### Introduction

Antibiotic Resistant Organisms (AROs) include organisms such as Methicillin Resistant Staphylococcus aureus (MRSA) and Vancomycin Resistant Enterococcus (VRE), as well as groups of very resistant organisms like Carbapenemase Producing Organisms (CPOs). AROs are being seen with greater frequency in most hospitals and other healthcare facilities. These organisms may cause life-threatening infections and have been associated with facility outbreaks. Treatment of these organisms is complicated by the fact that the organisms are resistant to multiple antimicrobial agents, so treatment options are limited.

Screening clients for the presence of AROs, followed by implementation of additional precautions for those found to be infected or colonized, has been shown to be effective in controlling outbreaks in hospitals and long term care facilities. Clients on some units are at a higher risk of severe complications from AROs and, therefore, will have increased screening and additional precautions (i.e., Intensive Care Unit [ICU]).

Routine Practices, including proper hand hygiene, cleaning/disinfection, and personal protective equipment (PPE) based on a risk-assessment, are paramount in preventing the transmission of all AROs and must be maintained on all units, with all clients.

### Definitions

**Pediatric Inpatient Department (PIPD):** Clients with MRSA and CPO will continue to be placed on additional precautions. Clients with VRE **will not** be placed on additional precautions. Screening for MRSA and CPO will occur as indicated by the ARO Admission Screen Medical Directive (Appendix A). Additional screening for MRSA and CPO will occur as directed by IP&C – Saskatoon on the ARO ICP Surveillance Orders Medical Directive (Appendix B). Screening for VRE **will not routinely** occur on PIPD, but may occasionally be ordered as directed by IP&C – Saskatoon.
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**Cleared:** The client has had three sufficient negative ARO swabs as determined by the Infection Control Practitioner (ICP) and is declared as “previously ARO positive” on the Laboratory Information System (LIS) Epidemiologically Significant Occurrence (ESO). The client’s alert is also removed in the Registration System. Contact Precautions are no longer required but screening cultures are to be collected on each admission to acute care.

**Contact:** Client “A” is a contact if Client “A” shared a room for 24 hours or greater with Client “B” who has a new ARO and was not on appropriate additional precautions, OR, if Client “A” has been admitted to the bed of Client “B”, who has a new ARO, for 24 hours or greater without a proper Contact Precautions terminal clean done during that 24 hours. An MRSA or VRE contact requires an ARO screen to be collected 7 days after last contact with the new ARO client (Client “B”) who was not on appropriate additional precautions. A CPO contact requires an ARO screen to be collected on Days 0, 7, 14, and 21 after last contact with the new CPO client (Client “B”), as well as Contact Precautions until one negative screen at least 7 days from last contact is negative and IP&C - Saskatoon has determined they may come off of additional precautions.

**NOTE:** CPO contacts will have one of two ESO Alerts: Option 1 – Recent CPO contacts (those who have not had a negative CPO screen) will require Contact Precautions and mandatory private room in addition to their screening for CPO. Option 2 – CPO contacts (those who have had at least one negative CPO screen at least 7 days after contact) will not require Contact Precautions but will still require additional CPO screening. IP&C - Saskatoon will determine which ESO applies.

**Contact Tracing:** The process an ICP uses to determine which clients are contacts and adding the applicable ESO Alert into the Laboratory Information System (LIS).

**ESO Alert:** An ESO Alert is added into the LIS by the ICP for each applicable individual client and prints to the unit’s fax machine when a client is admitted or anytime they are transferred to another bed, in order to remind staff about the appropriate additional precautions, room placement and to refer staff to the medical directives for swabbing instructions. The ESO Alert reinforces the medical directives.

“**High risk**” unit: Units with clients deemed most vulnerable. These include Adult/Pediatric ICU/CCU, Transplant, and Oncology units. Clients with MRSA, VRE, and CPO will continue to be placed on additional precautions. Screening for MRSA and VRE will occur for all admissions to the unit and screening for CPO will occur as indicated by the ARO Admission Screen Medical Directive (Appendix A). Additional screening for MRSA, VRE, and CPO will occur as directed by IP&C - Saskatoon on the ARO ICP Surveillance Orders Medical Directive (Appendix B).

**Medical Directive:** Medical Directive means a prescription for a protocol, procedure, treatment or intervention that may be performed for a range of clients who meet certain conditions. It is always printed and does not require the signature of the attending Practitioner or medical resident (Region-wide Policies and Procedures: Medical Directives - 7311-60-027).

