U.S. Department of Transportation
Federal Aviation Administration

Advisory Circular

Subject: AIR CARRIER FIRST AID PROGRAMS
Date: 3/9/95
Initiated by: AFS-203
AC No: 120-44A
Change:

1. PURPOSE. This advisory circular provides guidance about first aid program resources, subjects, equipment, and pertinent regulations.

2. RELATED FEDERAL AVIATION REGULATIONS (FAR) SECTIONS.

a. FAR Part 91, Subpart A - General. Section 91.3.

b. FAR Part 91, Subpart C - Equipment, Instrument, and Certificate Requirements. Section 91.211.

c. FAR Part 121, Subpart G - Manual Requirements. Sections 121.133 and 121.137.

d. FAR Part 121, Subpart K - Instrument and Equipment Requirements. Sections 121.309 and 121.327-331.

e. FAR Part 121, Subpart M - Airman and Crewmember Requirements. Section 121.383.

f. FAR Part 121, Subpart N - Training Program. Sections 121.415-417 and 121.427.

g. FAR Part 121, Subpart T - Flight Operations. Section 121.574.

h. FAR Part 121, Appendix A - FIRST-AID KITS AND EMERGENCY MEDICAL KITS.

i. FAR Part 125, Subpart F - Instrument and Equipment Requirements. Section 125.207.

j. FAR Part 125, Subpart H - Airman and Crewmember Requirements. Section 125.271.

k. FAR Part 135, Subpart B - Flight Operations. Section 135.91.

l. FAR Part 135, Subpart C - Aircraft and Equipment. Sections 135.157 and 135.177.

m. FAR Part 135, Subpart H - Training. Section 135.331.

3. BACKGROUND. Information about possible first aid resources including a curriculum for first aid training and complete first aid training programs may be obtained by contacting various organizations including the American Medical Association, American Red Cross chapters, American Heart Association chapters, and hospitals. In addition, information about protecting employees from bloodborne pathogens and other sources of infectious diseases may be obtained from these sources and the Occupational Safety and Health Administration. Nevertheless, many people have requested first aid information specific to air carrier operations. This advisory circular provides information to assist air carriers in developing first aid programs which meet the needs of that air carrier's operations and may provide one means of complying with existing regulations.

4. DISCUSSION. Air carrier crewmember first aid programs should include first aid information in crewmember manuals and in any required emergency training. When addressing various aspects of first aid, the limited space on aircraft and the necessity for crew coordination throughout an occurrence should be stressed. First aid programs should include:

a. First Aid and Emergency Medical Equipment. Air carrier first aid programs and manuals should provide information about protection from bloodborne pathogens and treatment of illness and injuries. In addition, first aid programs and manuals should provide information about the locations, function, and operation of first aid and emergency medical equipment. They should also include methods to ensure that the contents of the first aid kit and emergency medical kit are complete. Procedures for replenishing used kits should be provided.

b. Use of Emergency and First Aid Oxygen. Air carrier training programs and crewmember manuals should include the location, function, and operation of emergency oxygen equipment. This should include methods to determine when supplemental and first aid oxygen equipment are ready for use, locations of all oxygen equipment, and procedures for administering oxygen. In addition, air carrier training programs and crewmember manuals should include the air carrier's policy and the FAR that prohibit smoking in the vicinity of oxygen use, and proper restraint of oxygen equipment when in use. Air carriers which use chemically-generated passenger supplemental-oxygen systems should include in their crewmember manuals and training programs information which is specific for these types of oxygen systems. This should include the heat-generating properties and the correct handling of the oxygen canisters.

c. The Handling of Illness and Injury. An air carrier's first aid program should provide information about protection of crewmembers from bloodborne pathogens (including use of barrier gloves), familiarization with the contents of the medical kit and the assessment of the severity and possible treatment of the medical problems listed below. This list also provides suggestions pertinent to some problems. However, neither the list nor the suggestions are all inclusive. Each air carrier should develop first aid programs which are appropriate to that air carrier's operations, equipment, and personnel. These programs should include information on the following:

(1) History and Assessment of individuals who are ill or injured. This information should be communicated to the flight crewmembers, any on-board medical assistants, and anyone offering medical assistance to the flight from the ground, and should be given to medical personnel who meet the flight.

(2) Lack of Breathing, Choking, Hyperventilation.

(3) Profuse Bleeding (including nosebleed).

(4) Shock, Unconsciousness, Major Allergic Response.

(5) Chest Pain.

(6) Cardio-Pulmonary Resuscitation (CPR), including use of available airway equipment. The material should address problems specific to the aircraft including movement of the person receiving CPR.

(7) Stroke.

(8) Seizures.

(9) Diabetic Emergencies.

(10) Childbirth.

(11) Abdominal Distress.

(12) Airsickness.

(13) Injuries to the Extremities.

(14) Injuries to the Skull, Spine, and Chest.

(15) Eye Injury.

(16) Ear Distress.

(17) Infectious Diseases/Conditions.

(18) Universal precautions against bloodborne pathogens (see Appendix A).

