

Healthcare-associated infections surveillance report

Clostridium difficile Infections (CDI) Update, Q4 2015/16

August 2016

Summary Table

	Q4 2015/16	Previous quarter (Q3 2015/16)	Same quarter of previous year (Q4 2014/15)
Total CDI cases identified	952	646	831
Number of new CDI cases associated with the reporting facility	465	311	465
Total inpatient days	973,558	691,550	946,826
Rate of CDI associated with the reporting facility per 10,000 inpatient days (95% CI)	4.8 (4.4-5.2)	4.5 (4.0-5.0)	4.9 (4.5-5.4)

Highlights

- The provincial rate of CDI associated with the reporting facility in Q4 of 2015/2016 increased compared to the previous quarter (Q3 2015/16), however the change was not statistically significant
- The provincial rates fluctuated in the past five quarters (Q4 2014/15 Q4 2015/16), with no significant difference from each other, after a significant increase in Q4 2014/15.

The provincial CDI surveillance program was established to monitor the incidence and trends of healthcareassociated CDI among patients who have been hospitalized in acute care facilities.

Clostridium difficile or C. difficile are bacteria that can live in the bowel without causing harm. However, for people taking antibiotics or with weakened immune system, e.g. elderly, under 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.

C. difficile bacteria and their spores are shed in feces. People can acquire the bacteria if they touch surfaces (e.g., toilets, commodes, bathing tubs, and electronic rectal thermometers) contaminated with feces, and then touch their mouth. For healthy people, C. difficile does not often pose a health risk. The elderly and those with other illnesses or who are taking antibiotics are at a greater risk of developing infections.

Regular hand hygiene by healthcare providers and patients is the most effective way of preventing the transmission of C. difficile in the healthcare setting. Using antibiotics wisely and keeping the environment as clean as possible (especially around ill patients) can help reduce the risk of C. difficile spreading to patients and visitors.

The PICNet website (www.picnet.ca) has general information about CDI prevention and control, as well as the case definition, data sources, and limitations associated with this report. If you have questions or suspect that you have CDI, please contact your doctor or healthcare provider.











12.0 10.0 Rate per 10,000 inpatient days 8.0 6.0 4.0 2.0 0.0 2009/10 2010/11 2011/12 2012/13 2013/14 2014/15 2015/16 Rate per 10,000 10.0 8.1 7.5 8.6 9.0 7.3 7.7 8.3 7.1 7.7 7.9 9.2 7.6 6.2 5.8 6.5 5.4 4.4 4.3 4.2 4.1 3.7 3.6 4.9 inpatient days Number of cases 611 476 450 673 557 438 473 684 431 464 509 808 480 390 377 588 349 285 286 389 259 242 240 465 338 329 311 465

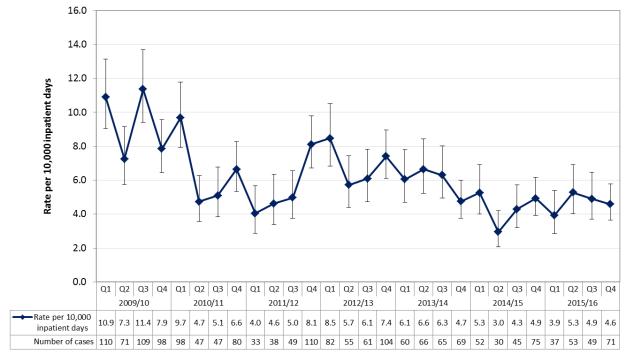
Figure 1. Number of new cases and rate of CDI associated with the reporting facility, by fiscal year and quarter, British Columbia¹

Fiscal year and quarter

Note: vertical bars on the line represent the 95% confidence interval of the rates to show an estimated range of values

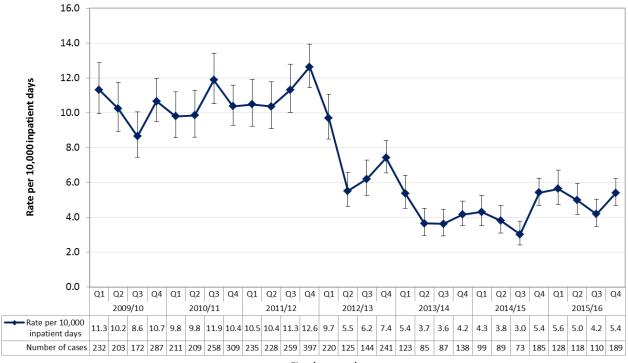
Data were aggregated by fiscal quarter for each health authority except PHSA, which aggregated the data by calendar quarter. The time frame of each fiscal quarter varied by fiscal year and there were more days in Q4 than in Q1, Q2, and Q3 each fiscal year. There were changes and variations in the laboratory testing for confirmation of CDI diagnosis and application of case definition over time and by health authority.

