

Clostridioides difficile Infections (CDI) Update, Q3 & Q4 of 2019/20

September 2020

Summary Table

	Q3 2019/20	Q4 2019/20	Last 4 quarters (Q1-Q4 2019/20)	Previous year (Q1-Q4 2018/19)
Total CDI cases identified*	423	514	1,789	2,003
Number of new CDI cases associated with the reporting facility	242	266	969	1,012
Total inpatient days	708,908	882,657	3,013,577	2,984,680
Rate of CDI associated with the reporting facility per 10,000 inpatient days (95% CI)	3.4 (3.0-3.9)	3.0 (2.7-3.4)	3.2 (3.0-3.4)	3.4 (3.2-3.6)

Highlights for Q3 & Q4 of 2019/20

- The provincial rate of CDI cases associated with the reporting facility in Q3 and Q4 of 2019/20 was 3.4 and 3.0 per 10,000 inpatient days, respectively.
- The average rate of CDI in the last four quarters (3.2 in Q1 - Q4 of 2019/20) was lower than the previous year (3.4 in Q1 - Q4 of 2018/19). However, the difference was not statistically significant.
- There is a significant downward trend in the quarterly provincial rates of CDI from Q1 of 2015/16 to Q4 of 2019/20 (see Figure 1).

What is *Clostridioides difficile* infection (CDI)?

Clostridioides difficile (*C. difficile*) is a bacterium that can live in the bowel without causing harm. For healthy people, *C. difficile* does not often pose a health risk. However, for people taking antibiotics or with weakened immune systems, e.g. patients who are elderly or undergoing chemotherapy, the normal balance of healthy bacteria in the digestive system may be upset, allowing *C. difficile* to grow to unusually high levels and produce toxins that can damage the bowel and cause diarrhea, fever, abdominal cramping, dehydration, and even death.

How is *Clostridioides difficile* transmitted?

The bacteria and their spores are shed in feces. People can acquire the bacteria if they touch items or surfaces (e.g., toilets, commodes, bathing tubs, etc.) that are contaminated with feces, and then touch their mouth or mucous membranes without washing their hands thoroughly. *C. difficile* can live for long periods on surfaces and can spread very easily.

How can *Clostridioides difficile* transmission be prevented?

The risk of acquiring CDI can be reduced by frequent hand washing with soap and water — particularly after toileting, before eating, and after touching any frequently touched surfaces (such as door handles, elevator buttons, shared keyboard/mouse, etc.) Other risk reduction methods include avoiding sharing personal items and using antibiotics cautiously. Staff in healthcare settings can significantly reduce the spread of *C. difficile* by strictly following infection control guidelines.

* A health authority modified reporting of CDI surveillance data to PICNet from Q1 of 2019/20 and onwards, such that only the CDI cases that were associated with the facility in their health authority were reported to PICNet. The changes have no effect on the number and rate of CDI associated with the reporting facility, however, it may affect the total CDI cases reported.

Why is CDI being monitored in BC hospitals?

Monitoring CDI in acute care facilities helps improve the quality of care and protect both patients and healthcare providers through the development of evidence based infection prevention and control guidelines. It also increases awareness and understanding of CDI among professionals and the public.

Where can I find information about CDI in BC?

The PICNet website (www.picnet.ca) provides provincial guidance, toolkits, and related resources about CDI prevention and control, as well as the surveillance protocol and reports on CDI in BC. If you have questions or suspect that you have CDI, please contact your doctor or healthcare provider.

About this report

This quarterly update presents the latest data on incidence and trends of new cases of CDI that were healthcare-associated (HCA) with the reporting facility among inpatients in the last five years. In the following graphs,

- 1) Relapses of CDI and new cases that were associated with another healthcare facility, community-associated, or of unknown origin were not included.
- 2) The data were aggregated by fiscal quarter for each health authority except Provincial Health Services Authority (PHSA), which aggregated the data by calendar quarter.
- 3) The time frame of each fiscal quarter varied by fiscal year. Generally, there were more days in the fourth fiscal quarter (Q4) than in the other three quarters (Q1, Q2, and Q3) of each fiscal year.
- 4) The line in each graph represents the overall linear trend over time.
- 5) Direct comparison of the number of cases or the rate between health authorities is not recommended due to variations in laboratory testing for confirmation of CDI diagnosis and in the application of CDI case definition.

