

Manitoba Health, Seniors and Active Living ARO Definitions

1. ARO Definitions

Manitoba Health, Seniors and Active Living (MHSAL) ARO definitions are written to be consistent with Canadian Nosocomial Infection Surveillance Project (CNISP). The following definitions are congruent with the 2017 CNISP definitions.

2.1 MRSA

These definitions are to be used for the purposes of identification and surveillance classification of new MRSA cases.

MRSA surveillance inclusion criteria for all cases (health care-associated and community):

isolation of *Staphylococcus aureus* from any body site AND

resistance of isolate to oxacillin AND

patient must currently be admitted to a health care facility¹ AND

is a “newly identified MRSA case”

To classify the case as an infection versus colonization, the case needs to meet the case definitions for an infection at time of culture or within 72 hours of when the culture was taken.

Attribution is completed in accordance with the best judgment of the IPC professional/delegate.

This DOES NOT include:

- MRSA cases previously identified
- Emergency, clinic, or other outpatient cases (e.g. physiotherapy) who are not admitted.
- Cases re-admitted with MRSA

A) Health care-associated-current facility:

Diagnosis of MRSA was made by a culture positive sample for MRSA collected greater than or equal to 2 calendar days after admission to current facility (admission considered day 1: diagnosis made at day 3 or beyond) **and**:

- No medical history of previous MRSA infection or colonization

¹ Includes ER and outpatients who tested positive for MRSA and then are subsequently admitted or are admitted but still in ER awaiting a bed on a ward.

OR

Diagnosis of MRSA was made by a culture positive sample for MRSA collected within 2 calendar days (admission considered day 1; diagnosis made prior to day 3) of admission to current facility and:

- Medical history in the previous 12 months at current facility including one or more of the following:
 - Admission to current facility
 - Dialysis
 - Surgery (including day surgery)
 - Placement of indwelling catheters or medical devices that pass through the skin into the body

OR

Diagnosis of MRSA was made post discharge from current facility by a culture positive sample for MRSA collected within 2 calendar days (admission considered day 1; diagnosis made prior to day 3) of admission to a receiving facility.

OR

Neonates to 1 year of age: The identification of health care-associated MRSA in the neonatal period is complicated by the possibility of perinatal acquisition of these organisms. The identification of this organism should prompt an investigation of colonization of the mother and other neonates in the unit.

- The initial hospital stay was less than 3 calendar days and infant subsequently presented to the same hospital within 14 days of their initial discharge

OR

- The initial hospital stay was equal to or greater than 3 calendar days and the infant subsequently presented to the same hospital any time within the first year of initial discharge

B) Health care-associated-other facility:

Diagnosis of MRSA was made by a culture positive sample for MRSA collected within 2 calendar days after admission to the health care facility (admission considered day 1; diagnosis made at day 3 or prior) and:

- Medical history in the past 12 months at another facility including one or more of the following:
 - Admission to a health care facility or care in a long-term care residential facility
 - Dialysis
 - Surgery (including day surgery)
 - Placement of indwelling catheters or medical devices that pass through the skin into the body

OR

Neonates to 1 year of age: The identification of health care-associated MRSA in the neonatal period is complicated by the possibility of perinatal acquisition of these organisms. The identification of this organism should prompt an investigation of colonization of the mother and other neonates in the unit.

- The initial hospital stay was less than 3 calendar days and infant subsequently presented to a different hospital within 14 days of their initial discharge

OR

- The initial hospital stay was equal to or greater than 3 calendar days and the infant subsequently presented to a different hospital any time within the first year of initial discharge

C) Community-associated case definition:

Community-associated cases are defined as meeting all of the following criteria:

- No previous known MRSA infection or colonization
- MRSA Positive sample identified less than 2 calendar days after admission to a health care facility (admission considered day 1; diagnosis made less than day 3)
- No known admission to a health care facility in the previous 12 months
- No known residence in a long-term care facility in the previous 12 months

- No known surgery or dialysis in the previous 12 months
- No known indwelling catheter or medical device (e.g. Foley catheter, tracheostomy, feeding tube) in the previous 12 months

D) Unknown case definition:

Unknown cases are defined as:

- Patient is not linked to current facility cases and there is a history of multiple admissions to more than one facility
- Unable to gather information about previous admissions to facilities therefore community- associated criteria cannot be substantiated

2.2 VRE

VRE surveillance will only be required for bloodstream infections. The following definitions are to be used for the purposes of identification and surveillance classification of VRE bacteremia cases.

