

## About Us

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# Center 10

- ACS Verified Level I Adult and Level II Pediatric Center
- ED Volume 120,000 annually
- Trauma registry volume 2500 annually
  - Blunt: 80%
  - Penetrating: 18%
  - Burn: 2%

## About Us

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# Center 10

- 10 Attending surgeons taking call
- Numerous residency and fellowship programs
- Trauma Service- Resident run with 1 MLP on days/ 1 MLP on nights
  - Trauma Program Manager
  - 5 registrars
  - 2 MCRs
  - Pediatric Coordinator
  - Injury Prevention coordinator
  - Administrative assistant

## Definition

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# Failure to Rescue

- Age  $\geq 16$
- ISS  $\geq 5$
- Hospital LOS  $\geq 1$  day or dead
- Exclude DOA
- Admit to trauma service (Cohort 2)
- Patients with Grade 2 or Grade 3 Complication
- Failure to rescue =  $n$  dead with complication /  $n$  with complication

## Definition

# Failure to Rescue

### Grade 2 Complications

- Unplanned ICU admit
- Pneumonia
- Unplanned return to OR
- DVT/PE
- Decubitus ulcer
- Cdiff.
- Enterocutaneous fistula
- Extremity compartment syndrome

### Grade 3 Complications

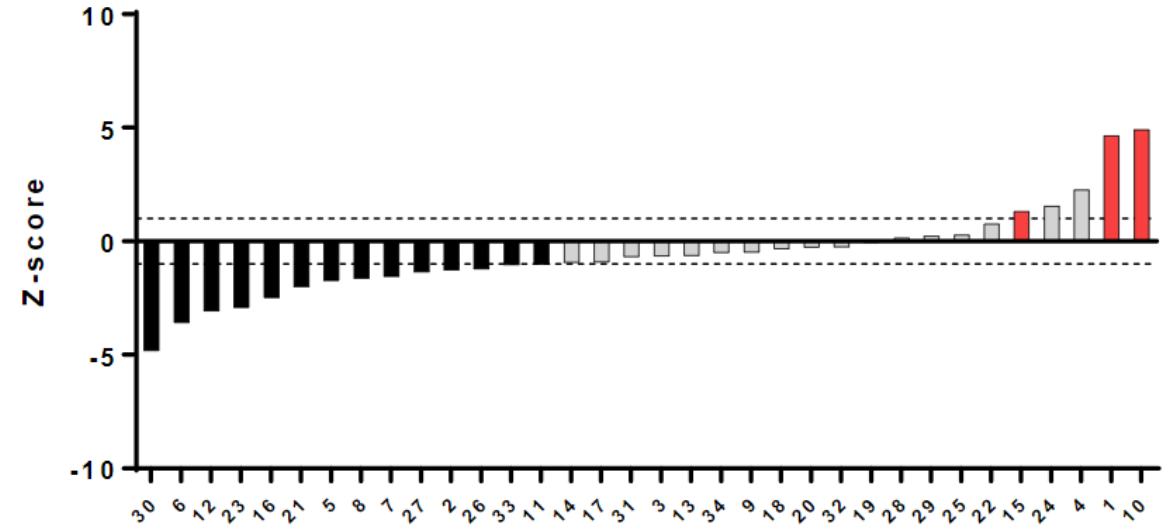
- Cardiac arrest with CPR
- Acute Kidney Injury
- ARDS
- Myocardial Infarction
- Unplanned Intubation
- CVA
- Severe Sepsis
- Acute Renal Insufficiency
- Mortality

