Enhancing Performance Improvement Processes in Arizona's Trauma Centers: A Three Year Plan (2013-2015)

Thursday, July 30, 2013
Roy P. Drachman Hall
The University of Arizona, Mel and Enid Zuckerman College of Public Health
Tucson, Arizona

SUMMARY REPORT

Prepared by:
Joyce A. Hospodar, MBA, MPH
Manager, Health Systems Development
Center for Rural Health, The University of Arizona, Mel and Enid Zuckerman College of Public Health

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Sponsored by:

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Meeting Purpose and Objectives

In January 2013 the American College of Surgeons issued a report to the Arizona Bureau of EMS and Trauma System (BEMSTS) offering specific recommendations to enhance Arizona's trauma system. Three of these recommendations addressed improving the quality at the state's trauma centers by:

- Continuing to partner with the Center for Rural Health (CRH) to enhance rural trauma care;
- Selecting Quality Improvement indicators to track over time; and,
- Convening trauma program managers around the state to address trauma system issues.

On July 30, 2013, BEMSTS and the Center for Rural Health convened a face-to-face meeting of the state's trauma program managers for an intensive one-day planning meeting. The University of Arizona Medical Center's Level I Trauma Center hosted the day-long event.

The core learning objectives defined for this meeting included:

- Understand the nature of this joint sponsorship
- Know why the four target performance objectives were selected
- Develop strategies to address these four performance objectives
- Meet with other Trauma Program Managers from around the state
- Participate in a Level I Trauma Center Mortality and Morbidity meeting
- Determine agenda topics and locations for future meetings

A total of 39 people attended the meeting, representing Trauma I, Trauma III (provisional) and Trauma IV Centers.

Overview of Agenda and Speakers

The meeting agenda and names of the speakers can be found in Section V., Appendix B and D, respectively. The meeting opened with a welcome, an introduction of all those attending and a brief review of the agenda. To start the day -long session, UMC, the host for this first meeting, presented an overview of their Trauma I Program.

Presentations continued outlining the 'rules' associated with Trauma Center Performance Improvement followed by open discussions of each of the Performance Improvement objectives selected as key:

(1) ED Dwell Time Pre-Transfer;
(2) Transfers After Admissions;
(3) Reduce Deaths in Non-Trauma Centers; and,
(4) Increase Trauma Billing Efficiency.

Each of the presentations can be found in Section V., Appendix E.

During the break for lunch, all participants attended UMC's Level I Trauma Center Morbidity and Mortality (M & M) Committee meeting led by Peter M. Rhee, MD and Randall S. Friese, MD.

Evaluation Results

Twenty-eight people out of the 39 who attended the meeting completed an evaluation survey yielding a 72% response rate. Eighty-two percent of this group (23 people) rated the meeting as 'excellent' while 96% said that the event 'effectively' met their needs. Almost 70% of the attendees learned 'a lot' while less than one-third felt that 'some' new knowledge was gained. All of those responding indicated that they will use the information provided. Table 1 below shows the specific breakdown of responses.

Table 1 - Evaluation Survey Responses

Question	Response (Number/Percentage)	Response (Number/Percentage)
Overall Rating	Excellent- 23/82%	Good -5/18%
Meeting Relevance	Definitely – 20/71%	Very – 8/29%
New Knowledge	A lot – 19/68%	Some- 9/32%
Met Needs	Yes – 27/96%	No Response -1/4%
Use of Information	Yes – 28/100%	

Appendix F contains the complete evaluation summary and lists out each open-ended comment provided.

Next Steps

At the conclusion of the meeting, two participants volunteered to Co-Chair the planning of activities going forward: Teresa 'Vinni' Vincifora, Chief Clinical Officer at Benson Hospital and Arvie Webster, Trauma Program Manager at The University of Arizona Medical Center. In addition, Bill Ashland, Program Director at Flagstaff Medical Center Trauma Services, offered to host the next face-to-face meeting.

The Bureau of EMS and Trauma System staff drafted and will seek approval for the *Bureau of EMS and Trauma System Quality Improvement Plan: 2013-2016.*

Appendix A—Mark Your Calendar

Arizona Rural Hospital Flexibility Program (AZ-Flex)

SAVE THE DATE

Enhancing Performance Improvement Processes in Arizona's Trauma Centers: A Three Year Plan (2013-2015)

Tuesday, July 30, 2013 • 9:00 AM– 5:00 PM
Roy P. Drachman Hall • Room A120
1295 N. Martin Ave. • Tucson, AZ 85724

Learning Objectives
At the conclusion of this meeting each trauma program manager will:

- Understand the nature of the joint sponsorship for this three-year project;
- Know why the four target performance improvement objectives were selected;
- Have participated in the development of strategies to address each performance objective;
- Have met with many trauma program managers from around the state;
- Had the opportunity to participate in a level I trauma center Mortality and Morbidity meeting;
- Brainstorm with other trauma program managers on agenda topics and locations for future meetings .

Target Audience
Trauma program managers from each of Arizona's designated 32 trauma centers.

Continuing Education
A certificate of completion for 6 hours of CE will be mailed to each participant.

