

Clostridium difficile Infections (CDI) Update, Q4 2017/18

August 2018

Summary Table

	Q4 2017/18*	Previous quarter (Q3 2017/18)	Same quarter of previous year (Q4 2016/17)*	Year-to- date 2017/18
Total CDI cases identified	735	563	799	2,316
Number of new CDI cases associated with the reporting facility	358	269	394	1,104
Total inpatient days	990,673	677,016	961,383	2,914,319
Rate of CDI associated with the reporting facility per 10,000 inpatient days (95% CI)	3.6 (3.3-4.0)	4.0 (3.5-4.5)	4.1 (3.7-4.5)	3.8 (3.6-4.0)

* There were more days in the fiscal quarter Q4 than in Q1, Q2, and Q3 in the fiscal year.

Highlights for Q4 2017/18

- The provincial rate of CDI cases associated with the reporting facility in Q4 2017/18 was 3.6 per 10,000 inpatient days, which was lower than the previous quarter (4.0 per 10,000 inpatient days). However, the difference was not statistically significant.
- The CDI rate in Q4 2017/18 was also not significantly different from the same quarter of the previous year (4.1 per 10,000 inpatient days in Q4 2016/17).
- There is a downward trend in the provincial rates of CDI from Q1 2013/14 to Q4 2017/18 that is statistically significant.

What is *Clostridium difficile* infection (CDI)?

Clostridium 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 *Clostridium 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 to prevent *Clostridium difficile* transmission?

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.

Why is CDI being monitored in BC hospitals?

Monitoring CDI in acute care facilities helps us 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 to 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.

This quarterly update presents the latest data on incidence and trends of new 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 and there were more days in the fourth 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, 2013/14 - 2017/18, British Columbia

