Trauma Performance Improvement

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Trauma Program Coordinator/Manager

What is PI?

- Performance/Process Improvement is: the concept of measuring the output of a particular process or procedure, then modifying the process or procedure to increase the output, increase efficiency, or increase the effectiveness of the process or procedure. .(http://en.wikipedia.org/wiki/Performance_improvement)
- Simply put – to find a way to do things better for a better outcome.

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PI in the DRH Trauma Dept.

- >2000 patients seen & treated at DRH annually.
- Multidisciplinary approach to Trauma Care & Processes ~ Team Approach
- PI meetings = Weekly Trauma Rounds, monthly Trauma Morbidity & Mortality, and monthly Trauma Systems
- Cooperation & Collaboration ingrained in the culture of DRH from ED - Hospital Administration and every dept. in between.

The Trauma

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Trauma Medical Director

- Oversees the operation & function of the Trauma Program.
- Manages all medical trauma activities:
  - Trauma M&M
  - Physician Outreach
  - Physician to Physician follow-up
- Is an ACS Site Reviewer for Trauma Verifications

Trauma Program Coordinator

- Implements, Coordinates, Monitors Trauma Activities
- Provides Loop Closure for System Issues (ED nursing issues, Soc. Serv., Lab, etc)
- Oversees and Maintains Level I ACS Verification
- Trauma PI – TQIP, NTDB, etc

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Trauma Program Specialist

- Coordination of Trauma Rounds
- Lead ATLS coordinator
- Injury Prevention & Community Outreach
- Assist with PI loop closure
- Covers Case Management

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Trauma Case Managers

- Assessment of all trauma and surgical patients for discharge planning/case management needs
- Brief Alcohol Intervention and monitoring
- Data abstraction of inpatient trauma cases for Trauma Registry and summary write-ups for Trauma M&M

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Trauma Registrar

- Coding and data entry of all trauma cases
- Updates Trauma Registry at patient discharge
- Creates & presents monthly reports at Trauma Systems
- PI Data Abstraction and data entry for MTQIP
- NTDB Submission
- Provides Trauma Registry requests reports

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Trauma Department Secretary

- Assist with the planning and coordination of ATLS
- Coordinating and obtaining Trauma Autopsies
- Secretarial support for Trauma M&M meeting and Trauma Rounds
- Follow-up support with Trauma department activities

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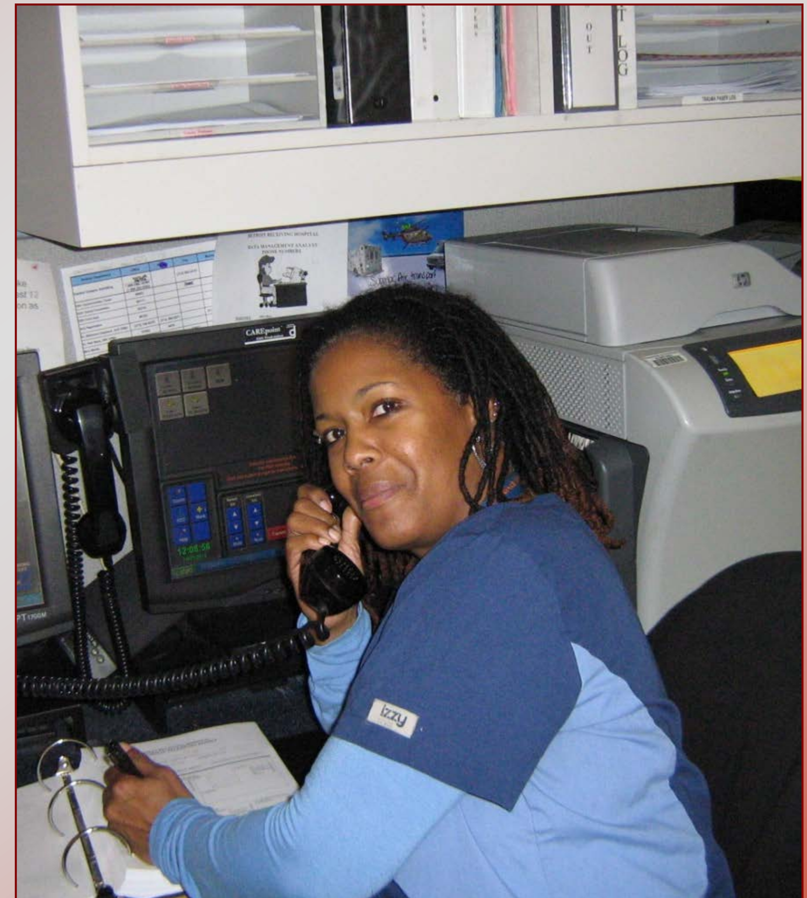
Communication Center Tech.