Figure 1. Provincial rate and number of new cases of CDI associated with the reporting facility, by fiscal year and quarter, 2015/16 - 2019/20, British Columbia

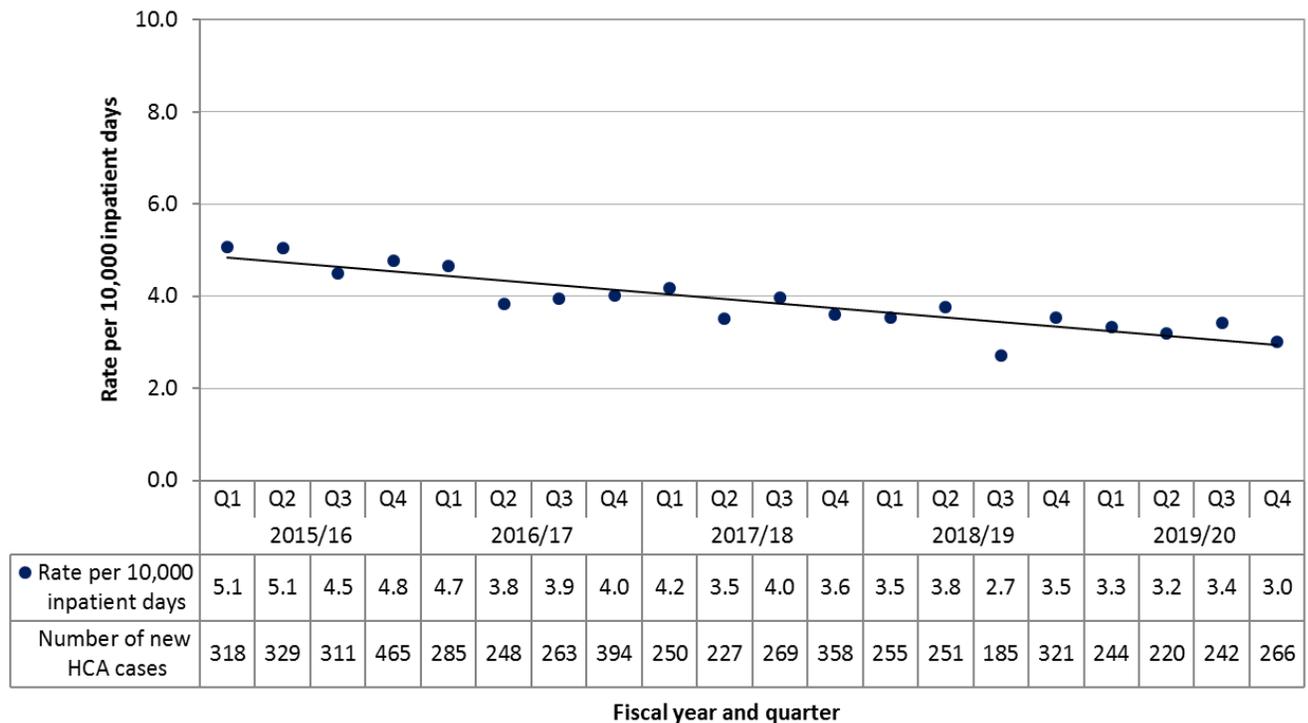


Figure 2. Rate and number of new cases of CDI associated with the reporting facility, by fiscal year and quarter, 2015/16 - 2019/20, Interior Health

