

## Methicillin-resistant *Staphylococcus aureus* (MRSA) 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 new MRSA cases identified*	542	641	2,207	2,709
Number of new MRSA cases associated with the reporting facility	286	307	1,118	1,263
Total inpatient days	754,255	951,686	3,233,733	3,194,936
<b>Rate of MRSA associated with the reporting facility per 10,000 inpatient days (95% CI)</b>	<b>3.8 (3.4-4.3)</b>	<b>3.2 (2.9-3.6)</b>	<b>3.5 (3.5-3.7)</b>	<b>4.0 (3.7-4.2)</b>

### Highlights for Q3 & Q4 of 2019/20

- The provincial rate of new MRSA cases associated with the reporting facility in Q3 and Q4 of 2019/20 was 3.8 and 3.2 per 10,000 inpatient days, respectively.
- The rate of MRSA in Q4 of 2019/20 was the lowest quarterly rate reported since the inception of provincial MRSA surveillance.
- The average rate of MRSA in the last four quarters (3.5 in Q1-Q4 of 2019/20) was significantly lower than the previous year (4.0 in Q1-Q4 of 2018/19).
- There is a significant downward trend in the quarterly provincial rate of MRSA from Q1 of 2015/16 to Q4 of 2019/20 (see Figure 1).

### What is Methicillin-resistant *Staphylococcus aureus* (MRSA)?

MRSA is a type of *Staph* bacteria that has become resistant to many antibiotics which has made it more difficult to treat. 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 severe wound infections, pneumonia, or septicaemia (infection in the bloodstream) — can result in life-threatening illness or, if left untreated, death. Those with weakened immune systems and chronic illnesses are more susceptible to developing an infection.

### How is MRSA transmitted?

MRSA is primarily spread by skin-to-skin contact or through contact with surfaces contaminated with the bacteria. About 2 in 100 people in the community carry MRSA. People who carry MRSA but do not have signs of infection can spread the bacteria to others. It has shown to spread easily in healthcare settings; therefore hospital patients and residents in residential care facilities are at a higher risk of acquiring MRSA.

### How can MRSA *transmission* be prevented?

Clean your hands often with soap and water or use an alcohol-based hand rub (sanitizer); do not share personal items; cover your wounds or cuts with clean, dry bandages until healed; and wash used sheets, towels, and clothes with warm water and laundry detergent. The spread of MRSA can be prevented in healthcare settings through adherence to infection prevention and control measures such as contact precautions, careful cleaning of patient rooms and medical equipment, and good hand hygiene by physicians, nursing staff, and other healthcare providers.

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

**Why is MRSA being monitored in BC hospitals?**

MRSA bacteria have many virulence factors that enable them to cause infections. For example, MRSA is a cause of healthcare-associated bloodstream and catheter-related infections. MRSA is also a common cause of community-associated infections, especially skin and soft tissue infections, and can also cause necrotizing pneumonia. Active surveillance (e.g., screening of high-risk individuals) can identify patients colonized with MRSA so that precautions can be taken to prevent transmission to other patients.

