AED CHALLENGE® PROGRAM GUIDE

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For GENERIC, LIFEPAK 1000, LIFEPAK 500, and CR Plus AEDs (2010 CPR/ECC Guidelines)

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AED CHALLENGE® PROGRAM

The AED Challenge program is an online skills refresher that provides a computer-simulated environment for practicing automated external defibrillation (AED) and CPR skills. It gives realistic practice to students who are learning to use an AED and helps experienced AED users keep their skills sharp.

The AED Challenge program simulates a variety of sudden cardiac arrest scenarios. Your objective is to provide rapid treatment and defibrillation. The program gives advice, feedback, and scores performance. The AED Challenge program gives defibrillation-trained personnel high-quality practice whenever it is needed.

The AED Challenge program follows the 2010 American Heart Association (AHA) Guidelines for Cardiopulmonary Resuscitation (CPR) and Emergency Cardiovascular Care (ECC).

WARNING

The AED Challenge program was designed for review and practice of AED and CPR protocol knowledge by trained emergency responders. It is not a self-instructional program. It is intended to supplement training conducted by a qualified instructor and supervised by a licensed physician. This application is not a replacement for initial hands-on training using an actual device.

The treatment recommendations contained in this application meet national and international guidelines for cardiopulmonary resuscitation and automated defibrillation. It is not intended to be a substitute for device operating instructions and local protocols.

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SYSTEM REQUIREMENTS

- Up-to-date Web browser (e.g., Internet Explorer 8, Firefox 9, Safari 5)
- Adobe Flash Player 10 or higher (installed as Web browser add-on)
- Audio capability recommended (not required)

*Note: Click the **Help** link on the AED Challenge home page (AEDchallenge.com) for technical support or write to help@aedchallenge.com.*

GETTING STARTED

After logging in to the AED Challenge website you can start The AED Challenge program by clicking the **Start AED Challenge** button. Your organization's group or subgroup administrator might need to configure The AED Challenge program to meet local protocols and to tailor scenarios to meet your organization's requirements. If your username has been assigned with administrator permissions, you can click the **Options** button to configure the program.

If you forget your username or password, you can retrieve it using the **Log in Help** link on the AED Challenge home page:

1. Click on **Log in help** located near the **Log In** button.
2. Enter your email address and then click the "**Send Username**" or "**Send Password**" button.

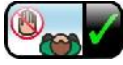3. Your username (or password) will be sent to the email address on record.

To run an AED Challenge scenario click the **Start AED Challenge** button. Once the AED Challenge program has downloaded, you should start with the **prompted practice mode** which guides you through a scenario with prompts for each step. The **practice mode** allows unlimited practice on a variety of different scenarios. The **test mode** delivers three different scenarios for testing purposes. **Advanced test** will deliver three challenging scenarios and a five-question quiz covering various CPR and AED topics.

TAKING A TEST

A test consists of three scenarios. Your results are recorded only when you have completed three scenarios and you submit the results. You must click the **Next Scenario** button to continue the test after each scenario and then submit the scores by clicking the **Submit scores and quit** button on the Scenario Summary screen after third scenario is complete.

Your scores are stored in the AED Challenge database and are available for viewing by you and your administrator. A score of 1,000 or greater on each scenario is considered satisfactory performance.

Here are a few tips to help you use the program successfully:

- The **HINT** button located on the right of the program window will advise you which action to take, but will deduct points from your score.

- View your test results by clicking the **Reports** button.

- During a scenario the program will not allow you to select some actions until the current action is completed (for example, initial chest compressions).

- Always click the **Stand Clear** button before analyzing AND before shocking. There is a penalty for not doing so.

Note: Once a scenario is displayed, it is implied the scene is safe for rescuers. You need to take no actions to make the scene safe. However, it may be helpful for you to verbalize that the scene is safe before you begin assessing the patient.

A scenario will end automatically when you have completed all the steps in the scenario.

AED CHALLENGE HOME PAGE

The following buttons appear on the left column of the AED Challenge home page after you have logged in:

The **Home** button displays the AED Challenge home page.

The **Start AED Challenge** button downloads the AED Challenge program in a separate browser window.

The **Individual Info** (**My Info**) button displays your account information such as username, password, email and training date.