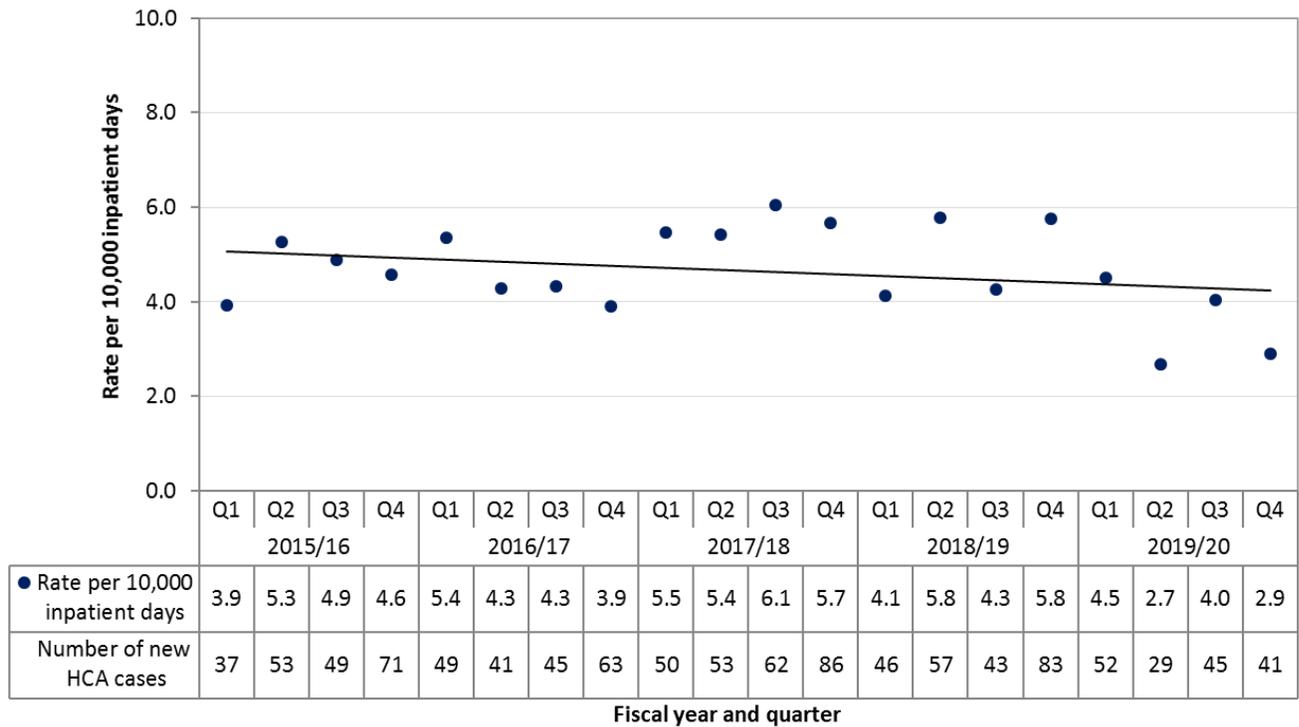
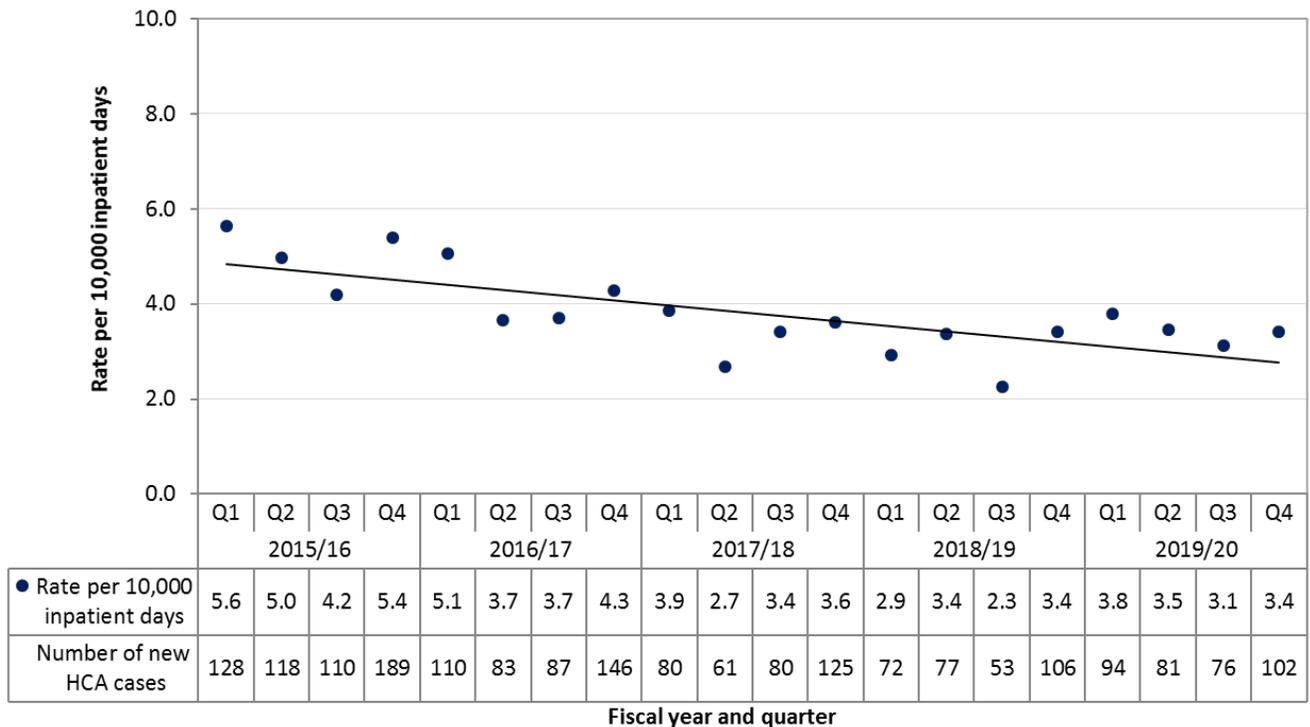


