M·TQIP

Individual Site Summary Report

November 1, 2014 through January 31, 2017

Issued May 17, 2017

Contents

Description of Cohorts

Cohort 1 (All)

1) Mechanism = Blunt or penetrating
2) Age ≥ 18, Age ≥ 16 starting 1/1/13
3) ISS ≥ 5
4) Hospital LOS ≥ 1 day or dead

Cohort 1 (All) w/o DOA's

1) Mechanism = Blunt or penetrating
2) Age ≥ 18, Age ≥ 16 starting 1/1/13
3) ISS ≥ 5
4) Hospital LOS ≥ 1 day or dead
5) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)

Cohort 2 (Admit trauma)

1) Mechanism = Blunt or penetrating
2) Age ≥ 18, Age ≥ 16 starting 1/1/13
3) ISS ≥ 5
4) Hospital LOS ≥ 1 day or dead
5) Admit to trauma service if ED disposition not death

Cohort 2 (Admit trauma) w/o DOA's

1) Mechanism = Blunt or penetrating
2) Age ≥ 18, Age ≥ 16 starting 1/1/13
3) ISS ≥ 5
4) Hospital LOS ≥ 1 day or dead
5) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)
6) Admit to trauma service if ED disposition not death

Cohort 3 (Blunt Multi-System)

1) Mechanism = Blunt
2) Age ≥ 18, Age ≥ 16 starting 1/1/13
3) ISS ≥ 5
4) Hospital LOS ≥ 1 day or dead
5) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)
6) AIS ≥ 3 in at least two of the following body regions: head/neck, face, chest, abdomen, extremities, or external.

Cohort 4 (Blunt Single-System)

1) Mechanism = Blunt
2) Age ≥ 18, Age ≥ 16 starting 1/1/13
3) ISS ≥ 5
4) Hospital LOS ≥ 1 day or dead

5) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)
6) AIS ≥ 3 limited to only one body region with all other body regions having a maximum AIS ≤ 2 in the following body regions: head/neck, face, chest, abdomen, extremities, or external.

Mortality or Hospice

1) Mechanism = Blunt or penetrating
2) Age ≥ 18, Age ≥ 16 starting 1/1/13
3) ISS ≥ 5
4) Hospital LOS ≥ 1 day or dead
5) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)
6) Outcome is dead or discharge to hospice

Cohort 5 (Penetrating)

1) Mechanism = Penetrating
2) Age ≥ 18, Age ≥ 16 starting 1/1/13
3) ISS ≥ 5
4) Hospital LOS ≥ 1 day or dead
5) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)

Cohort 6 (Admit non-trauma Service)

1) Mechanism = Blunt or Penetrating
2) Age ≥ 18, Age ≥ 16 starting 1/1/13
3) ISS ≥ 5
4) Hospital LOS ≥ 1 day or dead
5) Admit to non-trauma service if ED disposition not death
6) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)

Cohort 7 (Benchmark)

1) Age $\geq$ 16
2) ISS $\geq$ 9
3) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)
4) Exclude patients who were transferred out
5) Exclude patients discharged directly from the ED alive
6) Exclude patients with an advanced directive limiting care present prior to injury
7) Exclude patients who sustain a hip fracture and fall and age $\geq$ 65

Note: this benchmark may not match your national benchmark report exactly. The MTQIP uses AIS 2005. The national benchmark uses ICD-9 with crosswalk to AIS 1998.

ISS > 35 Mortality

1) Mechanism = Blunt or penetrating
2) Age ≥ 18, Age ≥ 16 starting 1/1/13
3) ISS > 35

4) Hospital LOS ≥ 1 day or dead
5) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)

Age < 65 Mortality

1) Mechanism = Blunt or penetrating
2) Age ≥ 18, Age ≥ 16 starting 1/1/13 and Age < 65
3) ISS ≥ 5
4) Hospital LOS ≥ 1 day or dead
5) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)

Age ≥ 65 Mortality

1) Mechanism = Blunt or penetrating
2) Age ≥ 65
3) ISS ≥ 5
4) Hospital LOS ≥ 1 day or dead
5) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)

Mortality Trend

1) Cohort 2
2) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)

Complications Trend

1) Cohort 2
2) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)

Complications

1) Cohort 2 w/o DOA's
2) Complication severity grade 1
    a. Definition: Non-life-threatening complications
    b. Complications: catheter-related bloodstream infection, C. difficile colitis, deep SSI, drug or alcohol withdrawal syndrome, graft/prosthesis/flap failure, organ/space SSI, acute renal insufficiency, osteomyelitis, superficial SSI, unplanned return to ICU, urinary tract infection, wound disruption
3) Complication severity grade 2
    a. Definition: Potentially life-threatening complications
    b. Complications: decubitus ulcer, DVT, enterocutaneous fistula, extremity compartment syndrome, pneumonia, pulmonary embolism, unplanned intubation, unplanned return to OR
4) Complication severity grade 3
    a. Definition: Life-threatening complications with residual or lasting disability or mortality
    b. Complications: acute lung injury/ARDS, acute kidney injury, cardiac arrest with CPR, mortality, myocardial infarction, severe sepsis, stroke/CVA
5) Specific complication groups

a. Any complication = Grade 1 + Grade 2 + Grade 3 (excluding death)
b. Serious = Grade 2 + Grade 3 (excluding death)
c. Cardiac/Stroke = stroke/CVA, cardiac arrest requiring CPR, myocardial infarction
d. Pneumonia = pneumonia
e. DVT/Pulmonary Embolus = DVT lower extremity, DVT upper extremity, pulmonary embolism
f. UTI = urinary tract infection
g. Renal Failure = acute kidney injury
h. Sepsis = sepsis
i. C. Difficile Colitis = C. diff

Failure to Rescue

1) Mechanism = Blunt or penetrating
2) Age ≥ 18, Age ≥ 16 starting 1/1/13
3) ISS ≥ 5
4) Hospital LOS ≥ 1 day or dead
5) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)
6) Admit to trauma service if ED disposition not death
7) Exclude patients who did not have a severity grade 2 or 3 complication
8) Failure to rescue = n dead with complication / n with complication

Note: A patient can have four possible combinations: dead/no complication, dead/complication, alive/no complication, or alive/complication. Failure to rescue is the percent of patients with an identified complication who go on to die.

Unplanned Return to OR

1) Cohort 2
2) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)
3) Unplanned return to OR = Y

Unplanned Return to ICU

1) Cohort 2
2) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)
3) Unplanned return to ICU = Y

Hospital Length of Stay

1) Cohort 2
2) Exclude all deaths

Intensive Care Unit Length of Stay

1) Cohort 2
2) Exclude all deaths
3) Exclude all patients with ICU LOS < 1

Patients Admitted to ICU

1) Cohort 1
2) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)
3) ICU days > 0

Mechanical Ventilator Days

1) Cohort 2
2) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)
3) Exclude all patients with Mechanical Ventilator Days < 1

VAP

1) Cohort 2
2) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)
3) Exclude patients with Mechanical Ventilator Days < 1

Patients on Ventilator

1) Cohort 1
2) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)
3) Mechanical Ventilator days > 0

IVC Filter

1) Cohort 1
2) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)
3) Op Code 38.7, 06H00DZ, 06H03DZ, 06H04DZ, 06V03DZ, or 06V03ZZ

VTE

1) Cohort 2
2) Patients who received heparin, LMWH, or no VTE prophylaxis from ED admit date and time
3) Exclude all patients who arrived in ED prior to 1/1/12
4) Exclude patient who were DOA
5) Exclude patients who died in ED
6) Exclude patients who received direct thrombin inhibitor, oral Xa inhibitor, Coumadin, or other

ICP Monitor and/or Brain Operation

1) Cohort 1
2) Mechanism = Blunt
3) AIS Head ≥1, excluding vascular, scalp, and bony injuries
4) Exclude if TBI GCS>8
5) Exclude patients who had no signs of life (ED HR 0, BP 0, GCS 3)
6) Exclude patients who were transferred late (Direct admit)

Blood

1) Cohort 1
2) PRBC 4 hours $\geq$ 5 units

Hemorrhage Control Angiography/Operation

1) Cohort 1
2) Lowest systolic BP ≤ 90 in ED
3) Exclude if first angiography/operation < 0 or > 24 hours

No Signs of Life

1) Patients will be designated as having arrived to the ED with "no signs of life" if they meet one of the following criteria and die in the ED
2) ED SBP 0, HR 0, and GCS 3
3) ED SBP 0, HR 0, and mGCS 1
4) ED SBP = NK/NR, HR 0, and mGCS 1
5) ED SBP 0, HR 0, and mGCS = NK/NR
6) ED SBP 0, HR = NK/NR, and mGCS 1
7) ED SBP = NK/NR, HR 0, and mGCS = NK/NR

Legend

☐ Low-outlier status (better performance)

▒ Non-outlier status (average performance)

■ High-outlier status (worse performance)

Statistical Methods

We performed risk and reliability adjustment using a two stage approach. Multivariate logistic regression modeling was used to account for differences in baseline characteristics and injury severity, thereby allowing for risk-adjustment at the patient level. Potential predictors of for the outcome of interest were entered into the model. A logit equation was derived based on the significant co-variates using forward selection. Separate models for each outcome were constructed and the order of variable entry was determined by the c-index which measures the ability of a parameter to discriminate outcome. Reliability adjustment used a Bayesian random effects model to account for sample size differences between hospitals. Logit equations resulting from second stage models were used to calculate expected outcome risk. Adjusted rates for each hospital were calculated by multiplying the rate ratio of observed to expected events by the overall collaborative rate

In some instances, specific incidents had missing values for potentially important co-variates (Glasgow Coma Scale (GCS) motor score, systolic blood pressure, and pulse rate). These attributes were identified and managed via the creation an indicator variable where applicable. The final model and analysis included all of the incidents that met MTQIP entry criteria for the cohort being examined.

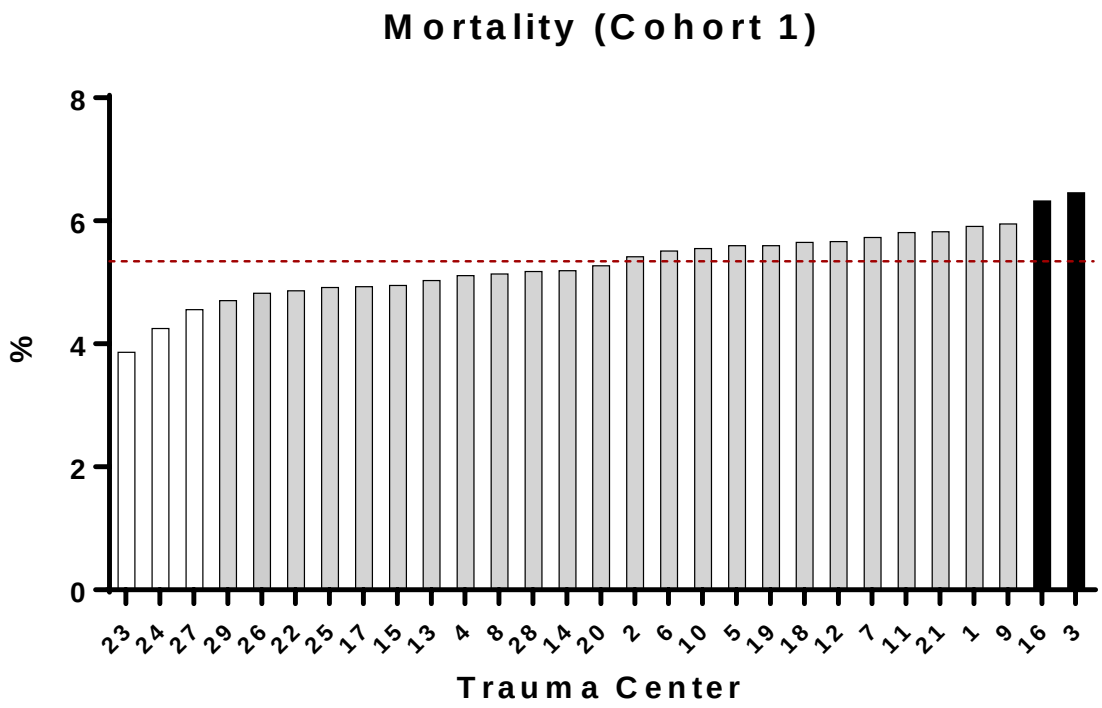
Continuous data exhibiting a right-skewed distribution such as hospital length of stay was natural log-transformed. Multivariate analysis of hospital length of stay, intensive care unit length of stay, and mechanical ventilator days was performed using multiple linear regression and adjusting for significant co-variates. After the regression analysis was conducted the generated coefficient from the regression model was exponentiated to determine the percent increase or decrease in length of stay relative to the risk adjusted mean. Only patients who survived were considered in the hospital and ICU length of stay analysis to simplify this approach. To be included in the ICU length of stay or mechanical ventilator days' analysis, a patient had to have at least one day of use for the resource being investigated.

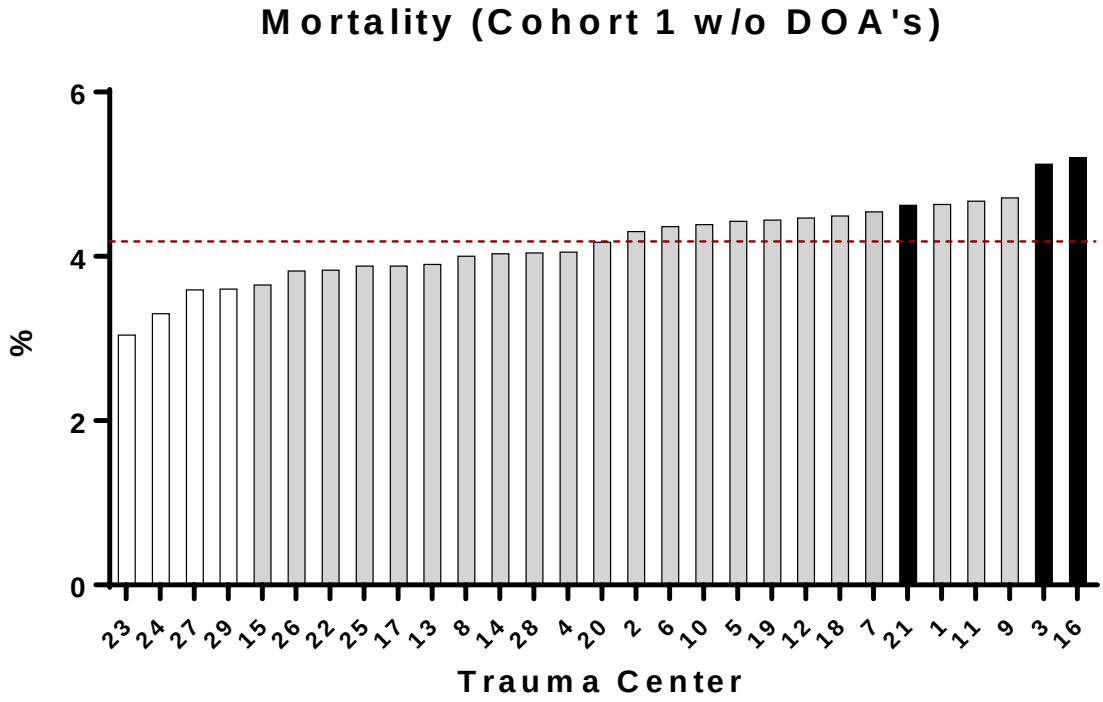
Eligible = N - Alive w/o intervention - Dead and monitor withheld for reason

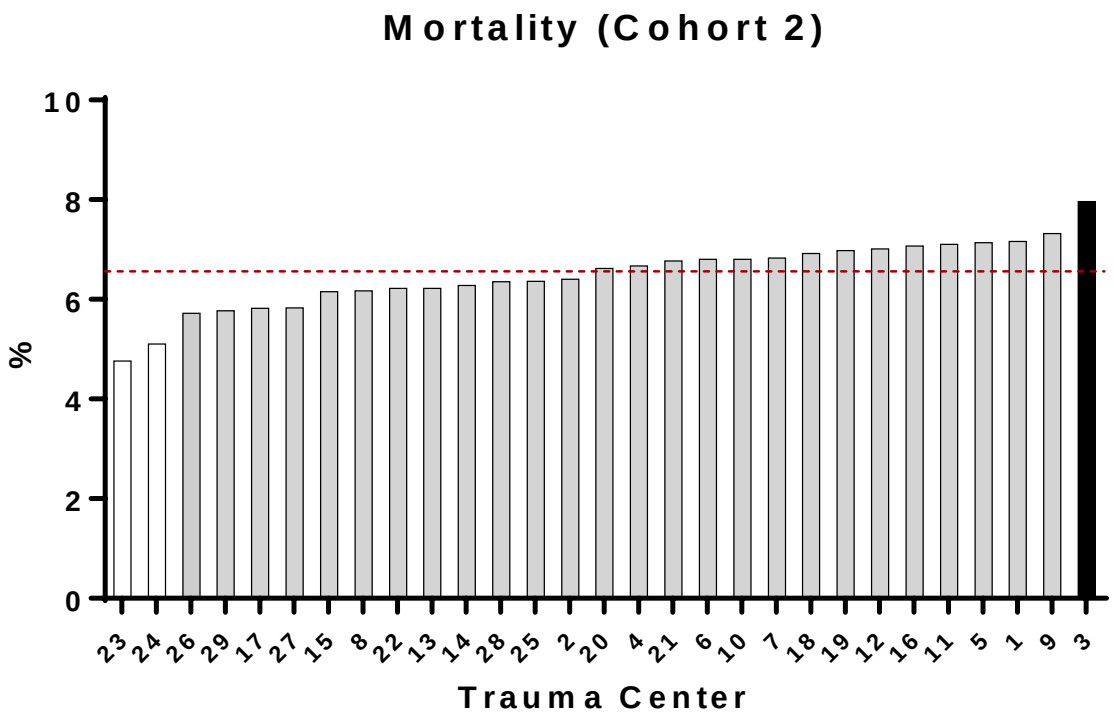
Eligible and no intervention = N - Alive w/o intervention - Alive with intervention - Dead with intervention - Dead and monitor withheld for reason