RSVP to:
Joyce Hospodar at hospodar@email.arizona.edu by **Tuesday, July 23, 2013**

Trauma program managers from Critical Access Hospitals may be eligible for travel assistance. For more information contact **Joyce Hospodar**, AZ-Flex at **520-626-2432/ hospodar@email.arizona.edu**

The events are made possible through funding provided by the Health Resources and Services Administration, Office of Rural Health Policy, Medicare Rural Hospital Flexibility Program.

Enhancing Performance Improvement Processes in Arizona's Trauma Centers: A Three Year Plan (2013-2015)

Tuesday, July 30, 2013 • 9:00 AM– 5:00 PM
Roy P. Drachman Hall • Room A120
1295 N. Martin Ave. • Tucson, AZ 85724

AGENDA

9:00 a.m.	Welcome and Introductions	Terry Mullins/Kevin Driesen
9:10	Review of the Agenda	Joyce Hospodar
9:15	Greeting and Overview of UMC's Trauma Program	Michelle Ziemba
9:45	What Do the Rules Have to Say about Trauma Center P.I.	Noreen Adlin
10:00	P.I. Objective 1 – ED Dwell Time Pre-Transfer	Arvie Webster
10:45	Break	
11:00	P.I. Objective 2 – Transfers After Admissions	Bill Ashland
11:45	Morbidity and Mortality Function (UMC Room 5403)	Hosted Lunch
1:30 p.m.	The M&M process – Unraveled	Michelle Ziemba
2:15	P.I. Objective 3 – Reduce Deaths in non-Trauma Centers	Lori Wass
3:30	Break	
3:45	P.I. Objective 4 – Increase Trauma Billing Efficiency	Pam Noland
4:30	Election of Co-Chairs (one level I, one level IV)	Joyce Hospodar
4:45	Agenda Topics and Location for Future Meetings	New Co-Chairs
5:00	Adjourn	

OBJECTIVES
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- Brainstorm with other trauma program managers on agenda topics and locations for future meetings.

Appendix C—Attendee List

Enhancing Performance Improvement Processes in Arizona's Trauma Centers:
A Three Year Plan (2013-2015)
Tuesday, July 30, 2013 | 9:00 AM – 5:00 PM

Attendee Contact Information

Name	Title	Organization	Tel Number	Email
Mary Ann Antonini	ED Educator/ Trauma Nurse Coordinator	Summit Healthcare	928.537.6701	man-tonini@summithealthcare.net
Todd Arnold, RN	Trauma Program Manager	Banner Ironwood Medical Center	480.394.4103	Todd.arnold@bannerhealth.com
Jamie Arvayo, RN, BSN	Clinical Manager, ED Trauma Coordinator	Banner Gateway Medical Center	480.543.2485	Jamie.Arvayo@bannerhealth.com
Leilana Badonie, RN	Trauma Coordinator	Chinle Hospital	928.674.7090	Leilana.Badonie@ihs.gov
Curtis Beerens, RN, BSN	Emergency Department Director	Cobre Valley Regional Medical Center	928.402.1185	cbeerens@cvrmc.org
Mary Benkert	State Trauma Registry	BEMSTS		Mary.Benkert@azdhs.gov
Maureen Brophy	Epidemiologist/Biostastician	BEMSTS		Maureen.Brophy@azdhs.gov
Marilyn Byrne, RN	Trauma Performance Improvement & Research Coordinator	John C. Lincoln Deer Valley	602.870.6210	Marilyn.Byrne@jcl.com
Vatsal Chikani	Biostastician	BEMSTS		Vatsal.Chikani@azdhs.gov
Name	**Title**	**Organization**	**Tel Number**	**Email**
Paul Dabrowski, MD	Trauma Program Medical Director	Banner Good Samaritan Hospital	602.239.5187	Paul.dabrowski@bannerhealth.com
Dan Derksen, MD	Director	Center for Rural Health	520.626.3085	dderksen@email.arizona.edu
Howard Eng	AZ Flex Program Evaluator	Center for Rural Health	520.626.5840	jjeng@email.arizona.edu
Robin Gil	Regional EMS Coordinator	BEMSTS		Robin.Gil@azdhs.gov
Irene Gohr, MSN, CEN, FNP-C	Ed/Trauma	UAMC – South Campus	520.874.5608	Irene.Gohr@uahealth.com
Darlene Herlinger	Base Hospital Manager	UAMC – South Campus	520.249.8663	Darlene.Herlinger@uahealth.com
Shannon Johnson, RN, BSN	Director, Trauma Program Services	Tuba City Regional Health Care Corporation	928.283.2829 Ext. 20363	shannon.johnson@tchealth.org
Lori Moxon Kennedy, RN, BSN	Trauma Program Manager	John C. Lincoln Deer Valley	623.879.1879	Lori.Moxon@jd.com
Helen Kilpatrick	ER Supervisor	Benson Hospital	520.586.2261, Ext. 273	hkilpatrick@bensonhospital.org
Charmaine Leoni	ED Nursing Director	Banner Baywood Medical Center		Charmaine.Leoni@bannerhealth.com
Heather Mack	ED Nurse Manager	Mt. Graham Regional Medical Center	928.348.4181	Health.mack@mtgraham.org
Maria Martinez, RN	Emergency Services Nursing Director	La Paz Regional Hospital		mmartinez@lapazhospital.org
Rogelio Martinez	DQA Section Chief	BEMSTS		Rogelio.Martinez@azdhs.gov
Summer Magoteaux, RN	Trauma Program Manager	Phoenix Children's Medical Center	602.933.5543	smagoteaux@phoenixchildrens.com

