

**American Heart Association**  
**Health Educational Services**

# PALS

# Course

# Guidelines



**American  
Heart  
Association®**

**AUTHORIZED  
TRAINING  
C E N T E R**



## Please review the following **IMPORTANT INFORMATION.**

\*\*\* You will be practicing skills that require working on your hands and knees, bending, standing and lifting. Please wear loose, comfortable clothing to class. Please inform one of the instructors when you arrive for class if you have any physical conditions that might prevent these activities. The instructor will work to accommodate your needs within the stated course completion requirements. \*\*\*

### Course Registration:

Registration for all courses is through Health Educational Services. For questions about registration, contact the Health Educational Services via email at [registration@healthedservices.com](mailto:registration@healthedservices.com), or call 831-424-1867.

### Attendance:

Late arrivals, ten (10) minutes or more, are NOT accommodated. Walk-ins are NOT allowed and are directed to register for the next available class.

### Registration Verification:

Participants are to initial next to their name on the printed course roster to indicate that their name and email address is spelled correctly. Verification may alternatively be verified via electronic media. *It is the responsibility of the participant to correct any spelling errors and/or to notify the course lead instructor/designee of any misinformation.* All certification cards will be electronically issued through the American Heart Association.

### Pre-test:

It is a requirement of the American Heart Association that all participants submit the appropriate pre-course self-assessment score report upon arrival to class. The passing score is 70%. The PALS pre-course self-assessment is available by accessing the following URL: [www.heart.org/eccstudent](http://www.heart.org/eccstudent)  
Code = pals15

To avoid computer or printing delays which could result in not being able to attend class, it is recommended that the pre-course self-assessment be completed prior to the night before class.

### Course Materials:

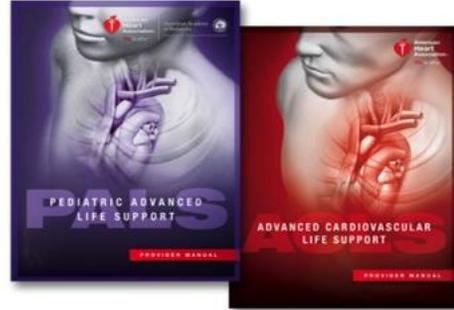
All participants are required to have their own copy of the current PALS Provider Manual. You may purchase a copy from Health Educational Services or you can obtain a copy from your employer if they have a system in place to borrow one.

You may purchase the 2015 *Hand book of Emergency Cardiovascular Core* for (\$25.00) to use as a reference guide at the PALS practice stations.

## ***How to Access the PALS Mandatory Self- Assessment***

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1. Access the website at: [www.heart.org/eccstudent](http://www.heart.org/eccstudent)
  2. Enter code from manual: **PALS15**
  3. Click submit button
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Welcome to the American Heart Association Student Website!

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Please enter the code found at the bottom of page ii in the front of your course manual to access the student supplementary materials for your course. These materials are provided to give you additional information you may find helpful for the course. ACLS and PALS also include a Precourse Self-Assessment that is required for entry into the course. A score of 70% or higher is necessary to pass and print your report.

The 2010 Guidelines ACLS Course materials, including the 2010 ACLS Student Website, were discontinued on May 31, 2016. For information on accessing the 2015 Guidelines ACLS Student Website, please contact your AHA Instructor or Training Center.

The 2010 Guidelines PALS Course materials, including the 2010 PALS Student Website, were discontinued on December 6, 2016. For information on accessing the 2015 Guidelines PALS Student Website, please contact your AHA Instructor or Training Center.

PALS15

Submit



### MANDATORY SELF-ASSESSMENT

Before launching the Precourse Self-Assessment:

- Please make sure your computer is connected to a working printer. You must print your results upon completion, from the same computer used to take the assessment. Attempting to save your results and print them at a later time or from a different computer will lead to the loss of your results, so please complete the entire Precourse Self-Assessment in one sitting.
- The AHA Student Website includes PDF and Flash content. If your computer is not already configured to view these forms of content, you may download the Mac or PC version of [Adobe Reader](#) and Adobe Flash Player free from [adobe.com](#). If you have Adobe Reader or Flash Player installed and are still having issues, please make sure you have the latest version.

