

# **Healthcare-associated infections** surveillance report

## Methicillin-resistant Staphylococcus aureus (MRSA) Update, Q4 2014/2015

August 2015

#### **Summary Table**

	Q4 2014/2015	Previous quarter	Last 4 quarters
Total new MRSA cases identified	1,082	689	2,847
Number of MRSA associated with the reporting facility	537	333	1,453
Total inpatient days	1,014,015	757,100	3,142,728
Provincial rate per 10,000 inpatient days (95% CI)	5.3 (4.9-5.8)	4.4 (4.0-4.9)	4.6 (4.4-4.9)

#### **Highlights**

- The provincial rate of new cases of MRSA associated with the reporting facility in Q4 of 2014/2015 was significantly higher than in the previous quarter (Q3 of 2014/2015) and the last four quarters (Q4 of 2013/2014 - Q3 of 2014/2015).
- The provincial rate of MRSA fluctuated greatly in the past four quarters. The health authorities have been closely monitoring the trends of MRSA in their facilities.

The provincial MRSA surveillance program was established to monitor the incidence and trends of healthcareassociated MRSA (either colonization or infection) among patients who have been hospitalized in acute care facilities.

MRSA stands for Methicillin-resistant Staphylococcus aureus, a type of S. aureus that has become resistant to certain antibiotics such as methicillin, penicillin, amoxicillin, etc., and is thus more difficult to treat. Like nonresistant S. aureus, MRSA often lives on the skin or in the nose of healthy people without causing symptoms (this is called colonization). It can, however, cause skin and other infections. Most infections are minor, such as pimples and boils. Serious infections — such as wound infections, pneumonia, or septicaemia (infections getting into the bloodstream) — can result in life-threatening illness or, on rare occasions, death, if left untreated. Those with weakened immune systems and chronic illnesses are more susceptible to developing an infection.

MRSA is primarily spread by skin-to-skin contact or through contact with items contaminated with the bacteria. It has been shown to spread easily in healthcare settings, therefore hospital patients, and residents in nursing homes or long-term care facilities, are at a higher risk of acquiring MRSA. In addition, MRSA has been found in community settings.

Hand hygiene is the most important measure to prevent the spread of MRSA in both the healthcare setting and the community. Hospitals perform active surveillance (e.g., screening of high-risk individuals) to identify patients colonized with MRSA so that precautions can be taken to prevent transmission to other patients.

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













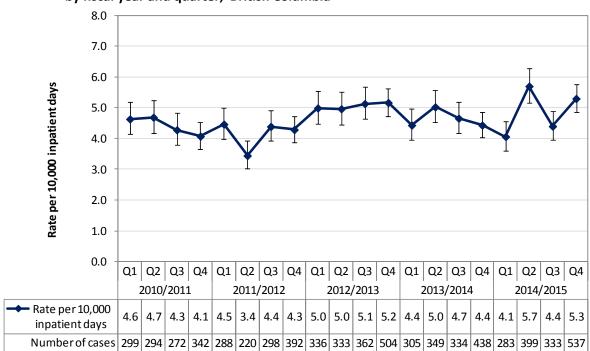


Figure 1. Provincial rate and number of new cases of MRSA associated with the reporting facility, by fiscal year and quarter, British Columbia<sup>1</sup>

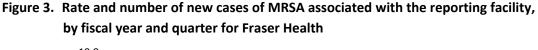
Bars in the line chart represent 95% confidence interval of the rates. Case finding strategy and application of case classification for MRSA surveillance may vary over time and by health authority. The time frame of each fiscal quarter varied by fiscal year and there were more days in Q4 than in Q1,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

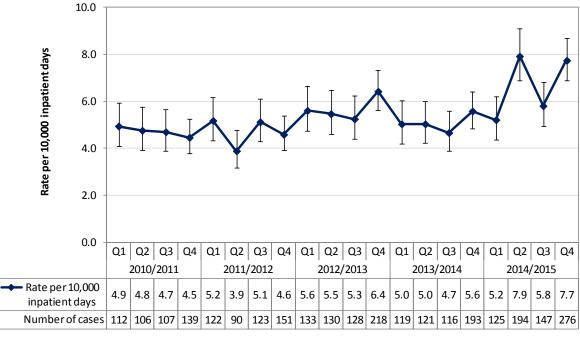
-

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 Sate 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 2011/2012 2013/2014 2014/2015 2012/2013 - Rate per 10,000 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 5.5 4.4 3.5 3.6 3.3 2.5 3.2 inpatient days Number of cases 63 72 42 40 29 24 32 55 62 49 49 72 55 61 51 57 40 38 37 55