**Where can I find information about MRSA in BC?**

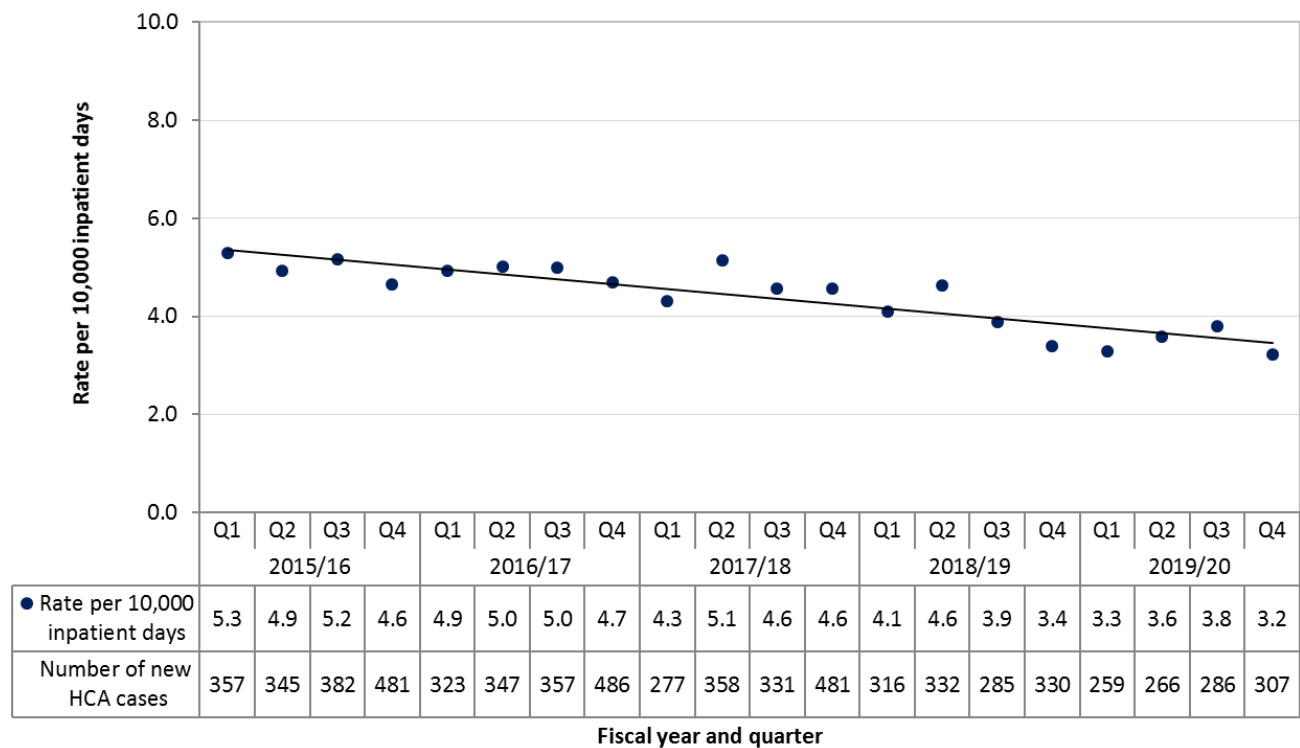
The PICNet website ([www.picnet.ca](http://www.picnet.ca)) provides provincial guidance, toolkits, and related resources for the prevention and control of MRSA and other antimicrobial organisms, as well as the surveillance protocol and reports on MRSA in BC. If you have questions or suspect that you have MRSA, please contact your doctor or healthcare provider.

**About this report**

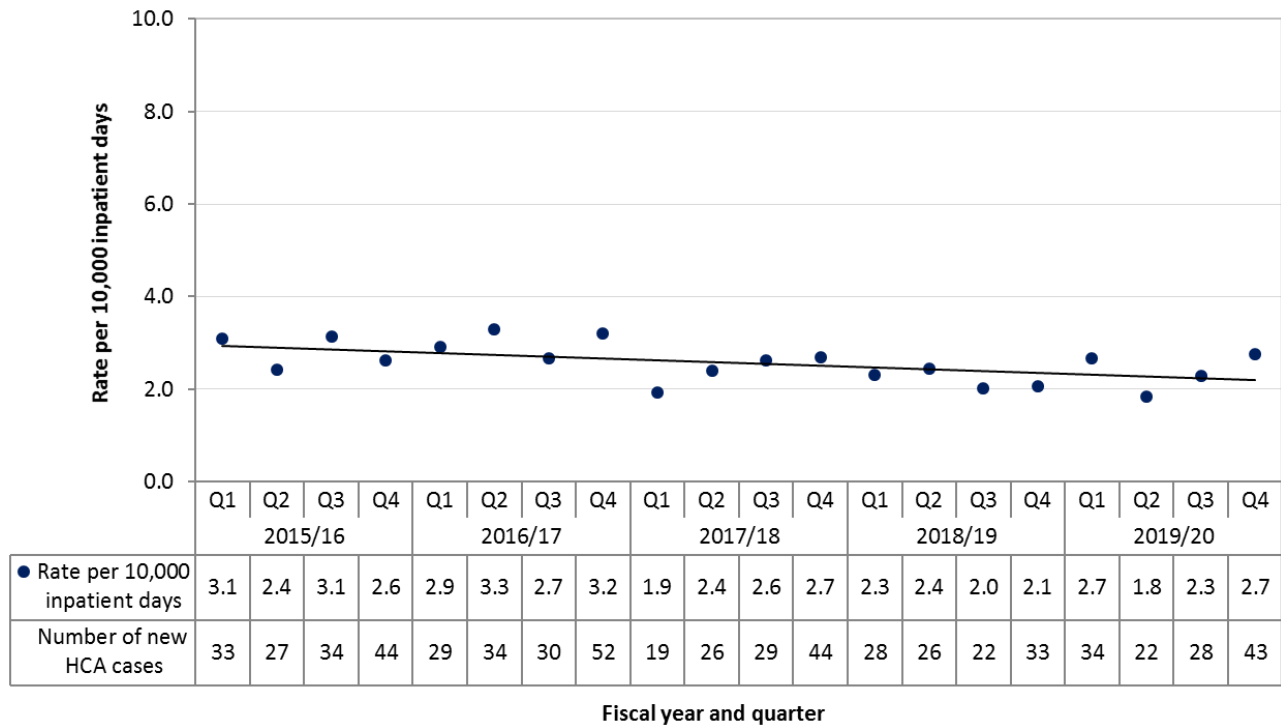
This quarterly update presents the latest data on the incidence and trends of healthcare-associated (HCA) cases of MRA that were newly identified among inpatients in the last five years. In the following graphs,

