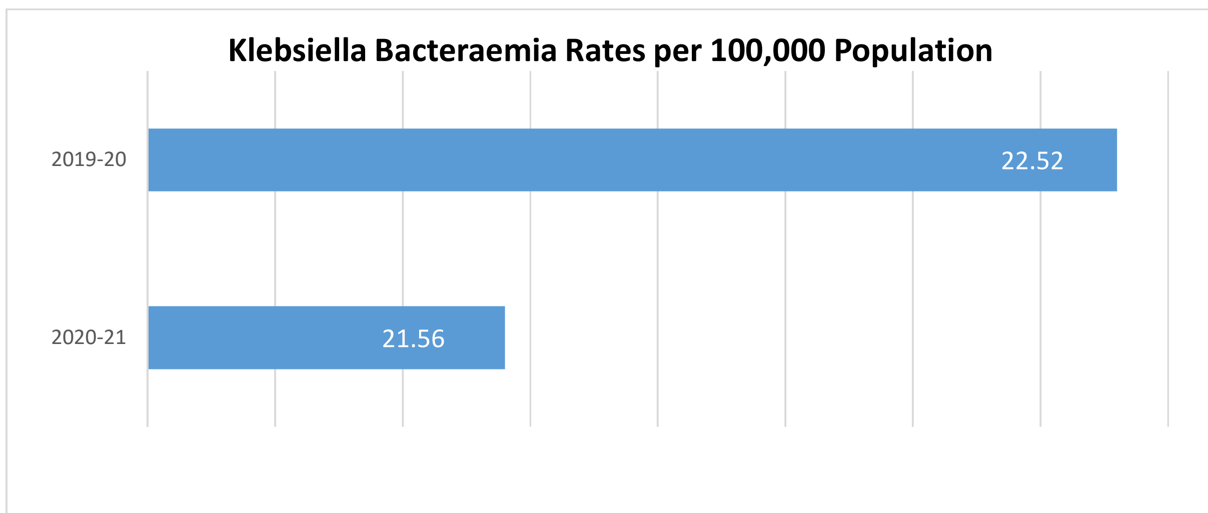
97 cases were reported at the end of the 2020/21 period which is a 4% reduction compared to the same period last year. CTM achieved a rate of 21.56 per 100,000 population.

Of the cases reported, 39% (38/97) are deemed to be healthcare associated infections and 61% (59/97) are community acquired infections. 13% (13/97) had a preventable source which is an increase compared to last year. 6 of the cases are associated with IV lines and 7 are linked to urinary catheters.

Merthyr Cynon ILG had fewer cases than RTE and Bridgend ILG.

Cumulative monthly numbers of Klebsiella spp. bacteraemia for April 2020 – March 2021 compared to the equivalent period in 2019/20





(E) Pseudomonas aeruginosa bacteraemia

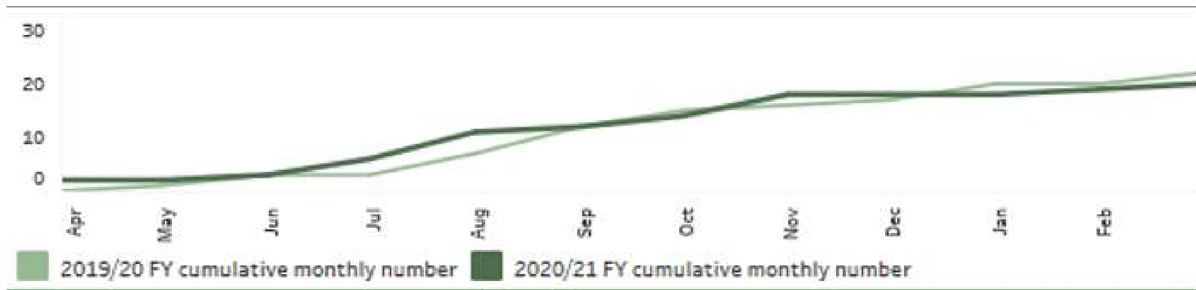
A 10% reduction based on 2018/19 numbers was expected in 2020/21. 20 cases were reported during this period which is 9% fewer cases compared to the previous year. CTM achieved the reduction expectation set by WG.

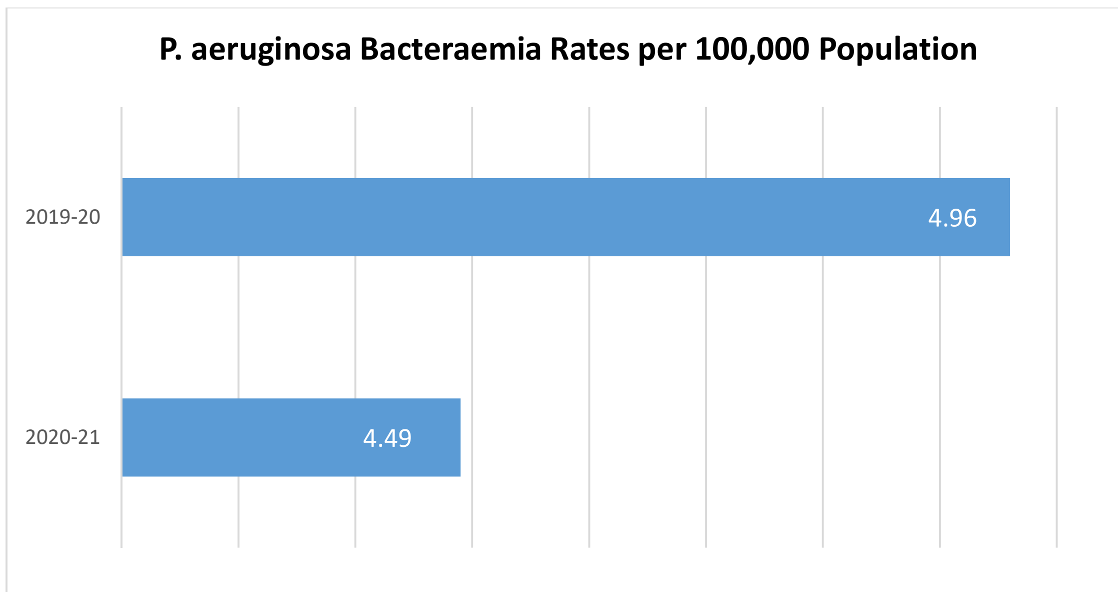
Of the 20 cases reported, 30% (6/20) are healthcare associated infections and 70% (14/20) are community-acquired infections.