Appendix C—Attendee List continued

Amanda Osuna	Nursing Supervisor	Benson Hospital	520.586.2261, Ext. 282	aosuma@bensonhospital.org
Dawn Polkabla	Co-Chair	Rural Trauma Manager Work Group	928.812.0850	Azrn99@yahoo.com
Rebakah Pope		Oro Valley Hospital		Re-bakah.Pope@orovalleyhopsital.com
Gloria Powell	Trauma Program/Base Hospital Manager	Banner Boswell Medical Center	623.832.5368	Gloria.powell@bannerhealth.com
James Prohaska	Program Development Director	Mountain Vista Medical Center		jprohaska@iasishealthcare.com
Olga Rivero		Southeast Arizona Medical Center		orivero@samcaz.org
Darlene Rodriguez, RN, BSN	Trauma Program Manager	West Valley Hospital	623.882.1926	drodriguez@abrazohealth.com
Claudia Romo	Emergency Department Manager	Copper Queen Community Hospital	520.432.6579	cromo@cqch.org
Linda Lou Parsons	Quality Manager	Payson Regional Medical Centers	928.472.1241	Linda_Lou_Parsons@chs.net
Tracey Schlosser, RN BHCL	Prehospital Coordinator	Banner Estrella Medical Center	623.327.7048	Tracey.Schlosser@bannerhealth.com
Sandy Scott, RN	Trauma Coordinator	Banner Desert Medical Center	480.412.8117	Sandy.scott@bannerhealth.com
Leah Sheppard	Trauma Program Manager	John C. Lincoln Deer Valley	628.879.1879	Leah.Sheppard@jcl.com
Danielle Stello, RN	Pre-Hospital/ Trauma Coordinator	Havasu Regional Medical Center	928.854.7549	Danielle.stello@lpnt.net
Tiffiny Strever, RN, BSN, CEN	Trauma Program Manager	Maricopa Medical Center	602.344.5387	Tiffiny.Strever@mihs.org
Amber Teichmiller		Oro Valley Hospital		Amber.Teichmiller@orovalleyhospital.com
Christopher Thompson	Trauma Coordinator	Yavapai Regional Medical Center	928.771.5518	csthomps@yrmc.org
Kimberly Tozi, RN	EMS Coordinator/ Interim Trauma Coordinator	Banner Baywood Medical Center	480.321.4952	Kim.Tozi@bannerhealth.com
Carl Valenti, RN	ED Director	Payson Regional Medical Center	928.472.1346	Carl_Valenti@chs.net
Teresa Vincifora	Chief Clinical Officer	Benson Hospital	520.586.2261, Ext. 336	tvinvifora@bensonhospital.org
Nathan Windatt, RN, BScN	Trauma Program Manager	Mountain Vista Medical Center	480.772.3657	nwindatt@iasishealthcare.com

Appendix D—Presenters Contact List

Name	Title	Organization	Tel Number	Email
Noreen Adlin, NREMTP	Trauma System Designation Coordinator	BEMSTS	602.364.3275	Noreen.Adlin@azdhs.gov
Bill Ashland, RN	Program Director, FMC Trauma Services	Flagstaff Medical Center	928.773.3457	bill.ashland@naheath.com
Kevin Driesen, PhD	Director, AZ Flex Program	Center for Rural Health, UA MEZCOPH	520.626.5837	kdriesen@emial.arizona.edu
Joyce Hospodar	Manager, Health Systems Development	Center for Rural Health, UA MEZCOPH	520.626.2432	hospodar@email.arizona.edu
Terry Mullins	Chief	BEMSTS	602.364.3149	Terry.Mullins@azdhs.gov
Pam Noland, RN	Trauma Coordinator	Northern Cochise Community Hospital	520.507.0013	PNoland@ncch.com
Lori Wass, BSN, MSN	Trauma Program Manager	Chandler Regional Medical Center	480.728.3636	Lori.Wass@DiginityHealth.org
Arvie Webster, RN,MSN,CEN	Trauma Program Manager	UA Medical Center	520.694.4818	Arvie.Webster@uahealthcom
Michelle Ziemba, RN, MSN	Director, Trauma & Emergency Services	UA Medical Center	520.694.7545	Michelle.Ziemba@ uahealth.com

Appendix E—Presenters' PowerPoint Presentations

THE UNIVERSITY OF ARIZONA MEDICAL CENTER

Overview of UAMC Trauma Program

Trauma Program Managers Workshop
July 30, 2013

Michelle Ziemba, RN MSN Director of Trauma and Emergency Services

0

THE UNIVERSITY OF ARIZONA MEDICAL CENTER

OVERVIEW OF TODAY'S ACTIVITIES

- Understand more about the Level I Trauma Center at UAMC – University Campus
- Appreciate the role Trauma Centers play in the Trauma System and how important the Performance Improvement processes are to improve the system of trauma care in our state
- Participate in a real M&M session to see first hand how care can be reviewed and discussed for the benefit of program development
- Learn fist hand through panel discussions ways in which performance improvement activities can be implemented in trauma centers
- Opportunity to network and exchange ideas with our peers and colleagues.

