



GIG
CYMRU
NHS
WALES

Bwrdd Iechyd Prifysgol
Bae Abertawe
Swansea Bay University
Health Board



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|---------------------------------|---|--------------------------|-------------------------------------|
| Meeting Date | 27 June 2023 | Agenda Item | 3.1 |
| Report Title | Healthcare Acquired Infections Update Report | | |
| Report Author | Delyth Davies, Head of Nursing, Infection Prevention & Control | | |
| Report Sponsor | Gareth Howells, Executive Director of Nursing & Patient Experience | | |
| Presented by | Delyth Davies, Head of Nursing, Infection Prevention & Control | | |
| Freedom of Information | Open | | |
| Purpose of the Report | This paper provides the Committee with an update on the Health Board's progress against Tier 1 infections and presents the 2023/24 Infection Prevention Improvement Plan. | | |
| Key Issues | <ul style="list-style-type: none"> The Health Board and Service Group position against infection reduction expectations to 31st May 2024 is presented. There has been year-on-year reduction to May 2023 in <i>Staph. aureus</i>, <i>E. coli</i> and <i>Pseudomonas aeruginosa</i> bacteraemia. Compliance with infection-related mandatory training is provided (against a national target of 85% compliance). Infection Prevention & Control Level 1 & Level 2 training compliance at 31/05/2023 was 86.30% and 22.74% respectively. ANTT training compliance (combined) is reported on ESR as being 24.61% (staff undertaking either of two courses with same content). | | |
| Specific Action Required | Information | Discussion | Assurance |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Recommendations | <p>Members are asked to:</p> <p>Members are asked to:</p> <ul style="list-style-type: none"> - NOTE the position against the key indicator infections (Tier 1) to 31/05/2023 (Appendix 1). - NOTE the 2023/24 Infection Prevention Improvement Plan (Appendix 2); - NOTE the compliance with mandatory infection prevention-related training (Appendix 3), and the expectation for Service Groups to focus on achieving 85% compliance. - NOTE the proposed changes to the governance arrangements for the Infection Prevention & Control Committee. | | |

Infection Prevention and Control Report

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|--------------------------------------|--|---------------------------|----------------------------|
| | | Agenda Item | 4.1 |
| Freedom of Information Status | | Open | |
| Performance Area | Healthcare Acquired Infections Update Report | | |
| Author | Delyth Davies, Head of Nursing, Infection Prevention & Control | | |
| Lead Executive Director | Gareth Howells, Executive Director of Nursing & Patient Experience | | |
| Reporting Period | 31 May 2023 | Report prepared on | 12 th June 2023 |

Summary of Current Position to 31 May 2023

This paper will present a summary of the overarching position in relation to the number of cases of key indicator infections within the Health Board, and by Service Group, to the end of May 2023.

Health Board and Service Group progress against the Tier 1 infection reduction goals to the end of May 2023 is shown in [Appendix 1](#).

A summary position for the Health Board is shown in the table below, identifying the cumulative position for the financial year 2023/24, the monthly case numbers, and the average monthly goal.

Table 1: Health Board Summary Position for May 2023

| Infection | Cumulative Cases to end of May 2023 | Monthly total: May 2023 | Average monthly reduction goal (max.) |
|---|-------------------------------------|-------------------------|---------------------------------------|
| <i>C. difficile</i> (CDI) | 30 | 12 | <8 (annual maximum: <95 cases) |
| <i>Staph. aureus</i> bacteraemia (SABSI) | 26 | 10 | <6 (annual maximum: <71 cases) |
| <i>E. coli</i> bacteraemia (EcBSI) | 48 | 22 | <19 (annual maximum: <234 cases) |
| <i>Klebsiella spp.</i> bacteraemia (KI BSI) | 18 | 10 | <6 (annual maximum: <71 cases) |
| <i>Ps. aeruginosa</i> bacteraemia (PAERBSI) | 3 | 1 | <2 (annual maximum: <24 cases) |

A summary position for Service Groups is shown in the table below, identifying the number of cases in the reporting month, with cumulative totals for the financial year to date shown in brackets.

Table 2: Service Group Summary Position for May 2023 (cumulative)

| | CDI | SABSI | EcBSI | KIBSI | PAERBSI |
|---|-------------------|-------------------|------------------|-------------------|------------------|
| SBUHB Total | 30 (25% ↑) | 26 (16% ↓) | 48 (8% ↓) | 18 (29% ↑) | 3 (25% ↓) |
| PCTSG - CAI | 12 (6 cases ↑) | 11 (8 cases ↓) | 22 (5 cases ↓) | 7 (4 cases ↑) | 1 (1 case ↓) |
| PCTSG - HAI | 0 (1 case ↓) | 0 (equal to) | 0 (1 case ↓) | 0 (equal to) | 0 (equal to) |
| MH&LD – HAI | 0 (equal to) | 0 (equal to) | 0 (1 case ↓) | 0 (equal to) | 0 (equal to) |
| MORR – HAI | 12 (1 case ↓) | 8 (7 cases ↓) | 20 (4 cases ↑) | 8 (equal to) | 2 (equal to) |
| NPTH - HAI | 1 (1 case ↓) | 0 (equal to) | 1 (equal to) | 1 (equal to) | 0 (equal to) |
| SH - HAI | 2 (equal to) | 7 (4 cases ↑) | 5 (1 case ↓) | 2 (equal to) | 0 (equal to) |
| Other HB cases identified in, but not associated with, SBUHB | 3 | | | | |

Whilst the Health Board is achieving the average monthly case expectation for *Pseudomonas aeruginosa* bacteraemia only, there is year-on-year reduction in episodes of harm for *Staph. aureus* and *E. coli* bacteraemia compared with the position to May 2022.

Episodes of harm from *Klebsiella spp.* bacteraemia have increased year-on-year, with the majority of cases associated with Morriston Hospital and the community. *Klebsiella spp.* bacteraemia continues to have an association with hepato-biliary disease, such as gallstones.

There has been an increase in *C. difficile* cases to the end of May, 2023 with the majority of cases occurring at Morriston and the community. Whole genome sequencing results continue to indicate that there are few confirmed transmission events within the Health Board. Whole Genome Sequencing across Wales since 2020 has indicated a significant burden of transmission across a variety of settings, with multiple potential reservoirs in health care and the community, with a number of publications internationally identifying the potential for transmission from food and animals and diverse environmental sources.

The challenge of tackling *C. difficile* in Wales has been a focus of the Wales *C. difficile* Infection Focus Forum for the last 18 – 24 months and is to culminate in a soon to be published *Clostridioides difficile* Strategy and Action Plan for Wales 2023-2025.

