Respiratory – Croup

A 8-month-old with difficulty breathing for 1 hour

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
Preparation and Triage			
1. Activate the team and assign roles	Coworkers are present to assist with the initial assessment.		
"Is there any specific equipment that you would prepare?"			
2. Prepare the room	May include, but not limited to, the following: • Length-based resuscitation tape • Pediatric equipment • Pediatric protocols and dosing guidelines • Scale		
3. Don PPE	PPE has been donned, and no safety threats have been identified.		
"The patient is brought to a room."			
General Impression			
4. Assess the three components of the Pediatric Assessment Triangle (PAT) AND categorize the patient as "sick, sicker, or sickest" • Appearance • Work of breathing • Circulation to the skin One alteration in the PAT = sicker	• Crying hoarsely, interactive • Stridor, nasal flaring, and tachypnea • Skin color is normal		
5. Assess for obvious uncontrolled external hemorrhage or unresponsiveness/apnea and the need to reprioritize to C-ABC	No uncontrolled external hemorrhage or unresponsiveness/apnea and no need to consider reprioritizing to C-ABC		
Primary Survey			
Alertness and Airway with Simultaneous Cervical Spinal Stabilization			
6. Assess level of consciousness using AVPU	Patient is alert.	**	
7. Open the airway	Patient's mouth is open while crying, and you can assess the airway.		
8. Assess the patency and protection of the airway (identify at least FOUR): • Bony deformity • Edema • Fluids (blood, vomit, or secretions) • Foreign objects • Loose or missing teeth • Sounds (snoring, gurgling, or stridor) • Tongue obstruction • Vocalization	• No bony deformity • No edema • No blood, vomit, or secretions • No foreign objects • No loose or missing teeth • Stridor is heard with a hoarse cry • No tongue obstruction • Crying sounds different per parent	**	
Breathing and Ventilation			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
9. Assess breathing effectiveness (identify at least FOUR): • Breath sounds • Depth, pattern, and general rate of respirations • Increased work of breathing ◦ Abnormal positioning ◦ Grunting ◦ Head bobbing ◦ Nasal flaring ◦ Retractions/accessory muscle use ◦ Tachypnea • Open wounds or deformities • Skin color • Spontaneous breathing • Subcutaneous emphysema • Symmetrical chest rise	• Lung sounds are clear except for referred noises from the upper airway • Normal depth and pattern but tachypnea is present • Increased work of breathing noted with nasal flaring and retractions • No open wounds or deformities • Color is normal • Breathing is spontaneous • No subcutaneous emphysema • Chest rise is symmetrical	**	
10. Anticipate administration of oxygen or inhaled epinephrine	The physician has ordered inhaled epinephrine. A coworker will administer the treatment and reassess the patient. Please proceed with your assessment.		
Circulation and Control of Hemorrhage			
11. Assess circulation (must identify ALL THREE): • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill is 2 seconds • Normal color for patient, warm, and dry • Central pulse strong and rapid; peripheral pulses strong	**	
"The team determines that IV access is not required at this time. Please continue your assessment."			
Disability (Neurologic Status)			
12. Assess neurologic status using the GCS: • Best eye opening • Best verbal response • Best motor response	• Eye opening is spontaneous (4) • Appropriate verbal response (5) • Spontaneous and appropriate movement (6) GCS = 15	**	
13. Assess pupils	PERRL		
Exposure and Environmental Control			
14. Remove all clothing AND inspect for obvious abnormalities or injuries	No signs of illness or injury other than tachypnea, nasal flaring, and retractions; retractions and nasal flaring are improving with inhaled epinephrine	**	
15. Provide warmth (identify at least ONE): • Blankets • Increase room temperature • Warmed fluids • Warming lights	A warming method has been applied.		

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
NOTE: During testing, if the learner did not intervene to correct life-threatening findings in the primary survey and/or did not complete all double-starred criteria, the instructor will review the primary survey and notify the course director.			
Full Set of Vital Signs and Family Presence			
16. Obtain a full set of vital signs and weight in kilograms (if not determined earlier)	BP 74/40mm Hg HR 160 beats/minute RR 42 breaths/minute T 100°F (37.8°C) SpO_2 96% Weight 9 kg		
17. Facilitate family presence	Parent is holding the child		
Get Adjuncts and Give Comfort (LMNOP)			
18. L – Consider the need for laboratory analysis	Deferred		
19. M – Attach patient to a cardiac monitor	Normal sinus rhythm		
20. N – Consider the need for insertion of a naso- or orogastric tube	Deferred		
21. O – Assess oxygenation and continuous end-tidal capnography (if available)	Pulse oximetry 96% End-tidal CO_2 35 mm Hg (4.67 kPa)		
22. P – Assess pain using an appropriate pain scale	Pain = 0 using an appropriate scale	*	
23. Give appropriate nonpharmacologic comfort measures (identify at least ONE): • Distraction • Family presence • Places padding over bony prominences • Repositioning • Splinting • Verbal reassurance • Other, as appropriate	Nonpharmacologic comfort measures have been implemented.		
24. Consider obtaining order for analgesic medication	Deferred		
Consideration of Need for Definitive Care			
"Is there a need to consider transfer to a pediatric-capable facility, surgery, or critical care?"			
Secondary Survey			
History and Head-to-Toe			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
25. Obtain pertinent history (identify at least ONE): • Medical records/documents • Prehospital report • SAMPLE	S: Runny nose for 2 days A: No known allergies M: No medications P: No medical needs noted at regular checkups, immunizations are up to date L: Patient had a bottle prior to going to bed around 9pm last night. Wet diaper noted prior to arrival. E: Patient woke parent at 3 am with a "funny cry" and a barky cough. Parent felt the cough improved a little prior to arrival.		
NOTE: The learner describes and demonstrates the head-to-toe assessment by describing appropriate inspection techniques and demonstrating appropriate auscultation and palpation techniques.			
26. Inspect and palpate head for abnormalities	No abnormalities, fontanelle flat and soft		
27. Inspect and palpate face for abnormalities	No abnormalities, nasal flaring has resolved		
28. Inspect and palpate neck for abnormalities	No abnormalities		
29. Inspect and palpate chest for abnormalities	No abnormalities, retractions and tachypnea improved		
30. Auscultate breath sounds	Clear and equal; referred upper airway sounds improved after inhaled epinephrine treatment		
31. Auscultate heart sounds	No abnormalities		
32. Inspect the abdomen for abnormalities	No abnormalities		
33. Auscultate bowel sounds	Present in all 4 quadrants		
34. Palpate all four quadrants of the abdomen for abnormalities	No abnormalities		
35. Inspect and palpate the flanks for abnormalities	No abnormalities		
36. Inspect the pelvis for abnormalities	No abnormalities		
37. Apply gentle pressure over iliac crests downward and medially	No abnormalities		
38. Apply gentle pressure on the symphysis pubis (if iliac crests are stable)	No abnormalities		
39. Inspect the perineum for abnormalities	No abnormalities		
40. Consider how to measure urinary output	Diapers will be weighed.		
41. Inspect and palpate all four extremities for neurovascular status and abnormalities	No abnormalities		
Inspect Posterior Surfaces			
42. Inspect and palpate posterior surfaces	No abnormalities	*	
Summarize abnormalities identified, listed below, throughout the scenario. If the learner has not already identified them all, ask for any additional abnormalities noted. • Stridor and respiratory distress resolved with inhaled epinephrine			
"What interventions or diagnostics can you anticipate for this patient?"			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
43. Identify at least THREE interventions or diagnostics	May include, but not limited to, the following: • Croup care instructions • Inhaled epinephrine if stridor returns • Nasal suctioning • Oral fluids • Psychosocial support • Radiographs if not improving (chest, neck) • Steroids		
Just Keep Reevaluating			
"What findings will you continue to reevaluate while the patient is in your care?"			
44. Reevaluate vital signs			
45. Reevaluate all identified abnormalities and effectiveness of interventions			
46. Reevaluate primary survey			
47. Reevaluate pain			
Definitive Care or Transport			
"What is the definitive care for this patient?"			
48. Consider need for transfer to a pediatric-capable facility or admission			
"Is there anything you would like to add?"			

Instructor Talking Points

- Discuss the potential causes of stridor, including foreign body aspiration, croup, and epiglottitis. Review the symptoms associated with these disease processes. Drooling can be normal in children but might be a sign that they are unable to manage their secretions.
- Review the need to provide minimal stimulation by decreasing invasive procedures if the patient can maintain an airway and appears to be stable. More invasive/painful procedures can occur after airway swelling has been reduced and/or epiglottitis and foreign body aspiration have been ruled out.
- Identify available alternatives for difficult airway management.
- Discuss the need for monitoring after inhaled epinephrine administration.

Referenced Chapters

Chapter 5, Initial Assessment

Chapter 7, The Child in Need of Stabilization

Chapter 8, The Child with a Cough

Respiratory – Asthma

A 4-year-old with a history of asthma and difficulty breathing

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
Preparation and Triage			
1. Activate the team and assign roles	Coworkers are present to assist with the initial assessment.		
"Is there any specific equipment that you would prepare?"			
2. Prepare the room	May include, but not limited to, the following: • Length-based resuscitation tape • Pediatric equipment • Pediatric protocols and dosing guidelines • Scale		
3. Don PPE	PPE has been donned, and no safety threats have been identified.		
"The patient has just arrived."			
General Impression			
4. Assess the three components of the Pediatric Assessment Triangle (PAT) AND categorize the patient as "sick, sicker, or sickest" • Appearance • Work of breathing • Circulation to the skin Two or more alterations in the PAT = sickest	• Anxious, assuming tripod position • Labored breathing with accessory muscle use • Skin is pale		
5. Assess for obvious uncontrolled external hemorrhage or unresponsiveness/apnea and the need to reprioritize to C-ABC	No uncontrolled external hemorrhage or unresponsiveness/apnea and no need to consider reprioritizing to C-ABC		
Primary Survey			
Alertness and Airway with Simultaneous Cervical Spinal Stabilization			
6. Assess level of consciousness using AVPU	Alert	**	
7. Open the airway	Opens mouth when asked		
8. Assess the patency and protection of the airway (identify at least FOUR): • Bony deformity • Edema • Fluids (blood, vomit, or secretions) • Foreign objects • Loose or missing teeth • Sounds (snoring, gurgling, or stridor) • Tongue obstruction • Vocalization	• No bony deformity • No edema • No fluids • No foreign objects • No loose or missing teeth • No snoring, gurgling, or stridor • No tongue obstruction • Vocalization is limited to 2 or 3 words at a time	**	
"Airway is patent, the patient is maintaining a position of comfort."			
Breathing and Ventilation			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
9. Assess breathing effectiveness (identify at least FOUR): • Breath sounds • Depth, pattern, and general rate of respirations • Increased work of breathing: ◦ Abnormal positioning ◦ Grunting ◦ Head bobbing ◦ Nasal flaring ◦ Retractions/accessory muscle use ◦ Tachypnea • Open wounds or deformities • Skin color • Spontaneous breathing • Subcutaneous emphysema • Symmetrical chest rise	• Breath sounds are diminished in the bases with inspiratory and expiratory wheezing auscultated throughout • Regular, tachypneic, shallow respirations • Tripod position with accessory muscle use, retractions, and nasal flaring • No open wounds • Skin color is pale • Breathing is spontaneous • No subcutaneous emphysema • Chest rise is symmetrical	**	
10. Anticipate administration of oxygen and respiratory medications	Oxygen is applied via an appropriate device for the ordered flow rate; a coworker is administering ordered medications.	**	
11. Reassess breathing effectiveness (identify at least FOUR): • Breath sounds • Depth, pattern, and general rate of respirations • Increased work of breathing: ◦ Abnormal positioning ◦ Grunting ◦ Head bobbing ◦ Nasal flaring ◦ Retractions/accessory muscle use ◦ Tachypnea • Open wounds or deformities • Skin color • Spontaneous breathing • Subcutaneous emphysema • Symmetrical chest rise	• Breath sounds with increased inspiratory and expiratory wheezing auscultated throughout • Regular, tachypneic, but deeper respirations • Accessory muscle use, retractions, and nasal flaring have improved; the patient is no longer tripoding • No open wounds • Skin color is pale • Breathing is spontaneous • No subcutaneous emphysema • Chest rise is symmetrical	*	
"An inhaled beta agonist is being administered. Please continue your assessment."			
Circulation and Control of Hemorrhage			
12. Assess circulation (must identify ALL THREE): • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill is 2 seconds • Pale, warm, and dry • Central pulse strong and rapid; peripheral pulses strong	**	
"The team determines that IV access is not required at this time. Please continue your assessment."			
Disability (Neurologic Status)			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
13. Assess neurologic status using the GCS: • Best eye opening • Best verbal response • Best motor response	• Eye opening is spontaneous (4) • Appropriate verbal response (5) • Follows commands (6) GCS = 15	**	
14. Assess pupils	Pupils are PERRL		
Exposure and Environmental Control			
15. Remove all clothing AND inspect for obvious abnormalities or injuries	Nasal flaring is resolved, retractions and accessory muscle use are improved; no other obvious abnormalities are present.	**	
16. Provide warmth (identify at least ONE): • Blankets • Increase room temperature • Warmed fluids • Warming lights	A warming method has been applied		
NOTE: During testing, if the learner did not intervene to correct life-threatening findings in the primary survey and/or did not complete all double-starred criteria, the instructor will review the primary survey and notify the course director.			
Full Set of Vital Signs and Family Presence			
17. Obtain a full set of vital signs and weight in kilograms (if not determined earlier)	BP 98/50 mm Hg HR 139 beats/minute RR 28 breaths/minute T 98.6°F (36.8°C) SpO_2 95% with respiratory treatment Weight 19 kg		
18. Facilitate family presence	Caregiver at the bedside		
Get Adjuncts and Give Comfort (LMNOP)			
19. L – Consider the need for laboratory analysis	Deferred		
20. M – Attach patient to a cardiac monitor	Sinus tachycardia		
21. N – Consider the need for insertion of a naso- or orogastric tube	Deferred		
22. O – Assess oxygenation and continuous end-tidal capnography (if available)	Pulse oximetry 95% with respiratory treatment End-tidal CO_2 38 mm Hg (5.07 kPa)		
23. P – Assess pain using an appropriate pain scale	Pain = 0 using an appropriate scale	*	