The **Options** button allows subgroup and group administrators to set protocol, scenario and administrative options.

The **Reports** button lets you view your test scores. It also allows the group administrator to view and print test results and performance reports.

The **Help** button gives you access to instructions for taking a test, frequently asked questions, user guides, technical support and a utility to check which version of Adobe Flash Player is installed on your computer.

*To reset your password click **My Info** on the AED Challenge home page then click **Edit**. Also, your group or subgroup administrator can change your password. Heartsafe Solutions customers must contact help@aedchallenge.com to change a password.*

MAIN MENU

The following buttons are on the AED Challenge menu that appears in a pop-up window after you click the **Start AED Challenge** button.

The **Prompted Practice** button runs scenarios in a tutorial-like mode that guides you through each scenario with visual prompts for each step. The prompted practice mode allows unlimited practice on a variety of different scenarios.

The **Practice** button, which is located on the menu, opens the Scenario screen and starts the scenario. The AED Challenge program randomly chooses one of dozens of cardiac arrest scenarios.

The test mode (**Test** button) delivers three scenarios for testing purposes. The **Advanced Test** button presents you with three challenging test scenarios for testing purposes and a multiple-choice CPR/AED quiz. Your test results are uploaded to the AED Challenge database in these two modes.

SCENARIO SCREEN

The Scenario screen appears after you click a mode button (prompted practice, practice, test or advanced test) on the menu. The following buttons appear on the Scenario screen. A checkmark appears beside each action when it is completed.

Here is a description of each button and what it does:

	Tap and Shout	Taps patient and shouts to determine whether or not patient is responsive.
	Yell for Help	Clicking this button causes rescuer to yell for help and tell a bystander to Call 911 and get the AED. The AED will arrive after a short time and appear on your screen.
	Check Breathing	Rescuer does a quick scan of the chest to see if the patient is not breathing or gasping only.
	Chest Compressions/ CPR	During the initial phase of the scenario this buttons gives 30 chest compressions and stops. After the AED has analyzed, it starts and stops CPR (compressions and rescue breaths).
	Airway	Opens patient's airway using the head tilt-chin lift technique.
	Breaths	Delivers rescue breaths to the patient using either a facemask or a bag-valve-mask unit.
	Check Pulse	Checks patient for pulse, breathing or signs of circulation such as movement and normal breathing and displays the result.
	Stand Clear	Clears all personnel from patient. Click this button during AED analysis and BEFORE shocking. This button also stops CPR.
		A checkmark will appear when you complete this step during analysis and before shocking. The checkmark will hide after analysis or shock is complete. You must clear the patient again for the next analysis and shock.
	Electrode pads	While holding your mouse button down over a pad drag each pad to the correct position on patient. Drop the electrode into place by releasing the mouse button. *If a pad becomes loose, reattach it by clicking the pad.*
	Hint	Tells you which step to take next. Subtracts points from your score. Located in the top right corner.
	End Scenario	Click this when you want to end the scenario before it is completed. Do not click this button during a test because it will result in a low score. The button is located below the patient.

