

Methicillin-Resistant *Staphylococcus aureus* (MRSA) Surveillance

Quarterly data summary: Q1 of Fiscal Year 2014/2015

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The emergence and spread of Methicillin-resistant *Staphylococcus aureus* (MRSA) in healthcare settings has become a major concern because MRSA infections are more difficult to treat than ordinary *S. aureus* infections, and may result in higher morbidity and mortality. The provincial MRSA surveillance program was established to monitor the incidence and trends of the cases of MRSA newly identified among acute care inpatients admitted to healthcare facilities in British Columbia (BC). This summary updates the cases of MRSA identified during the first fiscal quarter (Q1, April 1 – June 19, 2014) of fiscal year (FY) 2014/2015. Direct comparison of the numbers of cases and rates between health authorities (HA) is not recommended, as many factors can affect the rate of MRSA associated with the reporting facility, such as the intensity of MRSA screening performed by the facility, the patients' exposure history to healthcare, and the prevalence of MRSA in the community. For details about this provincial surveillance program, case definition, and data limitations, please refer to the annual *Methicillin-Resistant Staphylococcus aureus (MRSA) Surveillance Report: For the Fiscal Year 2013/2014*, which can be found on the PICNet website (http://s.picnet.ca/mrsareports).

- A total of 607 cases of MRSA (either colonization or infection) were newly identified among acute care inpatients during Q1 of FY 2014/2015, of which 287 (47.3%) were defined as healthcareassociated with the reporting facility.
- The provincial rate of new cases of MRSA associated with the reporting facility was 4.1 [95% confidence interval (CI): 3.7-4.6] per 10,000 inpatient days in Q1 of FY 2014/2015.
- Compared to the provincial rate of 4.4 (95% CI: 4.0-4.9) per 10,000 inpatient days in the previous quarter (Q4 of FY 2013/2014), the rate in Q1 of FY 2014/2015 did not change significantly.
- The provincial rate in Q1 of FY 2014/2015 was also not significantly different from the rate in the same quarter (Q1) of each past three fiscal year (FY 2010/2011 to FY 2013/2014).

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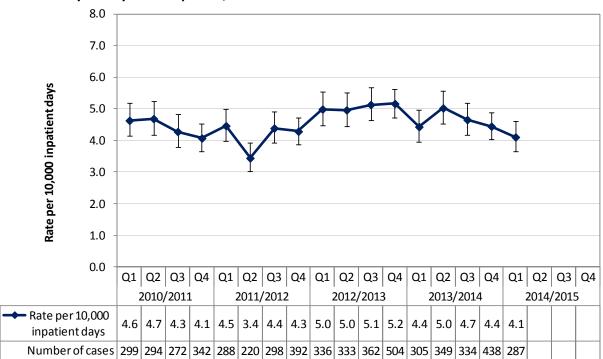


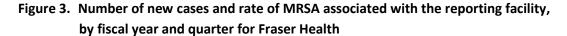
Figure 1. Number of new cases and rate of MRSA associated with the reporting facility, by fiscal year and quarter, British Columbia¹

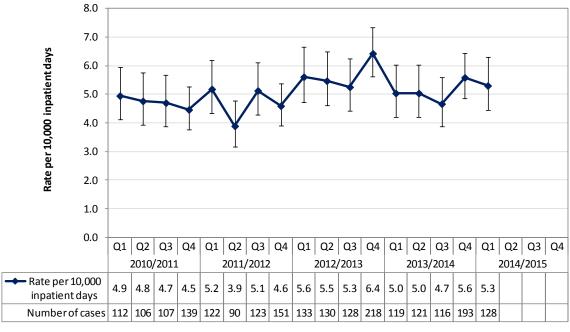
Bars in the line chart represent 95% confidence interval of the rates. Case finding strategy and application of case classification for MRSA surveillance may vary over time and by health authority. The time frame of each fiscal quarter varied by fiscal year and there were more days in Q4 than in Q1, Q2, and Q3 each fiscal year. The same hereinafter.