“**Non-high risk**” unit: Any unit not included as a “high risk” unit. Clients with MRSA and CPO will continue to be placed on additional precautions. Clients with VRE will not be placed on additional precautions. Screening for MRSA and CPO will occur as indicated by the ARO Admission Screen Medical Directive (Appendix A). Additional screening for MRSA and CPO will occur as directed by IP&C - Saskatoon on the ARO ICP Surveillance Orders Medical Directive (Appendix B). Screening for VRE will not routinely occur on “non-high risk” units, but may occasionally be ordered as directed by IP&C - Saskatoon.
NOTE: Some screening, such as Contact Tracing Surveillance Orders for VRE may be required while the client is on a “high risk” unit but would not be required while on a “non-high risk” unit. Refer to the ARO ICP Surveillance Orders Medical Directive (Appendix B).

SCM Health Issue Alert: The “SCM Health Issue” Alert is placed in the client header by IP&C - Saskatoon when the client is positive for an ARO. Additional precautions may be required based on the unit the client is on (as defined above).

Policy

1. Clients who will be in an acute care facility for more than 48 consecutive hours (excluding newborns at their birth facility or with a NICU admission) are evaluated for their risk of having contracted an ARO in the past or through their current admission. Medical directives are used to guide either nursing staff or ICPs in the appropriate screening requirement and subsequent additional precautions required. The types of Medical Directives are as follows:
   - **ARO Admission Screen Medical Directive** (Appendix A) – used to screen clients who will be in an acute care facility for more than 48 consecutive hours (excluding newborns at their birth facility or with a NICU admission). This Medical Directive is directed to licensed nurses – Registered Nurses, Registered Psychiatric Nurses and Licensed Practical Nurses and the screen must be completed prior to the 48 hour timeframe.
   - **ARO ICP Surveillance Orders Medical Directive** (Appendix B) – used to order “Extended Stay”, “Contact Tracing”, “Transfer from Outbreak Unit”, “Prevalence Screening” and “Testing for Clearance”. This Medical Directive is directed to ICPs so that the appropriate swabs can be completed by nursing.

2. The **Specimen Collection Guide** (Appendix C) guides the nurse in using the appropriate swab and method of collection for each type of screen ordered on the Medical Directive. The Specimen Collection Guide is also located on the reverse of each of the Medical Directives. Some contraindications may exist for the usual sites to be swabbed. Please refer to the Specimen Collection Guide for all possible sites needing to be swabbed dependent on the client’s individual assessment.

Purpose

1. To prevent and control the spread of AROs by appropriately screening clients who will be in an acute care facility for more than 48 consecutive hours, as well as screening clients throughout their stay due to an identified risk.

NOTE: For prevention of ARO transmission, refer to IP&C - Saskatoon 40-110 MRSA- Acute Care and 40-190 VRE policies, provincial guidance documents regarding CPO (CPO FAQ sheet for health care providers, CPO Information sheet for patients and families, CPO Patients screening and management algorithm, and the CPO Huddle talk). Refer to 55-30 ARO Outbreak – Acute Care policy for screening requirements during an ARO outbreak in acute care.

Procedure

1. On pre-admission (i.e., during a Pre-Admission Clinic visit):
   - “OP Registration Form (Face Sheet)”: The nurse will check for an “Alert”, if applicable (i.e., MRSA, VRE, or CPO) to use the correct additional precautions for care with the client in that unit.
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- ESO Alert: The nurse will check if there are any “ESO Alerts” that printed to the unit’s fax machine to alert the nurse of additional precautions and to refer the nurse to the medical directives for screening requirements.

**NOTE:** Health care facilities will begin removing or revising the ESBL flags/comments in their admitting/lab systems; however, this process may take a while. In the interim, disregard the ESBL flags. Even though they are present, these clients no longer require contact precautions or ESBL swabs collected.

- ARO Admission Screen Medical Directive (**Appendix A**): The nurse will fill out the “ARO Admission Screen Medical Directive” in anticipation of a scheduled admission, and will collect the appropriate swabs and implement any indicated additional precautions required.

2. **On admission to the Emergency Department:**
   - “SCM Health Issue” Alert: The nurse will check the client header in SCM for any “Alert” (i.e., MRSA, VRE, or CPO, etc.) to use the correct additional precautions for care with the client in that unit.
   - ESO Alert: The nurse will check if there are any “ESO Alerts” that printed to the unit’s fax machine to alert the nurse of additional precautions and to refer the nurse to the medical directives for screening requirements.

**NOTE:** Health care facilities will begin removing or revising the ESBL flags/comments in their admitting/lab systems; however, this process may take a while. In the interim, disregard the ESBL flags. Even though they are present, these clients no longer require contact precautions or ESBL swabs collected.

