

## OBJECTIVES

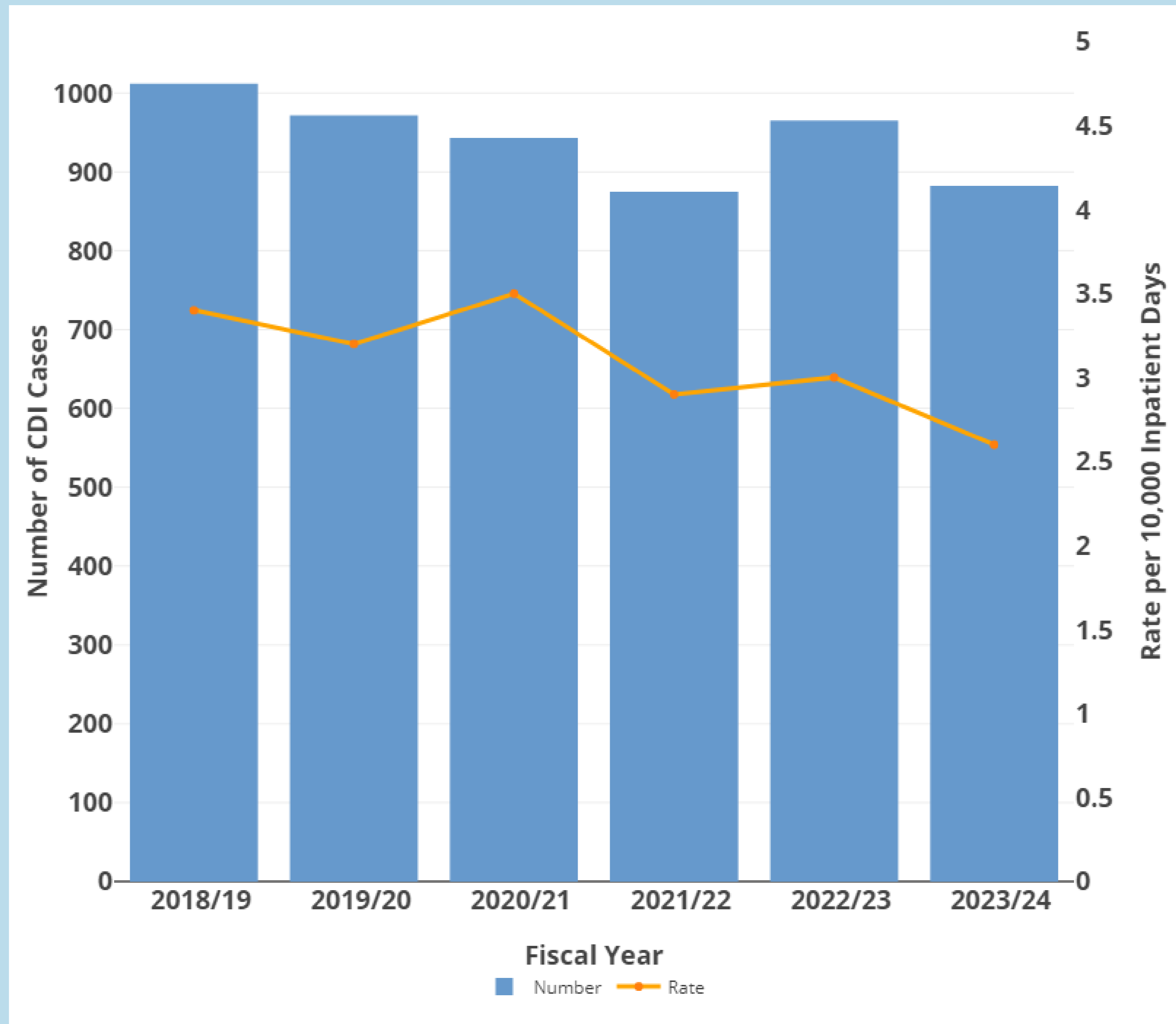
- To provide a standardized, provincial, and health authority-based, health care-associated infections (HAI) annual surveillance report.
- To describe *Clostridioides difficile* infection (CDI) and methicillin-resistant *Staphylococcus aureus* (MRSA) trends over time covering the years prior to, during, 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

