

**Ministry of Health
and Long-Term Care**

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**Ministère de la Santé
et des Soins de longue durée**

**Sous-ministre adjoint
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October 16, 2008

Dear Hospital Presidents and Chief Executive Officers:

Pursuant to section 22.2 of Regulation 965 made under the *Public Hospitals Act* which deals with hospitals' disclosure of information concerning certain patient safety indicators through hospital websites, each Ontario hospital is mandated to report on its hospital website, by December 31, 2008 and by the end of every quarter thereafter:

- its quarterly infection rate of new nosocomial MRSA bacteremia and VRE bacteremia, and
- its quarterly total of the number of new nosocomial cases.

Both the rate and case information will be reported for a defined reporting period. A schedule of reporting is included in the attached Appendices, which also describes in detail the reporting methodology.

The MOHLTC will also be posting the above hospital MRSA bacteremia and VRE bacteremia information on its Patient Safety public website in alignment with hospital public reporting.

In addition, each Ontario public hospital is mandated to report to the Ministry of Health and Long-Term Care, according to the reporting schedule outlined in the attached Appendices, a number of data elements regarding MRSA bacteremia and VRE bacteremia data collection using the Ministry's Web-Enabled Reporting System (WERS). These data elements include, but are not limited to:

- the number of new MRSA bacteremia and VRE bacteremia cases associated with the reporting facility (the numerator),
- the number of patient days (the denominator), and
- the calculated infection rate.

Further details on MRSA bacteremia and VRE bacteremia case definition, rate calculation and case reporting thresholds are included in the Appendices to this letter.

Each **eligible** Ontario hospital is also mandated to report its Hospital Standardized Mortality Ratio (HSMR) on the hospital website by December 31, 2008. Clarification on the use of the Canadian Institute for Health Information's (CIHI) methodology and calculations will be provided in a subsequent correspondence.

Public reporting of MRSA, VRE and HSMR information is the second stage in the disclosure of information on a number of patient safety indicators. As such, you will be informed of public reporting details for indicators required by April 2009 in the coming months.

If you have questions or require further clarification on the reporting details, please contact Sten Ardal, Director Health Analytics, at 416-327-6483 for assistance.

Sincerely,

Original signed by

John McKinley
Assistant Deputy Minister

C: Hon. David Caplan, MPP
Minister of Health and Long-Term Care

Ron Sapsford
Deputy Minister, Ministry of Health and Long-Term Care

APPENDIX 'A'

Methicillin-resistant *Staphylococcus aureus* (MRSA Bacteremia) Infection Rate

Case Definition¹:

This definition is specific to MRSA bacteremia and is not transferable to any other indicator. The collection and reporting on MRSA bacteremia for patient safety indicator reporting does not preclude the necessity for surveillance and tracking the epidemiology of nosocomial MRSA by healthcare facilities including other types of MRSA healthcare-associated infections.

A case is a patient identified with laboratory confirmed bloodstream infection with methicillin resistant *Staphylococcus aureus* (MRSA). A blood stream infection is a single positive blood culture for MRSA.

MRSA are strains of *S. aureus* that have a minimum inhibitory concentration (MIC) to oxacillin of ≥ 4 mcg/ml or contain the *mecA* gene coding for penicillin binding protein 2a (PBP 2A). They are resistant to all of the beta-lactam classes of antibiotics (such as penicillins, penicillinase-resistant penicillins (e.g. cloxacillin) and cephalosporins).

A subsequent MRSA bacteremia in the same patient is to be considered a new episode, and counted as such, if the original infection had been successfully treated with clinical resolution and more than six weeks have elapsed since the completion of the antimicrobial treatment of the original bacteremia.

a) New nosocomial case associated with the reporting facility:

The infection was **not** present on admission (i.e., onset of symptoms > 72 hours after admission) or the infection was present at the time of admission but was related to a previous admission to the same facility within the last 72 hours.

b) New case associated with other health care facility:

The infection was present on admission (i.e., onset of symptoms < 72 hours after admission) and the patient was exposed to another health care facility (including LTC) other than the reporting facility within the last 72 hours.

c) New case associated with a source other than a health care facility or unknown/indeterminate source:

The infection was present on admission (i.e., onset of symptoms < 72 hours after admission) and the patient was not exposed to any health care facility in the last 72 hours.