VRE surveillance inclusion criteria for all cases (health care-associated or community):

isolation of *Enterococcus* from any bacteremia (bloodstream infection) **AND**

resistance of isolate to vancomycin
AND

patient must currently be admitted to a health care facility²

To classify the case as an infection, the case needs to meet the case definitions for an infection at time of culture or within 72 hours of when the culture was taken.

Attribution is completed in accordance with the best judgment of the IPC professional/delegate.

This DOES NOT include:

- Emergency, clinic, or other outpatient cases (e.g. physiotherapy) who are not admitted.

A) Health care-associated-current facility:

Diagnosis of VRE was made by a blood culture positive for VRE collected 48 hours or more after admission to current facility

OR

Diagnosis of VRE was made by a blood culture positive for VRE collected within 48 hours of admission to current facility **and**:

- Medical history in the previous 12 months at current facility of any one or more of the following:
 - Admission to current facility
 - Dialysis
 - Surgery including day surgery
 - Placement of indwelling catheters or medical devices that pass through the skin into the body

OR

Diagnosis of VRE bacteremia was made post discharge from current facility by a culture positive sample for VRE collected within 48 hours of admission to a receiving facility.

OR

Neonates to 1 year of age: The identification of health care-associated VRE bacteremia in the neonatal period is complicated by the possibility of perinatal acquisition of these organisms. The identification of this organism should prompt an investigation of colonization of the mother and other neonates in the unit.

² Includes ER and outpatients who tested positive for VRE bacteremia and then are subsequently admitted or are admitted but still in ER awaiting a bed on a ward.

- The initial hospital stay was less than 3 calendar days and infant subsequently presented to the same hospital within 14 days of their initial discharge

OR

- The initial hospital stay was equal to or greater than 3 calendar days and the infant subsequently presented to the same hospital any time within the first year of initial discharge

B) Health care-associated acquisition-other facility:

Diagnosis of VRE was made by a culture positive sample for VRE collected within 48 hours after admission to the health care facility **and:**

- Medical history in the past 12 months at another facility of any one or more of the following:
 - Admission to a health care facility or care in a long-term care residential facility
 - Dialysis
 - Surgery including day surgery
 - Placement of indwelling catheters or medical devices that pass through the skin into the body

OR

Neonates to 1 year of age: The identification of health care-associated VRE bacteremia in the neonatal period is complicated by the possibility of perinatal acquisition of these organisms. The identification of this organism should prompt an investigation of colonization of the mother and other neonates in the unit.

- The initial hospital stay was less than 3 calendar days and infant subsequently presented to a different hospital within 14 days of their initial discharge

OR

- The initial hospital stay was equal to or greater than 3 calendar days and the infant subsequently presented to a different hospital any time within the first year of initial discharge

C) Community-associated case definition:

Community-associated cases are defined as meeting all of the following criteria:

- No previous known VRE
- VRE identified within 48 hours after admission to a health care facility
- No known admission to a health care facility in the previous 12 months
- No known residence in a long-term care facility in the previous 12 months
- No known surgery or dialysis in the previous 12 months
- No known indwelling catheter or medical device (e.g. Foley catheter, tracheostomy, feeding tube) in the previous 12 months

D) Unknown case definition:

Unknown cases of VRE bacteremia are defined as:

- Patient is not linked to current facility cases and there is a history of multiple admissions to more than one facility
- Unable to gather information about previous admissions to facilities therefore community-associated criteria cannot be substantiated

2.3 CPE

These definitions are to be used for the purposes of identification and surveillance classification of new CPE cases.

