

## **NON-FATAL INJURIES IN AIRCRAFT CRASHES IN ALASKA, 1991-1999**

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### **ABSTRACT**

Occupational fatalities and injuries associated with aircraft crashes are concerning, particularly in Alaska where a disproportionate number of all U.S. aircraft crashes occur. Between 1990 and 1999 there were 915 commuter and air taxi crashes in the U.S. of which 234 (26%) were fatal, resulting in 708 deaths. Alaska accounted for 357 (39%) of the total U.S. crashes, 55 of which were fatal (24% of the U.S. fatal crashes), resulting in 149 deaths (21% of all U.S. deaths). The survivability of aircraft crashes in Alaska is dependent on many factors including post-crash fire, environmental conditions such as crash into body of water, off-airport location of crash, etc. If, however, the occupants survive the crash long enough to receive medical treatment, the survivability of the injuries sustained no longer depends as significantly on the conditions associated with the crash itself, but the severity of the injuries sustained. Valuable information regarding the prevention of fatalities can be concluded by surveillance of these non-fatal injuries and the forces that cause them. Appropriate intervention for non-fatal injuries can therefore not only reduce the currently survivable aircraft crashes, but also will likely prevent or lessen potentially fatal injuries. This descriptive study of the non-fatal injuries in aviation as reported in the Alaska Trauma Registry (ATR) for the period of 1991-1999 suggests that of the 54 non-fatal injuries evaluated in this report, 40.5 injuries (or 75%) would have been prevented if all aircraft were equipped with shoulder harnesses or seat restraints and all occupants used them correctly, giving an improvement of prevention or reduction of injury 714%. The study also provides additional recommendations for the prevention of these types of injuries such as incorporation of helmet use.

