

Review of the SNHD Trauma Center System  
Office of Emergency Medical Services and Trauma System  
Division of Community Health  
Southern Nevada Health District  
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## **Introduction**

The Southern Nevada Health District (SNHD) is the lead public health agency responsible for oversight of the District's Trauma and Emergency Medical Services Response Network. With the recent economic turmoil, Clark County has borne a heavy burden that has fallen upon the public health and medical communities. During the past 15 years, the district was one of the fastest growing areas in the United States. The community built an outstanding EMS and Trauma System, but the recent economic downturn has threatened the funding base for many services, and we are concerned that we could see serious adverse impacts that affect our existing EMS and Trauma System.

In anticipation of the need to make future decisions about our EMS and Trauma System, including how to evaluate new proposals from hospitals to become designated as trauma centers and hospitals that might propose expanding their services and applying to be a higher level center in the future, we conducted an evaluation of the existing system and established an ad hoc Expert Trauma Center Advisory Committee to consult with the Office of Emergency Medical Services and Trauma System (OEMSTS).

## **Background**

According to Clark County Trauma System Regulations, the Office of Emergency Medical Services and Trauma System (OEMSTS) has the responsibility to "establish criteria which are consistent with state and national standards to determine the optimal number and level of Centers for the Treatment of Trauma or Pediatric Centers for the Treatment of Trauma to be authorized based upon the availability of resources and the ability to distribute patients to ensure timely access to definitive care." (Section 200.000 VII)

The District Board of Health, based on recommendations from the OEMSTS, "shall determine the needs of the Clark County trauma system based on evidence obtained through continuous evaluation of the system assessing the volume, acuity and geographic distribution of patients requiring trauma care; and the location, depth and utilization of trauma resources in the system." (put in Citation)

## **Methods**

The OEMSTS reviewed trauma field triage criteria transport data and Clark County trauma registry data. The data were loaded into GIS software for mapping and analysis. We analyzed transport times to each facility and an aggregate total for the system.

## Results:

- Decrease in population with the downturn in the economy
- Decrease in trauma cases (see attached chart “Total Trauma registry Patients 2007 – 2009”)
  - 13% decrease from 2007 to 2008
  - 5.8% decrease from 2008 to 2009
- No evidence of delay in access to care (see attached “Aggregate Trauma Centers Transport Times”)
  - Over 92% of all transports are 30 minutes or less
  - Over 73% are 20 minutes or less
- Decreased number of seriously injured trauma patients due to vehicle occupant safety engineering (see attached “TFTC Transports by Category” and “TFTC Transports by Disposition”)
- Decrease in construction activities in Southern Nevada

## Discussion:

Most important factors to consider are:

- Number of trauma cases
- Severity of trauma cases
- Transportation time
- Changes in population
- Quality of care

After review of available data, consensus from our 3 outside experts:

- Existing system is serving the community well
- Evidence is strong, clear, and consistent
- No evidence of lack of access to trauma care
- Transportation times are good
- More capacity in the existing trauma care system than cases

Additional important factors:

- Establishment of a level 3 trauma center is an expensive undertaking, and the most important component to the increased expenses is the requirement for 24/7 physician coverage, especially for general surgeons and orthopedists
- 24/7 coverage is a requirement for trauma center designation, regardless of the number of cases transported to the center.
- There are no established, objective standards to determine the number and level of trauma centers to serve a community.

- In 2004, the community was being served by one, level 1 trauma center, UMC
  - At the time, the population was about 1.6 million, and 94% of all transport times were <30 minutes
  - One factor that was weighed in the 2004 report was the lack of surge capacity and the 4% annual growth rate in population of the community
  - Based on generally accepted practice in the United States, an average is to have one trauma center per 1 million population
  - With the current loss of population and reduction in trauma cases and severity, there is ample capacity in the existing system
- Based on the analysis of the trauma cases, there are not enough cases to justify establishing a new trauma center in the community on economic grounds or in terms of need
  - It is important not to harm the existing centers, especially UMC
  - It will be important to monitor the performance of the trauma system in the future, especially when the population again expands
  - It is not clear what impact health care reform legislation will have on the community and how it may impact on the trauma system
  - It will be important to monitor the quality of care in the future, and the MAB is an appropriate group to do so

The expert panel did not feel there were any anomalies in the transport times or in the patterns of patient delivery to trauma centers in Clark County. Based on the down-turn in the economy, the expert panel was encouraged by the existing trauma centers continued commitment to providing trauma care in the community. The system seems to be working well and there is quality leadership.

It is reasonable and prudent to recommend suspending any new trauma center designations for a 2-year period and to monitor the system performance and population growth. Based on evidence of access, quality, and cost, decisions on future needs for trauma centers and levels can be made to insure preserving the existing system and expanding it when needed to protect the community.

### **Recommendation**

After careful consideration, we recommend that the SNHD not accept applications for additional trauma center designation for a period of two years. The SNHD will conduct an annual review of the relevant data. When conditions indicate that expansion or contraction of the system would benefit trauma care, the moratorium for applications for trauma center designation can be lifted.