SCORING

The AED Challenge program adds to your score for each correct action. Points are deducted when you break a protocol rule. Breaking a protocol rule will result in a penalty and an error message. Protocols are configured on the **Options** page and require administrator-level permissions to access.
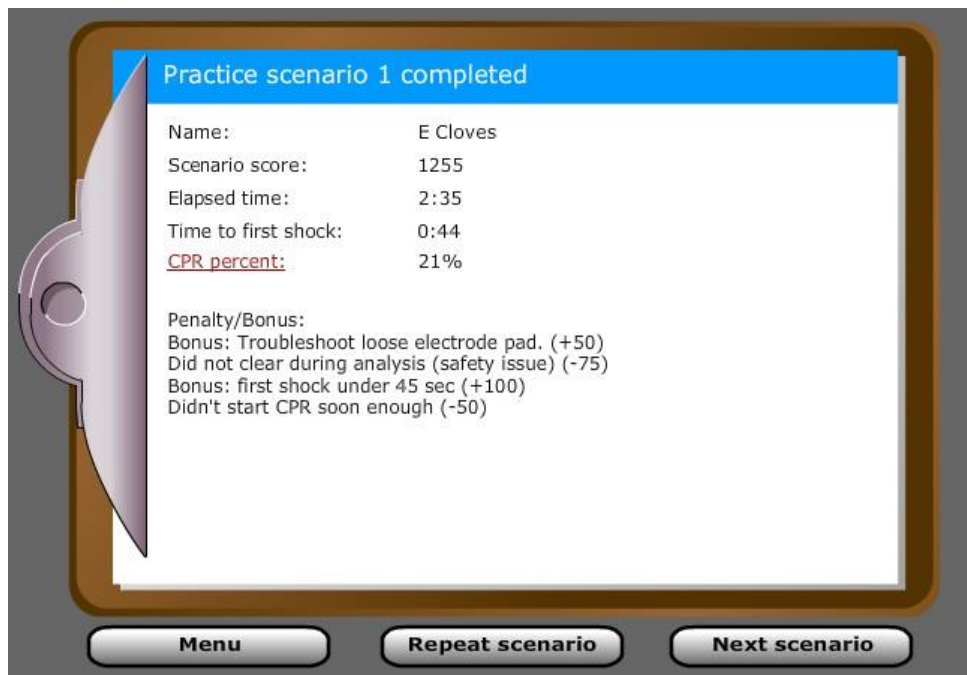
The point value for each action varies depending on the scenario. No points are given when steps are performed out of order. Use the **Hint** button if you are not sure which step to take. *The highest score can be achieved by performing the initial assessment steps first and then delivering a quick shock if indicated.*

A competent performance usually results in a final score of 1,000 points or more, depending on protocol and scenario settings. Bonus points are given for fast delivery of the initial shock and troubleshooting.

CPR Percent shows the percent of the scenario in which you performed chest compressions. This helps emphasize to responders the importance of minimizing interruptions in CPR. This number represents the "CPR fraction" or the percent of a scenario during which compressions were delivered.

SCENARIO SUMMARY

The Scenario Summary screen is automatically shown after you have completed all the steps in a scenario or if you click the **Stop** button. It lists scenario information, penalties, bonuses and score. To quit a scenario before finishing a scenario, click the **Stop** button.

In the test and advanced test modes, the AED Challenge program shows the Scenario Summary screen after each test scenario. You must select **Next Scenario** to continue the test after each scenario. Click the **Submit scores and quit** button on the Scenario Summary screen after you complete three test scenarios. The program then sends your scores to the database and closes.

To view your test scores, click the **Reports** button on the left side of the AED Challenge home page. To print your test scores, click the right mouse button then select **Print**.

TROUBLESHOOT SCENARIOS

The AED Challenge program randomly presents a troubleshooting situation in which the electrode pad becomes unattached from the patient. To solve this problem during a scenario (and receive extra points) click the loose pad when prompted by the AED. Your administrator can control this feature and its frequency on the **Options** page.

PERMISSION LEVELS

There are three permission levels for AED Challenge program users: *group administrator* (group admin), *subgroup admin* and *user*. These are assigned when an account is created and allow different levels of access to AED Challenge program features.

A group admin can assign permissions for individuals in his or her group. The group admin and subgroup admin have many of the same rights, for example, they can: edit subgroup info, create/edit/archive individual accounts, assign permissions, change AEDs, change AED settings and remove test results. However, the subgroup admin cannot create or view other subgroups.

Group Admins: To change a user to a subgroup admin you must assign the user on the **Subgroup Info** page (see instructions below under "Change the Subgroup Admin").

Administrator Guide

This section covers the Group Info, Subgroup Info and Individual Info areas of the website and are available to group and subgroup administrators only.

ACCOUNT MANAGEMENT

The Individual Info page of the AED Challenge website lets you edit your users' account information and add users. The Group Info and Subgroup Info pages let you edit group and subgroup information.

NOTE: Heartsafe Solutions customers must add and remove (archive) users by contacting help@aedchallenge.com.

There are three buttons located on the AED Challenge home page that are available to a group admin:

- The **Individual Info** page allows you to view or change account information for a specific individual including email address and password.

- The **Subgroup Info** page allows you to change subgroup information. A group admin can create additional subgroups and assign individual users to a subgroup.

- The **Group Info** page allows the group administrator to edit group information for your entire group or organization.