20% (4/20) of the cases are associated with an invasive device: 3 cases linked to urinary catheters and 1 case linked to a PICC line. The 4 cases were reported from Bridgend ILG.

MC ILG reported no cases during this period.

Cumulative monthly numbers of Pseudomonas Bacteraemia for April 2020 – March 2021 compared to the equivalent period in 2019/20





(F) Line associated infections

There is no national surveillance scheme for monitoring blood stream infections associated with medical devices eg. IV lines, urinary catheters. In CTM, the IPC Team have investigated each case since 2011. To strengthen the investigation process and learning opportunities, multi-disciplinary IPC huddles were introduced in 2018/19. Not all cases were discussed in 2020/21 due to the COVID pandemic. This improvement work will be reintroduced in 2021/22. Clinical engagement is critical to provide opportunities for multi professional learning.

17 line associated bacteraemia were reported in 2020/21 which is 4 fewer cases than the previous year. 62% (13/21) were associated with a PVC.

3. Surveillance

Surgical Site Infection Surveillance (SSI)

Cwm Taf UHB participate in the mandatory surveillance of Surgical Site Infections (SSI) for Orthopaedic and C. section surgery. Using standardised methods allows Health Boards to analyse their SSI data to improve the quality of care which also acts as a comparison between different hospitals to benchmark performance. The HARP team has been unable to publish infection data for 2020/21 due to the pandemic.

Critical Care Surveillance

Ventilator Associated Pneumonia (VAP) Surveillance

No data published

Other Surveillance

ICNet

ICNet is a case management and surveillance system which has been adopted nationally. The IPC Team has contributed to the development of the enterprise monitor modules for enhanced carbapenamase producing organism and other multi drug resistant organism surveillance. Further work is underway to develop surgical site infection and outbreak management modules.

4. IPC Policies Approved in 2020/21

The following Infection Prevention and Control policies/procedures and guidelines were approved at the Infection Prevention & Control Committee. All documents are accessible for staff via the Intranet.

There are a number of IPC policies/procedures that need re-aligning and standardisation following the integration of POW and the Bridgend boundary with the former Cwm Taf UHB.

No.	Title	IPCC Approval
	IPC Terms of Reference	March 21
IPC03	IPC Management of Gastrointestinal Illness	March 21
IPC05	Decontamination of Flexible Endoscopes and Intra Cavity Probes Procedures	March 21
IPC07	IPC Personal Protective Equipment (PPE) Policy	March 21
IPC08	Notifiable Infectious Diseases	March 21
IPC18	Clostridium difficile Care Pathway	March 21

IPC20	Varicella Zoster Virus Policy	March 21
IPC30	Infectious and communicable Diseases Procedure for HCW	March 21

5. Internal Audit Programme and performance

All clinical areas are required to perform weekly hand hygiene and environmental audits. Directorates must monitor and act on their audit findings and report to the directorate IP&C quarterly meetings. This data is entered onto the Healthcare Monitoring System to provide ward to board assurance.

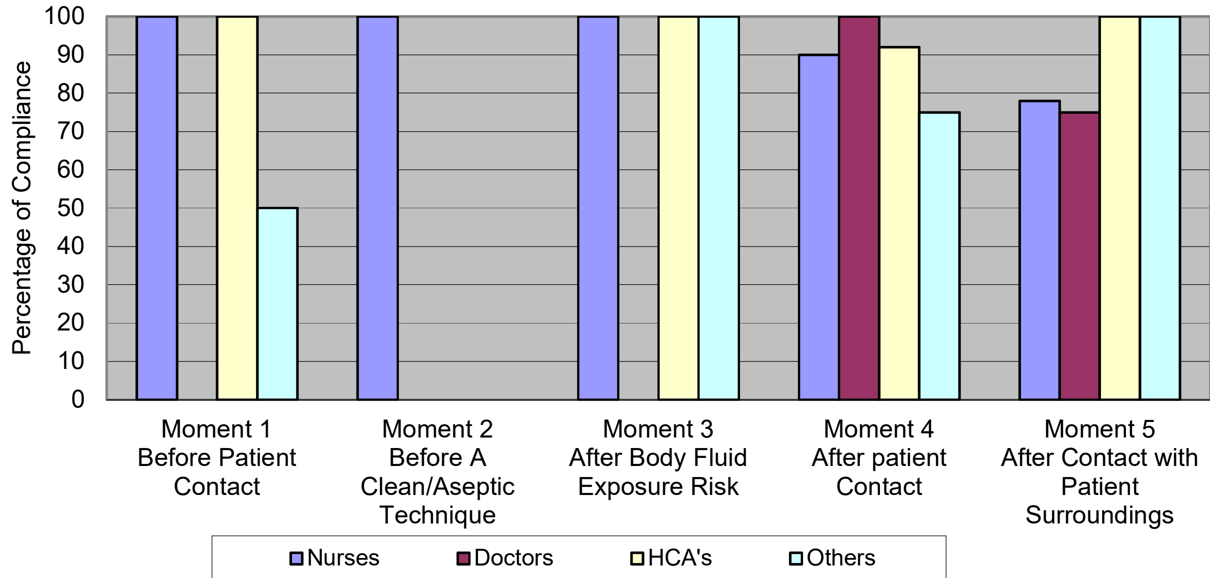
The IPC Team has a rolling annual audit programme including all clinical areas and departments for independent verifications. Unfortunately the IPC team were unable to fully complete the audit programme in 2019/20 due to COVID but informal spot checks were carried out regularly during ward visits and non-compliance with IPC policies was addressed at the time of the visit.