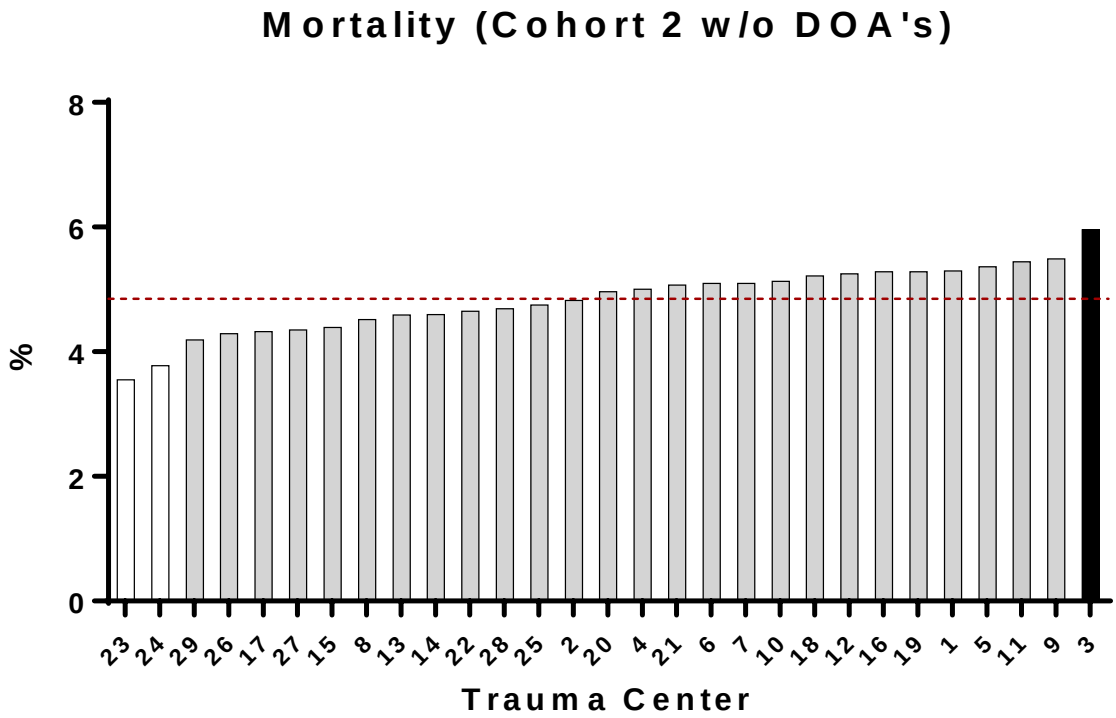
Timely = Monitor placement or operation ≤ 8 hours after ED arrival

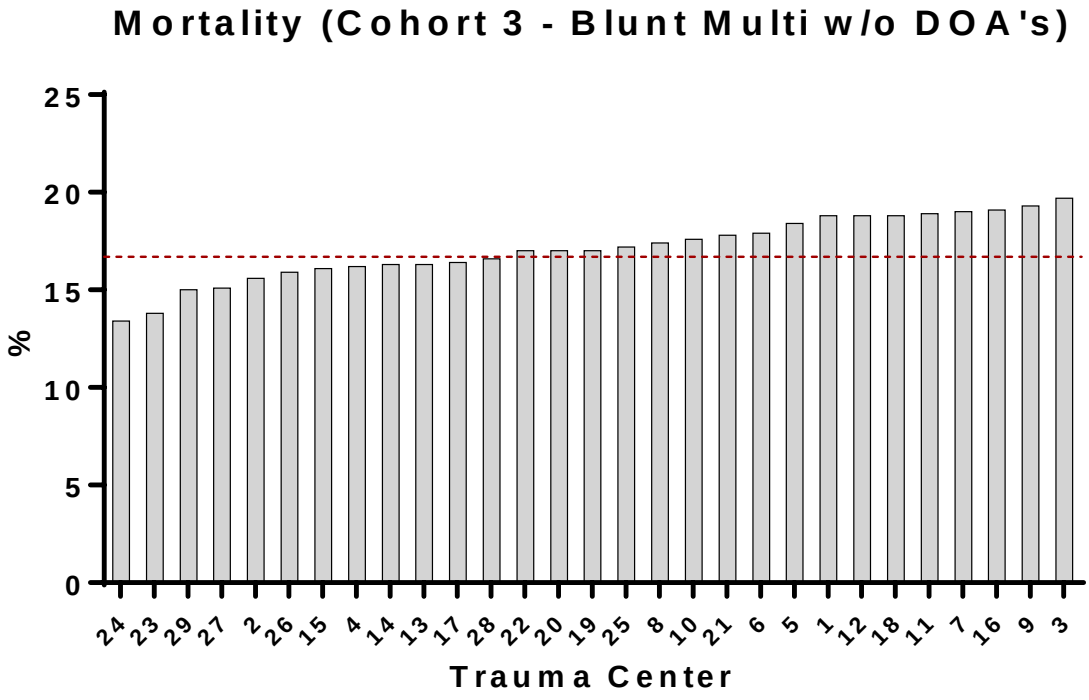
Mortality Graphs






Mortality (Cohort 2)
10
8
6
4
2
0
%
23 24 26 29 17 27 15 8 22 13 14 28 25 2 20 4 21 6 10 7 18 19 12 16 11 5 1 9 3
Trauma Center


Mortality (Cohort 2 w/o DOA's)
8
6
4
2
0
%
23 24 29 26 17 27 15 8 13 14 22 28 25 2 20 4 21 6 7 10 18 12 16 19 1 5 11 9 3
Trauma Center


Mortality (Cohort 3 - Blunt Multi w/o DOA's)
25
20
15
10
5
0
%
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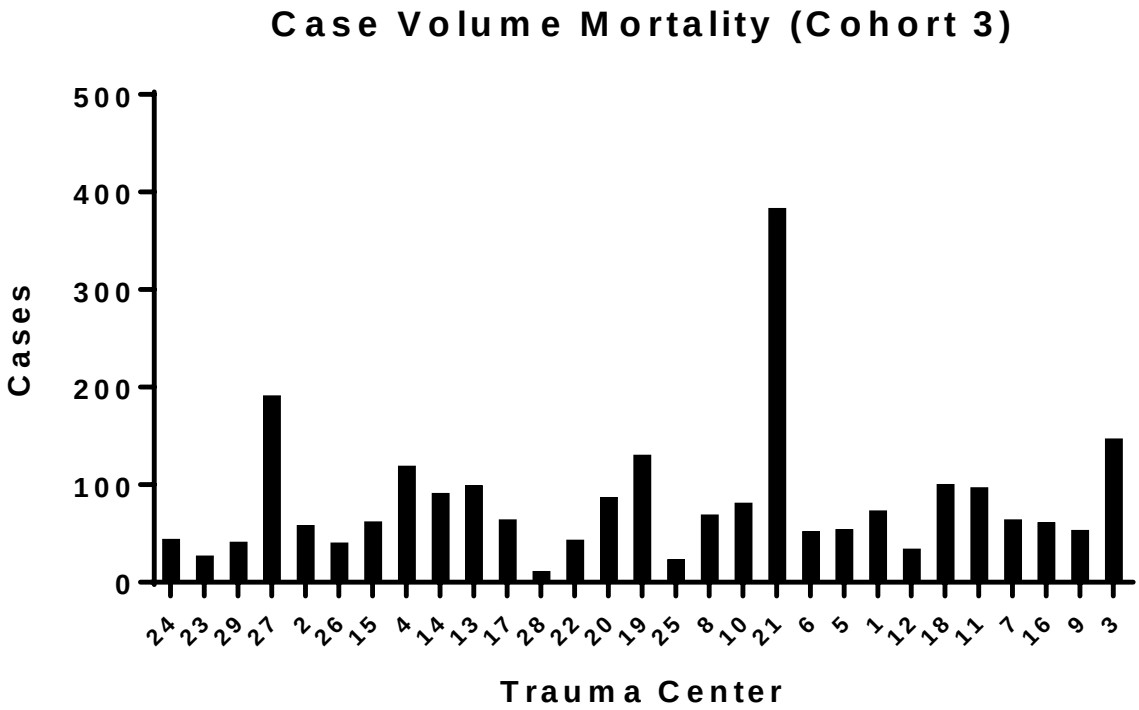
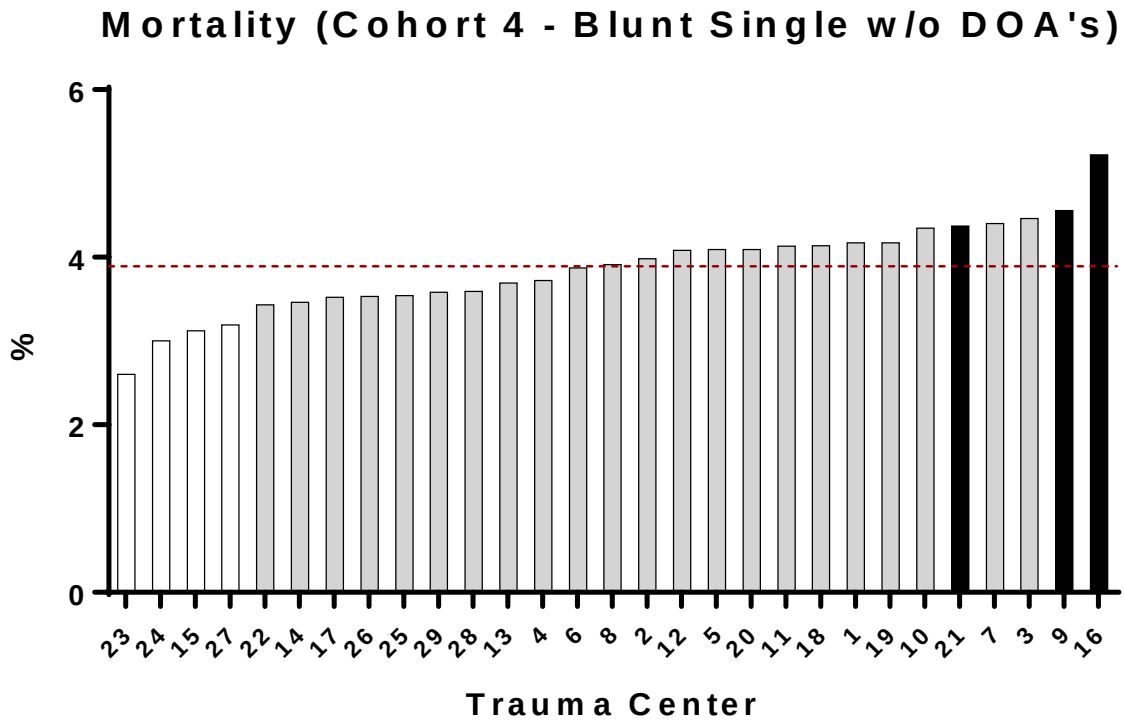
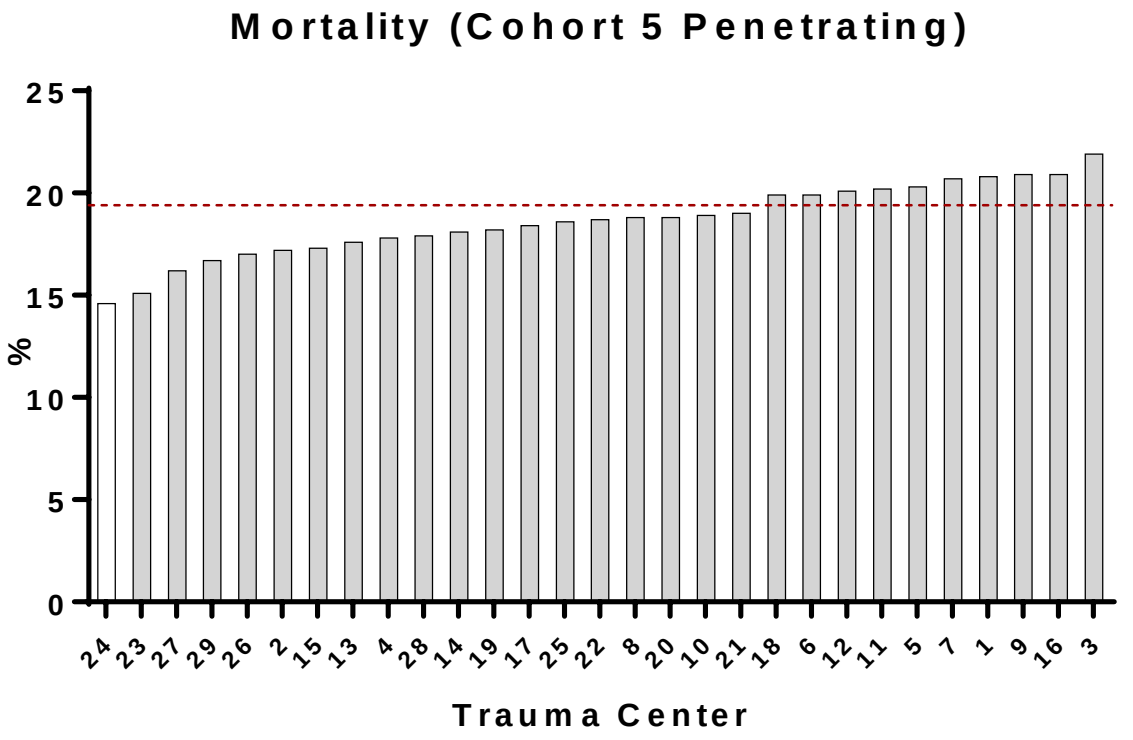
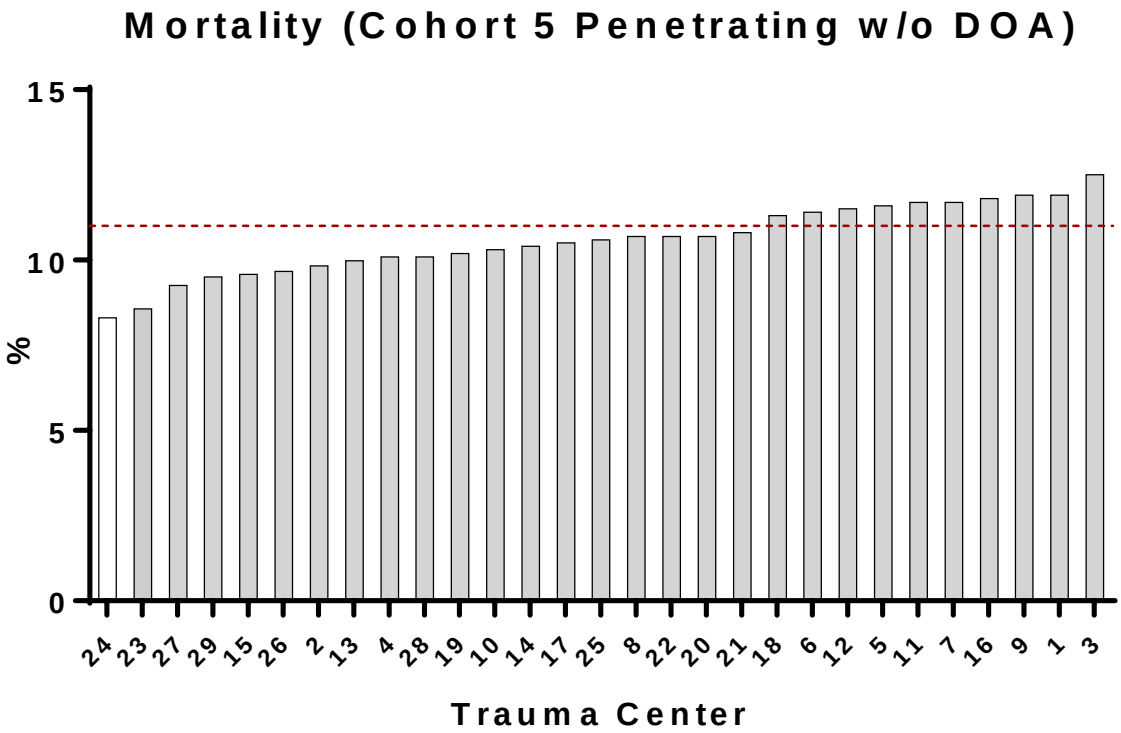
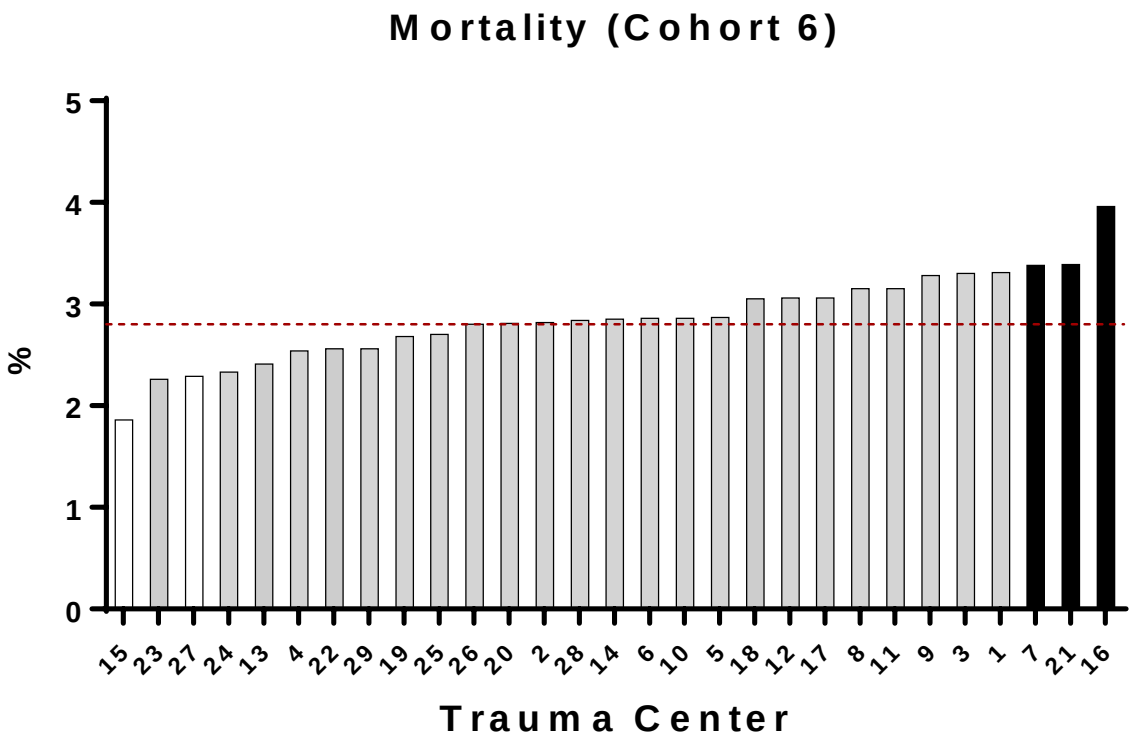
Trauma Center