1

THE UNIVERSITY OF ARIZONA MEDICAL CENTER

UAMC – UNIVERSITY CAMPUS LEVEL I TRAUMA CENTER

- UAMC was initially verified as a Level I Trauma Center by the ACS in November of 2008.
- Prior to that time, as many of Arizona's trauma centers, it was a self designated Level I trauma program
- We see about 4800 trauma patients each year with 2400 admits
- All surgical subspecialties exist on this campus.
- We are the only Level I trauma center serving all of Southern Arizona
- One of the busiest in the state
- Academic medical center for the University of Arizona College of Medicine
- We participate in the SAEMS region – Southern AZ EMS region.

2

THE UNIVERSITY OF ARIZONA MEDICAL CENTER

UAMC TRAUMA DEPARTMENTS AND UNITS

- **Emergency Department** – 61 treatment spaces, 7 of them large trauma resuscitation bays. 18 bed Pediatric Emergency Department. In addition a 16 bed CDU observation unit.
- **2DW Surgical / Trauma ICU** – 20 bed surgical trauma ICU located directly above the ED
- **2DN** - Intermediate Care unit surgical unit for recovery of surgical and trauma patients adjacent to the ICU.

3

THE UNIVERSITY OF ARIZONA MEDICAL CENTER

ROLE OF THE TRAUMA PROGRAM MANAGER

- Very unique and can be a pretty lonely job as it is often the only one in a facility
- Holding all people accountable to optimal trauma care for all our injured patients
  - Nurses
  - Physicians
  - EMS Providers
  - Departmental Leadership
- Must be an expert in PI processes. Eventually you will be sought after by others in your organization to help them improve other systems of care
- Trauma center operations and systems stress hospital operations. Trauma is a time sensitive disease that requires availability and consistency. If you do trauma well your organization can do many other things well.
- Master at using data to drive improvements and changes
- We need each other to support our efforts and initiatives.

4

THE UNIVERSITY OF ARIZONA MEDICAL CENTER

PERFORMANCE IMPROVEMENT DRIVES YOUR PROGRAM!!

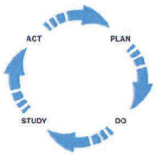
- **Right Patients**
  - AZSTR – definition of the trauma patient
  - Field Triage Criteria (State, CDC, regional)
- **Right Place**
  - Level of Trauma Center
  - Level of patient care in your hospital
- **Right amount of time**
  - Scene times
  - ED Dwell times
  - Time to next phase of care
- **Right thing for the patient**
  - Outcome measures
  - Mortality
  - Complications

5

THE UNIVERSITY OF ARIZONA MEDICAL CENTER

PERFORMANCE IMPROVEMENT PROCESS

- Define and know your indicators / standards of care delivery
- How will you measure it? Must be able to track, audit, and or measure compliance for that indicator
- Define and implement your processes for review. Operational committees, special task forces, and or Case Review
- LOOP CLOSURE. Define how you will take action to fix and or correct any issues you find to improve the care to trauma patients.



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PERFORMANCE IMPROVEMENT

Trauma Centers

- Program operations
- Facility specific performance as it relates to the care of the patient in your facility
- Timing to transitions of care
- Complications
- Outcomes
- Performance competency of trauma staff

Trauma System

- System operations through various systems of care
  - EMS
  - Trauma Centers Level IV, III, II, I
- Field triage and transport
- ED dwell time timing of transitions
- Mortality
- Injury prevention
- Legislative initiatives
- Mass casualty management

7

THE UNIVERSITY OF ARIZONA MEDICAL CENTER

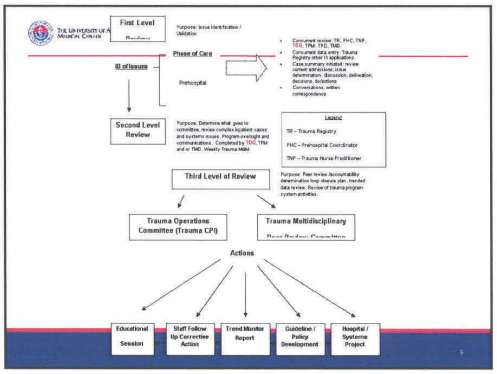
Trauma M&M Unraveled

Trauma Program Managers Workshop
July 30, 2013

Michelle Ziemba, RN MSN Director of Trauma and Emergency Services

8

THE UNIVERSITY OF ARIZONA MEDICAL CENTER



9

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FIRST LEVEL REVIEW

- Initial review of care
- Review of care against established audit filters or PI Indicators
- If something is triggered in that review does it need to go further?
  - Impact patient outcome
  - Triggered review or audit but situation was handled appropriately best for the patient
  - Issues is being tracked and trended
- Determination if the issue needs to go for a next level of review for case review or significant operational system issue.