- **If the client is admitted as an inpatient while in the Emergency Department, or if the client will be staying in the Emergency Department for more than 48 hours:**
  - ARO Admission Screen Medical Directive (**Appendix A**): The nurse will fill out the “ARO Admission Screen Medical Directive” **within the first 48 hours** and will collect the appropriate swabs and implement any indicated additional precautions required.

3. **On admission as an “Inpatient”:**
   - “Inpatient Registration Form (Face-sheet)”: The nurse will check for an “Alert”, if applicable (i.e., MRSA, VRE, or CPO), to use the correct additional precautions for care with the client in that unit.
   - SCM Health Issue Alert: The nurse will check the client header in SCM for any “Alert” (i.e., MRSA, VRE, or CPO, etc.) to use the correct additional precautions for care with the client in that unit.
   - ESO Alert: The nurse will check if there are any “ESO Alerts” that printed to the unit’s fax machine to alert the nurse of additional precautions and to refer the nurse to the medical directives for screening requirements.

**NOTE:** Health care facilities will begin removing or revising the ESBL flags/comments in their admitting/lab systems; however, this process may take a while. In the interim, disregard the ESBL flags. Even though they are present, these clients no longer require contact precautions or ESBL swabs collected.

- ARO Admission Screen Medical Directive (**Appendix A**): If not already done on pre-admission (i.e., during a Pre-Admission Clinic visit or during an extended stay in the Emergency
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Department) within the previous seven days, the nurse will complete the “ARO Admission Screen Medical Directive” within the first 48 hours of being in the acute care facility and will collect the appropriate swabs and implement any indicated additional precautions required.

4. Throughout the client’s stay as an inpatient:
   • The nurse will check for any new “SCM Health Issue” Alert, ESO Alert or ARO ICP Surveillance Orders Medical Directive (Appendix B) for further additional precautions or screening swabs required during the client’s admission.

5. Procedures for each Medical Directive:
   a. ARO Admission Screen Medical Directive (Appendix A)
      NOTE: For prevention of ARO transmission, refer to IP&C - Saskatoon 40-110 MRSA- Acute Care and 40-190 VRE policies, provincial guidance documents regarding CPO (CPO FAQ sheet for health care providers, CPO Information sheet for patients and families, CPO Patients screening and management algorithm, and the CPO Huddle talk). Refer to 55-30 ARO Outbreak – Acute Care policy for screening requirements during an ARO outbreak in acute care.

      • To prevent and control the spread of AROs early by appropriately screening clients who will be in an acute care facility for more than 48 consecutive hours.
      • The ARO Admission Screen Medical Directive is to be completed within the first 48 hours of their acute care facility stay.

      NOTE: Some departments may have additional unit specific ARO screening policies on admission based on specific needs to that unit (i.e., NICU).

      Medical Directive:
      • An “ARO Admission Screen Medical Directive” is to be completed by a licensed nurse on all clients who will be in an acute care facility for more than 48 consecutive hours (excluding newborns at their birth facility or with a NICU admission). Based on an individual assessment of the client during screening, a licensed nurse (Registered Nurse, Registered Psychiatric Nurse or Licensed Practical Nurse) may order lab tests for ARO admission screening.

      Procedure:
      • Licensed nursing staff will review medical and social history and interview client and/or family members to determine if client meets the screening criteria.
      • If any of the criteria are met, they will follow the directions for additional precautions and specimen collection as indicated. The “ARO Admission Screen Medical Directive” is available through Former SHR Printing Services and a sample is included with this policy (Appendix A). Appropriate methods of collecting ARO specimens are described in the “Specimen Collection Guide” on the back of each Medical Directive (Appendix C).

   b. ARO ICP Surveillance Orders Medical Directive (Appendix B)
      NOTE: For prevention of ARO transmission, refer to IP&C - Saskatoon 40-110 MRSA- Acute Care and 40-190 VRE policies, provincial guidance documents regarding CPO (CPO FAQ sheet for health care providers, CPO Information sheet for patients and families, CPO Patients screening and management algorithm, and the CPO Huddle talk). Refer to 55-30 ARO Outbreak – Acute Care policy for screening requirements during an ARO outbreak in acute care.
i. **Extended Stay Surveillance Orders**

- Clients who have been in the hospital for 30 days will have “Extended Stay” ARO specimens collected to determine if there has been a healthcare-associated transmission of an ARO during their stay.
- To prevent and control the spread of AROs by screening all clients with long hospital stays. This will occur every 30 days during their admission.

**NOTE:** Some departments may have unit specific ARO screening protocols on their unit where less frequent screening is required (i.e., DUBE, NICU).

