

OBJECTIVES

- To provide a standardized, provincial, and health authority-based, health care-associated infections (HAI) annual surveillance report.
- To describe *Clostridioides difficile* infection (CDI) and methicillin-resistant *Staphylococcus aureus* (MRSA) trends over time covering the years prior to, during, and after the COVID-19 pandemic.
- To disseminate CDI and MRSA trends in healthcare settings in British Columbia in a publicly available, interactive report.

METHODS

- Surveillance populations:** The surveillance population for CDI includes all inpatients aged 1 year or older, and MRSA surveillance covers all inpatients admitted to acute care facilities in the province.
- Case classification:** Incident cases were laboratory confirmed and classified as either healthcare-associated (HCA), community-associated, or unknown origin based on the patient's healthcare encounter in the last four weeks (CDI) or twelve months (MRSA) before identification.
- Rate calculation:** The rate of HCA CDI or MRSA was calculated as the number of new cases associated with the reporting facility divided by the total inpatient days (multiplied by 10,000).
- Delivery:** An interactive annual report will be shared publicly.

RESULTS

Figure 1: Rate of new CDI cases associated with the reporting facility

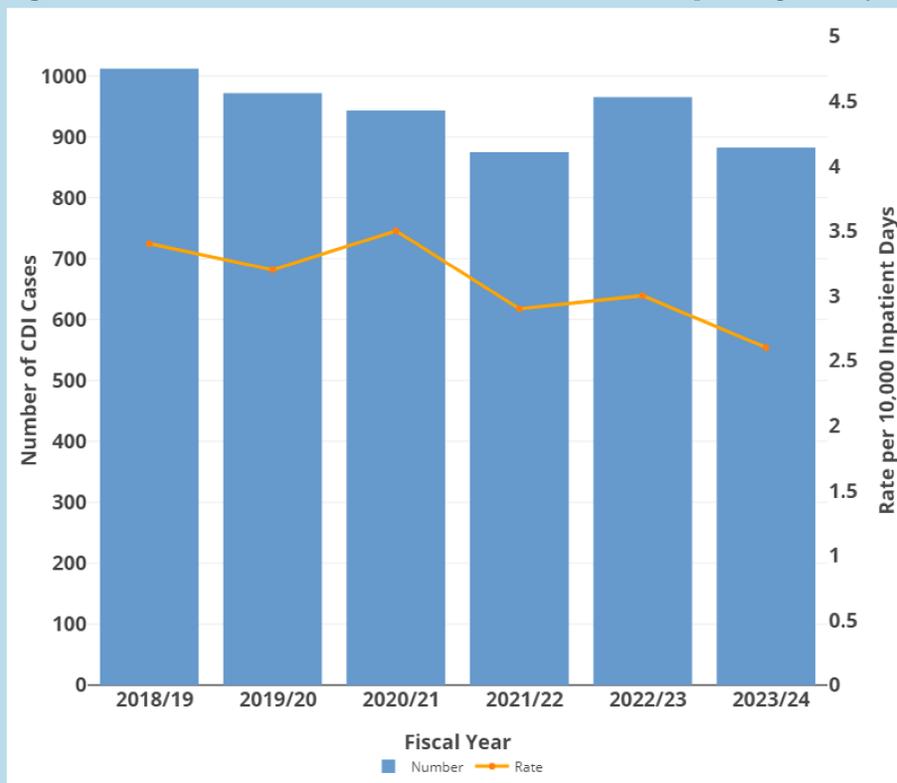
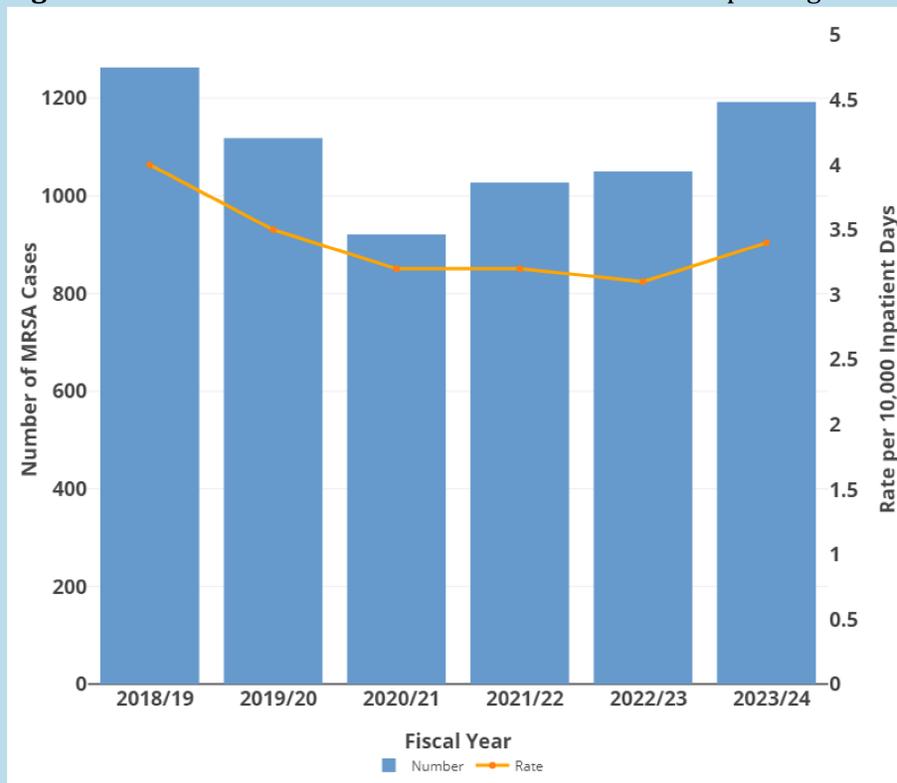


Figure 2: Rate of new MRSA cases associated with the reporting facility



CONCLUSIONS

- The CDI rate dropped slightly from 3.4 per 10,000 inpatient days in 2018/19 to 3.2 in 2019/20, then increased to 3.5 in 2020/21 (Figure 1).
- The 2020/21 increase may reflect changes in CDI testing practices and/or in hospital operations during the COVID-19 pandemic, such as fewer inpatient days due to delayed or cancelled procedures, which can make the rate look higher even if the number of cases stays the same.
- After 2020/21, the rate declined each year, reaching 2.6 in 2023/24, the lowest in the reporting period. These trends suggest an overall improvement in facility-associated CDI.
- The MRSA rate declined from 4.0 per 10,000 inpatient days in 2018/19 to 3.2 in 2020/21. In the years that followed, the rate increased slightly, reaching 3.4 in 2023/24 (Figure 2).
- Analyses (data not shown) show steady or declining trends in regional and community hospitals, while tertiary care hospitals have shown a recent increase, suggesting a need for close monitoring.
- Maintaining an updated surveillance system is crucial for monitoring changes in CDI and MRSA trends that can indicate where better IPC strategies may be implemented and/or health system events may have impacted infection rates.

ACKNOWLEDGEMENTS

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As a provincial health improvement network within PHSA and based on our office location, we acknowledge the traditional, ancestral and unceded territories of the Musqueam, Squamish and Tsleil-Waututh First Nations who have cared for and nurtured the lands and waters around us for all time.