



Advisory Circular

Subject: EMERGENCY MEDICAL
EQUIPMENT TRAINING

Date: 1/12/06

AC No: 121-34B

Initiated by: AFS-220
AAM-210

1. What is the purpose of this advisory circular (AC)?

This AC provides guidance regarding crewmember training programs (flight attendant training programs in particular) that incorporate Automated External Defibrillators (AED) and enhanced Emergency Medical Kits (EMK). The FAA expects and anticipates some variation among the training programs air carriers establish for crewmember emergency medical training. (Also see AC 121-33B, Emergency Medical Equipment.)

2. Does this AC supersede any existing ACs?

This AC supersedes AC 121-34A, Emergency Medical Equipment Training, dated May 9, 2003. It also relates to existing AC 120-44A, Air Carrier First Aid Programs (<http://www.faa.gov/avr/afs/cabinsafety/acidx.cfm>), which is also a good reference source.

3. What FAA regulations does this AC cover?

Title 14 of the Code of Federal Regulations (14 CFR) part 121, subpart X; part 121, appendix A. (<http://www.gpoaccess.gov/ecfr>).

4. Who should read this AC?

FAA aviation safety inspectors (cabin safety and operations), part 121 air carrier certificate holders, directors of operations, directors of safety, crewmembers, AED manufacturers and suppliers, EMK suppliers, as well as people involved in the development of air carrier procedures and training programs. This AC may also be valuable to people associated with operations under 14 CFR part 125, part 135, and subpart K of part 91 (fractional ownership programs).

5. What emergency medical equipment training must the certificate holder provide to all crewmembers?

All crewmembers must receive initial and recurrent training on the following:

- Emergency medical event procedures, including coordination among crewmembers.
- Location, function, and intended operation of emergency medical equipment.
- Recognizing EMK content. (This instruction for flight attendants would also need to include the requirement to coordinate with the Captain regarding what items might need to be replaced at the end of a flight if an EMK is used during a flight. All crewmembers must understand that EMKs and AEDs are “no-go” items and must be carried as indicated on the Minimum Equipment List.

6. What training must the certificate holder provide only to flight attendants?

In addition to the initial and recurrent training described in paragraph 5, flight attendants must receive the following:

- Initial instruction, to include performance drills, in the proper use of AEDs.
- Initial instruction, to include performance drills, in Cardiopulmonary Resuscitation (CPR).
- Recurrent training, to include performance drills, in the proper use of AEDs and in CPR at least once every 24 months.

7. Does the FAA require a standard curriculum?

- I No. The FAA does not require a standard curriculum or standard testing. Instruction should conform to national programs such as those offered by the American Heart Association or the American Red Cross. (For information about these national programs, contact the local chapters of these organizations.) The intent of the rule is to allow air carriers to incorporate training on these specific subjects into the context of their approved training programs. There is no requirement for separate curricula or separate knowledge tests.

8. Does the FAA require specified hours of instruction?

No. The FAA does not require a minimum number of program hours for emergency medical equipment and procedures training contained in crewmember emergency training or flight attendant recurrent training. Although times may vary between programs, the American Heart Association curriculum combining Basic Life Support (BLS) and AED training requires approximately 3½ to 4 hours as does subsequent recurrent training. BLS training may be conducted separately from the AED instruction or in a combined session. (It should be noted that BLS instruction does not necessarily need to lead to official BLS certification.)

- I Many air carriers conduct performance drills in CPR and proper use of AEDs during recurrent training once every 12 months, which is desirable. (Some air carriers may also conduct performance drills in BLS once every year.) Because the FAA does not want to deviate from

existing practice by establishing a separate training schedule for “hands-on” performance drills for recurrent training for flight attendants, the performance drills in CPR and proper use of AEDs are required for flight attendants once every 24 months.

9. What issues should we address in an emergency medical training program?

- A segment on personal procedures protecting against blood-borne pathogens is recommended. (This guidance is elaborated in AC 120-44A.)
- The need for CPR and an AED whenever the passenger is breathless, pulseless, and unconscious.
- The difference between a heart attack (myocardial infarction or MI) and cardiac arrest (ventricular fibrillation) and similar events (e.g., stroke).
- An introduction to the concept of the “Chain of Survival” (Access to Care, Early CPR, Defibrillation, Advanced Cardiac Care).
- The importance of practical CPR skills as a necessary part of care.
- Information regarding medications in the EMK (as discussed under paragraphs 6 and 7 of AC 121-33B) and what qualified health care professionals might use them for.
- Passenger-specific issues (e.g., when to discontinue resuscitative measures; ground transport issues; do-not-resuscitate orders and living wills; post-incident analysis and discussion).
- Protocols for responding to passengers when no onboard voluntary, professional medical assistance is available.
- The ability to contact and coordinate with ground-based medical care providers, if available.
- That no oxygen (including portable oxygen bottles, portable oxygen concentrators, compressed oxygen cylinders and aircraft oxygen systems) should be used within 10 feet of an AED at the moment the AED is being used to deliver a shock to a person.