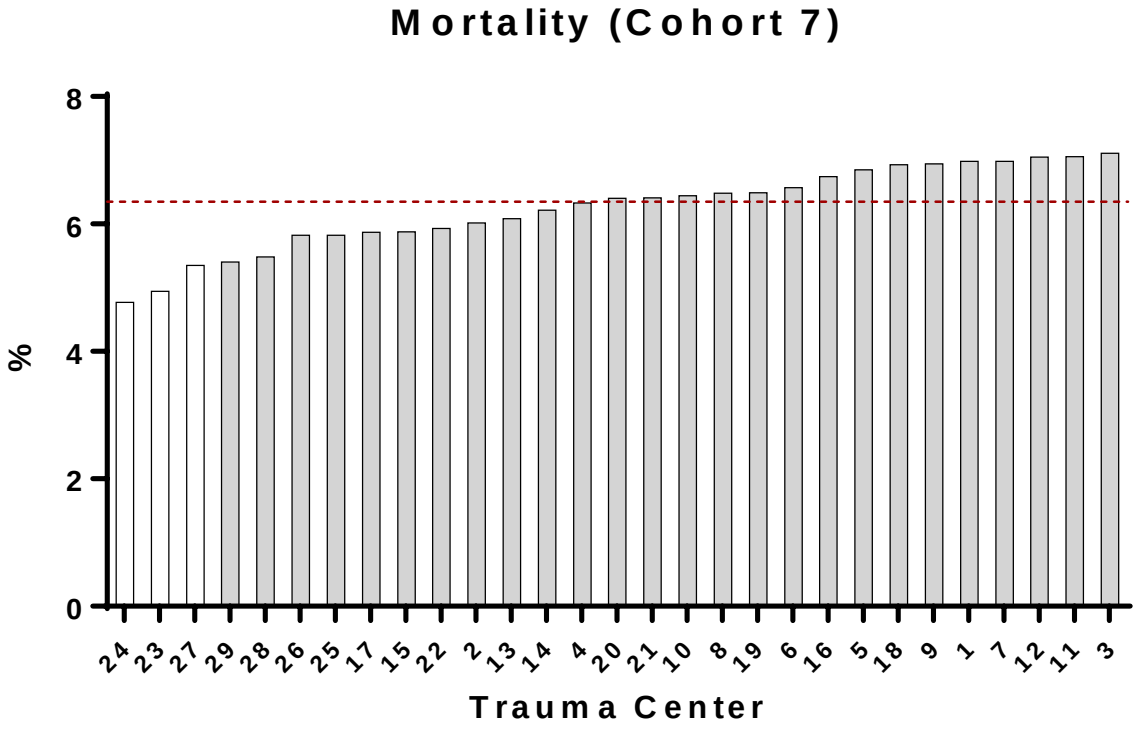

Case Volume Mortality (Cohort 3)
500
400
300
200
100
0
Cases
24 23 29 27 2 26 15 4 14 13 17 28 22 20 19 25 8 10 21 6 5 1 12 18 11 7 16 9 3
Trauma Center

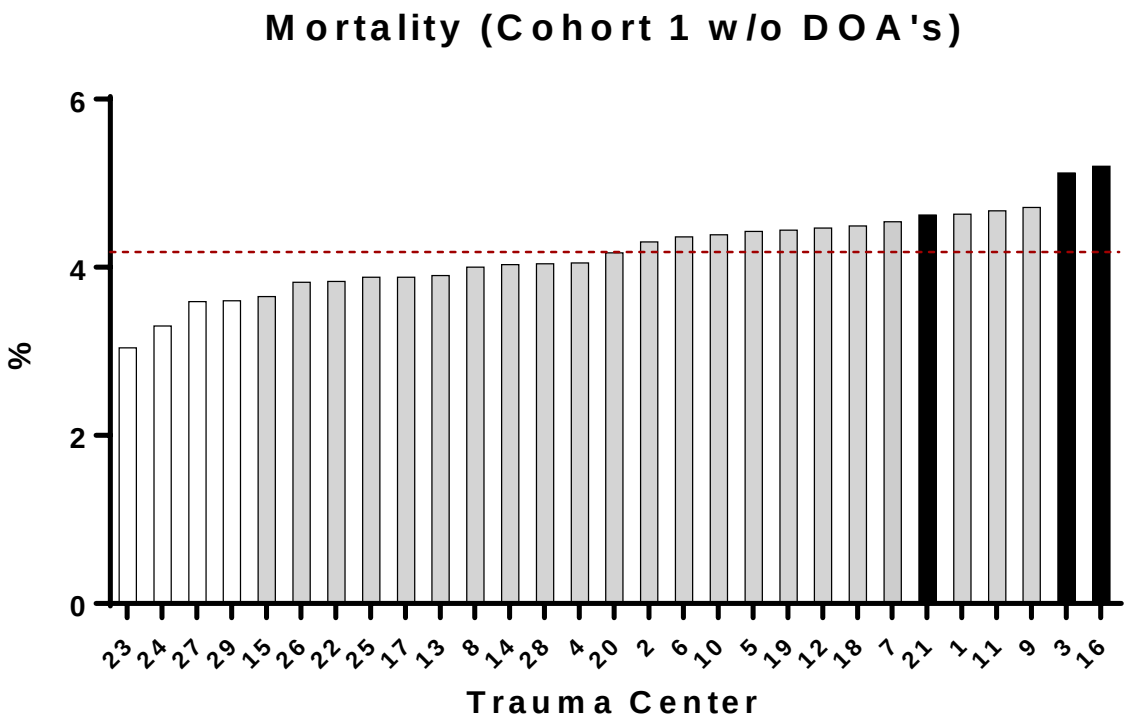

Mortality (Cohort 4 - Blunt Single w/o DOA's)
6
4
2
0
%
23 24 15 27 22 14 17 26 25 29 28 13 4 6 8 2 12 5 20 11 18 1 19 10 21 7 3 9 16
Trauma Center

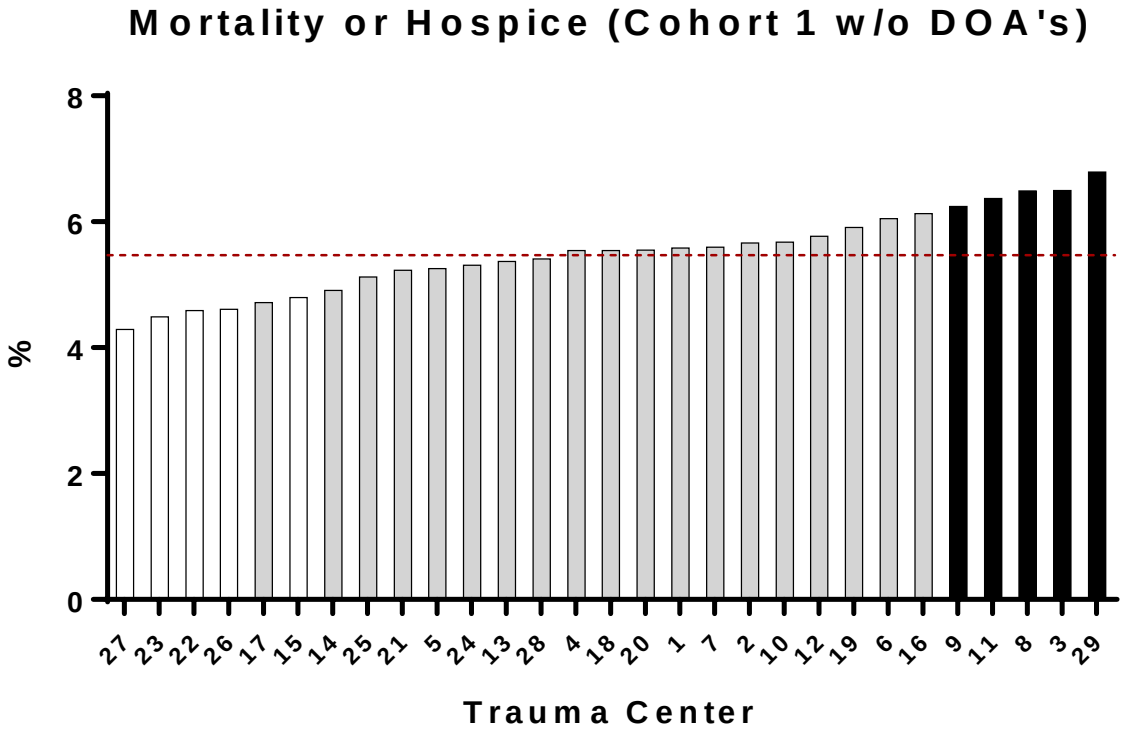

Mortality (Cohort 5 Penetrating)
25
20
15
10
5
0
%
24 23 27 29 26 2 15 13 4 28 14 19 17 25 22 8 20 10 21 18 6 12 11 5 7 1 9 16 3
Trauma Center

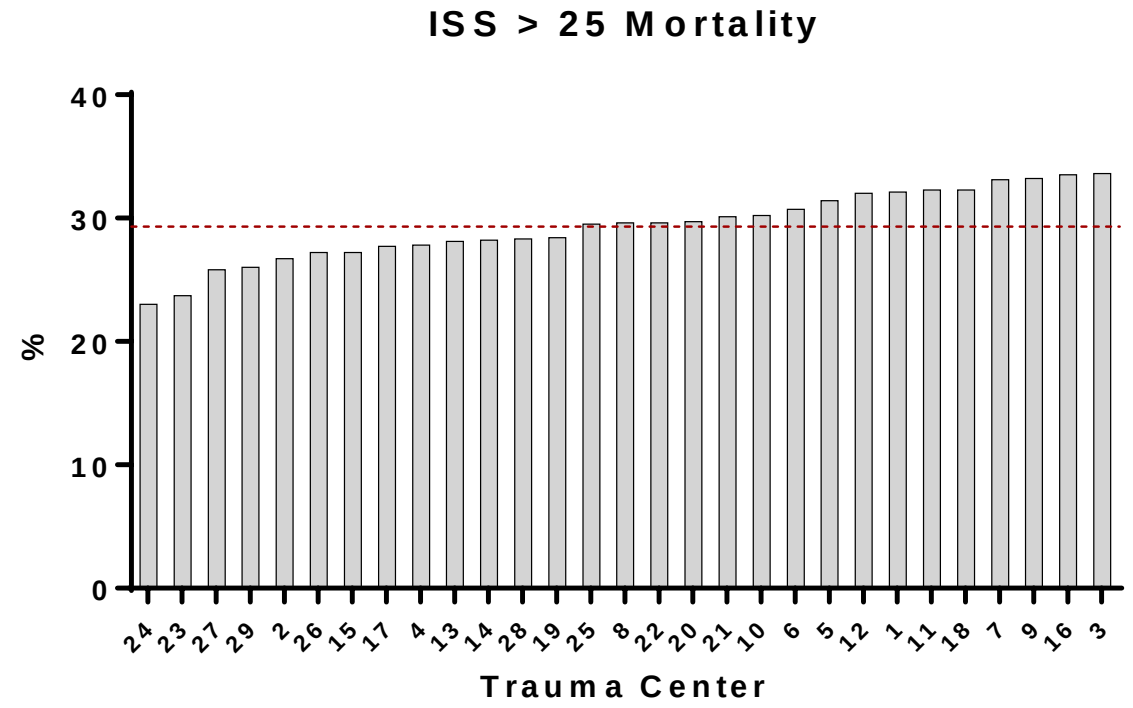

Mortality (Cohort 5 Penetrating w/o DOA)
15
10
5
0
%
24 23 27 29 15 26 2 13 4 28 19 10 14 17 25 8 22 20 21 18 6 12 5 11 7 16 9 1 3
Trauma Center

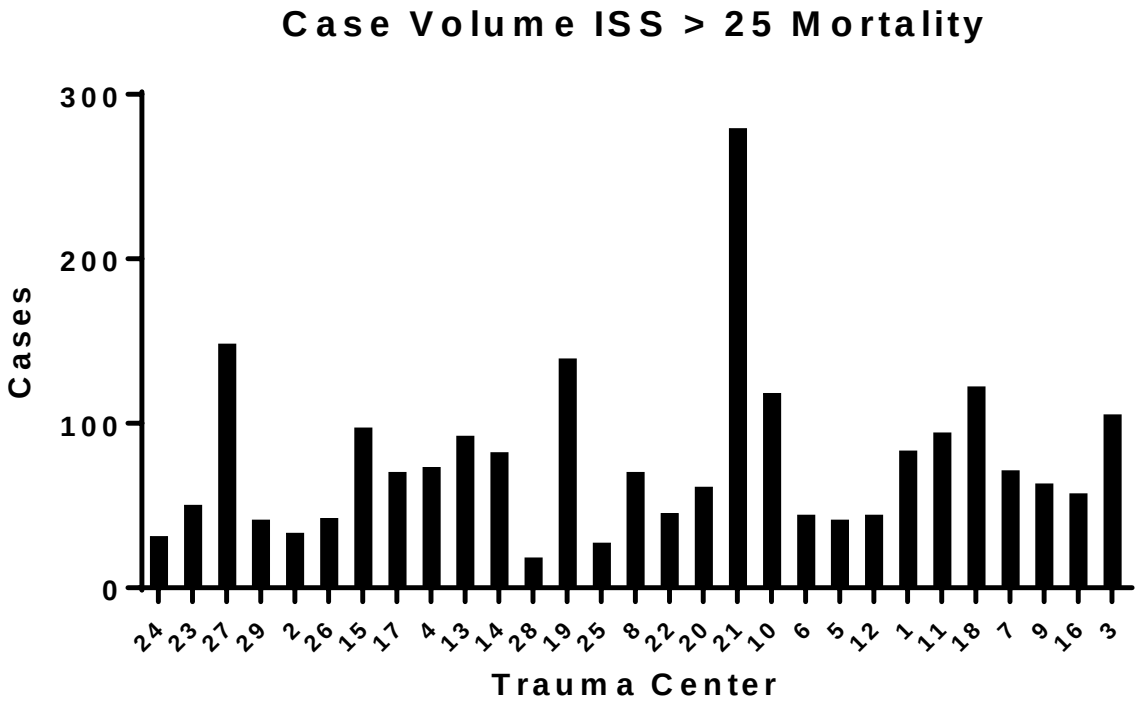

Mortality (Cohort 6)
%
0
1
2
3
4
5
15 23 27 24 13 4 22 29 19 25 26 20 2 28 14 6 10 5 18 12 17 8 11 9 3 1 7 21 16
Trauma Center

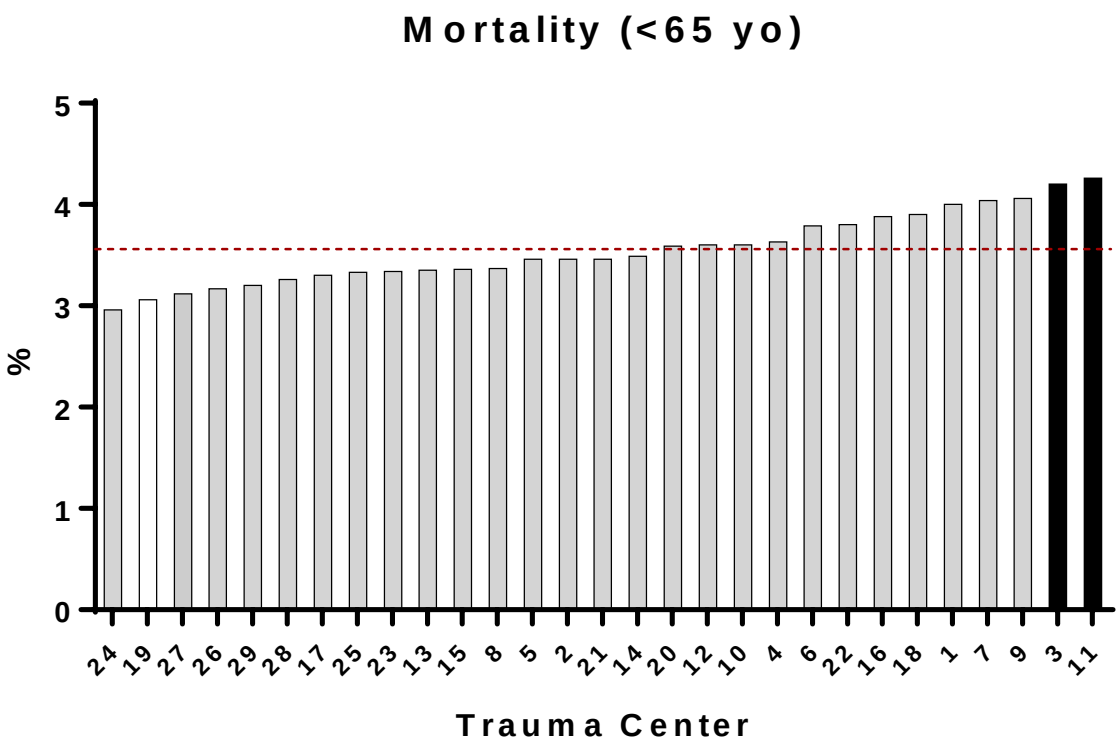

Mortality (Cohort 7)
%
0
2
4
6
8
24 23 27 29 28 26 25 17 15 22 2 13 14 4 20 21 10 8 19 6 16 5 18 9 1 7 12 11 3
Trauma Center

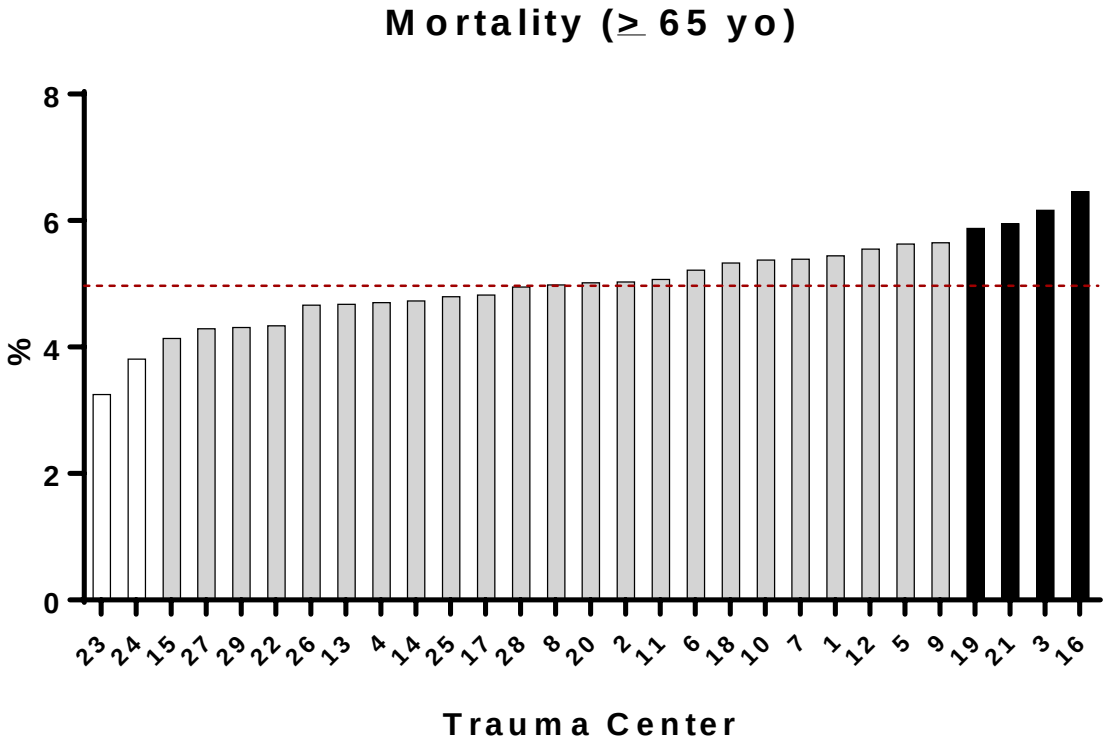

Mortality (Cohort 1 w/o DOA's)
%
0
2
4
6
23 24 27 29 15 26 22 25 17 13 8 14 28 4 20 2 6 10 5 19 12 18 7 21 1 11 9 3 16
Trauma Center