2023/24 Infection Prevention Improvement Plans

Learning from the improved scrutiny of healthcare associated infections undertaken by Service Groups during 2022/23 identified areas for continuing improvement. The 2023/24 Infection Prevention Improvement Plan can be reviewed in **Appendix 2**. The key focus for 2023/24 includes:

- Achieve reduction in 5 key healthcare associated infections through application of evidence-based practice and best practice guidance.
- Develop a proactive schedule of antimicrobial-related audit, using the Audit Management and Tracking (AMaT) clinical audit assurance software. The IPC-related audit tools currently available on AMaT, and being piloted by Cwm Taf Morgannwg Health Board, contain specifics to that Health Board. The SBU IPC team is in the process of revising the audit tool for pilot within this Health Board.
- Achieve compliance with national training target for infection prevention & control-related mandatory training (all available staff). Working toward IP&C Training, Level 1 and Level 2 – ≥85% (available staff). Training compliance to 31/05/23 is detailed in Appendix 3. Overall, compliance at 31/05/23 (reported via ESR) for Level 1 IP&C training was 86.30%; Level 2 IP&C training compliance was 22.74%; ANTT combined compliance 24.61%. Caveat: there are many wards reporting much higher levels of compliance in nursing staff in relation to Level 2 IPC training. This is not currently reflected in ESR.
- Develop a proactive schedule of IPC-related audit for Service Groups, and IPC team, using the Audit Management and Tracking (AMaT) clinical audit assurance software.
- Maintain compliance with National Standards of Cleanliness.
- Continue to develop a Quality Improvement programme to work towards compliance with the National Decontamination Agenda and relevant Welsh Health Technical Memorandum documents.

Future governance arrangements for Infection Prevention & Control

Following the review of corporate governance arrangements for Swansea Bay University Health Board, the Infection Control Committee will become a sub-group of the Quality & Safety Group. A revised Terms of Reference will be submitted to the Infection Control Committee on 29 June for review and approval. Following this, the Infection Prevention & Control Group will report directly to the Quality & Safety Group and updates for the Quality & Safety Committee will be included within the report from the Quality & Safety Group.

Challenges, Risks and Mitigation

- Current pressures on Health Board services, both in the community and in hospitals, continue to be extreme, as are the pressures on providing social care packages. The demand for unscheduled acute care remains high, leading to increased demand for inpatient beds, with surge capacity being utilised. In addition to the above, increased length of stay and staff shortages increase risks of delivering safe patient care.
- Across the Health Board (as is the case across NHS Wales) there are increasing numbers of those living with high-risk co-morbidities and risks for *C. difficile*.
- The service pressures on acute sites continue to impede the ability to decant bays for 4D cleaning bay areas, and clinical areas affected by periods of increased incidence of *C. difficile* in line with Health Board standards. 3D cleaning is undertaken using disinfectants and all single rooms, bathrooms and toilets are reactively & proactively 4D UV-C cleaned.
- Further, bed spacing and ventilation within the majority of inpatient settings pose an ongoing risk in relation to transmission of COVID-19 and other acute viral infections.
- Planned preventive maintenance of the aging estate is compromised by the lack of dedicated decant facilities.
- Original plans for dedicated decant facilities in Morriston are being reviewed by Capital Planning to provide a more economically viable proposal, which is likely to delay further the provision of a decant facility.

Actions in progressing Infection Prevention Improvement Plan (what, by when, and by whom)

Action: Confirmation of Service Group Infection Prevention Improvement Plans for 2023/24, and submission of these to the Health Board Infection Prevention & Control Group. **Target completion date:** 29.06.23. **Leads:** Service Group Directors.

Action: Develop an IPC audit tool for piloting in Swansea Bay. **Target completion date:** 30.06.23. Interim Matron IP&C.

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.

