Identification of the Leading Candidate to Become a Level II
Trauma Center in Solano County
Final Report and Recommendations

Presented to:
Solano County Emergency Medical Services Cooperative (SCEMSC)
Board of Directors

Presented by:
American College of Surgeons – Committee on Trauma
Trauma Systems Evaluation and Planning Committee
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Background

Phase I

The American College of Surgeons (ACS) was contracted by the Solano County Emergency Medical Services Cooperative (SCEMSC) board to develop recommendations with corresponding evidenced-based rationale and justification as to whether a Level II trauma center in Solano County should be developed, and whether it could be sustained. During the first phase of the project, the ACS conducted an inventory of the trauma care resources that currently serve Solano County, assessed the trauma center and trauma system resource capabilities, and analyzed data regarding injury deaths.

Based on the analysis of data from all sources, the ACS project team reached the following conclusions:

- Given its current population and existing injury patterns and volumes, specifically including head injuries, Solano County would benefit from a capable Level II trauma center. This would result in:
  - More timely access to higher levels of trauma care
  - Fewer out-of-service or position stresses on EMS services
  - Financial assets in the local health care community
  - Closer proximity for injured patients to family and social support networks

- The selection of the hospital to become a Level II center should be based on a competitive process. The primary selection determinant should be the demonstration of quality and sufficiency of existing resources to attain Level III and subsequently Level II verification from the ACS, coupled with a detailed plan for the development and sustainment of a viable neurosurgical program with commitment to trauma call.

- The selection process (phase II) should be based on detailed tools and processes, including:
  - A formal application tool and process
  - Technical assistance at the RFP pre-bid meeting
  - The development and application of an evaluation tool
  - The selection of an SCEMSC task group charged with site selection (as the process evolved, the SCEMSC task group became known as the Independent Review Panel [IRP])
  - Expert guidance and facilitation of SCEMSC task group review/decision-making process
  - A transparent decision making process based on the findings

Phase II

Once the SCEMSC board accepted the recommendations concerning the need for a Level II trauma center in Solano County, the SCEMSC and ACS extended their existing contract to outline the process that would be implemented to identify the hospital recommended to become the Level II trauma center.
Goal

The goal of phase II was to provide the SCEMSC board with an objective analysis of the capabilities of each applicant organization along with other factors including geography and transportation resources in order to identify the facility that would best meet the needs of the County.

Methods

Request for Proposal (RFP) Developed

The project team from the ACS began work immediately on the request for proposal (RFP), relying heavily on team members familiar with proposal development processes generally and in California, specifically. The RFP underwent several iterations of development and review by the ACS team and between the ACS and SCEMSC teams. When the RFP was determined to be complete, the ACS presented it to the SCEMSC on April 11, 2013. SCEMSC subjected the RFP to a thorough internal and legal review.

Timeline

Concurrent with the development of the RFP, a process timeline was developed for inclusion in the RFP. The timeline was:

- Request for Proposal Presented to SCEMSC – April 11, 2013
- Proposal Distributed – April 22, 2013
- Proposer RFP Question Submission Deadline – no later than noon, May 24, 2013
- Mandatory Proposers Conference – June 17, 2013
- Proposal Submission Deadline – no later than 3:00 pm, July 15, 2013
- Site Visits – August 15-20, 2013
- Announcement of Recommendations – October 10, 2013
- Deadline to File Protest – Due no later than noon, October 21, 2013
- Solano Public Health Decision on Appeals – October 31, 2013
- Contract Negotiations – November 1-20, 2013
- Preliminary Designation – November 20, 2013
- Level II Trauma System Start Up – November 21, 2013
- Permanent Designation – July 1, 2015†

† Contingent on successful verification by the American College of Surgeons

RFP Distributed

The RFP was distributed to interested parties on April 22, 2013.
Questions/Clarification

Questions about the RFP were accepted until May 24, 2013. These questions were addressed at a mandatory bidder’s conference on June 17, 2013.

Application/Submission

Two applicants, NorthBay Medical Center (Fairfield) and Kaiser Vacaville Medical Center (Vacaville), submitted a letter of intent and proposer’s fee on or before June 24. Proposals were received from both applicants prior to the July 15, 2013 deadline.

Evaluation Tool

Concurrent with the development of the RFP, the ACS project team adapted and developed an evaluation tool to assist the Independent Review Panel members in their evaluation of the applicant medical centers. The evaluation process included analysis of the two RFPs, as well as the on-site verification and review process.