- “Extended Stay Surveillance Orders” will consist of a test for MRSA, VRE, depending on the unit:
  - On “high risk” units – Will include MRSA and VRE
  - On “non-high risk” units – Will only include MRSA

**Medical Directive:**

- Based on an individual assessment of the client, an ICP may order lab tests to be collected for extended stay ARO screening.

**Procedure:**

- The ICP will send or deliver the completed pre-printed order sheet to the nursing unit for client testing to occur.
- The pre-printed order sheet will be placed in the doctor’s orders section of the medical record and the ICP will indicate clearly in the box provided, the appropriate test to perform and specimen to collect. The appropriate “Chart Flag” will be used to indicate the presence of a new order.
- If repeated tests and specimen collection are required it will be clearly indicated on the order sheet. The nursing staff is responsible for recording in the client’s care plan when the repeat testing is indicated and sending a swap on the date indicated on the order.
- Appropriate methods of collecting ARO specimens are described in the “Specimen Collection Guide” on the back of each Medical Directive (Appendix C).

ii. **Contact Tracing Surveillance Orders**

- Clients who have been in contact for 24 hours or more with a client with a newly identified ARO will be “Contact Traced” for the presence of that same ARO.
- A contact is defined above under the “Definitions” section.
- An MRSA or VRE contact requires a screen to be collected **7 days after last contact** with the new ARO client who wasn’t on appropriate additional precautions for your unit.
- A CPO contact requires a screen to be collected on **Day 0, 7, 14, and 21, as well as Contact Precautions and MANDATORY private room** until one negative screen at least 7 days from last contact is negative and IP&C - Saskatoon has determined they may come off of additional precautions.
- See [60-30 Appendix E: Screening Process for Contacts of AROs](#).

**NOTE:** CPO contacts will have one of two ESO Alerts: Option 1 – Recent CPO contacts (those who have not had a negative CPO screen) will require Contact Precautions and mandatory private room in addition to their screening for CPO. Option 2 – CPO contacts (those who have had at least one negative CPO screen at least 7 days after contact) will not require Contact Precautions but will still require additional CPO screening. IP&C - Saskatoon will determine which ESO applies.

**NOTE:** Contacts of MRSA or VRE do not require additional precautions:

- On “high risk” units - Contact Tracing Surveillance Orders for MRSA and CPO will be required. Contact Tracing Surveillance Orders for VRE will only be required while client is on the “high risk” unit.
On “Non-high risk” units – Contact Tracing Surveillance Orders for MRSA and CPO will be required. Contact Tracing Surveillance Orders for VRE will not be required while on the “Non-high risk” unit.

Refer to 55-30 ARO Outbreak – Acute Care policy for additional precautions and screening requirements for ARO contacts during an ARO outbreak in acute care.

NOTE: Contacts who refuse screening for “Contact Tracing” will be placed on additional precautions.

Medical Directive:
• Based on an individual assessment of the client, an ICP may order lab tests to be collected for contact tracing ARO screening

Procedure:
• The ICP will send or deliver the completed pre-printed order sheet to nursing unit for client testing to occur.
• The pre-printed order sheet will be placed in the doctor’s orders section of the medical record and the ICP will be indicated clearly in the box provided, the appropriate test to perform and specimen to collect. The appropriate “Chart Flag” will be used to indicate presence of a new order.
• If repeated tests and specimen collection are required it will be clearly indicated on the order sheet. The nursing staff is responsible for recording in the client’s care plan when the repeat testing is indicated and sending a swab on the date indicated on the order.
• Appropriate methods of collecting ARO specimens are described in the “Specimen Collection Guide” on the back of each Medical Directive (Appendix C).

iii. Outbreak Transfer Surveillance Orders
• Refer to 55-30 ARO Outbreak – Acute Care policy for additional precautions and screening requirements for ARO contacts during an ARO outbreak in acute care.

Medical Directive:
• Based on an individual assessment of the client, an ICP may order lab tests to be collected for transfers from an outbreak unit.

