

Antibiotic Resistant Organisms Risk Screening - Acute Care

Site Applicability

PHC Acute Care Sites

Practice Level

Basic: Physicians, NPs, Nursing, Clinical Nurse Leader, Clinical Site Coordinator, Bed Placement Coordinator

Standards

A risk assessment for antibiotic resistant organisms (ARO) will be completed on admission for **all inpatient acute care admissions** using the [Infectious Disease Risk Screening \(IDRS\) PowerForm in Cerner](#). AROs included for screening are [MRSA](#) (methicillin resistant *Staphylococcus aureus*), [VRE](#) (vancomycin resistant enterococci), and [CPO](#) (carbapenemase producing organisms).

IDRS can be a separate PowerForm or be embedded in other PowerForms (e.g., ED Triage – Adult PowerForm, OB Triage and Assessment PowerForm, MH Initial Admission PowerForm, etc.).

Admitting nurse must ask the patient if they have any risk factors for AROs in order for Cerner to trigger the appropriate screening swab orders:

ARO Risk Factor Within the Last Year	ARO Screening Swabs Ordered*
Canadian healthcare (invasive procedure, overnight stay)	MRSA, VRE
Healthcare outside Canada	MRSA, VRE, CPO
Chemotherapy (invasive, intravenous or intrathecal)	MRSA, VRE
Dialysis	MRSA, VRE
Homelessness, in shelter or refugee camp	MRSA, VRE
Transitional/supportive housing, group home, or long term care	MRSA, VRE
Incarceration	MRSA, VRE
Household contact with known CPO	MRSA, VRE, CPO
Household contact with known MRSA and/or VRE	MRSA, VRE
Substance use	MRSA, VRE

***See Special Considerations in NICU section below**

Screening swabs are not routinely required for organisms that already have a Disease Alert in the banner bar on Cerner.

Patients admitted to mental health units/programs in acute care will not have Cerner generated orders for ARO screening swabs and will not have [Contact Precautions](#) implemented when alerted for MRSA or VRE.

The RN/RPN/LPN will collect the appropriate screening swabs as determined by the IDRS Form and send to the lab within 12 hours of admission.

Screening swabs for MRSA will include swabs from the anterior nares, perineum, and any open, draining wound/skin lesion/sore/puncture site (e.g., IV site, PEG tube, etc.).

Screening swabs for VRE will include a rectal or colostomy site swab with fecal staining.*

Screening swabs for CPO will include a rectal or colostomy site swab with fecal staining.* Additional screening swabs for CPO may be indicated in consultation with IPAC.

*Note: VRE and CPO can be cultured from the same screening swab. If the patient requires both, send only one swab with VRE and CPO specimen labels.

Special Considerations in NICU

All infants admitted to the NICU (neonatal intensive care unit) will be assessed for risk factors for MRSA, VRE and CPO using the IDRS PowerForm. Screening swabs are ordered automatically when ARO risk factors are present.

Screening swabs for MRSA will include swabs from nares and umbilicus.

Screening swabs for VRE/CPO will include a rectal swab with fecal staining. For infants, perianal swabs are acceptable if rectal swabbing is contraindicated. Additional screening swabs for CPO may be indicated in consultation with IPAC.

Contact Precautions will be initiated for infants known to have an ARO or who are born to mothers who are positive for an ARO.

Infants known to have an ARO will be placed in the far right corner of the unit and separated from other infants.

Guideline

The purpose of assessing the risk for antibiotic resistant organisms (ARO) is to detect and prevent the possible transmission of MRSA, VRE and CPO from infected/colonized patients to other patients, employees and visitors.

