# Chapter 5.10 Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillator (AED) Program

## *This could be you . . ..*

***An employee began having chest pain shortly after coming to work. Minutes later, he collapsed on the floor. A fast acting employee called 33333 and shouted for help. After evaluating the patient and starting CPR, another employee responded with an AED unit and was able to shock the heart into a normal rhythm.***

### 5.10.1 Applicability of this chapter

You are required to follow this chapter if you work at JSC or a JSC field site. White Sands Test Facility shall follow the White Sands AED program.

### 5.10.2 What this chapter covers

This chapter defines JSC's Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillator (AED) program, including training, maintenance, certification, auditing and placement. JSC is committed to improving the chances of survival for any employee or visitor who may suffer from sudden cardiac arrest.

### 5.10.3 Why CPR and AEDs are important

JSC follows the guidelines of the American Heart Association (AHA) for Public Access to Defibrillation, and JSC is committed to providing AED capability within 5 minutes to all locations at JSC. This is accomplished by a combination of Ambulance and Fire Protection Specialists, emergency responders, and placement of AEDs in facilities across JSC.

Note: Each year, an estimated 295,000 Americans die of sudden cardiac arrest before they reach the hospital. Sudden cardiac arrest strikes people of all ages and all degrees of fitness usually without warning. Many of these lives can be saved if bystanders quickly phone the JSC emergency numbers (x33333 or (281) 483-3333 onsite or 911 offsite), begin CPR and use an AED. Figure 5.10-1 illustrates the coordinated set of actions to improve survival.

**Figure 5.10-1: American Heart Association Chain of Survival**

### 5.10.4 Elements of a complete CPR and AED program

5.10.4.1 JSC's AED/CPR program includes these five program elements:

a. *Management Support*: Agreement about the goals, responsibility, implementation requirements and costs of the program.

b. *Employee Participation:* Demonstrated by recognizing the signs and symptoms of a heart attack, knowing the chain of survival and volunteering to be a CPR/AED lay responder.

c. *Emergency Responders*: Designated fire protection specialists, health care professionals and others whose primary duty is emergency response.

d. *Training*: Managers, supervisors, and employees in the CPR/AED program knowledgeable in their role.

e. *AED Placement*: Assessing the proper number and placement of AEDs and supplies.

### 5.10.5 Involvement in JSC's CPR and AED program

5.10.5.1 The following individuals shall be involved in JSC's CPR and AED program:

a. Managers must be committed to maintaining the AED equipment provided as part of commitment to maintaining a safe and healthful workplace and shall:

   (1) Assign a person to maintain the AED and associated equipment located in their facility. Nominally this person should be the primary or alternate facility manager.

   (2) Ensure the facility Emergency Action Plan includes the cardiac chain of survival and the location of any AEDs in the building.

b. Employees whose job *requires* certification in CPR or AED operation (e.g., Physician, Nurse, Paramedic, Fire Protection Specialist, Childcare Worker, Electrician) shall maintain training and certification through the AHA, American Red Cross (ARC), or National Safety Council (NSC).

c. Employee participation is needed to make JSC CPR/AED program a success. Employees may participate by:

   (1) Learning the risk factors and take steps to prevent cardiovascular disease.

   (2) Learning the signs and symptoms of heart attacks and immediately calling the emergency numbers if you or a co-worker experience heart attack symptoms.

   (3) Volunteering to be a lay rescuer by learning CPR and how to use an AED.

### 5.10.6 Who may perform CPR and use an AED

To perform CPR or use an AED, employees shall have a current certification by the AHA, ARC or NSC.

### 5.10.7 Placement of AEDs

5.10.7.1 JSC has an established AED program. You can find details about the AED program, including locations,

at:https://sashare.sp.jsc.nasa.gov/sd/SD3/SitePages/ClinicPrograms/JSC%20CPR%20AED%20Program.aspx. Occupational Health will decide future placement of AEDs and placement shall consider the following criteria:

a. Are more than 200 employees assigned to the building during normal working hours?

b. Do workers engage in activities that increase risk? (For example, on second or third shift when the JSC Clinic is closed, in exercise facilities, electrical, machine shops, printing, etc.)

c. Is the facility remote from the JSC Clinic or JSC Emergency Responders, such as Ellington Field or the Sonny Carter Training Facility?

d. Is this a multi-story building or a building with a configuration that may slow the Fire Protection Specialist or Emergency Medical Technician response?

### 5.10.8 CPR and AED training program

5.10.8.1 JSC offers free CPR and AED training with sign-up through SATERN. In the course catalog, search for "CPR AED (JSC)" or course "JSC-OHS-CPR" The training combines lecture, hand-outs, and hands-on manikin training and also includes a description of AEDs located throughout JSC. Classes are small in size and fill quickly so it is important you attend on the scheduled day.

5.10.8.2 The AHA, ARC, and NSC require training every two years to keep your card current.

5.10.8.3 Facility managers or their designees shall be trained to perform the maintenance check by Occupational Health.

### 5.10.9 Responsibilities for the JSC CPR and AED program

a. Occupational Health has overall responsibility for the formal CPR/AED program and shall:

(1) Assign the AED Program Physician, Manager and Coordinator.

(2) Develop operational protocols and procedures to be included in the JSC Emergency Preparedness Plan.

(3) Assist other organizations in developing specific programs.

(4) Train employees.

(5) Review and approve/reject requests for AEDs

(6) Audit AED maintenance, record discrepancies in SHETrak (Safety, Health, and Environmental Tracking System).

b. Facility Managers or their designees are responsible for maintaining the AEDs in cooperation with Occupational Health and shall:

(1) Inspect the AED and accessory bag weekly. Record the results of the inspection on the sheet provided.

(2) Report discrepancies to the JSC AED coordinator at the number listed at URL:https://sashare.sp.jsc.nasa.gov/sd/SD3/SitePages/ClinicPrograms/JSC%20CPR%20AED%20Program.aspx.

(3) Detailed instructions on AED maintenance, inventory and blank inspection sheets are found athttps://sashare.sp.jsc.nasa.gov/sd/SD3/SitePages/ClinicPrograms/JSC%20CPR%20AED%20Program.aspx.

### 5.10.10 Legal concerns

Most states, including Texas, have passed “Good Samaritan Laws” to protect those who, in good faith, administer emergency care, including using an AED at the scene of an emergency, from liability in civil damages unless you are willfully or wantonly negligent. This is covered in greater detail in the CPR and AED class.

### 5.10.11 if you actually perform CPR or use an AED

Following the administration of CPR or the use of an AED, the AED physician director shall review the incident with you. This review is intended to provide feedback to improve our program if necessary. Additionally, you will be offered an opportunity to schedule a stress debriefing with the Employee Assistance Office to discuss the event and patient outcome, and receive information on post-incident reaction management.

### 5.10.12 For more information on CPR and AEDs

a. JSC CPR/AED Program: https://sashare.sp.jsc.nasa.gov/sd/SD3/SitePages/ClinicPrograms/JSC%20CPR%20AED%20Program.aspx

b. American Heart Association: www. heart.org

c. American Red Cross: http://www.redcross.org

d. National Safety Council: www.nsc.org