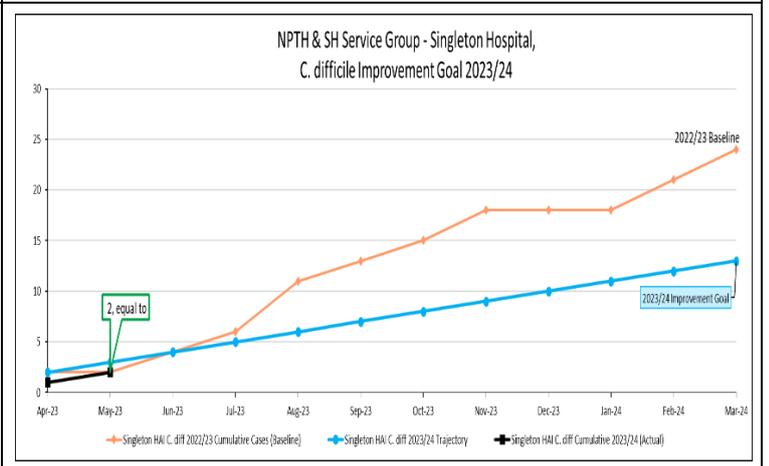
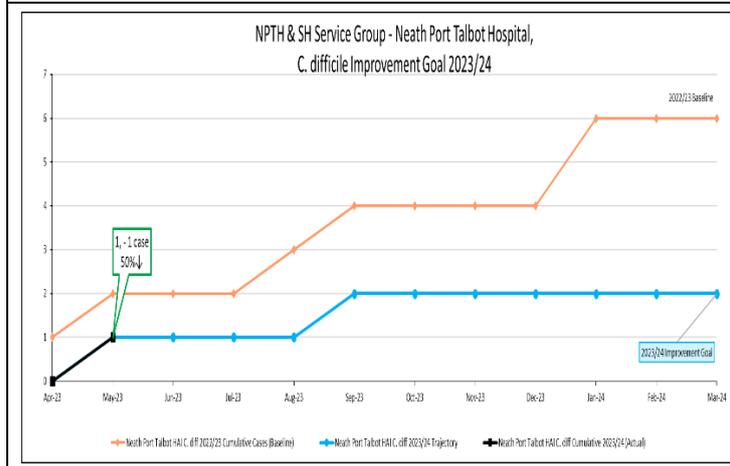
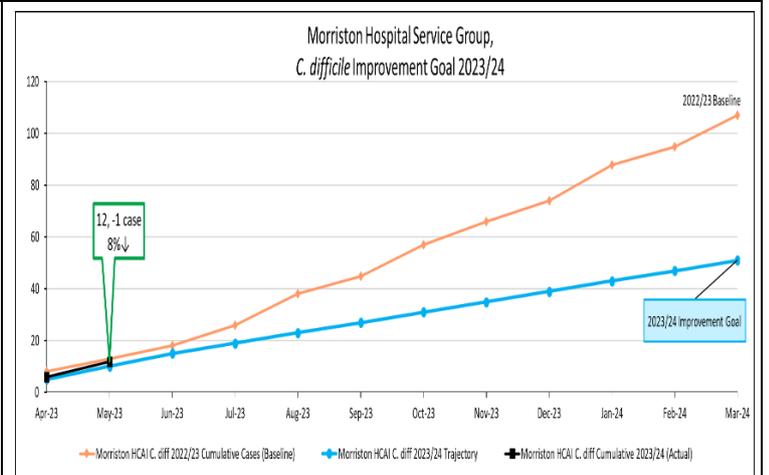
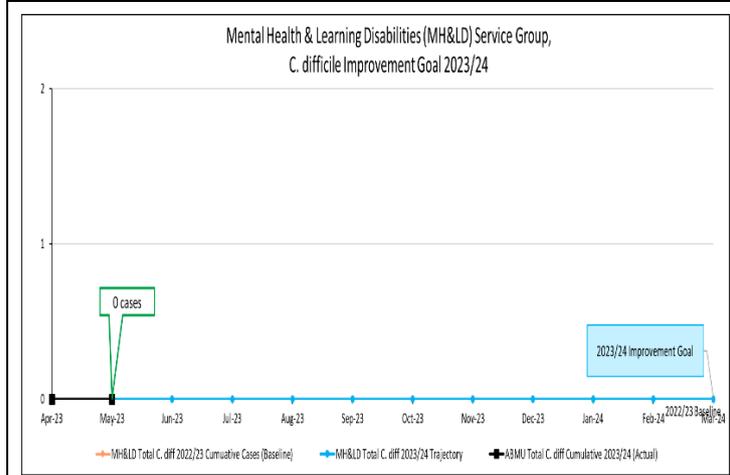
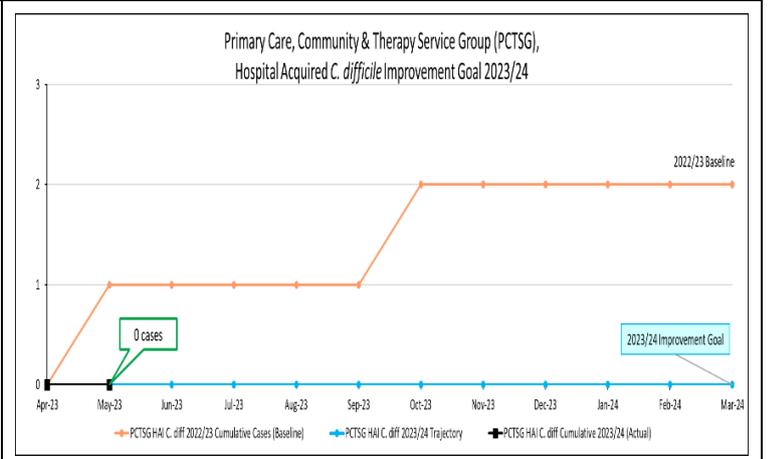
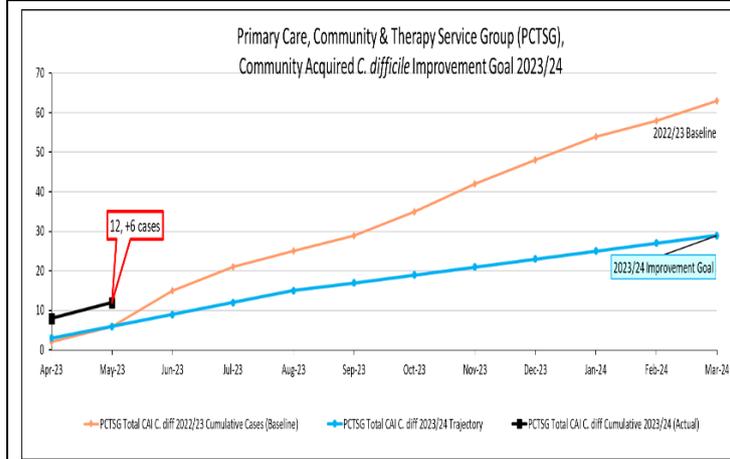
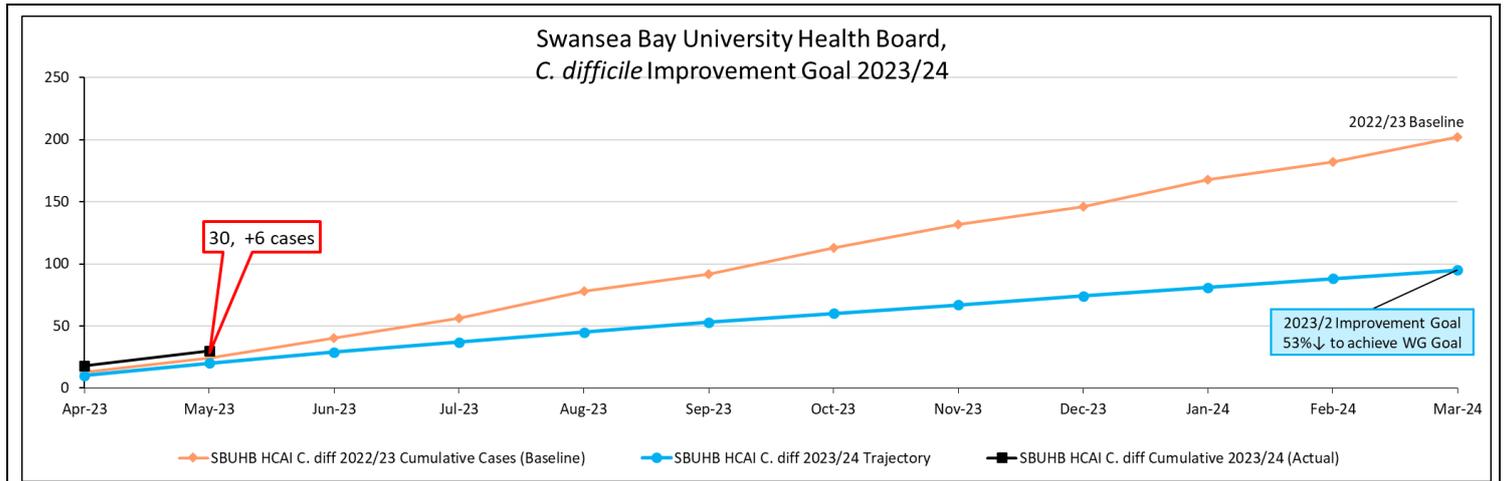
The estimated costs related to healthcare associated infections, from 01 April 2023 to end of May 2023 is as follows: *C. difficile* - £300,000; *Staph. aureus* bacteraemia - £182,000; *E. coli* bacteraemia - £55,200; therefore, a total cost of **£537,200**.