(19) Physical agents, which include the management of common injury situations such as minor burns caused by the spillage of hot liquids, in-flight fire/smoke situations, and situations where passengers and crew could be exposed to extreme conditions such as in a water landing. The treatment of chemical burns, smoke inhalation, and excessive heat exposure should be included.

(20) Hypoxia and proper use of oxygen, including reference to conditions that may be exacerbated by administration of oxygen.

(21) Special Communications Situations, which may include the elderly, the visually impaired, the hearing impaired, those with behavioral problems, and those who do not understand English.

(22) Drug and Alcohol Abuse which includes the different ways this may be manifested depending on the type of drug that has been abused.

d. Assistance.

(1) From Persons on Board. Each first aid program should provide a procedure for identifying medically qualified persons on board the aircraft. These procedures should list those persons who would be considered medically qualified. For example, medical doctors, nurses, emergency medical technicians, or first aid instructors could be listed.

(2) From Persons on the Ground. Many airlines have procedures which allow crewmembers on board the flight to consult with medical personnel on the ground. This practice is highly desirable. Air carrier manuals and training should provide guidelines to crewmembers about obtaining medical consultation from the ground. The information obtained through the medical history and assessment should be passed on to these medical personnel.

(3) Following the Flight. The pilot in command should use all the information available to determine the level of medical assistance needed when the flight arrives. Some of the information will be obtained through the medical history and assessment. The crewmembers on board the flight are the only people who have direct knowledge of the nature and severity of the medical problem; therefore, while the decision regarding the level of assistance needed may be made by consulting ground personnel, no one on the ground should downgrade the level of assistance requested by the pilot in command.

e. Medical Emergency Landing. First aid programs should provide specific guidelines which give information about when a medical emergency landing may be needed. This information should be covered during emergency training, should be included in the manual, and should also be provided in a "checklist" or some other easily-read format. It should be carried on the airplane either in the first aid kit or some other area easily accessible to the crewmembers. The guidelines should be specific and include medical emergencies such as suspected heart attacks, diabetic coma, low blood sugar conditions, unconsciousness, and profuse bleeding. It should be emphasized, however, that the decision to make a medical emergency landing rests with the pilot in command who will also have to consider the overall safety of the flight and operational requirements.

William J. White
Deputy Director, Flight Standards Service

APPENDIX A. BLOODBORNE PATHOGENS.

1. PURPOSE. The purpose of this appendix is to provide information about the types of material which could be included in a program to encourage awareness of and prevention of exposure to bloodborne pathogens (awareness program). This program, if given, should be part of the air carrier's emergency training and other information pertaining to first aid (first aid program) and should provide information to crewmembers about precautions to take when crewmembers believe they may be exposed to a bloodborne pathogen.

2. BACKGROUND. Certain pathogens can be found in the blood and other body fluids of infected individuals. These bloodborne pathogens may be transmitted when an individual is exposed to infected body fluids. The two most significant diseases caused by bloodborne pathogens are Hepatitis-B, which is caused by the Hepatitis-B Virus (HBV), and Acquired Immunodeficiency Syndrome (AIDS), which results from the Human Immunodeficiency Virus (HIV). Both of these diseases are dangerous, and even though there is only a slight possibility that crewmembers would be exposed, it is still important to provide them with information about the nature of bloodborne pathogens, which could cause these and other diseases. Such information can be obtained from a number of sources including local hospitals, doctors, state health departments, and the Occupational Safety and Health Administration.

The awareness program should provide material appropriate in content and vocabulary to crewmembers and the tasks they perform. The awareness program does not necessarily have to be part of a classroom presentation. Air carriers are encouraged to be creative in the presentation of the awareness program and may use various methods of presenting the material including computer-based training (CBT), video presentations, and written materials. Information about this program should be listed with other training information in the emergency first aid section of the air carrier's training program and should be contained in appropriate parts of crewmember manuals. Subjects which can be included in an awareness program include, but are not limited to, the following:

a. A general explanation of the epidemiology and symptoms of bloodborne diseases;

b. An explanation of the modes of transmission of bloodborne pathogens and the rationale for, and use, of universal precautions;

c. A description of the tasks and other activities that may involve exposure to blood and other potentially infectious materials;

d. An explanation of the use and limitations of practices that will prevent or reduce exposure, including work practices and proper use of gloves;

e. Information on the types, location, removal handling, proper use and/or disposal of gloves;

f. Information on the Hepatitis-B vaccine, including information on its efficiency, safety, and the benefits of being vaccinated; and

g. Information on the appropriate actions to take and persons to contact when crewmembers have come in contact with body fluids (see paragraph 2(b)).

*U.S. G.P.O.:1995-387-549:113

U.S. Department
of Transportation

**Federal Aviation
Administration**

800 Independence Ave., S.W.
Washington, D.C. 20591

**FORWARDING AND RETURN
POSTAGE GUARANTEED**

Official Business
Penalty for Private Use $300

BULK MAIL
POSTAGE & FEES PAID
FEDERAL AVIATION
ADMINISTRATION
PERMIT NO. G-44