



Trauma System Status Report

2018



Contents

TRAUMA SYSTEM SUMMARY:	2
CHANGES IN TRAUMA SYSTEM:	2
NUMBER AND DESIGNATION LEVEL OF TRAUMA CENTERS:	4
TRAUMA SYSTEM GOALS AND OBJECTIVES:.....	5
CHANGES TO IMPLEMENTATION SCHEDULE:.....	10
SYSTEM PERFORMANCE IMPROVEMENT:	11
PROGREESS ON ADDRESSING EMS AUTHORITY TRAUMA SYSTEM PLAN COMMENTS:	12
OTHER ISSUES:	13

TRAUMA SYSTEM SUMMARY:

In accordance with established guidelines, attached is the annual update to the Yolo County Trauma Care System Plan.

Yolo County has designated two (2) hospitals as paramedic receiving facilities. There are no adult or pediatric trauma centers within Yolo County. The closest Level I and Level II adult trauma centers are located in the adjacent counties of Sacramento and Solano, respectively. The closest pediatric trauma center is located in Sacramento County. Based on the Yolo County Trauma Triage criteria, the most severe trauma cases are transported by a ground or air ambulance to the out-of-county trauma centers. Yolo County EMS Agency has interagency agreements with Sacramento and Solano County EMS to use their designated hospitals.

Yolo County receives approximately 20,000 EMS calls per year. Less than 2% of all EMS calls are for critical blunt trauma. Yolo County is bordered by Colusa, Lake, Napa, Sacramento, Solano, and Sutter Counties. The county covers a total area of 1,023 square miles and is home to a population of 215,802. Davis is the largest populated city, followed by West Sacramento and Woodland. Most of the county is rural, with a majority of the county being agricultural.

Local and national standards for trauma care mandate that patients have access to specialized trauma treatment services within one (1) hour of injury. With the rural areas of the county, Code 3 ground ambulance transport times can exceed one (1) hour depending on fixed (e.g. distance to and from scene) and variable (e.g. traffic) factors. In these cases, an air ambulance may be used, whenever possible, to expedite transport to a Level I or II trauma center.

Yolo County emergency medical technicians (EMTs) and paramedics utilize both the basic and local optional scopes of practice in caring for patients. Trauma-specific procedures are used daily to guide the care of the injured patient. A robust trauma triage procedure that aligns with the trauma center's internal triage procedure is utilized for all patients transported to a trauma center.

CHANGES IN TRAUMA SYSTEM:

There have been no significant changes to the trauma system since the last update.

Yolo County continues to have barriers with trauma data collection and validation. Over the past year we have worked with American Medical Response (AMR) to align county protocols with their ePCR system MEDS to ensure that we were collect correct and appropriate data. The trauma centers provide us with excel spreadsheets for all Yolo County trauma patients treated at their facility, but we are unable to match the pre-hospital ePCR with the hospital data. This presents a gap in our analysis of our system since we are unable to see the full continuum of care in our trauma system. Yolo County is working diligently on finding a standard, accurate way to collect and match data.

Yolo County is an active participant in the Regional IV Trauma Care Committee.

Yolo County EMS also actively participates in Sacramento and Solano County's trauma performance improvement process by attending meetings hosted by EMS, hospitals, or other agencies. Solano and Sacramento County attend Yolo County Trauma QI Committee meetings, and participate in ad-hoc programs and assessment of our trauma system. All affiliated regional partners participate in open dialogue and share opportunities for system and regional improvements.

In 2017, Yolo County applied to join the State Tranexamic Acid (TXA) Trial. Mid-year, Yolo County was approved to join the trial by EMSA trial. Immediately, Yolo County started to roll out face-to-face training with all paramedics with a go live date of January 2018. This was an important step in our trauma care due to extended transport times to a Level I/II facility with trauma patients who suffer severe blunt trauma with hemorrhagic shock.

NUMBER AND DESIGNATION LEVEL OF TRAUMA CENTERS:

YEMSA has designated out-of-county trauma centers through interagency agreements and receiving facility agreements with the University of California, Davis Medical Center (UCDMC) in Sacramento (Level I), and Kaiser Foundation Hospital (KFH) in Vacaville (Level II).