Method of calculation:

The calculation of the MRSA bacteremia infection rate for the reporting period (on a quarterly basis) is:

$$\text{MRSA bacteremia infection rate} = \frac{\text{Number of new nosocomial cases associated with the reporting facility}}{\text{Total number of patient days}} \times 1,000$$

The **numerator** is the total number of newly identified nosocomial cases (“a” above and excluding “b” and “c”) for the reporting period.

The **denominator** is the total number of in-patient days for the reporting period. Patient days are calculated from the daily bed census including acute, rehab, chronic care and mental health beds.

Data are aggregated for quarterly administrative reporting periods identified in section ‘Reporting’ below.

APPENDIX 'A'

Methicillin-resistant *Staphylococcus aureus* (MRSA Bacteremia) Infection Rate

Rationale²:

MRSA is an important nosocomial pathogen, with increasing incidence in community-acquired infection around the world. Rates in Canada have increased ten-fold over the past decade, with some of the highest rates observed in Ontario.

Hospital acquired infection rates provide one measure of patient safety and the quality of care. MRSA infection rates act as a signal to hospitals to look more carefully at their practices, such as, hand hygiene practices and infection screening programs.

Data capture:

Data will be collected directly from Ontario hospitals using the web-enable reporting system (WERS).

Reporting:

Timeframe:

Initial Dec 30 2008 (Period 1) reporting should include cumulative data for the three month period Sep 01 to Nov 30 2008. Subsequent reporting will be **quarterly** following the time table below.

Administrative periods for aggregating data are defined as:

<u>Period</u>	<u>Period end date</u>	<u>WERS reporting date</u>	<u>Public website reporting date</u>
1	30-Nov-08	15-Dec-08	30-Dec-08
2	31-Mar-09	15-Apr-09	30-Apr-09
3	30-Jun-09	15-Jul-09	30-Jul-09
4	30-Sep-09	15-Oct-09	30-Oct-09
5	31-Dec-09	15-Jan-10	29-Jan-10

Public Reporting:

At the end of each Period and as indicated above hospitals will report the previous three month's data on their website **by hospital site** including;

(i) the number of new nosocomial MRSA bacteremia cases that is zero (0) or totalling five (5) or more associated with that hospital site, or if this is less than 5 cases (i.e. 1 to 4 cases), then hospitals may post text reading "< 5 cases", and

(ii) the nosocomial MRSA bacteremia rate as calculated above.

MOHLTC WERS Reporting:

By the 15th of the month as indicated above hospitals will report the previous three month's data to the MOHLTC using WERS. These data include among other administrative data such as facility number:

- All cases, including:
 - a. cases associated with the reporting facility (i.e. the numerator for the rate calculation),
 - b. cases associated with other health care facilities, and
 - c. cases associated with a source other than a health care facility or unknown/indeterminate source.
- Patient days within the reporting facility (i.e. denominator for the rate calculation) calculated from the daily bed census including acute, rehab, chronic care and mental health beds, and
- The calculated MRSA bacteremia rate.

APPENDIX 'A'

Methicillin-resistant *Staphylococcus aureus* (MRSA Bacteremia) Infection Rate

Reporting eligibility:

- All hospital sites.
- Inpatient data.

References:

1. Best Practices for Infection Prevention and Control of Resistant *Staphylococcus aureus* and Enterococci in all Health Care Settings. March 2007. Ministry of Health and Long-term Care/Provincial Infectious Diseases Advisory Committee (PIDAC), Toronto, Canada.
2. Surveillance for Methicillin-Resistant *Staphylococcus aureus* in Canadian Hospitals - A Report Update from the Canadian Nosocomial Infection Surveillance Program. Canada Communicable Disease Report. Volume 31-03 February 2005.

APPENDIX 'B'

Vancomycin-resistant Enterococcus (VRE Bacteremia) Infection Rate

Case Definition¹:

This definition is specific to VRE bacteremia and is not transferable to any other indicator.

A case is a patient identified with laboratory confirmed bloodstream infection with **Vancomycin-resistant Enterococcus (VRE Bacteremia)**. A blood stream infection is a single positive blood culture for VRE.

VRE are strains of *Enterococcus faecium* or *Enterococcus faecalis* that have a minimum inhibitory concentration (MIC) to vancomycin of ≥ 32 mcg/ml. They contain the resistance genes VAN-A or VAN-B.