¹ Excluded from this report was Northern Health in FY 2010/2011, one acute care facility in Island Health between Q1 of FY 2010/2011 to Q2 of FY 2012/2103, and certain acute care facilities in Interior Health from Q3 of FY 2011/2012 to Q2 of FY 2012/2013. Data were aggregated by fiscal quarter for each health authority except PHSA, which aggregated the data by calendar quarter.

8.0 7.0 Rate per 10,000 inpatient days 6.0 5.0 4.0 3.0 2.0 1.0 0.0 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 | Q2 | Q3 | Q4 | 2010/2011 2014/2015 2011/2012 2012/2013 2013/2014 - Rate per 10,000 5.5 4.7 5.5 3.4 2.6 3.3 2.7 3.1 4.1 5.7 4.5 4.3 4.5 5.0 4.4 3.5 3.6 inpatient days **Number of cases** 63 72 42 40 29 24 32 55 62 49 49 72 55 61 51 57 40

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





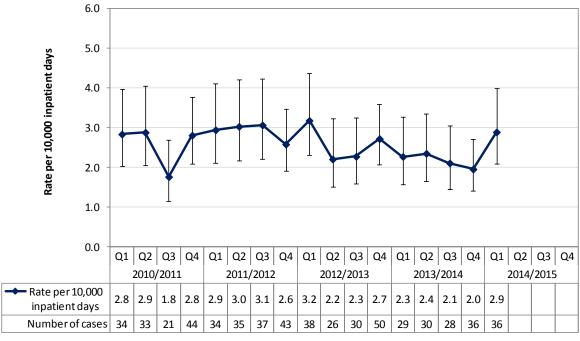
Fiscal year and quarter

² Excluded certain acute care facilities from Q3 of FY 2011/2012 to Q2 of FY 2012/2013

10.0 9.0 Rate per 10,000 inpatient days 8.0 7.0 6.0 5.0 4.0 3.0 2.0 1.0 0.0 Q1 | Q2 | Q3 | Q4 Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 Q1 Q2 Q3 Q4 2010/2011 2011/2012 2012/2013 2014/2015 2013/2014 Rate per 10,000 6.0 6.6 6.0 4.8 4.0 5.9 6.1 5.2 7.1 8.1 6.5 5.4 7.3 6.2 4.3 5.8 7.3 inpatient days Number of cases 88 | 124 | 75 | 102 | 123 | 137 | 80 | 109 | 113 | 133 | 63 87 79 95 | 117 | 69 57

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

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



Fiscal year and quarter

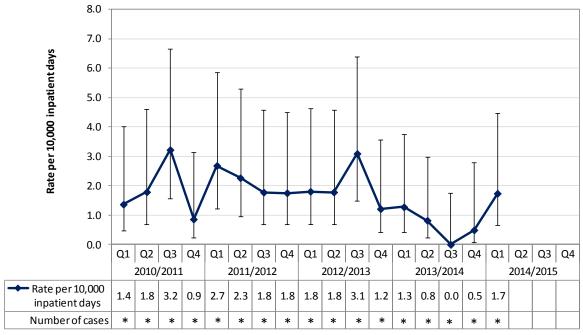
³ Includes acute care facilities of Providence Health Care (PHC)

⁴ Formerly known as Vancouver Island Health Authority. Excluded one acute care facility between Q1 of FY 2010/2011 to Q2 of FY 2012/2103

10.0 9.0 Rate per 10,000 inpatient days 8.0 7.0 6.0 5.0 4.0 3.0 2.0 1.0 0.0 Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | 2010/2011 2011/2012 2013/2014 2014/2015 2012/2013 - Rate per 10,000 3.0 | 2.9 6.7 2.3 3.2 | 2.6 | 5.9 | 5.3 | 5.8 | 4.1 | 4.5 6.1 6.0 inpatient days **Number of cases** 28 14 15 24 22 25 24 19 26 26 18 16

Figure 6. Number of new cases and rate of MRSA associated with the reporting facility, by fiscal year and quarter for Northern Health⁵

Figure 7. Number of new cases and rate of MRSA associated with the reporting facility, by fiscal year and calendar quarter for Provincial Health Services Authority



Fiscal year and calendar quarter

^{*} represents that the number of cases is <10 to ensure patient confidentiality

⁵ Data in 2010/2011 were not available.