Recommendations

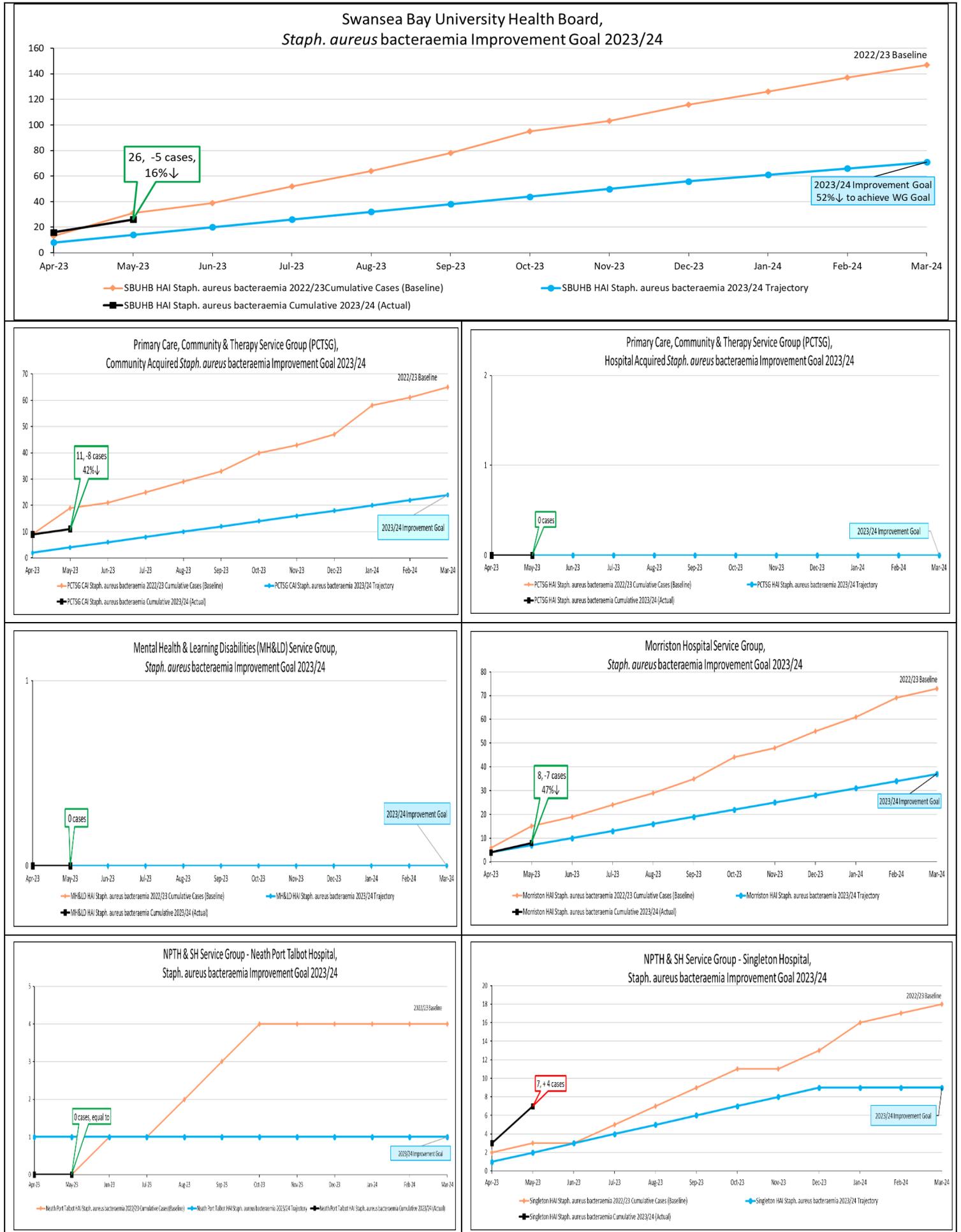
Members are asked to:

- NOTE the position against the key indicator infections (Tier 1) to 31/05/2023 ([Appendix 1](#)).
- NOTE the 2023/24 Infection Prevention Improvement Plan (**Appendix 2**);
- NOTE the compliance with mandatory infection prevention-related training ([Appendix 3](#)), and the expectation for Service Groups to focus on achieving 85% compliance.
- NOTE the proposed changes to the governance arrangements for the Infection Prevention & Control Committee.