ADD A NEW USER

To add a new user and allow that person access to the AED Challenge program:

1. Log in to the AED Challenge home page using your username and password (you must be a group or subgroup admin)

2. Click **Individual Info** in the left panel

3. Click **Add New User**

4. Assign a subgroup (group admins only) and enter the user's name, username, password, email address and other information

5. Click **Submit New Individual**

NOTE:

- *AED Challenge sends a welcome message with log on information when*

you add a new user account. The AED Challenge program will automatically assign a Test Date 15 days from the current date for the user. He or she then is automatically scheduled to receive email reminders to take a test.

- *You can change a scheduled test date by clicking **Individual Info** and then **Edit** next to a user's name.*

- *We recommend using an email address for the user's username so it is easy to remember.*

- *A user can change his or her password by clicking **My Info** and then **Edit** when he or she is logged in. The username is not changeable. Both the group admin and subgroup admin can change the password for a user. Heartsafe Solutions customers cannot change their passwords in this way. You must submit a request to help@aedchallenge.com.*

- *Contact help@aedchallenge.com to purchase subscriptions for additional users.*

To change a user's account information:

1. Click **Individual Info** in the left panel
2. Click **Edit** next to the user's account information
3. Edit the user's information and then click **Submit Updates**

ARCHIVE (REMOVE) AN INDIVIDUAL USER

You can archive the account of a user who is no longer active in your AED program. This will free up a user account in your subscription total and allow you add a new user without charge. Archiving does not remove the account. It prevents the individual from logging in but saves the test records. Contact help@aedchallenge.com to reactivate an archived account.

NOTE: Once you archive a user account, the AED Challenge program does not allow you to make it active again without contacting AED Challenge Support. You must contact AED Challenge support (help@aedchallenge.com) to un-archive an account. You will be able to view test records for archived accounts.

To archive a user:

> 1. Log in to AED Challenge home page using your group or subgroup admin username and password
>
> 2. Click **Individual Info** in the left panel
>
> 3. Click **Edit** next to the user's account information
>
> 4. Set the **Account Status** field to "Archived" and then click **Submit Updates** (The user's test records will be retained but the user won't be able to access the website.)

NOTE: Heartsafe Solutions customers must contact help@aedchallenge.com to archive a user.

ADD A NEW SUBGROUP (GROUP ADMIN ONLY)

By adding subgroups you can divide your organization's users into manageable chunks, for example, by department or location. It also allows you to assign an administrator to oversee the subgroup. Only a group admin can add a new subgroup.

To add a new subgroup and assign a subgroup admin:

> 1. First, make sure you have added a user account for the person you want to be the administrator for the subgroup then…
>
> 2. Click **Subgroup Info**
>
> 3. Click **Add New Subgroup**
>
> 4. Select a user from the dropdown menu to assign as subgroup admin
>
> *This will change the user's permission level to subgroup administrator the next time he or she logs in.*
>
> 5. Enter the subgroup's name (e.g., Accounting Department)
>
> 6. Click **Submit Subgroup Updates**
>
> 7. Click **Individual Info**
>
> 8. Click **Edit** next to the user
>
> 9. Select the new subgroup in the Subgroup dropdown list for that user
>
> 10. Click **Submit Updates**. The new subgroup now will appear on the Individual User Info page (click **Individual Info**).

NOTE: A person must have a user account before you can assign him or her as a subgroup admin.

CHANGE THE SUBGROUP ADMIN (GROUP ADMIN ONLY)

To change the subgroup admin:

1. Click **Subgroup Info**

2. Click **Edit** next to the subgroup you want to change

3. Select a user from the dropdown menu to assign as the subgroup admin

4. Click **Submit Subgroup Updates**

5. Ask the new subgroup admin to log in to the AED Challenge home page. You will now be able to see the new assignment on the Individual User Info page.

NOTE: You can only assign one subgroup admin per subgroup. However, a user can be assigned as a subgroup admin for more than one subgroup. Only a group admin can assign users as subgroup admins.

CHANGE GROUP INFORMATION (GROUP ADMIN ONLY)

To change group information (only a group admin can do this):

1. Click **Group Info**

2. Click **Edit**

3. Edit the group's information (group name, options such as missed test report and email notifications configuration)

4. Click **Submit Group Updates**

NOTE: You must contact help@aedchallenge.com to change the person who is the group admin.

