

Pediatric Advanced Life Support
Infant CPR
Skills Testing Checklist (1 of 2)



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Student Name _____ Date of Test _____

Hospital Scenario: "You are working in a hospital or clinic when a woman runs through the door, carrying an infant. She shouts, 'Help me! My baby's not breathing.' You have gloves and a pocket mask. You send your coworker to activate the emergency response system and to get the emergency equipment."

Prehospital Scenario: "You arrive on the scene for an infant who is not breathing. No bystander CPR has been provided. You approach the scene and ensure that it is safe. Demonstrate what you would do next."

Assessment and Activation

- | | |
|--|--|
| <input type="checkbox"/> Checks responsiveness | <input type="checkbox"/> Shouts for help/Activates emergency response system |
| <input type="checkbox"/> Checks breathing | <input type="checkbox"/> Checks pulse |

Once student shouts for help, instructor says, "Here's the barrier device."

Cycle 1 of CPR (30:2) *CPR feedback devices preferred for accuracy

Infant Compressions

- ☐ Performs high-quality compressions*:
 - Placement of 2 fingers or 2 thumbs in the center of the chest, just below the nipple line
 - 30 compressions in no less than 15 and no more than 18 seconds
 - Compresses at least one third the depth of the chest, about 1½ inches (4 cm)
 - Complete recoil after each compression

Infant Breaths

- ☐ Gives 2 breaths with a barrier device:
 - Each breath given over 1 second
 - Visible chest rise with each breath
 - Resumes compressions in less than 10 seconds

Cycle 2 of CPR (repeats steps in Cycle 1) Only check box if step is successfully performed

- | | | |
|---------------------------------------|----------------------------------|---|
| <input type="checkbox"/> Compressions | <input type="checkbox"/> Breaths | <input type="checkbox"/> Resumes compressions in less than 10 seconds |
|---------------------------------------|----------------------------------|---|

Rescuer 2 arrives with bag-mask device and begins ventilation while Rescuer 1 continues compressions with 2 thumb-encircling hands technique.

Cycle 3 of CPR

Rescuer 1: Infant Compressions

- ☐ Performs high-quality compressions*:
 - 15 compressions with 2 thumb-encircling hands technique
 - 15 compressions in no less than 7 and no more than 9 seconds
 - Compress at least one third the depth of the chest, about 1½ inches (4 cm)
 - Complete recoil after each compression

Rescuer 2: Infant Breaths

This rescuer is not evaluated.

(continued)

Pediatric Advanced Life Support
Infant CPR
Skills Testing Checklist (2 of 2)



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Student Name _____

Date of Test _____

(continued)

Cycle 4 of CPR

Rescuer 2: Infant Compressions

This rescuer is not evaluated.

Rescuer 1: Infant Breaths

- ☐ Gives 2 breaths with a bag-mask device:
- Each breath given over 1 second
 - Visible chest rise with each breath
 - Resumes compressions in less than 10 seconds

STOP TEST

Instructor Notes

- Place a check in the box next to each step the student completes successfully.
- If the student does not complete all steps successfully (as indicated by at least 1 blank check box), the student must receive remediation. Make a note here of which skills require remediation (refer to instructor manual for information about remediation).

Test Results Check **PASS** or **NR** to indicate pass or needs remediation:

☐ **PASS**

☐ **NR**

Instructor Initials _____ Instructor Number _____ Date _____

Airway Management Skills Station Competency Checklist



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Student Name _____ Date of Test _____

Critical Performance Steps	Check if done correctly
Verbalizes difference between high-flow and low-flow O ₂ delivery systems <ul style="list-style-type: none"> High flow: O₂ flow exceeds patient inspiratory flow, preventing entrainment of room air if system is tight-fitting; delivers nearly 1.00 FIO₂, eg, nonrebreathing mask with reservoir, high-flow nasal cannula Low flow (≤10 L/min): patient inspiratory flow exceeds O₂ flow, allowing entrainment of room air; delivers 0.22 to 0.60 FIO₂, eg, standard nasal cannula, simple O₂ mask 	
Verbalizes maximum nasal cannula flow rate for standard nasal cannula (4 L/min)	
Opens airway by using head tilt–chin lift maneuver while keeping mouth open (jaw thrust for trauma victim)	
Verbalizes different indications for OPA and NPA <ul style="list-style-type: none"> OPA only for unconscious victim without a gag reflex NPA for conscious or semiconscious victim 	
Selects correctly sized airway by measuring <ul style="list-style-type: none"> OPA from corner of mouth to angle of mandible 	
Inserts OPA correctly	
Verbalizes assessment for adequate breathing after insertion of OPA	
Suctions with OPA in place; states suctioning not to exceed 10 seconds	
Selects correct mask size for ventilation	
Assembles bag-mask device, opens airway, and creates seal by using E-C clamp technique	
With bag-mask device, gives 1 breath every 2 to 3 seconds for 30 seconds. Gives each breath in approximately 1 second; each breath should cause chest rise	
Endotracheal Intubation <ul style="list-style-type: none"> States equipment needed for endotracheal (ET) tube intubation procedure Demonstrates technique to confirm proper ET tube placement by physical exam and by using an exhaled CO₂ device Secures ET tube Suctions with ET tube in place 	
The following steps are optional. They are demonstrated and evaluated only when the student's scope of practice involves ET intubation.	
Endotracheal Intubation <ul style="list-style-type: none"> Prepares equipment for ET intubation Inserts ET tube correctly 	

STOP TEST

Instructor Notes

- Place a check in the box next to each step the student completes successfully.
- If the student does not complete all steps successfully (as indicated by at least 1 blank check box), the student must receive remediation. Make a note here of which skills require remediation (refer to instructor manual for information about remediation).

