



**Fundamental Critical Care Support Skill Station  
Recognition and Assessment of the Seriously Ill Patient  
Participant Guide**

**Estimated completion time: 60 minutes**

This skill station incorporates material from the chapter, Recognition and Assessment of the Seriously Ill Patient, but also uses material found in other chapters of the FCCS text. The general goals for all skill stations are: identify indications for acute management of patients with specific critical care problems, in this case recognition and assessment of the critically ill patient; assist the participants in initiating appropriate initial acute care management; and evaluate patient response to resuscitation and other interventions.

**Station Goals**

**The goals of this station are to:**

- Highlight the importance of early identification and assessment of the signs and symptoms of critical illness.
- Discuss significance of early medical intervention for the patients at risk for life-threatening illness.
- Emphasize the principle that resuscitation and assessment should occur in parallel.

**Participant Objectives**

**After completing this skill station, the student should be able to:**

- Identify and rapidly treat life-threatening events.
- Understand the DIRECT approach to assess and manage critically ill patients.
- Understand the need to administer oxygen to critically ill patients.
- Understand that treatment and search for diagnoses should occur simultaneously.
- Recognize and treat respiratory failure.
- Recognize shock and its treatment.

Instructor to briefly review principles taught in the lecture, Recognition and Assessment of Seriously Ill Patient.

Failure to detect disordered physiology and establish early appropriate preventative measures leads to unplanned admissions to critical care, cardiac arrests, and ultimately unnecessary deaths. Therefore, recognizing the seriousness of the clinical situation, using rapid simple preventative treatments, following a systematic approach, and calling early for experienced help can reduce complications of critical illness and save lives. It is important to emphasize that treatment often precedes definitive diagnosis. Although the diagnosis should be actively pursued, resuscitation should be conducted in parallel.

1. It is possible to **predict** which patients may develop critical illness by identifying those at risk. This includes patients with any combination of the following characteristics:

- Emergency admissions
- Comorbidities
- Advanced age
- Prolonged hospital stay
- Malnutrition
- Steroid treatment
- Immunosuppression
- Severe illness
- Post anesthesia
- Hemorrhage, particularly rebleeding or massive bleeding
- Drug or alcohol dependency

| Examples of Surgical Patients                            | Examples of Medical Patients                      |
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| Acute pancreatitis                                       | Cardiovascular failure post myocardial infarction |
| Bowel perforation or ischemia                            | Severe diabetic ketoacidosis                      |
| Gastrointestinal, biliary tract, or urinary tract sepsis | Compromised poisoned patient                      |
| Postoperative respiratory or cardiac failure             | Sepsis  |

2. It is possible to **prevent** further deterioration in the critically ill by having in place appropriate calling criteria for the medical emergency teams. These include:

- Airway: any evidence that the patient's airway is compromised, such as noisy breathing/stridor.
- Breathing: respiratory arrest, respiratory rate <8 breaths/min or >30 breaths/min, oxygen saturation <90% with a  $FI_{O_2} \geq 0.6$ , respiratory distress, hypercarbia ( $P_{aCO_2} > 60$  mm Hg [ $> 8$  kPa] or  $> 15$  mm Hg [ $> 2$  kPa] above patient's normal level) with respiratory acidosis.
- Circulation: cardiac arrest, pulse rate <40 breaths/min or >140 breaths/min, systolic blood pressure (BP) <90 mm Hg, evidence of tissue hypoperfusion or tissue hypoxia (eg, cool extremities), hyperlactatemia, metabolic acidosis.
- Disability: Glasgow Coma Scale score <12 or fall of greater than 2 points, pupils or other focal neurological signs, seizures, absent gag reflex.
- Others: severe pain (particularly chest), hypoglycemia (glucose <50 mg/dL or <3 mmol/L), oliguria (urine output <0.5 mL/kg/h for 6 h), hyperkalemia, uremia, liver failure, gastrointestinal hemorrhage, severe sepsis suspected.

- Tachypnea is an early marker of critical illness. Extremes of temperature, pallor, delirium, sweating, rigors, nausea, vomiting, sudden weakness, and changes in hydration status need prompt assessment.
- Young and fit patients will exhibit signs of critical illness late, so a high index of suspicion is required.

3. Initial **treatment** should include a **rapid primary assessment** to prioritize resuscitation measures following the **ABCDE** approach, with **E** indicating exposure, evidence, and a focused examination. Immediate investigations and appropriate monitoring should be initiated. Most patients will benefit from **OXYGEN** and **FLUIDS** unless there is clearly evidence of hypoxic drive or cardiogenic pulmonary edema. Using the **DIRECT** methodology and sequence will help in the management of the critically ill.

DIRECT methodology:

**Detection:** Using the history, physical exam, and the behavioral, cardiovascular, and respiratory system changes, the critical care team is alerted to the patient’s physiological status. The findings guide the appropriate laboratory and radiographic evaluations to establish a working/presumptive diagnosis, differential diagnosis, and worst possible diagnosis.

**Intervention:** This is the process of treating and correcting the disease or injury while keeping in mind the critical care maxim to minimize morbidity and prevent mortality.

**Reassessment:** This ensures that treatment is appropriate for the severity of the disease and/or injury.

**Effective Communication:** The greatest source of injury and death in healthcare is communication errors. The more complicated the patient, the more important it is for everyone to communicate their perspective to the team so that multiple and often time-sensitive tasks can be performed expertly and promptly.