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
24. Give appropriate nonpharmacologic comfort measures (identify at least ONE): • Distraction • Family presence • Places padding over bony prominences • Repositioning • Splinting • Verbal reassurance • Other, as appropriate	Nonpharmacologic comfort measures have been implemented.		
25. Consider obtaining order for analgesic medication	Deferred		
Consideration of Need for Definitive Care			
"Is there a need to consider transfer to a pediatric-capable facility, surgery, or critical care?"			
Secondary Survey			
History and Head-to-Toe			
26. Obtain pertinent history (identify at least ONE): • Medical records/documents • Prehospital report • SAMPLE	Medical records indicate a previous admission for status asthmaticus where the child required ventilatory assistance and a pediatric ICU stay 1 year ago. S: Coughing and difficulty breathing for a few hours A: No known allergies M: Prescribed beta agonist metered dose inhaler with spacer as needed and inhaled steroids; ran out of medications one month ago P: Asthma, eczema L: Drank water just prior to arrival, unsure of last void E: Child returned this morning from overnight visit with family member who smokes cigarettes		
NOTE: The learner describes and demonstrates the head-to-toe assessment by describing appropriate inspection techniques and demonstrating appropriate auscultation and palpation techniques.			
27. Inspect and palpate head for abnormalities	No abnormalities		
28. Inspect and palpate face for abnormalities	No abnormalities		
29. Inspect and palpate neck for abnormalities	No abnormalities		
30. Inspect and palpate chest for abnormalities	No abnormalities, accessory muscle use and retractions have resolved		
31. Auscultate breath sounds	Continued inspiratory/expiratory wheezing with increased air exchange		
32. Auscultate heart sounds	No abnormalities		
33. Inspect the abdomen for abnormalities	No abnormalities		
34. Auscultate bowel sounds	Present in all four quadrants		
35. Palpate all four quadrants of the abdomen for abnormalities	No abnormalities		

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
36. Inspect and palpate the flanks for abnormalities	No abnormalities		
37. Inspect the pelvis for abnormalities	No abnormalities		
38. Apply gentle pressure over iliac crests downward and medially	No abnormalities		
39. Apply gentle pressure on the symphysis pubis (if iliac crests are stable)	No abnormalities		
40. Inspect the perineum for abnormalities	No abnormalities		
41. Consider how to measure urinary output	Measure output when patient voids		
42. Inspect and palpate all four extremities for neurovascular status and abnormalities	No abnormalities		
Inspect Posterior Surfaces			
43. Inspect and palpate posterior surfaces	No abnormalities	*	
NOTE: Summarize abnormalities identified, listed below, throughout the scenario. If the learner has not already identified them all, the instructor will ask for any additional noted. • Wheezing • Respiratory distress • Improved with inhaled beta agonist			
"What interventions or diagnostics can you anticipate for this patient?"			
44. Identify at least THREE interventions or diagnostics	May include but not limited to the following: • Pulmonology consult • Chest radiograph • Psychosocial support • Non-invasive positive pressure ventilation • Peak flow monitoring • Pharmacy – ensure access • Smoking cessation education for family member, family teaching to avoid asthma triggers • Steroids		
Just Keep Reevaluating			
"What findings will you continue to reevaluate while the patient is in your care?"			
45. Reevaluate vital signs			
46. Reevaluate all identified abnormalities and effectiveness of interventions			
47. Reevaluate primary survey			
48. Reevaluate pain			
Definitive Care or Transport			
"What is the definitive care for this patient?"			
49. Consider need for transfer to a pediatric-capable facility or admission			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
"Is there anything you would like to add?"			

Instructor Talking Points

- What if the child had not improved with inhaled beta agonists? Do you have treatment protocols for status asthmaticus?
- Ventilatory assistance options other than intubation: non-invasive positive pressure ventilation
- Medications: Heliox, ketamine (bronchodilatory effects), magnesium
- History of status asthmaticus is concerning; however, running out of medications 1 month ago makes it more likely the patient will improve quickly. If the child had been using home medications without relief, it is less likely that first-line therapies will be effective.

Referenced Chapters

Chapter 5, Initial Assessment

Chapter 7, The Child in Need of Stabilization

Chapter 8, The Child with a Cough

An 8-day-old with a 2-day history of irritability and poor feeding

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
Preparation and Triage			
1. Activate the team and assign roles	Coworkers are present to assist with the initial assessment.		
"Is there any specific equipment that you would prepare?"			
2. Prepare the room	May include, but not limited to, the following: • Length-based resuscitation tape • Pediatric equipment • Pediatric protocols and dosing guidelines • Infant radiant warmer • Infant scale		
3. Don PPE	PPE has been donned, and no safety threats have been identified.		
"The patient is brought to a room."			
General Impression			
4. Assess the three components of the Pediatric Assessment Triangle (PAT) AND categorize the patient as "sick, sicker, or sickest" • Appearance • Work of breathing • Circulation to the skin Two or more alterations in the PAT = sickest	• Opens eyes occasionally • Tachypneic with nasal flaring • Pale		
5. Assess for obvious uncontrolled external hemorrhage or unresponsiveness/apnea and the need to reprioritize to C-ABC	No uncontrolled external hemorrhage or unresponsiveness/apnea and no need to consider reprioritizing to C-ABC		
Primary Survey			
Alertness and Airway with Simultaneous Cervical Spinal Stabilization			
6. Assess level of consciousness using AVPU	Responds to tactile stimuli with eye opening and weak cry	**	
7. Open the airway	Airway is opened with the head tilt-chin lift maneuver		
8. Assess the patency and protection of the airway (identify at least FOUR): • Bony deformity • Edema • Fluids (blood, vomit, or secretions) • Foreign objects • Sounds (snoring, gurgling, or stridor) • Tongue obstruction • Vocalization	• No bony deformity • No edema • Copious clear nasal secretions • No foreign objects • No snoring, gurgling, or stridor • No tongue obstruction • Vocalizes with an occasional weak cry	**	
9. Suction nares	Nares suctioned with copious amount of secretions cleared	**	
10. Reassess airway	The airway is patent	*	

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
Breathing and Ventilation			
11. Assess breathing effectiveness (identify at least FOUR): • Breath sounds • Depth, pattern, and general rate of respirations • Increased work of breathing ◦ Abnormal positioning ◦ Grunting ◦ Head bobbing ◦ Nasal flaring ◦ Retractions/accessory muscle use ◦ Tachypnea • Open wounds or deformities • Skin color • Spontaneous breathing • Subcutaneous emphysema • Symmetric chest rise	• Breath sounds are clear and equal • Respirations are shallow, regular and rapid • Retractions, nasal flaring, and tachypnea are noted • No open wounds or deformities • Skin color is pale with mottled extremities • Breathing is spontaneous • No subcutaneous emphysema • Chest rise is symmetrical	**	
12. Anticipate the need for supplemental oxygen	Oxygen is administered via an appropriate device for the ordered flow rate	**	
13. Reassess breathing effectiveness (identify at least FOUR): • Breath sounds • Depth, pattern, and general rate of respirations • Increased work of breathing ◦ Abnormal positioning ◦ Grunting ◦ Head bobbing ◦ Nasal flaring ◦ Retractions/accessory muscle use ◦ Tachypnea • Open wounds or deformities • Skin color • Spontaneous breathing • Subcutaneous emphysema • Symmetrical chest rise	• Breath sounds are clear and equal • Respirations regular and at a more normal rate • Retractions and tachypnea are improved; nasal secretions have been suctioned again • No open wounds or deformities are noted to the chest • Skin color is pale, mottling is improving • Breathing is spontaneous • There is no subcutaneous emphysema • Chest rise is symmetrical	*	
"A coworker will continue to manage the nasal secretions and oxygen administration; you can continue your assessment."			
Circulation and Control of Hemorrhage			
14. Assess circulation (must identify ALL THREE): • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill 5 seconds • Skin pale with mottled limbs, cool, and dry • Central pulse rapid and weak; peripheral pulses weaker	**	

