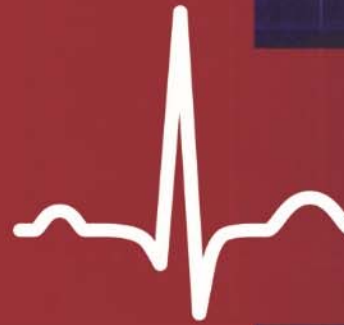


March 30 – April 2, 2016 ANAHEIM, CALIFORNIA

*SOCIETY OF TRAUMA NURSES*

# TRAUMA CON



*SOCIETY OF TRAUMA NURSES*



# The PI Process and American College of Surgeons Verification: Turning a Weakness or Deficiency into a Strength

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*SOCIETY OF TRAUMA NURSES*

## Learning Objectives

- The attendee will gain insight on how to identify a plan for resolution for each weakness and deficiency and develop a plan to monitor it for loop closure. The participant will be able to define the scope of the issue using the Plan, Do, Study, Act (PDSA) method of analysis.



## Learning Objectives

(Continued)

You will be able to develop a solution that defines the expected outcome and applicable monitoring measures for that resolution



## Disclosure Statement

- Faculty/Presenters/Authors/Content Reviewers/Planners disclose no conflict of interest relative to this educational activity.



## Successful Completion

- To successfully complete this course, participants must attend the entire event and complete/submit the evaluation at the end of the session.
- Society of Trauma Nurses is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.



How did we get here and how did we turn lemons into lemonade?

North Shore University Hospital  
Manhasset, NY

A member of Northwell Health



# NYS Regulations for Trauma Programs 1990

Adoption of ACS Standards 2013

Building our Trauma Program





## The Consultative Visit

How we learned what we didn't know, or when people come together meaningful things happen.



## By the Numbers

12 Deficiencies

15 Weaknesses

19 Recommendations

15 Strengths



Where did we start?  
GAP Analysis  
Executive Steering Committee



Stop, Caution, Ready to Go...  
Moving the Needle from Red to Green



North Shore University Hospital  
ACS-COT Level 1 Verification Pursuit

Key	
	Complete
	In-Progress
	ACS look-back period

DRAFT

**Deficiencies and Corrections Timeline**

**Type 1 Deficiencies - 0 Permitted for Verification**

- 80% compliance of the surgeons presence in the ED

**Type 2 Deficiencies - 3 Permitted for Verification**

- CME/Internal Education Process / 16 hour liaison
- ED Physicians with no ATLS
- ED physicians who are not board certified
- Neurosurgeons who are not board certified
- Trauma registry data is not collected and analyzed
- The PIPS program is not supported by a reliable method of data collection
- The program is not able to demonstrate that the trauma registry supports PIPS
- The result of analysis and collective strategies are not documented
- PIPS - the process does not identify problems
- PIPS - the process does not identify problem resolution
- PIPS process does not review the organ donation

**Weaknesses**

- Low operative volume
- High number of neurosurgeons taking call
- No response expectation with level 2 activations
- 2 level system results in under triage
- Neurosurgery representation at Peer Review meetings
- Trauma flow sheet not meeting the needs of the program
- EMS records inconsistently available
- Solid organ grading not done routinely
- Neuro and Ortho documentation is inconsistent
- No process for transfer of outside image
- Studies not formally over read
- Excessive ED dwell time
- No PACU RN trauma education
- Research information was difficult to verify and trauma input unclear
- The TMD reviews his own cases

Status	2013												2014								Notes
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
	[Red bar from Jan to May]												[Green bar from Jun to Aug]								- Although 2 months of red, avg. will be greater than 80%
	[Red bar from Jan to May]												[Green bar from Jun to Aug]								- Need 4 CME projects per year
	[Red bar from Jan to May]												[Green bar from Jun to Aug]								
	[Red bar from Jan to May]												[Green bar from Jun to Aug]								
	[Red bar from Jan to Dec]												[Green bar from Jan to Aug]								- Call schedule needs to be compliant by Feb 1
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	[Red bar from Jan to Dec]												[Green bar from Jan to Aug]								
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	[Red bar from Jan to Dec]												[Green bar from Jan to Aug]								- PI project in-progress
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	[Red bar from Jan to Dec]												[Green bar from Jan to Aug]								- PI project in-progress
	[Red bar from Jan to May]												[Green bar from Jun to Aug]								
	[Red bar from Jan to May]												[Green bar from Jun to Aug]								- Look-back is 3 years; won't be an issue
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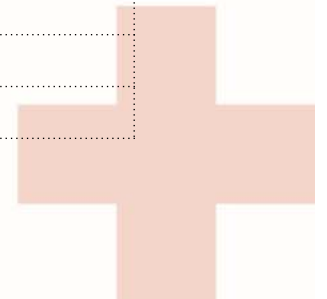
# North Shore University Hospital