Assessment, Intervention, and Documentation

- The IDRS PowerForm (see [Appendix A](#)) will be included in the admission order set for all acute care inpatient admissions.
- Send screening swabs to PHC Medical Microbiology Laboratory within 12 hours of admission.
- ICU will re-collect and send screening swabs for all admitted patients for MRSA and VRE on Sunday nights, unless the patient is already alerted for the specified organism (exception for any patient who had their admission risk assessment completed on Friday or Saturday of that same week).
- If the patient already has a Disease Alert in Cerner for a particular organism:
 - Do not send screening swab(s) for a previously alerted organism.
 - Implement [Contact Precautions](#) for patients who have been previously alerted. [Droplet and Contact Precautions](#) are needed for patients with MRSA or CPO in sputum.
 - Inform the receiving patient care area that Contact Precautions are required.
- If a patient is not alerted in Cerner but reports an ARO history, ask the patient when and at what healthcare facility they tested positive and contact IPAC with this information. IPAC will confirm the patient's report and indicate if repeat screening swabs are required. Place the patient on Contact Precautions but avoid cohorting until the reported history has been confirmed.
- If a patient is not alerted in Cerner but they are alerted in another electronic health record (e.g., Care Connect), contact IPAC to add the alert into Cerner.
- If a screening swab results positive for an ARO, Cerner will automatically update the Disease Alert in the banner bar and order Contact Precautions. However, if an ARO results positive from a clinical specimen (e.g., wound culture), the Disease Alert and precautions will be added manually by IPAC.

Patient Placement

- [Routine Practices](#) and [Point of Care Risk Assessment](#) are used in the routine care of *all* patients at *all* times in *all* healthcare settings and are determined by the circumstances of the patient, the environment and the task to be performed.
- Patients with MRSA should be placed in a private room. If a private room is not available, MRSA positive patients may be cohorted with other known MRSA patients.
- Patients with VRE should be placed in a private room. If a private room is not available, VRE positive patients may be cohorted with other patients with VRE.

- Patients who test positive for CPO *require* placement in a private room. CPO positive patients should not be cohorted with other patients. All patients deemed high risk for CPO will be placed on Contact Precautions in a private room until screening swab results are available. If a private room is not available, contact IPAC to assist with a risk assessment for patient placement.
- Refer to the [Patient Placement Guidelines](#) for further information.

Education and Resources

- Explain to the patient the need for obtaining screening swabs.
- Explain to the patient and visitors the importance of washing hands and identify hand hygiene resources available to them (location of sink, alcohol-based hand rub and/or hand wipes)
- Instruct the patient and visitors on proper hand washing techniques as required.
- Explain to the patient and visitors the rationale for implementing precautions for patients who are alerted for an ARO.
- Additional ARO resources for patients/families are available through [Patient Health Education Materials](#).

Related Documents

- [B-00-07-13066](#) - Carbapenemase Producing Organisms (CPO)
- [B-00-07-13029](#) - Contact Precautions - Infection Control
- [B-00-07-13079](#) - Droplet and Contact Precautions - Infection Control
- [B-00-07-13015](#) - Methicillin Resistant *Staphylococcus aureus* (MRSA)
- [B-00-07-13087](#) - Patient Placement Guideline - Infection Control
- [B-00-07-13081](#) - Point of Care Risk Assessment - IPAC Best Practice Guideline
- [B-00-07-13045](#) - Routine Practices
- [B-00-07-13016](#) - Vancomycin Resistant Enterococci (VRE)
- [CST Cerner Help - Document Infectious Disease Risk Screening](#)

References

- Centers for Disease Control and Prevention. (2015). Facility Guidance for Control of Carbapenem-resistant Enterobacteriaceae (CRE). Retrieved from <https://www.cdc.gov/hai/pdfs/cre/CRE-guidance-508.pdf>
- Centers for Disease Control and Prevention. (2022). 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings. Retrieved from <https://www.cdc.gov/infectioncontrol/pdf/guidelines/isolation-guidelines-H.pdf>
- McKinnell, J. A., Miller, L. G., Eells, S. J., Cui, E., & Huang, S. S. (2013). A systematic literature review and meta-analysis of factors associated with methicillin-resistant *Staphylococcus aureus* colonization at time of hospital or intensive care unit admission. *Infection control and hospital epidemiology*, 34(10), 1077–1086. <https://doi.org/10.1086/673157>