There is a need for a Level III trauma center in Sacramento to appropriately triage and transport trauma patients. Yolo County also sees a need for a Level IV trauma center within the county, and we will continue to work with our local hospitals to meet this need.

TRAUMA SYSTEM GOALS AND OBJECTIVES:

Goal #1: Establish and designate a Level IV Trauma Hospital within Yolo County.

Specific:

- Establish at least one Level IV trauma center in Yolo County.
- Lack of availability of specialty receiving centers in Yolo County.
- Yolo County patients who do not meet the Trauma Triage Criteria for a Level I/II Trauma Center are transported to a high level of care even though their injuries do not meet that standard.

Measurable:

Designate a Yolo County Level IV Trauma Receiving Center.

Attainable:

Yolo County EMS has been working with Woodland Memorial Hospital on attaining Level IV Designation. The system need is evident that Yolo County patients would benefit from a Level IV trauma center, and it would decrease the amount of unnecessary and inappropriate transports to a Level I/II trauma center. Currently, because this is not mandated, Yolo County is not able to control the decision of Woodland Memorial. Yolo will continue to assist, support, and encourage Woodland Memorial to achieve designation as a Level IV trauma center.

Relevant:

Yolo County patients who do not meet the Trauma Triage Criteria for a Level I/II trauma center are transported to a high level of care even though their injuries do not meet that standard. A Level IV designation would allow for appropriate Trauma Triage with a more appropriate destination for the patient.

Time:

Establish Level IV trauma center by the end of the 2019 Calendar year.

Outcome:

We have been working closely with Woodland Memorial on this project, and it does not look like this will be accomplished. We have shifted our efforts into support Regional Trauma Transfer Guidelines and are working closely with the emergency department physicians to do periodical trauma case reviews.

Goal #2: Ensure that Yolo County Trauma Protocol is consistent with current ACS recommendations and best of practices.

Specific:

- Review current Trauma Protocols
- Ensure that protocols are aligned with ACS recommendations
- Revise and draft protocols when gaps are recognized

Measurable:

Review and analyze current trauma protocols with ACS recommendations and best of practices. Revise protocols as needed.

Attainable:

After review and analyzing of current protocols, we will make draft changes to be implemented and share it with stakeholders.

Relevant:

Yolo County will ensure that trauma patients are getting the best and most appropriate care for their injuries.

Time:

Protocol roll out July 2016.

Hemorrhagic Shock and TXA training June 2017.

TXA Protocol effective July 1, 2018.

Outcome:

After review of our current protocols and outcome data, Yolo County saw a need to adapt a new protocol and add additional language to another protocol. The new protocol Traumatic Cardiac Arrest Protocol was used to address the need to differentiate between a medical vs. traumatic arrest and their associated causes and treatment modalities. We added language to our Termination of Resuscitation to include two different criteria to address the medical and traumatic arrest. Before the protocol went live, we established a training that was delivered to all BLS and ALS personnel.

We also saw a need to implement Tranexamic Acid (TXA) due to the blunt traumas in our county and the distances to definitive care at a trauma center. In 2016 we worked on drafting the application, training, and the protocol to apply for the approval to run a trial in Yolo County. We worked with Sacramento and Solano county trauma centers, specifically their trauma team, to review our application and gain their support in this project. In 2017 we worked on face-to-face trainings with all accredited paramedics on recognizing hemorrhagic shock and the use of TXA. July 1, 2018, TXA was placed into service on all Yolo County ambulances and ALS first responder engines.

Goal #3: Evaluate and revise current trauma system policies and procedures and include them in the system-wide quality assurance process.

Specific:

- Ensure data being collected is relevant to protocol
- Create a standardized data collection and data review process
- Create system-wide benchmarks

Measurable:

Review the data capturing process and ensure it aligns with Yolo County protocol. Standardize the information that is being put in and captured in our trauma data. We will use that data to set benchmarks for our QI system and program.

Attainable:

We are working closely with AMR (MEDs Team) to work on data fields and data collection. Once we can ensure that the data is current and relevant, we will be able to set benchmarks and learn about our success and areas for improvement.

Relevant:

Without ensuring our data is accurate, we cannot effectively QI our system and set program improvement goals.