Note: If you need to enlarge the text or images in the Precourse Self-Assessment, use your software's zoom feature; if it's still not viewable, contact your training center for assistance.



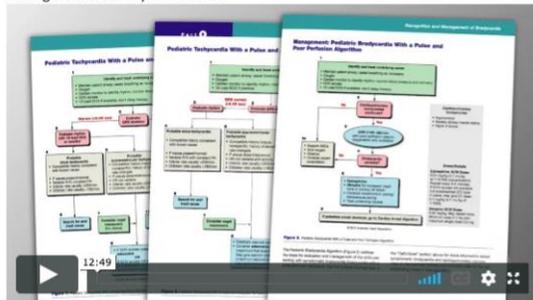
*To start self assessment press the launch button*

### Additional Resources

[PALS Student Site Support page](#) | [PALS Precourse Preparation Checklist \(PDF opens new window\)](#) | [PALS Provider Manual Suggested Reading List \(MS Word opens new window\)](#)

### Videos

Management of Arrhythmia Video



Management of Respiratory Emergencies Video



Management of Shock Emergencies Video



Systematic Assessment Video



*It is highly encouraged to watch the above videos prior to class*

# Welcome to the Health Educational Services Pediatric Advanced Life Support Course

## ***How to get ready:***

Because the PALS course covers an extensive amount of material in a short time, it is strongly recommended that you prepare for the course in advance.

## ***Pre-course Requirements:***

1. Review and understand the information in your PALS Provider Manual paying particular attention to the Core Cases and Module 3, “Systematic Approach”
2. Review your BLS skills to refresh your knowledge of the information. You will be tested on the child and infant CPR and AED skills. You are not taught how to perform CPR or how to use an AED, you must know this in advance.
3. Review, understand and complete the ECG and Pharmacology pre-course self-assessment found on the PALS Student website at [www.heart.org/eccstudent](http://www.heart.org/eccstudent) Code = pals15.
4. Print the mandatory self-assessment score report **passing score is a minimum of 70% and bring it** with you to class.

## ***What this course does not cover:***

This PALS course does not teach ECG interpretation or pharmacology information. If you do not possess knowledge of the ECG and pharmacology information included on the mandatory self-assessment, it is unlikely that you can successfully complete the PALS course. The PALS patient assessment is not fully reviewed in Update (Renewal) course. This is an intricate part of the skills testing.

## ***What to bring:***

Your PALS course materials (Provider Manual with Pocket Guide(s)). Your Manual is used during each course lesson. If purchased, the *2015 Hand book of Emergency Cardiovascular Care for Healthcare Providers* may be used as a reference while at practice stations during the course.

If you have any questions, please contact Health Educational Services:

Howard Main; [howard@healthedservices.com](mailto:howard@healthedservices.com); 831-424-1867 x101

# PALS Renewal

**This PALS Update (Renewal) course is 8 hours in length.**

Topics to be covered:

- Course Introduction
- Overview of PALS Science
- BLS Practice & Competency Testing
- Management of Respiratory Emergencies
- Rhythm Disturbances/ Electrical Therapy
- Resuscitation Team Concepts
- Overview of Pediatric Assessment
- Core Cases (Respiratory, Cardiac & Shock)
- Putting it All Together
- Course Summary & Testing Details
- Written Tests
  - Skills Validation
  - Remediation, as needed

The PALS Renewal Course is divided into multiple lessons. The lessons utilize hands-on practice as well as DVD-based programs. These DVD-based programs make use of practice-while-watching activities, which allow students to practice on the manikin while viewing the DVD. This format provides significantly more time for practice and demonstration of skills than previous formats.