Audit Results

The data shown below are cumulative results of IP&CT verification audits across staff groups and departments in secondary care.

(A) Hand Hygiene Audits

Hand hygiene audits are based on the WHO's "5 moments for hand hygiene" which is applied to all staff working in clinical areas. The graph below identifies staff group achievements and compliances at each observed moment of care during clinical intervention where hand hygiene opportunities were either observed as achieved or missed. All missed opportunities/ non-compliance is discussed with the member of staff at the time of the audit.



Key for tables below

* No audit undertaken in this area.
Figures in red show result below expected score of ≥85%.
Please note that the actual numbers of observations made may be small.

Breakdown of Hand Hygiene compliance (all staff) by ILG and clinical services.

	Merthyr Cynon ILG		Rhondda Taf Ely ILG		Bridgend ILG	
Directorate	**2019/20**	**2020/21**	**2019/20**	**2020/21**	**2019/20**	**2020/21**
Medicine	70%	90%	**75%**	80%	84%	80%
Surgery	51%	100%	60%	64%	83%	80%
Trauma & Orthopaedics	71%	*	55%	*	70%	*
Anaesthetics & Theatre	68%	74%	92%	71%	100%	71%
Obs & Gynae	*	*	*	*	*	*
Children & Young People	94%	*	*	*	*	100%
Localities	100%	93%	*	90%	*	75%

Hand hygiene is the single most important measure to prevent cross infection. Clinical engagement is paramount to improve compliance with hand practice. Infection prevention and control is everybody's business and all staff must practice infection prevention and control precautions at all times.

(B) Bare Below the Elbow Audit

Consistent efforts have been made to improve hand hygiene practice and compliance with bare below the elbow. It must be the responsibility of all clinical staff, irrespective of grade or profession to be bare below the elbow in the clinical environment.

Breakdown of BBE compliance (all staff) by Directorate of each site

	PCH & Community Hospitals		RCH & Community Hospitals		POW & Community Hospitals	
Directorate	**2019/20**	**2020/21**	**2019/20**	**2020/21**	**2019/20**	**2020/21**
Medicine	100%	90%	69%	98%	95%	98%
Surgery	100%	100%	89%	95%	95%	97%
Trauma & Orthopaedics	100%	*	100%	*	100%	*
Anaesthetics & Theatre	100%	*	71%	*	100%	86%
Obs & Gynae	*	*	*	*	*	*
Children & Young people	92%	*	*	100%	*	100%
Localities	70%	89%	85%	100%	N/A	97%

Environmental Cleanliness Audits

Environmental audits have shown consistent levels of cleaning in the majority of the areas across the Health Board. Resources have been utilised to ensure they are equally applied to all clinical areas. The scores below not only reflect standards of cleaning for housekeeping and nursing staff but also includes any maintenance/ estates issues identified.

Poor audit scores have been reported across all sites.

	Merthyr Cynon ILG		Rhondda Taf Ely ILG		Bridgend ILG	
Directorate	**2019/20**	**2020/21**	**2019/20**	**2020/21**	**2019/20**	**2020/21**
Medicine	82%	79%	70%	74%	68%	69%
Surgery	83%	*	61%	74%	72%	72%

Trauma & Orthopaedics	90%	*	64%	*	74%	*
Anaesthetics & Theatre	77%	72%	76%	*	75%	76%
Obs & Gynae	67%	*	66%	*	68%	*
Children & Young People	88%	*	69%	75%	*	76%
Localities	86%	*	*	70%	*	75%

(C) Personal Protective Equipment (PPE) Audits

	PCH & Community Hospitals		RGH & Community Hospitals		POW & Community Hospitals	
Directorate	**2019/20**	**2020/21**	**2019/20**	**2020/21**	**2019/20**	**2020/21**
Medicine	80%	79%	73%	68%	80%	68%
Surgery	70%	100%	67%	55%	79%	75%
Trauma & Orthopaedics	67%	*	61%	*	80%	*
Anaesthetics & Theatre	57%	79%	81%	*	94%	30%
Obs & Gynae	*	*	*	*	*	*
Children & Young People	93%	*	*	*	*	82%
Localities	100%	96%	*	81%	*	78%

Poor audit scores have been reported across all sites. The IPC provide additional training to support the COVID response.

6. Outbreaks and Incidents

Diarrhoea and Vomiting (D&V)

Viral D&V is usually brought into the hospital from the community. It is essential that everyone is compliant with policies and procedures in order to reduce outbreaks of viral gastroenteritis on the wards. Prompt assessment and isolation is key to minimising outbreaks.