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
15. Obtain IV access	IV access is obtained	**	
16. Anticipate a 10 mL/kg IV bolus of warmed isotonic crystalloids	The patient weighs 3.5 kg 35 mL of warmed IV fluids have been administered	**	
17. Reassess circulation (must identify ALL THREE): • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill 3 seconds • Skin pale, warmer, and dry; mottling is improving • Central pulse at a more normal rate and stronger; peripheral pulses stronger	*	
18. Anticipate a 2nd 10 mL/kg IV bolus of warmed isotonic crystalloids	The physician elects to evaluate further before administering more IV fluids – please continue your assessment	**	
Disability (Neurologic Status)			
19. Assess neurologic status using the GCS: • Best eye opening • Best verbal response • Best motor response	• Opens eyes to sound (3) • Crying (4) • Moves spontaneously (6) GCS = 13	**	
20. Obtain blood glucose	Blood glucose is within normal limits	*	
21. Assess pupils	PERRL		
Exposure and Environmental Control			
22. Remove all clothing AND inspect for obvious abnormalities or injuries	Mottled hands and feet	**	
23. Provide warmth (identify at least ONE): • Blankets • Increase room temperature • Warmed fluids • Warming lights	A warming method is applied Ideally, the patient is placed under a radiant warmer with a skin temperature probe		
NOTE: During testing, if the learner did not intervene to correct life-threatening findings in the primary survey and/or did not complete all double-starred criteria, the instructor will review the primary survey and notify the course director.			
Full Set of Vital Signs and Family Presence			
24. Obtain a full set of vital signs and weight in kilograms	BP 64/32 mm Hg HR 144 beats/minute RR 50 breaths/minute T 96.8°F (36°C) SpO_2 97% on 2 L oxygen Weight 3.5 kg		
25. Facilitate family presence	Parent is at the bedside with a liaison		
Get Adjuncts and Give Comfort (LMNOP)			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
26. L – Consider the need for laboratory analysis	May include, but not limited to, the following: • Blood cultures • Complete blood count • Metabolic panel • Venous blood gas • Lactate		
27. M – Attach patient to a cardiac monitor	Normal sinus rhythm		
28. N – Consider the need for insertion of a naso- or orogastric tube	Deferred		
29. O – Assess oxygenation and continuous end-tidal capnography (if available)	Pulse oximetry is 97% on 2 L oxygen End-tidal CO_2 unavailable		
30. P – Assess pain using an appropriate pain scale	Pain = 3 using an appropriate pain scale	*	
31. Give appropriate nonpharmacologic comfort measures (identify at least ONE): • Distraction • Family presence • Places padding over bony prominences • Repositioning • Splinting • Verbal reassurance • Other, as appropriate	Nonpharmacologic comfort measures have been implemented		
32. Consider obtaining order for analgesic medication	Deferred		
Consideration of Need for Definitive Care			
"Is there a need to consider transfer to a pediatric-capable facility, surgery, or critical care?"			
Secondary Survey			
History and Head-to-Toe			
33. Obtain pertinent history (identify at least ONE): • Medical records/documents • Prehospital report • SAMPLE	S: Irritable, nasal congestion, and not feeding well A: No known allergies M: No medications, had recommended vaccine at birth P: Vaginal delivery, 39-week gestation, no complications, parent had recommended prenatal care. Birth weight was 7 pounds 11 ounces (3.49 kg) per parent. L: Nursed for a short time 4 hours ago, last wet diaper 2 hours ago E: Baby had been doing well until yesterday; parent concerned about nasal congestion and poor feeding		
NOTE: The learner describes and demonstrates the head-to-toe assessment by describing appropriate inspection techniques and demonstrating appropriate auscultation and palpation techniques.			
34. Inspect and palpate head for abnormalities	No abnormalities, fontanelles are flat and soft		
35. Inspect and palpate face for abnormalities	Oxygen delivery device present, nasal flaring has resolved		

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
36. Inspect and palpate neck for abnormalities	No abnormalities		
37. Inspect and palpate chest for abnormalities	No abnormalities, retractions and tachypnea have resolved		
38. Auscultate breath sounds	Clear and equal		
39. Auscultate heart sounds	No abnormalities		
40. Inspect the abdomen for abnormalities	Healing umbilicus without redness or drainage		
41. Auscultate bowel sounds	Present in all 4 quadrants		
42. Palpate all four quadrants of the abdomen for abnormalities	No abnormalities		
43. Inspect and palpate the flanks for abnormalities	No abnormalities		
44. Inspect the pelvis for abnormalities	No abnormalities		
45. Apply gentle pressure over iliac crests downward and medially	No abnormalities		
46. Apply gentle pressure on the symphysis pubis (if iliac crests are stable)	No abnormalities		
47. Inspect the perineum for abnormalities	No abnormalities		
48. Consider how to measure urinary output	Diapers will be weighed		
49. Inspect and palpate all four extremities for neurovascular status and abnormalities	No abnormalities, mottling has resolved		
Inspect Posterior Surfaces			
50. Inspect and palpate posterior surfaces	No abnormalities	*	
Summarize abnormalities identified, listed below, throughout the scenario. If the learner has not already identified them all, ask for any additional abnormalities noted. • Clear nasal secretions • Retractions, nasal flaring, tachypnea, mottled extremities, and delayed capillary refill resolved with oxygen and IV fluid administration • Nasal secretions, signs of shock, and low body temperature concerning for neonatal sepsis • Irritable, difficulty feeding			
"What interventions or diagnostics can you anticipate for this patient?"			
51. Identify at least THREE interventions or diagnostics	May include, but not limited to, the following: • Admission or transfer • Antibiotics • Blood cultures • Chest radiograph • Lumbar puncture • Maintenance fluids with glucose • Nasopharyngeal swab • Psychosocial consult • Respiratory panel • Urinalysis and urine culture		
Just Keep Reevaluating			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
"What findings will you continue to reevaluate while the patient is in your care?"			
52. Reevaluate vital signs			
53. Reevaluate all identified abnormalities and effectiveness of interventions			
54. Reevaluate primary survey			
55. Reevaluate pain			
Definitive Care or Transport			
"What is the definitive care for this patient?"			
56. Consider need for transfer to a pediatric-capable facility or admission			
"Is there anything you would like to add?"			

Instructor Talking Points

- Discuss the category of a neonate (first 28 days of life) as the highest-risk pediatric patient.
- Discuss the neonate being an obligatory nose breather which can impede the ability to feed.
- Instant capillary refill (also known as flash capillary refill) is also a sign of sepsis.
- Refer to the mnemonics related to neonatal conditions, do not review in-depth: THEMISFITS, NEOSECRETS, and TORCH.
- Review the potential for a septic neonate to be febrile OR hypothermic.
- Review the need for a smaller volume for IV fluid boluses (10 mL/kg) and smaller IV flush following medications – a 10 mL syringe is a fluid bolus for a 1 kg neonate.
- Discuss neonatal comfort measures.

Referenced Chapters

Chapter 5, Initial Assessment

Chapter 6, The Neonate

Chapter 7, The Child in Need of Stabilization

Medical – DKA

An 8-year-old child with nausea for one week. Vomiting since yesterday, developed generalized abdominal pain today.

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
Preparation and Triage			
1. Activate the team and assign roles	Coworkers are present to assist with the initial assessment.		
"Is there any specific equipment that you would prepare?"			
2. Prepare the room	May include, but not limited to, the following: • Length-based resuscitation tape • Pediatric equipment • Pediatric protocols and dosing guidelines • Scale		
3. Don PPE	PPE has been donned, and no safety threats have been identified.		
"The patient is brought to a room."			
General Impression			
4. Assess the three components of the Pediatric Assessment Triangle (PAT) AND categorize the patient as "sick, sicker, or sickest" • Appearance • Work of breathing • Circulation to the skin Two or more alterations in the PAT = sickest	• Lethargic with slow verbal responses • Tachypneic • Pale		
5. Assess for obvious uncontrolled external hemorrhage or unresponsiveness/apnea and the need to reprioritize to C-ABC	No uncontrolled external hemorrhage or unresponsiveness/apnea and no need to consider reprioritizing to C-ABC		
Primary Survey			
Alertness and Airway with Simultaneous Cervical Spinal Stabilization			
6. Assess level of consciousness using AVPU	Alert but lethargic	**	
7. Open the airway	Opens mouth when asked		
8. Assess the patency and protection of the airway (identify at least FOUR): • Bony deformity • Edema • Fluids (blood, vomit, or secretions) • Foreign objects • Loose or missing teeth • Sounds (snoring, gurgling, or stridor) • Tongue obstruction • Vocalization	• No bony deformities • No edema • No blood, vomit, or secretions • No foreign objects • No loose or missing teeth • No snoring, gurgling, or stridor • No tongue obstruction • Vocalization is normal	**	
"The airway is patent."			
Breathing and Ventilation			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
9. Assess breathing effectiveness (identify at least FOUR): • Breath sounds • Depth, pattern, and general rate of respirations • Increased work of breathing ◦ Abnormal positioning ◦ Grunting ◦ Head bobbing ◦ Nasal flaring ◦ Retractions/accessory muscle use ◦ Tachypnea • Open wounds or deformities • Skin color • Spontaneous breathing • Subcutaneous emphysema • Symmetrical chest rise	• Breath sounds are clear • Respirations are deep, regular, and tachypneic • Retractions and tachypnea noted • No open wounds or deformities • Skin color is pale • Breathing is spontaneous • No subcutaneous emphysema • Chest rise is symmetrical	**	
10. Anticipate administration of supplemental oxygen	Oxygen applied via an appropriate device for the ordered flow rate	**	
11. Reassess breathing effectiveness (identify at least FOUR): • Breath sounds • Depth, pattern, and general rate of respirations • Increased work of breathing ◦ Abnormal positioning ◦ Grunting ◦ Head bobbing ◦ Nasal flaring ◦ Retractions/accessory muscle use ◦ Tachypnea • Open wounds or deformities • Skin color • Spontaneous breathing • Subcutaneous emphysema • Symmetrical chest rise	• Breath sounds are clear • Respirations are deep, regular, and tachypneic • Retractions slightly improved • No open wounds or deformities • Skin color is pale • Breathing is spontaneous • No subcutaneous emphysema • Chest rise is symmetrical	*	
"The team will continue to monitor the patient's breathing. Please continue with your assessment."			
Circulation and Control of Hemorrhage			
12. Assess circulation (must identify ALL THREE): • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill 5 seconds • Skin pale, cool, and dry • Central pulses rapid and weak; peripheral pulses very weak	**	
13. Obtain intravenous (IV) access	IV access is obtained	**	