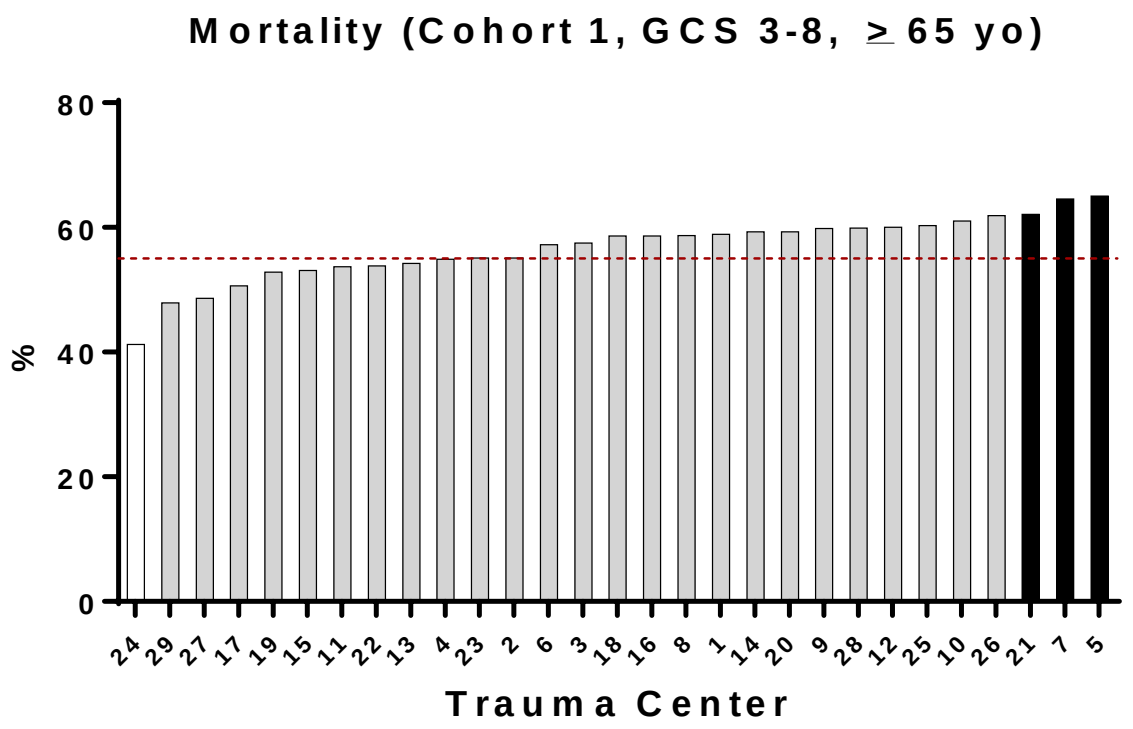

Mortality or Hospice (Cohort 1 w/o DOA's)
%
0
2
4
6
8
27 23 22 26 17 15 14 25 21 5 24 13 28 4 18 20 1 7 2 10 12 19 6 16 9 11 8 3 29
Trauma Center

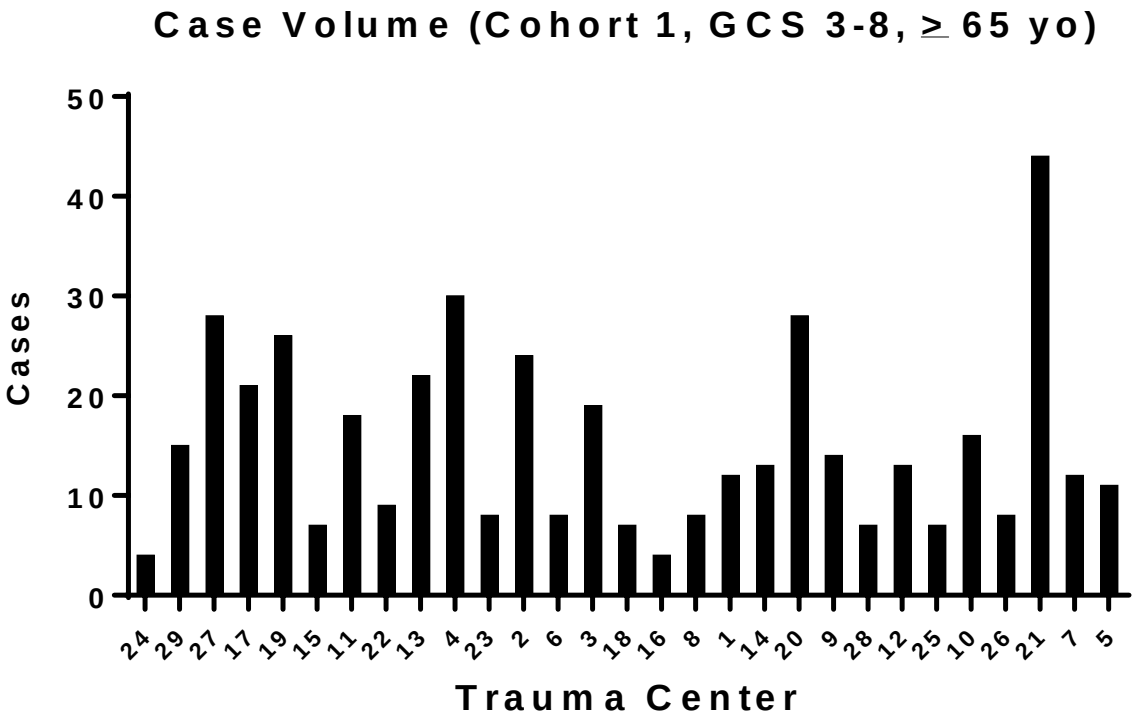

ISS > 25 Mortality
40
30
20
10
0
%
24 23 27 29 2 26 15 17 4 13 14 28 19 25 8 22 20 21 10 6 5 12 1 11 18 7 9 16 3
Trauma Center

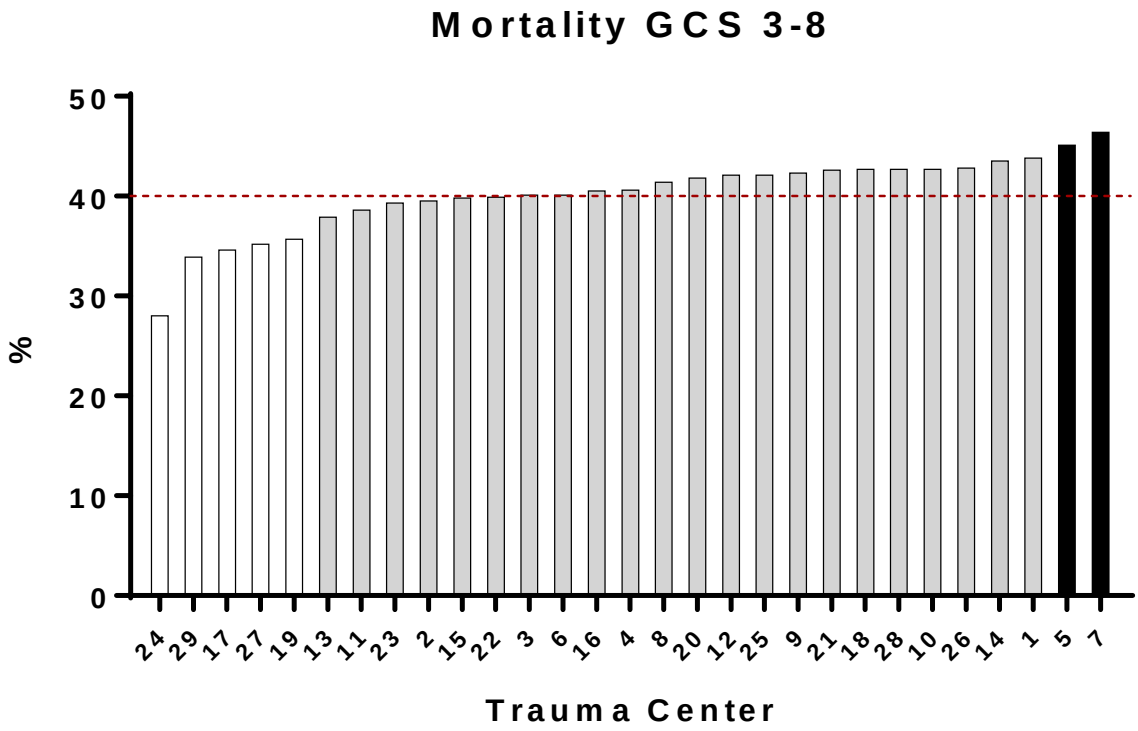

Case Volume ISS > 25 Mortality
300
200
100
0
Cases
24 23 27 29 2 26 15 17 4 13 14 28 19 25 8 22 20 21 10 6 5 12 1 11 18 7 9 16 3
Trauma Center

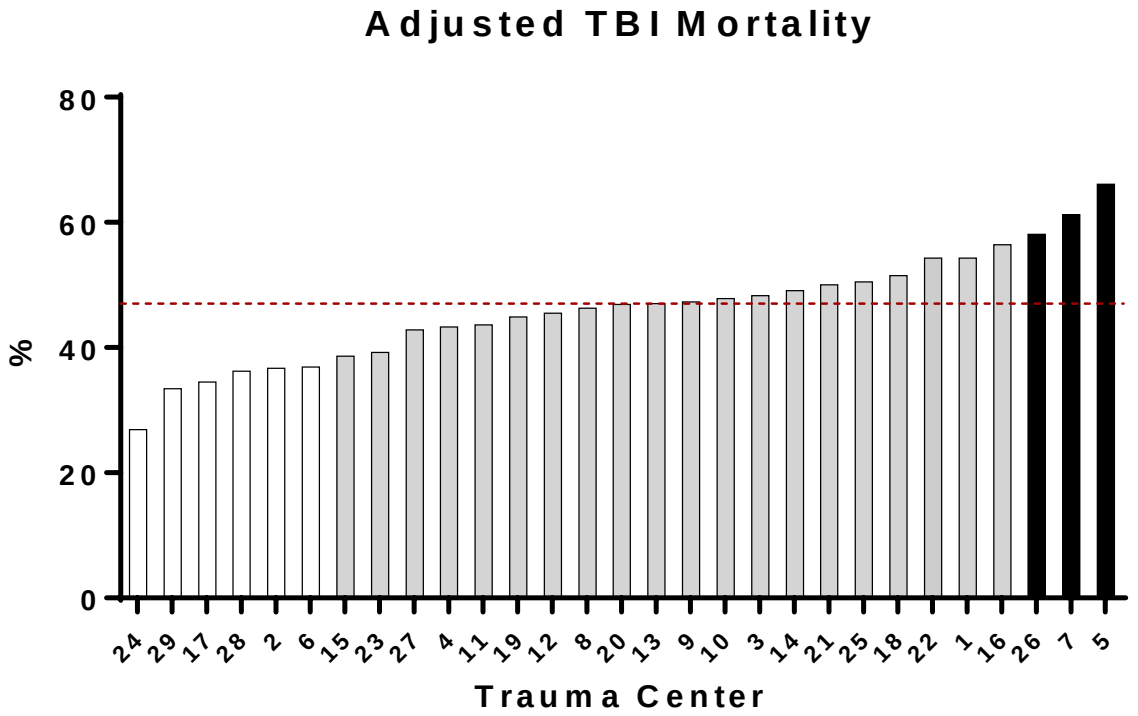

Mortality (<65 yo)
%
0
1
2
3
4
5
24 19 27 26 29 28 17 25 23 13 15 8 5 2 21 14 20 12 10 4 6 22 16 18 1 7 9 3 11
Trauma Center


Mortality (≥ 65 yo)
%
0
2
4
6
8
23 24 15 27 29 22 26 13 4 14 25 17 28 8 20 2 11 6 18 10 7 1 12 5 9 19 21 3 16
Trauma Center

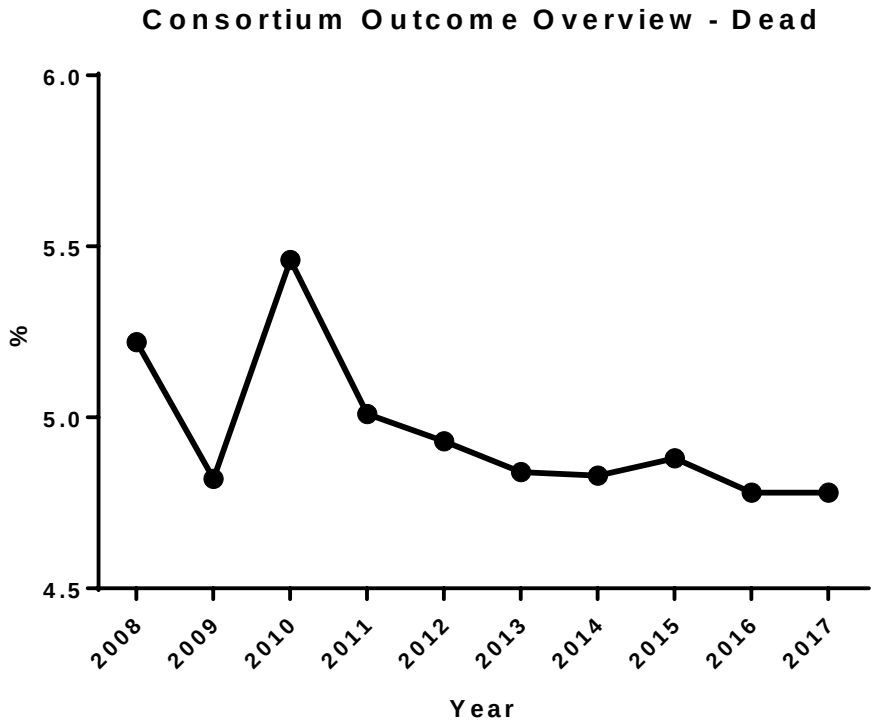

Mortality (Cohort 1, GCS 3-8, ≥ 65 yo)
80
60
40
20
0
%
24 29 27 17 19 15 11 22 13 4 23 2 6 3 18 16 8 1 14 20 9 28 12 25 10 26 21 7 5
Trauma Center

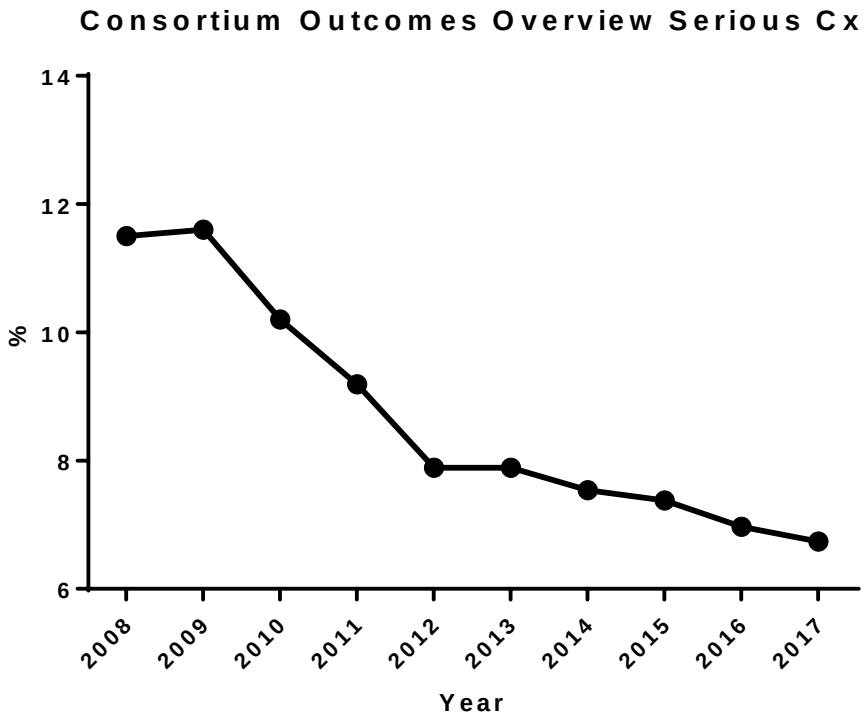

Case Volume (Cohort 1, GCS 3-8, ≥ 65 yo)
50
40
30
20
10
0
Cases
24 29 27 17 19 15 11 22 13 4 23 2 6 3 18 16 8 1 14 20 9 28 12 25 10 26 21 7 5
Trauma Center


Mortality GCS 3-8
50
40
30
20
10
0
%
24 29 17 27 19 13 11 23 2 15 22 3 6 16 4 8 20 12 25 9 21 18 28 10 26 14 1 5 7
Trauma Center

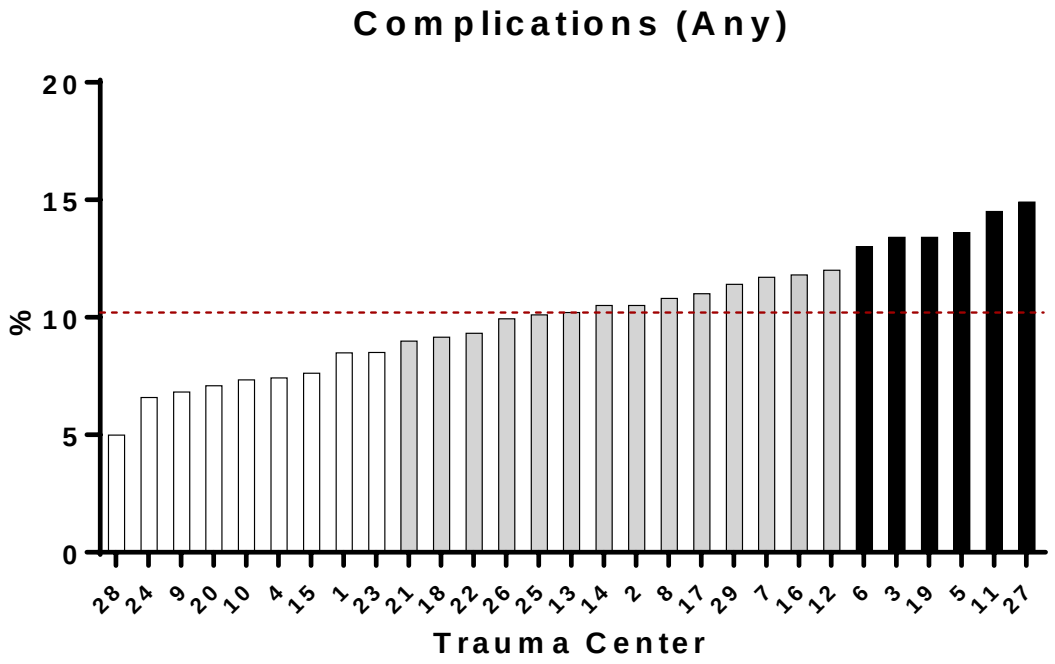

Adjusted TBI Mortality
80
60
40
20
0
%
24 29 17 28 2 6 15 23 27 4 11 19 12 8 20 13 9 10 3 14 21 25 18 22 1 16 26 7 5
Trauma Center

