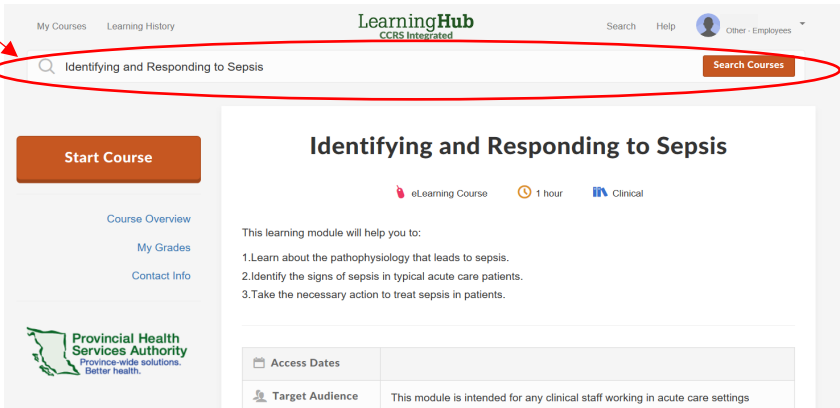


# SEPSIS MANAGEMENT: EDUCATION AND GUIDELINES

For those individuals with suspected or confirmed COVID-19 infection, sepsis may be a possible complication from the virus resulting in poor outcomes and death. It is important for the **early identification** and **early intervention** of treatment in the management of sepsis to ensure patient outcomes are optimized. Please review the following fact sheet to help inform your practice.

TO ACCESS THE ONLINE WEBPAGES, PLEASE CLICK ON THE HYPERLINKS (BLUE AND UNDERLINED WORDS) EMBEDDED WITHIN THE DOCUMENT

<p><b>Background</b></p>	<p>Sepsis is the body's overwhelming and life-threatening response to infection that can lead to tissue damage, organ failure, and death. Sepsis is a complication that can occur as a result of the COVID-19 virus.</p>
<p><b>Education Module Online</b></p>	<p>You may access the online education module on sepsis via the <a href="#">LearningHub</a></p> <p>The education module is called <b>"Identifying and Responding to Sepsis"</b>.</p> <ul style="list-style-type: none"> <li>• Enter course name into the search bar to find course registration.</li> <li>• Click on the "Register Now" button for access to the course.</li> </ul> 
<p><b>Adult Sepsis Clinical Support Tool and Algorithm</b></p>	<p><b>Sepsis Tool-Kit</b> from BC Patient Safety and Quality Council:</p> <p>You can find very informative and simple information to review to understand how to identify and manage sepsis. An excellent resource to take the time to review! It clearly outlines how to identify sepsis by examining vital signs and subjective history, and assessing for signs of perfusion.</p> <ul style="list-style-type: none"> <li>○ <a href="#">Sepsis Tool-Kit</a> found online at BC Patient Safety and Quality Council</li> <li>○ <a href="#">Quick link</a> to the Sepsis Algorithm from BC Patient Safety and Quality Council</li> </ul>

# SEPSIS MANAGEMENT: EDUCATION AND GUIDELINES

<p><b>Pediatric Sepsis Guidelines and Screening Tool</b></p>	<p>For information regarding <b>Pediatric Guidelines</b> please refer to <a href="#">ePOPS Website</a> with BC Children’s. ePOPS is an online searchable database for pediatric guidelines, policies, and procedures as per BC Children’s Hospital. Take the time to review the sepsis guidelines now:</p> <ul style="list-style-type: none"> <li>○ <a href="#">Sepsis Guidelines</a> from BC Children’s Hospital</li> <li>○ <a href="#">Screening Tool</a> for Sepsis from BC Children’s Hospital</li> </ul>
<p><b>Canadian Guidelines for Sepsis and Septic Shock Management in suspected COVID-19 Infection</b></p>	<p>The Association of Medical Microbiology and Infectious Disease Canada (AMMI) has partnered with the Canadian Critical Care Society to create the Interim Guidance for <b>“Clinical Management of Patients with Moderate to Severe COVID-19” (April 2, 2020)</b>.</p> <p>Please take the time to print-off and read the <a href="#">Canadian Clinical Interim Guidelines</a></p> <div style="border: 1px solid black; padding: 10px; margin-top: 20px;"> <p>In <i>Section 7.2</i> of the Interim Guideline, you will note specific recommendations and guidance surrounding treatment options for those who are septic and have suspected or confirmed COVID-19 virus.</p> <p>Adult treatment highlights include:</p> <ul style="list-style-type: none"> <li>● Early fluid resuscitation – typically one bolus of 250-500ml of a crystalloid fluid (i.e. normal saline) within 15-30min of arrival.</li> <li>● <b>Avoid fluid overload.</b> Too much IV fluid is harmful (leads to poor health outcomes) and can further complicate the patient’s ability to breathe. We want to keep patients ‘dry as a pickle’ – dry on the outside, little moist on the inside.</li> <li>● Use crystalloid fluid only (either normal saline or Lactated Ringer’s)</li> <li>● If fluid resuscitation is not effective, <b>use vasopressors</b> (not more fluid) to <b>maintain adequate perfusion</b> (Adequate perfusion = MAP greater than or equal to 60). <ul style="list-style-type: none"> <li>○ First line vasopressor is typically norepinephrine (stocked in nursing stations).</li> </ul> </li> <li>● Anticipate administration of empirical antibiotics (i.e. ceftriaxone) within 1 hour of arrival.</li> </ul> </div>