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
14. Anticipate a 20mL/kg IV bolus of warmed isotonic crystalloids	The patient weighs 32 kg. 640 mL of warmed IV fluids have been administered.	**	
15. Reassess circulation (must identify ALL THREE): • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill 4 seconds • Skin pale, cool, and dry • Central pulses rapid but stronger; peripheral pulses weak	*	
16. Anticipate a 2nd 20 mL/kg IV bolus of warmed isotonic crystalloids	A second warmed IV fluid bolus of 640 mL has been administered.	**	
17. Reassess circulation (must identify ALL THREE): • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill 2 seconds • Skin pale, warm, and dry • Central pulse at a more normal rate and strong; peripheral pulses stronger	*	
Disability (Neurologic Status)			
18. Assess neurologic status using the GCS: • Best eye opening • Best verbal response • Best motor response	• Opens eyes with tactile stimuli (2) • Unsure of why they are here (4) • Obeys commands (6) GCS = 12	**	
19. Assess blood glucose	HIGH on glucometer	*	
20. Assess pupils	Pupils are equal, round, and sluggishly reactive		
"The physician is aware of the glucometer reading and is entering orders which will be completed by a coworker. Please continue your assessment."			
Exposure and Environmental Control			
21. Remove all clothing AND inspect for obvious abnormalities or injuries	No obvious signs of illness or injury other than tachypnea with retractions and deep breaths	**	
22. Provide warmth (identify at least ONE): • Blankets • Increase room temperature • Warmed fluids • Warming lights	A warming method has been applied		
NOTE: During testing, if the learner did not intervene to correct life-threatening findings in the primary survey and/or did not complete all double-starred criteria, the instructor will review the primary survey and notify the course director.			
Full Set of Vital Signs and Family Presence			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
23. Obtain a full set of vital signs and weight in kilograms (if not determined earlier)	BP 110/66 mm Hg HR 145 beats/minute RR 44 breaths/minute T 97.9°F (36.6°C) SpO_2 97% Weight 32 kg		
24. Facilitate family presence	Parent at the bedside		
Get Adjuncts and Give Comfort (LMNOP)			
25. L – Consider the need for laboratory analysis	May include, but not limited to, the following: • Beta-hydroxybutyrate • Blood gases • Complete blood count • Hemoglobin A1C • Lactate • Metabolic panel • Urinalysis		
26. M – Attach patient to a cardiac monitor	Sinus tachycardia Monitor set to record frequent blood pressures		
27. N – Consider the need for insertion of a naso- or orogastric tube	Deferred		
28. O – Assess oxygenation and continuous end-tidal capnography (if available)	SpO_2 is 97% on 2 L oxygen End-tidal CO_2 30 mm Hg (4 kPa)		
29. P – Assess pain using an appropriate pain scale	Pain = 2 using an appropriate scale	*	
30. Give appropriate nonpharmacologic comfort measures (identify at least ONE): • Distraction • Family presence • Places padding over bony prominences • Repositioning • Splinting • Verbal reassurance • Other, as appropriate	Nonpharmacologic comfort measures have been implemented		
31. Consider obtaining order for analgesic medication	Deferred		
Consideration of Need for Definitive Care			
"Is there a need to consider transfer to a pediatric-capable facility, surgery, or critical care?"			
Secondary Survey			
History and Head-to-Toe			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
32. Obtain pertinent history (identify at least ONE): • Medical records/documents • SAMPLE	Parent is a good historian S: Nausea vomiting, abdominal pain A: No known allergies M: No medications P: None, immunizations up to date L: Drinking more fluids than usual, drank a sports drink just prior to arrival; urinating frequently, last void just prior to arrival E: Nausea for one week, vomiting since yesterday, developed generalized abdominal pain today. Patient has been tired, thirsty, and drinking/urinating more than usual. Had a runny nose and cough 2 weeks ago.		
NOTE: The learner describes and demonstrates the head-to-toe assessment by describing appropriate inspection techniques and demonstrating appropriate auscultation and palpation techniques.			
33. Inspect and palpate head for abnormalities	No abnormalities		
34. Inspect and palpate face for abnormalities	Fruity smell to breath Dry mucous membranes Oxygen delivery device present		
35. Inspect and palpate neck for abnormalities	No abnormalities		
36. Inspect and palpate chest for abnormalities	Tachypnea and retractions present but improved		
37. Auscultate breath sounds	Clear and equal		
38. Auscultate heart sounds	No abnormalities		
39. Inspect the abdomen for abnormalities	No abnormalities		
40. Auscultate bowel sounds	Present in all 4 quadrants		
41. Palpate all four quadrants of the abdomen for abnormalities	Generalized tenderness in all 4 quadrants		
42. Inspect and palpate the flanks for abnormalities	No abnormalities		
43. Inspect the pelvis for abnormalities	No abnormalities		
44. Apply gentle pressure over iliac crests downward and medially	No abnormalities		
45. Apply gentle pressure on the symphysis pubis (if iliac crests are stable)	No abnormalities		
46. Inspect the perineum for abnormalities	No abnormalities		
47. Consider how to measure urinary output	A urinal is given to the patient to monitor output.		
48. Inspect and palpate all four extremities for neurovascular status and abnormalities	No abnormalities		
Inspect Posterior Surfaces			
49. Inspect and palpate posterior surfaces	No abnormalities	*	

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
Summarize abnormalities identified, listed below, throughout the scenario. If the learner has not already identified them all, ask for any additional abnormalities noted. • Altered mental status • Retractions and tachypnea due to acidosis • Hypovolemia • Elevated glucose level			
"What interventions or diagnostics can you anticipate for this patient?"			
50. Identify at least THREE interventions or diagnostics	May include, but not limited to, the following: • Initiate insulin drip/DKA protocol as indicated • Serial blood glucose levels (glucometers may be invalid for patients in DKA) • Serial neurological assessments • Monitor electrolytes • Monitor venous blood gases • Antiemetics for nausea • Psychosocial support • Endocrine consult • Head CT • PICU admission • Add dextrose to IV fluids per protocol based on lab results		
Just Keep Reevaluating			
"What findings will you continue to reevaluate while the patient is in your care?"			
51. Reevaluate vital signs			
52. Reevaluate all identified abnormalities and effectiveness of interventions			
53. Reevaluate primary survey			
54. Reevaluate pain			
Definitive Care or Transport			
"What is the definitive care for this patient?"			
55. Consider need for transfer to a pediatric-capable facility or admission			
"Is there anything you would like to add?"			

Instructor Talking Points

Utility of pH analysis with hyperglycemia; need to correct the acidosis as well as decrease blood sugar levels with intravenous fluids and insulin infusion

Need for early detection of cerebral edema/altered mental status

Definition of diabetic ketoacidosis:

- Hyperglycemia (blood glucose > 200 mg/dL [11 mmol/L]
- Venous pH < 7.3 or serum bicarbonate < 15 mmol/L [15 mEq/L]
- Ketonemia (blood beta-hydroxybutyrate ≥ 3 mmol/L) or ketones in the urine

Bring and discuss facility pediatric DKA protocol

Referenced Chapters

Chapter 5, Initial Assessment

Chapter 7, The Child in Need of Stabilization

Chapter 12, The Child with Abdominal Pain

Chapter 14, The Child with an Altered Mental Status

Resuscitation – PEA

A 6-month-old with a cough, fever, and nasal congestion for a few days. "Weird breathing" started this morning.

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
Preparation and Triage			
1. Activate the team and assign roles	Coworkers are present to assist with the initial assessment		
"Is there any specific equipment that you would prepare?"			
2. Prepare the room	May include, but not limited to, the following: • Length-based resuscitation tape • Pediatric resuscitation cart • Pediatric protocols and dosing guidelines • Infant scale		
3. Don PPE	PPE has been donned, and no safety threats have been identified.		
"The patient is brought to the room in an infant carrier."			
General Impression			
4. Assess the three components of the Pediatric Assessment Triangle (PAT) AND categorize the patient as "sick, sicker, or sickest" • Appearance • Work of breathing • Circulation to the skin Two or more alterations in the PAT = sickest	• Eyes closed • Occasional gasping respiration • Dusky		
5. Assess for obvious uncontrolled external hemorrhage or unresponsiveness/apnea and the need to reprioritize to C-ABC	Unresponsive with abnormal respirations		
6. Stimulate patient while looking for signs of normal breathing and assessing a central pulse	• Unresponsive after stimulation • Occasional gasping breaths • Absent brachial pulse		
7. Call for help	Resuscitation team activated		
8. Begin chest compressions using 2 fingers or 2 thumbs with encircling hands, deliver 15 compressions	High quality chest compressions started using 2 thumbs with encircling hands, coworker has a backboard ready if needed for alternate compression technique.	**	
9. Ensure coworker is preparing bag-mask device to deliver ventilations at a ratio of 15 compressions to 2 breaths	The airway is opened using the head tilt-chin lift maneuver. Cycles of 15 compressions to 2 breaths delivered with adequate chest rise during ventilation.	**	
10. Perform cycles of 15 compressions to 2 breaths while connecting patient to defibrillator to assess rhythm	Compressions briefly paused when pads attached to assess rhythm. Irregular bradycardia with wide QRS complexes noted. No palpable pulse (pulseless electrical activity [PEA]).	**	
11. Resume cycles of 15 compressions to 2 ventilations, preparing to switch compressors every 2 minutes	A coworker assigned to record will document interventions and remind the compressor to switch every two minutes.		

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
12. Obtain IV or IO access to administer epinephrine as soon as possible	IO access obtained, right distal femur If student does not mention epinephrine, ask what the priority medication is for PEA/asystole and when/how often it should be administered Ask what resources the students have available to estimate a patient weight and calculate pediatric drug dosages	**	
"The estimated weight is 8 kg per length-based resuscitation tape. *The recorder tells you that almost 2 minutes have elapsed since the last rhythm check.* *What can you do to prepare for the next rhythm check?"*			
13. Palpate pulse during compressions to assess quality of compressions and quickly assess pulse presence during pause for rhythm check and to switch compressors	Pulse palpable while compressions are delivered. No palpable pulse during pause for breaths or rhythm check; monitor shows slow, irregular, wide-complex rhythm.		
14. Resume compressions and ventilations with a new compressor	High-quality chest compressions and breaths delivered with a ratio of 15 compressions to 2 breaths		
15. Administer epinephrine as soon as possible	0.01mg/kg (0.8 mL of the 1 mg/10 mL concentration) of epinephrine administered IO followed by a 10-mL flush		
"The team has just inserted an endotracheal tube (ETT). *How do you assess endotracheal tube placement?"*			
16. Assess ETT placement (must identify ALL THREE): i. Attach a CO_2 detector device; after 5 to 6 breaths, assesses for evidence of exhaled CO_2 ii. Simultaneously observe for rise and fall of the chest with assisted ventilations iii. Auscultate over the epigastrium for gurgling AND lungs for bilateral breath sounds	• CO_2 detector device is attached • Symmetrical rise and fall of the chest noted with assisted ventilations • No sounds over the epigastrium • Breath sounds are equal with crackles in the right lower lobe • After 5 to 6 breaths, there is evidence of exhaled CO_2	**	
17. Assess ETT position by noting the number at the gums AND secure the ETT	The ETT is secured and the number at the level of the gums is documented		
"How will you coordinate compressions and ventilations now that the patient is intubated?" Signs of puberty: 1 breath every 6 seconds; no signs of puberty: 1 breath every 2 to 3 seconds			
18. Provide continuous compressions at a rate of 100–120 compressions per minute; provide one breath every 2 to 3 seconds with no pauses for compressions	Compressions and ventilations continue. The recorder states it has been more than 2 minutes since the last rhythm check.		
19. Prepare to switch compressors; have one team member palpate the pulse during compressions and keep fingers in the same location during the rhythm check	There is a weak central pulse when compressions are paused. Monitor shows sinus tachycardia		
Alertness and Airway			
20. Assess level of consciousness using AVPU	Unresponsive	**	

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
21. Open the airway	Open the mouth to assess the airway.		
22. Assess the patency and protection of the airway (identify at least FOUR): • Bony deformity • Edema • Fluids (blood, vomit, or secretions) • Foreign objects • Sounds (snoring, gurgling, or stridor) • Tongue obstruction • Vocalization	• No bony deformity • No edema • Thick yellow secretions noted in ETT • An ETT is appropriately positioned and secured • No snoring, gurgling, or stridor • No tongue obstruction • No vocalization	**	
23. Suction endotracheal tube	The patient does not move during ETT suctioning.		
24. Reassess airway patency	ETT secretions have been cleared, ETT remains secured at original position documented at the gums.	*	
Breathing and Ventilation			
25. Assess breathing effectiveness (identify at least FOUR): • Breath sounds • Depth, pattern, and general rate of respirations • Increased work of breathing: ◦ Abnormal positioning ◦ Grunting ◦ Head bobbing ◦ Nasal flaring ◦ Retractions/accessory muscle use ◦ Tachypnea • Open wounds or deformities • Skin color • Spontaneous breathing • Subcutaneous emphysema • Symmetrical chest rise	• Breath sounds are equal with crackles in the right lower lobe • Respirations are assisted on the ventilator • No increased work of breathing • No open wounds or deformities • Skin color is very pale • No spontaneous respirations • No subcutaneous emphysema • Chest rise is symmetrical	**	
Circulation			
26. Assess circulation (must identify ALL THREE): • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill is 5 seconds • Skin very pale, cool, and dry • Weak central and peripheral pulses are present	**	
27. Anticipate a 20 mL/kg IO bolus of warmed isotonic crystalloids	The patient weighs 8 kg 160 mL of warmed IO fluids have been administered	**	