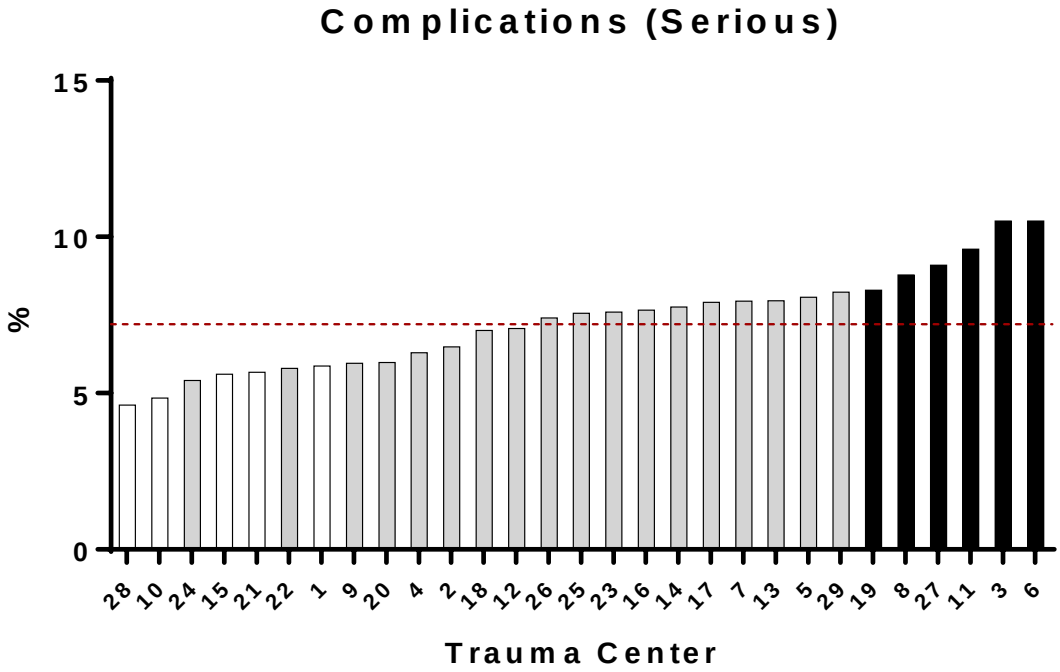
Trends

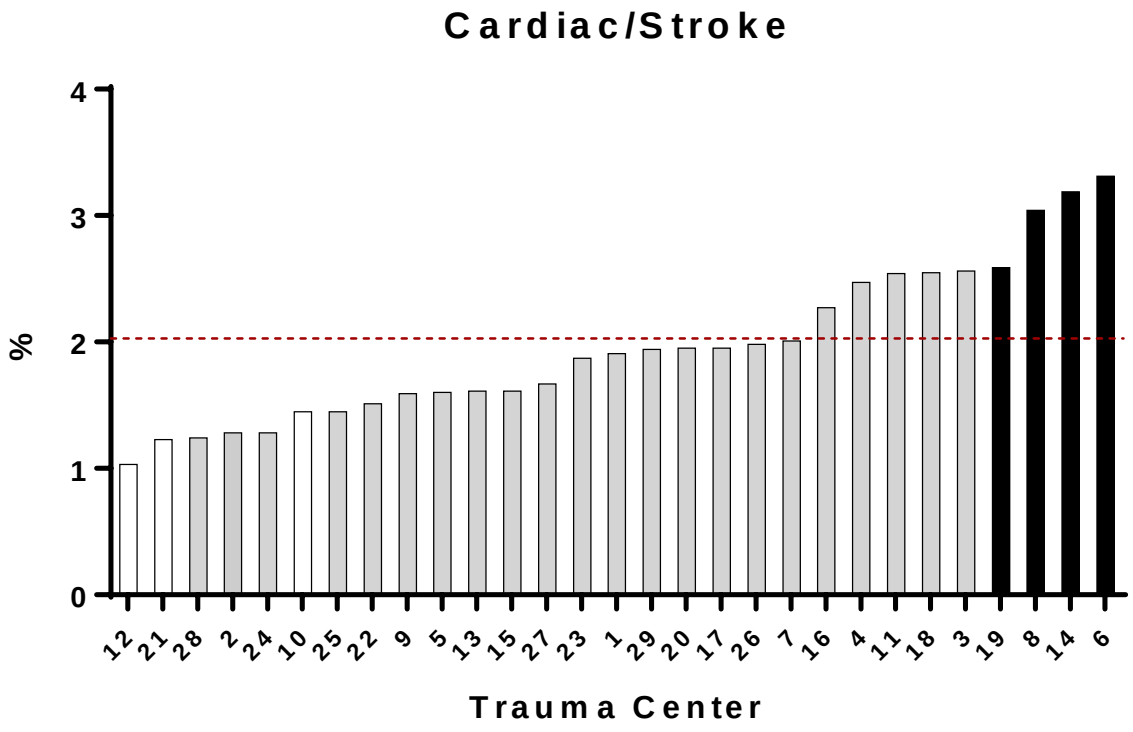

Consortium Outcome Overview - Dead
6.0
5.5
5.0
4.5
%
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Year

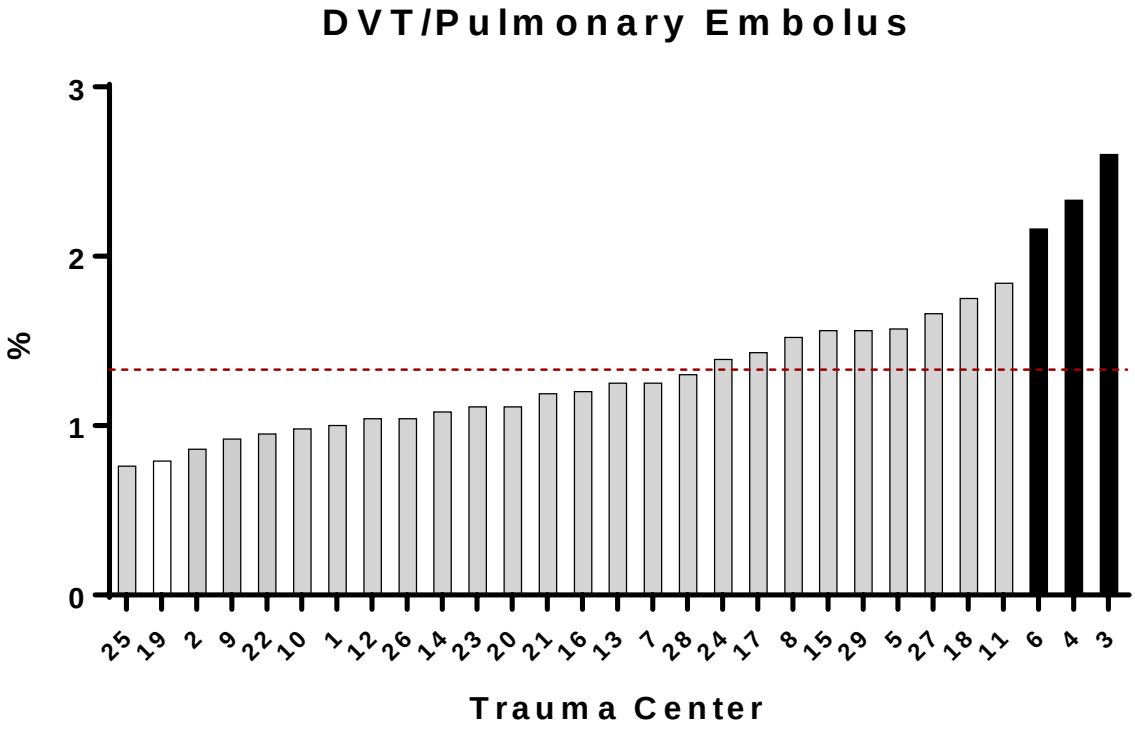

Consortium Outcomes Overview Serious Cx
14
12
10
8
6
%
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Year

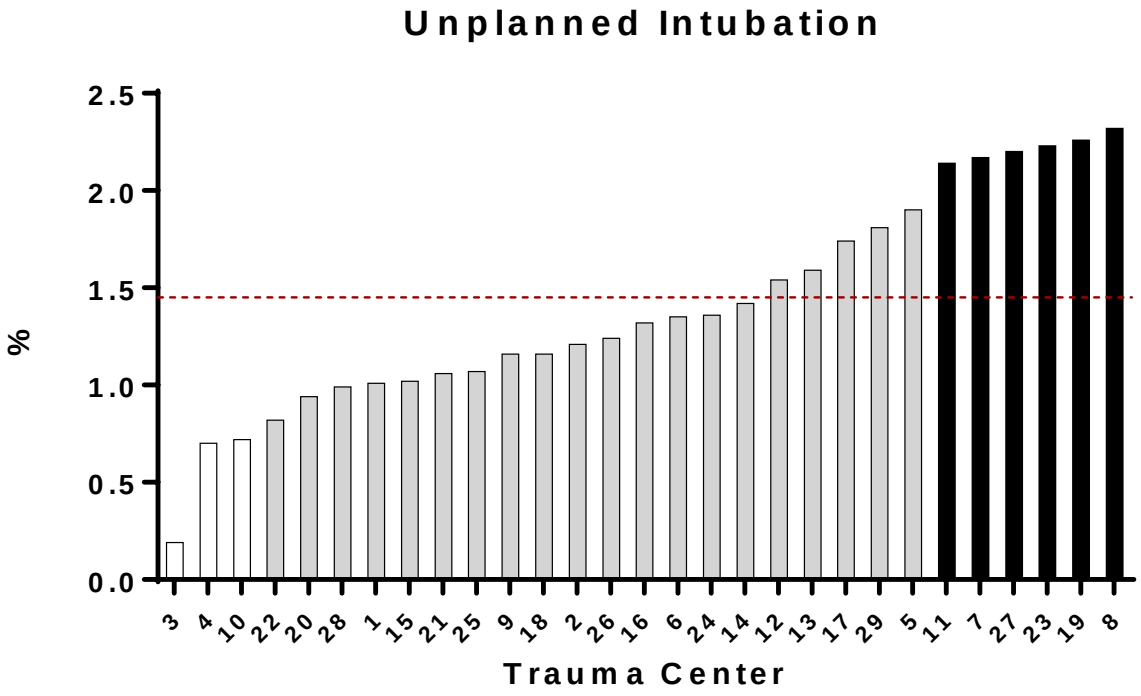
Outcomes

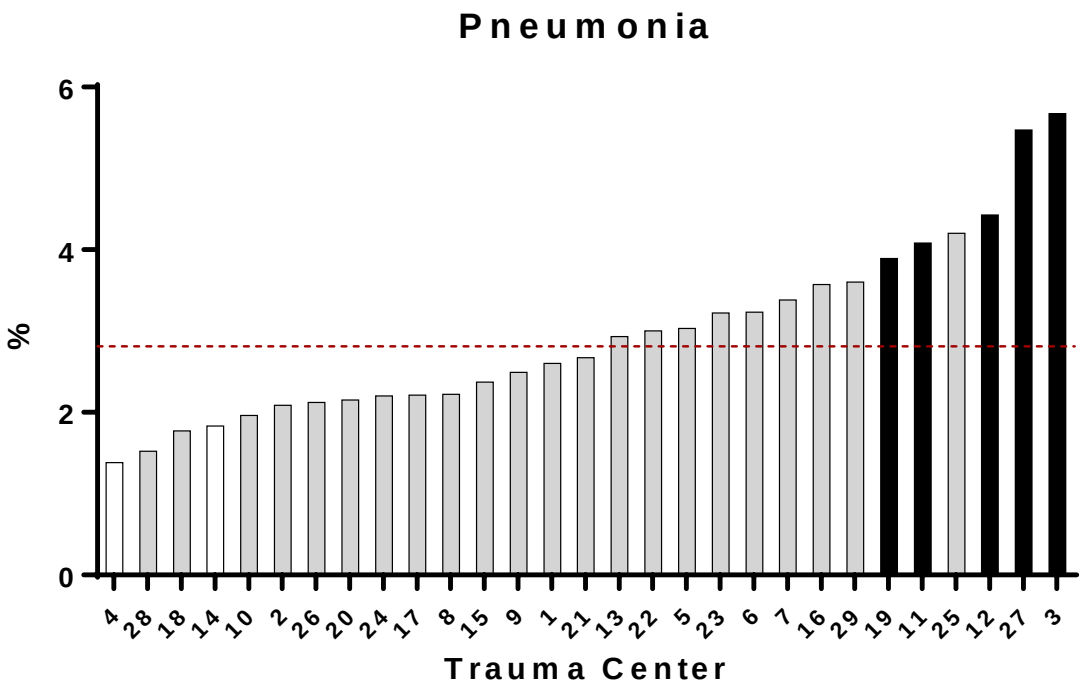

Complications (Any)
20
15
10
5
0
%
28 24 9 20 10 4 15 1 23 21 18 22 26 25 13 14 2 8 17 29 7 16 12 6 3 19 5 11 27
Trauma Center

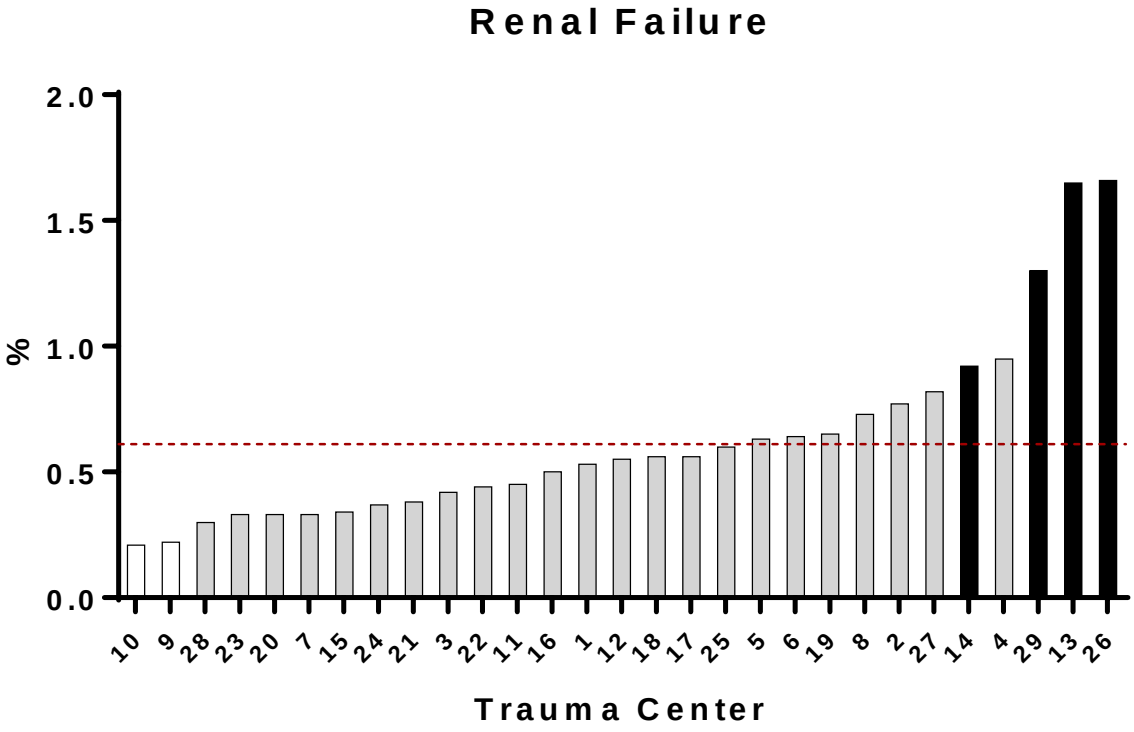

Complications (Serious)
15
10
5
0
%
28 10 24 15 21 22 1 9 20 4 2 18 12 26 25 23 16 14 17 7 13 5 29 19 8 27 11 3 6
Trauma Center

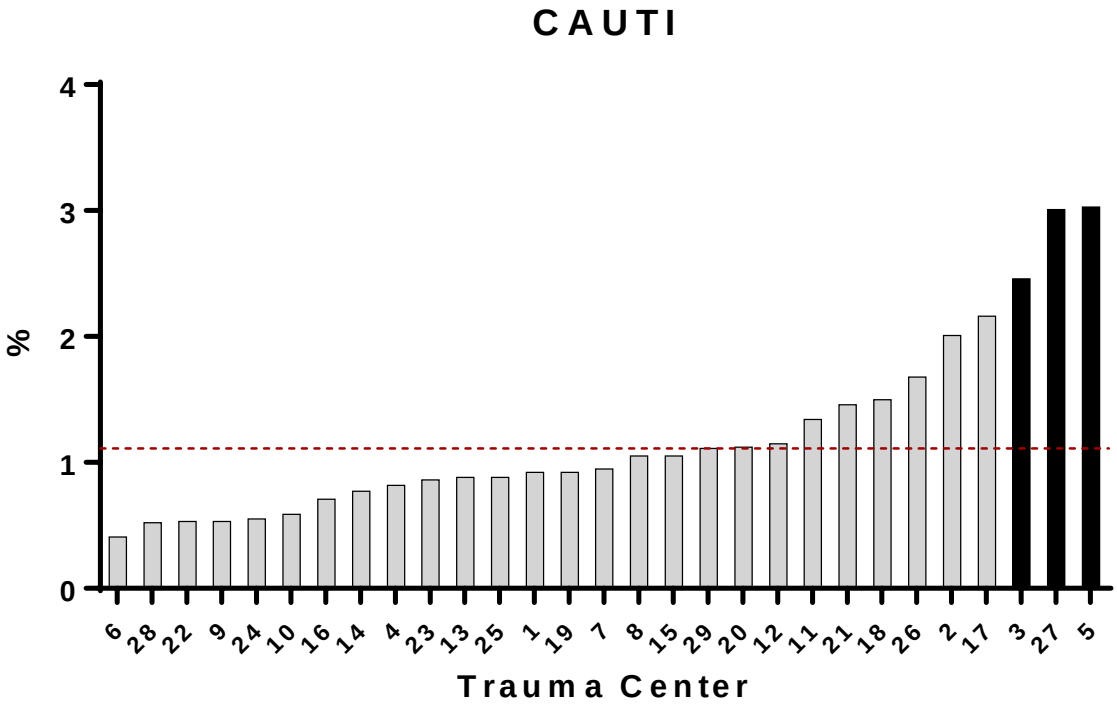

Cardiac/Stroke
%
0
1
2
3
4
12 21 28 2 24 10 25 22 9 5 13 15 27 23 1 29 20 17 26 7 16 4 11 18 3 19 8 14 6
Trauma Center