- 1) MRSA 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 case finding strategies and the application of MRSA case classification for surveillance among the health authorities.

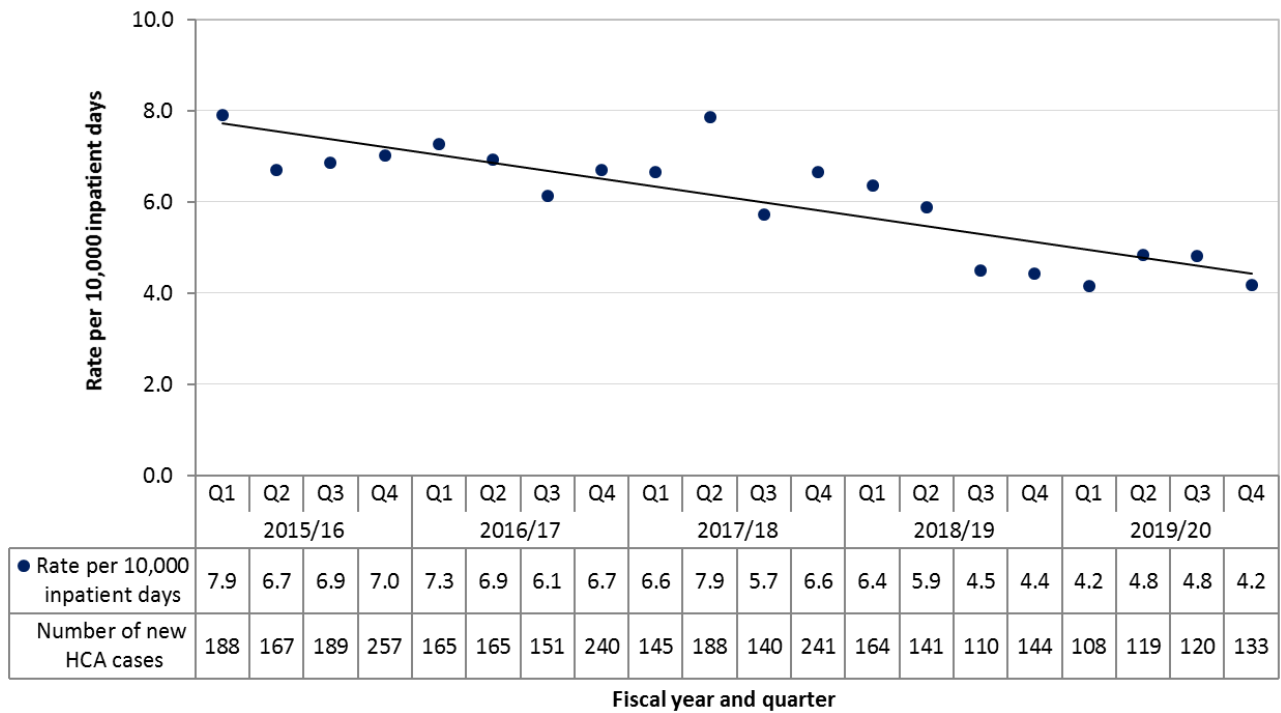
**Figure 1. Provincial rate and number of new cases of MRSA associated with the reporting facility, by fiscal year and quarter, 2015/16 - 2019/20, British Columbia**



