Abstract

A growing challenge to acute care providers in the field is the identification of those crash victims who suffer from time critical injuries. Improved safety systems in motor vehicles are protecting crash victims from many of the injuries that are recognizable from physiological responses making the detection of residual injuries more difficult. The emergence of Automatic Crash Notification (ACN) Systems provides the ability to rapidly determine the location of motor vehicle crashes. When a crash occurs that is severe enough to cause injuries, the ACN system automatically transmits GPS position data to a telematics service provider.

The exact location of the crash is immediately determined by the service provider who, in turn, notifies the closest rescue center (this link has not been made to air medical transport providers. ACN systems have the potential to greatly reduce notification time and improve the accuracy of location data transmitted to rescue teams. Much of the information used to deploy safety systems would also be useful in determining the risk of injury to occupants. The information includes a measurement of the crash severity such as the change in velocity (delta V) during the crash and the direction from which the vehicle was impacted.

The objective of this pilot project will be to look at the feasibility of integrating ACN data into an integrated air medical transport dispatch and clinical information management system. Previous studies have prioritize the variables that could be transmitted with an ACN (Automatic Crash Notification) signal with the purpose of assessing these variables to assist in early identification of those occupants with time critical injuries requiring early activation of air medical resources.

The objective of this project will be to develop an application provider interface (API) with an ACN telematics provider to a large integrated information management system with the purpose of enhancing early activation of air medical providers to appropriate time critical injuries. To accomplish this a technical interchange meeting, data mapping, and an entity relationship diagram must be created. Data definitions must be set and specific outcome data must be identified. Data sharing agreements must be negotiated and engineering design must be planned. This is an infrastructure-building project that is necessary to study the linkage between ACN data and air medical transport services. Our pilot project will link air medical transport data to this emerging safety technology.