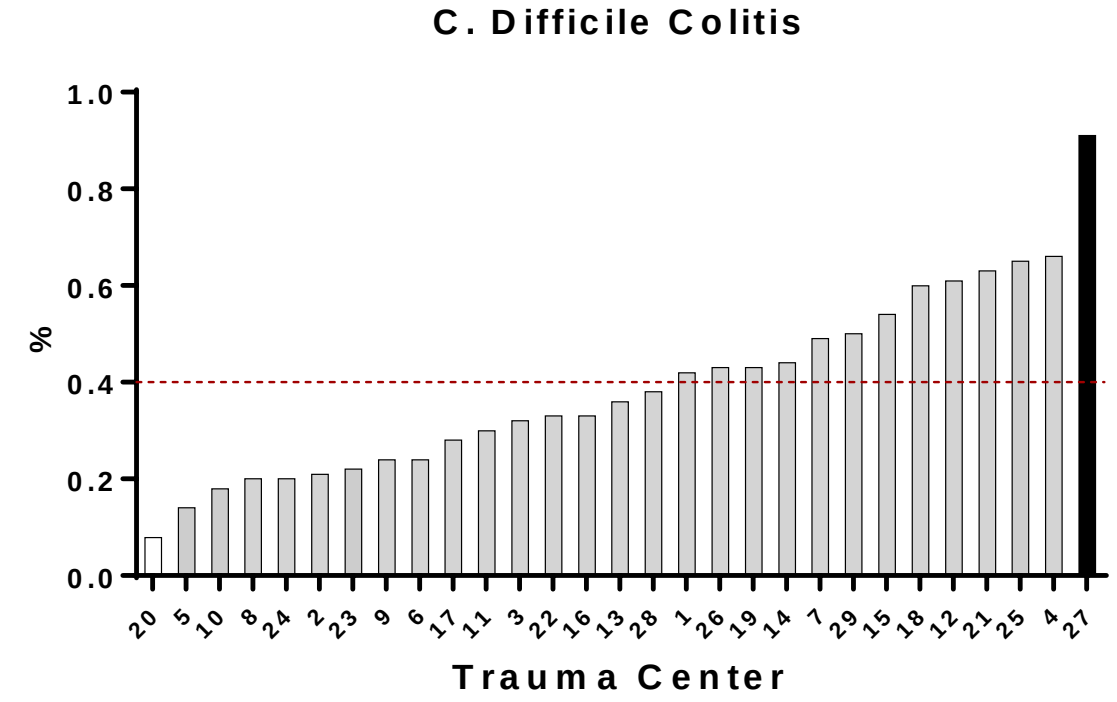

DVT/Pulmonary Embolus
%
0
1
2
3
25 19 2 9 22 10 1 12 26 14 23 20 21 16 13 7 28 24 17 8 15 29 5 27 18 11 6 4 3
Trauma Center

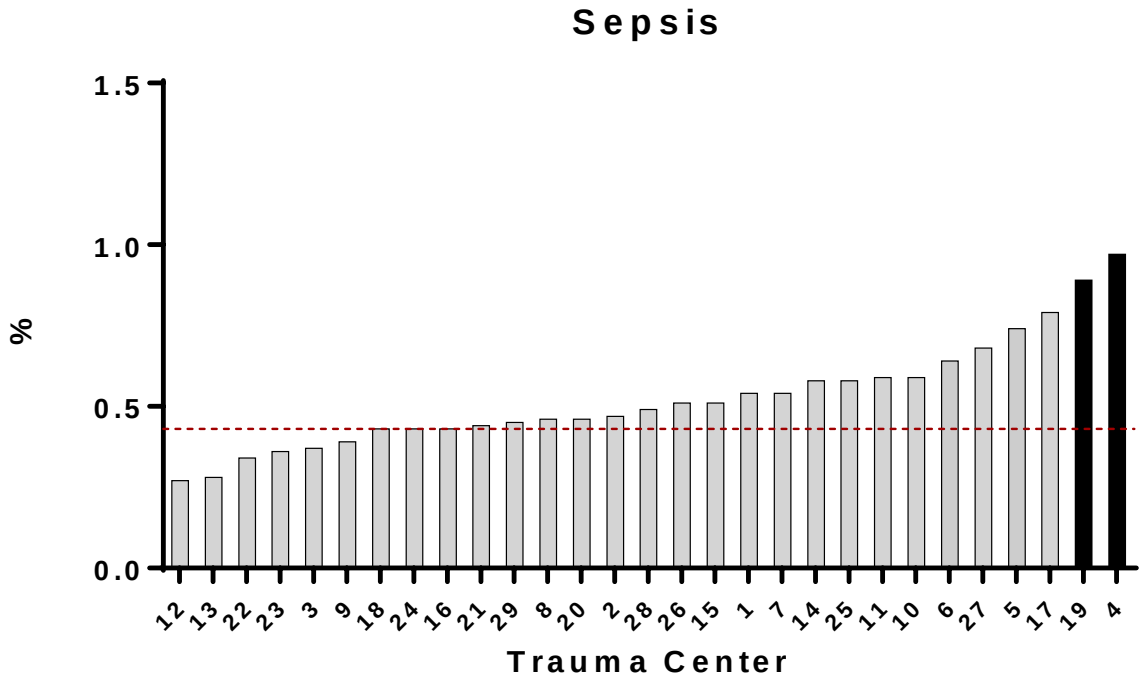

Unplanned Intubation
2.5
2.0
1.5
1.0
0.5
0.0
%
3 4 10 22 20 28 1 15 21 25 9 18 2 26 16 6 24 14 12 13 17 29 5 11 7 27 23 19 8
Trauma Center


Pneumonia
6
4
2
0
%
4 28 18 14 10 2 26 20 24 17 8 15 9 1 21 13 22 5 23 6 7 16 29 19 11 25 12 27 3
Trauma Center

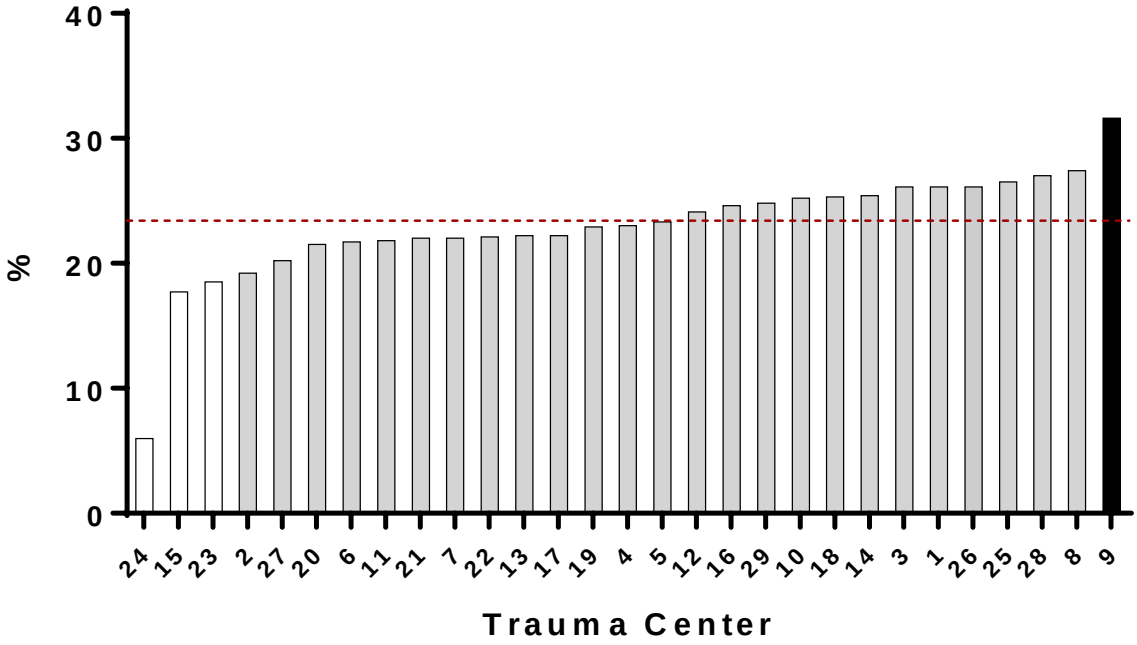

Renal Failure
2.0
1.5
1.0
0.5
0.0
%
10 9 28 23 20 7 15 24 21 3 22 11 16 1 12 18 17 25 5 6 19 8 2 27 14 4 29 13 26
Trauma Center


CAUTI
4
3
2
1
0
%
6 28 22 9 24 10 16 14 4 23 13 25 1 19 7 8 15 29 20 12 11 21 18 26 2 17 3 27 5
Trauma Center

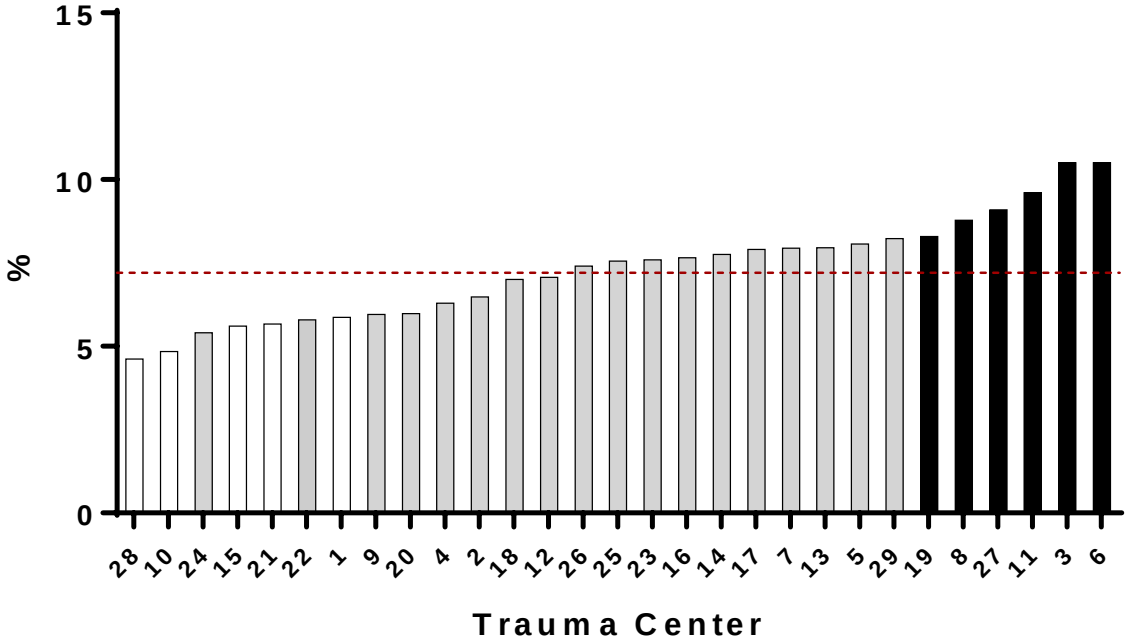

C. Difficile Colitis
1.0
0.8
0.6
0.4
0.2
0.0
%
20 5 10 8 24 2 23 9 6 17 11 3 22 16 13 28 1 26 19 14 7 29 15 18 12 21 25 4 27
Trauma Center

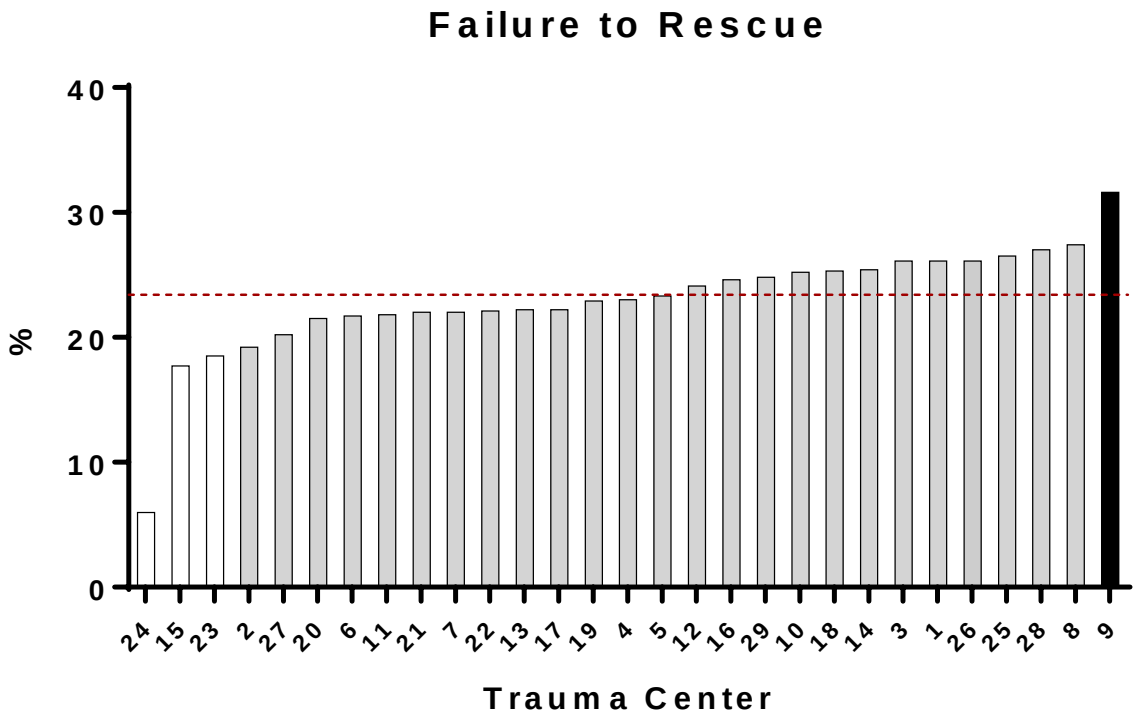

Sepsis
1.5
1.0
0.5
0.0
%
12 13 22 23 3 9 18 24 16 21 29 8 20 2 28 26 15 1 7 14 25 11 10 6 27 5 17 19 4
Trauma Center