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

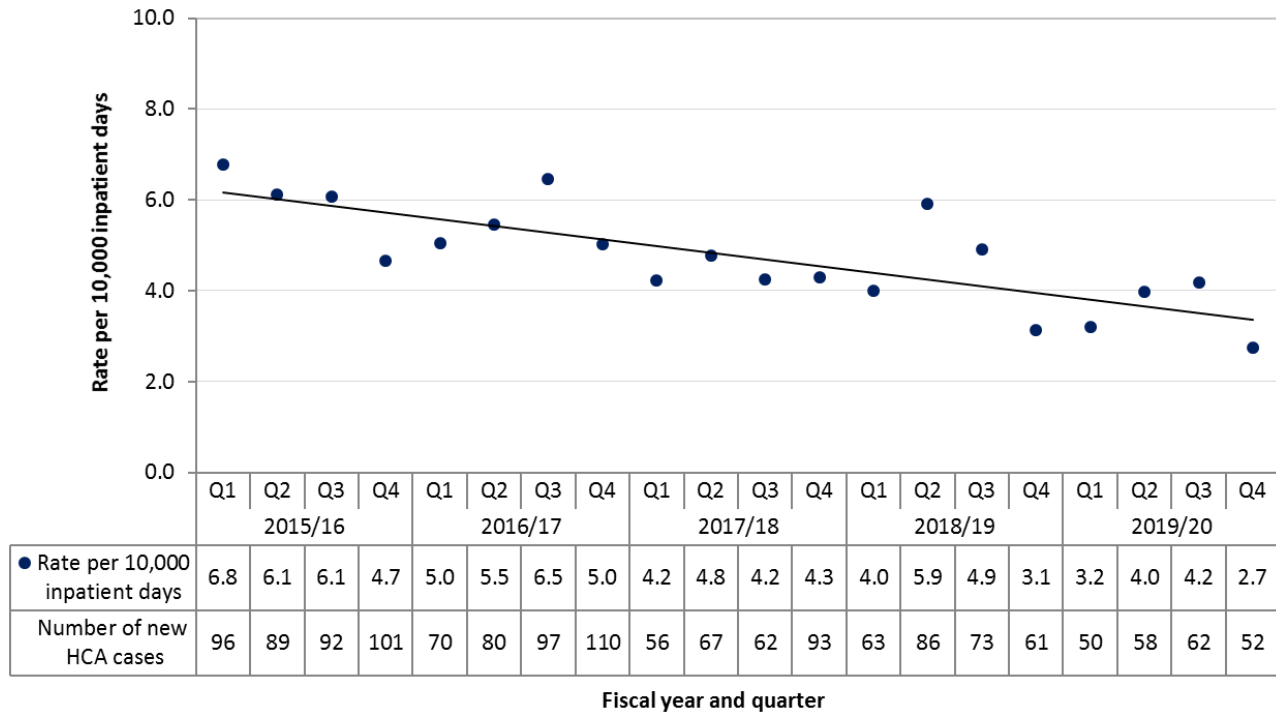


**Figure 3. Rate and number of new cases of MRSA associated with the reporting facility, by fiscal year and quarter, 2015/16 - 2019/20, Fraser Health<sup>1</sup>**