10

THE UNIVERSITY OF ARIZONA MEDICAL CENTER

SECOND LEVEL OF REVIEW

- Review between TPM and TMD for review of the situation and at that time can implement immediate action and or loop closure.
- Review as M&M Trauma service level meeting or an Emergency Department case review conference.
- Issue taken up to a hospital organizational performance improvement or quality meeting this system issue not only impacts the trauma patient, but this very same issue impacts other populations as well.
- Can the issue be resolved and or loop closure be established at this level?
- Action plans developed

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THE UNIVERSITY OF ARIZONA MEDICAL CENTER

THIRD LEVEL OF REVIEW

- Cases meeting hard line audit filters that all patients meeting this criteria have this level of review
  - Deaths
  - ICU bounce backs
  - Patients not transitioning for the next phase of care in timely fashion
  - Missed injuries
  - Returns to OR
  - Involvement of multiple sub-specialities (issues across departments)
- Multidisciplinary Trauma Peer Review
- Trauma Operations
  - Performance on larger system issues
  - Dashboards tracking issue resolution and program performance
  - Monitoring of previous PI issues
  - Overall program performance and development

12

UAMC - Trauma Systems Performance Indicators - FY2012-2013

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trauma Registry Training

Trauma System Authority

- Finalized October 6, 2005
- Arizona Revised Statutes 36-2225
- Article 13. TRAUMA CENTER DESIGNATION
- Article 14. TRAUMA REGISTRY; TRAUMA SYSTEM QUALITY ASSURANCE
- Most current version may be found at the Bureau of EMS and Trauma web site: http://www.azdhs.gov/bems/ems_rules.pdf

R9-25-1301 through Exhibit I

R9-25-1401 through 1406 Trauma Registry Data Quality Assurance

Health and Wellness for all Arizonans

Trauma System Authority

- Statute - *a law enacted by the legislative branch of a government*

36-2225 – Statewide emergency medical service and trauma system; definitions

A. The department shall develop and administer a state wide emergency medical services and trauma system to implement the Arizona emergency medical services and trauma system
   1. Injury prevention activities to decrease the incidence of trauma and decrease the societal cost of preventable mortality and morbidity
   2. Public access to pre hospital emergency medical services.
   3. A statewide network of trauma centers that provide trauma care and to which trauma patients can be transported.

Health and Wellness for all Arizonans

Trauma System Authority

36-2225 – Statewide emergency medical service and trauma system; definitions

4. A trauma center designation and dedesignation process for health care institutions that provide trauma care. The department may adopt rules that:
   a) Allow for designation based on:
      i. A health care institution's verification as a trauma facility by a national verification organization
      II. A determination by a national verification organization that a health care institution meet the state standards established by rule for designation as a trauma center.
      III. A determination by the department that a health care institution meets the state standards established by rule for designation as a trauma center.
   b) Require that trauma centers submit data to the trauma registry.

Health and Wellness for all Arizonans

Trauma System Authority

36-2225 – Statewide emergency medical service and trauma system; definitions

5. Trauma system evaluation and quality review through the collection and analysis of data.
6. Protection of confidential patient care and trauma registry information.

So where does the American College of Surgeons (ACS) fit in?

Health and Wellness for all Arizonans

Trauma System Authority

WAIT FOR IT?

B. For the purpose of this section:

1. "National verification organization" means the American College of Surgeons Committee on Trauma or other nationally recognized organization that verifies the ability of health care institutions to provide trauma services at various levels.
2. "Trauma center" means a health care institution that is designated pursuant to rules adopted by the department to provide a specific level of trauma care.

Health and Wellness for all Arizonans

Arizona Trauma Center Standards

- Exhibit I.
  - Trauma Facilities Criteria
  - Levels I, II, III, and IV
  - Essential and required = E
  - Applicable foot notes

Located in the last pages of Article 13. Trauma Center Designation (the rules).

Health and Wellness for all Arizonans

Appendix E—Presenters' PowerPoint Presentations Continued

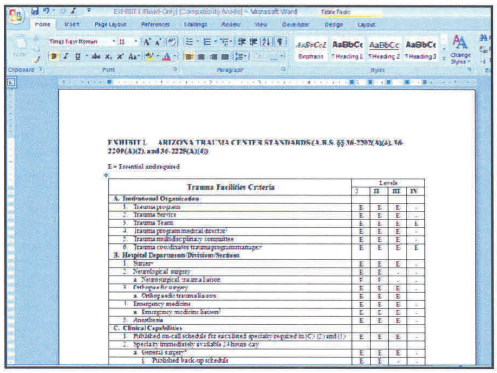
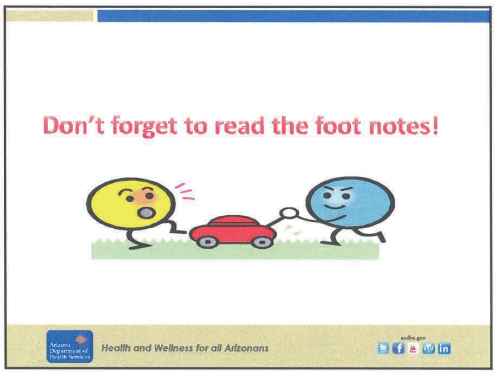
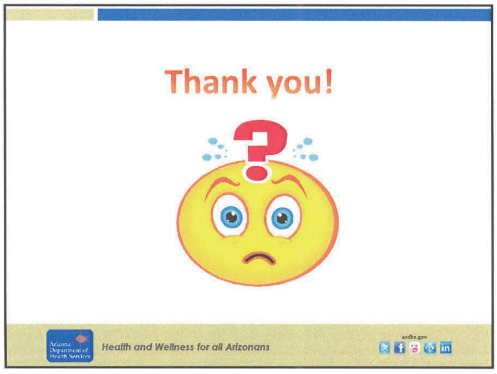