A subsequent VRE bacteremia in the same patient is to be considered a new episode, and counted as such, if the original infection had been successfully treated with clinical resolution and more than six weeks have elapsed since the completion of the antimicrobial treatment of the original bacteremia.

a) New nosocomial case associated with the reporting facility:

The infection was **not** present on admission (i.e., onset of symptoms > 72 hours after admission) or the infection was present at the time of admission but was related to a previous admission to the same facility within the last 72 hours.

b) New case associated with other health care facility:

The infection was present on admission (i.e., onset of symptoms < 72 hours after admission) and the patient was exposed to another health care facility (including LTC) other than the reporting facility within the last 72 hours.

c) New case associated with a source other than a health care facility or unknown/indeterminate source:

The infection was present on admission (i.e., onset of symptoms < 72 hours after admission) and the patient was not exposed to any health care facility (including LTC) within the last 72 hours.

Method of calculation:

The calculation of the VRE bacteremia rate for the reporting period (on a quarterly basis) is:

$$\text{VRE bacteremia rate} = \frac{\text{Number of new nosocomial cases associated with the reporting facility}}{\text{Total number of patient days}} \times 1,000$$

The **numerator** is the total number of newly identified nosocomial cases ("a" above and excluding "b" and "c") for the reporting period.

The **denominator** is the total number of in-patient days for the reporting period. Patient days are calculated from the daily bed census including acute, rehab, chronic care and mental health beds.

Data are aggregated for quarterly administrative reporting periods identified in section 'Reporting' below.

Rationale¹:

Hospital acquired infection rates provide one measure of patient safety and the quality of care. In Ontario, the incidence of VRE more than doubled in 2005. The majority of patients were thought to have acquired VRE in acute-care hospitals.

VRE infection impacts on patient outcomes, quality of care and duration of hospitalization in acute care. The use of best practices to prevent transmission of VRE will protect patients from increased morbidity and mortality as well as reduce associated costs to the health care system.

APPENDIX 'B'

Vancomycin-resistant Enterococcus (VRE Bacteremia) Infection Rate

Data capture:

Data will be collected directly from Ontario hospitals using the web-enabled reporting system (WERS).

Reporting:

Timeframe:

Initial Dec 30 2008 (Period 1) reporting should include cumulative data for the three month period Sep 01 to Nov 30 2008. Subsequent reporting will be **quarterly** following the time table below.

Administrative periods for aggregating data are defined as:

<u>Period</u>	<u>Period end date</u>	<u>WERS reporting date</u>	<u>Public website reporting date</u>
6	30-Nov-08	15-Dec-08	30-Dec-08
7	31-Mar-09	15-Apr-09	30-Apr-09
8	30-Jun-09	15-Jul-09	30-Jul-09
9	30-Sep-09	15-Oct-09	30-Oct-09
10	31-Dec-09	15-Jan-10	29-Jan-10

Public Reporting:

At the end of each Period and as indicated above hospitals will report the previous three month's data on their website **by hospital site** including;

- (i) the number of new nosocomial VRE bacteremia cases that is zero (0) or totalling five (5) or more associated with that hospital site, or if this is less than 5 cases (i.e. 1 to 4 cases), then hospitals may post text reading "< 5 cases", and
- (ii) the nosocomial VRE bacteremia rate as calculated above.

MOHLTC WERS Reporting:

By the 15th of the month as indicated above hospitals will report the previous three month's data to the MOHLTC using WERS. These data include among other administrative data such as facility number:

- o All cases, including:
 - d. cases associated with the reporting facility (i.e. the numerator for the rate calculation),
 - e. cases associated with other health care facilities, and
 - f. cases associated with a source other than a health care facility or unknown/indeterminate source.
- o Patient days within the reporting facility (i.e. denominator for the rate calculation) calculated from the daily bed census including acute, rehab, chronic care and mental health beds, and
- o The calculated VRE bacteremia rate.

Reporting eligibility:

- All hospital sites.
- Inpatient data.

References:

1. Best Practices for Infection Prevention and Control of Resistant *Staphylococcus aureus* and Enterococci in all Health Care Settings. March 2007. Ministry of Health and Long-term Care/Provincial Infectious Diseases Advisory Committee (PIDAC), Toronto, Canada.