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
28. Reassess circulation (must identify ALL THREE): • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill is 4 seconds • Skin pale, cool and dry • Central pulses are stronger and rapid; peripheral pulses remain weak	*	
29. Anticipate a 2nd 20 mL/kg IO bolus of warmed isotonic crystalloids	A second warmed IO fluid bolus of 160 mL has been administered	**	
30. Reassess circulation (must identify ALL THREE): • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill is 2 to 3 seconds • Skin pale, warmer, and dry • Central pulses are stronger and at a more normal rate; peripheral pulses are stronger	*	
"The physician elects to evaluate further before administering more fluids. Please continue your assessment."			
31. Obtain IV access when possible	An IV line is inserted; labs are drawn and sent		
Disability (Neurologic Status)			
32. Assess neurologic status using the GCS: • Best eye opening • Best verbal response • Best motor response	• No eye opening (1) • Endotracheal tube in place, not vocalizing (1) • Withdraws from IV insertion (4) GCS = 6, patient has not received any sedation or paralytics	**	
33. Assess pupils	Pupils are sluggish but equal and reactive		
34. Assess blood glucose	Blood sugar is 30 mg/dL (1.67 mmol/L)	*	
"The physician ordered an appropriate dose of dextrose and it has been administered."			
35. Reassess neurologic status using the GCS: • Best eye opening • Best verbal response • Best motor response NOTE: Acceptable to reassess blood glucose, credit given in Step 40, blood glucose normal	• Spontaneous (4) • Irritable/cries (4) • Moves spontaneously (6) GCS = 14	*	
Exposure and Environmental Control			
36. Remove all clothing AND inspect for obvious abnormalities or injuries	No signs of illness or injury are noted.	**	
37. Provide warmth (identify at least ONE): • Blankets • Increase room temperature • Warmed fluids • Warming lights	A warming method has been applied.		
NOTE: During testing, if the learner did not intervene to correct life-threatening findings in the primary survey and/or did not complete all double-starred criteria, the instructor will review the primary survey and notify the course director.			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
Full Set of Vital Signs and Family Presence			
38. Obtain a full set of vital signs and weight in kilograms (obtain an exact weight if not determined earlier)	BP 70/42 mm Hg HR 162 beats/minute RR Assisted at an appropriate rate on the ventilator T 98.8°F (37°C) SpO_2 95% Weight 8 kg		
"The team is evaluating ongoing fluid needs. Please continue your assessment."			
39. Facilitate family presence	Parent is at the bedside with a liaison		
Get Adjuncts and Give Comfort (LMNOP)			
40. L – Consider the need for laboratory analysis	May include, but not limited to, the following: • Blood gases • Blood glucose • Complete blood count • Cultures • Lactate • Metabolic panel Repeat blood glucose within normal limits		
41. M – Attach patient to a cardiac monitor	Sinus tachycardia without ectopy; monitor set to record blood pressure at frequent intervals		
42. N – Consider the need for insertion of a naso- or orogastric tube	Gastric tube has been inserted		
43. O – Assess oxygenation and continuous end-tidal capnography (if available)	Pulse oximetry 95% on ventilator End-tidal CO_2 40 mm Hg (5.33 kPa) with a normal waveform		
44. P – Assess pain using an appropriate pain scale	Pain = 7 using an appropriate scale	*	
45. Give appropriate nonpharmacologic comfort measures (identify at least ONE): • Distraction • Family presence • Places padding over bony prominences • Repositioning • Splinting • Verbal reassurance	Nonpharmacologic comfort measures have been implemented		
46. Consider obtaining order for analgesic medication	Sedation and analgesia have been ordered and administered. (If the learner has not obtained IV access, state "IO lidocaine administered to reduce pain from IO fluid administration.")		
47. Reassess pain using an appropriate pain scale	Pain = 1 using an appropriate scale	*	

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
Consideration of Need for Definitive Care			
"Is there a need to consider transfer to a pediatric-capable facility, surgery, or critical care?"			
Secondary Survey			
History and Head-to-Toe			
48. Obtain pertinent history (identify at least ONE): • Medical records/documents • Prehospital report • SAMPLE	S: Fever, cough and congestion for 2 to 3 days with decreased feeding today; "weird breathing" this morning A: None M: None P: 39-week gestation, vaginal delivery with no complications, immunizations up to date L: Had a little formula a few hours ago, wet diaper changed at that time E: Patient woke for a bottle a few hours ago but had difficulty feeding with nasal congestion		
NOTE: The learner describes and demonstrates the head-to-toe assessment by describing appropriate inspection techniques and demonstrating appropriate auscultation and palpation techniques			
49. Inspect and palpate head for abnormalities	No abnormalities, fontanelle soft and flat		
50. Inspect and palpate face for abnormalities	A secured ETT is present; no other abnormalities		
51. Inspect and palpate neck for abnormalities	No abnormalities		
52. Inspect and palpate chest for abnormalities	No abnormalities		
53. Auscultate breath sounds	Crackles noted to right lower lung; left lung is clear		
54. Auscultate heart sounds	No abnormalities		
55. Inspect the abdomen for abnormalities	No abnormalities (if gastric tube not inserted, abdomen is distended – prompt to insert gastric tube)		
56. Auscultate bowel sounds	Present in all 4 quadrants		
57. Palpate all four quadrants of the abdomen for abnormalities	No abnormalities		
58. Inspect and palpate the flanks for abnormalities	No abnormalities		
59. Inspect the pelvis for abnormalities	No abnormalities		
60. Apply gentle pressure over iliac crests downward and medially	No abnormalities		
61. Apply gentle pressure on the symphysis pubis (if iliac crests are stable)	No abnormalities		
62. Inspect the perineum for abnormalities	No abnormalities		
63. Consider how to measure urinary output	Diapers will be weighed		
64. Inspect and palpate all four extremities for neurovascular status and abnormalities	Stabilized IO device present, no other abnormalities		
Inspect Posterior Surfaces			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
65. Inspect and palpate posterior surfaces	No abnormalities	*	
Summarize abnormalities identified, listed below, throughout the scenario. If the learner has not already identified them all, the instructor will ask for any additional noted. • Altered level of consciousness • Cardiac arrest • Thick yellow secretions suctioned from ETT • Right lower lung crackles • Respiratory failure			
"What interventions or diagnostics can you anticipate for this patient?"			
66. Identify at least THREE interventions or diagnostics	May include, but not limited to, the following: • Antibiotics • Blood gas • Blood cultures • Chest radiograph • Head CT • Metabolic panel • Psychosocial support • Maintenance fluids with dextrose • Pediatric intensive care unit admission • Sedation • Specialty consultation • Targeted temperature management		
Just Keep Reevaluating			
"What findings will you continue to reevaluate while the patient is in your care?"			
67. Reevaluate vital signs			
68. Reevaluate all identified abnormalities and effectiveness of interventions			
69. Reevaluate primary survey			
70. Reevaluate pain			
Definitive Care or Transport			
"What is the definitive care for this patient?"			
71. Consider need for transfer to a pediatric-capable facility or admission			
"Is there anything you would like to add?"			

Instructor Talking Points

- Immediate identification of need for cardiopulmonary resuscitation and review of initial steps
- Reprioritize to C-ABC; when pulses return, complete full A, B, and C
- Interventions may happen simultaneously but vital to perform chest compressions, ventilations, rhythm check, defibrillation IV/IO, and epinephrine in that order
- How to calculate and draw up epinephrine doses
- What if the child had remained pulseless? What causes do we consider during a resuscitation?

Referenced Chapters

Chapter 5, Initial Assessment

Chapter 7, The Child in Need of Stabilization

Chapter 14, The Child with an Altered Mental Status

Resuscitation – VT

A 7-year-old is en route via ambulance after a witnessed syncopal episode at soccer practice. There was no trauma. The patient was alert upon paramedic arrival. Vitals are BP 102/63 mm Hg, RR 18 breaths/minute, HR 76 beats/minute, pulse oximetry 98% without supplemental oxygen

Skill Steps	Potential Interventions	Demonstrated	
		Yes	No
Preparation and Triage			
1. Activate the team and assign roles	Coworkers are present to assist with the initial assessment.		
"Is there any specific equipment that you would prepare?"			
2. Prepare the room	May include, but not limited to, the following: • Length-based resuscitation tape • Pediatric equipment • Pediatric protocols and dosing guidelines • Scale		
3. Don PPE	PPE has been donned, and no safety threats have been identified.		
"The patient is brought to the room on the ambulance stretcher. The patient weighs 30 kg."			
General Impression			
4. Assess the three components of the Pediatric Assessment Triangle (PAT) AND categorize the patient as "sick, sicker, or sickest" • Appearance • Work of breathing • Circulation to the skin No alterations in the PAT = sick	• Sitting upright on the stretcher and looking around • No increased work of breathing • Skin color is baseline for patient; no signs of pallor or cyanosis		
5. Assess for obvious uncontrolled external hemorrhage or unresponsiveness/apnea and the need to reprioritize to C-ABC	No uncontrolled external hemorrhage or unresponsiveness/apnea and no need to consider reprioritizing to C-ABC		
Primary Survey			
Alertness and Airway			
6. Assess level of consciousness using AVPU	Alert	**	
7. Open the airway	The patient can open his mouth		

Skill Steps	Potential Interventions	Demonstrated	
		Yes	No
8. Assess the patency and protection of the airway (identify at least FOUR): • Bony deformity • Edema • Fluids (blood, vomit, or secretions) • Foreign objects • Loose or missing teeth • Sounds (snoring, gurgling, or stridor) • Tongue obstruction • Vocalization	• No bony deformity • No edema • No fluids • No foreign objects • No loose or missing teeth • No snoring, gurgling, or stridor • No tongue obstruction • Patient was answering questions but suddenly stops talking	**	
"During the airway assessment the patient has an acute mental status change."			
9. Assess level of consciousness using AVPU	Unresponsive		
10. Assess for the need to reprioritize to C-ABC and call for help	Reprioritization to C-ABC is needed because of unresponsiveness; your coworkers are calling for help		
11. Stimulate patient while looking for signs of normal breathing and assessing a central pulse	• Unresponsive after stimulation • Occasional gasping breaths • Absent central pulse		
12. Begin chest compressions, deliver 15 compressions	High quality chest compressions started; coworker is placing a backboard.	**	
13. Ensure coworker is preparing bag-mask device to deliver ventilations at a ratio of 15 compressions to 2 breaths	The airway is opened using the head tilt-chin lift maneuver. Cycles of 15 compressions to 2 breaths delivered with adequate chest rise during ventilation.	**	
14. Perform cycles of 15 compressions to 2 breaths while connecting patient to defibrillator to assess rhythm	Compressions briefly paused when pads attached to assess rhythm. Regular wide complex tachycardia noted. No palpable pulse (pulseless ventricular tachycardia [VT]).	**	
15. Resume compressions/ventilations while charging defibrillator to 2 joules/kg, clear staff from patient prior to defibrillation, and defibrillate	Patient was weighed upon arrival, 30 kg 60 joules delivered	**	
16. Resume cycles of 15 compressions to 2 ventilations, preparing to switch compressors every 2 minutes	A coworker assigned to record will document interventions and remind the compressor to switch every two minutes.	**	
17. Obtain IV or IO access	IO access obtained		
18. Prepare for administration of 0.01mg/kg of IO epinephrine (acceptable after 1st or 2nd shock)	0.01 mg/kg (3 mL of the 1 mg/10 mL concentration) of epinephrine administered IO, followed by a 10 mL flush		
19. Prepare for advanced airway	The team is preparing for intubation,		
"The recorder tells you that almost 2 minutes have elapsed since the last rhythm check. What can you do to prepare for the next rhythm check?"			