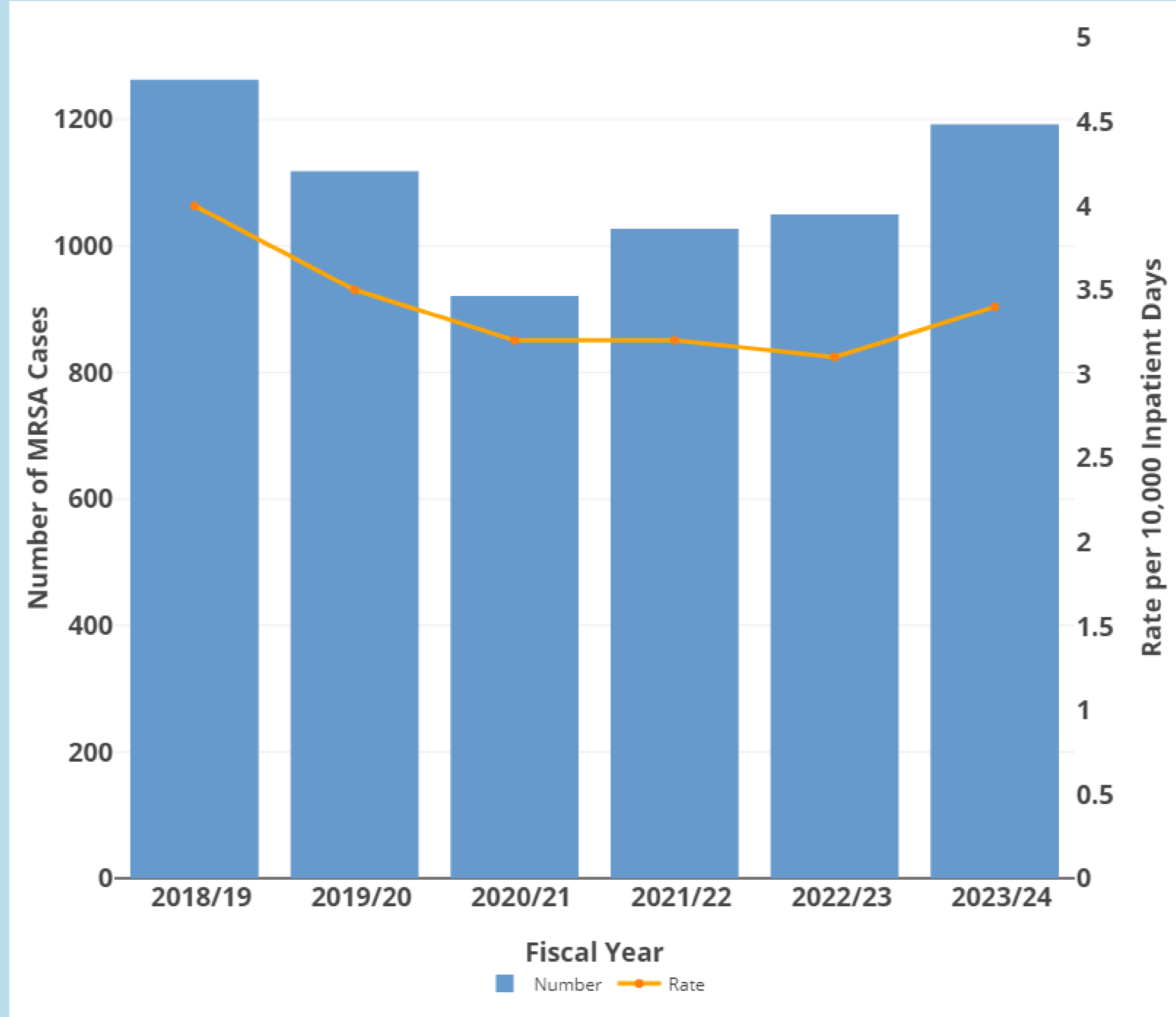
- Surveillance populations:** The surveillance population for CDI includes all inpatients aged 1 year or older, and MRSA surveillance covers all inpatients admitted to acute care facilities in the province.
- Case classification:** Incident cases were laboratory confirmed and classified as either healthcare-associated (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

We would like to thank infection prevention and control, laboratory and epidemiology partners in the health authorities, including Fraser Health, Interior Health, Island Health, Northern Health, Provincial Health Services, Vancouver Coastal Health, and Providence Health Care, and BC Ministry of Health.

*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.*