The evaluation tool had the following seven sections:

Facility Measures

This section was built upon the 2006 Health Resources and Services Administration (HRSA) document, Model Trauma System Planning and Evaluation, which includes a Benchmark, Indicator and Scoring process. The 113 indicators contained in that document are meant to measure both the maturity of the trauma system as well as the integration of the trauma centers within the system. While most of the 24 indicators used in the Facility Measures section came directly from the HRSA document, several were customized from other sources to more clearly indicate the current state of trauma system/center development in Solano County. Each indicator had a five-point semantic differential scale (modified Likert item), which was scored independently by each IRP member. The language used in each semantic differential varied and was specific to the indicator. The indicator scores were summed to achieve the total score for the section.

Resource and Operations Standards for Level II Trauma Center (Appendix 4 from RFP)

This section contained 48 items (including sub-items) that described the facility and its capabilities. It included general descriptions of various programs and attributes of the facility. This section was scored on a static semantic differential rating scale with individual scores reflecting the following:

- 1 = not addressed,
- 2 = partially addressed: inadequate description/documentation,
- 3 = fully addressed: adequate description/documentation, and
- 4 = fully addressed, excellent description/documentation.

The item scores were summed to achieve the total score for the section.
Level II Trauma Center Minimum Standards (Appendix 5 from RFP)

The minimum standards section contained 110 items that virtually paralleled the required elements contained in the RFP. This section focused on the personnel and processes within the facility. Again, a static semantic differential was employed with individual item scores reflecting the following:

- 1 = non-compliant, unlikely to attain compliance within 12 months,
- 2 = non-compliant, likely to attain compliance within 12 months,
- 3 = non-complaint, likely to attain compliance within 6 months, and
- 4 = fully compliant.

The item scores were summed to achieve the total score for the section.

Declarative Statements (Appendix 6 from RFP)

This section contained 14 items that were assurances from the applicant that they would agree to fulfill various obligations as a trauma center. These included such items as agreeing to accept all injured patients and providing access for prehospital personnel for training purposes. Again, a static semantic differential was used with the following discriminators:

- 1 = not addressed,
- 2 = partially addressed: inadequate description/documentation,
- 3 = fully addressed: adequate description/documentation, and
- 4 = fully addressed, excellent description/documentation.

The item scores were summed to achieve the total score for the section.

Statements of Commitment to Perform and Fulfill Responsibilities Arising From Designation (Appendix 7 from RFP)

This section confirmed the presence of various attestations required in the RFP. This section included 14 signatures or other attestations with the measurement being a dichotomous variable of “present” or “absent.” One point was assigned to each “present” and summed for a total section score.

Data Requirements (Appendix 8 from RFP)

This section allowed each IRP member to evaluate the quality of data gleaned from the facility’s trauma registry, and to confirm that trauma registry data were being used to inform performance improvement and patient safety efforts. The 36 items were evaluated using a dichotomous variable of “present” or “absent.” One point was assigned to each “present,” and summed for a total section score.

Required Attachments (Appendix 9 from RFP)

The final section represents required documentation or various configuration or response requirements contained in the RFP. These included such items as the current surgical call schedule and confirmation of Joint Commission accreditation. The dichotomous
“present” or “absent” variable was, once again, employed as the most realistic measure of compliance. One point was assigned to each “present,” and summed for a total section score.

Selection of the Independent Review Panel (IRP) Members

The RFP noted that “The proposal review process will be conducted by a team of individuals called the Independent Review Panel (IRP). These individuals will be experienced in the implementation and operation of trauma services, trauma centers, and trauma care systems and who work outside of the County of Solano and, when practical, outside of the State of California.”

The membership categories were described in the RFP and were defined as: trauma surgeons, an emergency physician, trauma nurse coordinator (trauma program manager), prehospital care provider, a local department director of a health or emergency management agency, and an EMS agency administrator.

The ACS provided SCEMSC with a list of potential IRP members based on the following criteria:

1. Expertise in trauma center/systems
2. Demonstrated ability to collaborate with other professional colleagues
3. Absence of actual or perceived conflicts of interest with either health care system, institution, or key personnel
4. No previous or current affiliation as a verification program reviewer for the ACS (because the ACS will eventually be asked to verify the successful bidder)

The potential IRP members were vetted a second time by SCEMSC staff to ensure that they had sufficient qualifications and no known conflicts of interest. The team members entered into direct contracts with SCEMSC to complete the independent review, involving both analysis of the RFP and the on-site review process.