Figure 2. Number of new cases and rate of CDI associated with the reporting facility, by fiscal year and quarter for Interior Health²



Fiscal year and quarter

Figure 3. Number of new cases and rate of CDI associated with the reporting facility, by fiscal year and quarter for Fraser Health



Fiscal year and quarter

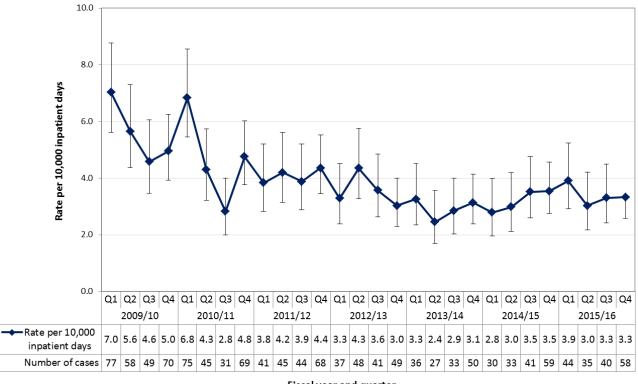
 $^{\rm 2}$ Excluded certain acute care facilities from Q3 of FY 2011/2012 to Q2 of FY 2012/2013

16.0 14.0 12.0 Rate per 10,000 inpatient days 10.0 8.0 6.0 4.0 2.0 Q1 Q2 Q3 Q4 Q1 | Q2 | Q3 | Q4 | Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 2009/10 2010/11 2011/12 2012/13 2013/14 2014/15 2015/16 Rate per 10,000 12.4 | 9.6 | 7.3 | 10.6 | 10.6 | 9.5 | 8.6 | 10.5 | 7.5 | 9.4 | 9.4 | 10.1 | 8.8 | 10.3 | 7.4 | 7.6 | 7.5 | 6.1 | 5.6 7.3 6.8 5.9 5.2 4.7 4.1 3.9 5.6 7.5 inpatient days Number of cases 179 132 103 192 151 128 123 203 106 132 139 202 125 146 111 159 110 93 87 111 68 60 59 119 122 105 102 127

Figure 4. Number of new cases and rate of CDI associated with the reporting facility, by fiscal year and quarter for Vancouver Coastal Health³

Fiscal year and quarter

Figure 5. Number of new cases and rate of CDI associated with the reporting facility, by fiscal year and quarter for Island Health⁴



Fiscal year and quarter

Includes acute care facilities of Providence Health Care (PHC)

⁴ Formerly known as Vancouver Island Health Authority.

8.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0

2.0

0.0

Rate per 10,000

inpatient days

Number of cases 5

2009/10

2010/11

Figure 6. Number of new cases and rate of CDI associated with the reporting facility, by fiscal year and quarter for Northern Health

Fiscal year and quarter

2012/13

 $1.2 \ | \ 1.3 \ | \ 2.1 \ | \ 3.2 \ | \ 4.8 \ | \ 1.0 \ | \ 2.5 \ | \ 2.8 \ | \ 2.8 \ | \ 2.8 \ | \ 2.8 \ | \ 3.7 \ | \ 1.2 \ | \ 2.7 \ | \ 2.5 \ | \ 4.1 \ | \ 3.3 \ | \ 2.1 \ | \ 1.6 \ | \ 2.5 \ | \ 1.5 \ | \ 5.0 \ | \ 2.9 \ | \ 3.1 \ | \ 1.0 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7 \ | \ 1.7$

9 | 17 | 19 | 4 | 10 | 16 | 11 | 11 | 8 | 22 | 5 | 11 | 11 | 24 | 14 | 9 | 7 | 15 | 6 | 22 | 13 | 19 | 4 | 7 | 5 | 13

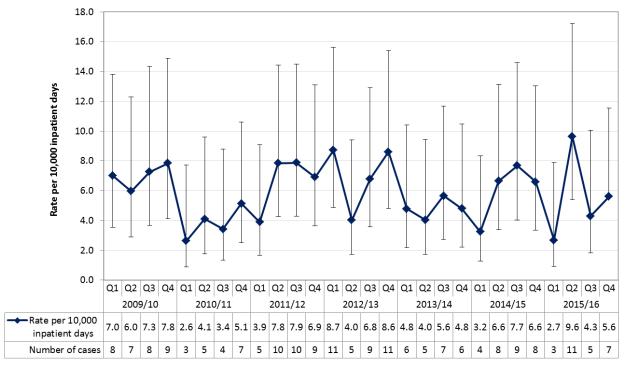
2013/14

2014/15

2015/16



2011/12



Fiscal year and calendar quarter

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