Test Results Check **PASS** or **NR** to indicate pass or needs remediation:

☐ **PASS**

☐ **NR**

Instructor Initials _____ Instructor Number _____ Date _____

Vascular Access Skills Station Competency Checklist



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Student Name _____ Date of Test _____

Critical Performance Steps	Check if done correctly
Verbalizes indications for IO insertion	
Verbalizes sites for IO insertion (anterior tibia, distal femur, medial malleolus, anterior-superior iliac spine)	
Verbalizes contraindications for IO placement <ul style="list-style-type: none"> • Fracture in extremity • Previous insertion attempt in the same bone • Infection overlying bone 	
Inserts IO catheter safely	
Verbalizes how to confirm IO catheter is in correct position; verbalizes how to secure IO catheter	
Attaches IV line to IO catheter; demonstrates giving IO fluid bolus by using 3-way stopcock and syringe	
Shows how to determine correct drug doses by using a color-coded length-based tape or other resource	
The following is optional:	
Verbalizes correct procedure for establishing IV access	

STOP TEST

Instructor Notes <ul style="list-style-type: none"> • Place a check in the box next to each step the student completes successfully. • If the student does not complete all steps successfully (as indicated by at least 1 blank check box), the student must receive remediation. Make a note here of which skills require remediation (refer to instructor manual for information about remediation). 		
Test Results Check PASS or NR to indicate pass or needs remediation:	<input type="checkbox"/> PASS	<input type="checkbox"/> NR
Instructor Initials _____ Instructor Number _____ Date _____		

Rhythm Disturbances/ Electrical Therapy Skills Station Competency Checklist



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Student Name _____ Date of Test _____

Critical Performance Steps	Check if done correctly
Applies 3 ECG leads correctly (or local equipment if >3 leads are used) <ul style="list-style-type: none"> Negative (white) lead: to right shoulder Positive (red) lead: to left lower ribs Ground (black, green, brown) lead: to left shoulder 	
Demonstrates correct operation of monitor <ul style="list-style-type: none"> Turns monitor on Adjusts device to manual mode (not AED mode) to display rhythm in standard limb leads (I, II, III) or paddles/electrode pads 	
Verbalizes correct electrical therapy for appropriate core rhythms <ul style="list-style-type: none"> Synchronized cardioversion for unstable SVT, VT with pulses Defibrillation for pulseless VT, VF 	
Selects correct paddle/electrode pad for infant or child; places paddles/electrode pads in correct position	
Demonstrates correct and safe synchronized cardioversion <ul style="list-style-type: none"> Places device in synchronized mode Selects appropriate energy (0.5 to 1 J/kg for initial shock) Charges, clears, delivers current 	
Demonstrates correct and safe manual defibrillation <ul style="list-style-type: none"> Places device in unsynchronized mode Selects energy (2 to 4 J/kg for initial shock) Charges, clears, delivers current 	

STOP TEST

Instructor Notes

- Place a check in the box next to each step the student completes successfully.
- If the student does not complete all steps successfully (as indicated by at least 1 blank check box), the student must receive remediation. Make a note here of which skills require remediation (refer to instructor manual for information about remediation).

Test Results Check **PASS** or **NR** to indicate pass or needs remediation:

☐ **PASS**

☐ **NR**

Instructor Initials _____ Instructor Number _____ Date _____

PALS Case Scenario

Testing Checklist

Respiratory Case Scenario

Upper Airway Obstruction



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Student Name _____ Date of Test _____

Critical Performance Steps	Check if done correctly
Team Leader	
Assigns team member roles	
Uses effective communication throughout	
Patient Management	
Directs assessment of airway, breathing, circulation, disability, and exposure, including vital signs	
Directs administration of 100% oxygen or supplemental oxygen as needed to support oxygenation	
Directs application of cardiac monitor and pulse oximetry	
Identifies signs and symptoms of upper airway obstruction	
Categorizes as respiratory distress or failure	
Directs administration of nebulized epinephrine and corticosteroid (for croup), or IM epinephrine and IV corticosteroid (for anaphylaxis)	
States indications for bag-mask ventilation and/or other airway or ventilation support	
<i>If the student does not verbalize the above, prompt the student with the following question: "What are the indications for bag-mask ventilation and/or other airway or ventilation support?"</i>	
Directs establishment of IV or IO access, if indicated	
Directs reassessment of patient in response to treatment	
Case Conclusion/Debriefing	
<i>The following step is evaluated only if the student's scope of practice applies</i>	
Describes how to estimate correct endotracheal tube size for this patient	
<i>If the student does not verbalize the above, prompt the student with the following question: "How would you estimate the endotracheal tube size for this infant with upper airway obstruction?"</i>	

STOP TEST

Instructor Notes <ul style="list-style-type: none"> Place a check in the box next to each step the student completes successfully. If the student does not complete all steps successfully (as indicated by at least 1 blank check box), the student must receive remediation. Make a note here of which skills require remediation (refer to instructor manual for information about remediation). 		
Test Results Check PASS or NR to indicate pass or needs remediation:	<input type="checkbox"/> PASS	<input type="checkbox"/> NR
Instructor Initials _____ Instructor Number _____ Date _____		

PALS Case Scenario Testing Checklist Respiratory Case Scenario Lower Airway Obstruction



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Student Name _____ Date of Test _____

Critical Performance Steps	Check if done correctly
Team Leader	
Assigns team member roles	
Uses effective communication throughout	
Patient Management	
Directs assessment of airway, breathing, circulation, disability, and exposure, including vital signs	
Directs administration of 100% oxygen or supplemental oxygen as needed to support oxygenation	
Directs application of cardiac monitor and pulse oximetry	
Identifies signs and symptoms of lower airway obstruction	
Categorizes as respiratory distress or failure	
Directs administration of albuterol and corticosteroids (for asthma) or suctioning or possible additional laboratory studies (for bronchiolitis)	
States indications for bag-mask ventilation and/or other airway or ventilation support	
<i>If the student does not verbalize the above, prompt the student with the following question: "What are the indications for bag-mask ventilation and/or other airway or ventilation support?"</i>	
Directs establishment of IV or IO access, if appropriate	
Directs reassessment of patient in response to treatment	
Case Conclusion/Debriefing	
<i>The following step is evaluated only if the student's scope of practice applies</i>	
States indications for endotracheal intubation	
<i>If the student does not verbalize the above, prompt the student with the following question: "What are the indications for endotracheal intubation?"</i>	