## Failure to Rescue Status

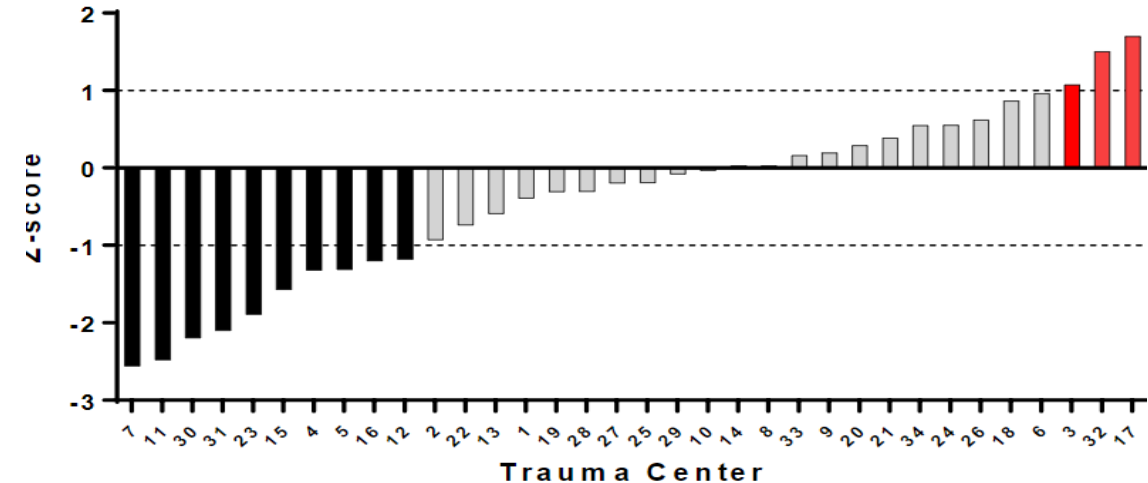
# Center 10

- Serious complication Z score has increased (high outlier)
- Mortality rate Z score has remained consistent (average performance)
- Addition of 1<sup>st</sup> MCR 04/2016
  - 2<sup>nd</sup> MCR 01/2018

Z-score - Serious Complication Rate  
Cohort 2 - Admit to Trauma  
7/1/15 - 6/30/18



Z-score - Mortality Rate  
Cohort 2 - Admit to Trauma  
7/1/15 - 6/30/18



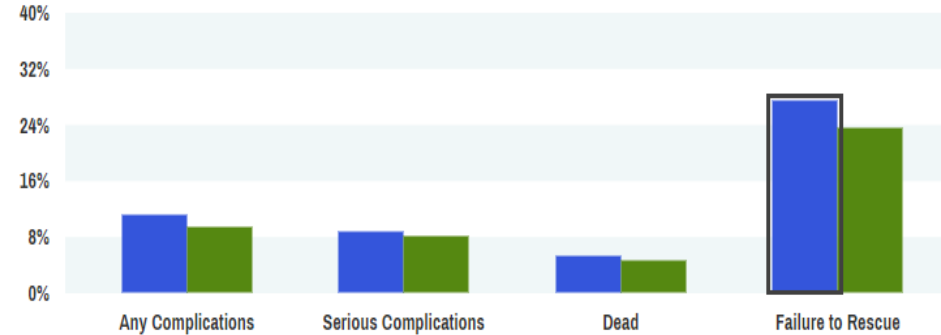
## Failure to Rescue Status

# Center 10

- July 1, 2015-December 31, 2018
- ASJH Adjusted FTR rate: 27.4%
- MTQIP Adjusted FTR rate: 23.7%

Adjusted	Unadjusted	O/E Ratio	Confidence Intervals
27.4	33.8	1.28	HIGH 30.8 LOW 24

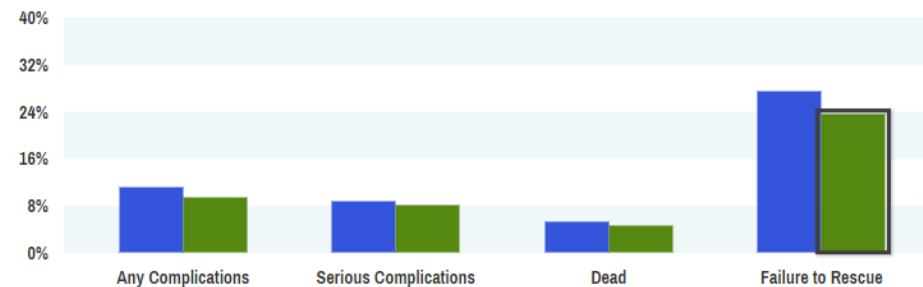
### Outcomes Overview



### Failure to Rescue - MTQIP - All

Adjusted	Unadjusted	O/E Ratio	Confidence Intervals
23.7	23.7	1.07	HIGH 24.7 LOW 22.7

### Outcomes Overview



## Failure to Rescue

# Drilldown

- 70 patients identified
- Average ISS 26.2
- Average age 56.9 years
- Blunt 65% (45)
- Penetrating 35% (25)



