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Comparative Analysis: EMS/ Rescue Response to Six Air Crashes

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Introduction: An analysis was conducted of the emergency medical and rescue response to six airliner crashes that occurred in the United States during 1986–1992. The airliner crashes selected for the study all had a high percentage of injured survivors, trapped victims, and also fatal injuries.

Objective: To determine if lessons might be learned from each crash that would assist other localities in preparation for multiple-casualty, airliner crash incidents.

Methods: The analysis included a detailed review of reports by the United States National Transportation Safety Board (NTSB), and interviews with local officials including on-scene command officers, emergency medical and rescue team members, along with emergency and trauma physicians and hospital officials.

Results: The analysis resulted in the determination of the magnitude of response and degree of EMS/Rescue effectiveness for airliner crashes that occurred as follows: 1) Denver, Colorado, November 1987; Continental Airlines McDonnell-Douglas DC-9; 2) Kahului, Maui, Hawaii, April 1988; Aloha Airlines Boeing 737; 3) Sioux City, Iowa, July 1989; United Airlines McDonnell-Douglas DC-10; 4) Cove Neck, New York, January 1990; Avianca Airlines Boeing 707; 5) Los Angeles, California, February 1991; US Air Boeing 737 and Skywest Swearingen Metroliner (collision); and 6) Flushing, New York, March 1992; US Air Fokker F-28. Results of the comparative analysis showed differences in the adequacy of EMS and rescue manpower, equipment, triage, treatment of patients (basic and advanced life support), extrication of trapped victims, transport by ground and air vehicles, radio and other forms of communications, incident command posts, and related parameters.

Conclusions: Important lessons have been uncovered from this comparative analysis of six airliner crashes that show a need to modify and improve EMS and rescue procedures.

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Avianca Flight 52: Lessons Learned

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Objective: To describe the crash of Avianca Flight 52 and res-

cue of victims on 25 January 1990, as well as lessons learned which may improve future rescue efforts.

Methods: Direct observations, videotapes of rescue operations, disaster critiques, and reports of hearings and courtroom deliberations were analyzed.

Results: Avianca Flight 52 crashed after running out of fuel. Authorities investigated a misunderstanding among the flight crew and air traffic controllers regarding the fuel supply. First-responders to the scene attended to victims. The crash became a closed disaster after initial failure to establish a perimeter and subsequent convergence clogged the narrow roadways. Nearly all victims were transported to local hospitals. Rescuers were credited with an outstanding effort under adverse conditions.

Conclusion: Wide distribution of an inexpensive disaster kit to all EMS, police, and fire response vehicles is recommended to guide initial actions of first responders at a disaster scene including early perimeter control. With air transportation, disaster plans should include distribution of patients to more distant specialty hospitals to avoid overloading local hospitals. Standardization of terminology for low-fuel situations may prevent similar disasters.

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First Aircraft Accident Drill in Minister Pistarini Airport

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Objective: To describe the first accident drill developed in Minister Pistarini International Airport.

Methods: The exercise took place at 1400 h, on 14 and 15 December 1992 at the largest airport in Argentina (45 years after it opened). The exercise was planned to improve and train personnel in preparation for accidents that occur at the airport. The mock accident required treatment of 68 survivors and two fatalities at a mock crash site on runway N-11, one of six airport runways. The exercise depicted an air crash using a passenger bus to simulate a piece of fuselage. Pieces of debris were placed along the last 400 meters of the runway. The drill involved several different personnel departments at the airport: medical services, firefighters, accident prevention, operations, the Zonal Ezeiza Hospital, and the Buenos Aires Province Emergency Direction.

Results: All of the victims were carried to the stabilization area after initial classification in the field. This area was established,