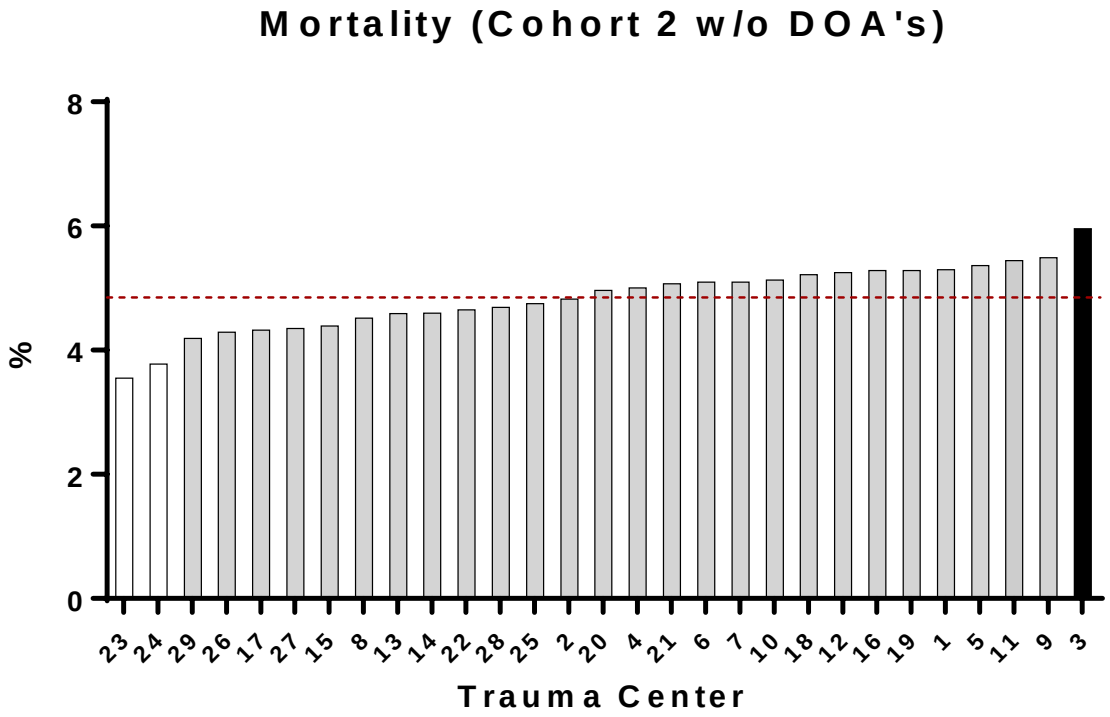
Failure to Rescue

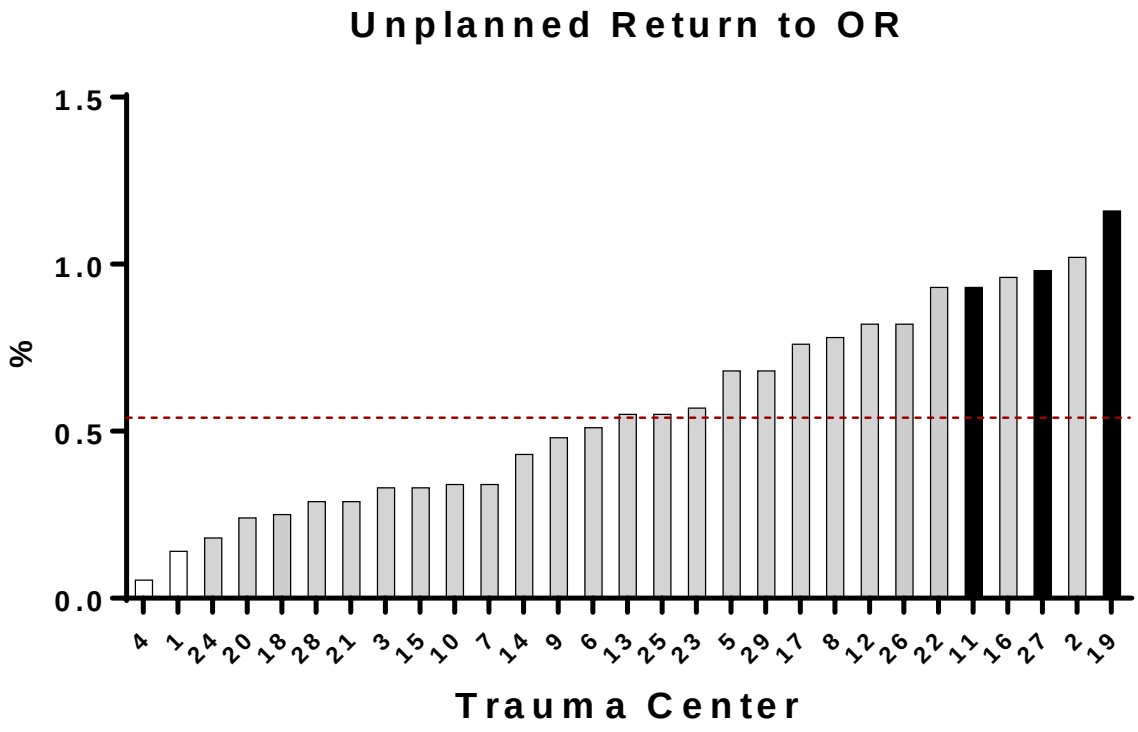


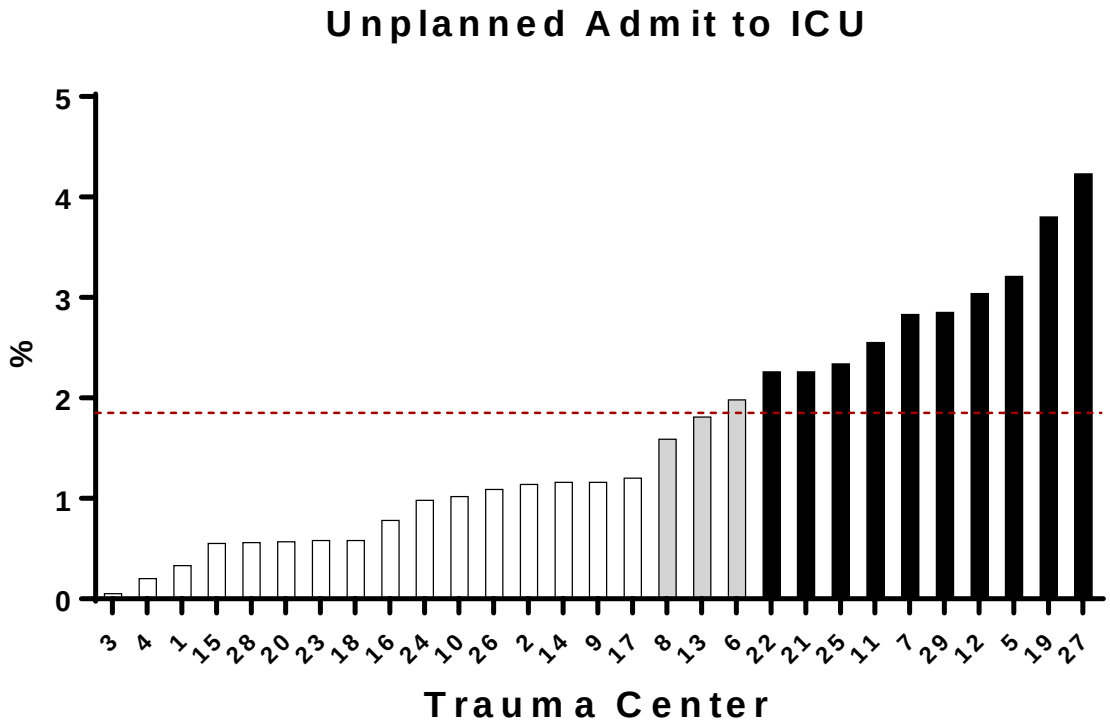
Complications (Serious)



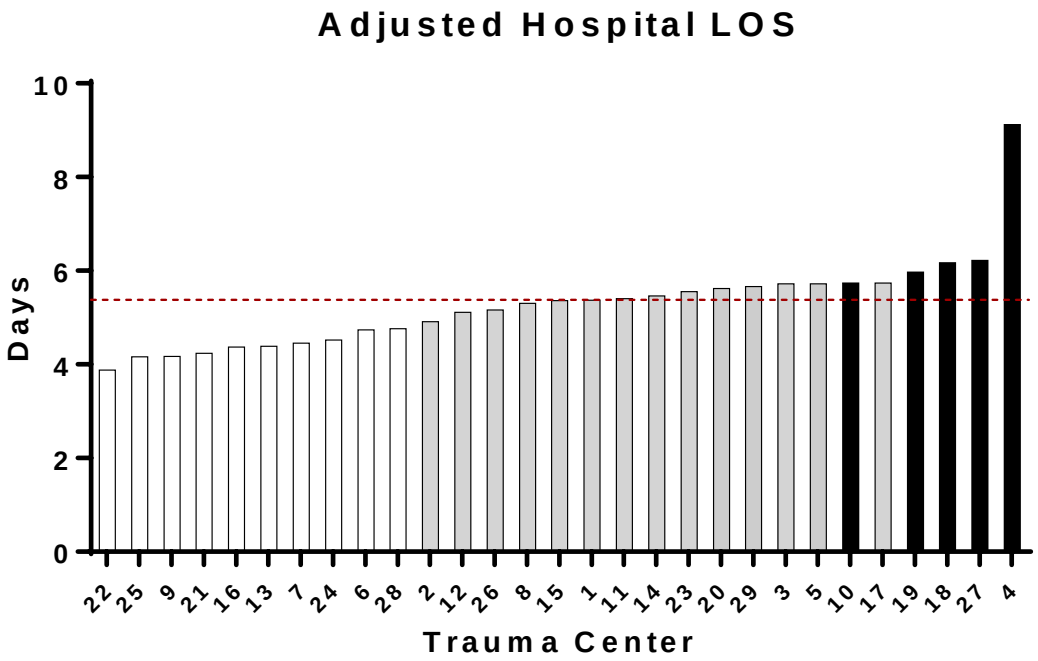

Failure to Rescue
40
30
20
10
0
%
24 15 23 2 27 20 6 11 21 7 22 13 17 19 4 5 12 16 29 10 18 14 3 1 26 25 28 8 9
Trauma Center

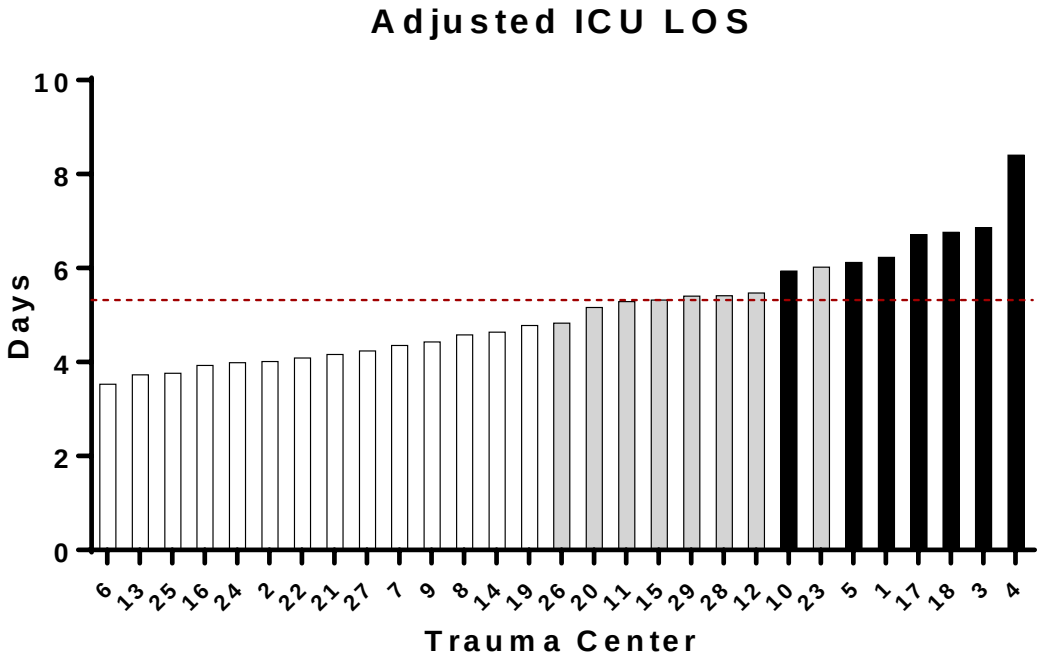

Mortality (Cohort 2 w/o DOA's)
8
6
4
2
0
%
23 24 29 26 17 27 15 8 13 14 22 28 25 2 20 4 21 6 7 10 18 12 16 19 1 5 11 9 3
Trauma Center

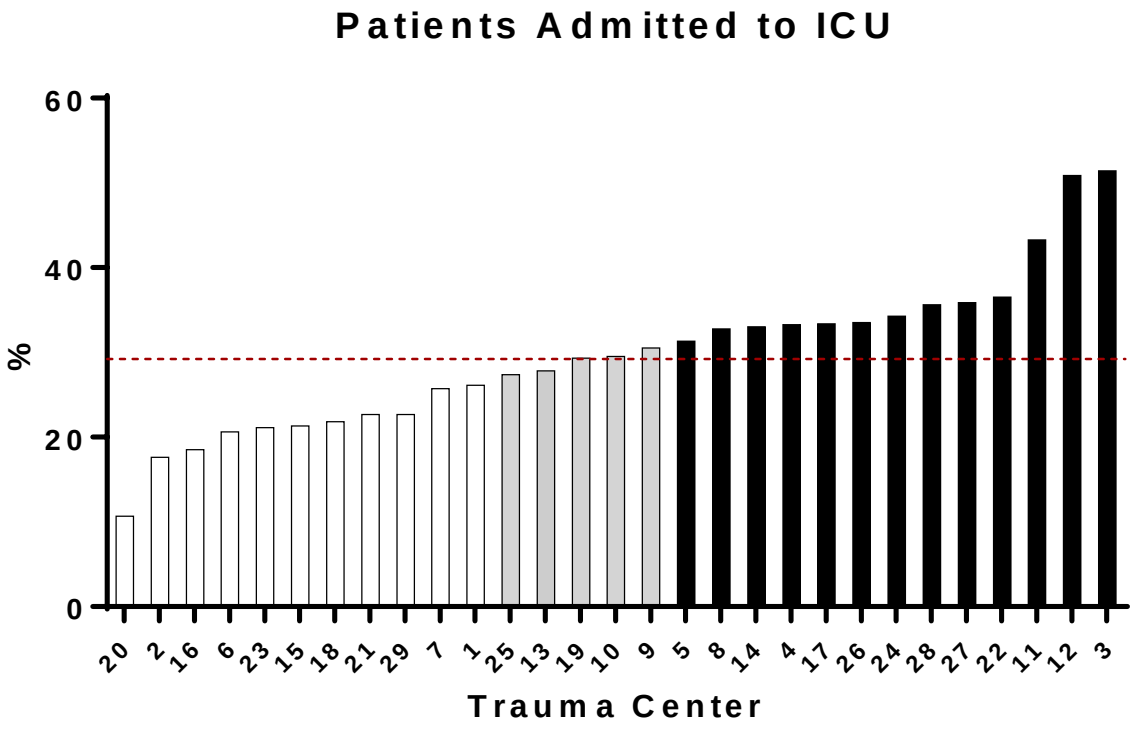

Unplanned Return to OR
1.5
1.0
0.5
0.0
%
4 1 24 20 18 28 21 3 15 10 7 14 9 6 13 25 23 5 29 17 8 12 26 22 11 16 27 2 19
Trauma Center

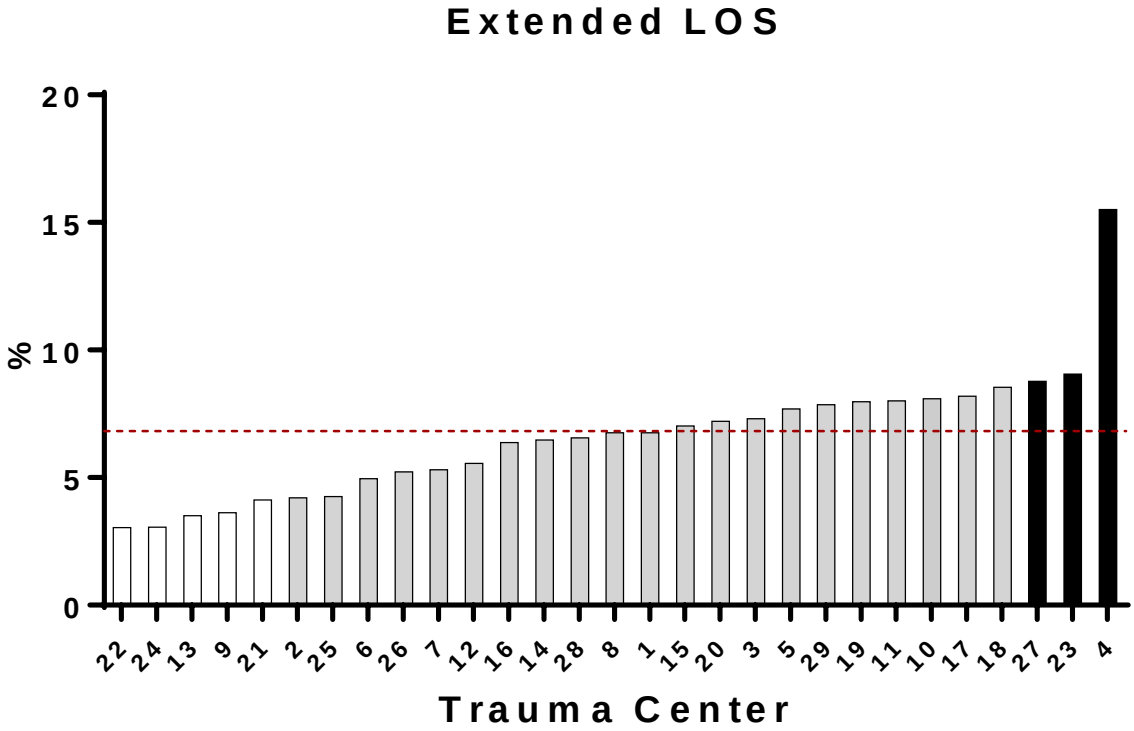

Unplanned Admit to ICU
5
4
3
2
1
0
%
3 4 1 15 28 20 23 18 16 24 10 26 2 14 9 17 8 13 6 22 21 25 11 7 29 12 5 19 27
Trauma Center