All patients should have a clinical risk assessment performed on admission to identify any infection prevention and control risks. We have a robust system in place where patients should be screened for D&V symptoms, which are:

- Communication by GPs – GPs are asked to assess/screen patients for D&V symptoms and communicate this information before referring patients into hospital.

- Bed Managers – are required to ask referring GPs if the patient has had D&V symptoms and record this in their daily sheet (which should be kept and available for audits).
- Admitting nurse – is required to ask the patient regarding D&V symptoms within the first 2 hours of admission and documenting this in the Admission pack documents under 'Infection Control Risk Assessment' section.

	2019/20	2020/21
Total no of Ward Closures & Bay Restrictions (Due to Suspected / Confirmed Viral Diarrhoea and Vomiting)	34	6
No. of Patients	204	20
No. of Staff	49	0
No. of Bed Days lost	175	0

No. of Norovirus Outbreaks on Closed wards	2019/20	2020/21
Confirmed	4	1
Suspected	5	0

There was a significant reduction in ward closures/bay restrictions due to D&V in 2020/21 but there were significant disruptions across all 3 of the ILGs due to the COVID pandemic. A separate COVID report has been prepared detailing the COVID cases, ward outbreaks and disruption caused by the pandemic.

Period of Increase Incidence (PII)

7 PII meetings were held during 2020–2021. Remedial and corrective actions were identified and monitored by the ILGs, supported by the IPC Team.

Location	Period	Organism	Cases
RGH ITU	July 2020 – August 2020	VRE	5
PCH Ward 9	July 2020 - August 2020	CDI	5
PCH ITU	January 2021	MRSA	3
PCH Ward 5	02/03/21 – 08/03/21	Suspected Norovirus	4
POW Ward 2/AMU	May 2020 – August 2020	Increase of CDI infection	8
POW ITU	March 2021	Klebsiella Infection	19
POW ITU	December 2020 - March 2021	Line Infection	4

Serious Incident/ No Surprises Notifications (excludes SI notifications for CDI related deaths)

Location	Period	Organism	Total No. of Cases
RGH Site	17/09/2020 - 16/03/2021	COVID	557
Seren Ward & Ward 7 YCC	17/09/2020	COVID	10pts Seren & 13 pts YCC ward 7
RGH Ward 2	20/09/20 - 29/09/20	COVID	7
RGH Ward 12	15/09/20 – 30/09/20	COVID	14
RGH Ward 14	10/09/20 – 27/09/20	COVID	30
RGH Ward 15	22/09/20 – 15/10/20	COVID	25
RGH Ward 20	21/09/20 – 11/10/20	COVID	29
RGH YCR Site	05/10/20 – 10/10/20	COVID	26
PCH ITU	January 2021	MRSA	2
PCH Site	29/08/20 – 13/04/21	COVID	358
YCC Site	18/10/21 – 19/02/21	COVID	28

7. COVID - 19

Public Health Wales released a briefing in January 2020 alerting Health Board's to cases of pneumonia of unknown microbial aetiology associated with Wuhan City, Hubei Province, China. A cluster of cases had been identified which represented the emergence of a novel pathogen – COVID-19.

As the pandemic developed over 2020/21, Public Health Wales published regular briefings, IPC guidance, a clinical and epidemiological criteria and testing strategies to promote standardisation across Wales. The IPC team worked collaboratively to deliver a robust multi professional response to COVID across CTM.

A 15 point plan was devised by Public Health colleagues which described the gold standard CTM should worked towards. Clinical pathways were developed and along with a robust testing strategy, patient were placed in a suitable area depending on their test results/symptoms. Regular Outbreak Control Team meetings were held within CTM to discuss individual COVID cases and manage the evolving outbreak situation across all hospital sites. The

increased cases/outbreak situations seen across the hospital sites reflected the situation in our communities.

A proactive programme including IPC training, PPE instruction (donning and doffing) and fit test training was introduced and delivered across the 3 ILGs.

Confirmed cases in CTM September 2020 March 2021

	RGH	YCR (1)	YCR (2)	PCH	YCC	POW	Maesteg	GH
Cases	557	26	31	358	28	505	24	24
Deaths	169	1	2	104	7	163	11	5

The Healthcare Epidemiologist is analysing the whole genome sequencing data in order for us to better understand the CTM outbreaks. Work is ongoing to investigate the healthcare associated COVID cases and COVID deaths. Further advice is expected from WG.

8. Antimicrobial Stewardship

(1) Secondary Care

(a) National Prescribing Targets

There are 2 national antimicrobial prescribing targets. The progress made by CTM in 2019-2020 is shown in the table below. Please note: This is the most recent data available from Public Health Wales due to the impact of the COVID-19 pandemic.

	Indicator	Target	CTM progress	Notes
Welsh Health Circular antimicrobial resistance (AMR) and healthcare-associated infection (HCAI) Improvement Goals 2019/20 (data to end of March 2020)	Total antimicrobial volume – see Figure 1 below.	1% reduction	Target not achieved: PCH: 3.1% increase RGH: 3.6% increase POWH: No data (problems with denominator data since HB merge).	Total antimicrobial prescribing (oral and parenteral agents) is highest in RGH and lowest in POWH. 6 of the 15 acute hospitals in Wales met the target (POWH not included).
	World Health Organisation (WHO) ACCESS** category target – see Figure 2 below.	≥55% of antibacterial prescribing should be antibacterials in the ACCESS** category	All 3 acute hospitals achieved the target: PCH: 67.4% RGH: 66.5% POWH: 68.2%	10 of the 16 acute hospitals in Wales met the target.