Figure 3. Rate and number of new cases of CDI associated with the reporting facility, by fiscal year and quarter, 2015/16 - 2019/20, Fraser Health¹



¹ Fraser Health expanded its CDI surveillance program to a new acute care site from Q4 of 2017/18 and another new acute care site during Q4 2018/19.

Figure 4. Rate and number of new cases of CDI associated with the reporting facility, by fiscal year and quarter, 2015/16 - 2019/20, Vancouver Coastal Health²

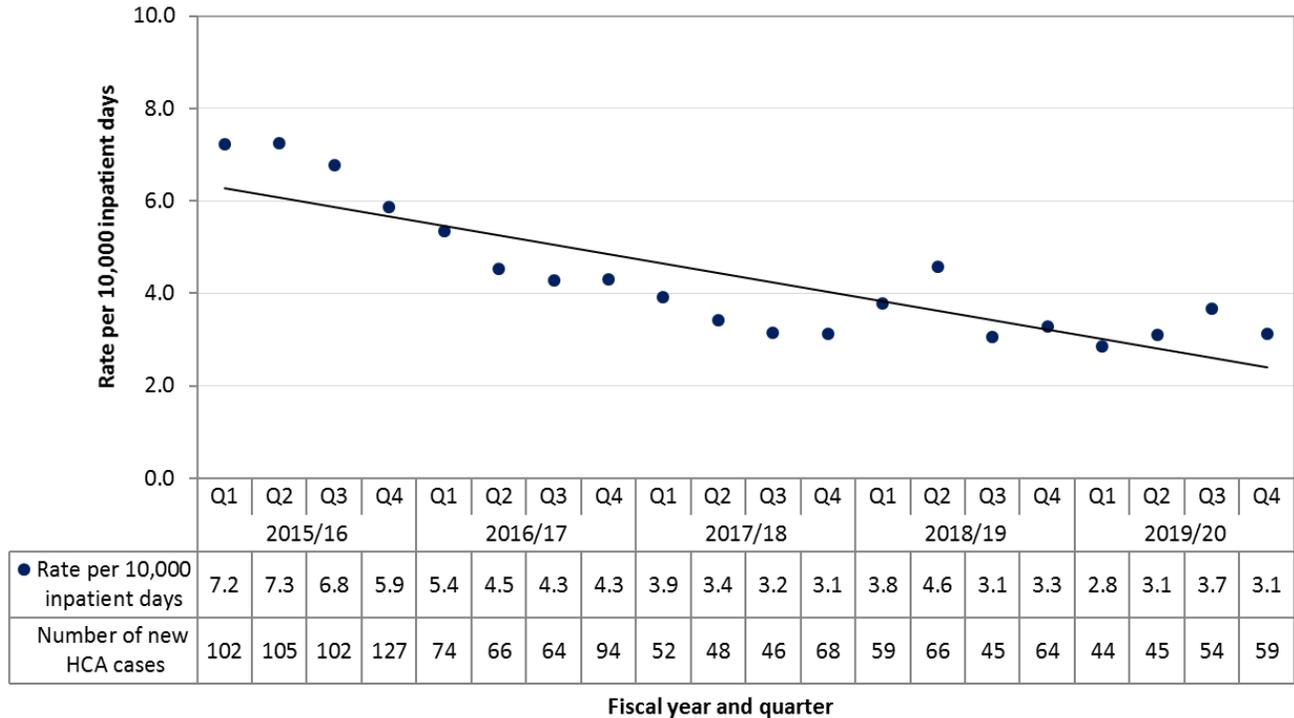
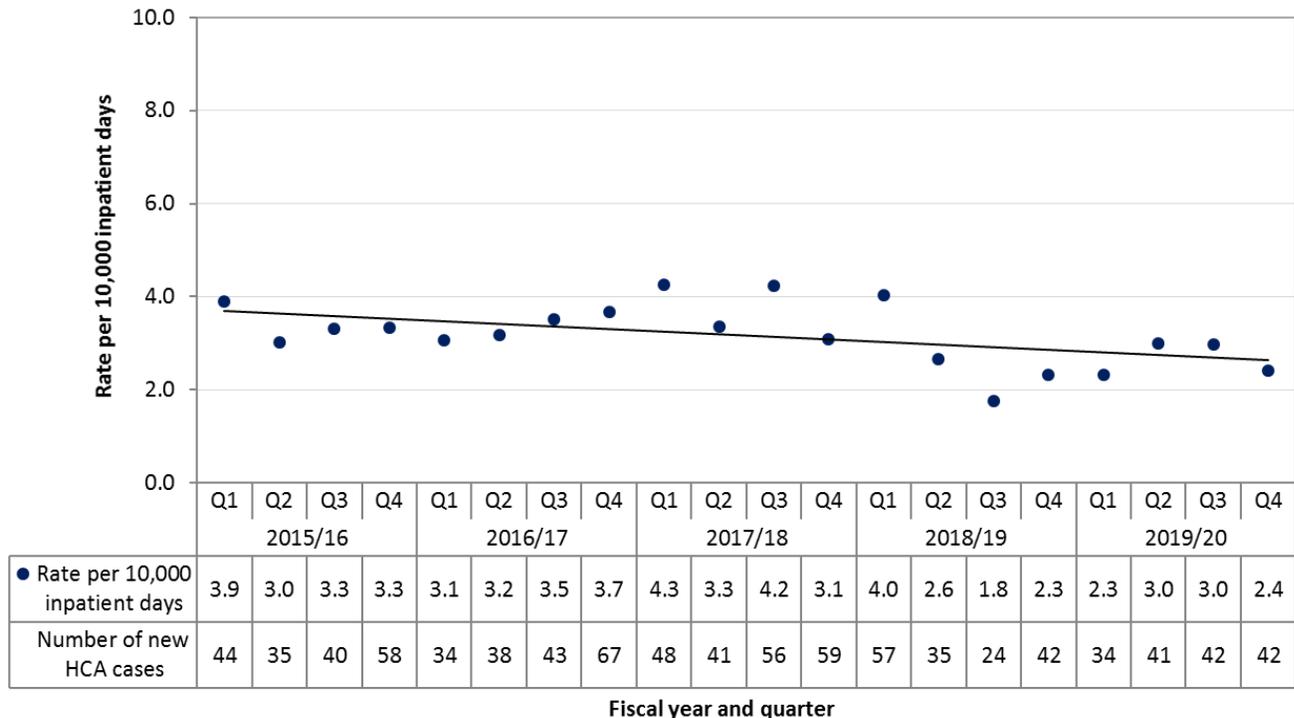