Skill Steps	Potential Interventions	Demonstrated	
		Yes	No
20. Palpate pulse during compressions to assess quality of compressions and quickly assess pulse presence during pause for rhythm check and to switch compressors	Pulse palpable while compressions are delivered. No palpable pulse during pause for breaths or rhythm check; monitor shows persistent ventricular tachycardia.		
21. Resume compressions/ventilations while charging defibrillator to 4 joules/kg, clear staff from patient prior to defibrillation, and defibrillate	120 joules delivered	**	
22. Resume compressions and ventilations with a new compressor		**	
"The team has just inserted an endotracheal tube (ETT) using drug-assisted intubation. How do you assess endotracheal tube placement?"			
23. Assess ETT placement (must identify ALL THREE): i. Attach a CO_2 detector device; after 5 to 6 breaths, assess for evidence of exhaled CO_2 ii. Simultaneously observe for rise and fall of the chest with assisted ventilations iii. Auscultate over the epigastrium for gurgling AND lungs for bilateral breath sounds	• CO_2 detector device is attached • Symmetrical rise and fall of the chest noted with assisted ventilations • No sounds over the epigastrium • Breath sounds are equal • After 5 to 6 breaths, there is evidence of exhaled CO_2	**	
24. Assess ETT position by noting the number at the teeth AND secure the ETT	The ETT is secured and the number at the level of the teeth is documented.		
"How will you coordinate compressions and ventilations now that the patient is intubated?" Signs of puberty – 1 breath every 6 seconds; no signs of puberty – 1 breath every 2 to 3 seconds			
25. Provide continuous compressions at a rate of 100–120 compressions per minute; provide one breath every 2 to 3 seconds with no pauses for compressions	Compressions and ventilations continue with continuous compressions at a rate of 100–120 per minute and 1 breath every 2 to 3 seconds with no pauses for compressions.		
26. Prepare for administration of 5 mg/kg of IO amiodarone	150 mg of amiodarone is being prepared. The recorder tells you that 2 minutes has elapsed since the last rhythm check.		
27. Palpate pulse during compressions to assess quality of compressions and quickly assess pulse presence during pause for rhythm check and to switch compressors	The rhythm is sinus tachycardia, and there is a palpable central pulse without compressions.		
28. Stop chest compressions but continue assisted ventilations	Assisted ventilations are continued. A coworker will set up a ventilator.		
Alertness and Airway			
29. Assess level of consciousness using AVPU	Unresponsive	**	

Skill Steps	Potential Interventions	Demonstrated	
		Yes	No
30. Assess the patency and protection of the airway (identify at least FOUR): • Bony deformity • Edema • Fluids (blood, vomit, or secretions) • Foreign objects • Sounds (snoring, gurgling, or stridor) • Tongue obstruction • Vocalization	• No bony deformity • No edema • No fluids • An ETT is appropriately positioned and secured • No abnormal sounds • No tongue obstruction • No vocalization	**	
Breathing and Ventilation			
31. Assess breathing effectiveness (identify at least FOUR): • Breath sounds • Depth, pattern, and general rate of respirations • Increased work of breathing ◦ Abnormal positioning ◦ Grunting ◦ Head bobbing ◦ Nasal flaring ◦ Retractions/accessory muscle use ◦ Tachypnea • Open wounds or deformities • Skin color • Spontaneous breathing • Subcutaneous emphysema • Symmetrical chest rise	• Breath sounds are clear and equal • Respirations are assisted on the ventilator • No increased work of breathing • No open wounds or deformities • Skin color is very pale • No spontaneous respirations • No subcutaneous emphysema • Chest rise is symmetrical	**	
Circulation			
32. Assess circulation (must identify ALL THREE): • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill 6 seconds • Skin pale, cool, and dry • Weak central and peripheral pulses are present	**	
33. Anticipate a 20 mL/kg IO bolus of warmed isotonic crystalloids	The patient weighs 30 kg 600 mL of warmed IO fluids have been administered	**	
34. Reassess circulation (must identify ALL THREE): • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill is 4 seconds • Skin pale, cool, and dry • Central pulses are stronger and rapid; peripheral pulses remain weak	*	

Skill Steps	Potential Interventions	Demonstrated	
		Yes	No
35. Anticipate a 2nd 20 mL/kg IO bolus of warmed isotonic crystalloids	A second warmed IO fluid bolus of 600 mL has been administered.	**	
36. Reassess circulation (must identify ALL THREE): • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill is 2 to 3 seconds • Skin pale, warmer, and dry • Central pulses are stronger and at a more normal rate; peripheral pulses are stronger	*	
"The physician elects to evaluate further before administering more fluids. Please continue your assessment."			
37. Obtain IV access when possible	An IV line is inserted; labs are drawn and sent.		
Disability (Neurologic Status)			
38. Assess neurologic status using the GCS: • Best eye opening • Best verbal response • Best motor response	• None (1) • None (1) • None (1) GCS = 3, documented as non-testable after drug-assisted intubation	**	
39. Assess pupils	PERRL		
40. Assess blood glucose	Blood glucose is within normal limits	*	
Exposure and Environmental Control			
41. Remove all clothing AND inspect for obvious abnormalities or injuries	No signs of illness or injury are noted.	**	
42. Provide warmth (identify at least ONE): • Blankets • Increase room temperature • Warmed fluids • Warming lights	A warming method is applied.		
NOTE: During testing, if the learner did not intervene to correct life-threatening findings in the primary survey and/or did not complete all double-starred criteria, the instructor will review the primary survey and notify the course director.			
Full Set of Vital Signs and Family Presence			
43. Obtain a full set of vital signs and weight in kilograms (if not determined earlier)	BP 92/48 mm Hg HR 114 beats/minute RR Assisted at an appropriate rate on the ventilator T 97.5°F (36.4°C) SpO_2 97 % Weight 30 kg		
44. Facilitate family presence	Family is en route to the hospital.		
Get Adjuncts and Give Comfort (LMNOP)			

Skill Steps	Potential Interventions	Demonstrated	
		Yes	No
45. L – Consider the need for laboratory analysis	May include, but not limited to, the following: • Blood gases • Blood glucose • Complete blood count • Cultures • Lactate • Metabolic panel • Toxicology screen		
46. M – Attach patient to a cardiac monitor	Sinus tachycardia, monitor set to record blood pressure at frequent intervals. A 12-lead ECG will be performed.		
47. N – Consider the need for insertion of a naso- or orogastric tube	A gastric tube has been inserted.		
48. O – Assess oxygenation and continuous end-tidal capnography (if available)	Pulse oximetry = 97% on ventilator End-tidal CO_2 = 38 mm Hg (5.06 kPa) with normal waveform		
49. P – Assess pain using an appropriate pain scale	Pain = 0 using an appropriate pain scale	*	
50. Give appropriate nonpharmacologic comfort measures (identify at least ONE): • Distraction • Family presence • Places padding over bony prominences • Repositioning • Splinting • Verbal reassurance • Other, as appropriate	Nonpharmacologic comfort measures have been implemented.		
51. Consider obtaining order for analgesic medication	Sedation and analgesia have been ordered and will be administered as appropriate.		
Consideration of Need for Definitive Care			
"Is there a need to consider transfer to a pediatric-capable facility, surgery, or critical care?"			
Secondary Survey			
History and Head-to-Toe			
52. Obtain pertinent history (identify at least ONE): • Medical records/documents • Prehospital report • SAMPLE	S: Patient was playing soccer when he collapsed on the field. Paramedics arrived and found patient alert in no distress. The coach stated he was unresponsive for 2 to 3 minutes. A: None M: None P: No past medical history; immunizations are up to date L: Unknown E: Was at soccer practice for approximately 30 minutes when he collapsed while running on the field.		

Skill Steps	Potential Interventions	Demonstrated	
		Yes	No
NOTE: The learner describes and demonstrates the head-to-toe assessment by describing appropriate inspection techniques and demonstrating appropriate auscultation and palpation techniques.			
53. Inspect and palpate head for abnormalities	No abnormalities		
54. Inspect and palpate face for abnormalities	A secured endotracheal tube is present; no other abnormalities		
55. Inspect and palpate neck for abnormalities	No abnormalities		
56. Inspect and palpate chest for abnormalities	Defibrillation pads are attached; no other abnormalities		
57. Auscultate breath sounds	No abnormalities		
58. Auscultate heart sounds	No abnormalities		
59. Inspect the abdomen for abnormalities	No abnormalities (if gastric tube not inserted, abdomen is distended – prompt to insert gastric tube)		
60. Auscultate bowel sounds	Present in all 4 quadrants		
61. Palpate all four quadrants of the abdomen for abnormalities	No abnormalities		
62. Inspect and palpate the flanks for abnormalities	No abnormalities		
63. Inspect the pelvis for abnormalities	No abnormalities		
64. Apply gentle pressure over iliac crests downward and medially	No abnormalities		
65. Apply gentle pressure on the symphysis pubis (if iliac crests are stable)	No abnormalities		
66. Inspect the perineum for abnormalities	No abnormalities		
67. Consider how to measure urinary output	Indwelling urinary catheter inserted with return of clear yellow urine.		
68. Inspect and palpate all four extremities for neurovascular status and abnormalities	Stabilized IO device present, no other abnormalities		
Inspect Posterior Surfaces			
69. Inspect and palpate posterior surfaces	No abnormalities	*	
Summarize abnormalities identified, listed below, throughout the scenario. If the learner has not already identified them all, the instructor will ask for any additional noted. • Syncopal episode • Dysrhythmia–pulseless ventricular tachycardia converted to sinus rhythm after defibrillation x 2 and epinephrine x 1; amiodarone prepared but not administered			
"What interventions or diagnostics can you anticipate for this patient?"			

Skill Steps	Potential Interventions	Demonstrated	
		Yes	No
70. Identify at least THREE interventions or diagnostics	May include but not limited to the following: • 12-lead electrocardiogram • Cardiology consult • Chest radiograph • Computed tomography of head • Toxicology screen • Echocardiogram • Psychosocial support • Targeted temperature management		
Just Keep Reevaluating			
"What findings will you continue to reevaluate while the patient is in your care?"			
71. Reevaluate vital signs			
72. Reevaluate all identified abnormalities and effectiveness of interventions			
73. Reevaluate primary survey			
74. Reevaluate pain			
Definitive Care or Transport			
"What is the definitive care for this patient?"			
75. Consider need for transfer to a pediatric-capable facility or admission			
"Is there anything you would like to add?"			

Instructor Talking Points:

- Defibrillator use
- Dysrhythmic cause for syncopal episode
- Reversible conditions predisposing child to ventricular tachycardia
- Facility policy for targeted temperature management
- Lidocaine use for pain related to IO fluid infusion

Referenced Chapters:

Chapter 5, Initial Assessment

Chapter 7, The Child in Need of Stabilization

Chapter 14, The Child with an Altered Mental Status

Injury – Burn

Parent states their 8-month-old has been irritable since their bath this morning.