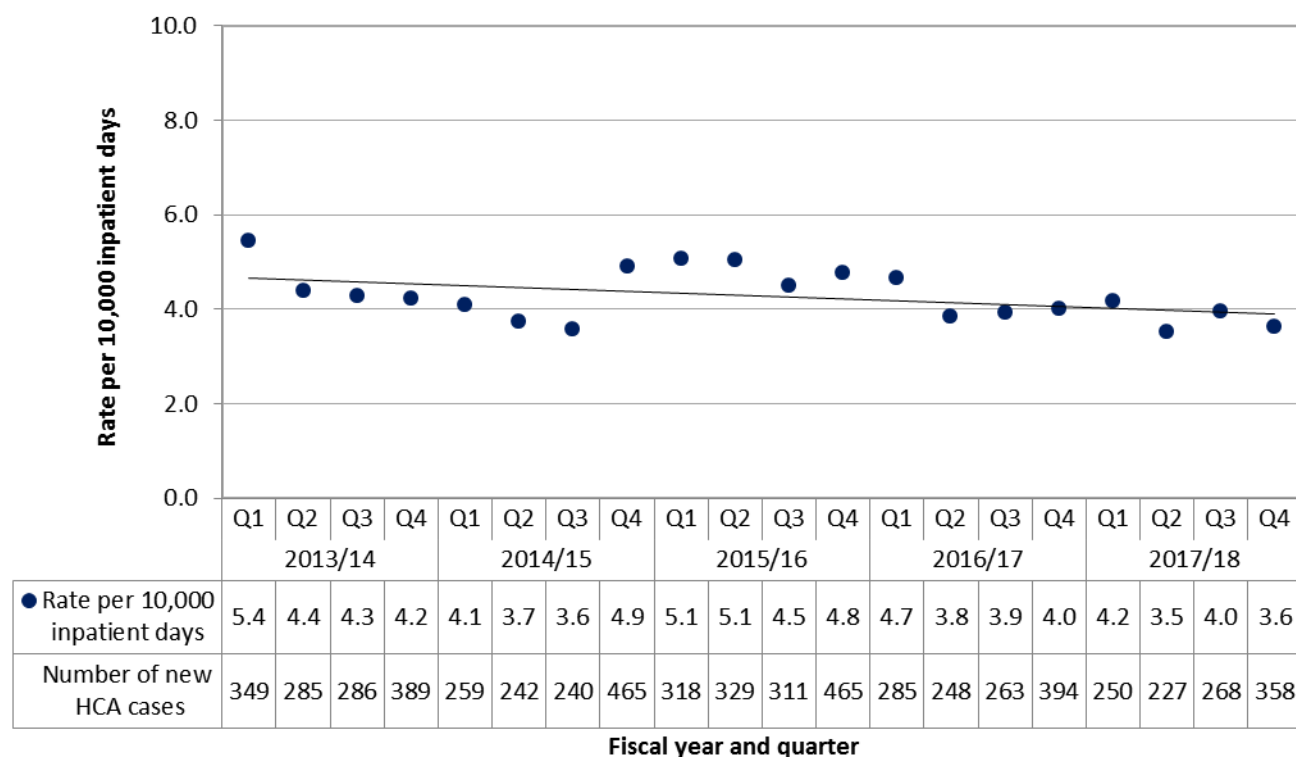


Figure 2. Rate and number of new cases of CDI associated with the reporting facility, by fiscal year and quarter, 2013/14 - 2017/18, Interior Health