## *ACS-COT Level 1 Verification Checklist*

### As of 2/10/2014

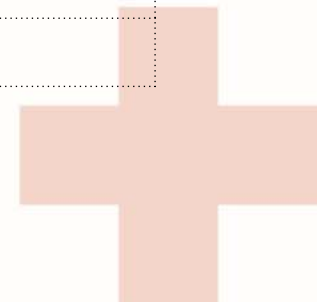
## Deficiencies

Status	Responsible Party	Update
1	80% threshold of trauma attending in ED within 15 minutes of patient arrival not met	3 Bank
2	16 hours External CME for EM / Neurosurgery liaisons not met	3 Sama/Narayan
3	CME or internal educational processes for members of trauma panel (NS, ortho, EM, Trauma) not met	3 Bank
4	One (two ?) neurosurgeon not board certified/eligible	3 Narayan
5	EM physicians who have never taken ATLS (All EM and Surgery Physicians must)	3 Sama
6	Family Medicine physicians in EM didn't take ATLS	3 Sama
7	PI - lack of problem resolution, lacking systems and processes	3 Bank
8	Registry not feeding PI process	3 Bank
9	Program does not follow organ donation and retrieval rates	3 Bank



# Weaknesses

1 Low trauma operative volume	1	N/A	Natural growth and SS rotations
2 High number of neurosurgeons taking call "hard to make a workable model"	3	Narayan	Jan 1 completion
3 Trauma activation system (suggest a III tier system)	3	Bank/Sama	
4 Trauma flow sheet	3	Bank	
5 EMS records are inconsistently available	2	TBD	PI project in development
6 Solid organ injury grading not being done by radiology	3	Nadich	
7 Documentation of neuro and ortho attending participation and resident supervision poor	2	Narayan/Mauri	
8 Limited process of digital transfer of imaging for outside transfers	3	Nadich	
9 Outside studies not formally over read even when requested	3	Nadich	
10 Excessive ED dwell time	2	TBD	PI project in-progress
11 No Trauma education for PACU RNs	3	Moleski	
12 Clinical research	3	Bank	
13 Trauma medical director reviews own cases	3	Bank	



To have or have not....

What do we need to add or change to  
be successful





Pick a Poison...Weakness or Deficiency

Taking the consultative review and resolving the issue with demonstrated loop closure



Title

Performance Improvement Issue

Analysis of Issue

Corrective Actions

Loop Closure

Supporting Documents



## **Weakness 3**

There is no response expectation with Level 2 activations

## **Weakness 4**

The current two level activation system results in under triage



## Analysis

- The previous trauma response system provided only two levels of activation, a full trauma activation or a trauma consult. This resulted in an “all or nothing” trauma response, with no middle level of activation and no trauma response time expectation for consults (“a Level 2 activation”).



## Analysis

This system provided for a very large gap between the management of a trauma patient in critical condition and all other trauma patients. The result was under triage of patients, with the failure to fully mobilize resources in a timely fashion.



## Corrective Actions

- A subcommittee of the TOPIC Committee was formed consisting of physician and nursing leadership. This committee reviewed trauma activation criteria from outside institutions. A three tiered trauma activation system was developed and tailored to meet the institutional needs of North Shore University Hospital.



## Corrective Actions

- Criteria for each level of activation were specified.
- The criteria for activation were posted in each of the rooms used for trauma resuscitation.
- A time frame of 60 minutes was established as the response time for Level 2 activation.