Figure 5. Rate and number of new cases of CDI associated with the reporting facility, by fiscal year and quarter, 2015/16 - 2019/20, Island Health³



² Data from acute care facilities of Providence Health Care (PHC) were included

³ Data include two new hospitals opened during Q3 of 2017/18 and historical data from two closed hospitals. A new and more sensitive multiplex testing for *C. difficile* was introduced during Q3 of 2017/18 and onwards.

Figure 6. Rate and number of new cases of CDI associated with the reporting facility, by fiscal year and quarter, 2013/14 – 2019/20, Northern Health

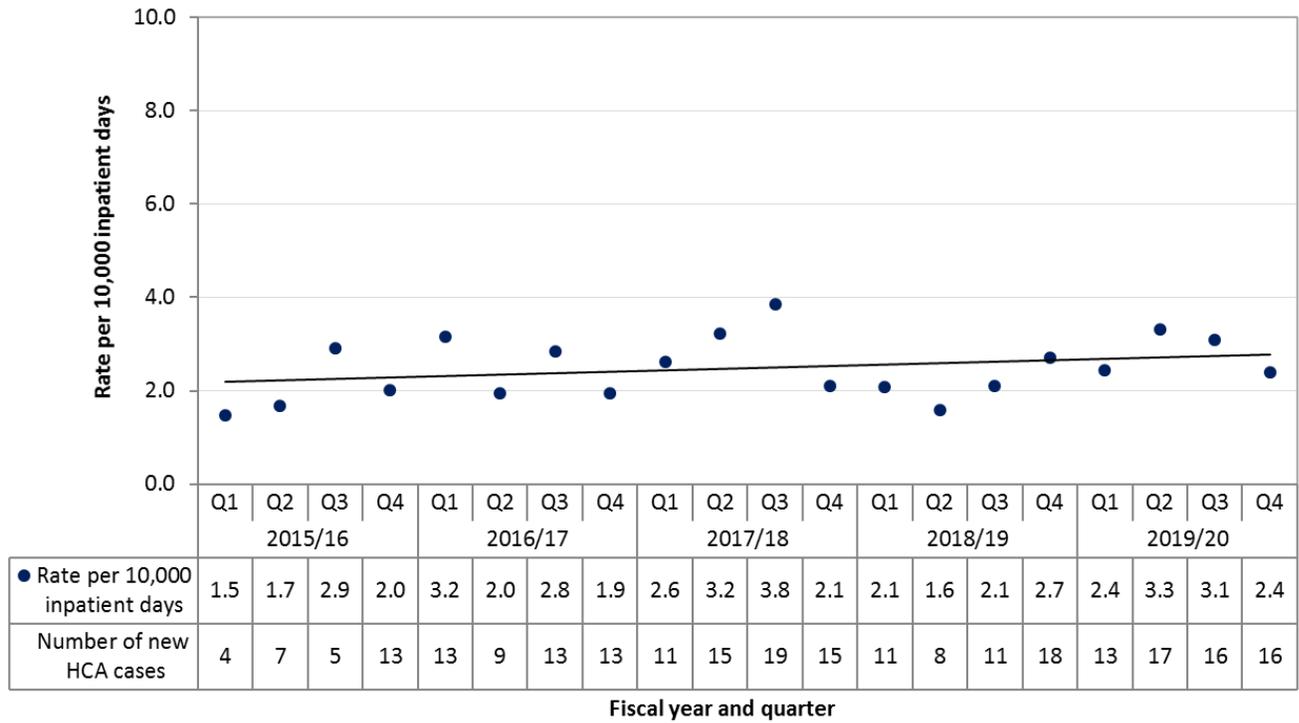
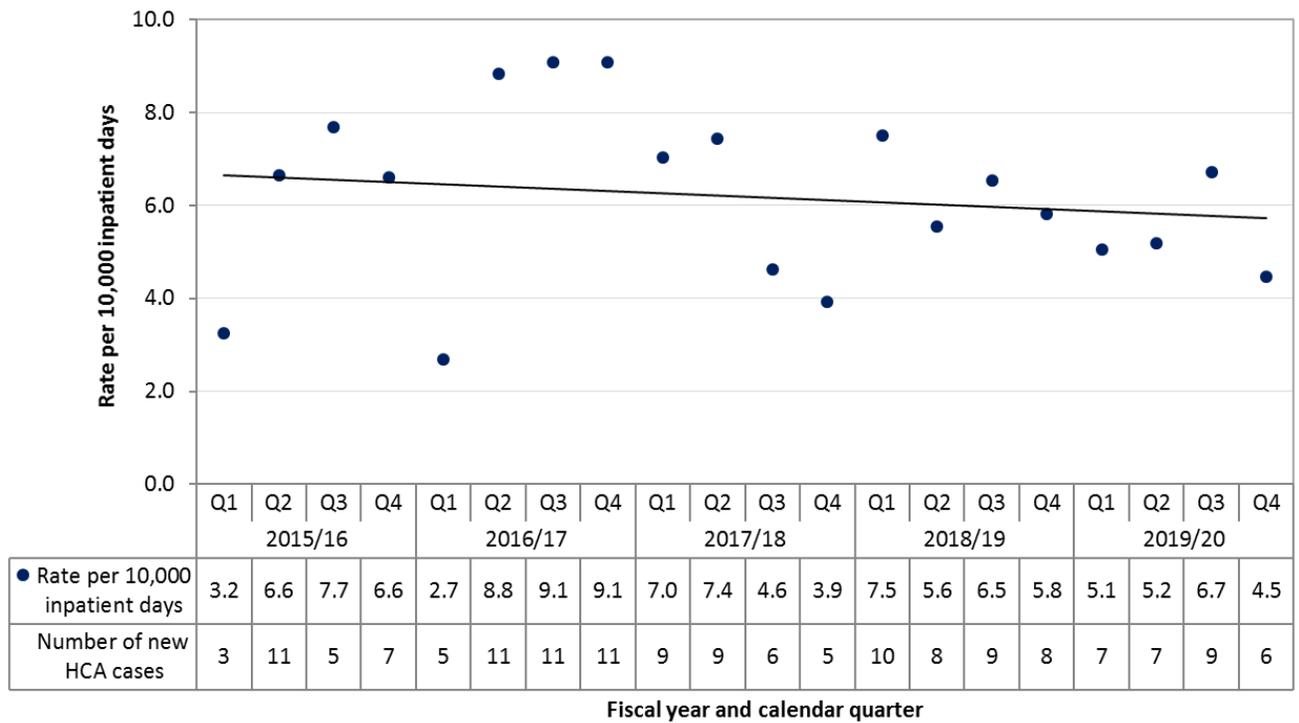


Figure 7. Rate and number of new cases of CDI associated with the reporting facility, by fiscal year and calendar quarter, 2013/14 – 2019/20, Provincial Health Services Authority⁴



⁴ Data from BC Cancer - Vancouver were included starting from Q1 of 2018/19

Provincial Infection Control Network of BC (PICNet)
1001 West Broadway, Suite 504
Vancouver, BC V6H 4B1
Tel: 604-875-4844 x 22985
Fax: 604-875-4373
Website: www.picnet.ca
Email: picnet@phsa.ca

Disclaimer

The purpose of this report is to provide information to healthcare providers, decision-makers, patients, and the public on healthcare-associated infections identified among the patients admitted to acute care facilities. This report may be used, in whole or in part, to inform infection prevention and control practices for improving the quality of healthcare services. PICNet does not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any information in the report; neither does it intend to provide specific medical advice. Commercial uses are prohibited without express written permission.

PICNet
PROVINCIAL INFECTION CONTROL
NETWORK OF BRITISH COLUMBIA
A program of the Provincial Health Services Authority