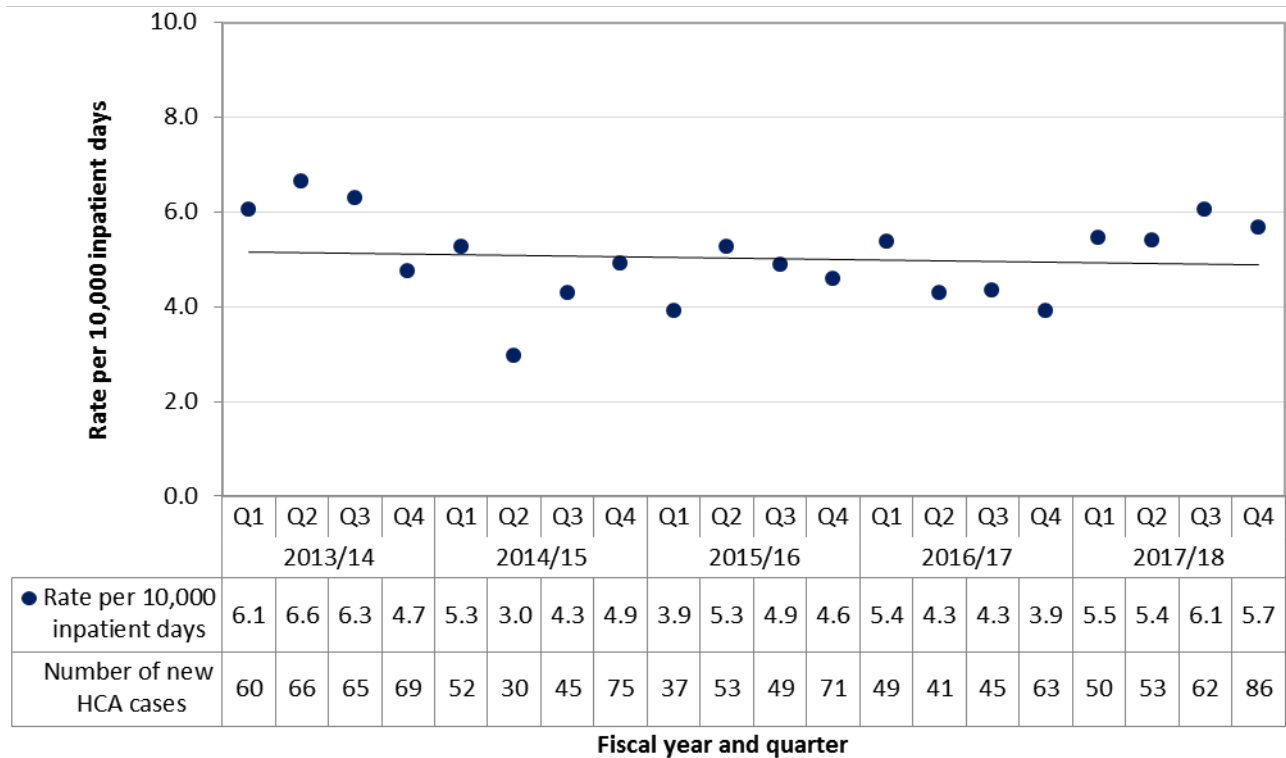


Figure 3. Rate and number of new cases of CDI associated with the reporting facility, by fiscal year and quarter, 2013/14 - 2017/18, Fraser Health