** key antibiotics which are narrow spectrum and used as first-line treatment options

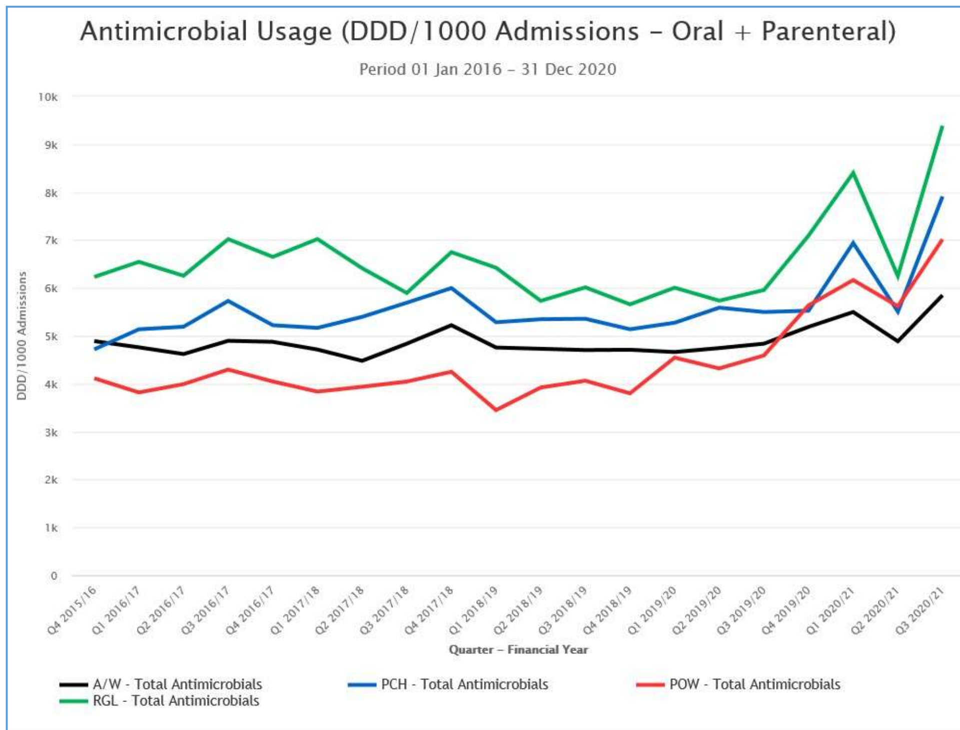


Figure 1: Total antimicrobial usage in acute sites (data to end December 2020)

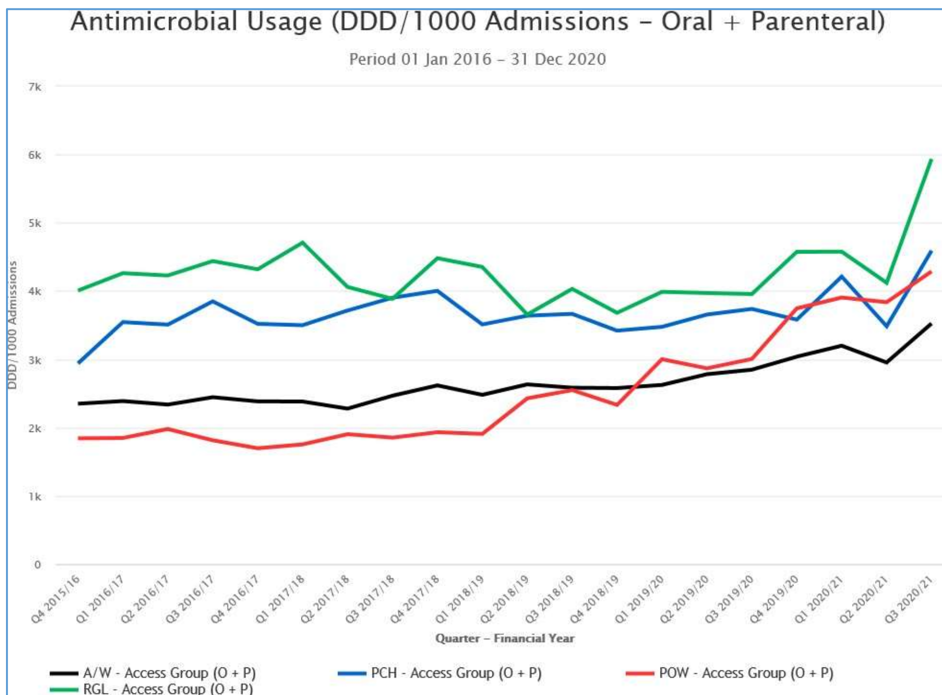


Figure 2: ACCESS group antimicrobial usage in acute sites (data to end December 2020)

(b) Antimicrobial stewardship work programme

Antimicrobial Guidelines

The major focus of the antimicrobial stewardship team has been the merge of the Cwm Taf and POWH antimicrobial guidelines. This has involved detailed review and update of all sections of the guidelines in conjunction with clinical and microbiology colleagues. The original deadline for the complete merge and creation of a single CTM antimicrobial guideline was March 2020. This has been delayed due to the COVID-19 pandemic. The progress so far is as follows: primary care approximately 64% complete, secondary care approximately 38% complete, paediatrics approximately 15% complete.

