



NTSB National Transportation Safety Board

Office of Highway Safety

Survival Factors

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Survival Factors Issues

- Emergency Notification
- Emergency Response
 - Medical transport
 - EMS plans and protocols
- Occupant Protection

Emergency Notification

- Accident occurred at 8:02 p.m.
- Initial 911 call lost at 8:04 p.m.
- Mistakenly believed the call referenced an earlier reported accident
- Second 911 call into dispatch at 8:38 p.m.
- Initial arrival by first responders at 8:56 p.m.

Emergency Notification

- Approximately 40% of all calls to 911 call centers are made on wireless telephones
- 80% of Americans subscribe to wireless service
- Demonstrates need for reliable wireless communication capabilities

Emergency Notification Summary

- Federal coordination of State EMS programs is the responsibility of FICEMS
- FICEMS should develop plan for wireless communication coverage along high-risk rural roads and along rural roads with substantial large bus traffic

Emergency Notification Summary

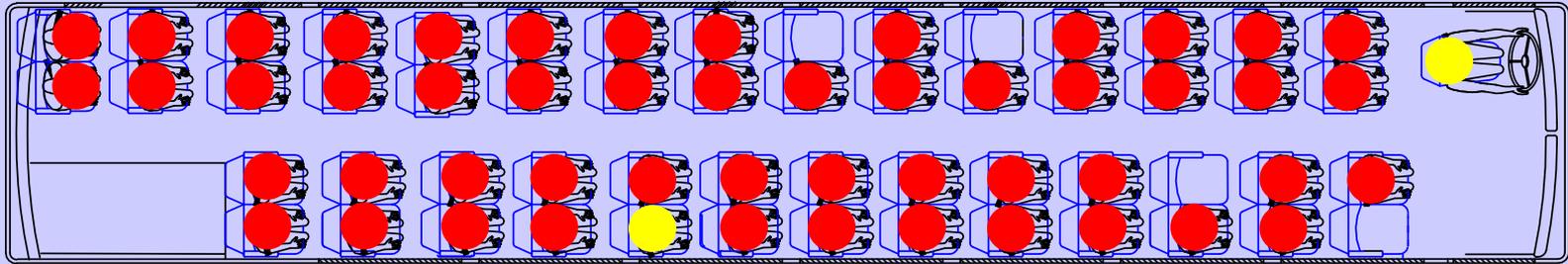
UMA and ABA should

encourage members to use mobile cellular amplifiers or satellite-based devices to communicate emergency events

Emergency Response

- San Juan County—8 ambulances, 1 transport ambulance, 3 vans
- Navajo Nation—4 ambulances
- Additional mutual aid support
 - Moab-Grand County EMS
 - St. Mary's Hospital and Mesa County, Colorado EMS
 - Southwest Memorial Hospital
 - Combined supplied 7 ambulances