Procedure:
• The ICP will send or deliver the completed pre-printed order sheet to nursing unit for client testing to occur.
• The pre-printed order sheet will be placed in the doctor’s orders section of the medical record and the ICP will be indicated clearly in the box provided, the appropriate test to perform and specimen to collect 7 days after transfer from the ARO outbreak unit. The appropriate “Chart Flag” will be used to indicate presence of a new order.
• Appropriate methods of collecting ARO specimens are described in the “Specimen Collection Guide” on the back of each Medical Directive (Appendix C).

iv. Prevalence Screening Surveillance Orders
• Clients who are at risk of acquiring a specific ARO (i.e., due to an outbreak) will be tested for that ARO by “Prevalence Screening”.
• To investigate a larger population of clients in situations where there is a noted increase of an ARO; therefore, there is an increased risk for those clients to acquire a healthcare-associated ARO.
• The ICP will consult with the Infection Control Officer (ICO) to determine the scope of the “Prevalence Screen”. The scope will refer to which clients/units/wards will be tested and
how many weeks the test will be repeated. Refer to the 55-30 ARO Outbreak – Acute Care policy.

Medical Directive:
- Based on an individual assessment of the client, an ICP may order lab tests to be collected for ARO prevalence screening.

Procedure:
- The ICP will send or deliver the completed pre-printed order sheet to nursing unit for client testing to occur.
- The pre-printed order sheet will be placed in the doctor’s orders section of the medical record and the ICP will be indicated clearly in the box provided, the appropriate test to perform and specimen to collect. The appropriate “Chart Flag” will be used to indicate presence of a new order.
- If repeated tests and specimen collection are required it will be clearly indicated on the order sheet. The nursing staff is responsible for recording in the client’s care plan when the repeat testing is indicated and sending a swab on the date indicated on the order.
- Appropriate methods of collecting ARO specimens are described in the “Specimen Collection Guide” on the back of each Medical Directive (Appendix C).

v. Testing for Clearance Surveillance Orders (for MRSA or VRE positive clients only).
- Testing for Clearance will not occur for CPO positive clients.
- Clients must wait at least 3 months from their last positive screen.

NOTE: Clearance of MRSA or VRE is not indicated on “high risk” units. Clients on those units are too acutely ill to rely on test results for clearance. Other clients, for whom clearance of MRSA or VRE is not routinely indicated includes, but is not limited to, clients receiving renal services, acutely ill/unstable clients, clients receiving intensive care or clients receiving oncology services. Consult your ICP BEFORE starting the clearing process for these other clients.

- Ensure that the client is not using chlorhexidine antibacterial soap or taking the following IV or oral antibiotics for at least 48 hours before attempting to retest (Contact the ICP if unsure if an antibiotic will affect the screen):

<table>
<thead>
<tr>
<th>ARO</th>
<th>Potentially susceptible antibiotics</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Note: Treatment of infections should be based on laboratory susceptibility testing results) - Updated January 30, 2020</td>
<td></td>
</tr>
<tr>
<td>MRSA</td>
<td>Amikacin, Bacitracin, Clindamycin, Daptomycin, Doxycycline, Fusidic Acid, Gentamicin, Linezolid, Mupirocin, Rifampin, Telavancin, Tetracycline, Tigecycline, Tobramycin, Trimethoprim/Sulfamethoxazole (Cotrimoxizole, Bactrim, Septra), Vancomycin</td>
</tr>
<tr>
<td>VRE</td>
<td>Daptomycin, Linezolid, Telavancin, Tigecycline</td>
</tr>
</tbody>
</table>

- In total, three consecutive sets of negative samples from all colonized/infected/documented positive body sites (i.e., wounds, indwelling devices) need to be completed. If a urine culture or blood culture was a positive site, swab for MRSA or VRE using their usual screening sites. See the Specimen Collection Guide for appropriate method of collection. Contact the ICP if unsure of which sites to swab.

NOTE: If trying to clear MRSA, three samples from ALL wounds/devices need to be collected regardless of whether they were positive in the past or not.

- To clear the “Alert” status on the client and take them off additional precautions, the ICP needs to be notified of the negative results and will then assess whether those swabs were
sufficient for clearing and whether the client can be taken off additional precautions at that time.

- See Appendix D – MRSA and VRE Retesting Process to Clear Positive Status for detailed instructions on the ARO clearing process.

Medical Directive:
- Based on an individual assessment of the client, an ICP may order lab tests to be collected for testing for clearance surveillance order.

Procedure:
- The ICP will send or deliver the completed pre-printed order sheet to nursing unit for client testing to occur.
- The pre-printed order sheet will be placed in the doctor’s orders section of the medical record and the ICP will be indicated clearly in the box provided, the appropriate test to perform and specimen to collect. The appropriate “Chart Flag” will be used to indicate presence of a new order.
- If repeated tests and specimen collection are required it will be clearly indicated on the order sheet. The nursing staff is responsible for recording in the client’s care plan when the repeat testing is indicated and sending a swab on the date indicated on the order.
- Appropriate methods of collecting ARO specimens are described in the “Specimen Collection Guide” on the back of each Medical Directive (Appendix C).