- Provincial Infection Control Network. (2013). Antibiotic Resistant Organisms Prevention and Control Guidelines for Healthcare Facilities. Retrieved from https://www.picnet.ca/wp-content/uploads/PICNet_ARO_Guidelines_March2013.pdf
- Provincial Infection Control Network. (2014). Vancomycin Resistant Enterococci Screening and Isolation Practices in BC Healthcare Settings: A Discussion Paper. Retrieved from https://www.picnet.ca/wp-content/uploads/VRE-Discussion-Paper_Revision-November-2014.pdf
- Provincial Infectious Diseases Advisory Committee. (2013). Screening, Testing and Surveillance for Antibiotic-Resistant Organisms (AROs) in all health care settings. Retrieved from <https://www.publichealthontario.ca/-/media/documents/A/2013/aros-screening-testing-surveillance.pdf>
- Public Health Agency of Canada. (2017). Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Healthcare Settings. Retrieved from <https://www.canada.ca/en/public-health/services/publications/diseases-conditions/routine-practices-precautions-healthcare-associated-infections.html>

Appendix A: Infectious Disease Risk Screening PowerForm

More information on how to fill out the Infectious Disease Risk Screening PowerForm can be found at [CST Cerner Help](#).

Infectious Disease Risk Screening																			
Refer to field reference text (right-click on field) for automated isolation and ARO swab order information. Confirm all automated orders are consistent with site-specific guidelines.																			
Syndromic Symptom Surveillance																			
ADULTS (17 years or older): Does the patient have any of the following signs or symptoms? (Ref) PEDS (less than 17 years): Does the patient and/or a household member have any of the following signs or symptoms?																			
	No	Yes	Unable to obtain																
*Suspected Viral Respiratory Infection																			
*Suspected Infectious Diarrhea																			
*Suspected Infectious Vomiting																			
*Fever with H/A, Photophobia, or Alt LOC																			
*Fever with Rash (e.g. Measles)																			
*Fever with Parotid Swelling (e.g. Mumps)																			
*Query TB (e.g. Hemoptysis)																			
*Vesicular Rash (e.g. Shingles, Chickenpox)																			
Vesicular Rash Description (Ref) <input type="checkbox"/> Immunocompromised patient <input type="checkbox"/> Localized shingles <input type="checkbox"/> Disseminated rash <input type="checkbox"/> Facial rash																			
Antibiotic Resistant Organism (ARO) and Exposure Screening																			
During the past YEAR, has the patient experienced any of the following antibiotic-resistant organism risk factors? (Ref) <input type="checkbox"/> None <input type="checkbox"/> Canadian healthcare (invasive procedure, overnight stay) <input type="checkbox"/> Chemotherapy (invasive, intravenous or intrathecal) <input type="checkbox"/> Dialysis <input type="checkbox"/> Homelessness, in shelter or refugee camp <input type="checkbox"/> In halfway/group home or long-term care facility <input type="checkbox"/> Incarceration <input type="checkbox"/> Household contact with known CPO <input type="checkbox"/> Household contact with known MRSA and/or VRE <input type="checkbox"/> Substance use <input type="checkbox"/> Unable to obtain			In which Canadian facility did this healthcare occur? 																
Does the patient have a history of any of the following? (Ref) <table border="1"> <thead> <tr> <th></th> <th>No</th> <th>Yes</th> <th>Unable to obtain</th> </tr> </thead> <tbody> <tr> <td>*History of AROs</td> <td></td> <td></td> <td></td> </tr> <tr> <td>*Healthcare OUTSIDE Canada in Last Year</td> <td></td> <td></td> <td></td> </tr> <tr> <td>*Recent Exposure to Communicable Disease</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				No	Yes	Unable to obtain	*History of AROs				*Healthcare OUTSIDE Canada in Last Year				*Recent Exposure to Communicable Disease				ARO History Details (Ref) <input type="checkbox"/> C. Ausis <input type="checkbox"/> Other/unknown <input type="checkbox"/> CPO <input type="checkbox"/> MRSA <input type="checkbox"/> VRE