- Dedicated EMT/Paramedic answers all EMS calls
- Documents pre-hospital information (MIST form)
- Activates trauma pager
- Handles all ED transfers
- Facilitate 3-way communication with referring physicians
- Obtains runsheets



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Trauma Surgical Team

- 3 Trauma Divisions – each division covers every 3rd 24 hours – does trauma, acute & critical care
- Autonomous fixed Staff/Attending for each division (ex. L/L = green surgery) that care for patients from ED to Outpatient.
- Ortho., NeuroSurg., OMFS, Oral Surgery, Burns, Medicine, Plastics, etc. all involved in the trauma team process as indicated by the American College of Surgeon for a Level One Trauma Facility.

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Trauma Team

- Everyone participates & contributes
- All are crucial to success of program
- TPM is the "glue" that gets program to stick together/"cheer leader" that gets program to move forward
- Need everyone to know their "job" and take pride in getting the job done – need recognition goal is achieved.

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Weekly Trauma Rounds

Trauma Performance Improvement

Trauma Rounds

Frequency:

- Weekly Rounds, sit down conference presentation, 1-1 ½ hrs in duration – 1 CEU provided for each meeting to Attendings and nursing.
- Reports to Medical Staff Operations Committee (MSOC) – Hospital Administration Leadership.

Purpose:

- To review care of every trauma patient from the previous week and to follow the care of in-house patients for each service.
- To serve as a teaching opportunity / tool for attending staff to educate the participants and the residents that present the patient cases.

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Trauma Rounds - Preparation

Preparation: The Trauma Services Staff complete data abstractions on all trauma cases that present to facility from Monday 8am- Monday 8am.

Trauma Director – is able to oversee the function and operations of the program on a weekly basis.

Outreach – with Referring facilities & EMS providers: Any issues with transport or care prior to arrival is discussed & a letter is sent to the provider regarding compliments or suggestions for improvement.

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Weekly Trauma Rounds Report

Room	Name, SSN, Admit Date, Attending, TC, TL	Mechanism of Injury/ Diagnosis	Complication Morbidity	System Issues	Action/ Discussion
5U2B	Ivana Drink 51yo 688000000 5/15 1514 Ledgerwood **TC2 Tl Wood**	Fall down stairs at home Bilat quadriceps tendon rupture, Acute TIA	**5/17 UTI –** prior to arrival	Ed los 8 Hr 16 Min Ortho 1629/ND Orders 1925 PCMS 2206 *1510 TC2 eta 3min, fall down stairs, gcs 7, bp 98/56, r 14, hr 63*	**5/15** ETOH 289, Brief screening complete. Intubated in resus by ED resident. Admitted to med. w/consult to neurology **5/16** Developed aphasia – CT scan negative-> TIA – Ortho fixed tendon yesterday – plan to RIM, carotid duplex done **5/17** D/C RIM

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Trauma Rounds – Loop Closure

Loop Closure: Problems with documentation or with trauma care are identified and often the loop is closed at this meeting.

Trending: As each patient case is discussed, common or similar issues are monitored and tracked for trending. If a trend is apparent in weekly Trauma Rounds, the issue is discussed for recommendations for improvement and sent to Trauma Systems Committee for further loop closure/resolution.

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Trauma Rounds - Examples

1. Length of stay in the ED for trauma admissions:
   - This issue became apparent in weekly trauma rounds. If the ED LOS is prolonged, then the issue is discussed to determine if it played a part in the morbidity or mortality of the patient.
2. Ideas for injury prevention presentations for the community:
   - Trending of common preventative mechanisms of injury like: smoking on home O2; not wearing a seat belt and improper cooking techniques with grease, grilling, boiling.

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Trauma Rounds - Registry

Registry validation – The trauma registrar is present and participates by asking for additional information that is needed for the registry which may not be documented in the medical record – this also serves as an educational opportunity for the residents to document appropriately to satisfy the trauma re-verification criterion.

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Trauma Rounds – Post Meeting

Completion of Rounds: Upon completion of the meeting – rounds are updated and new cases are added for the upcoming week.

- Any further follow-up or loop closure is done and reported to the Trauma Director during the week or in the trauma rounds for the next week.

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Trauma Morbidity & Mortality M&M

- All Core Trauma/Surgical Attendings
  - Specialty Liaisons,
  - TPM,
  - Risk Management,
  - Hospital Administrator,
  - and any other attending involved in trauma care -
- All Deaths, isolated cases from T. Rounds, or issues requiring attending T. Surgeon input are discussed at this meeting
- The Trauma Attending of record presents case, and an uninvolved peer is assigned to review care & documentation of the case.
- Differences in opinion are discussed & included in minutes; which are done by TMD as chair.
- Autopsy are presented and Cases are Classified.