References


Antibiotic Resistant Organism (ARO)
Admission Screen Medical Directive

MD-004

These orders are to be completed for all hospital inpatient admissions (excluding newborns at their birth facility or with a NICU admission). Based on an individual assessment of each client, licensed nurses may order lab tests as directed. If any answers are “Yes”, send swabs accordingly and place on additional precautions as indicated. Complete the following screening criteria:

- Client is known to be positive for MRSA
  - YES
  - NO
  - Swab for MRSA
  - Use Contact Precautions

- Client is known to be positive for CPO
  - YES
  - NO
  - Swab for CPO
  - Use Contact Precautions & Mandatory Private Room

- Client is previously positive for MRSA (i.e., has had negative swabs and has been cleared by Infection Prevention & Control)
  - YES
  - NO
  - Swab for MRSA

- Client has had close contact* with a known MRSA positive client
  - YES
  - NO
  - Swab for MRSA

- Client has had close contact* with a known CPO positive client
  - YES
  - NO
  - Swab for CPO
  - Use Contact Precautions & Mandatory Private Room

- Client has a history of travel to a high risk geographical area† in the last 12 months
  - YES
  - NO
  - Swab for CPO
  - Use Contact Precautions & Mandatory Private Room

- Client has received health care** outside of Canada in the last 12 months
  - YES
  - NO
  - Swab for MRSA and CPO
  - Use Contact Precautions & Mandatory Private Room

- Client has received health care** within Canada in the last 12 months
  - YES
  - NO
  - Swab for MRSA

- Client has used IV street drugs or lived in a communal setting (i.e., homeless shelter, correctional facility) in the last 12 months
  - YES
  - NO
  - Swab for MRSA

- Client’s primary residence is north of or within Prince Albert
  - YES
  - NO
  - Swab for MRSA and CPO

- Client is being admitted to a “High Risk Unit”: ICU, CCU, PICU, Transplant, or Oncology
  - YES
  - NO
  - “High Risk Unit” ONLY:
    Swab for MRSA and VRE
    Use Contact Precautions IF known to be positive

- Client has had all of the above required screening swabs sent within the last 7 days
  - YES
  - NO
  - No screening required

- Client does not meet any of the criteria listed above
  - YES
  - NO

*Close Contact is defined as: Household member or roommate in hospital

**Health care: Refers to a long term care/hospital admission or an outpatient medical procedure, including but not limited to hemodialysis and/or chemotherapy and/or cosmetic procedures

†High risk geographical areas currently include: Indian subcontinent (i.e., India, Sri Lanka, Bangladesh, and Pakistan)

Screening swab(s) sent: □ MRSA □ VRE □ CPO
Admission screen completed by ______ (initials)

This Medical Directive has been approved by the Physician Lead of Infection Prevention & Control (the Infection Control Officer) for the Saskatoon Area of the Saskatchewan Health Authority and complies with the Saskatoon Health Region Medical Directives Policy (7311-60-027).

Review will occur every year. This Directive is in effect through to the end of December 2020.

These orders do not require a prescribing practitioner signature
Antibiotic Resistant Organism (ARO)
Infection Control Practitioner (ICP) Surveillance Orders Medical Directive

MD-022

Based on an individual assessment of clients, Infection Control Practitioners (ICP) may order lab tests to determine if there has been a healthcare-associated transmission of an Antibiotic Resistant Organism (ARO) in any of the following circumstances:

- Extended stay risk due to a hospital stay for 30 days or more
- Contact with a client or the environment of a client with a newly identified ARO
- As a component of outbreak investigation
- Testing to clear a client’s ARO Alert status

Specific tests may be ordered only for stays on “High Risk Units” (ICU, CCU, PICU, NICU, Transplant, or Oncology).

Licensed nurses may collect specimens based on the ICP orders.

Reason for Surveillance
☐ Extended Stay
☐ Contact Tracing
☐ Outbreak Transfer
☐ Prevalence Screening
☐ Testing for Clearance

Lab Investigations

***See Specimen Collection Guide on reverse for proper collection sites and methods***

☐ Methicillin Resistant Staphylococcus aureus (MRSA)
  + Other site(s): __________________________________________

☐ Vancomycin Resistant Enterococcus (VRE)
  + Other site(s): __________________________________________

☐ Carbapenemase Producing Organism (CPO)
  + Other site(s): __________________________________________

☐ Other ARO: __________________________________________
  Site(s): __________________________________________

Collect the chosen specimen(s) and repeat if indicated below:
☐ ONLY screen if on “High Risk Unit” on (date): ________________
☐ Screen only on (date): __________________
☐ Screen on dates: #1 __________ #2 __________ #3 __________
☐ Screen every _______ days, starting date: _______________ and ending/including date: ______________
☐ Screen EVERY 30 DAYS starting from date of admission until the client is discharged

This Medical Directive has been approved by the Physician lead of Infection Prevention & Control (the Infection Control Officer) for the Saskatoon Area of the Saskatchewan Health Authority and complies with the Saskatoon Health Region Medical Directives Policy (7311-60-027). Review will occur every year.