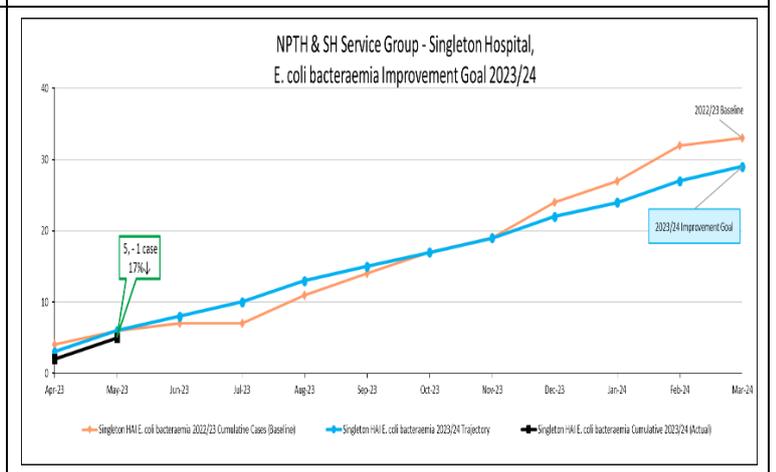
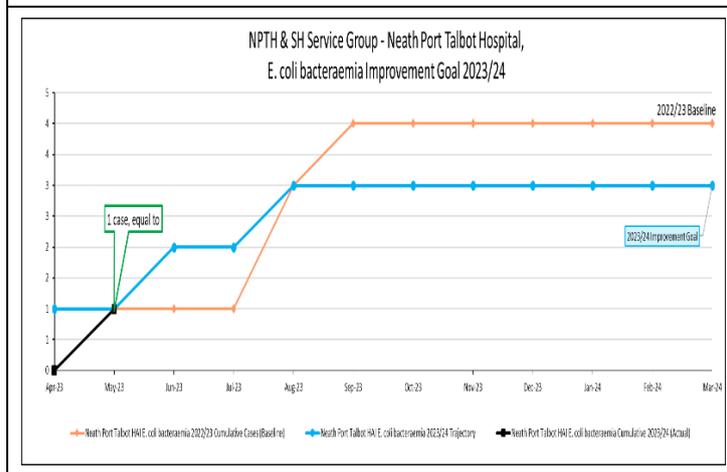
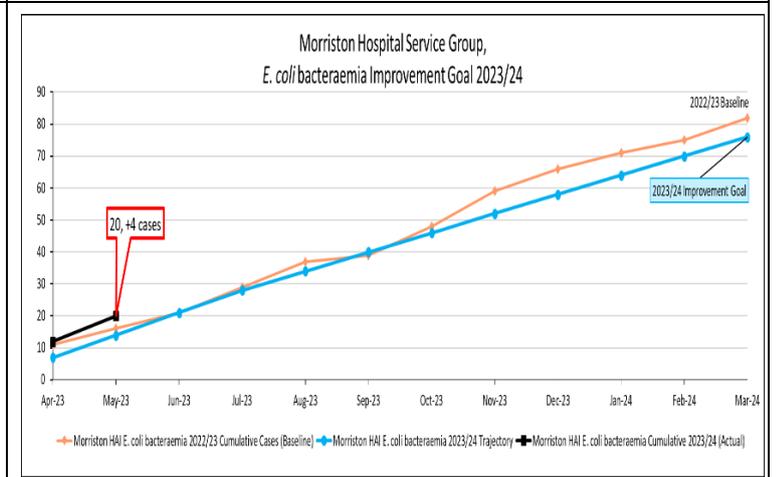
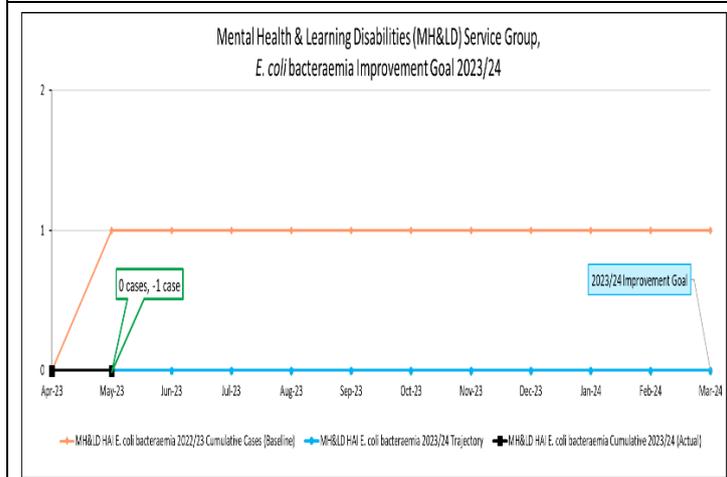
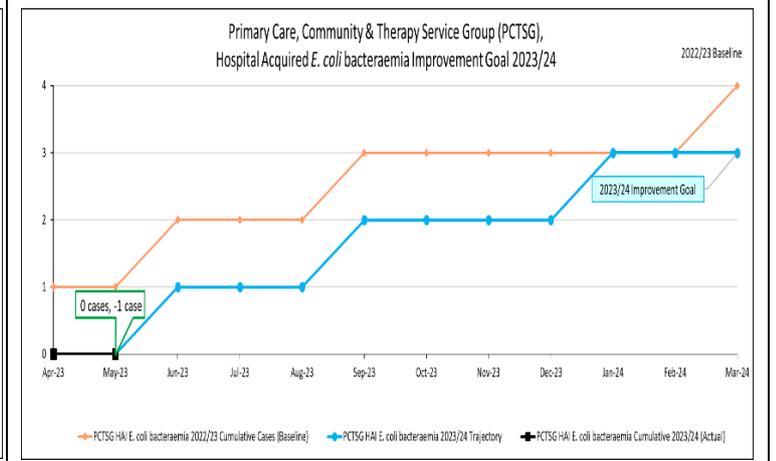
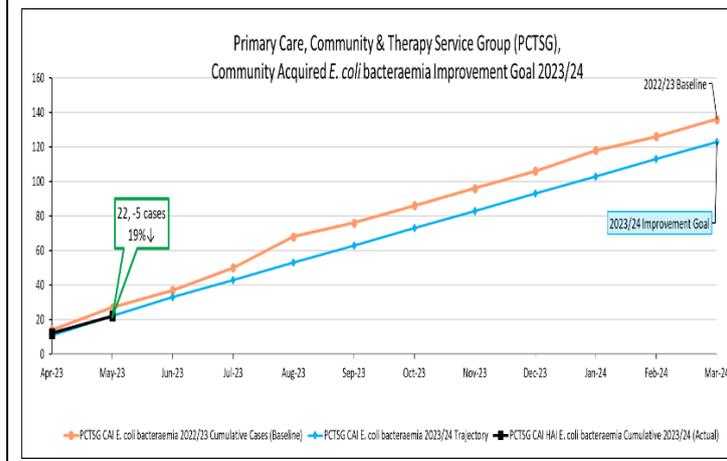
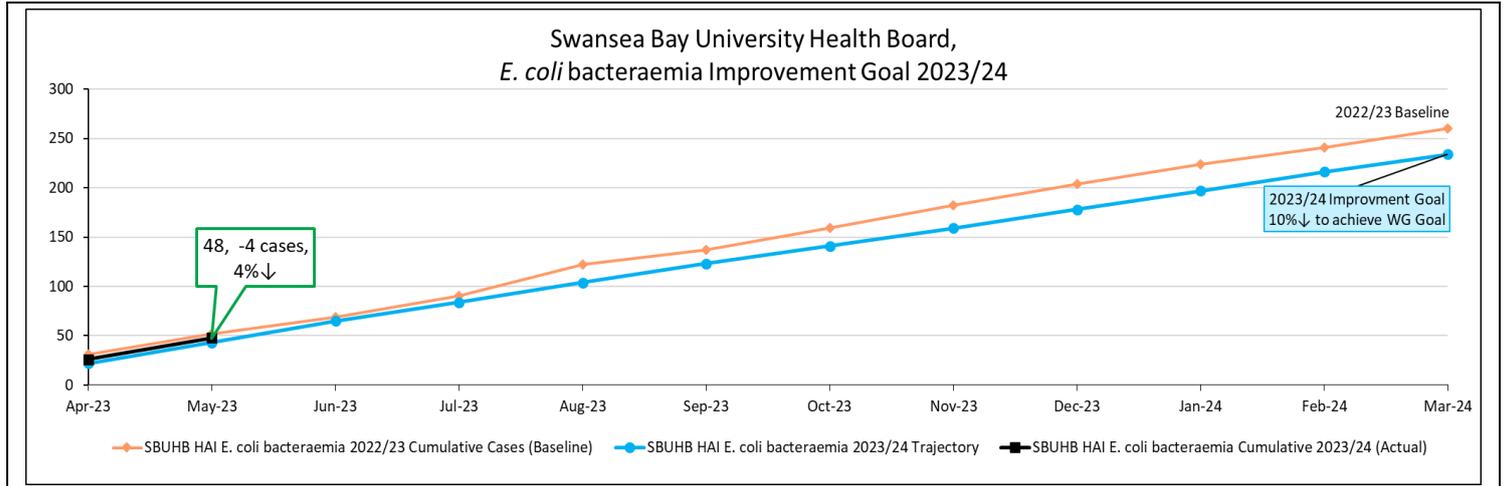
C. difficile