STOP TEST

Instructor Notes <ul style="list-style-type: none"> Place a check in the box next to each step the student completes successfully. If the student does not complete all steps successfully (as indicated by at least 1 blank check box), the student must receive remediation. Make a note here of which skills require remediation (refer to instructor manual for information about remediation). 		
Test Results Check PASS or NR to indicate pass or needs remediation:	<input type="checkbox"/> PASS	<input type="checkbox"/> NR
Instructor Initials _____ Instructor Number _____ Date _____		

PALS Case Scenario Testing Checklist Respiratory Case Scenario Lung Tissue Disease



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Student Name _____ Date of Test _____

Critical Performance Steps	Check if done correctly
Team Leader	
Assigns team member roles	
Uses effective communication throughout	
Patient Management	
Directs assessment of airway, breathing, circulation, disability, and exposure, including vital signs	
Directs administration of 100% oxygen (or supplemental oxygen as needed to support oxygenation) and evaluates response	
Identifies indications for bag-mask ventilation and/or additional airway or ventilation support	
Describes methods to verify that bag-mask ventilation is effective	
Directs application of cardiac monitor and pulse oximetry	
Identifies signs and symptoms of lung tissue disease	
Categorizes as respiratory distress or failure	
Directs establishment of IV or IO access	
Directs reassessment of patient in response to treatment	
Identifies need for involvement of advanced provider with expertise in pediatric intubation and mechanical ventilation	
Case Conclusion/Debriefing	
<i>The following step is evaluated only if the student's scope of practice applies</i>	
States indications for endotracheal intubation	
<i>If the student does not verbalize the above, prompt the student with the following question: "What are the indications for endotracheal intubation?"</i>	

STOP TEST

Instructor Notes <ul style="list-style-type: none"> Place a check in the box next to each step the student completes successfully. If the student does not complete all steps successfully (as indicated by at least 1 blank check box), the student must receive remediation. Make a note here of which skills require remediation (refer to instructor manual for information about remediation). 		
Test Results Check PASS or NR to indicate pass or needs remediation:	<input type="checkbox"/> PASS	<input type="checkbox"/> NR
Instructor Initials _____ Instructor Number _____ Date _____		

PALS Case Scenario

Testing Checklist

Respiratory Case Scenario

Disordered Control of Breathing



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Student Name _____ Date of Test _____

Critical Performance Steps	Check if done correctly
Team Leader	
Assigns team member roles	
Uses effective communication throughout	
Patient Management	
Directs assessment of airway, breathing, circulation, disability, and exposure, including vital signs	
Directs administration of 100% oxygen (or supplemental oxygen as needed to support oxygenation) and evaluates response	
Identifies indications for bag-mask ventilation and/or additional airway or ventilation support	
Describes methods to verify that bag-mask ventilation is effective	
Directs application of cardiac monitor and pulse oximetry	
Identifies signs of disordered control of breathing	
Categorizes as respiratory distress or failure	
Directs establishment of IV or IO access	
Directs reassessment of patient in response to treatment	
Identifies need for involvement of advanced provider with expertise in pediatric intubation and mechanical ventilation	
Case Conclusion/Debriefing	
<i>The following step is evaluated only if the student's scope of practice applies</i>	
States indications for endotracheal intubation	
<i>If the student does not verbalize the above, prompt the student with the following question: "What are the indications for endotracheal intubation?"</i>	

STOP TEST

Instructor Notes <ul style="list-style-type: none"> Place a check in the box next to each step the student completes successfully. If the student does not complete all steps successfully (as indicated by at least 1 blank check box), the student must receive remediation. Make a note here of which skills require remediation (refer to instructor manual for information about remediation). 		
Test Results Check PASS or NR to indicate pass or needs remediation:	<input type="checkbox"/> PASS	<input type="checkbox"/> NR
Instructor Initials _____ Instructor Number _____ Date _____		

PALS Case Scenario Testing Checklist Shock Case Scenario Hypovolemic Shock



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Student Name _____ Date of Test _____

Critical Performance Steps	Check if done correctly
Team Leader	
Assigns team member roles	
Uses effective communication throughout	
Patient Management	
Directs assessment of airway, breathing, circulation, disability, and exposure, including vital signs	
Directs administration of 100% oxygen	
Directs application of cardiac monitor and pulse oximetry	
Identifies signs and symptoms of hypovolemic shock	
Categorizes as compensated or hypotensive shock	
Directs establishment of IV or IO access	
Directs rapid administration of a 20 mL/kg fluid bolus of isotonic crystalloid; repeats as needed to treat signs of shock	
Reassesses patient during and after each fluid bolus. Stops fluid bolus if signs of heart failure (worsening respiratory distress, development of hepatomegaly or rales/crackles) develop	
Directs reassessment of patient in response to each treatment	
Case Conclusion/Debriefing	
States therapeutic end points during shock management	
If the student does not verbalize the above, prompt the student with the following question: "What are the therapeutic end points during shock management?"	