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
Preparation and Triage			
1. Activate the team and assign roles	Coworkers are present to assist with the initial assessment.		
"Is there any specific equipment that you would prepare?"			
2. Prepare the room	May include, but not limited to, the following: • Length-based resuscitation tape • Pediatric equipment • Pediatric protocols and dosing guidelines • Infant scale		
3. Don PPE	PPE has been donned, and no safety threats have been identified.		
"The patient is brought to a room."			
General Impression			
4. Assess the three components of the Pediatric Assessment Triangle (PAT) AND categorize the patient as "sick, sicker, or sickest" • Appearance • Work of breathing • Circulation to the skin Two or more alterations in the PAT = sickest	• Crying and inconsolable • Tachypneic with a strong cry • Pale and diaphoretic		
5. Assess for obvious uncontrolled external hemorrhage or unresponsiveness/apnea and the need to reprioritize to C-ABC	No uncontrolled external hemorrhage or unresponsiveness/apnea and no need to consider reprioritizing to C-ABC		
Primary Survey			
Alertness and Airway with Simultaneous Cervical Spinal Stabilization			
6. Assess level of consciousness using AVPU	Alert	**	
7. Open the airway	Airway is opened with the head tilt-chin lift maneuver		
8. Assess the patency and protection of the airway (identify at least FOUR): • Bony deformity • Edema • Fluids (blood, vomit, or secretions) • Foreign objects • Loose or missing teeth • Sounds (snoring, gurgling, or stridor) • Tongue obstruction • Vocalization	• No bony deformity • No edema • No blood, vomit, or secretions • No foreign objects • No loose or missing teeth • No snoring, gurgling, or stridor • No tongue obstruction • Crying loudly	**	
"The airway is patent."			
Breathing and Ventilation			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
9. Assess breathing effectiveness (identify at least FOUR): • Breath sounds • Depth, pattern, and general rate of respirations • Increased work of breathing ◦ Abnormal positioning ◦ Grunting ◦ Head bobbing ◦ Nasal flaring ◦ Retractions/accessory muscle use ◦ Tachypnea • Open wounds or deformities • Skin color • Spontaneous breathing • Subcutaneous emphysema • Symmetrical chest rise	• Breath sounds are difficult to assess with crying but equal • Tachypneic and irregular with crying • No increased work of breathing • No open wounds or deformities noted • Skin color is pale • Breathing is spontaneous • No subcutaneous emphysema • Chest rise is symmetrical	**	
"Breathing is effective. At this time, no interventions are required."			
Circulation and Control of Hemorrhage			
10. Assess circulation (must identify ALL THREE): • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill 4 seconds • Skin pale, cool, and diaphoretic • Central pulse rapid and strong; peripheral pulses weak	**	
11. Obtain IV access	IV access is obtained	**	
12. Anticipate a 20 mL/kg bolus of warmed isotonic crystalloids	The patient weighs 9 kg 180 mL of warmed IV fluids have been administered	**	
13. Reassess circulation (must identify ALL THREE): • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill 2 seconds • Skin color improved; skin warm and less diaphoretic • Central pulse at a more normal rate; peripheral pulses stronger	*	
Disability (Neurologic Status)			
14. Assess neurologic status using the GCS: • Best eye opening • Best verbal response • Best motor response	• Spontaneous (4) • Crying (4) • Localizes (6) GCS = 14	**	
15. Assess blood glucose	Blood glucose within normal limits		
16. Assess pupils	PERRL		
Exposure and Environmental Control			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
17. Remove all clothing AND inspect for obvious abnormalities or injuries	Redness and blisters noted bilaterally from pelvis to toes	**	
18. Provide warmth (identify at least ONE): • Blankets • Increase room temperature • Warmed fluids • Warming lights	A warm blanket is propped over the patient to prevent air flow without touching the patient's skin.		
NOTE: During testing, if the learner did not intervene to correct life-threatening findings in the primary survey and/or did not complete all double-starred criteria, the instructor will review the primary survey and notify the course director.			
Full Set of Vital Signs and Family Presence			
19. Obtain a full set of vital signs and weight in kilograms (if not determined earlier)	BP 80/42 mm Hg HR 162 beats/minute RR 42 breaths/minute T 97.4°F (36.3°C) SpO_2 98 % Weight 9 kg		
20. Facilitate family presence	Parent in the waiting room		
Get Adjuncts and Give Comfort (LMNOP)			
21. L – Consider the need for laboratory analysis	May include, but not limited to, the following: • Blood gases • Complete blood count • Lactate • Metabolic panel		
22. M – Attach patient to a cardiac monitor	Normal sinus rhythm		
23. N – Consider the need for insertion of a naso- or orogastric tube	Deferred		
24. O – Assess oxygenation and continuous end-tidal capnography (if available)	Pulse oximetry 98% on room air End-tidal CO_2 36 mm Hg (4.80 kPa)		
25. P – Assess pain using an appropriate pain scale	Pain = 9 using an appropriate pain scale	*	
26. Give appropriate nonpharmacologic comfort measures (identify at least ONE): • Distraction • Family presence • Places padding over bony prominences • Repositioning • Splinting • Verbal reassurance • Other, as appropriate	Nonpharmacologic comfort measures have been implemented.		
27. Consider obtaining order for analgesic medication	Analgesia has been ordered and administered.		

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
28. Reassess pain using an appropriate pain scale	Pain score after medication = 3		
Consideration of Need for Definitive Care			
"Is there a need to consider transfer to a pediatric-capable facility, surgery, or critical care?"			
Secondary Survey			
History and Head-to-Toe			
29. Obtain pertinent history (identify at least ONE): • Medical records/documents • Prehospital report • SAMPLE	Medical records show multiple emergency department visits for injuries S: Inconsolable since morning bath given by boyfriend A: None M: None P: Immunizations up to date L: Last known intake was a bottle 1 hour prior to arrival, last wet diaper 5 hours ago E: The infant had been changed and was drinking a bottle when the parent left the home 5 hours ago; upon returning home, the infant was dressed in a sleeper and inconsolable. Boyfriend told the parent that he bathed and dressed the infant after the bottle and that the infant has been crying more than usual since the parent left.		
NOTE: The learner describes and demonstrates the head-to-toe assessment by describing appropriate inspection techniques and demonstrating appropriate auscultation and palpation techniques.			
30. Inspect and palpate head for abnormalities	No abnormalities, fontanelle flat and soft		
31. Inspect and palpate face for abnormalities	Bruises to right cheek		
32. Inspect and palpate neck for abnormalities	No abnormalities		
33. Inspect and palpate chest for abnormalities	No abnormalities		
34. Auscultate breath sounds	Clear and equal		
35. Auscultate heart sounds	No abnormalities		
36. Inspect the abdomen for abnormalities	No abnormalities		
37. Auscultate bowel sounds	Present in all four quadrants		
38. Palpate all four quadrants of the abdomen for abnormalities	No abnormalities		
39. Inspect and palpate the flanks for abnormalities	No abnormalities		
40. Inspect the pelvis for abnormalities	Well-delineated area of redness noted across pelvis		
41. Apply gentle pressure over iliac crests downward and medially	Stable		
42. Apply gentle pressure on the symphysis pubis (if iliac crests are stable)	Stable		
43. Inspect the perineum for abnormalities	Perineum reddened		
44. Consider how to measure urinary output	Urinary catheter inserted with dark yellow urine output		

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
45. Inspect and palpate all four extremities for neurovascular status and abnormalities	Upper extremities with normal temperature, motion, sensation, and pulses Bruising noted to bilateral upper arms Lower extremities with normal temperature and spontaneous movement; patient cries with lower extremity movement and palpation Lower extremities edematous with reddened, blistered skin Lower extremity pulses slightly weaker than upper extremity pulses; capillary refill normal		
Inspect Posterior Surfaces			
"Imaging has been performed; there is no evidence of a spinal or pelvic injury. It is safe to turn the patient."			
46. Inspect and palpate posterior surfaces	Buttocks and posterior legs are red and blistering.	*	
Summarize abnormalities identified, listed below, throughout the scenario. If the learner has not already identified them all, ask for any additional abnormalities noted. • Bruise to right cheek • Bruises to upper arms • Demarcated line with normal skin above and red skin with blisters below noted from pelvis to bilateral lower extremities			
"What interventions or diagnostics can you anticipate for this patient?"			
47. Identify at least THREE interventions or diagnostics	May include, but not limited, to the following: • Consult to burn center • Skeletal survey • Law enforcement • Mandatory reporting • Psychosocial support • Social services • Wound care with sedation • Maintenance fluids • Fluid resuscitation with burn center guidance • Pain management		
Just Keep Reevaluating			
"What findings will you continue to reevaluate while the patient is in your care?"			
48. Reevaluate vital signs			
49. Reevaluate all identified abnormalities and effectiveness of interventions			
50. Reevaluate primary survey			
51. Reevaluate pain			
Definitive Care or Transport			
"What is the definitive care for this patient?"			
52. Consider need for transfer to a pediatric-capable facility or admission			
"Is there anything you would like to add?"			

Instructor Talking Points

- Burn center consultation for wound care and fluid resuscitation; follow local burn center recommendations
- Rationale for fluid resuscitation – 3rd spacing of fluids
- Pain management – reassessment mentioned in this scenario due to significant level of pain
- Pros/cons of indwelling catheter – burn resuscitation monitoring, urethral swelling after trauma, diapers with burned skin
- Lower extremity pulses slightly weaker due to edema; monitor edema progression and pulse quality
- Mandatory reporting
- Less obvious signs of maltreatment

Referenced Chapters

Chapter 5, Initial Assessment

Chapter 9, The Child with an Injury

Chapter 16, The Child with a Suspicious Presentation

Injury – ATV Rollover

Prehospital Report

An ambulance is en route with a 10-year-old who was riding an all-terrain vehicle (ATV) that rolled over. The family extricated the child from under the overturned ATV before paramedics arrived. The child was not wearing a helmet. The patient is unresponsive with no active bleeding. There is an obvious deformity to the left upper leg. The patient has one intravenous catheter with isotonic crystalloid solution infusing at a rapid rate and a cervical collar in place.

Vital signs are BP 80/48 mm Hg, HR 128 beats/minute, RR spontaneously at 6 breaths/minute. Ventilations are being assisted with a bag-mask device; pulse oximetry 84% with assisted ventilations connected to oxygen at 15 L/minute.

The patient is expected in five minutes. Please begin your initial assessment process.

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
Preparation and Triage			
1. Activate the team and assign roles	The trauma team is activated, and coworkers are present to assist with the initial assessment.		
"Is there any specific equipment that you would prepare?"			
2. Prepare the room	May include, but not limited to, the following: • Airway/intubation supplies • Blood products with rapid-volume infuser • Length-based resuscitation tape • Pediatric equipment • Pediatric protocols and dosing guidelines • Fluid warmer • Increase the room temperature • Pelvic binder • Traction splint • Zero the bed scale		
3. Don PPE	PPE has been donned, and no safety threats have been identified.		
"The patient has just arrived."			
General Impression			
4. Assess the three components of the Pediatric Assessment Triangle (PAT) AND categorize the patient as "sick, sicker, or sickest" • Appearance • Work of breathing • Circulation to the skin Two or more alterations in the PAT = sickest	• Not moving or interacting with surroundings • Minimal respiratory effort, ventilations assisted by ambulance staff • Dusky		
5. Assess for obvious uncontrolled external hemorrhage or unresponsiveness/apnea and the need to reprioritize to C-ABC	No uncontrolled external hemorrhage The patient is unresponsive but has slow spontaneous respirations and a palpable pulse. No need to consider reprioritizing to C-ABC		
Primary Survey			
Alertness and Airway with Simultaneous Cervical Spinal Stabilization			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
6. Assess level of consciousness using AVPU	Unresponsive to painful stimuli	**	
7. Open the airway while maintaining cervical spinal stabilization	Airway is opened using the jaw-thrust maneuver while a coworker assists to maintain spinal stabilization and optimal airway positioning		
8. Assess the patency and protection of the airway (identify at least FOUR): • Bony deformity • Edema • Fluids (blood, vomit, or secretions) • Foreign objects • Loose or missing teeth • Sounds (snoring, gurgling, or stridor) • Tongue obstruction • Vocalization	• No bony deformity • No edema • No blood, vomit, or secretions • No foreign objects • No loose or missing teeth • Snoring is heard when the jaw thrust is released • Tongue obstruction as evidenced by snoring when the jaw thrust is released • No vocalization	**	
"An oropharyngeal airway has been inserted. The tongue obstruction and snoring are relieved. Your coworker no longer needs to hold the airway open with the jaw-thrust maneuver but will continue to assist with spinal stabilization. The airway is patent."			
9. Anticipate a definitive airway	The team is preparing for intubation. Please proceed with your assessment.		
Breathing and Ventilation			
10. Assess breathing effectiveness (identify at least FOUR): • Breath sounds • Depth, pattern, and general rate of respirations • Increased work of breathing ◦ Abnormal positioning ◦ Grunting ◦ Head bobbing ◦ Nasal flaring ◦ Retractions/accessory muscle use ◦ Tachypnea • Open wounds or deformities • Skin color • Spontaneous breathing • Subcutaneous emphysema • Symmetrical chest rise	• Breath sounds are equal but diminished bilaterally • Breathing is shallow, irregular, and slow without assisted ventilations • No increased work of breathing • Abrasions to the chest, no chest wall deformities • Skin color is dusky • Breathing is spontaneous but very slow with minimal effort • No subcutaneous emphysema • Chest rise is symmetrical	**	
11. Continue assisted ventilations	Ventilations are assisted with a bag-mask device	**	
"What is the appropriate ventilation rate?" Signs of puberty: 1 breath every 6 seconds. No signs of puberty: 1 breath every 2 to 3 seconds.			
12. Reassess breathing effectiveness with assisted ventilations: (identify at least ONE) • Is there symmetrical chest rise? • Are breath sounds present and equal?	• Symmetrical and adequate chest rise • Bilateral breath sounds are present	*	