Emergency Response - Ejections

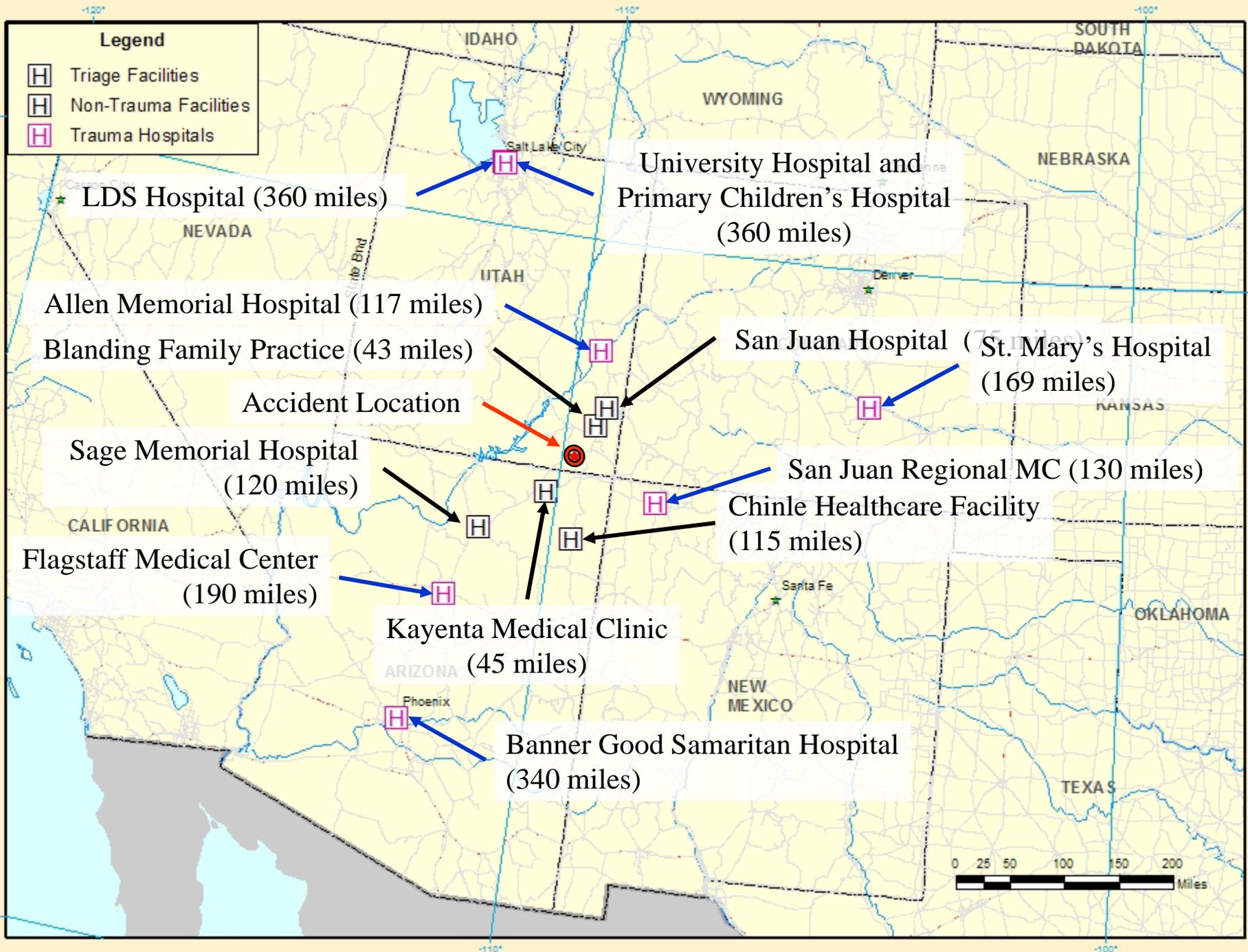


● - Not ejected

● - Ejected

Emergency Response-Injuries

- 9 fatalities
- 44 injuries
- Treated at 12 hospitals and medical centers, and one clinic



Emergency Response Summary

- First ambulance arrived almost 1 hour after accident; last ambulances arrived 4 hours after accident
- Assistance involved medical facilities in four states
- No medevac helicopter services available, causing extended response times due to travel distances

EMS Plans and Protocols

- Poor cellular telephone communication
- Medevac response limitations
- No mass casualty incident plan for transportation-related events

EMS Plans Summary

No contingency plans for situations when medevac services cannot respond

EMS Protocols Summary

FICEMS should

develop guidelines for EMS response
and provide those guidelines to the
States



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Occupant Protection

- Protection system should include roof strength, window glazing, seat strength, and restraints and their anchorage strength
- U.S. motorcoaches not required to have occupant protection systems because no standards exist

Occupant Protection

- Safety Board's 1999 Bus Crashworthiness Special Investigation
- Recommendations made to NHTSA
- 10 years later and still no Federal regulations or standards



Occupant Protection

- From 1998 to 2008, the Safety Board has investigated 33 motorcoach accidents involving 256 passenger ejections
- NHTSA's 2007 Approach to Motorcoach Safety

Summary

- NHTSA is making progress
- NHTSA has delayed motorcoach safety improvements
- Reclassify 1999 recommendations
 - Develop and require performance standards for occupant protection systems
 - Develop and require performance standards for roof strength



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