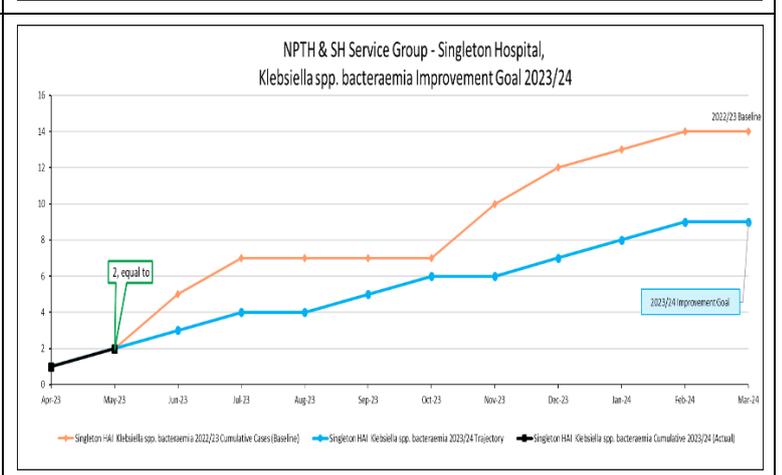
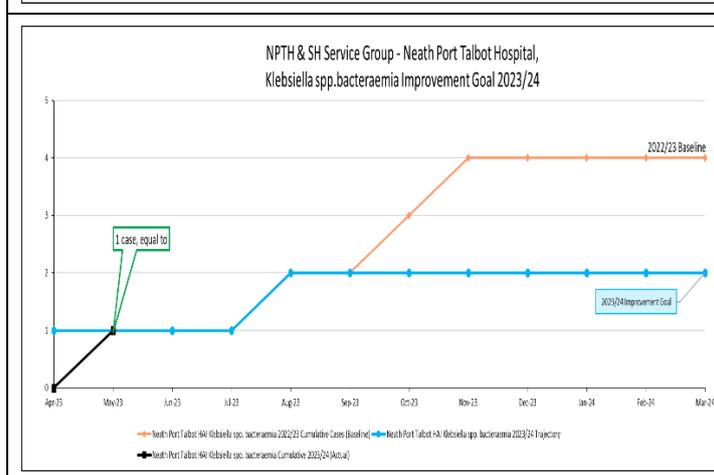
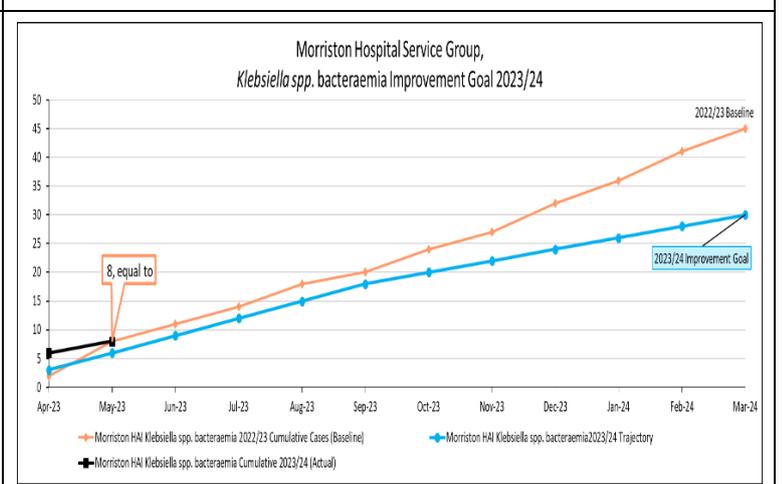
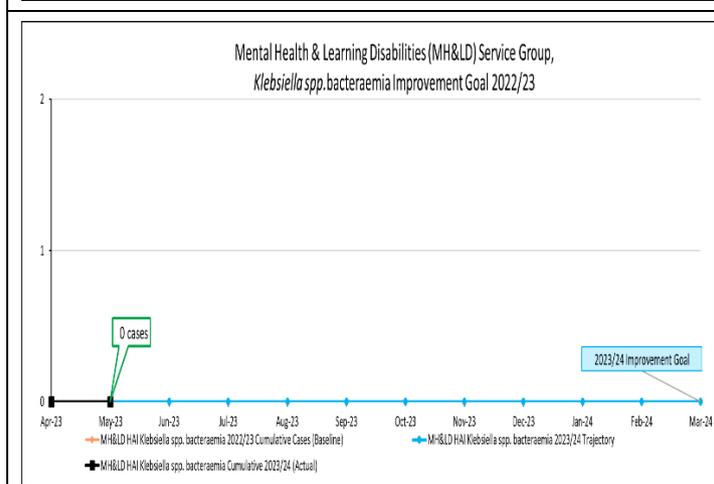
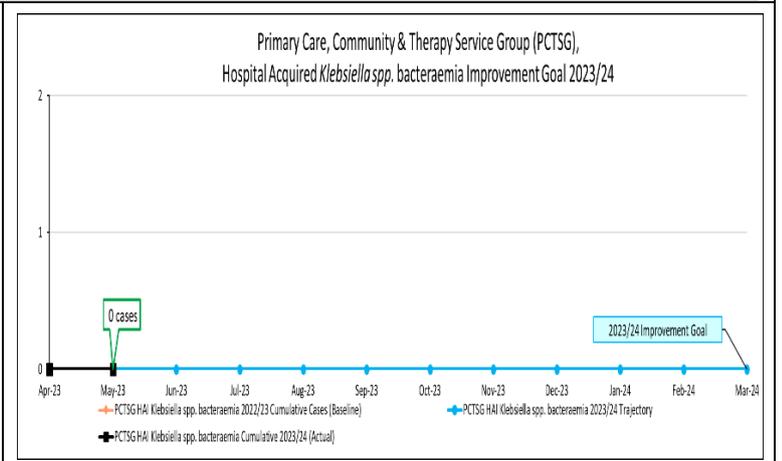
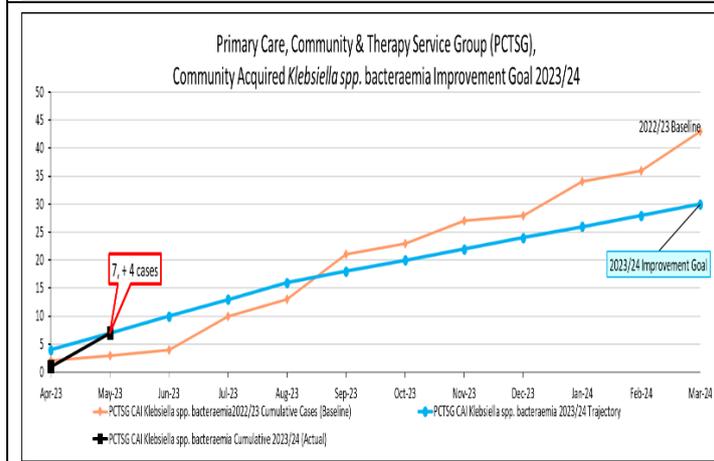
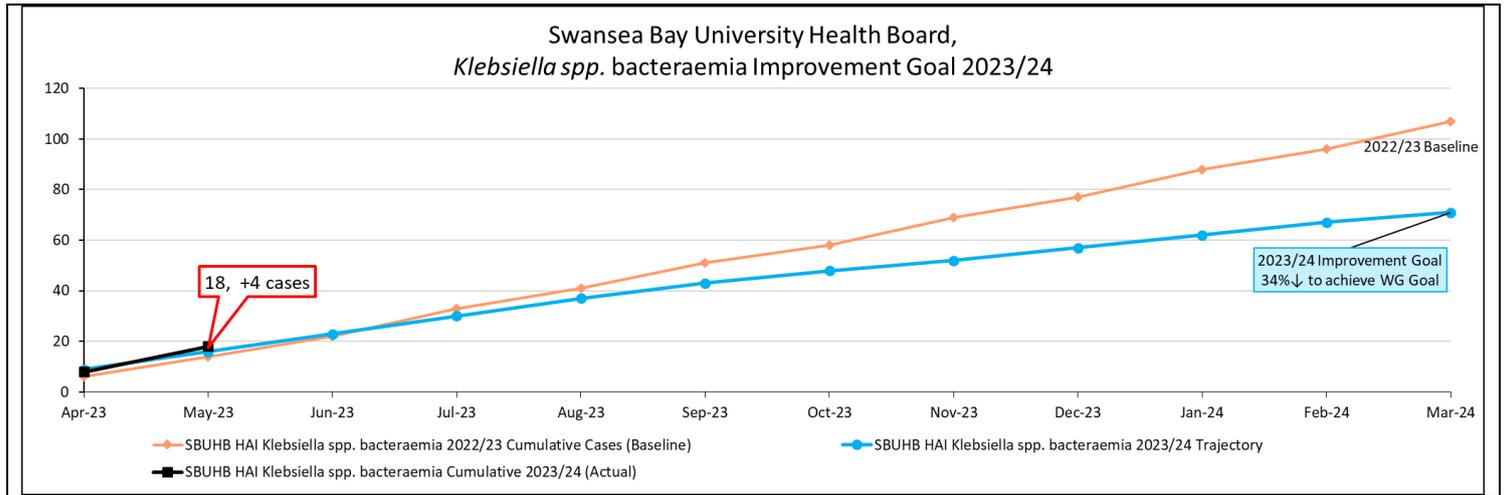
Staph. aureus bacteraemia