CPE surveillance inclusion criteria for all cases (health care-associated and community):

isolation of a new Carbapenemase-Producing *Enterobacteriaceae* from any body site **AND**

patient must currently be admitted to a health care facility³
AND

is a “newly identified CPE case”

To classify the case as an infection versus colonization, the case needs to meet the case definitions for an infection at time of culture or within 72 hours of when the culture was taken.

Where cases of CPE have been previously identified as CPE and present with a new CPE organism, these cases would be considered new cases.

Attribution is completed in accordance with the best judgment of the IPC professional/delegate.

This DOES NOT include:

- Emergency, clinic, or other outpatient cases (e.g. physiotherapy) who are not admitted.
- Cases re-admitted with same CPE pathogen as previous admission.

A) Health care-associated-current facility:

Diagnosis of a new CPE was made by a culture positive sample for CPE collected greater than or equal to 2 calendar days after admission to current facility (admission considered day 1; diagnosis made at day 3 or beyond) **and:**

- No medical history of previous similar CPE infection or colonization

OR

Diagnosis of new CPE was made by a culture positive sample for CPE collected within 2 calendar days (admission considered day 1; diagnosis made prior to day 3) of admission to current facility **and:**

- Medical history in the previous 12 months at current facility of including one or more of the following:
 - Admission to current facility
 - Dialysis
 - Surgery (including day surgery)
 - Placement of indwelling catheters or medical devices that pass through the skin into the body

OR

Diagnosis of new CPE was made post discharge from current facility by a culture positive sample for CPE collected within 2 calendar days (admission considered day 1; diagnosis made prior to day 3) of admission to a receiving facility

OR

Neonates to 1 year of age: The identification of health care-associated CPE in the neonatal period is complicated by the possibility of perinatal acquisition of these organisms. The identification of this organism should prompt an investigation of colonization of the

³ Includes ER and outpatients who tested positive for CPE and then are subsequently admitted or are admitted but still in ER awaiting a bed on a ward.

mother and other neonates in the unit.

- The initial hospital stay was less than 3 calendar days and infant subsequently presented to the same hospital within 14 days of their initial discharge

OR

- The initial hospital stay was equal to or greater than 3 calendar days and the infant subsequently presented to the same hospital any time within the first year of initial discharge

B) Health care-associated-other facility:

Diagnosis of new CPE was made by a culture positive sample for CPE collected within 2 calendar days after admission to the health care facility (admission considered day 1; diagnosis made at day 3 or prior) **and:**

- Medical history in the past 12 months at another facility of including one or more of the following:
 - Admission to a health care facility or care in a long-term care residential facility
 - Dialysis
 - Surgery (including day surgery)
 - Placement of indwelling catheters or medical devices that pass through the skin into the body

OR

Neonates to 1 year of age: The identification of health care-associated CPE in the neonatal period is complicated by the possibility of perinatal acquisition of these organisms. The identification of this organism should prompt an investigation of colonization of the mother and other neonates in the unit.

- The initial hospital stay was less than 3 calendar days and infant subsequently presented to a different hospital within 14 days of their initial discharge

OR

- The initial hospital stay was equal to or greater than 3 calendar days and the infant subsequently presented to a different hospital any time within the first year of initial discharge

C) Community-associated case definition (rare):

Community-associated cases are defined as meeting all of the following criteria:

- No previous known CPE infection or colonization of the same organism
- New CPE positive sample identified less than 2 calendar days after admission to a health care facility (admission considered day 1; diagnosis made less than day 3)
- No known admission to a health care facility in the previous 12 months
- No known residence in a long-term care facility in the previous 12 months
- No known surgery or dialysis in the previous 12 months
- No known indwelling catheter or medical device (e.g. Foley catheter, tracheostomy, feeding tube) in the previous 12 months

D) Unknown case definition:

Unknown cases are defined as:

- Patient is not linked to current facility cases and there is a history of multiple admissions to more than one facility
- Unable to gather information about previous admissions to facilities therefore community-associated criteria cannot be substantiated