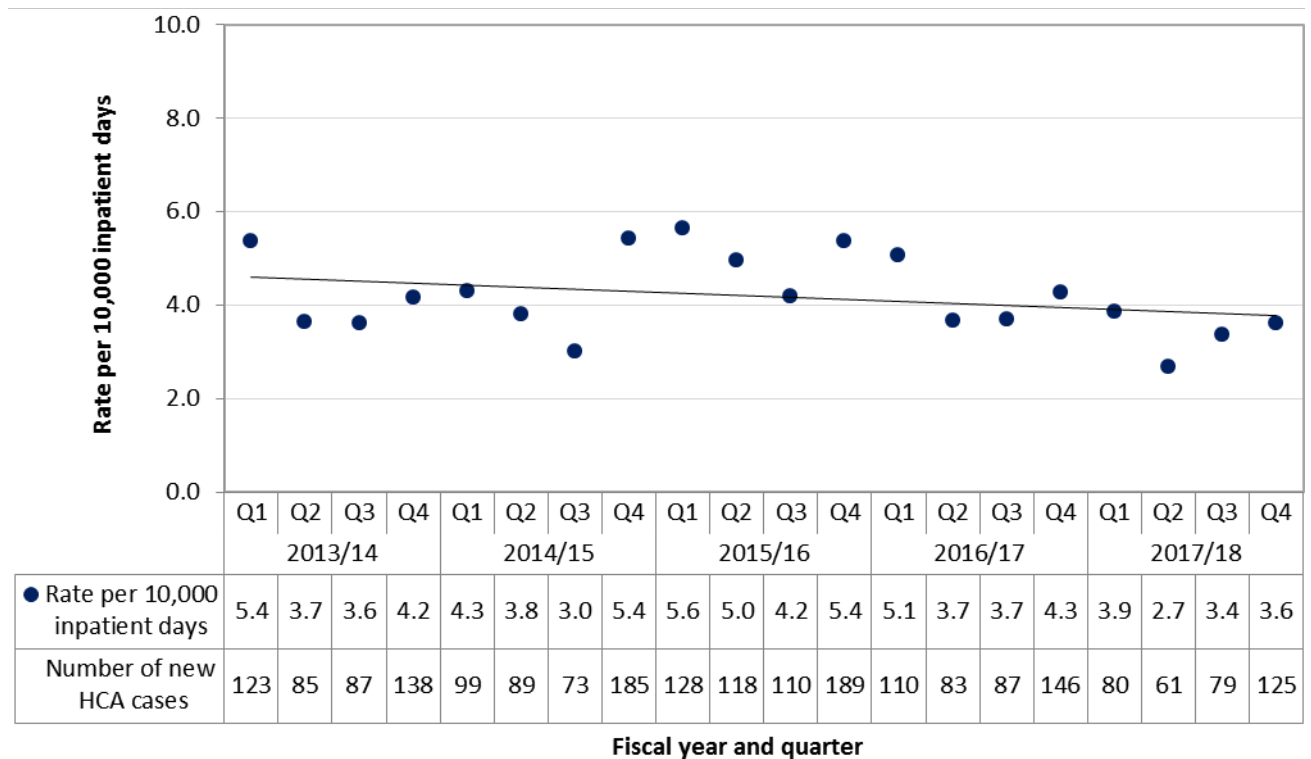


Figure 4. Rate and number of new cases of CDI associated with the reporting facility, by fiscal year and quarter, 2013/14 - 2017/18, Vancouver Coastal Health¹