STOP TEST

Instructor Notes <ul style="list-style-type: none"> Place a check in the box next to each step the student completes successfully. If the student does not complete all steps successfully (as indicated by at least 1 blank check box), the student must receive remediation. Make a note here of which skills require remediation (refer to instructor manual for information about remediation). 		
Test Results Check PASS or NR to indicate pass or needs remediation:	<input type="checkbox"/> PASS	<input type="checkbox"/> NR
Instructor Initials _____ Instructor Number _____ Date _____		

PALS Case Scenario Testing Checklist Shock Case Scenario Obstructive Shock



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Student Name _____ Date of Test _____

Critical Performance Steps	Check if done correctly
Team Leader	
Assigns team member roles	
Uses effective communication throughout	
Patient Management	
Directs assessment of airway, breathing, circulation, disability, and exposure, including vital signs	
Directs application of cardiac monitor and pulse oximetry	
Verbalizes DOPE mnemonic for intubated patient who deteriorates	
<i>If the student does not verbalize the above, prompt the student with the following questions: "What mnemonic is helpful to recall when the intubated patient deteriorates? What does this mnemonic mean?"</i>	
Identifies signs and symptoms of obstructive shock	
States at least 2 causes of obstructive shock	
<i>If the student does not state the above, prompt the student with the following statement: "Tell me at least 2 causes of obstructive shock."</i>	
Categorizes as compensated or hypotensive shock	
Directs establishment of IV or IO access, if needed	
Directs rapid administration of a fluid bolus of isotonic crystalloid, if needed (ie, for cardiac tamponade, massive pulmonary embolus)	
Directs appropriate treatment for obstructive shock (needle decompression for tension pneumothorax; fluid bolus, and pericardiocentesis for cardiac tamponade; oxygen, ventilatory support, fluid bolus, and expert consultation for massive pulmonary embolus; prostaglandin infusion and expert consultation for neonate with ductal-dependent congenital heart disease and constriction/closure of the ductus arteriosus)	
Directs reassessment of patient in response to treatment	
Case Conclusion/Debriefing	
States therapeutic end points during shock management	
<i>If the student does not verbalize the above, prompt the student with the following question: "What are the therapeutic end points during shock management?"</i>	

STOP TEST

Instructor Notes		
<ul style="list-style-type: none"> Place a check in the box next to each step the student completes successfully. If the student does not complete all steps successfully (as indicated by at least 1 blank check box), the student must receive remediation. Make a note here of which skills require remediation (refer to instructor manual for information about remediation). 		
Test Results	Check PASS or NR to indicate pass or needs remediation:	<input type="checkbox"/> PASS <input type="checkbox"/> NR
Instructor Initials _____ Instructor Number _____ Date _____		

PALS Case Scenario Testing Checklist Shock Case Scenario Distributive Shock



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Student Name _____ Date of Test _____

Critical Performance Steps	Check if done correctly
Team Leader	
Assigns team member roles	
Uses effective communication throughout	
Patient Management	
Directs assessment of airway, breathing, circulation, disability, and exposure, including vital signs	
Directs administration of 100% oxygen	
Directs application of cardiac monitor and pulse oximetry	
Identifies signs and symptoms of distributive (septic) shock	
Categorizes as compensated or hypotensive shock	
Directs establishment of IV or IO access	
Directs rapid administration of a 10-20 mL/kg fluid bolus of isotonic crystalloid for septic shock and 20 mL/kg fluid bolus of isotonic crystalloid for anaphylactic shock; repeats as needed (with careful reassessment) to treat shock	
Reassesses patient during and after each fluid bolus. Stops fluid bolus if signs of heart failure (worsening respiratory distress, development of hepatomegaly or rales/crackles) develop	
Directs initiation of vasoactive drug therapy within first hour of care for fluid-refractory shock	
Directs reassessment of patient in response to treatment	
Directs early administration of antibiotics (within first hour after shock is identified)	
Case Conclusion/Debriefing	
States therapeutic end points during shock management	
If the student does not verbalize the above, prompt the student with the following question: "What are the therapeutic end points during shock management?"	

STOP TEST

Instructor Notes <ul style="list-style-type: none"> Place a check in the box next to each step the student completes successfully. If the student does not complete all steps successfully (as indicated by at least 1 blank check box), the student must receive remediation. Make a note here of which skills require remediation (refer to instructor manual for information about remediation). 		
Test Results Check PASS or NR to indicate pass or needs remediation:	<input type="checkbox"/> PASS	<input type="checkbox"/> NR
Instructor Initials _____ Instructor Number _____ Date _____		

PALS Case Scenario Testing Checklist Shock Case Scenario Cardiogenic Shock



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DEDICATED TO THE HEALTH OF ALL CHILDREN™

Student Name _____ Date of Test _____

Critical Performance Steps	Check if done correctly
Team Leader	
Assigns team member roles	
Uses effective communication throughout	
Patient Management	
Directs assessment of airway, breathing, circulation, disability, and exposure, including vital signs	
Directs administration of 100% oxygen	
Directs application of cardiac monitor and pulse oximetry	
Identifies signs and symptoms of cardiogenic shock	
Categorizes as compensated or hypotensive shock	
Directs establishment of IV or IO access	
Directs slow administration of a 5 to 10 mL/kg fluid bolus of isotonic crystalloid over 10 to 20 minutes and reassesses patient during and after fluid bolus. Stops fluid bolus if signs of heart failure worsen	
Directs reassessment of patient in response to treatment	
Recognizes the need to obtain expert consultation from pediatric cardiologist	
Identifies need for inotropic/vasoactive drugs during treatment of cardiogenic shock	
<i>If the student does not indicate the above, prompt the student with the following question: "What are the indications for inotropic/vasoactive drugs during cardiogenic shock?"</i>	
Case Conclusion/Debriefing	
States therapeutic end points during shock management	
<i>If the student does not verbalize the above, prompt the student with the following question: "What are the therapeutic end points during shock management?"</i>	

STOP TEST

Instructor Notes <ul style="list-style-type: none"> Place a check in the box next to each step the student completes successfully. If the student does not complete all steps successfully (as indicated by at least 1 blank check box), the student must receive remediation. Make a note here of which skills require remediation (refer to instructor manual for information about remediation). 		
Test Results Check PASS or NR to indicate pass or needs remediation:	<input type="checkbox"/> PASS	<input type="checkbox"/> NR
Instructor Initials _____ Instructor Number _____ Date _____		

PALS Case Scenario

Testing Checklist

Cardiac Case Scenario

Supraventricular Tachycardia



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Student Name _____ Date of Test _____