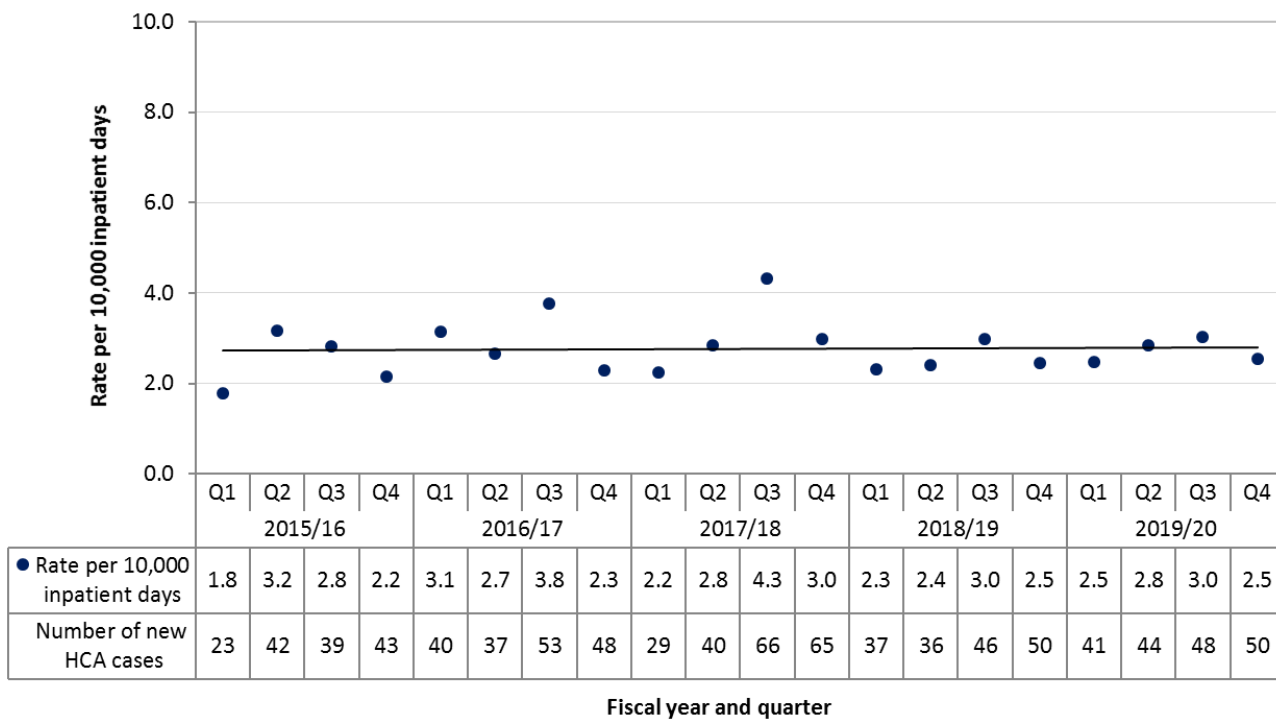


<sup>1</sup> Fraser Health expanded its surveillance program for MRSA to a new acute care site during Q4 2017/18 and another new acute care site during Q4 2018/19.

**Figure 4. Rate and number of new cases of MRSA associated with the reporting facility, by fiscal year and quarter, 2015/16 - 2019/20, Vancouver Coastal Health<sup>2</sup>**



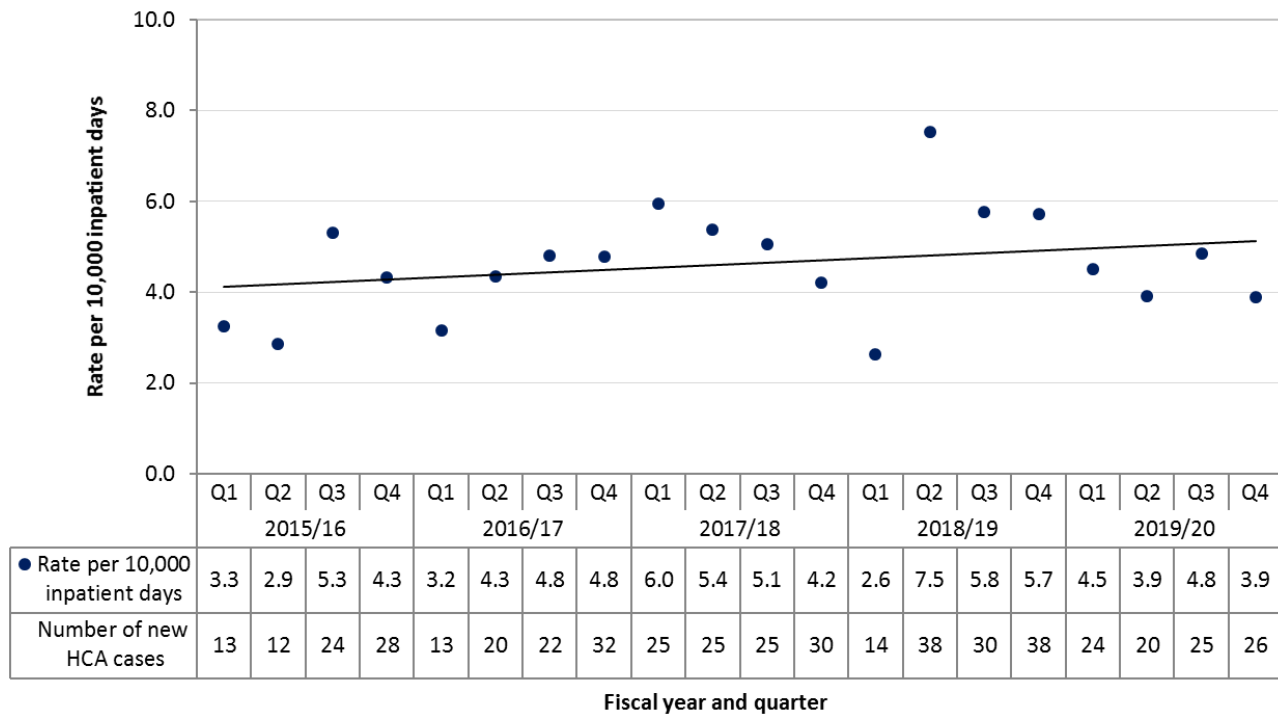
**Figure 5. Rate and number of new cases of MRSA associated with the reporting facility, by fiscal year and quarter, 2015/16 - 2019/20, Island Health<sup>3</sup>**