## Pre-course Preparation Checklist

- ✓ Possess current BLS for Healthcare Providers and PALS status.
- ✓ Understand the twelve (12) Core Cases in the *PALS Provider Manual*.
- ✓ Understand the algorithms for the Core Cases in the *PALS Provider Manual*.
- ✓ Complete the PALS Pre-course Self-Assessment on ECGs and Pharmacology then print the score report.

## PALS Systematic Approach Summary

### Initial Impression

Your first quick (in a few seconds) "from the doorway" observation

<b>Appearance</b>	Including level of consciousness (eg, unresponsive, irritable, alert and ability to interact)
<b>Breathing</b>	Increased work of breathing, absent or decreased respiratory effort, or abnormal sounds heard without auscultation
<b>Circulation (color)</b>	Abnormal skin color, such as cyanosis, pallor, or mottling
<i>The purpose is to quickly identify a life-threatening problem.</i>	

### Is the child unresponsive with no breathing or only gasping?

#### If YES:

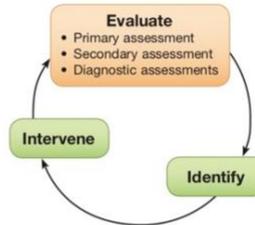
- Shout for help.
- Activate emergency response as appropriate for setting.
- Check for a pulse.
- Begin lifesaving interventions as needed.

#### If NO:

- Continue the evaluate-identify-intervene sequence.

Use the **evaluate-identify-intervene** sequence when caring for a seriously ill or injured child.

- **Evaluate** the child to gather information about the child's condition or status.
  - **Identify** any problem by type and severity.
  - **Intervene** with appropriate actions to treat the problem.
- Then repeat the sequence; this process is ongoing.



**If at any time you identify a life-threatening problem, immediately begin appropriate interventions. Activate emergency response as indicated in your practice setting.**

### Evaluate

"Evaluate" consists of the primary assessment (ABCDE), secondary assessment, and diagnostic tests.

#### Primary Assessment

A rapid, hands-on ABCDE approach to evaluate respiratory, cardiac, and neurologic function; this step includes assessment of vital signs and pulse oximetry

#### Airway

Clear	Maintainable	Not maintainable
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#### Breathing

Respiratory Rate and Pattern	Respiratory Effort	Chest Expansion and Air Movement	Abnormal Lung and Airway Sounds	Oxygen Saturation by Pulse Oximetry
Normal Irregular Fast Slow Apnea	Normal Increased • Nasal flaring • Retractions • Head bobbing • Seesaw respirations Inadequate • Apnea • Weak cry or cough	Normal Decreased Unequal Prolonged expiration	Stridor Snoring Barking cough Hoarseness Grunting Gurgling Wheezing Crackles Unequal	Normal oxygen saturation (≥94%) Hypoxemia (<94%)

#### Circulation

Heart Rate and Rhythm	Pulses		Capillary Refill Time	Skin Color and Temperature	Blood Pressure
Normal Fast (tachycardia) Slow (bradycardia)	<b>Central</b> Normal Weak Absent	<b>Peripheral</b> Normal Weak Absent	Normal: ≤2 seconds Delayed: >2 seconds	Pallor Mottling Cyanosis Warm skin Cool skin	Normal Hypotensive

#### Disability

AVPU Pediatric Response Scale				Pupil Size Reaction to Light		Blood Glucose	
<b>A</b> lert	Responds to <b>V</b> oice	Responds to <b>P</b> ain	<b>U</b> nresponsive	Normal	Abnormal	Normal	Low

#### Exposure

Temperature			Skin	
Normal	High	Low	Rash (eg, purpura)	Trauma (eg, injury, bleeding)

<b>Secondary Assessment</b>	A focused medical history (SAMPLE) and a focused physical exam
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<b>Diagnostic Tests</b>	Laboratory, radiographic, and other advanced tests that help to identify the child's physiologic condition and diagnosis
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**Identify** *Identify the child's problem as respiratory, circulatory, or both. Determine the type and severity of the problem(s). The table below lists common clinical signs that typically correlate with a specific type of problem and its severity.*