Figure 2. Rate and number of new cases of MRSA associated with the reporting facility, by fiscal year and quarter for Interior Health<sup>2</sup>





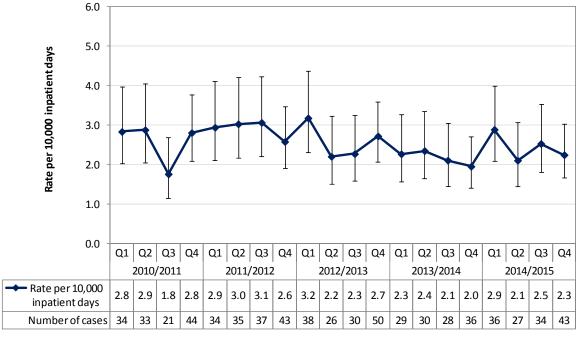
Fiscal year and quarter

<sup>&</sup>lt;sup>2</sup> Excluded certain acute care facilities from Q3 of FY 2011/2012 to Q2 of FY 2012/2013

10.0 Rate per 10,000 inpatient days 8.0 6.0 4.0 2.0 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 2013/2014 2014/2015 Rate per 10,000 6.0 5.8 6.6 6.0 4.8 4.0 5.9 6.1 5.2 7.1 8.1 6.5 5.4 | 7.3 | 7.3 | 6.2 | 4.3 | 7.3 | 5.2 6.1 inpatient days Number of cases 79 95 117 69 57 88 124 75 | 102 | 123 | 137 80 | 109 | 113 | 133 | 62

Figure 4. Rate and number of new cases of MRSA associated with the reporting facility, by fiscal year and quarter for Vancouver Coastal Health<sup>3</sup>

Figure 5. Rate and number of new cases of MRSA associated with the reporting facility, by fiscal year and quarter for Island Health<sup>4</sup>



Fiscal year and quarter

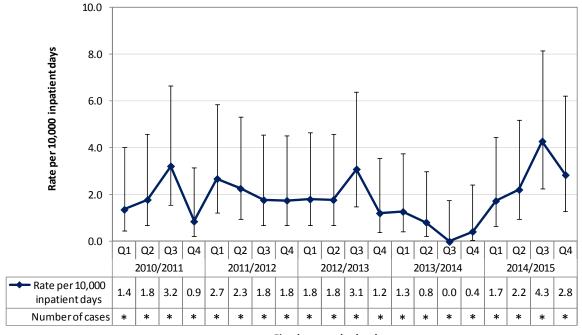
<sup>3</sup> Includes acute care facilities of Providence Health Care (PHC)

<sup>4</sup> 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 Rate per 10,000 inpatient days 8.0 6.0 4.0 2.0 0.0 Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 2010/2011 2014/2015 2011/2012 2012/2013 2013/2014 - Rate per 10,000 6.7 2.3 3.2 2.6 5.9 5.3 5.8 4.1 4.5 6.1 6.0 3.0 2.9 6.4 5.8 4.4 inpatient days Number of cases 28 \* 14 15 24 22 25 24 19 26 26 18 16 28 26 27

Figure 6. Rate and number of new cases of MRSA associated with the reporting facility, by fiscal year and quarter for Northern Health<sup>5</sup>

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



Fiscal year and calendar quarter

<sup>\*</sup> represents that the number of cases is <10 to ensure patient confidentiality

<sup>5</sup> Data in 2010/2011 were not available.

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: <a href="mailto:www.picnet.ca">www.picnet.ca</a>
Email: <a href="mailto:picnet@phsa.ca">picnet@phsa.ca</a>

### Disclaimer

The purpose of this report is to provide information on healthcare-associated infections identified among the patients admitted to the acute care facilities to healthcare providers, decision-makers, patients, and the public. This report may be used, in whole or in part, as the basis for infection prevention and control practices to improve 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.