Critical Performance Steps	Check if done correctly
Team Leader	
Assigns team member roles	
Uses effective communication throughout	
Patient Management	
Directs assessment of airway, breathing, circulation, disability, and exposure, including vital signs	
Directs application of cardiac monitor and pulse oximetry	
Directs administration of supplemental oxygen	
Identifies narrow-complex tachycardia (ie, SVT with adequate perfusion) and verbalizes how to distinguish between ST and SVT	
<i>If the student does not verbalize the above, prompt the student with the following question: "How do you distinguish between ST and SVT?"</i>	
Directs performance of appropriate vagal maneuvers	
Directs establishment of IV or IO access	
Directs preparation and administration of appropriate doses (first and, if needed, second) of adenosine	
States the rationale for the strong recommendation for expert consultation before providing synchronized cardioversion if the stable child with SVT fails to respond to vagal maneuvers and adenosine	
Directs or describes appropriate indications for and safe delivery of attempted cardioversion at 0.5 to 1 J/kg (subsequent doses increased by 0.5 to 1 J/kg, not to exceed 2 J/kg)	
Performs reassessment of patient in response to treatment	
Case Conclusion/Debriefing	
Discusses indications and appropriate energy doses for synchronized cardioversion	
<i>If the student does not verbalize the above, prompt the student with the following question: "What are the indications and appropriate energy doses for synchronized cardioversion?"</i>	

STOP TEST

Instructor Notes		
<ul style="list-style-type: none"> Place a check in the box next to each step the student completes successfully. If the student does not complete all steps successfully (as indicated by at least 1 blank check box), the student must receive remediation. Make a note here of which skills require remediation (refer to instructor manual for information about remediation). 		
Test Results	Check PASS or NR to indicate pass or needs remediation:	<input type="checkbox"/> PASS <input type="checkbox"/> NR
Instructor Initials _____	Instructor Number _____	Date _____

PALS Case Scenario

Testing Checklist

Cardiac Case Scenario

Bradycardia



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Student Name _____ Date of Test _____

Critical Performance Steps	Check if done correctly
Team Leader	
Assigns team member roles	
Uses effective communication throughout	
Patient Management	
Directs assessment of airway, breathing, circulation, disability, and exposure, including vital signs	
Identifies bradycardia associated with cardiopulmonary compromise/failure	
Directs initiation of bag-mask ventilation with 100% oxygen	
Directs application of cardiac monitor and pulse oximetry	
Reassesses heart rate and systemic perfusion after initiation of bag-mask ventilation	
Recognizes indications for high-quality CPR (chest compressions plus ventilation) in a bradycardic patient	
<i>If the student does not indicate the above, prompt the student with the following question: "What are the indications for high-quality CPR in a bradycardic patient?"</i>	
Directs establishment of IV or IO access	
Directs or discusses preparation for and appropriate administration and dose (0.01 mg/kg IV/IO [0.1 mL/kg of 0.1 mg/mL concentration]) of epinephrine	
Performs reassessment of patient in response to treatment	
Case Conclusion/Debriefing	
Verbalizes consideration of 3 potential causes of bradycardia in infants and children	
<i>If the student does not verbalize the above, prompt the student with the following statement: "Tell me 3 potential causes of bradycardia in infants and children."</i>	

STOP TEST

Instructor Notes <ul style="list-style-type: none"> Place a check in the box next to each step the student completes successfully. If the student does not complete all steps successfully (as indicated by at least 1 blank check box), the student must receive remediation. Make a note here of which skills require remediation (refer to instructor manual for information about remediation). 		
Test Results Check PASS or NR to indicate pass or needs remediation:	<input type="checkbox"/> PASS	<input type="checkbox"/> NR
Instructor Initials _____ Instructor Number _____ Date _____		

PALS Case Scenario Testing Checklist Cardiac Case Scenario Asystole/PEA



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DEDICATED TO THE HEALTH OF ALL CHILDREN™

Student Name _____ Date of Test _____

Critical Performance Steps	Check if done correctly
Team Leader	
Assigns team member roles	
Uses effective communication throughout	
Patient Management	
Identifies cardiac arrest	
Directs immediate initiation of high-quality CPR, and ensures performance of high-quality CPR at all times	
Directs placement of pads/leads and activation of monitor/defibrillator	
Identifies asystole or PEA	
Directs establishment of IO or IV access	
Directs preparation and administration of appropriate dose of epinephrine at appropriate intervals	
Directs checking rhythm approximately every 2 minutes while minimizing interruptions in chest compressions	
Case Conclusion/Debriefing	
Verbalizes at least 3 reversible causes of PEA or asystole	
<i>If the student does not verbalize the above, prompt the student with the following statement: "Tell me at least 3 reversible causes of PEA or asystole."</i>	

STOP TEST

Instructor Notes <ul style="list-style-type: none"> Place a check in the box next to each step the student completes successfully. If the student does not complete all steps successfully (as indicated by at least 1 blank check box), the student must receive remediation. Make a note here of which skills require remediation (refer to instructor manual for information about remediation). 		
Test Results Check PASS or NR to indicate pass or needs remediation:	<input type="checkbox"/> PASS	<input type="checkbox"/> NR
Instructor Initials _____ Instructor Number _____ Date _____		