EXHIBIT 1. ARIZONA TRAUMA CENTER STANDARDS (A.R.S. §§ 36-2202(A)(4), 36-2209(A)(2), and 36-2229(A)(4))

E = Essential and required

Trauma Facilities Criteria	Levels			
	I	II	III	IV
A. Institutional Organization				
1. Trauma program	E	E	E	-
2. Trauma Service	E	E	E	-
3. Trauma Team	E	E	E	E
4. Trauma program medical director[1]	E	E	E	-
5. Trauma multidisciplinary committee	E	E	E	-
6. Trauma coordinator trauma program manager[2]	E	E	E	E
B. Hospital Department/Division/Sections				
1. Surgery[3]	E	E	E	-
2. Neurological surgery	E	E	-	-
a. Neurosurgical trauma liaison	E	E	-	-
3. Orthopaedic surgery	E	E	E	-
a. Orthopaedic trauma liaison	E	E	E	-
4. Emergency medicine	E	E	E	-
a. Emergency medicine liaison[4]	E	E	E	-
5. Anesthesia	E	E	E	-
C. Clinical Capabilities				
1. Published on-call schedule for each listed specialty required in (C) (2) and (3)	E	E	E	-
2. Specialty immediately available 24 hours/day				
a. General surgery[5]	E	E	E	-
b. Published back-up schedule	E	E	-	-





ED Dwell Times

Presented By:
Arvie M. Webster, RN, MSN, CEN

Objectives

- Review Data
- Review Possible Causes
- Review Possible Solutions

Why is a Dwell Time So Important?

- Right patient to the right place
- "Golden Hour"
- ACS recommendation is less than 2 hours

What Does the Data Show?

ARIZONA DEPARTMENT OF HEALTH SERVICES
BUREAU OF EMERGENCY MEDICAL SERVICES AND TRAUMA SYSTEM

2013 LEVEL IV
JANUARY QUARTERLY REPORT
ASTR 2011

Prepared by:
Vetsai Chihoni, MPH
Rogelio Martinez, MPH

Data and Quality Assurance

Emergency Department (ED) Length Of Stay (LOS) at your facility before being transferred to another acute care

ED LOS	2010		2011	
	N	%	N	%
<2 hours	110	24.39%	200	22.32%
>2 hours	341	75.60%	696	77.67%
Total Patients	451	100.00%	896	100.00%

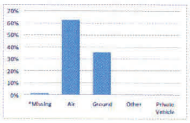
Why Are They in My ED For So Long?

- Waiting to be seen by physician?
- Excessive resuscitation time?
- Laboratory turnaround times?
- Radiograph turnaround times?
- Unnecessary Tests?
- Time of arrival to calling transport?
- Time from calling transport to patient departure?

A Lot of Air Transportation!

Patients transferred by your facility and their Mode of Transport: Reported by Level I

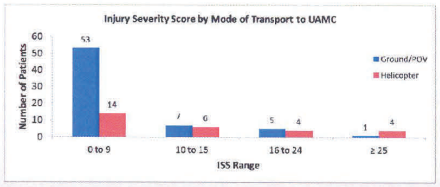
Mode of Transport	N	%
Total Transfers reported by Level I	707	100.00%
*Missing	9	1.27%
What Does the Data Show?		
Air	445	62.94%
Ground	251	35.50%
Other	1	0.14%
Private Vehicle	1	0.14%



Why is that a bad thing?

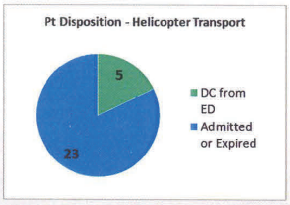
And It Doesn't End!

Maybe Something to Track...



0-9 minor 10-15 major 16-24 severe ≥25 critical

More Questions to Ask...



Are We Delaying Care?

ED LOS at your facility by ISS before transferring to another acute care

ED LOS (Hours)	2010				2011			
	<2 hours		≥2 hours		<2 hours		≥2 hours	
ISS	N	%	N	%	N	%	N	%
0-8	58	25.43%	170	74.56%	106	25.54%	309	74.45%
9-15	33	22.14%	116	77.85%	45	15.73%	241	84.26%
16-24	13	24.52%	40	75.47%	23	20.00%	92	80.00%
25-75	5	45.45%	6	54.54%	5	20.83%	19	79.16%
Total Patients	109	24.71%	332	75.28%	179	21.30%	661	78.69%

To better serve patients, those with a high ISS should be transferred quickly. In 2011, 80% of patients with an ISS over 16 had an ED LOS over 2 hours before being transferred.