This Directive is in effect through to the end of December 2020.

ICP Printed Name: ___________________________ ICP Signature: ___________________________

These orders do not require a prescribing practitioner signature
# Specimen Collection Guide*

*Use ESwab™ for ALL ARO Screens

<table>
<thead>
<tr>
<th>Equipment</th>
<th>ESwab™ - Addressograph label - Bacteriology requisition - Specimen bag for transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Perform hand hygiene and put on gloves.</td>
<td></td>
</tr>
<tr>
<td>2. Position client on their back or side for VRE Screen and CPO Screen.</td>
<td></td>
</tr>
<tr>
<td>3. Remove the white swab from the pouch. Use ONE swab for EACH SCREEN:</td>
<td></td>
</tr>
<tr>
<td>- For MRSA Screen (Nose and groin* swab):</td>
<td></td>
</tr>
<tr>
<td>o Place the swab into one of the client’s nostrils. Rotate 5 times, pressing lightly against the inside of the nose to collect the nasal sample. Repeat in second nostril with the same swab.</td>
<td></td>
</tr>
<tr>
<td>o Using the same swab, collect sample from each side of the groin</td>
<td></td>
</tr>
<tr>
<td><strong>Exception:</strong></td>
<td></td>
</tr>
<tr>
<td>*Axilla swab only if it will be detrimental to a client’s physical or psychological wellbeing to have a groin swab performed</td>
<td></td>
</tr>
<tr>
<td>- For VRE Screen (Rectal*/Stoma** swab):</td>
<td></td>
</tr>
<tr>
<td>o Gently insert the swab approximately 2 cm beyond the anal sphincter. Rotate swab and withdraw from anus.</td>
<td></td>
</tr>
<tr>
<td><strong>Exceptions:</strong></td>
<td></td>
</tr>
<tr>
<td>*Perianal swab for neutropenic clients (see IP&amp;C Policy 40-60: Immune Compromised Clients for definition of neutropenic).</td>
<td></td>
</tr>
<tr>
<td>For perianal swab:</td>
<td></td>
</tr>
<tr>
<td>o Expose perineum and rotate the swab as you run the tip firmly on the surface of the perineum and the anal areas</td>
<td></td>
</tr>
<tr>
<td>**Stoma opening swab, instead of rectal swab, if client has a colostomy/ileostomy.</td>
<td></td>
</tr>
<tr>
<td>- For CPO Screen (Rectal*/Stoma** swab):</td>
<td></td>
</tr>
<tr>
<td>o See instructions for VRE Screen</td>
<td></td>
</tr>
<tr>
<td>o If “Testing for Clearance” is ordered on the ARO Surveillance Orders Medical Directive (MD-022), also swab all “Other” sites* (i.e. wounds, indwelling devices) previously found positive. If clearing for MRSA, also include swabs of all current “Other” sites, regardless of whether they have been positive. Use a new swab for each “Other” site:</td>
<td></td>
</tr>
<tr>
<td>o Cleanse the wound/indwelling device with sterile normal saline from cleanest to dirtiest. Ensure the wound/indwelling device is dry before swabbing.</td>
<td></td>
</tr>
<tr>
<td>o Rotate the swab while moving from one edge of the wound/indwelling device to the other. Ensure the entire wound/indwelling device has been swabbed.</td>
<td></td>
</tr>
<tr>
<td>*If a urine culture or blood culture was a positive site, swab for MRSA/VRE as above.</td>
<td></td>
</tr>
<tr>
<td>4. Open the ESwab™ tube and place the swab into the liquid.</td>
<td></td>
</tr>
<tr>
<td>5. Break the swab shaft off at the pre-molded break point (the indented, pink mark). Leave bottom half of swab applicator in the tube. Dispose of the top of the swab stick in trash can. Recap the ESwab™ tube and turn the cap securely tight.</td>
<td></td>
</tr>
<tr>
<td>6. Label tube with client’s identification sticker (ensure there is no overlap) and label with appropriate collection site. For example:</td>
<td></td>
</tr>
<tr>
<td>- For MRSA Screen: Label as “Nose and groin”</td>
<td></td>
</tr>
<tr>
<td>- For VRE Screen: Label as “Rectal/Stoma”</td>
<td></td>
</tr>
<tr>
<td>- For CPO Screen: Label as “Rectal/Stoma”</td>
<td></td>
</tr>
<tr>
<td>7. Place labelled tube into a clean bag, ensuring the outside of the bag remains clean.</td>
<td></td>
</tr>
<tr>
<td>8. Remove gloves and perform hand hygiene.</td>
<td></td>
</tr>
<tr>
<td>9. Complete requisition with client’s identification sticker and label with appropriate screen and site swab was collected from. For example:</td>
<td></td>
</tr>
<tr>
<td>- For MRSA Screen: Label as “Nose and groin swab for MRSA Screen”</td>
<td></td>
</tr>
<tr>
<td>- For VRE Screen: Label as “Rectal/Stoma swab for VRE Screen”</td>
<td></td>
</tr>
<tr>
<td>- For CPO Screen: Label as “Rectal/Stoma swab for CPO Screen”</td>
<td></td>
</tr>
<tr>
<td>10. Send the bagged specimen with requisition to the lab.</td>
<td></td>
</tr>
</tbody>
</table>
Contact your Infection Control Practitioner (ICP) to determine when the retesting process can begin. Certain conditions may lead to delayed testing for clearance as they present a risk for continued colonization of the MRSA or VRE.