PALS Case Scenario Testing Checklist Cardiac Case Scenario VF/Pulseless VT



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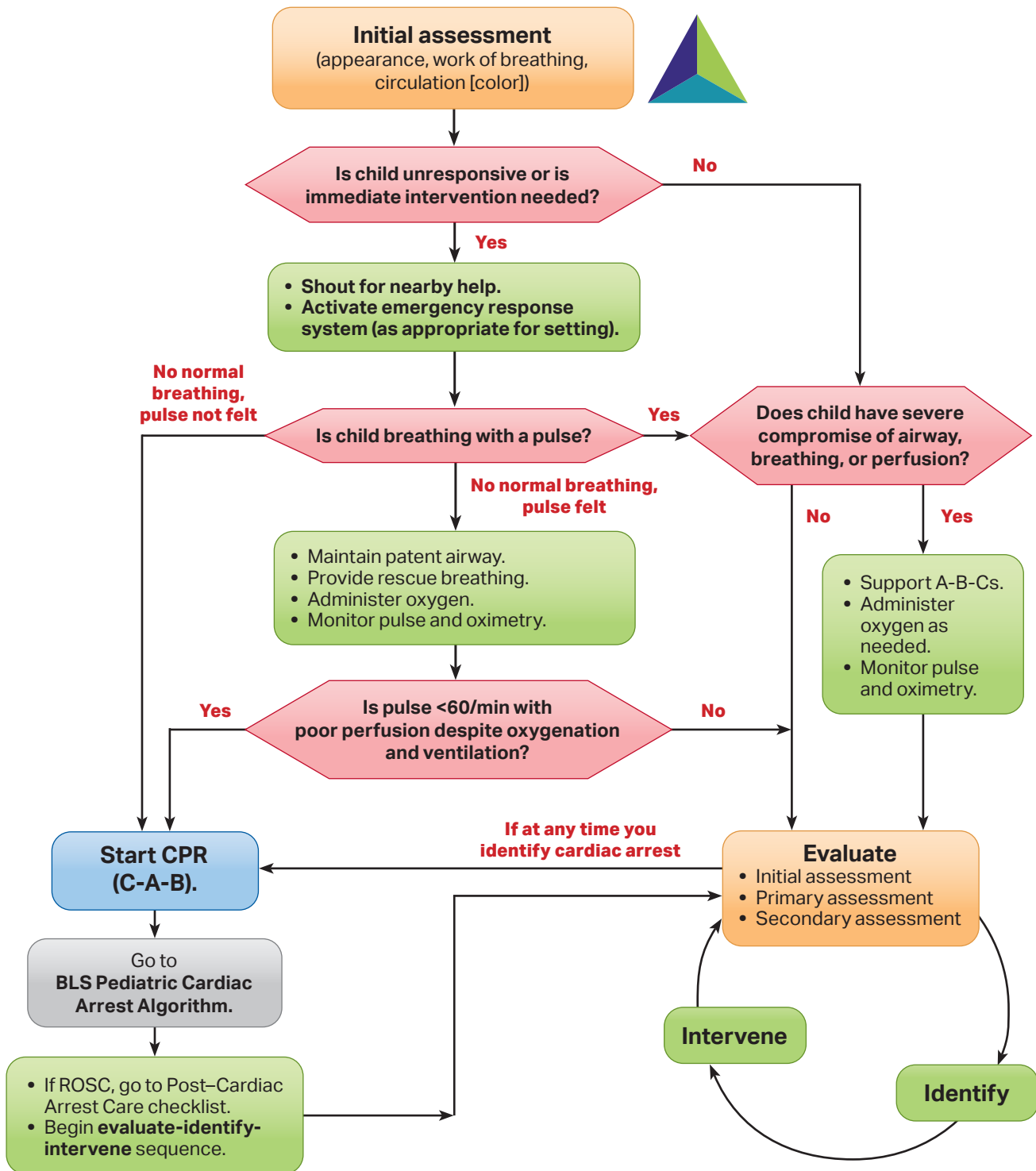
Student Name _____ Date of Test _____

Critical Performance Steps	Check if done correctly
Team Leader	
Assigns team member roles	
Uses effective communication throughout	
Patient Management	
Identifies cardiac arrest	
Directs immediate initiation of high-quality CPR, and ensures performance of high-quality CPR at all times	
Directs placement of pads/leads and activation of monitor/defibrillator	
Identifies VF or pulseless VT cardiopulmonary arrest	
Directs safe performance of attempted defibrillation at 2 J/kg	
After delivery of every shock, directs immediate resumption of CPR, beginning with chest compressions	
Directs establishment of IO or IV access	
Directs preparation and administration of appropriate dose of epinephrine at appropriate intervals	
Directs safe delivery of second shock at 4 J/kg (subsequent doses 4 to 10 J/kg, not to exceed 10 J/kg or standard adult dose for that defibrillator)	
Directs preparation and administration of appropriate dose of antiarrhythmic (amiodarone or lidocaine) at appropriate time	
Case Conclusion/Debriefing	
Verbalizes possible need for additional doses of epinephrine and antiarrhythmic (amiodarone or lidocaine), and consideration of reversible causes of arrest (H's and T's)	
<i>If the student does not verbalize the above, prompt the student with the following question: "If VF persists despite the therapies provided, what else should you administer or consider?"</i>	

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Instructor Initials _____ Instructor Number _____ Date _____		

PALS Systematic Approach Algorithm



2020 PALS Science Summary Table

This table compares 2015 science with 2020 science, providing a quick reference to what has changed and what is new in the science of pediatric advanced life support.