Antimicrobial Ward Rounds

Antimicrobial ward rounds (Consultant Microbiologist and Antimicrobial Pharmacist) are key to engaging with clinical staff and embedding good antimicrobial stewardship at ward level. In 2020-2021, the number of antimicrobial ward rounds in CTM decreased due to the COVID-19 pandemic. On all acute sites there was a once weekly *C. difficile* ward round in addition to a thrice weekly ITU ward round.

C. difficile Root Cause Analysis

Antibiotic prescribing is investigated in detail for all patients with healthcare-associated *C. difficile* infection. Any lessons learnt with regard to antimicrobial stewardship are communicated to clinical colleagues along with other measures put in place as necessary e.g. amendment of antimicrobial guidelines.

Restricted Antibiotics

There are protocols in place in PCH, RGH and POWH for the issue of restricted antibiotics (those requiring microbiology approval) by the pharmacy department. In addition, in POWH there is a separate, specific procedure for co-amoxiclav. In POWH, any antimicrobial prescribing outside of guidelines, without microbiology approval necessitates the pharmacist completing an antibiotic exception report, which is cascaded to the Medical Director. This is to ensure the prudent use of broad- spectrum antibiotics (WHO WATCH antibiotics) and antibiotics that should be reserved to treat resistant infections (WHO RESERVE antibiotics)

Audits

The Welsh Health Circular July 2019 mandated that all Health Boards will demonstrate compliance with
'Start Smart then Focus' by using the audit tool developed by Public Health Wales. This will allow benchmarking between acute sites in CTM and also against all hospitals in Wales. Due to the COVID- 19 pandemic, progress with embedding these audits in PCH, RGH and POWH has been delayed. The audits are due to start in June 2021 in POWH.

Education and Training

Education on antimicrobial stewardship is provided by clinical pharmacists in PCH, RGH and POWH. Audiences include pharmacists, fifth year medical students, doctors new to the Health Board and junior doctors.

ARK (Antibiotic Review Kit) Chart

The ARK chart has been approved for use across Wales. The introduction and roll out of the ARK chart in CTM is to be discussed and agreed at the CTM Antimicrobial Resistance Committee. Initial roll out will be in POWH in the latter part of 2021.

(2) Primary Care

(a) National Prescribing Targets

There are 3 national antimicrobial prescribing targets. Please note: This is the most recent data available from Public Health Wales due to the impact of the COVID-19 pandemic.

	Indicator	Target	CTM progress	Notes
All Wales Medicines Strategy Group National Prescribing Indicators (Data to end of December 2020)	Total antibacterial items/1000 STAR-PUs	Quarterly reduction of 5% against April 2018 - March 2019 baseline	Target achieved.	
	4C* antibacterial items/1000 patients *4C = co-amoxiclav, cephalosporins, fluoroquinolones, clindamycin.	To reduce prescribing compared with the quarter ending December 2018,	Target achieved.	The number of 4C antimicrobial items per 1,000 patients decreased by 19.6%, compared with an overall reduction of 15.7% across Wales.

Welsh Health Circular AMR and HCAI Improvement Goal 2019/20 (data to end of March 2020)	Total antimicrobial volume	25% reduction from baseline year of 2013 by 2024 (10 year target).	Not on track to meet target by 2023/24. Position at end 2019/20: An overall 9.5% reduction in total antimicrobial consumption against the target.	Wales remain on track to meet this target. CTM is one of 3 HBs not on track to meet the target. There was an increase in total antimicrobial usage in the winter quarters of 2019/20, halting overall reduction against the baseline rate.

(b) Antimicrobial stewardship work programme

Antimicrobial Guidelines

The major focus of the antimicrobial stewardship team has been the merge of the Cwm Taf and Bridgend Locality antimicrobial guidelines. This has involved detailed review and update of all sections of the guidelines in conjunction with clinical and microbiology colleagues. The original deadline for the complete merge and creation of a single CTM antimicrobial guideline was March 2020. This has been delayed due to the COVID-19 pandemic.

Audits

Work has focused on completing antibiotic prescribing audits within GP practices, and the results fed- back to the prescribers along with local and national prescribing and resistance data.

A cephalexin audit has been included in the Prescribing Management Scheme for 2021/22 that will inform future targeted interventions around cephalexin use and broader UTI management.

There have also been educational sessions with follow up audits to direct activity toward the review of antibiotics on repeat. These have looked at UTI prophylaxis predominantly but an acne and rosacea educational session/audit pack is currently

in development and is due to start in the summer of 2021.

<u>Education and Training</u>

As above.

9. Education and Training Activities

Face to face mandatory training was ceased in 2019/20 due to the COVID pandemic but the IPC Nurses continued to provide face to face sessions to reinforce the IPC precautions included in the national guidance to support the pandemic.

Level 2 training is available as an E.learning package via ESR.

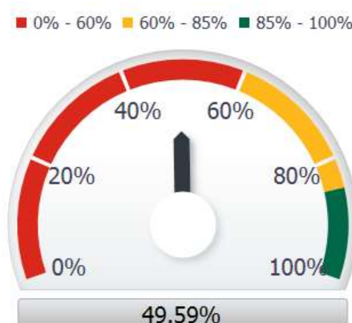
The table below identifies the number of staff trained this year.