	No	Yes	Unable to obtain																
*History of AROs																			
*Healthcare OUTSIDE Canada in Last Year																			
*Recent Exposure to Communicable Disease																			
In which facility and/or country did this foreign healthcare occur? 	When did this foreign healthcare occur? <input type="radio"/> Within the last 21 days <input type="radio"/> More than 21 days ago <input type="radio"/> Unable to obtain	Communicable Disease (Ref) Exposed To: <input type="checkbox"/> Chickenpox or shingles <input type="checkbox"/> Mumps <input type="checkbox"/> Confirmed COVID-19 patient <input type="checkbox"/> Tuberculosis <input type="checkbox"/> Measles <input type="checkbox"/> Other:																	
Tuberculosis Status Description (Ref) <input type="checkbox"/> N/A <input type="checkbox"/> Receiving treatment <input type="checkbox"/> Treated - did not complete treatment <input type="checkbox"/> Other: <input type="checkbox"/> Active pulmonary TB <input type="checkbox"/> Treated - completed treatment <input type="checkbox"/> Unable to obtain																			
Have you or a household member traveled outside of Canada within the last 30 days? <input type="radio"/> No <input type="radio"/> Yes, patient <input type="radio"/> Yes, household member <input type="radio"/> Yes, patient and household member <input type="radio"/> Unable to obtain																			
Location of Recent Travel <i>If needed, right-click on the field below to comment on the specific country to which the patient/household member traveled.</i> <table border="1"> <tbody> <tr> <td><input type="checkbox"/> Africa</td> <td><input type="checkbox"/> China</td> <td><input type="checkbox"/> Russia</td> </tr> <tr> <td><input type="checkbox"/> Asia</td> <td><input type="checkbox"/> Eastern Europe</td> <td><input type="checkbox"/> South America</td> </tr> <tr> <td><input type="checkbox"/> Australia/New Zealand</td> <td><input type="checkbox"/> India</td> <td><input type="checkbox"/> United States</td> </tr> <tr> <td><input type="checkbox"/> Caribbean</td> <td><input type="checkbox"/> Mexico</td> <td><input type="checkbox"/> Western Europe</td> </tr> <tr> <td><input type="checkbox"/> Central America</td> <td><input type="checkbox"/> Middle East</td> <td><input type="checkbox"/> Other:</td> </tr> </tbody> </table>				<input type="checkbox"/> Africa	<input type="checkbox"/> China	<input type="checkbox"/> Russia	<input type="checkbox"/> Asia	<input type="checkbox"/> Eastern Europe	<input type="checkbox"/> South America	<input type="checkbox"/> Australia/New Zealand	<input type="checkbox"/> India	<input type="checkbox"/> United States	<input type="checkbox"/> Caribbean	<input type="checkbox"/> Mexico	<input type="checkbox"/> Western Europe	<input type="checkbox"/> Central America	<input type="checkbox"/> Middle East	<input type="checkbox"/> Other:	
<input type="checkbox"/> Africa	<input type="checkbox"/> China	<input type="checkbox"/> Russia																	
<input type="checkbox"/> Asia	<input type="checkbox"/> Eastern Europe	<input type="checkbox"/> South America																	
<input type="checkbox"/> Australia/New Zealand	<input type="checkbox"/> India	<input type="checkbox"/> United States																	
<input type="checkbox"/> Caribbean	<input type="checkbox"/> Mexico	<input type="checkbox"/> Western Europe																	
<input type="checkbox"/> Central America	<input type="checkbox"/> Middle East	<input type="checkbox"/> Other:																	



First Released Date:	21-MAR-2001
Posted Date:	08-FEB-2023
Last Revised:	08-FEB-2023
Last Reviewed:	08-FEB-2023
Approved By: <i>(committee or position)</i>	PHC
	IPAC Standards Committee
Owners: <i>(optional)</i>	PHC
	IPAC