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Trauma M&M PI

Case #	DOS (Date of Service)	Date of Review	Date of Final Judgment	PI Issue – Care	PI – Issue Systems	Comments
14	2/16/2011 – 4/08/2011	5/10/2011	**1/10/2012** expected mortality with opportunity for improvement	▪ failure to communicate with the family when the patient was made DNR ▪ transferred to the floor with inadequate suctioning and Gram+ Cocci septicemia		Dr. Ledgerwood = Attending
30	8/17/2011 – 8/25/2011	9/13/2011	***Pending*** – *autopsy*	▪ Bradycardia ▪ Inability to clear secretions ▪ Inability to orally intubate ▪ No surgical airway		Dr. Diebel = Attending
36	9/7/2012 - 9/16/12	10/09/2012	**12/11/12** ▪ expected mortality without opportunity for improvement	▪ Should have been referred to Ethics – poor prognosis	▪ oscillator ventilator availability at DRH	Dr. Diebel = Attending ▪ Vent availability went to Trauma Systems on 12/18/2012

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Trauma Systems

- A Multidisciplinary Performance Improvement/Quality Committee.
- A working committee that identifies issues, investigates root causes of issues, develops/modifies processes and monitors trends in the care of the trauma patient.
- The committee facilitates and propels change.

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Topic	Responsibility	Action
LD BUSINESS		
1. BAL protocol (use of brushes)	Dr. Ledgerwood	Update
2. M.E. Office EMR access	Dr. Ledgerwood	Update
3. Oscillator Ventilator	Resp. Representative	Update
TANDING AGENDA		
1. Communications Center *a. Transfers-In –**Pg. 7*** *b. Transfers-out – **Pg. 9*** *c. Procedures outside DRH – **Pg. 10***	Communication Center Rep. M. Armstrong-Goldman Dr. Ledgerwood	Review
2. Laboratory Issues FFP – Blood Cooler & Plasma Monitor – • Massive Transfusion Activations (MTA) of month • FFP waste • Cell count & Gram Stain TAT for OR specimens • M&M Trauma Case – delay with FFP in MTA – John Doe #000 - issue with getting additional FFP for a MTA	K. Kangas S. Adams	Update
3. Hospital Course & Autopsy with Family of Deceased Patients ▪ Pt. ID forms	Dr. Ledgerwood M. Armstrong-Goldman	Update
4. Radiology Issues	Dr. Hillman/ G. Alexander	Review
5. Monthly Demographics Report - ***Pg. 12 & 12A (2012)***	K. Dhue	Review
6. Major Resuscitation Report – ***Pg. 13***	Dr. Ledgerwood	Review
7. Under and Over Triage Report – ***Pg. 14***	Dr. Ledgerwood	Review
8. Organ Donation	M. Armstrong-Goldman	Review
9. From Trauma Rounds: ▪ PCMS – Time of bed assignment	M. Armstrong-Goldman Dr. Ledgerwood	Review
0. SICU Bed Availability Report	S.E. Bennett	Review
1. ED LOS outliers (Registry PI)	M. Armstrong-Goldman	Review
2. State Trauma Activities: MCOT, DEMCA, R2S, etc. ▪ DEMCA	Dr. Ledgerwood / M. Armstrong-Goldman	Update
3. MTQIP P4P initiative	M. Armstrong-Goldman	Update
4. Trauma Admissions Per Year – Report – ***Pg. 17***	Dr. Ledgerwood / K. Dhue	Review
DUCATION/OUTREACH/INJURY PREVENTION		
1. TIPP	S. Maleyko-Jacob	Update
2. ATLS	S. Maleyko-Jacob	Update
3. Outreach Activities – ***Pg. 18***	Dr. Ledgerwood	Update
4. Trauma Symposium (Nov 14th & 15th, 2013 @ MGM)	M. Armstrong-Goldman	Update
EW BUSINESS		
1. IRB Proposals/Registry Requests	K. Dhue / M. Armstrong-Goldman	Review
2. Closed Reductions – ED vs. OR – criteria for process	Dr. Ledgerwood M. Armstrong-Goldman	Review

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Trauma PI Issue

Identification of John & Mary Doe cases

- Issue discovered & discussed in Trauma Rounds -> identified as a possible recurrent issue as there was no known policy/procedure for identification process.
- Issue elevated to Trauma Systems (PI meeting) -> Concerns:
    1. Delay with treatment -> No family to discuss care
    2. Delay with placement -> No family to make placement decisions
    3. Delay with finances -> Insured vs. Medicaid application submission
- Current Resolution: Social Work Department has completed a policy that outlines the process of identifying the patient – desired turn-around-time goal = 24-48hrs from arrival.

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Trauma PI Issue

Surgical ICU (SICU) Availability

- ED Length of stay & barriers that cause prolonged ED LOS (>4hrs) are discussed for each case at weekly Trauma Rounds
- Trending of the issue has found an issue with SICU Bed Availability -> which is discussed monthly at Trauma Systems
- Causes = Physician decision making, availability of acute care beds, appropriateness of ICU admissions.
- Resolution = pending – processes are being developed by Hospital Administration and other effected departments to streamline patient throughput process to improve availability of SICU and Acute Care Beds

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What's the Key?

- Get all the "Stakeholders" involved and committed to the PI process.
- Get the support from Hospital Administration and the Chiefs of Staff for each medical division
- Be consistent & Persistent in the process and follow-through.
- Stay *DIPLOMATIC* and **focused** on the goal –> Optimal Care for the Injured Patient!

Questions???

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