PALS topic	2015	2020
Pediatric Chain of Survival	5 links for both chains (IHCA and OHCA Chains of Survival)	6 links for both chains (IHCA and OHCA Chains of Survival); added a Recovery link to the end of both chains
Pediatric Ventilation Rate	<ul style="list-style-type: none"> Rescue breathing: If there is a palpable pulse 60/min or greater but there is inadequate breathing, give rescue breaths at a rate of about 12 to 20/min (1 breath every 3-5 seconds) until spontaneous breathing resumes. During CPR with an advanced airway: If the infant or child is intubated, ventilate at a rate of about 1 breath every 6 seconds (10/min) without interrupting chest compressions. 	<ul style="list-style-type: none"> Rescue breathing: For infants and children with a pulse but absent or inadequate respiratory effort, give 1 breath every 2 to 3 seconds (20-30 breaths/min). During CPR with an advanced airway: target a respiratory rate range of 1 breath every 2 to 3 seconds (20-30 breaths/min), accounting for age and clinical condition. Rates exceeding these recommendations may compromise hemodynamics.
Cuffed Endotracheal Tubes	Both cuffed and uncuffed ETTs are acceptable for intubating infants and children. In certain circumstances (eg, poor lung compliance, high airway resistance, or a large glottic air leak), a cuffed ETT may be preferable to an uncuffed tube, provided that attention is paid to [ensuring appropriate] ETT size, position, and cuff inflation pressure.	Cuffed ETTs can be used over uncuffed ETTs for intubating infants and children. When a cuffed ETT is used, attention should be paid to ETT size, position, and cuff inflation pressure (usually less than 20-25 cm H ₂ O).
Cricoid Pressure During Intubation	There is insufficient evidence to recommend routine application of cricoid pressure to prevent aspiration during endotracheal intubation in children.	Routine use of cricoid pressure is not recommended during endotracheal intubation of pediatric patients.
Emphasis on Early Epinephrine Administration	Administer epinephrine in pediatric cardiac arrest.	For pediatric patients in any setting, administer the initial dose of epinephrine within 5 minutes from the start of chest compressions.
Invasive Blood Pressure Monitoring to Assess CPR Quality	For patients with invasive hemodynamic monitoring in place at the time of cardiac arrest, it may be reasonable for rescuers to use blood pressure to guide CPR quality.	For patients with continuous invasive arterial blood pressure monitoring in place at the time of cardiac arrest, providers can use diastolic blood pressure to assess CPR quality.
Septic Shock	Administration of an initial fluid bolus of 20 mL/kg to infants and children with shock is reasonable, including those with conditions such as severe sepsis, severe malaria, and dengue.	<ul style="list-style-type: none"> In patients with septic shock, administer fluid in 10-mL/kg or 20-mL/kg aliquots with frequent reassessment. For infants and children with septic shock unresponsive to fluids and requiring

2020 PALS Science Summary Table

PALS topic	2015	2020
		<p>vasoactive support, consider stress-dose corticosteroids.</p> <ul style="list-style-type: none"> • In infants and children with fluid-refractory septic shock, use either epinephrine or norepinephrine as an initial vasoactive infusion. • In infants and children with fluid-refractory septic shock, if epinephrine and norepinephrine are unavailable, dopamine may be considered.
Opioid Overdose	<ul style="list-style-type: none"> • Empiric administration of intramuscular or intranasal naloxone to all unresponsive opioid-associated life-threatening emergency patients may be reasonable as an adjunct to standard first aid and non-healthcare provider BLS protocols. • ACLS providers should support ventilation and administer naloxone to patients with a perfusing cardiac rhythm and opioid-associated respiratory arrest or severe respiratory depression. Bag-mask ventilation should be maintained until spontaneous breathing returns, and standard ACLS measures should continue if return of spontaneous breathing does not occur. • We can make no recommendation regarding the administration of naloxone in confirmed opioid-associated cardiac arrest. 	<ul style="list-style-type: none"> • Two new opioid-associated emergency algorithms have been added for lay rescuers and trained rescuers. These algorithms are used for both adult and pediatric patients. • For patients in respiratory arrest, rescue breathing or bag-mask ventilation should be maintained until spontaneous breathing returns, and standard PBLS or PALS measures should continue if return of spontaneous breathing does not occur. • For a patient with suspected opioid overdose who has a definite pulse but no normal breathing or only gasping (ie, a respiratory arrest), in addition to providing standard PBLS or PALS care, responders can administer intramuscular or intranasal naloxone. • For patients known or suspected to be in cardiac arrest, in the absence of a proven benefit from the use of naloxone, standard resuscitative measures should take priority over naloxone administration, with a focus on high-quality CPR (compressions plus ventilation).

Abbreviations: ACLS, advanced cardiovascular life support; AED, automated external defibrillator; BLS, basic life support; CPR, cardiopulmonary resuscitation; EMS, emergency medical services; ETT, endotracheal tube; IHCA, in-hospital cardiac arrest; OHCA, out-of-hospital cardiac arrest; PALS, pediatric advanced life support; PBLS, pediatric basic life support.

2020 PALS Science Summary Table

PALS topic	2020
Pediatric Cardiac Arrest Algorithm and the Pediatric Bradycardia With a Pulse Algorithm	Updated to reflect the latest science
Pediatric Tachycardia With a Pulse Algorithm	A single algorithm now covers both narrow- and wide-complex tachycardias.
Pediatric Post–Cardiac Arrest Care Checklist	A checklist is provided for pediatric post–cardiac arrest care. Healthcare providers should use this checklist as a training tool and to ensure that the most high-impact interventions are being used.
Hemorrhagic Shock	Among infants and children with hypotensive hemorrhagic shock after trauma, administer blood products, when available, instead of crystalloid for ongoing volume resuscitation.
Infant Compressions	<ul style="list-style-type: none"> • Single rescuers should compress the sternum with 2 fingers or 2 thumbs placed just below the nipple line. • If the rescuer is unable to achieve appropriate depth for infants with 2 fingers or 2 thumbs, use the heel of 1 hand.