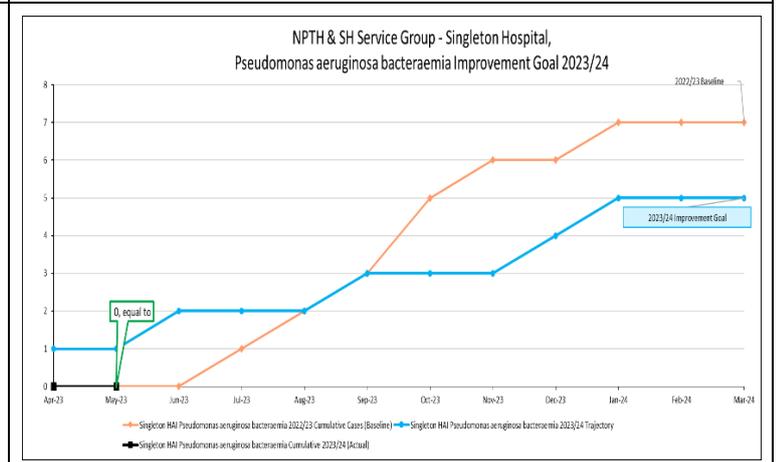
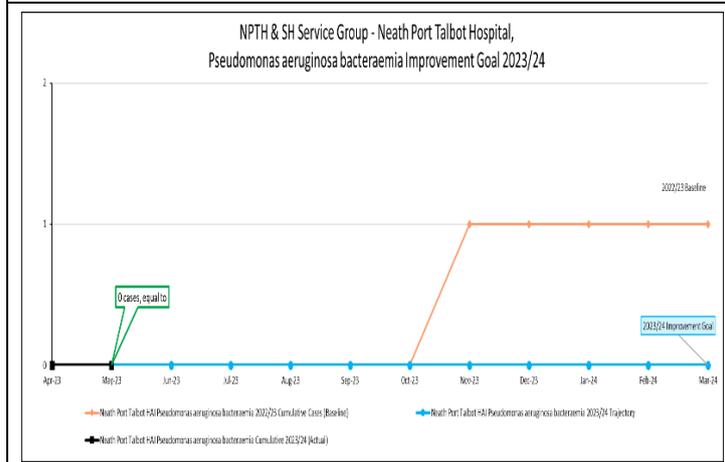
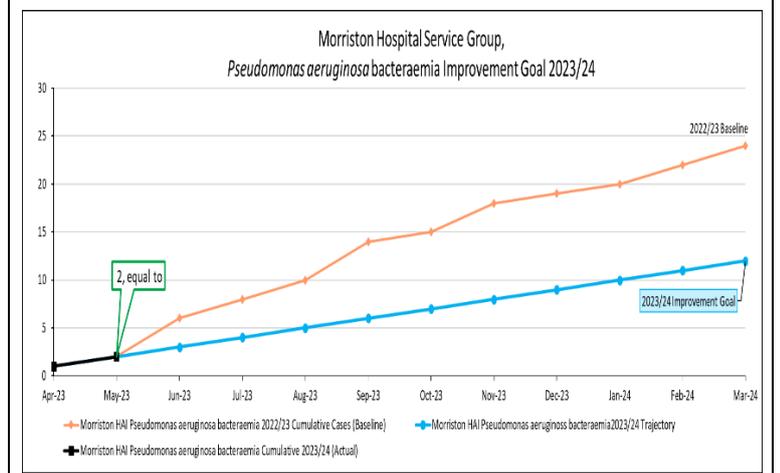
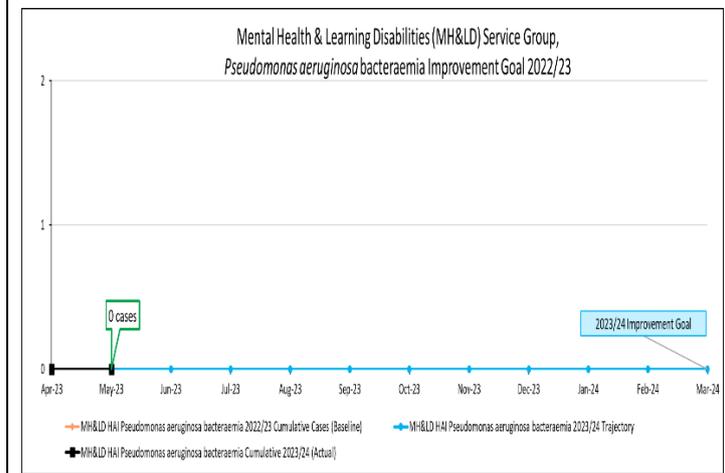
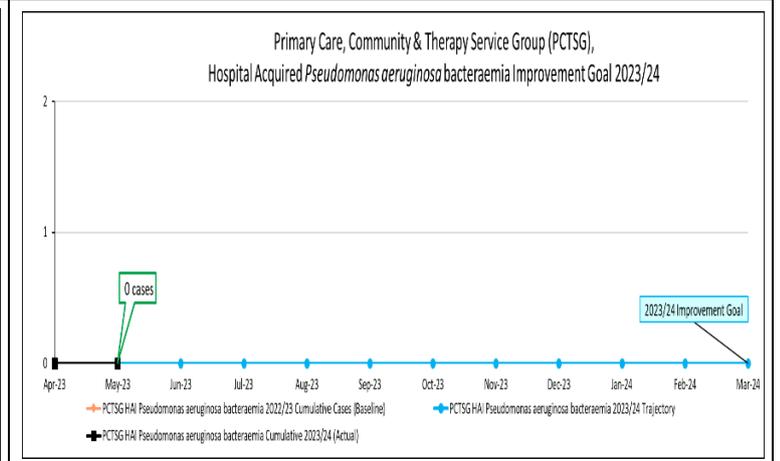
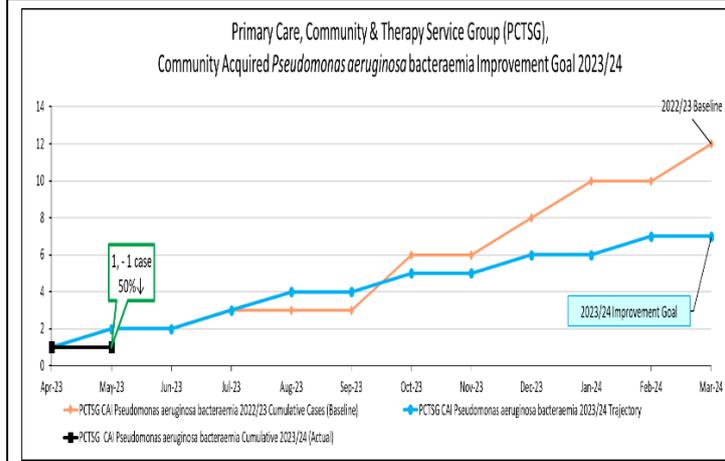
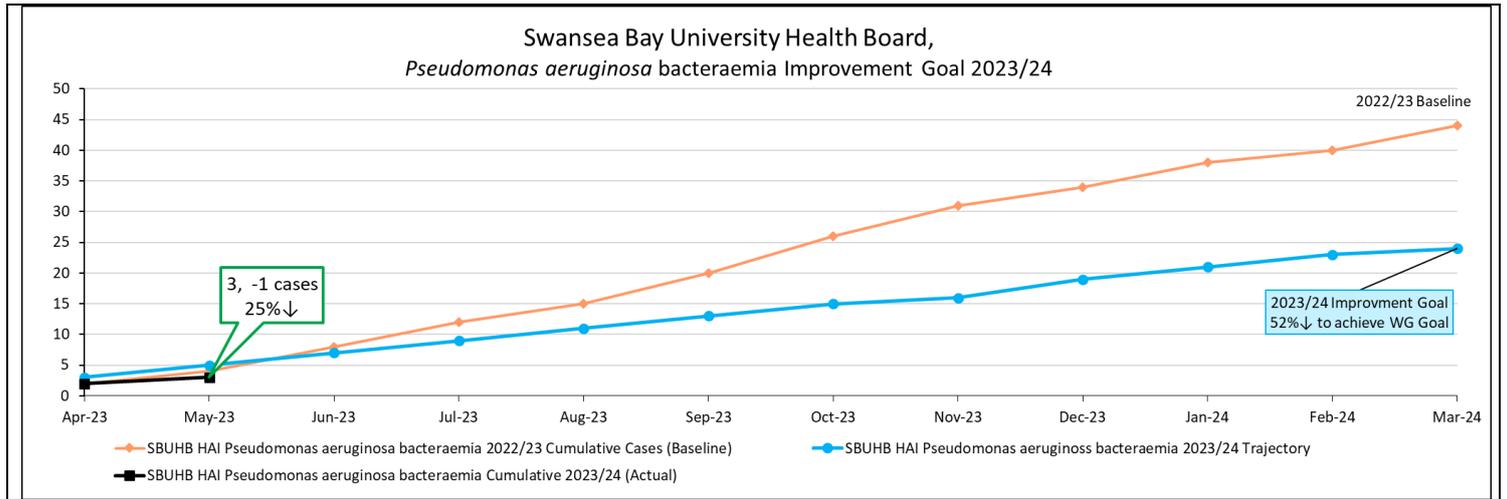
E. coli bacteraemia