## Corrective Actions

- Physicians were educated on this system through an Internal Education Process.
- Trauma attending compliance with mandatory response time is monitored on a monthly basis. Trauma team participants who are not in compliance with mandatory response times are counseled





## Level 1 Activations

- Hypotension
- Penetrating trauma
- GCS < 9
- Transfers from outside hospitals receiving a blood transfusion to maintain vital signs
- Intubated patients transferred from the scene



## Level 1 Activations

- Patients with respiratory compromise or obstruction.
- Cardiac arrest
- GCS < 9
- Emergency Medicine physician discretion

Expectation of Trauma Attending at bedside  
within 15 minutes



- Responders
  - Trauma Attending
  - EM Attending
  - Surgery Chief Resident
  - EM Senior Resident
  - Surgery Senior Resident
  - 3 ED RN's ( two at bedside, one for documentation)
  - 2 ED technicians (one at beside, one to assist documentation RN)



## Level 2 Activations

- Falls greater than 10 feet
- Run over, struck by, or ejected from a motor vehicle
- Signs/symptoms of spinal cord injury
- Two or more proximal long bone and/or pelvic fractures (femur, humerus, pelvis)



- Scalp and/or extremity with significant bleeding
- Severe maxillofacial trauma
- EMS requesting a trauma team
- EM Attending discretion

Expectation of Trauma Attending at bedside  
within 60 minutes



- Responders
  - EM Attending
  - Surgery Chief Resident
  - EM Senior Resident
  - Surgery Senior Resident (PGY 2-4)
  - 2 ED RN's ( one at bedside, one for documentation)
  - 1 ED technicians ( at bedside)



## Level 3 Activations (Trauma Consult)

- Patients who don't meet Level 1 or Level 2 criteria but still require a trauma service evaluation in the judgment of the Emergency Medicine Attending



## Loop Closure

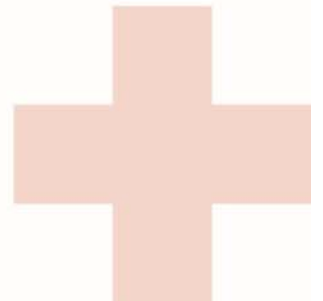
- There is now a Three Tier Activation system with a response expectation for Level 2 activations. Level 2 response time will be monitored on an ongoing basis.





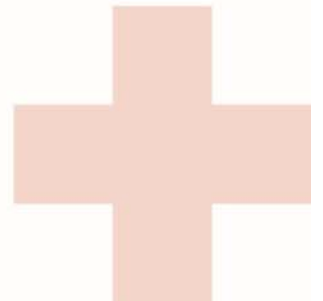
## Supporting Documents

- Three Tier Trauma Activation System.
- IEP for Three Tier Trauma Activation System.
- Graph by month of Level 1 and Level 2 responses 2012/2013/2014.
- Graph of Level 2 responses.