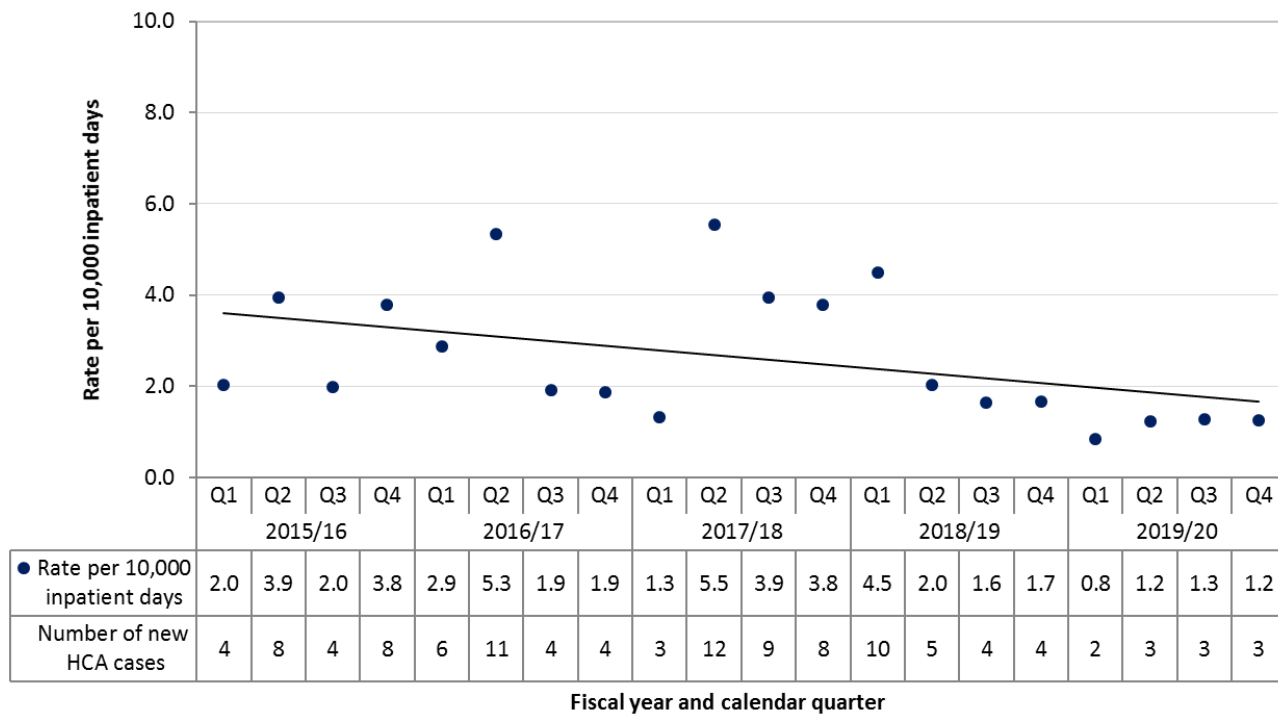
<sup>2</sup> Data from acute care facilities of Providence Health Care (PHC) were included.

<sup>3</sup> Data include two new hospitals opened during Q3 of 2017/18 and historical data from two closed hospitals.

**Figure 6. Rate and number of new cases of MRSA associated with the reporting facility, by fiscal year and quarter, 2015/16 - 2019/20, Northern Health**



**Figure 7. Rate and number of new cases of MRSA associated with the reporting facility, by fiscal year and calendar quarter, 2015/16 - 2019/20, Provincial Health Services Authority<sup>4</sup>**



<sup>4</sup> Data from BC Cancer - Vancouver were included starting from Q1 of 2018/19.

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