Skill Steps	Instructor Responses	Demonstrated	
		Yes	**No**
"The team has just completed drug-assisted intubation. How do you assess endotracheal tube placement?" Do not stop flow of PNP to prompt for a GCS score. It is appropriate but **not required** to quickly assess disability prior to administering medications to facilitate intubation **if it does not delay care**. **If asked**, may respond and give credit for GCS score in Step 25. *"Prior to drug administration the GCS score was 6; no extremity movement was noted."*			
13. Confirm endotracheal tube (ETT) placement (must identify ALL THREE): i. Attach a CO_2 detector device; after 5 to 6 breaths, assess for evidence of exhaled CO_2 ii. Simultaneously observe for rise and fall of the chest with assisted ventilations iii. Auscultate over the epigastrium for gurgling AND lungs for bilateral breath sounds	• CO_2 detector device is attached • Symmetrical rise and fall of the chest noted with assisted ventilations • No sounds over the epigastrium • Breath sounds are clear and equal • There is evidence of exhaled CO_2	**	
14. Assess ETT position by noting the number at the teeth AND secures the ETT	The ETT is secured, and the number at the level of the teeth is documented.		
15. Provide ventilations at an appropriate rate	Ventilations are provided at an appropriate rate by a team member.		
Circulation and Control of Hemorrhage			
16. Assess circulation (must identify ALL THREE): • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill 5 seconds • Skin pale, cool to the touch, and diaphoretic • Central pulse rapid, and weak; peripheral pulses are barely palpable	**	
17. Assess patency of the prehospital IV line.	The prehospital IV line is patent.		
18. Estimate volume of fluids infused	Estimated 750mL of IV fluids has been administered; weight is 40 kg per bed scale		
19. Anticipate administration of 10 mL/kg of packed red blood cells OR 20 mL/kg IV bolus of warmed, isotonic crystalloids with blood tubing	A warmed IV bolus is administered NOTE: If blood is immediately available, given the prehospital infusion and continued of signs and symptoms of shock, blood administration is more appropriate.	**	
20. Obtain second site for IV access	Attempts for a second IV line have been unsuccessful		
21. Obtain intraosseous (IO) access NOTE: With blood administration and the potential need for sedation or other medications, a 2nd access site is highly recommended. Scenario notes injury to lower half of body, with deformity to left leg. Discuss appropriate IO sites at the end of the scenario.	An intraosseous line is placed in the right humerus		

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
22. Reassess circulation after the bolus is completed (identify all three) • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill 4 seconds • Skin pale, cool to the touch, and moist • Central pulse rapid and weak; peripheral pulses are slightly stronger but remain weak	*	
23. Anticipate administration 10 mL/kg of packed red blood cells.	10 mL/kg of packed red blood cells are administered	**	
24. Reassess circulation after the bolus is completed (identify all three) • Assess capillary refill • Inspect AND palpate the skin for color, temperature, and moisture • Palpate a pulse	• Capillary refill 2-3 seconds • Skin is pale, warmer, and less moist • Central pulse is stronger and at a more normal rate; peripheral pulses are stronger	*	
"The team will monitor and manage ongoing blood and fluid resuscitation. Potential internal sources of blood loss are being evaluated (FAST exam, pelvic stability, femur fracture) to determine the best goal-directed therapy. You may continue your assessment."			
Disability (Neurologic Status)			
25. Assess neurologic status using the GCS: • Best eye opening • Best verbal response • Best motor response	GCS: • No eye opening (1) • No verbal response (1) • No motor response (1) GCS score documented as non-testable after drug-assisted intubation	**	
26. Assess pupils	Right pupil is fixed and dilated. Left pupil is minimally reactive to light.		
27. Assess bedside glucose	Glucose is within normal limits.	*	
Exposure and Environmental Control			
28. Remove all clothing AND inspect for obvious abnormalities or injuries	Abrasions and contusions are noted across the chest and abdomen. There is obvious deformity to the left thigh.	**	
29. Provide warmth (identify at least ONE): • Blankets • Increase room temperature • Warmed fluids • Warming lights	A warming method has been applied.		
Full Set of Vital Signs and Family Presence			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
30. Obtain a full set of vital signs and weight in kilograms	BP: 110/70 mm Hg HR: 112 beats/minute RR: Assisted at an appropriate rate on the ventilator T: 98.6°F (37°C) SpO_2: 96% Weight: 40 kg		
31. Facilitate family presence	Caregivers are in waiting room and would like to come into the room. The charge nurse has assigned a liaison.		
Get Adjuncts and Give Comfort (LMNOP)			
32. L – Consider the need for laboratory analysis	May include, but not limited to, the following: • Blood gases • Blood glucose • Blood cross/type and screen • Coagulation studies • Complete blood count • AST/lipase • Lactate • Metabolic panel • Thromboelastography/thromboelastometry		
33. M – Attach patient to a cardiac monitor	Normal sinus rhythm Blood pressures will be obtained at regular intervals.		
34. N – Consider the need for insertion of a naso- or orogastric tube	Orogastric tube has been inserted. Nasogastric route is contraindicated with the potential for facial/skull fractures. NOTE: Discuss the importance of gastric tube placement post intubation for gastric decompression and prevention of aspiration. If gastric tube was mentioned after intubation credit is given here.		
35. O – Assess oxygenation and continuous end-tidal capnography (if available)	SpO_2: 96% with ventilator settings monitored by a coworker End-tidal CO_2 37 mm Hg (4.93 kPa)		
36. P – Assess pain using an appropriate pain scale	Pain = 0 using an appropriate pain scale Assume pain is present based on mechanism and identified injuries.	*	
37. Give appropriate nonpharmacologic comfort measures (identify at least ONE): • Distraction • Family presence • Places padding over bony prominences • Repositioning • Splinting • Verbal reassurance • Other, as appropriate	Nonpharmacologic comfort measures have been implemented. NOTE: Applying ice to a multi-system trauma patient increases the risk for hypothermia and is not advised.		

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
38. Consider obtaining order for analgesic medication	Sedation and analgesia have been ordered and administered.		
Consideration of Need for Definitive Care			
"Is there a need to consider transfer to a pediatric-capable facility, surgery, or critical care?"			
Secondary Survey			
History and Head-to-Toe			
39. Obtain pertinent history (identify at least ONE): • Medical records/documents • Prehospital report • SAMPLE	S: No additional information A: None M: Daily vitamin P: None; immunizations up to date L: Ate one hour prior to arrival, unknown last urine output E: Witnessed trying to avoid a large boulder while driving an ATV; took a sharp turn and overturned the ATV. The ATV landed on the child's lower body; the child was extricated by family members before the ambulance arrived.		
NOTE: The learner describes and demonstrates the head-to-toe assessment by describing appropriate inspection techniques and demonstrating appropriate auscultation and palpation techniques.			
40. Inspect and palpate head for abnormalities	A depressed area is palpated on the back of the head.		
41. Inspect and palpate face for abnormalities	Multiple superficial abrasions and lacerations noted across left side of face. Secured endotracheal and gastric tubes are present.		
42. Inspect and palpate neck for abnormalities	Demonstrate (with assistance) removal AND reapplication of cervical collar for assessment No abnormalities		
43. Inspect and palpate chest for abnormalities	Multiple scattered abrasions and contusions		
44. Auscultate breath sounds	Clear and equal		
45. Auscultate heart sounds	No abnormalities		
46. Inspect the abdomen for abnormalities	Multiple abrasions and diffuse bruising noted across the abdomen, no obvious bleeding.		
47. Auscultate bowel sounds	Hypoactive		
48. Palpate all four quadrants of the abdomen for abnormalities	No abnormalities		
49. Inspect and palpate the flanks for abnormalities	No abnormalities		
50. Inspect the pelvis for abnormalities	No abnormalities		
51. Apply gentle pressure over iliac crests downward and medially	No instability noted NOTE: Pressure should not be applied to the symphysis pubis if pelvic instability is identified		
52. Apply gentle pressure on the symphysis pubis (if iliac crests are stable)	No instability noted		

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
53. Inspect the perineum for abnormalities	No abnormalities		
54. Consider how to measure urinary output	An indwelling urinary catheter is inserted.		
55. Inspect and palpate all four extremities for neurovascular status and abnormalities	• Extremities with normal color, temperature, and strong pulses • Deformity is noted to left upper thigh. Abrasions noted on both upper and lower extremities. No uncontrolled bleeding. • Patient remains unresponsive after drug-assisted intubation; motion and sensation assessment deferred		
Inspect Posterior Surfaces			
"Imaging has been performed, there is no evidence of a spinal or pelvic injury. The left leg will be stabilized as the team carefully turns the patient."			
56. Inspect and palpate posterior surfaces	No abnormalities	*	
NOTE: Summarize abnormalities identified, listed below, throughout the scenario. If the learner has not already identified them all, the instructor will ask for any additional noted. • Hypovolemic shock responsive to blood administration • Depressed skull fracture • Multiple abrasions/contusions to face, abdomen, extremities • Deformity of left upper leg			
"What interventions or diagnostics can you anticipate for this patient?"			
57. Identify at least THREE interventions or diagnostics	May include, but not limited to, the following: • Antibiotics • Consults • Focused assessment with sonography for trauma (FAST) • Head CT • Imaging (other radiographs, CT, US, interventional radiology as indicated) • Law enforcement • Psychosocial support • Social services • Splinting • Tetanus immunization • Wound care		
Just Keep Reevaluating			
"What findings will you continue to reevaluate while the patient is in your care?"			
58. Reevaluate vital signs			
59. Reevaluate all identified abnormalities and effectiveness of interventions			
60. Reevaluate primary survey			
61. Reevaluate pain			

Skill Steps	Instructor Responses	Demonstrated	
		Yes	No
Definitive Care or Transport			
"What is the definitive care for this patient?"			
62. Consider need for transfer to a pediatric-capable facility or admission			
"Is there anything you would like to add?"			

Instructor Talking Points

- Methods of opening the airway and maintaining cervical spine stabilization.
- Need to evaluate pre-hospital fluid administration in the pediatric trauma patient
- Process for intraosseous line site-selection and insertion
- Lidocaine use for pain related to IO fluid infusion
- Blood administration as goal-directed therapy for hemorrhagic shock
- Insertion of an orogastric tube in an intubated patient as an airway and breathing intervention in an intubated patient with suspected head trauma
- Pelvic binder and traction splint indications, contraindications, and application
- Potential for harm in log rolling a patient with a suspected spinal or pelvic injury

Referenced Chapters

Chapter 5, Initial Assessment

Chapter 7, The Child in Need of Stabilization

Chapter 9, The Child with an Injury