Total Number of staff attending IP&C Training

	Level 2		Management of IPC		Other*	
	2019/20	2020/21	2019/20	2020/21	2019/20	2020/21
Attended	495	*	143	7	700	961
Withdrawn	4	*	58	*	9	*
Did Not Attend	2	*	5	*	1	*

*Other – includes IV drugs and nurse induction, hand hygiene and PPE

Combined Compliance % for all 4 Levels of IPC Training on 31.03.21



Competence Full Name	Headcount	Competencies Required	Competencies In-date	Compliance %
110|CSTF|Infection Prevention and Control Level 2a - 1 Year|	3976	3976	172	4.33%
110|CSTF|Infection Prevention and Control Management Training - No specified renewal|	644	644	172	26.71%
NHS|CSTF|Infection Prevention and Control - Level 1 - 3 Years|	3775	3775	2955	78.28%
NHS|CSTF|Infection Prevention and Control - Level 2 - 1 Year|	7211	7211	4440	61.57%

Overall Combined Compliance % for each Staff Group on 31.03.21

Staff Group	Headcount	Competencies Required	Competencies In-date	Compliance %
Add Prof Scientific and Technic	324	403	205	50.87%
Additional Clinical Services	2054	3408	1469	43.10%
Administrative and Clerical	2153	2181	1760	80.70%
Allied Health Professionals	653	919	461	50.16%
Estates and Ancillary	1280	1280	908	70.94%
Healthcare Scientists	199	218	170	77.98%
Medical and Dental	852	1594	188	11.79%
Nursing and Midwifery Registered	3441	5566	2568	46.14%
Students	24	37	10	27.03%

Overall Combined Compliance %
for each ILG on 31.03.21

ILG	Headcount	Competencies Required	Competencies In-date	Compliance %
110 Balance Sheet ILG	1	1	1	100.00%
110 Bank ILG	1	1	1	100.00%
110 Bridgend ILG	2780	4513	1912	42.37%
110 Corporate ILG	713	723	571	78.98%
110 Delivery Executive ILG	790	822	564	68.61%
110 Hosted Organisations ILG	68	69	56	81.16%
110 Merthyr & Cynon ILG	3483	5156	2428	47.09%
110 Rhondda & Taf ILG	3144	4321	2206	51.05%

Aseptic Non Touch Technique (ANTT)

Aseptic Non Touch Technique (ANTT) is a comprehensive practice framework for aseptic technique used for all invasive procedures, from major surgery to maintenance of invasive devices and will affect every directorate and varying disciplines of staff.

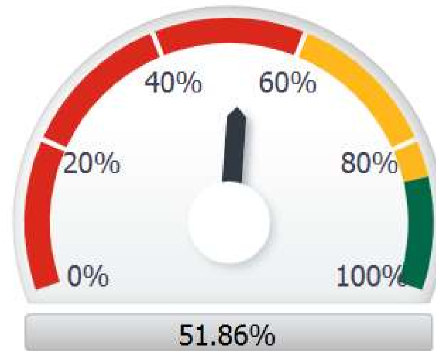
All health board employees who perform aseptic procedures as part of their role must complete the ANTT e-learning package which is available via NHS learning Wales. Staff will then be competency assessed in their areas by designated ANTT trainers for the organisation.

A Senior Infection Prevention and Control Nurse coordinated the roll out of ANTT in the former Cwm Taf UHB and the responsibility for monitoring compliance and DOPS assessment has been given to the ILGs to monitor and manage compliance. The IP&CT will continue to offer support and assistance to provide training for ANTT assessors and with assessments.

The All Wales ANTT policy has been adopted by the UHB and a steering group has been set up to oversee the implementation which is ongoing in primary and secondary care.

A Senior Infection Prevention and Control Nurse is coordinating ANTT workshops on the Princess of Wales Hospital site to introduce/roll out ANTT.

Combined compliance % for Level 1 (e-learning) and Level 2 (workplace assessment) ANTT Training on 31.03.21



Compliance Percentage for each of the three levels of ANTT training on 31.03.21

Competence Full Name	Headcount	Competencies Required	Competencies In-date	Compliance %
110|MAND|Aseptic Non Touch Technique - Level 2 (Workplace Assessment) - 3 Years|	3680	3680	1014	27.55%
110|MAND|Aseptic Non Touch Technique - Level 3 (Assessor) - No Specified Renewal|	226	226	33	14.60%
NHS|MAND|Aseptic Non Touch Technique - 3 Years|	3908	3908	2921	74.74%

Combined Level 1 and Level 2 compliance % for each Staff Group on 31.03.21

Staff Group	Headcount	Competencies Required	Competencies In-date	Compliance %
Add Prof Scientific and Technic	18	36	24	66.67%
Additional Clinical Services	1011	1952	1038	53.18%
Allied Health Professionals	279	558	237	42.47%
Healthcare Scientists	1	2	1	50.00%
Medical and Dental	493	981	169	17.23%
Nursing and Midwifery Registered	2103	4053	2462	60.75%
Students	3	6	4	66.67%

Combined Level 1 and Level 2 compliance % for each ILG on 31.03.21

ILG	Headcount	Competencies Required	Competencies In-date	Compliance %
110 Bridgend ILG	105	210	83	39.52%
110 Corporate ILG	27	54	18	33.33%
110 Delivery Executive ILG	84	168	105	62.50%
110 Hosted Organisations ILG	6	12	0	0.00%
110 Merthyr & Cynon ILG	2072	3996	2015	50.43%
110 Rhondda & Taf ILG	1614	3148	1714	54.45%

10. Decontamination

- **Decontamination Role**
  An external review is being carried out of decontamination in CTM. As part of the review, the infrastructure, governance arrangements, systems and processes will be evaluated. The operational lead for decontamination role has been incorporated into the Deputy Lead Infection Prevention and Control Nurse post but this is unsustainable and poses a risk for the Organisation. Investment has been sought unsuccessfully through IMTP submissions for many years but appointment of a dedicated person to lead on the operational decontamination agenda is critical for patient care and safety.