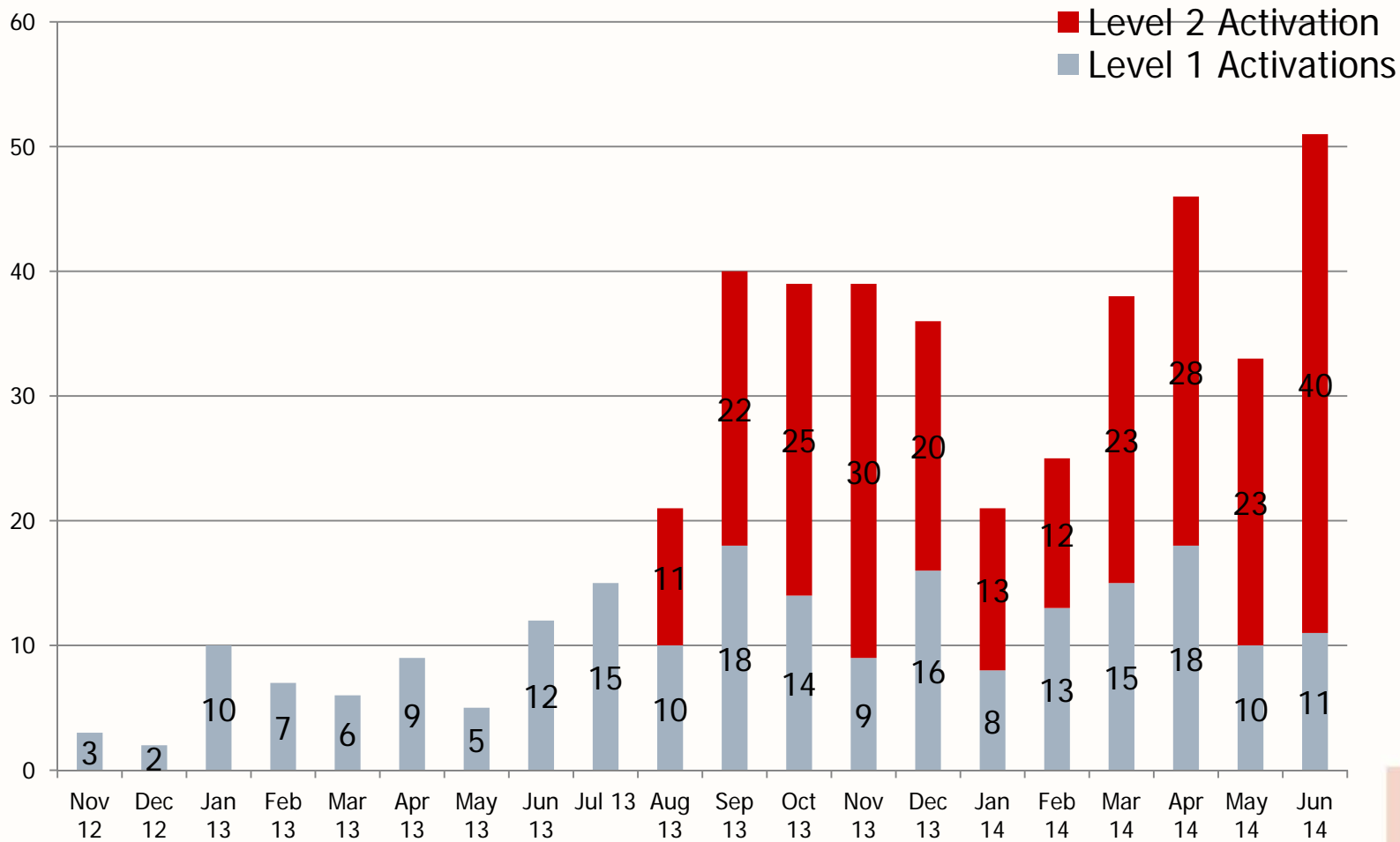


## Supporting Documents

- TOPIC Committee meeting minutes.
- Monthly activation tracking sheets.
- Template for counseling memo is attached.



# Trauma Activations Level 1/Level 2



## **Deficiency 9**

The results of analysis and corrective strategies are not documented.

## **Deficiency 10**

The process does not identify problems.



## Deficiency 11

The process does not demonstrate problem resolution (loop closure).



# Analysis

- The Trauma PIPS program was not well organized and documented. Documentation of problems, corrective strategies, and loop closure was inconsistent.



## Corrective Actions

- A reorganization of the Trauma PIPS program was completed.
  - The Trauma PI Plan was re-written.



- A dedicated Trauma Performance Improvement Nurse was identified and hired. The Trauma PI Nurse was charged with identifying quality issues in real time by attending daily morning report with the Trauma Medical Director. PI issues and complications identified at morning report are entered into the trauma registry prospectively.





- PI issues identified at morning report are investigated and the results of analysis and corrective strategies documented in the trauma registry.



- Appropriate issues and case reviews are discussed at the TOPIC meeting and Trauma Peer Review to increase transparency of the Trauma PIPS program. These discussions are documented in the meeting minutes. Issues without immediate resolution are followed monthly by the appropriate committee until loop closure.



- Specific cases requiring reviews outside the Division of Trauma are sent to the appropriate department and results of these reviews are documented in the trauma registry. Appropriate corrective actions are also documented.



- A standardized format for review of cases was created and used for mortality and/or PI reviews.

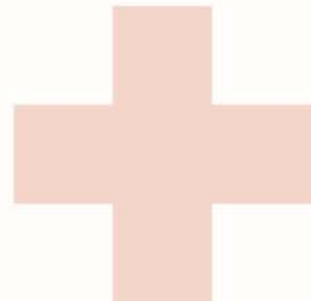


## Loop Closure

- The Trauma PIPS program has been fully reorganized. Quality issues are identified concurrently with patient care, and documented in the trauma registry. PIPS issues are brought through the appropriate committee structure and full transparency of the Trauma PIPS program is maintained.



# Questions?



**Thank you!**