Time:

On-going.

Outcome:

In 2017 we recognized data inconsistencies between the ePCR program being used by our paramedics and Yolo County Protocols. We have worked closely with the MEDs team to correct these issues and validate the data over the past year.

Goal #4: Increase transparency with trauma data and system improvement with stakeholders.

Specific:

- Ensure transparency on the Yolo County process and system to ensure we have full collaboration and buy-in from all our partners

Measurable:

We will review participation and feedback from our partners at committee meetings, ad-hoc meetings, and general public comment times, and ensure that all partners are involved. We will create meaningful system updates that will be distributed to all partners.

Attainable:

It will be accomplished through standardized corresponded such as: quarterly chiefs update, quarterly CQI meetings, EMCC, and our yearly system update.

Relevant:

To ensure quality and system approaches, we need all our partners participating at every level.

Time:

Ongoing

Outcome:

2016, was the first year Yolo County created an annual system update which was distributed to all our partners. The feedback from the annual plan was positive with encouragement to sustain.

2017 Yolo County published its annual system report which was distributed to all partners.

Goal #5: Increase trauma education opportunities in Yolo County.

Specific:

- Host EMS Trauma Symposium in Yolo County.

Measurable:

The Yolo County EMS Agency hosted its first EMS Trauma Symposium in County. The symposium was focused on enhancing assessment skills and care of patients involved in life-threatening traumatic events. The event was designed for EMS responders such as EMTs, paramedics, emergency nurses and firefighters.

Attainable:

It will be accomplished through collaboration with our stakeholders.

Relevant:

To ensure quality and system improvement, providing a symposium that will bring relevant best of practice information to Yolo County providers will enhance and strength our trauma system.

Time:

Complete in fiscal year 16/17.

Outcome:

The EMS Trauma Symposium was held on April 13th at the Woodland Community Center. The Symposium was attended by over 200 EMS professionals and was sold out months in advance. The participants came from all over California as well as a few from out of state. The speakers hail from some of the best trauma hospitals in California and are experts in the care of trauma patients! Due to the incredible speakers and EMS staff, the symposium was a huge success and has received incredibly positive reviews. The Yolo County EMS Agency plans to keep this as an on-going goal, although each year may not focus on the same topic.

CHANGES TO IMPLEMENTATION SCHEDULE:

Objectives were reformatted from last year. There have not been any major changes from our 2017 update.

Goal # 1 – Last year’s extensions allowed for valuable time to bring stakeholders together and discuss the next steps of a Level IV center in Yolo County. During those discussions it became evident that this would need to be tabled for a later date. We have now focused our time and effort into supporting, educating and doing periodical case reviews on trauma cases with the ED. We have also worked to support the Region IV Trauma Transfer Guidelines and are working on a way to collect better trauma transfer data.

Goal # 2 – Updated current status of TXA.

Goal # 3 – Recognize and identify data inconsistency in the ePCR platform from Yolo County Protocols. We have worked with the provider to correct this issue and validated trauma data for 2017.

Goal # 4 – Sustain annual system report, and distribute to all partners.

Goal # 5 – Sustain annual symposium educational focus may change year-to-year.

SYSTEM PERFORMANCE IMPROVEMENT:

Local trauma system improvements are ongoing. Improvements are accomplished through the items discussed above and by regular discussions with local acute care hospitals and out-of-county trauma centers. These discussions occur yearly at CQI-TAC meetings and at ad-hoc meetings. The Yolo County EMS System is in the process of developing a robust Continuous Quality Improvement system that continues to evolve. This system will include the development of local measures that go beyond State Core Measures to identify areas for improvement within the trauma system and larger EMS system.

PROGREESS ON ADDRESSING EMS AUTHORITY TRAUMA SYSTEM PLAN COMMENTS:

System Performance Improvement

Yolo County participates in the Regional Trauma Care Committee, UC Davis Medical Center QI, Kaiser Vacaville QI, along with Sacramento and Solano County QI meetings. All designated trauma centers for Yolo County and boarding LEMSAs participate in all Yolo County committees.

We have formal review processes on sharing, reviewing, and investigating patient outcomes and specific cases.

OTHER ISSUES:

No other issues have been identified.

END OF REPORT