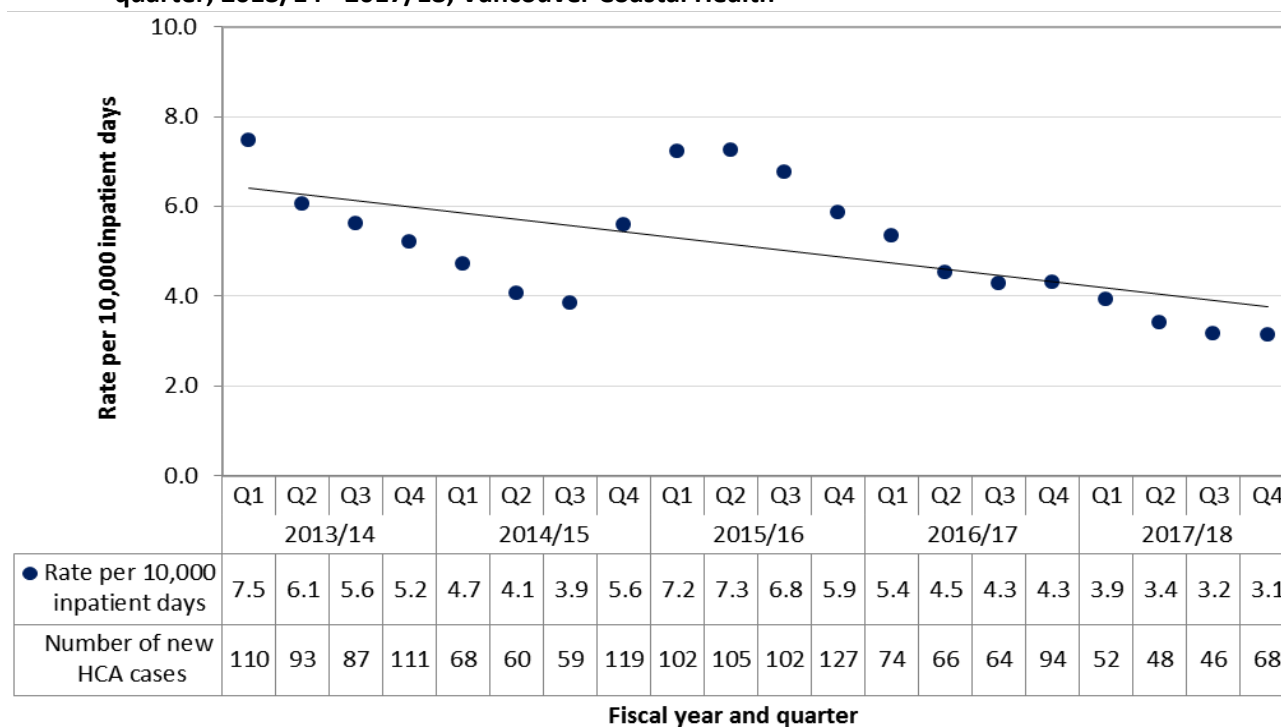
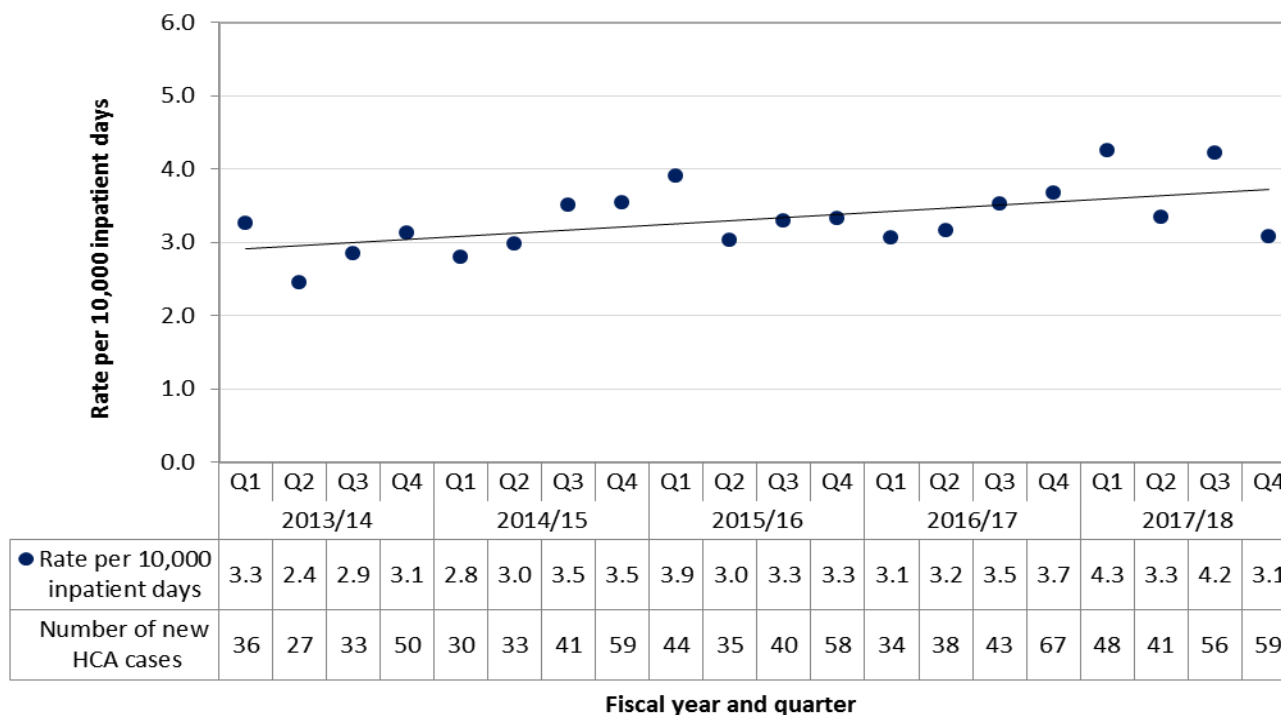


