

Priority Level Three: Emergency Medical Services

Washington's Emergency Medical Services and Trauma Care (EMSTC) System (or EMS) has contributed to a steady decrease in the number of motor vehicle related deaths. First, by providing critical care as soon as possible after an injury, EMS is helping reduce deaths and serious injuries. The minutes directly following a traumatic injury are often critical to saving lives or minimizing the long term effects of injury; timeliness and clinical expertise are critical factors in the success of post trauma care.

In addition to the minutes immediately following an injury, a patient's success is dependent on other important facets of trauma care, including prevention activities, hospital care, and rehabilitation resources. Each of these components work together to reduce death and disability of injured people throughout Washington.

Washington's trauma care system strives to assure that the "right" patient arrives at the "right" facility in the "right" amount of time. In a national evaluation of the effect of trauma center care on mortality, MacKenzie and colleagues discussed the importance of triaging severely injured patients to the highest level trauma center. The results of this study underscored the fact that overall risk of death is "significantly lower when care is provided in a trauma center than when it is provided in a non-trauma center." This highlights the importance of a well-coordinated system that ensures severely traumatized patients arrive at the most appropriate level of trauma center in the most optimum time span.

In order for the EMS system to continue its successes, we must strive to improve the following: analysis of response time data; communication between response agencies; use of medical dispatch protocols in every EMS dispatch center; and statewide implementation of GPS technology to ensure better response times. The ability to continue to build partnerships and improve data systems is also important to continued success.

Response Time. Thirty to forty percent of all trauma deaths occur within hours of the injury. Many of these deaths are considered preventable when an effective, organized trauma system exists. It is important to analyze the response times

of pre-hospital resources to assess their ability to respond to trauma related incidents in a timely and efficient manner. Washington Administrative Code (WAC) identifies specific response time criteria within four geo-classifications (urban, suburban, rural, and wilderness). EMS agencies must meet these criteria on 80% of all calls. Timely response to trauma scenes equates to faster hospital access for major trauma patients. Therefore, increasing the percentage of response time compliance by pre-hospital resources will equate to improved outcomes. In order to adequately assess pre-hospital response times, a central data repository must be developed and pre-hospital data gathered and analyzed to appropriately assess system efficacy.

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Integrated Interoperable Communications. During any response to a serious injury collision, agencies representing EMS, Fire Service, and Law Enforcement will be engaged. Integrated interoperable communications - the ability to easily and effectively communicate between response agencies - is a challenge and the economic as well as technical barriers to communications must be addressed.

Sophisticated communications systems allowing response personnel to effectively communicate are essential to successful EMS response systems. A comprehensive communications system provides EMS personnel with access to medical direction and additional resources that may be required at a trauma scene. Additionally, an effective communications system allows responding personnel to coordinate scene management activities. The ability to communicate with responding resources, both on the ground and in the air, assures rescuer safety and efficient preparation of the patient for transport. Responding personnel must have

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the ability to communicate between each other as the scene unfolds.

Medical Dispatch Protocol. The use of medical dispatch protocols is an important part of the EMS response, allowing 9-1-1 dispatchers to provide instructions to citizens who are on-scene at a serious injury collision before the arrival of emergency responders. Currently, communication centers throughout the state vary in the use of medical dispatch protocols. The level of sophistication of these protocols varies from computerized medical dispatch triage protocols to minimal call screening using no formal medical dispatch program. The disparity in the level and use of these essential protocols lends itself to inconsistent deployment of EMS resources, causing these resources to be over- or under-used. The EMS system in the state should pursue use of consistent medical dispatch protocols in every EMS dispatch center.

Global Positioning Satellites. Global Positioning Satellites (GPS) will reduce EMS response times to incident scenes by giving EMS responders the exact location of a motor vehicle collision and the most appropriate and rapid route to the scene. Mobile data terminals included with on-board GPS systems allow dispatchers to provide responding personnel with important information about the incident via computer. While

increasingly prevalent in some urban areas of the state, most if not all of the rural areas of the state lack this technology. Use of this technology will assure better statewide response times.

Partnership. Washington's EMS system has been built upon broad consensus among a divergent group of health care professionals and industry experts. These groups have continuously worked to address the complex political, economic, logistical, legal and clinical issues associated with trauma care in the state. Addressing the challenges in a collaborative approach will allow the EMS system to continue reducing the number of fatalities and long-term affects of trauma related to motor vehicle crashes.

Data Driven. Developing forward thinking strategies and making decisions based on empirical data is critical to the continued success of the EMS system in Washington. Therefore, any goals and performance measures should incorporate the gathering, analysis and archiving of data related to EMS and trauma incidents. This evidence based focus will ensure that EMS realizes its full potential and continues to favorably impact the outcomes of injured people in the state.

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Strategies to Enhance Emergency Medical Capabilities to Increase Survivability

3.5.A Reduce injury deaths and reduce injury hospitalizations

3.5.A1 Ensure all pre-hospital EMS personnel receive adequate trauma training through Ongoing Training and Evaluation Programs (OTEP). (P)

3.5.A2 Ensure efficient and adequate distribution of Level 1 and Level 2 Designated Trauma Centers. Increase the number of Level 2 trauma centers in the state, especially in eastern Washington. (P)

3.5.A3 Ensure that all major trauma patients are transported to the highest appropriate level of designated trauma center within a 30 minute transport. (P)

- Identify funding strategies that assist air medical services in filling gaps in coverage for emergency air medical response as identified in the state EMS and Trauma System Plan.

3.5.A4 Increase the percentage of EMS on-scene arrival responses that are within state requirements. (P)

3.5.A5 Ensure adequate and efficient distribution of pre-hospital EMS resources at all levels (aid and ambulance) according to evidence-based EMS and Trauma State and Regional Plans. (P)

3.5.A6 Promote the use of a computerized system of Emergency Medical Dispatch protocols including pre-arrival instructions in all EMS communications centers in Washington State. (P)

3.5.A7 Ensure that all EMS communications personnel are trained in emergency medical dispatch methods to ensure appropriate utilization of available EMS resources. (P)

3.5.A8 Encourage use of GPS technology by EMS agencies throughout the State. Fund GPS units for all 'first responders'. (E)

3.5.A9 Assure that seamless communications capabilities between EMS, law enforcement, and fire service agencies are achieved through interoperability. (P)

3.5.A10 Expand the Comprehensive Hospital Abstract Reporting System (CHARS) to include emergency department data to promote assessment of EMS system performance and enhance injury surveillance capabilities. (P)

3.5.A11 Improve enforcement and public understanding of 'move-over' law.