10. What venue is most appropriate for conducting instruction?

Simulated AED practice scenarios should, to the greatest extent possible, take place in the cabin environment. This venue is most appropriate for drilling problems that may be encountered when flight attendants assist stricken passengers within the confines of an aircraft cabin.

11. Who should provide the instruction?

Training instructors who are certified in BLS instruction. If you need to find a certified BLS instructor, contact the local chapter of the American Heart Association or American Red Cross.

12. How many participants should be in a given session?

During the portion of training where there is a “hands-on” application of practical skills, we recommend no more than 15 students per instructor.

13. Is physician oversight necessary?

While close supervision by a physician is not necessary, it is advisable to have a physician oversee the training program to maintain minimum quality standards. In many cases, this physician may be the airline medical director; however, it may vary with different circumstances.

14. Who is covered under “Good Samaritan” protection?

The Aviation Medical Assistance Act of 1998 covers liability to the extent defined as follows (quoted verbatim from the Act):

“(a) Liability of Air Carriers. An air carrier shall not be liable for damages in any action brought in a Federal or State court arising out of the performance of the air carrier in obtaining or attempting to obtain the assistance of a passenger in an in-flight medical emergency, or out of the acts or omissions of the passenger rendering the assistance, if the passenger is not an employee or agent of the carrier and the carrier in good faith believes that the passenger is a medically qualified individual.

“(b) Liability of Individuals. An individual shall not be liable for damages in any action brought in a Federal or State court arising out of the acts or omissions of the individual in providing or attempting to provide assistance in the case of an in-flight medical emergency unless the individual, while rendering such assistance, is guilty of gross negligence or willful misconduct.”

Air carriers should address their employees concerning the company policy on the provision of medical assistance to passengers. While an employee who chooses to provide assistance may be protected under Federal law from claims from passengers, the company may or may not have a policy of providing legal protection. Employees also should understand that they may be subject to disciplinary action if found in violation of company policy. There is no obligation under Federal law to provide medical assistance to passengers. The FAA does not have the authority to require employees to provide assistance or to defend employees sued for acts or omissions in the performance of duties.

15. What is the FAA’s position regarding the air carrier and its agents choosing to offer medical assistance to passengers during critical phases of flight (such as during landing)? (For example, § 121.391 requires flight attendants to be located as near as practicable to required floor level exits during takeoff and landing.)

The goal of all FAA regulations is to maintain a safe flying environment for all passengers and crew. Emergency situations could occur in flight that may affect the ability of the crewmembers or the passengers to comply with FAA regulations, such as those that require them to be secured in a specific location. An example of such a situation is a flight attendant deciding to administer CPR to a passenger during landing. Air carriers should develop procedures regarding such situations and incorporate them into its crewmember’s manuals and training programs.

Procedures should address the airline's policy toward the following: expected crewmember performance; efficient communication and coordination among crewmembers; passenger briefing procedures (if needed); protocols for requesting assistance from medically qualified passengers (if needed); even distribution of flight attendants throughout the cabin; and, in the case of one flight attendant on board, procedures to ensure that the safest cabin environment possible is maintained.

16. What prompted requirements for emergency medical enhancements?

The Aviation Medical Assistance Act (the Act) of 1998 [Pub. L. 105-170, 49 U.S.C. 44701] directed the FAA to determine whether current minimum requirements for air carrier emergency medical equipment and air carrier crewmember emergency medical training should be modified. As directed in the Act, the FAA conducted a year-long data collection on death or near-death in-flight medical events. It revealed 188 total events resulting in 108 deaths (119 of these 188 total incidents were cardiac-related resulting in 64 deaths). For cardiac-related events on the aircraft, an AED was reported as "not available" for 40 events. An AED was available and used to deliver at least one shock in 17 separate events. From these events, four passengers were reported as having survived. Subsequent to the data collection, further investigation revealed that more passengers, and a flight crewmember, had also survived after having been shocked with an AED. Based on these events, it was determined that part 121 should be amended to require emergency medical enhancements, such as performance based training for flight attendants on the use of AEDs and CPR, enhanced EMKs, and AEDs.

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