Recognizing Respiratory Problems Flowchart

PALS: Signs of respiratory problems					
Clinical signs		Upper airway obstruction	Lower airway obstruction	Lung tissue disease	Disordered control of breathing
Airway	Patency	Airway open and maintainable/not maintainable			
Breathing	Respiratory rate/effort	Increased			Variable
	Breath sounds	Stridor (typically inspiratory)	Barking cough Hoarseness Wheezing (typically expiratory) Prolonged expiratory phase	Grunting Crackles Decreased breath sounds	Normal
	Air movement	Decreased			Variable
Circulation	Heart rate	Tachycardia (early); bradycardia (late)			
	Skin	Pallor, cool skin (early); cyanosis (late)			
Disability	Level of consciousness	Anxiety, agitation (early); lethargy, unresponsiveness (late)			
Exposure	Temperature	Variable			
PALS: Identifying respiratory problems by severity					
Progression of respiratory distress to respiratory failure*					
Airway	Respiratory distress: open and maintainable Respiratory failure: not maintainable				
Breathing	Respiratory distress: tachypnea Respiratory failure: bradypnea to apnea				
	Respiratory distress: work of breathing (nasal flaring/retractions) Respiratory failure: increased effort progresses to decreased effort and then to apnea				
	Respiratory distress: good air movement Respiratory failure: poor to absent air movement				
Circulation	Respiratory distress: tachycardia Respiratory failure: bradycardia				
	Respiratory distress: pallor Respiratory failure: cyanosis				
Disability	Respiratory distress: anxiety, agitation Respiratory failure: lethargy to unresponsiveness				
Exposure	Variable temperature				

*Respiratory failure requires immediate intervention.

Managing Respiratory Emergencies Flowchart

Managing respiratory emergencies flowchart		
<ul style="list-style-type: none">• Airway positioning• Suction as needed	<ul style="list-style-type: none">• Oxygen• Pulse oximetry	<ul style="list-style-type: none">• ECG monitor as indicated• BLS as indicated
Upper airway obstruction		
Specific management for selected conditions		
Croup	Anaphylaxis	Aspiration foreign body
<ul style="list-style-type: none">• Nebulized epinephrine• Corticosteroids	<ul style="list-style-type: none">• IM epinephrine (or autoinjector)• Albuterol• Antihistamines• Corticosteroids	<ul style="list-style-type: none">• Allow position of comfort• Specialty consultation
Lower airway obstruction		
Specific management for selected conditions		
Bronchiolitis	Asthma	
<ul style="list-style-type: none">• Nasal suctioning• Consider bronchodilator trial	<ul style="list-style-type: none">• Albuterol ± ipratropium• Corticosteroids• Magnesium sulfate• IM epinephrine (if severe)• Terbutaline	
Lung tissue disease		
Specific management for selected conditions		
Pneumonia/pneumonitis Infectious, chemical, aspiration	Pulmonary edema Cardiogenic or noncardiogenic (ARDS)	
<ul style="list-style-type: none">• Albuterol• Antibiotics (as indicated)• Consider noninvasive or invasive ventilatory support with PEEP	<ul style="list-style-type: none">• Consider noninvasive or invasive ventilatory support with PEEP• Consider vasoactive support• Consider diuretic	
Disordered control of breathing		
Specific management for selected conditions		
Increased ICP	Poisoning/overdose	Neuromuscular disease
<ul style="list-style-type: none">• Avoid hypoxemia• Avoid hypercarbia• Avoid hyperthermia• Avoid hypotension	<ul style="list-style-type: none">• Antidote (if available)• Contact poison control	<ul style="list-style-type: none">• Consider noninvasive or invasive ventilatory support

Recognizing Shock Flowchart

Clinical signs		Hypovolemic shock	Distributive shock	Cardiogenic shock	Obstructive shock
Airway	Patency	Airway open and maintainable/not maintainable			
Breathing	Respiratory rate	Increased			
	Respiratory effort	Normal to increased		Labored	
	Breath sounds	Normal	Normal (± crackles)	Crackles, grunting	
Circulation	Systolic blood pressure	Compensated shock can progress to hypotensive shock if left untreated			
	Pulse pressure	Narrow	Variable	Narrow	
	Heart rate	Increased			
	Peripheral pulse quality	Weak	Bounding or weak	Weak	
	Skin	Pale, cool	Warm or cool	Pale, cool	
	Capillary refill	Delayed	Variable	Delayed	
	Urine output	Decreased			
Disability	Level of consciousness	Irritable early, lethargic late			
Exposure	Temperature	Variable			

Managing Shock Flowchart

Managing shock flowchart			
<ul style="list-style-type: none">• Oxygen• Pulse oximetry• ECG monitor		<ul style="list-style-type: none">• IV/IO access• BLS as indicated• Point-of-care glucose testing	
Hypovolemic shock: Specific management for selected conditions			
Nonhemorrhagic		Hemorrhagic	
<ul style="list-style-type: none">• 20 mL/kg NS/LR bolus, repeat as needed• Consider colloid		<ul style="list-style-type: none">• Control external bleeding• 20 mL/kg NS/LR bolus, repeat 2 or 3x as needed• Transfuse PRBCs as indicated	
Distributive shock: Specific management for selected conditions			
Septic	Anaphylactic		Neurogenic
Management algorithm: <ul style="list-style-type: none">• Septic Shock	<ul style="list-style-type: none">• IM epinephrine (or autoinjector)• Fluid boluses (10-20 mL/kg NS/LR)• Albuterol• Antihistamines, corticosteroids• Epinephrine infusion		<ul style="list-style-type: none">• 20 mL/kg NS/LR bolus, repeat PRN• Vasopressor
Cardiogenic shock: Specific management for selected conditions			
Bradyarrhythmia/tachyarrhythmia		Other (eg, CHD, myocarditis, cardiomyopathy, poisoning)	
Management algorithms: <ul style="list-style-type: none">• Bradycardia• Tachycardia		<ul style="list-style-type: none">• 5 to 10 mL/kg NS/LR bolus, repeat PRN• Inotropic and/or vasoactive infusion• Consider expert consultation• Antidote for poisoning	
Obstructive shock: Specific management for selected conditions			
Ductal-dependent (LV outflow obstruction)	Tension pneumothorax	Cardiac tamponade	Pulmonary embolism
<ul style="list-style-type: none">• Prostaglandin E1• Expert consultation	<ul style="list-style-type: none">• Needle decompression• Tube thoracostomy	<ul style="list-style-type: none">• Pericardiocentesis• 20 mL/kg NS/LR bolus	<ul style="list-style-type: none">• 20 mL/kg NS/LR bolus, repeat PRN• Consider thrombolytics, anticoagulants• Expert consultation