Reviewing individual cases of patients with a high ISS and a high ED LOS before transfer might help identify systemic improvements.

What Questions Do You Have About this Data?

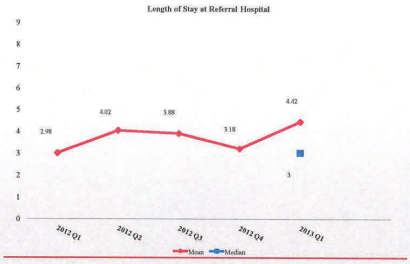
Patients that were transferred to higher level of care after being admitted

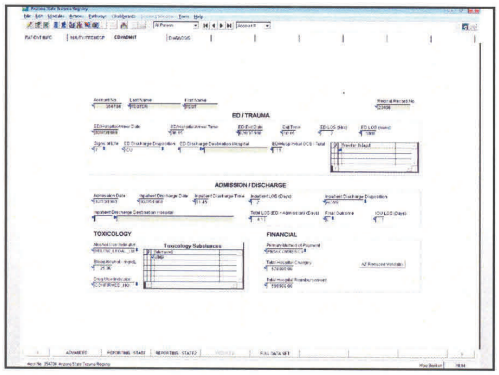
	2010		2011	
	N	%	N	%
# Patients Transferred after Admission	8	100.00%	18	100.00%
Los (Days)				
0				
1	1	12.50%	2	11.11%
2	3	37.50%	12	66.66%
6	4	50.00%	1	5.55%
9	0	0	1	5.55%
	0	0	2	11.11%

These cases were originally admitted into ARIZONA and then had to be transferred to a higher level of care.

Further review on these cases should be performed to ensure that patients were not admitted in error or had complications that required a higher level of care.

So What Can I Do?





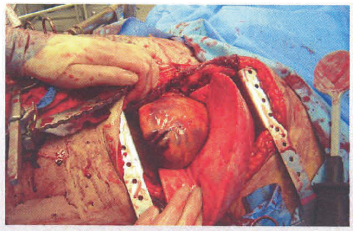
What Else Can I Do?

- Review all patient transfers
- Classify transfers > 2hours
  - Disease related
  - System related
  - Provider related
- Determine corrective action
  - Education
  - Discussions
- Don't forget to re-evaluate

Summary

- Reviewed Data
- Reviewed Possible Causes
- Reviewed Possible Solutions

Questions?



Reducing the Number of Patients that are Admitted to Level IV and Later Transferred to a Level I Trauma Center

Objectives:
Review Baseline Data
Review Possible Causes
Review Possible Solutions

Bill Ashland, RN
Trauma Program Director
Flagstaff Medical Center

Review Baseline Data

- 2010 & 2011 Data
- 2012 data not available and 1 patient in 2009
- ASTR Identified a total 27 Level IV's "late" transfer patients
- ASTR was able to match 7 of those patients to Level I TC's

Review Baseline Data Level IV

- Primary mechanism – E-code was 'Falls' 57%
- Average age was 64.7 years
- Blunt 89%,
- Penetrating (3) 11%

Injuries & Procedures @ Level IV

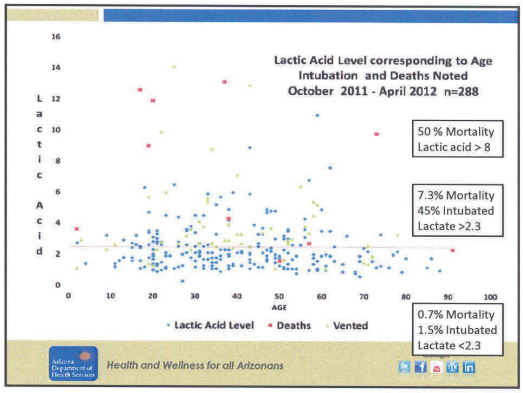
- Fractures most common coded injury
  - Ribs, spine, facial extremity
  - All Open wounds were coded as closed at L IV TC
    - including 1 exploratory laparotomy and
    - 1 Pericardiotomy
- Less than 15% received CT scans
- Thorax Most common body region injured

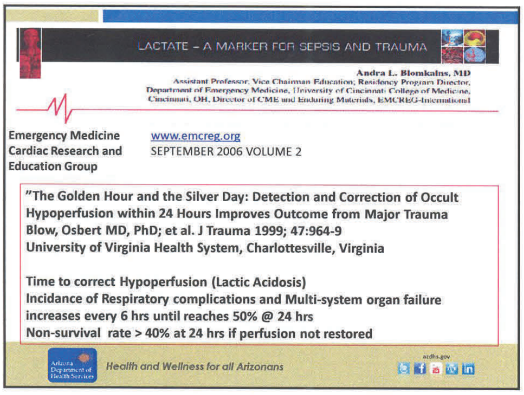
Level one Data

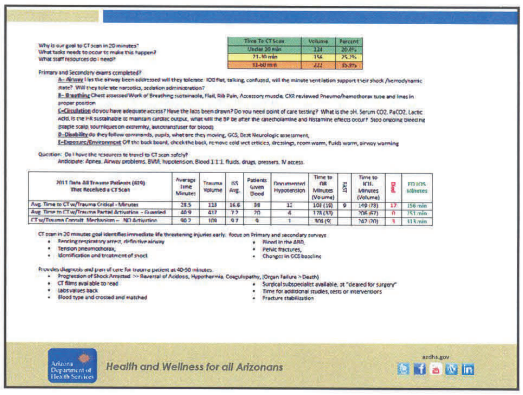
- All three of L-IV penetrating injuries were identified in the L-I data and were rescanned
- And exp lap was preformed
- Pneumonia was listed as the only complication
- Vent days were average