Trauma surgeons:
   Robert N. Hurd, MD, FACS – Montana
   Joel W. Schaefer, MD, FACS – Colorado

Emergency physician:
   Laurie Romig, MD, FACEP – Florida

Trauma nurse coordinator (trauma program manager):
   Ray Coniglio, RN, MSN – Colorado

Prehospital care provider:
   Fergus A. Laughridge, AEMT, CPM – Nevada

Local department director of a health or emergency management agency:
   Jolene R. Whitney, MPA – Utah

EMS agency administrator:
   Myra Looney Wood, RN, BSN, MBA – Arkansas
Because of the significant expertise that each IRP member represented, each reviewer was assigned specific areas of focus for evaluation and to lead group discussions during the evaluation process. For example one of the surgeons was asked to lead the discussion in the operating room, one of the nurses was asked to focus on emergency department nursing, and so forth.

The ACS provided a facilitator to assist the IRP. Her role was to facilitate discussion prior to each of the site visits to ensure that questions or clarification needed after the proposal review were assigned to one or more IRP members for follow-up during the site review. She also facilitated the IRP discussion following the site visits so that information gleaned by one or more members of the IRP was shared with all IRP members. Following the discussions, each IRP member individually reviewed, finalized, and scored all items. Finally, the facilitator recorded the aggregate section and total scores from each of the IRP members.

ACS Facilitator:
   Jane W. Ball, DrPH, RN, CPNP

Dr. Ball is well qualified as a group facilitator and is knowledgeable in trauma systems, trauma centers, and pediatric emergency care. Although she is a consultant to the ACS, she does not review trauma centers as part of the verification program.

Orientation/Training

Each member of the IRP received copies of the evaluation tool concurrently with their receipt of the RFP. Conference calls were held to discuss the use of the tools, the rules concerning completion prior to arrival, the intent and process of the site visits and other details. All IRP members participated in the calls.

Independent Scoring

Each member of the IRP was asked to independently score both proposals prior to arriving for the site visits. This step was intended to encourage each IRP member to focus on the information provided in the proposal rather than reliance on information shared during the facility visits. They were asked to identify those areas of each proposal response that needed clarification or validation during the site visit.

Site Visits

The range of site visits dates was provided in the RFP as August 15-20, 2013. The final selected review dates were August 19-20, 2013. Each facility was visited for 1 full day. The order of hospitals visited was determined by a coin toss.

A detailed agenda was developed prior to the team’s arrival. The agenda was used to ensure that each IRP member had the opportunity to gather the required information for objective analysis and scoring. Identical meeting and department visit sequences and allocated times were used by the team at both locations. The site visit consisted of a trauma center overview (provided by the trauma medical director/trauma program manager), an opportunity for discussion and clarification between the IRP and the applicant, a lengthy facility walk-through that also involved additional discussion, case reviews, and a final fact-finding opportunity. Dr. Ball ensured adherence to the schedule. Findings from the site visit allowed individual team members to validate or adjust their original (pre site-visit) independent scores.
Discussion

It was apparent to all IRP members that both facilities were well qualified in their current role as Level III trauma centers. It was also evident that either facility could, with continued dedication and focus achieve the transition to Level II status.

The ACS would encourage the successful bidder and the SCEMSC board to recognize that a trauma center does not equal a trauma system. Even though the trauma centers will be functioning at different levels, both facilities need to be engaged in the trauma system to ensure prompt access to care commensurate with patient injuries. Continued participation also helps ensure system redundancy in the event of a catastrophic event involving multiple injured patients or a facility failure.

The facilities tied with perfect scores from all seven IRP members in the Appendix 6 – Declarative Statements, and Appendix 9 – Required Attachments. These perfect scores confirmed that both facilities had done due diligence in the completion of the proposals. Beyond those similarities, a clear winner emerged after evaluation of the remaining sections. Though the scoring was relatively close, each IRP member independently scored the winning facility higher in all other categories.

Results

The aggregate sections scores for each facility are illustrated in tables 1 and 2. A side-by-side comparison is provided as table 3.

![Table 1: Facility 1 Aggregate Scores](image)
### Table 2: Facility 2 Aggregate Scores

#### Facility 2 Scoring Summary

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### Table 3: Comparison by Facility

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Facility 1 = NorthBay Medical Center  
Facility 2 = Kaiser Vacaville Medical Center
**Recommendations**

Based on the findings of this process the following recommendations are provided to the SCEMSC board for consideration:

1. Encourage and support Kaiser Vacaville Medical Center in efforts to become designated by Solano County and verified by the American College of Surgeons as a Level II trauma center.

2. Encourage and support NorthBay Medical Center to continue in its role as a designated Level III trauma center.