**Wait at least 3 months (from the last positive date)** before retesting for MRSA or VRE.
- Ensure all treatment for infection (i.e., Urinary tract infection, pneumonia, etc.) is complete at least 48 hours before retesting process begins.
- Ensure the client is taking no IV or oral antibiotics, or using antibacterial soaps (i.e., Chlorhexadine soap) 48 hours before each set of cultures, so as to not interfere with culture results.

**Required Testing Sites** (See the Specimen Collection Guide for appropriate method of collection):
- Three sets of cultures from all documented positive sites as well as the usual screening sites for the organism are required.
  - If testing for MRSA, also take three sets of cultures from ANY wound* or device site**, even if it has not been positive in the past.
  - If a urine culture or blood culture was a positive site, swab for MRSA or VRE using their usual screening sites.

One set of cultures NEGATIVE from all required sites.

Obtain two more sets of cultures from all required sites at least one week apart.

If any site is POSITIVE

If three negative sets of cultures from all required sites.

Fax results to Infection Prevention & Control - Saskatoon (306-655-6142). IP&C - Saskatoon will notify you once client has been cleared and can be removed from precautions.

**NOTE:** There is no clearance process for CPO.

*LTC/RENAL SERVICES:* Repeat testing of ALL required sites monthly x 6 months (monthly x 12 months for Renal Services). Renal Services will continue screening annually.

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*Wound sites – include draining or open wounds/incisions

**Device sites – swab opening surrounding device
Discover a MRSA or VRE Positive Client who was NOT on appropriate additional precautions for your unit

The positive client (index client) has been in the hospital for ≥ 24 hours before being placed on appropriate additional precautions. The positive client (index client) has been in the hospital for < 24 hours before being placed on appropriate additional precautions.

Contacts of the index client for ≥ 24 hours, as determined by Infection Prevention & Control – Saskatoon (IP&C – Saskatoon), are identified and flagged with an ESO Alert. No follow-up needed.

Collect swab for the identified organism on the required date noted on the Appendix B – ARO Surveillance Orders Medical Directive.

- See 60-30 Screening for AROs – Medical Directives for screening criteria
- See Appendix C – Specimen Collection Guide for collection method

MRSA or VRE test is positive

Transmission has occurred – Contact IP&C – Saskatoon.

MRSA or VRE test is negative

Notify IP&C – Saskatoon.
Discover a CPO Positive Client

The positive client (index client) has been in the hospital for ≥ 24 hours.

Yes

Contacts of the index client for ≥ 24 hours, as determined by Infection Prevention & Control – Saskatoon (IP&C – Saskatoon), are identified, flagged with an ESO Alert and placed on additional precautions and MANDATORY private room, until determined by IP&C – Saskatoon.

Yes

Collect swabs for CPO, as required, on the dates noted on the Appendix B – ARO Surveillance Orders Medical Directive.
- See 60-30 Screening for AROs – Medical Directives for screening criteria
- See Appendix C – Specimen Collection Guide for collection method

CPO tests are negative

Notify IP&C – Saskatoon.

No

The positive client (index client) has been in the hospital for < 24 hours.

No follow-up needed.

CPO tests are positive

Transmission has occurred – Contact IP&C – Saskatoon.