Health and Wellness for all Arizonans

azdhs.gov







Arizona Department of Health Services

Bureau of Emergency Medical Services & Trauma System

Willcox Arizona
Level IV Trauma Center

Pamela Noland RN
ED Nurse Manager
Level IV Trauma Coordinator

PI Objective 4 – Increase Trauma Billing Efficiency

- Thanks to Rogelio Martinez for the Following information and ASTR data:
  (see handouts)
- Trauma team activations are vital to ensure a coordinated and capable response to injured patients presenting to a trauma center's emergency department.
- Trauma care is not charity care
- Risk for Serious injuries &/or have wounds brought on by either and external force or an energy transfer
- Life-altering, life-threatening or ultimately fatal

PI Objective 4 – Increase Trauma Billing Efficiency

- **Arizona Baseline Trauma Billing Efficiency Score:**
  - Level I Trauma Centers – 86%
- Level IV Trauma Centers – 39%

Trauma Activation fees

- Trauma activation fees are to assist your facility in paying for your trauma program costs.
- **Payment is deserved and should be pursued vigorously**

In calculating your fees, include the following:

- Administrative cost
- Trauma Medical Director
- Trauma Coordinator
- Trauma Team activation salaries
- Physician Trauma Coverage agreements
- committee

Developing a Trauma Activation Fee 068X

- The facility must be an ACS verified or State Designated trauma center to charge an activation fee
- Utilize for patients for whom a trauma activation occurred.
  - Notification of key hospital personnel in response to triage information from pre-hospital care-givers in advance of the patient's arrival.

- Why should we use a trauma activation fee?
- Can we use the 68X code if a patient is driven to the hospital by family member or walked into the trauma center?
- Should the trauma activation fee levels differ based on whether the patient was admitted or not?
- Should we chart the reasons for trauma team activation?
- What should we do if insurers refuse to pay the trauma surcharge?

- NFTC Frequently asked questions
- http://www.health.state.mn.us/traumasystem/hospresources/billingcode/nftcfaq.pdf

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Stakeholders

- State of Arizona DHS Team
- Trauma Managers
- Hospital Patient accounting staff
- ED providers and Nurses

Performance Improvement:
ongoing assessment with a structured review of process and discussions of strategies to monitor trauma patient billing.

Costs should be contained in an ongoing cycle of fiscal PI

- Improve the data found in Trauma Billing Efficiency Score for Level IV Trauma Centers
  - Is this data complete
  - Can data be broke down further to determine where improvement needs to be focused.
  - What is the best tool to use for measurement?
  - How can we be consistent in all Level IV facilities with monitoring for trauma activation fee reporting

Enhancing Performance Improvement Processes in Arizona's Trauma Centers: A Three Year Plan (2013-2015)

Tuesday, July 30, 2013

Twenty-eight people completed an evaluation form out of the 39 people who attended the meeting yielding a 72% response rate.

How would you rate this meeting overall?

Excellent	***23/82%***	Fair
Good	***5/ 18%***	Poor

How relevant was this meeting to you?

Definitely relevant	***20/71%***	Somewhat relevant
Very relevant	***8/29%***	Not at all relevant

How much new knowledge did you gain from this meeting?

A lot	***19/68%***	A little
Some	***9/32%***	None

Did this meeting effectively meet your needs?

Yes	***27/96%***	No Response – ***1/ 4%***

- I brought my new management team to this program and we all have learned so much and are eager to implement what we have learned. This was an excellent program and the information learned can be applied in many areas.
- I came as resource but still gleaned information.
- Need more assistance with billing (I H S, 638)
- Need Regional Referral Patterns Areas

Will you use the information presented to you?

Yes	***28/100%***	No

Appendix F - Evaluation Summary Continued

How will you use the information gained from this meeting?

- The information on performance improvement was great & I will use it hospital wide not only for Level IV Trauma.
- Charge (trauma) Review, PI, M & M
- Understanding other facilities need in the trauma system.
- New PI project and also look @ financial piece.
- To create and improve an effective PI Program; many ideas presented will be utilized.
- Improving PI in my facility.
- Go back, start measuring & obtaining data to assist meeting these goals.
- Changes to current PI.
- Level IV billing & want to try to get state-wide united method.
- Present to Director & CNO to promote trauma billing activation.
- Part of the listserve next meeting – networking – speaking to other colleagues.
- Currently seeking Level IV designation.
- Develop our program better.
- Much better understanding of state PI goals and have ideas on changes we can make to our PI process. Thank you for this meeting – it really helped me a lot.
- Present at trauma committees.
- Further understand Level IV Trauma designation & assist ER Supervisor to build/grow trauma program.

Published October 18, 2013