**Teamwork:** The patient does best when all disciplines on the healthcare team bring their specialized training to work together synergistically to care for the needs of the critically ill or injured patient.

Always consider calling for experienced help.

| Summary of approach to case scenarios  |
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| <b>Detection</b><br>ABCDE, oxygen, fluids and blood glucose, call for HELP   |
| <ul style="list-style-type: none"> <li>• What is the main physiological problem to correct immediately to avoid further deterioration?</li> <li>• Order appropriate laboratory and radiographic evaluations to establish a working/presumptive diagnosis.</li> </ul> |
| <b>Intervention</b>  |
| <ul style="list-style-type: none"> <li>• Treat and correct the problem to minimize morbidity and prevent mortality.</li> </ul>   |
| <b>Reassessment</b>  |
| <ul style="list-style-type: none"> <li>• Reassess to ensure that treatment is appropriate and the patient is responding appropriately.</li> </ul>  |
| <b>Effective Communication</b>   |
| <ul style="list-style-type: none"> <li>• Healthcare members need to communicate their perspective to the team so that multiple and often time-sensitive tasks can be accomplished expertly and promptly.</li> </ul>  |

**Teamwork**

- All team members work together and bring their specialized training to synergistically care for the needs of the critically ill patient

| Case Scenario 1   | Critical Elements |
|---|-------------------|
| <p>A 54-year-old woman with diabetes was admitted with an intra-abdominal abscess following laparoscopic cholecystectomy. She underwent placement of a drain by the interventional radiology department. Two hours later, she develops a temperature of 39.4°C (103° F), heart rate of 128 beats/min, and blood pressure of 80/40 mmHg. Oxygen saturation is 89%</p> <p>She appears anxious and drowsy, breathing rapidly with reduced air in both lung bases. Her skin is flushed.</p> |                   |
| Detection   |                   |
| <p><b>Q. What is your initial approach?</b></p> <p><b>Q. What do you detect?</b></p> <p><b>Q. What lab or diagnostic tests would you order to determine a working diagnosis?</b></p>  |                   |

**Intervention**

**Q. What are your immediate actions?**

**Reassessment**

**Q. Is this patient at risk and why?**

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| <p><b>Q. What is your provisional diagnosis?</b></p>              |  |
| <p><b>Intervention</b></p>  |  |
| <p><b>Q. What do you do next?</b></p>                             |  |
| <p><b>Q. What is your next step?</b></p>                          |  |
| <p><b>Reassessment, Effective Communication, and Teamwork</b></p> |  |
| <p><b>Q. What is your next action?</b></p>                        |  |

| Case Scenario 2   | Critical Elements |
|---|-------------------|
| A 24-year-old man presents to emergency department with difficulty breathing. You are called to help. |                   |
| <b>Detection</b>  |                   |
| Q. Is this patient at risk? Why or why not?   |                   |
| <b>Intervention</b>   |                   |
| Q. What is the main physiological problem, and what immediate actions are you going to take?          |                   |
| Q. How bad is his asthma, and what would you do next?   |                   |
| <b>Reassessment</b>   |                   |
| Q. Is the patient improving? How would you assess the severity?                                       |                   |
| <b>Effective Communication, and Teamwork</b>  |                   |



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| <p><b>Q. What would you do next?</b></p> |  |
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| <p><b>Case Scenario 3</b></p>   | <p><b>Critical Elements</b></p> |
|---|---------------------------------|
| <p>You are asked to review a 45-year-old, insulin-dependent diabetic man in the emergency department. He has a 2-day history of confusion and increasing shortness of breath.</p> |                                 |

| <p><b>Detection</b></p> |  |
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| <p><b>Q. What would you do first?</b></p> |  |
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| <p><b>Q. What is his main physiological problem?</b></p> |  |
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| <p><b>Q. What is the diagnosis?</b></p> |  |
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| <p><b>Intervention</b></p> |  |
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| <p><b>Q. What do you do next?</b></p> |  |
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| <p><b>Q. What investigations are needed?</b></p>   |  |
| <p><b>Q. What other treatment is required, and where would be the best place to care for this patient?</b></p> |  |
| <p><b>Reassessment</b></p>   |  |
| <p><b>Q. Is the patient improving? How would you assess the severity?</b></p>                                  |  |
| <p><b>Effective Communication, and Teamwork</b></p>  |  |
| <p><b>Q. What would you do next?</b></p>   |  |

| Case Scenario 4   | Critical Elements |
|---|-------------------|
| <p>You are called to assess a 53-year-old man on the ward who has reduced oxygen saturation. He is known to be hypertensive on <math>\beta</math>-blockers and is a smoker.</p> |                   |
| Detection and Intervention  |                   |
| <p><b>Q. Is this patient at risk? What should you do first?</b></p>   |                   |
| <p><b>Q. What is the main physiological problem? What is the diagnosis?</b></p>   |                   |
| <p><b>Q. What interventions would you prescribe?</b></p>  |                   |
| Reassessment  |                   |

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| <b>Q. Is the patient improving? How would you assess the severity?</b> |  |
| <b>Effective Communication, and Teamwork</b>                           |  |
| <b>Q. What would you do next?</b>                                      |  |