## Failure to Rescue Status

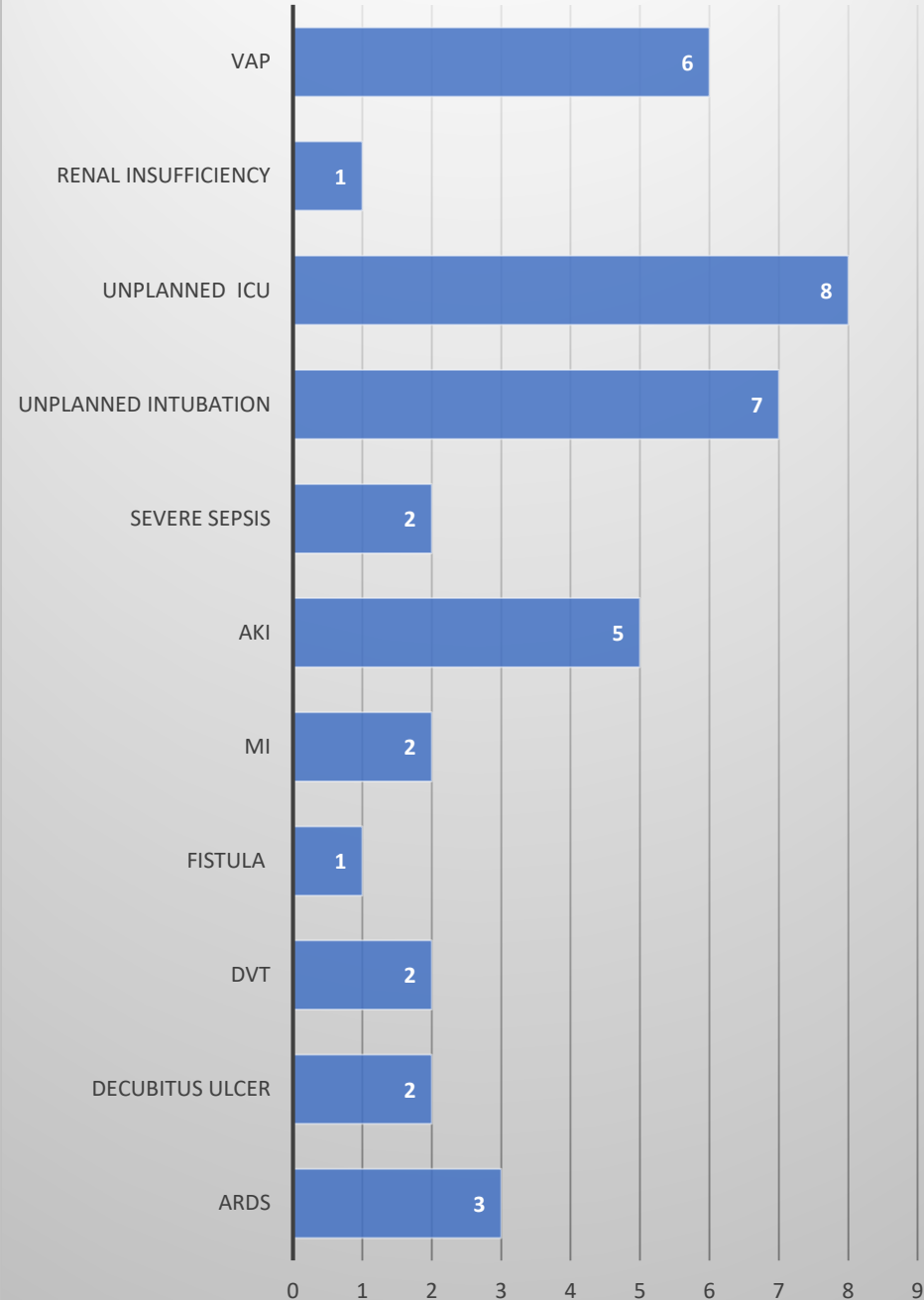
# Center 10

- Out of 70 patients identified, **52** had CPR as one of the complications.
- Of the 52 patients with CPR
  - 54% Blunt
  - 46% Penetrating
- 41 of the 52 (**79%**) had CPR within 1 day of arrival.
  - Average ISS: 33.4
  - Average Age: 43.5
    - Of the 41 patients
      - 56% Penetrating, Avg. age 36, Avg. ISS 28
      - 44% Blunt, Avg. age 53, Avg. ISS 41





## Complication Type



## Failure to Rescue Status

# Center 10

- 18 patients were identified as having no CPR but other complication(s)
  - Average ISS: 14.5
  - Average Age: 81.2 years
    - Blunt: 94%
    - Penetrating: 6%
- Unplanned ICU: 44%
- Unplanned intubation: 39%

# Reasons

- Collecting complications more accurately since the addition of MCRs.
- Despite complication rate increasing, mortality rate has remained the same.
- 79% of patients had an episode of cardiac arrest within Hospital Day 1
- Geriatric trauma

# Moving Forward

- Opportunities for a more robust drilldown into FTR
  - Patients with CPR greater than Hospital day 1
  - Patients with multiple complications
- Geriatric Trauma Protocols
  - Early Geriatrician Consults
  - ICU admission
  - Aggressive pulmonary toilet
    - Early tracheostomy
- Palliative care consults

Silver Tsunami