See EMAIL REMINDERS below for information about email notifications configuration.

You can add your organization's logo to the AED Challenge website so your users will see it when they log in. Please inquire with help@aedchallenge.com for assistance.

OPTIONS

You can configure the AED Challenge program to match your organization's local AED protocols. Access the Options page from the AED Challenge home page by clicking **Options** in the left column, selecting the appropriate group from the **Select Group** drop-down menu, and then selecting the appropriate AED device from the drop-down menu. You must have administrator credentials to access these options.

NOTE: AED Options apply to all users in a subgroup ONLY. Clicking **Edit AED Options** on the **Subgroup AED Options** page allows you to edit all the options for the AED that is selected. The settings you choose apply only to a subgroup.

To change options for a subgroup:

1. Click **Options** in the left column
2. Select in the dropdown menu the *subgroup* you want to see
3. Select in the dropdown menu an AED for the subgroup
4. Click **Select**
5. Click **Edit AED Options**
6. Select the desired options
7. Click **Submit Updates**

NOTE: Options listed below are associated with the subgroup. If you are a group admin you must edit the options for each subgroup to implement changes across your organization.

Protocol and Scenario Options

Rescuer Type	Configures the scenarios for either a lay rescuer with a single responder or professional rescuer with a team of responders.
Call EMS/Shout Help	Distinguishes between AHA and ERC guidelines for steps that a rescuer needs to do early in the scenario.
Initial Pulse Check	Tells the program to expect the user to do a pulse check as part of the initial assessment steps. Does not check a pulse during AED analysis. (see Pulse Check option below)
Continuous CPR Compressions	CPR compressions run continuously and there is no pause for rescue breaths.
Hands-only CPR	Rescuer does compressions-only CPR (no rescue breaths).
CPR Timer Speed	Speeds up the CPR countdown timer. This allows users to progress through a scenario more quickly. For example, when the

setting is 50%, a CPR1 setting of 60 seconds will last 30 seconds in real time.

Adult Compression-to-Breath Ratio	This setting makes the program perform CPR at the desired compression-breath ratio. If the breaths field is 0, no breaths are given.
Guidelines/ Protocol	Sets the program so that scenarios follow American Heart Association (AHA) or European Resuscitation Council (ERC) guidelines.
Female Scenarios	Includes a female patient in the patient pool.
Child Scenarios	Includes a child patient in the pool of patients selected. This scenario randomly will be shown in the Advanced Test only.
Bag-Valve Mask	For healthcare providers. Shows a bag-valve mask for ventilation rather than a facemask.
Loose Electrode	In this troubleshooting event, an electrode pad becomes unattached from patient's chest. AED will give a prompt for you to connect electrodes.
Troubleshoot Percent	This field assigns percentage of scenarios to include a troubleshooting situation. For example, a setting of "20" would cause the AED Challenge program to randomly generate a troubleshooting scenario in 20 of every 100 scenarios.
Child Compression-to-Breath Ratio	This setting makes the program perform CPR at the desired compression-breath ratio for children.

AED Options

Auto Analyze	Sets the AED to Auto Analyze 2 mode which starts analyzing automatically after the CPR period. (LIFEPAK 500 AED only)
Pulse Check	When set to NEVER, the Pulse Check option removes all prompting for pulse checks. Other Pulse Check settings allow pulse checks AFTER EVERY NSA (no shock advised), AFTER 2nd NSA, or ALWAYS. "Always" means after each shock and each "no shock advised" message. The Check Pulse button is shown to users whenever a pulse check is expected by the AED.
Pulse Prompt	Instructs the AED which audio prompt to play for a pulse check.
Fully Automatic AED	If checked, the AED will be an auto-shock AED with a cover over the shock button. (LIFEPAK CR Plus AED only)
Infant/Child Electrodes	Shows infant/child pads on child scenarios.
Clear Patient for Analysis	Requires user to press the **Stand Clear** button before pressing **Analyze** on the AED or while the AED gives the "Stand Clear of Patient" or "Do Not Touch Patient" prompt.
Audio	Enables AED audio. A sound card and speakers are required to use the audio option.