Klebsiella spp. bacteraemia



Pseudomonas aeruginosa bacteraemia



Training compliance obtained from ESR (National compliance target 85%)**Level 1 - Infection Prevention and Control Training compliance at 31st May 2023 – 86.30% overall**

| Staff Group | % Compliance to end of May 2023 | Increase (▲) or decrease (▼) in compliance compared to previous report |
|---|---------------------------------|--|
| Infection Prevention and Control – Level 1 – 3-yearly | | |
| Add Prof Scientific and Technic | 90.02% | ▲ (88.66%) |
| Additional Clinical Services | 86.34% | ▼ (86.46%) |
| Administrative and Clerical | 89.58% | ▼ (89.70%) |
| Allied Health Professionals | 94.44% | ▲ (94.33%) |
| Estates and Ancillary | 83.57% | ▲ (81.43%) |
| Healthcare Scientists | 84.47% | ▼ (84.93%) |
| Medical & Dental | 52.44% | ▼ (52.20%) |
| Nursing & Midwifery Registered | 90.12% | ▼ (90.26%) |
| OVERALL COMPLIANCE | 86.30% | ▲ (86.17%) |

Level 2 - Infection Prevention and Control Training compliance at 31st May 2023 – 22.74% overall

| Staff Group | % Compliance to end of May 2023 | Increase (▲) or decrease (▼) in compliance compared to previous report |
|--|---------------------------------|--|
| NHS CSTF Infection Prevention and Control - Level 2 – Annual | | |
| Add Prof Scientific and Technic | 15.08% | ▼ (15.28%) |
| Additional Clinical Services | 27.45% | ▼ (28.35%) |
| Administrative and Clerical | 6.79% | ▼ (6.85%) |
| Allied Health Professionals | 41.91% | ▲ (41.05%) |
| Estates and Ancillary | 2.46% | ▲ (2.45%) |
| Healthcare Scientists | 13.90% | ▼ (14.79%) |
| Medical & Dental | 11.51% | ▼ (12.78%) |
| Nursing & Midwifery Registered | 34.44% | ▼ (34.65%) |
| OVERALL COMPLIANCE | 22.74% | ▼ (23.03%) |

CAVEAT: Level 2 is mandated for clinical staff; however, the denominator is the entire HB workforce.

Aseptic non-touch Technique (ANTT) Training compliance at 31st May 2023 – 24.61%

| Staff Group | % Compliance to end of May 2023 | | Increase (▲) or decrease (▼) in compliance compared to previous report | |
|--|---------------------------------|------------------------|--|------------------------|
| | e-Learning (3 yearly) | e-Learning (once only) | e-Learning (3 yearly) | e-Learning (once only) |
| Aseptic Non Touch Technique Assessment - 3 Yearly e-Learning - once only | | | | |
| Add Prof Scientific and Technic | 3.94% | 1.39% | ▼ (4.63%) | ≡ (1.39%) |
| Additional Clinical Services | 13.35% | 11.18% | ▲ (13.10%) | ≡ (11.18%) |
| Allied Health Professionals | 12.02% | 6.36% | ▼ (12.03%) | ≡ (6.36%) |
| Healthcare Scientists | 4.63% | 6.30% | ▲ (3.84%) | ≡ (6.30%) |
| Medical & Dental | 4.23% | 3.96% | ▲ (3.74%) | ≡ (3.96%) |
| Nursing & Midwifery Registered | 33.99% | 17.91% | ▲ (33.66%) | ≡ (17.91%) |
| OVERALL COMPLIANCE | 15.05% | 9.56% | ▲ (14.81%) | ▲ (8.92%) |
| COMBINED COMPLIANCE | 24.61% | | ▲ 23.73% | |

CAVEAT: this training is mandated only for those staff who undertake aseptic procedures; however, the denominator is the entire HB workforce.

NOTE: two courses providing the same content are accessible in ESR. Staff have complete one or the other of these courses and, as such, the compliance data has been combined.