- **Local Decontamination Meetings**
  Local decontamination meetings have been set up for each Integrated Locality Group and Terms of Reference have been agreed.

- **POW Centralisation Scheme**
  The Strategic Outline Case submitted to Welsh Government has been approved and Capital Planning are in the process of appointing a design team to take the project forward. Shared Services are planning to carry out a JAG audit in Endoscopy in May 2021. The Authorising Engineer for Decontamination will require a statement from Welsh Government to support the JAG declaration.

- **SGS Audit**
  SGS carried out an audit of the three Sterile Service Departments in the Health Board on the 15th – 17th of October 2019. As a result of this audit, certification was temporarily suspended in the Princess of Wales Hospital which was rectified by the middle of November 2019. SGS re-audited in January 2020 where 7 minors were identified and again in March 2021 where 6 minors were identified. Overall, significant improvement has been made within the Sterile Service Departments.

- **Community Dental Instruments**
  Following the community dental survey carried out in November 2019, a number of meetings have been held to make arrangements to transfer dental equipment to the accredited Sterile Service Departments within the Health Board for decontamination. A lack of resource within CSSD has temporarily halted this process.

- **Laryngoscope Handles**
  An updated Welsh Health Circular (September 2020) has been distributed to all Health Board's in Wales. The updated version asks HBs to consider the environmental impact of switching to single use laryngoscope handles and asks that systems are in place to ensure reusable handles are decontaminated in accordance with manufacturer instructions using automated and validated systems. The Health Board continues to work towards the Welsh Health Circular.

- **Channelled Nasoendoscopes**

The Health Board has purchased 9 channelled naso-endoscopes for use in POW and RGH. Prior to use, a working group has been set up to ensure there is a robust decontamination process in place with stringent standard operating procedures (SOPs). The operational lead for decontamination will audit the practice against the SOP's once the process has been established.

- **Authorising Engineer Decontamination AE(D) Report**

  Available upon request.

11. Challenges this year and priorities for 2020/21

Challenges faced in the past year:

- The day to day IPC work has been on hold for the past year in order for the team to focus on the preparedness and response agenda for COVID.
- Increased workload due to the pandemic and responding/supporting to the COVID outbreaks across CTM.
- Poor staffing levels due to long term sickness and vacancies.
- Unable to support primary care due to the lack of a dedicated IPC resource.
- Unable to achieve audit programme.
- Unable to progress with planned improvement work.

Priorities for 2021/22

- Work with Integrated Locality Group leads to develop local improvement goals against the WG reduction expectations.
- Investment is needed to provide an integrated whole system approach for infection prevention and control. More emphasis must be placed on making improvements in primary care to improve patient care and safety and influence a reduction in C.Diffiicle infection, S.aureus and gram negative bacteraemia. The HB will not achieve the healthcare associated improvement goals without investment in primary care.
- A dedicated resource is critical to lead on the operational agenda for decontamination for Cwm Taf Morgannwg UHB.
- There are a number of refurbishment and capital building schemes ongoing across the Organisation which have identified a number of

engineering issues which affect IPC. A dedicated resource to support the ground and 1st floor refurbishment programme at PCH has been agreed and the recruitment process has started to appoint an IPC Nurse to support the schemes.

- Reintroduce face to face IPC training to offer a blended approach to learning.

- Complete a comprehensive IPC audit programme across the ILGs.

- Recommence improvement work to -
    - Develop and introduce a robust root cause analysis process for secondary and primary care to learn lessons from all cases of C.Difficile infection and preventable infections
    - Standardise skin preparation for surgical procedures
    - Reduce preventable infections
    - Support improvements in IPC practice and roll out of ANTT

- Provide bespoke placements with the IPC team for student nurses.

12. Glossary

CCU	Coronary Care Unit
CDI	*Clostridium difficile* Infection
C.diff	*Clostridium difficile*
CTUHB	Cwm Taf Morgannwg University Health Board
CVAD	Central Venous Access Device
CVC	Central Venous Catheter
D&V	Diarrhoea and Vomiting
GP	General Practitioner
HARP	The Healthcare Associated Infection, Antimicrobial Resistance & Prescribing Programme
HCAI	Health Care Associated Infections
HPV	Hydrogen Peroxide Vapour
IPC/IP&C	Infection Prevention & Control
IPCC	Infection Prevention & Control Committee
IPCN	Infection Prevention & Control Nurses
IP&CT	Infection Prevention & Control Team
ITU	Intensive Therapy Unit
MRSA	Methicillin - Resistant *Staphylococcus aureus*
MSSA	Methicillin - Sensitive *Staphylococcus aureus*
NHS	National Health Service
OPD	Out Patient Department
PCH	Prince Charles Hospital
POW	Princess of Wales Hospital

PPE	Personal Protective Equipment
PVC	Peripheral Venous Access Catheter
RCA	Root Cause Analysis
RGH	Royal Glamorgan Hospital
RRAI	Rapid Response to Acute Illness
SCBU	Special Care Baby Unit
SSI	Surgical Site Infection
UHB	University Health Board
VAP	Ventilator Associated Pneumonia
WG	Welsh Government
WHO	Welsh Health Organization