



# Sepsis Physician Package

Developed for Emergency Department and Inpatient physicians involved in early recognition and management of adult sepsis patients.



## Background

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Delays in recognition and management of sepsis in patients have been reported through the Patient Safety and Learning System. Recommendations resulting from the system-level reviews included the updating of sepsis protocols and standardizing tools and processes relating to sepsis recognition and management. Subsequent analysis of inpatient sepsis episodes at Island Health exploring both predisposing and precipitating risk factors, identified opportunities to increase early blood culture and lactate draws, and demonstrated a relationship between outcome and time to first blood culture.

The Sepsis Quality Improvement Project aims to improve patient outcomes through standardization of early sepsis recognition and management in adults at all Island Health facilities.

[Visit the Medical Staff Website Sepsis QI page for more details on project background.](#)



## Does this apply to me?

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Rollout of newly developed and updated clinical improvement tools for early recognition and management of sepsis in adults will affect the **Emergency Department** and **Acute Care inpatient units where admitted Sepsis Patients receive treatment.**

This applies to Island Health Physicians, Nurse Practitioners (NPs) and associated students providing care to a single adult patient or a group of adult patients with a suspected or confirmed sepsis diagnosis will be required to use the tools developed as part of the Sepsis Quality Improvement Project.



## What do I need to do?

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Familiarize yourself with the new and updated clinical order sets, antibiotic module, and protocols for early sepsis recognition and management.

The key updates to the existing Emergency Department order sets are:

- New algorithm (included in the nurse protocol and order sets)
- New antibiotic module developed by Infection Management Quality Committee
- Consider repeat lactate at 2 hours if initial lactate is >2mmol/L (Change from a threshold of 4mmol/L due to delayed diagnoses reported through PSLs)
- Use of Ringer's lactate in place of normal saline (This includes those with elevated or risk of elevated potassium; see [link](#))

- Limited volume bolus before moving to vasopressors

**Appendix A – Emergency Department Sepsis Order Sets: What’s new? What’s changed? Why? Infographic.**

 **Clinical Order Sets and Protocols**

**\*\*Please note – Island Health Login is required to view the following links\*\***

<b>Emergency Department:</b>
<b>Clinical Order Sets &amp; Antibiotic Module:</b> <ul style="list-style-type: none"> <li>➤ <a href="#">Sepsis Antibiotics Module</a></li> <li>➤ <a href="#">Clinical Order Set ED Management of Sepsis MAP 65 or Greater - Adult</a></li> <li>➤ <a href="#">Clinical Order Set ED Management of Sepsis MAP Less than 65 - Adult</a></li> </ul> <b>Algorithm and Nurse Protocol:</b> <ul style="list-style-type: none"> <li>➤ <a href="#">Adult sepsis guideline algorithm – ED and Inpatient</a></li> <li>➤ <a href="#">ED Nurse Protocol Suspected Sepsis</a></li> </ul>
<b>Acute Care Inpatient Medicine:</b>
<b>Clinical Order Sets &amp; Antibiotic Module:</b> <ul style="list-style-type: none"> <li>➤ <a href="#">Sepsis Antibiotics Module</a></li> <li>➤ <a href="#">Clinical Order Set Inpatient Sepsis</a></li> </ul> <b>Algorithm:</b> <ul style="list-style-type: none"> <li>➤ <a href="#">Adult sepsis guideline algorithm – ED and Inpatient</a></li> </ul>

 **Key Competencies**

**Early recognition of sepsis is facilitated by the use of the [Adult sepsis guideline algorithm – ED and Inpatient](#) \*.**

The algorithm uses the systemic inflammatory response syndrome (SIRS) criteria for initial screening for potential sepsis and the quick sequential organ failure assessment (qSOFA) criteria to guide initial management.

Systemic inflammatory response syndrome (SIRS) criteria:

- Heart rate >90/min
- Respiratory rate >20/min
- Temperature ≥38°C or <36°C
- Altered mental state

And,

Sequential organ failure assessment (SOFA) criteria:

- Respiratory rate >22 breathes/min
- Systolic blood pressure less than 100mmHg
- Altered mental status

And/or

- Lactate greater than 2 mmol/L

***\*Island Health login requires to view the Algorithm.***



## Resources

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- **The Sepsis Quality Improvement Project Intranet Site** hosts to the most up to date information and educational resources for early recognition and management of adult sepsis patients.  
*\*Island Health login is required to visit the Intranet\**
- [Reducing Unnecessary Variation in Care – Sepsis QI Project](#) page on the Medical Staff Website
- [BC Sepsis Network](#) page, created by the BC Patient Safety and Quality Council.

## Emergency Department Sepsis Order Sets What's new? What's Changed? Why?

\*Island Health login is required to visit the links below\*

- New: [Adult sepsis guideline algorithm – ED and Inpatient](#)
- New: [Sepsis Antibiotics Module](#)
- Updated: [Clinical Order Set ED Management of Sepsis MAP 65 or Greater - Adult](#)
- Updated: [Clinical Order Set ED Management of Sepsis MAP Less than 65 - Adult](#)
- Updated: [ED Nurse Protocol Suspected Sepsis](#)



### ~New~: [Algorithm](#)

Introducing a new algorithm to support early recognition and management of sepsis, included in the Nurse Protocol and Order Sets. Delayed blood culture draw is associated with adverse outcome.



### ~New~: [Antibiotic Module](#)

Developed by Infection Management Advisory Committee, the antibiotic module is a complete refresh of empiric antibiotic selection for sepsis to align with evidence and best practice. Changes are based on new guidelines regarding management of beta-lactam allergies, epidemiology of pathogens causing sepsis, and local antibiotic resistance patterns.



### ~Change~: **Consider repeat lactate at 2 hours if initial lactate is >2mmol/L**

This is a **change** to the previous order set, from threshold of 4mmol/L due to delayed diagnosis reported through PSLs.



### ~Change~: **Use Ringer's lactate in place of normal saline.**

In sepsis resuscitation, even a single litre of Ringers lactate in place of normal saline results in a mortality benefit. This **change** includes patients with elevated or risk of elevated potassium.

[Click here to read more about this change.](#) (*American Journal of Respiratory and Critical Care Medicine.*)



### ~Change~: **Limited volume bolus before moving to vasopressors**

This **change** aligns with evidence and best practice. Earlier use of vasopressors in septic shock is now recommended.