AED Text Prompts	Shows AED prompts in text balloons.
CPR Time 1	Sets length of CPR (in seconds) for the CPR period immediately following a shock.
CPR Time 2	Defines the time interval for performing CPR after a no shock advised decision.
Submit Updates	Saves your settings to the AED Challenge database.
Reset	Resets any changes you have made to options settings before you click the **Submit AED Updates** button.
Restore to Device Defaults	Applies default settings to all options for this page. You must use the **Submit AED Updates** button to save these changes after clicking the Restore to Device Defaults button.

PEFORMANCE REPORTS

The Performance Report shows information about your responders' status such as the number of active users. It also shows a summary of test performance such as average score and shock time by subgroup.

To view the Performance Report for a group:

1. Click **Group Info** in the left column
2. Click **View Report** under the Performance Report column

CUSTOM NOTICES

Administrators can create a custom message for users at their sites. Users see your message each time they use the AED Challenge program. Custom reminders are available for a subgroup or an entire group.

To add a Custom Notice for a subgroup:

1. Click **Subgroup Info** in the left column
2. Click **Edit** next to the site you want to update.
3. Select the **Show Custom Notice/Message** checkbox
4. Type your message in the text entry box
5. Click **Submit Subgroup Updates**

The message will be shown whenever someone who belongs to the subgroup starts the AED Challenge program.

EMAIL REMINDERS

From the Group Info page you can update your email notifications including which administrators receive test results and which test reminders are sent (first, second and final reminders) for users and administrators. Additionally, group admins can set the number of reminders (up to 3 per test), the interval (days) between reminders and the intervals between tests (e.g., every 90 days). If a checkbox is checked, the program will send an email for that item.

To change your group's email reminder schedule:

1. Click **Group Info**

2. Click **Edit**

3. Under *Email Notifications* configure the email reminders as desired

		Training Interval: 90 Days		
Notify:	Indiv Test	1st Reminder 14 days prior	2nd Reminder 7 days prior	3rd Reminder 0 days prior
Individual:	☐	☐	☐	☐
Subgroup Admin:	☐	☐	☐	☐
Group Admin:	☐	☐	☐	☐

Training Interval – Time in between scheduled tests. When you change any of the Interval fields and click **Submit Group Updates**, the website recalculates the Next Test Date for all users in the group.

Send Test Results – If the checkbox in this column is checked, it sends a user's test results to the group admin or subgroup admin or both.

NOTE:

- *If a user doesn't take a test at 45 days past Next Test Date, it is counted as a missed test.*

- *The AED Challenge website recalculates the Next Test Date when a test is taken. The date is based on the current Next Test Date, not the current date.*

- *Setting the Next Test Date field with no date (i.e., blank) will result in no reminders being sent to the user.*

DETAILED TEST REPORT

The Detailed Test Report shows user scores and errors made on test scenarios. There are three selections for sorting test results on the **Reports** page: **Select Subgroup**, **Show Errors** and **Show Test**. **Show Errors** hides or displays errors that users made during their scenarios. A report shows the results for a subgroup. Below is a sample test report for a user.

Cloves, E (1234)							
Date / Time	**Title**	**Time**	**Status**	**Shock Time**	**CPR %**	**Score**	
06/27/2011 10:29	Advanced Test Scenario 1	96	Pass	63	12	1290	Remove
	Advanced Test Scenario 2	132	Pass	58	24	1300	
	Advanced Test Scenario 3	138	Pass	35	30	1245	
					Average Score:	1278	

Penalty/Bonus:
Scenario 2: Bonus: first shock under 60 sec (+50), Hints given: 2 (-50)
Scenario 3: Bonus: first shock under 45 sec (+100); Did not clear during analysis (safety issue) (-75)

To view the report:

1. Click **Reports** in the left column
2. Select the subgroup you want to see
3. Click **Go**

NOTE:
- *A test consists of three scenarios*

- *Upon completion of a test, users must click "**Submit Scores and Quit**" to send the test results to the AED Challenge database. The AED Challenge program will attempt to allow a user to print test scores locally if it does not receive the test results.*

- *An average score of 1000 points or higher is considered competent performance*

- *Prompted practice and practice scores are not saved, only test scores are saved.*