Type	Severity
<b>Respiratory</b>	<ul style="list-style-type: none"> <li>Respiratory distress</li> <li>Respiratory failure</li> </ul>
<b>Circulatory</b>	<ul style="list-style-type: none"> <li>Compensated shock</li> <li>Hypotensive shock</li> </ul>
<b>Cardiac Arrest</b>	

Respiratory		
Signs	Type of Problem	Severity
<ul style="list-style-type: none"> <li>Increased respiratory rate and effort (eg, retractions, nasal flaring)</li> <li>Decreased air movement</li> <li>Stridor (typically inspiratory)</li> <li>Barking cough</li> <li>Snoring or gurgling</li> <li>Hoarseness</li> </ul>	<b>Upper airway obstruction</b>	<b>Respiratory distress</b> <ul style="list-style-type: none"> <li>Some abnormal signs but no signs of respiratory failure</li> </ul> <b>Respiratory failure</b> <i>One or more of the following:</i> <ul style="list-style-type: none"> <li>Very rapid or inadequate respiratory rate</li> <li>Significant or inadequate respiratory effort</li> <li>Low oxygen saturation despite high-flow oxygen</li> <li>Bradycardia (ominous)</li> <li>Cyanosis</li> <li>Decreased level of consciousness</li> </ul>
<ul style="list-style-type: none"> <li>Increased respiratory rate and effort (eg, retractions, nasal flaring)</li> <li>Decreased air movement</li> <li>Prolonged expiration</li> <li>Wheezing</li> </ul>	<b>Lower airway obstruction</b>	
<ul style="list-style-type: none"> <li>Increased respiratory rate and effort</li> <li>Decreased air movement</li> <li>Grunting</li> <li>Crackles</li> </ul>	<b>Lung tissue disease</b>	
<ul style="list-style-type: none"> <li>Irregular respiratory pattern</li> <li>Inadequate or irregular respiratory depth and effort</li> <li>Normal or decreased air movement</li> <li>Signs of upper airway obstruction (see above)</li> </ul>	<b>Disordered control of breathing</b>	

Circulatory		
Signs	Type of Problem	Severity
<ul style="list-style-type: none"> <li>Tachycardia</li> <li>Weak peripheral pulses</li> <li>Delayed capillary refill time</li> <li>Changes in skin color (pallor, mottling, cyanosis)</li> </ul>	<ul style="list-style-type: none"> <li>Cool skin</li> <li>Changes in level of consciousness</li> <li>Decreased urine output</li> </ul>	<b>Signs of poor perfusion</b>
<ul style="list-style-type: none"> <li>Signs of poor perfusion (see above)</li> </ul>	<b>Hypovolemic shock</b> <b>Obstructive shock</b>	<b>Compensated shock</b> <ul style="list-style-type: none"> <li>Signs of poor perfusion and <i>normal</i> blood pressure</li> </ul> <b>Hypotensive shock</b> <ul style="list-style-type: none"> <li>Signs of poor perfusion and <i>low</i> blood pressure</li> </ul>
<ul style="list-style-type: none"> <li>Possible signs of poor perfusion (see above) <i>or</i></li> <li>Warm, flushed skin with brisk capillary refill (warm shock)</li> <li>Peripheral pulses may be bounding</li> <li>Possible crackles</li> <li>Possible petechial or purpuric rash (septic shock)</li> </ul>	<b>Distributive shock</b>	
<ul style="list-style-type: none"> <li>Signs of poor perfusion (see above)</li> <li>Signs of heart failure</li> </ul>	<b>Cardiogenic shock</b>	

**Intervene** *On the basis of your identification of the problem, intervene with appropriate actions. Your actions will be determined by your scope of practice and local protocol.*