# SEPSIS MANAGEMENT: EDUCATION AND GUIDELINES

<p><b>Monitoring a Sepsis Patient in the Remote Context</b></p>	<p>Sepsis protocols often indicate the use of lab work in order to confirm diagnosis and monitor success of interventions – specifically, <i>serum lactate</i> is identified as a marker for severity of sepsis. However, we do not have access to laboratory capabilities in our remote nursing stations.</p> <p><b>In the absence of a serum lactate measurement, use blood pressure (i.e. MAP) and clinical signs of perfusion to define shock.</b></p> <ol style="list-style-type: none"> <li>1. MAP (“mean arterial pressure”) is the average pressure in a patient’s arteries during one cardiac cycle and is a better indicator of good perfusion to vital organs than systolic blood pressure (SBP) alone. <ul style="list-style-type: none"> <li>○ MAP can be calculated with the following formula: <div data-bbox="683 821 1099 1024" style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <math display="block">\text{MAP} = \frac{\text{SBP} + 2(\text{DBP})}{3}</math> <p>SBP: Systolic Blood Pressure DBP: Diastolic Blood Pressure</p> </div> </li> </ul> </li> <li>2. Clinical signs of poor perfusion include: <ul style="list-style-type: none"> <li>○ Altered mentation/level of consciousness</li> <li>○ Dusky or mottled skin color</li> <li>○ Cool extremities (and sometimes swelling in extremities)</li> <li>○ Cap refill &gt;3sec</li> <li>○ Decreased or absent peripheral pulses</li> <li>○ Reduced urine output (&lt;20ml/hour)</li> </ul> </li> </ol>
<p><b>I need support understanding this content, who do I connect with?</b></p>	<p>Many of these concepts can be overwhelming and confusing. If you require any assistance in reviewing the material, have questions, or have any concerns about applying these concepts in a remote, nursing station context, <b>please contact your nursing practice consultant for further support.</b> We are here to support you.</p>

---

# SEPSIS MANAGEMENT: EDUCATION AND GUIDELINES

---

## References and Further Reading:

An Introduction to the Sepsis Pathway (YouTube) - <https://www.youtube.com/watch?v=OgQ6avlpBRY>

BC Patient and Safety Quality Council - <https://bcpsqc.ca/resources/sepsis/>

Global Sepsis Alliance - <https://www.global-sepsis-alliance.org/news/2020/3/4/can-covid-19-cause-sepsis-explaining-the-relationship-between-the-coronavirus-disease-and-sepsis-cvd-novel-coronavirus>

Association of Medical Microbiology and Infectious Disease Canada -  
<https://www.ammi.ca/Content/Clinical%20Care%20COVID%2D19%20Guidance%20FINAL%20April2%20ENGLISH%281%29%2Epdf>

World Health Organization (WHO) Clinical Management of Severe Respiratory Infection when Novel Coronavirus Infection is Suspected - [https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-\(ncov\)-infection-is-suspected](https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-(ncov)-infection-is-suspected)

ePOPs: BC Children's Hospital - <http://policyandorders.cw.bc.ca/>

Translating Emergency Knowledge for Kids - <https://trekk.ca/>

SHOPS Website (access to VCH, PHSA, PHC Policy, Guidelines, Clinical Support Tools) -  
<http://shop.healthcarebc.ca/vch>