Figure 5. Rate and number of new cases of CDI associated with the reporting facility, by fiscal year and quarter, 2013/14 - 2017/18, Island Health²



¹ The data include acute care facilities of Providence Health Care (PHC)

² The 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 - 2017/18, Northern Health

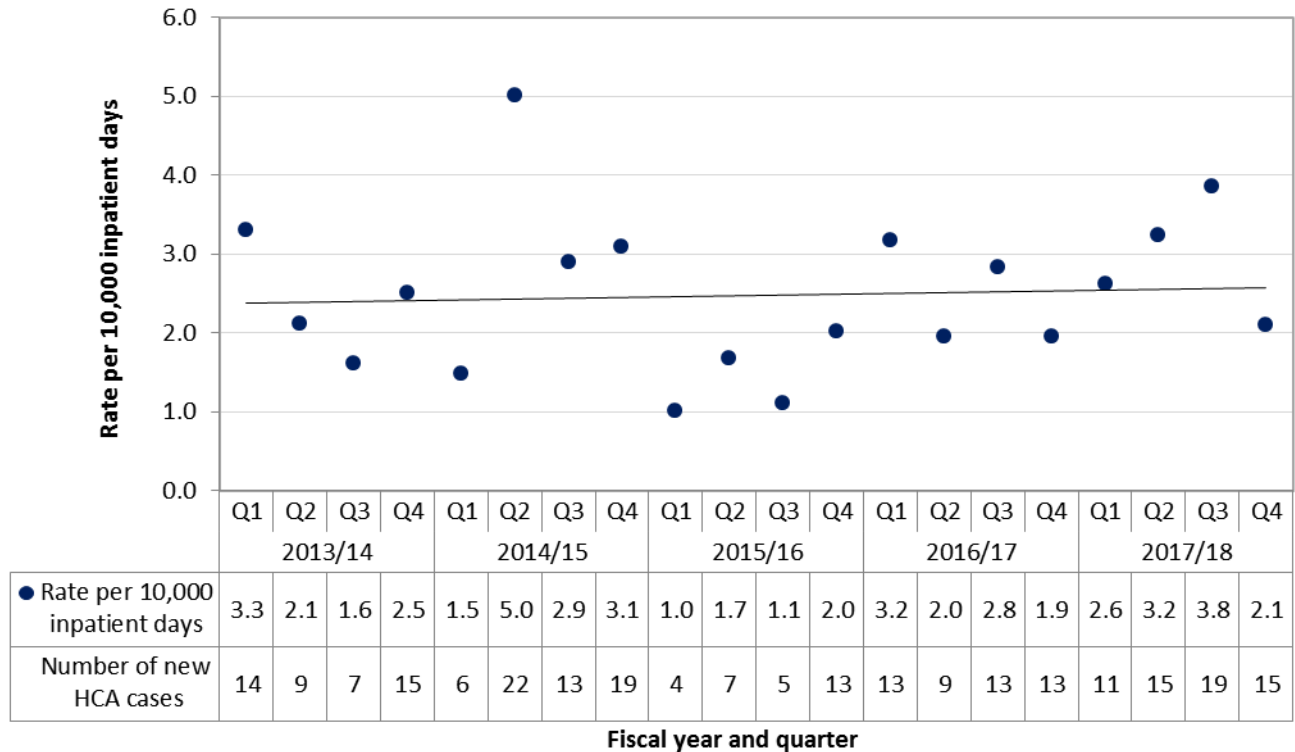
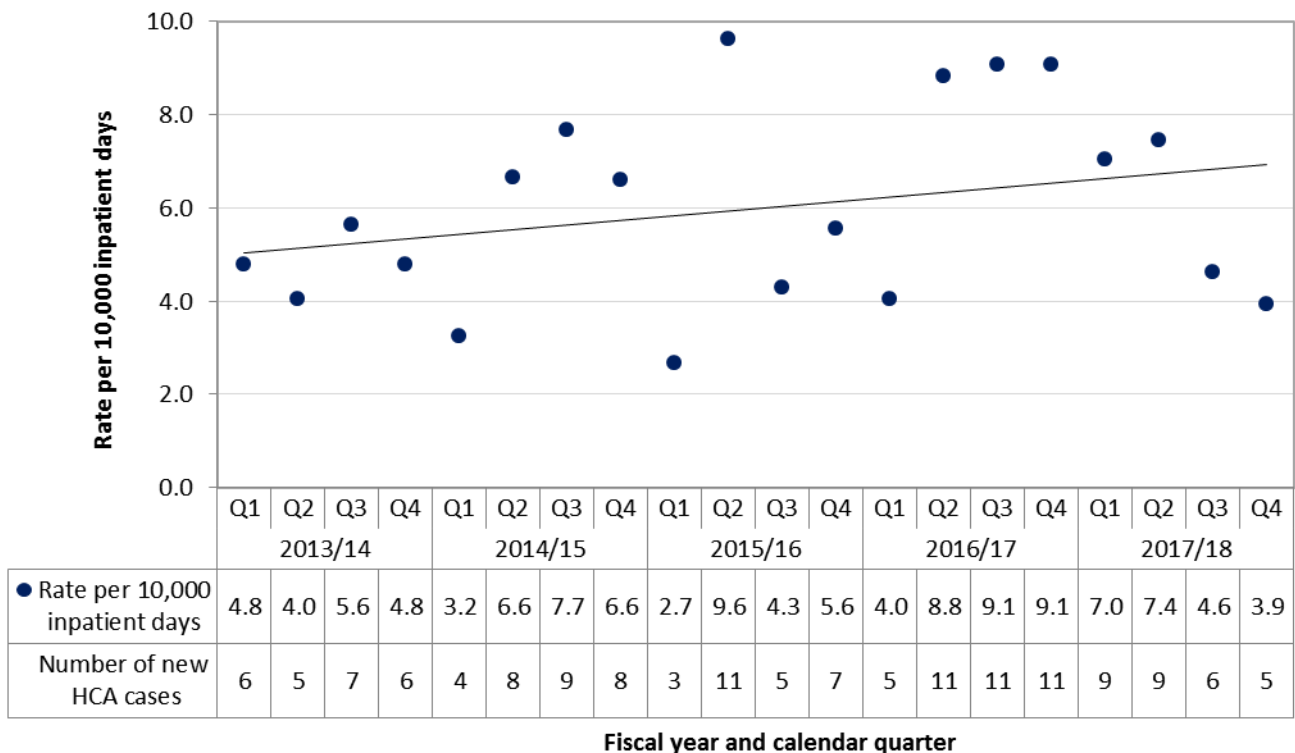


Figure 7. Rate and number of new cases of CDI associated with the reporting facility, by fiscal year and calendar quarter, 2013/14 - 2017/18, Provincial Health Services Authority



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