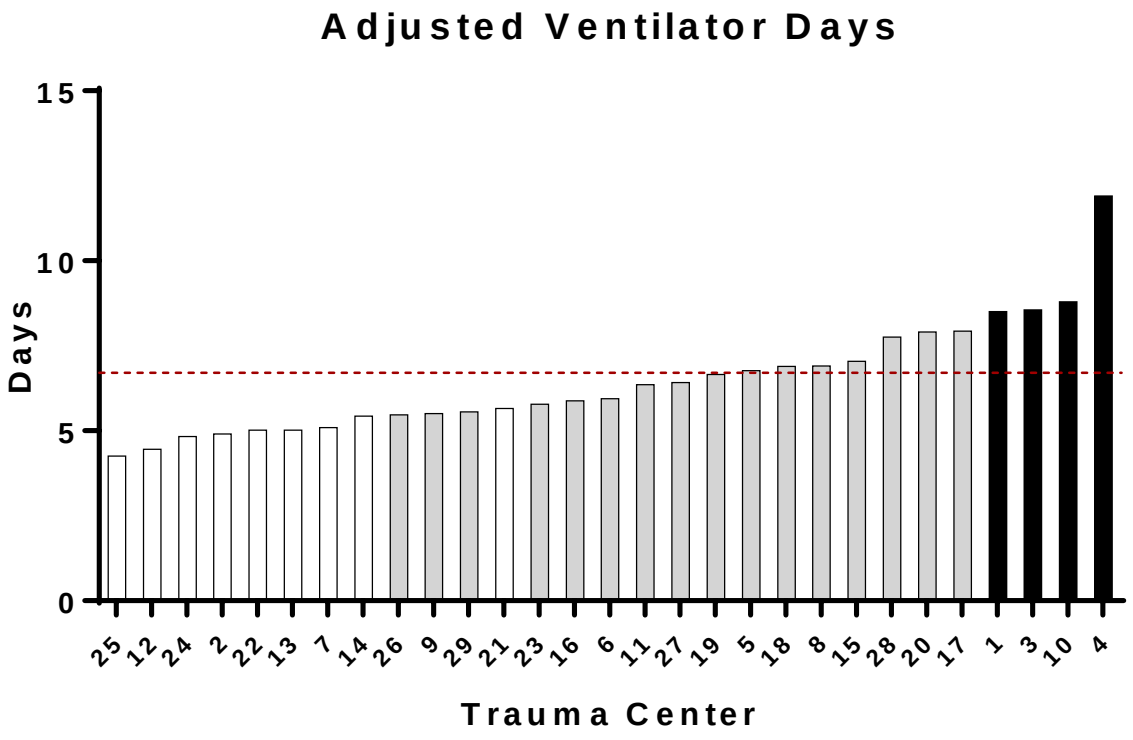
Resource Utilization

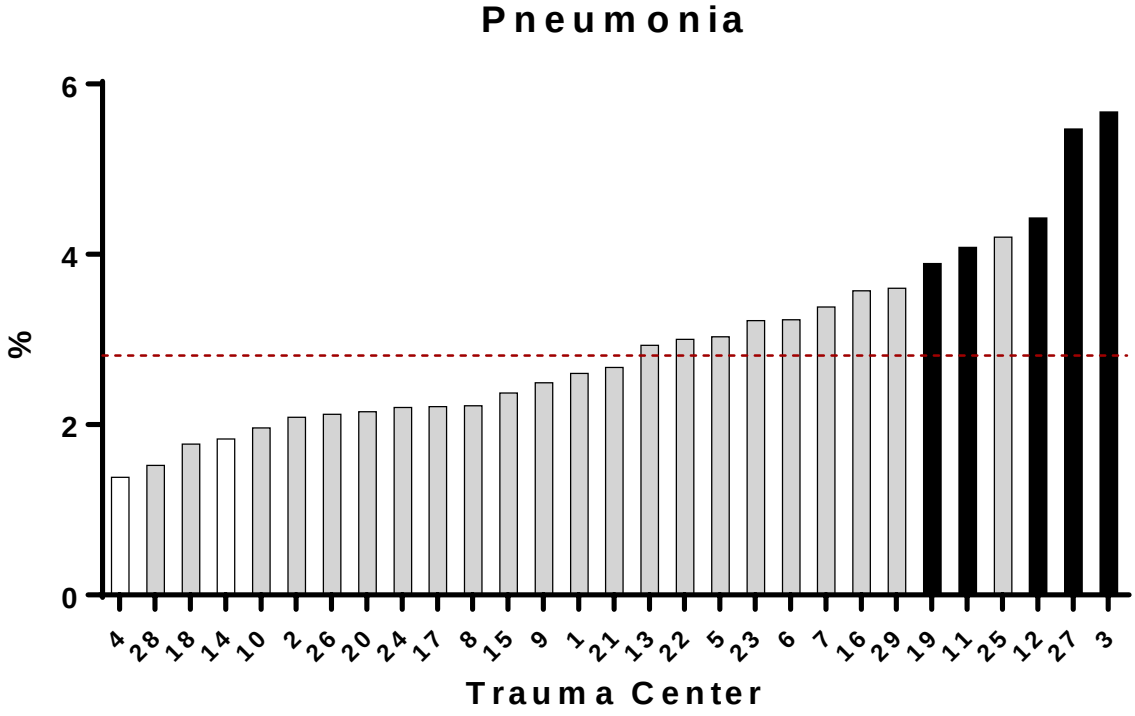


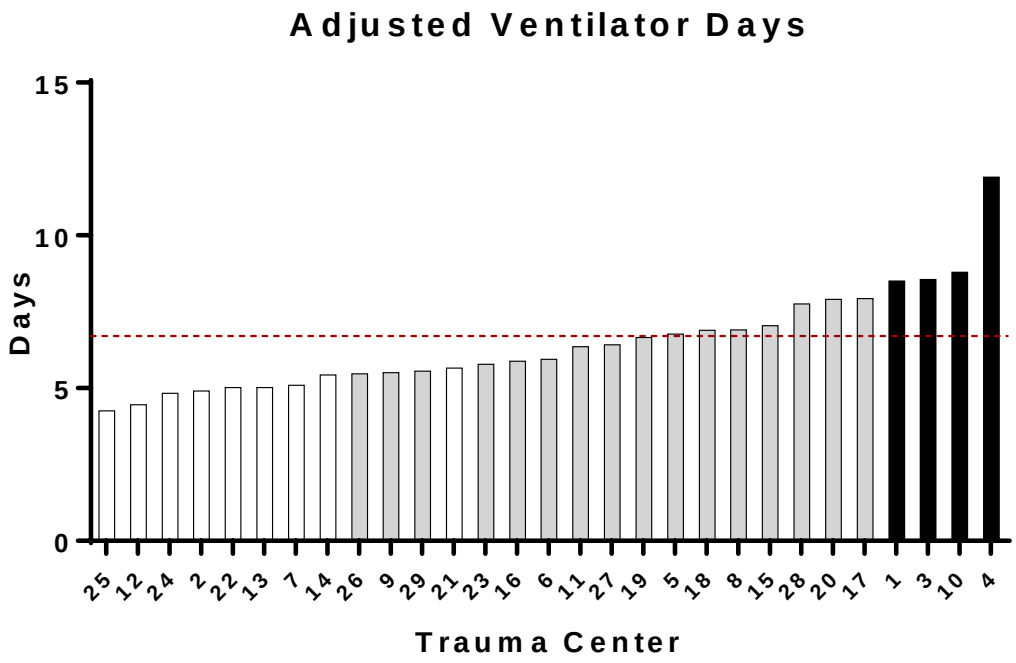


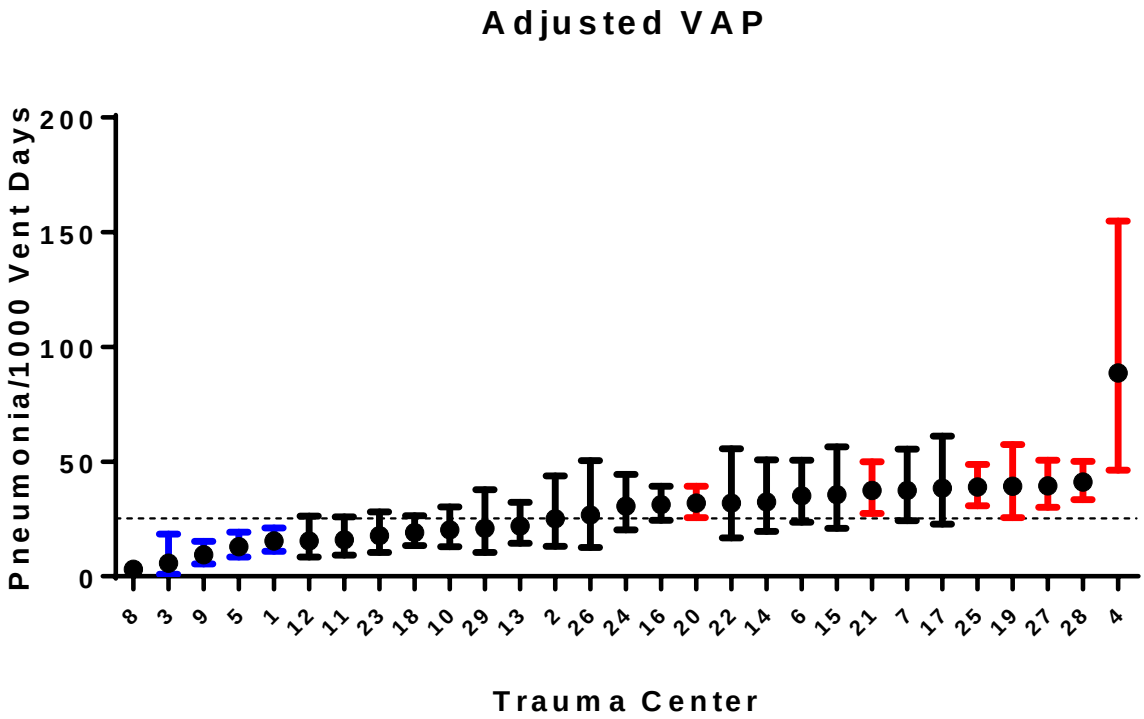

Patients Admitted to ICU
60
40
20
0
%
20 2 16 6 23 15 18 21 29 7 1 25 13 19 10 9 5 8 14 4 17 26 24 28 27 22 11 12 3
Trauma Center

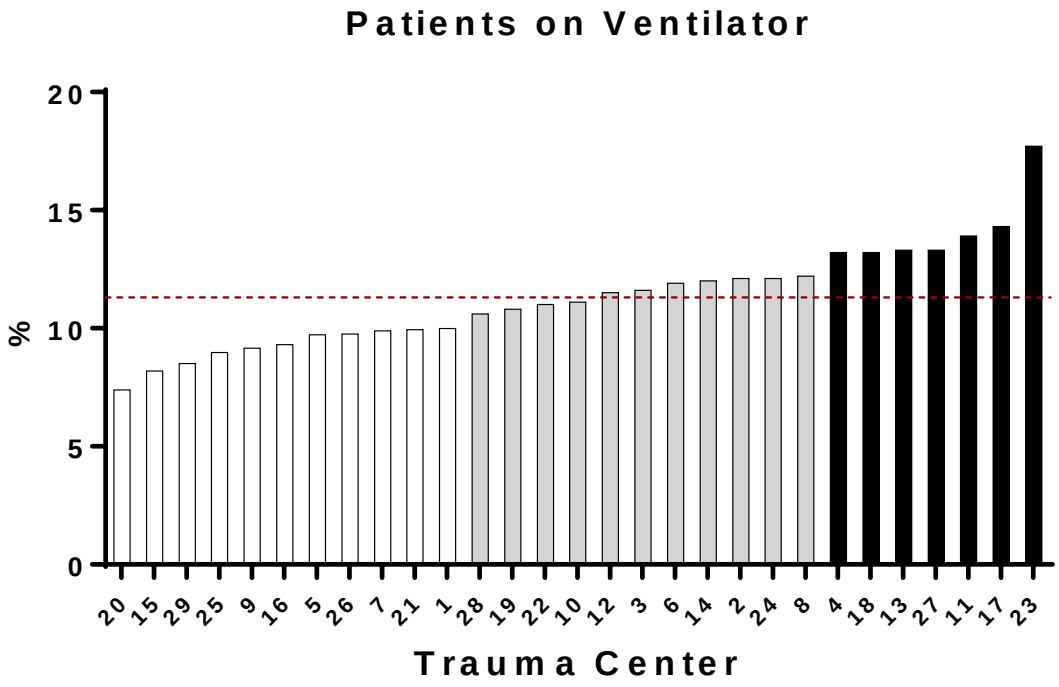

Extended LOS
20
15
10
5
0
%
22 24 13 9 21 2 25 6 26 7 12 16 14 28 8 1 15 20 3 5 29 19 11 10 17 18 27 23 4
Trauma Center

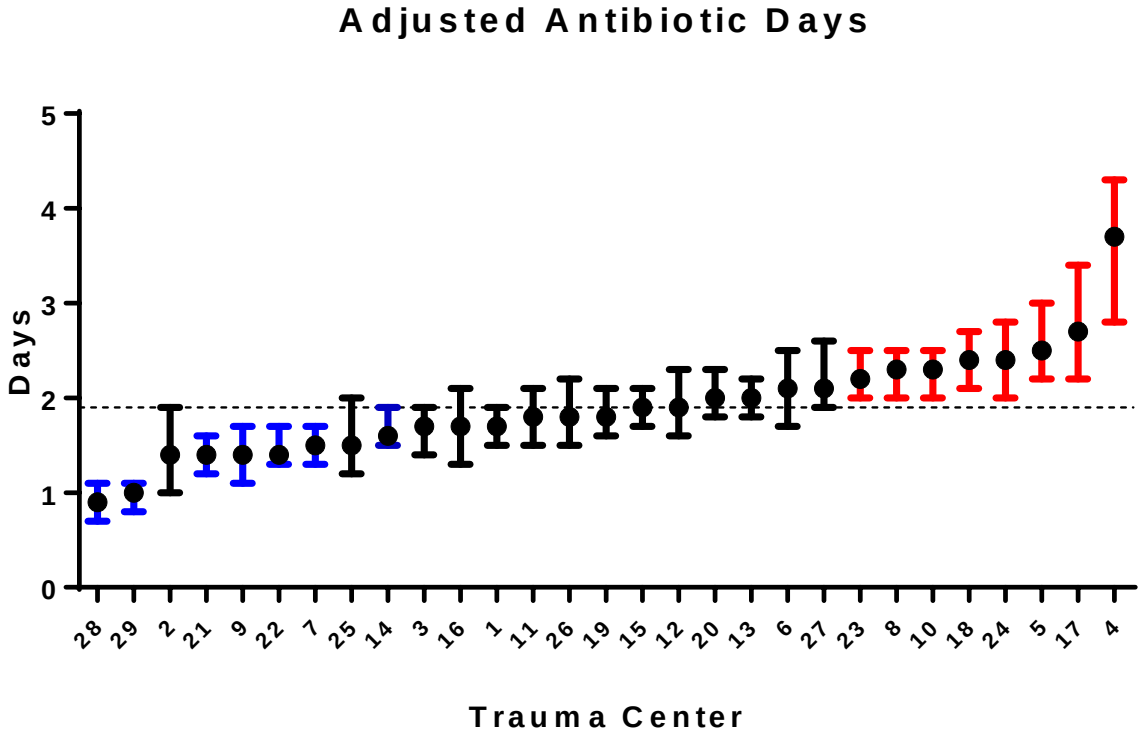

Adjusted Ventilator Days
15
10
5
0
Days
25 12 24 2 22 13 7 14 26 9 29 21 23 16 6 11 27 19 5 18 8 15 28 20 17 1 3 10 4
Trauma Center


Pneumonia
6
4
2
0
%
4 28 18 14 10 2 26 20 24 17 8 15 9 1 21 13 22 5 23 6 7 16 29 19 11 25 12 27 3
Trauma Center

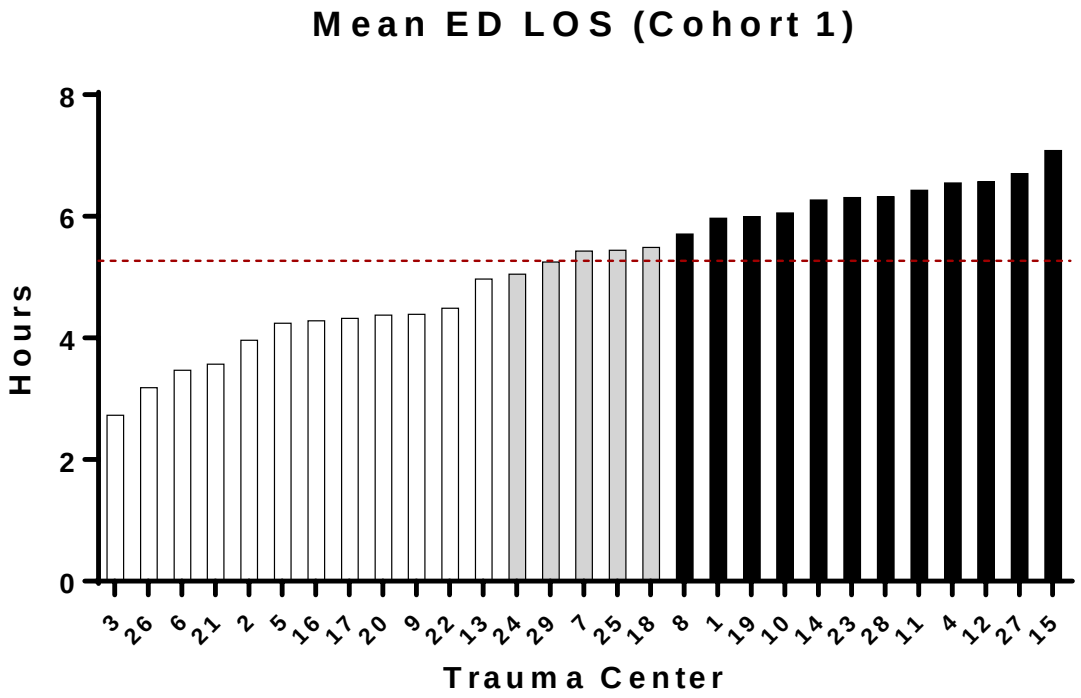

Adjusted Ventilator Days
Days
15
10
5
0
25 12 24 2 22 13 7 14 26 9 29 21 23 16 6 11 27 19 5 18 8 15 28 20 17 1 3 10 4
Trauma Center

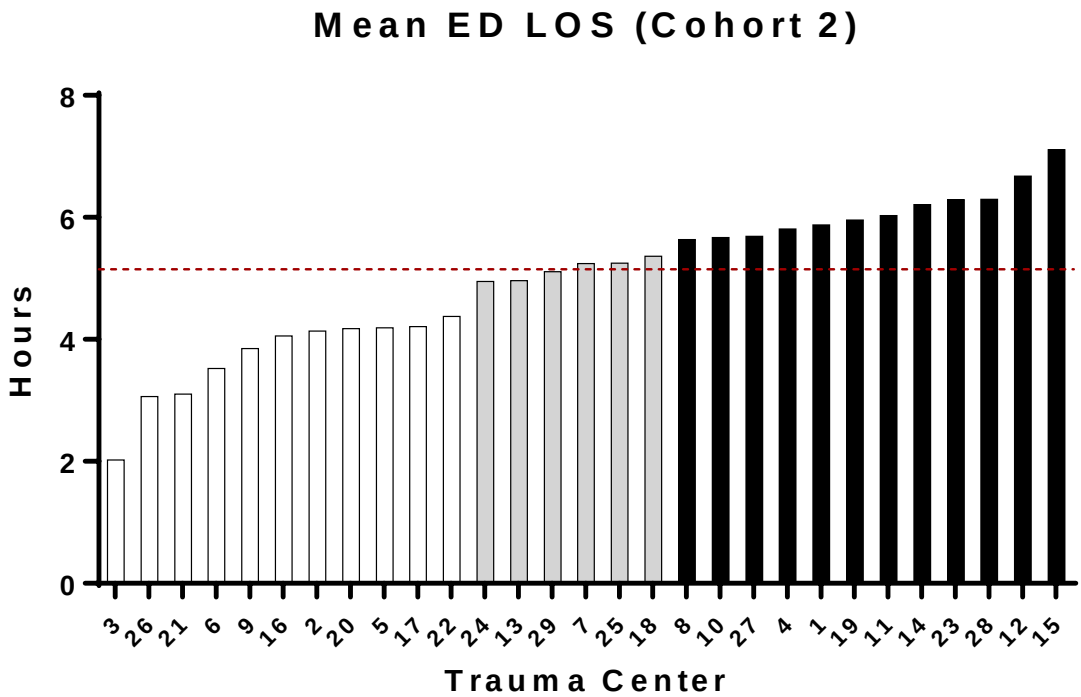

Adjusted VAP
Pneumonia/1000 Vent Days
200
150
100
50
0
8 3 9 5 1 12 11 23 18 10 29 13 2 26 24 16 20 22 14 6 15 21 7 17 25 19 27 28 4
Trauma Center

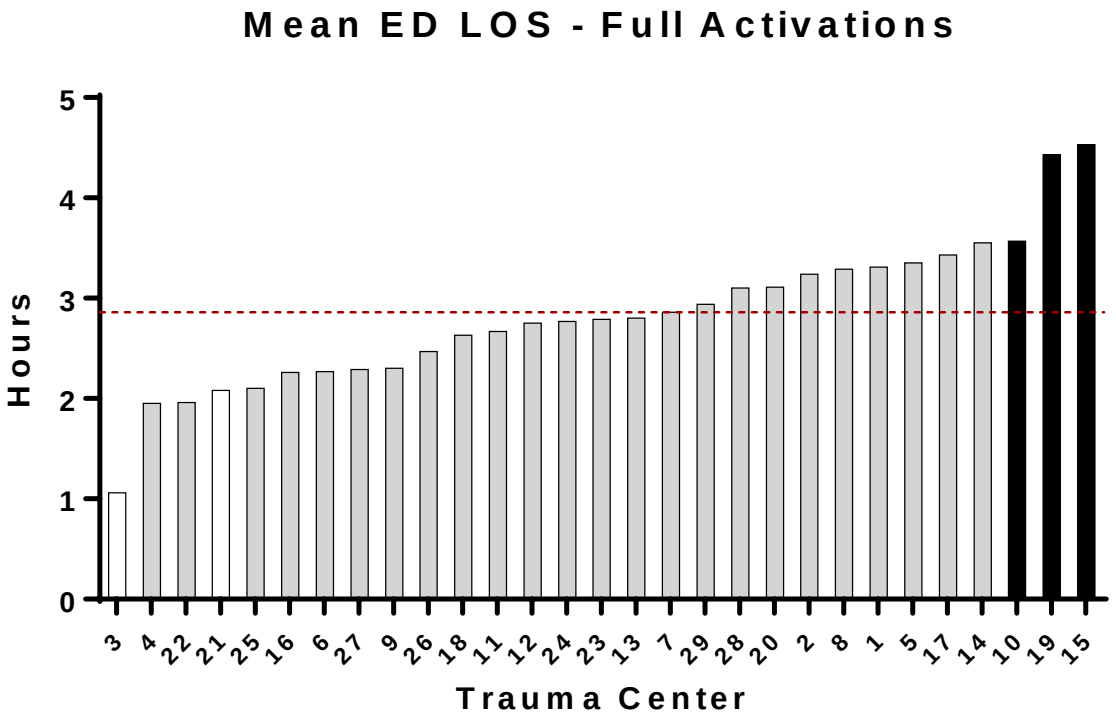

Patients on Ventilator
20
15
10
5
0
%
20 15 29 25 9 16 5 26 7 21 1 28 19 22 10 12 3 6 14 2 24 8 4 18 13 27 11 17 23
Trauma Center

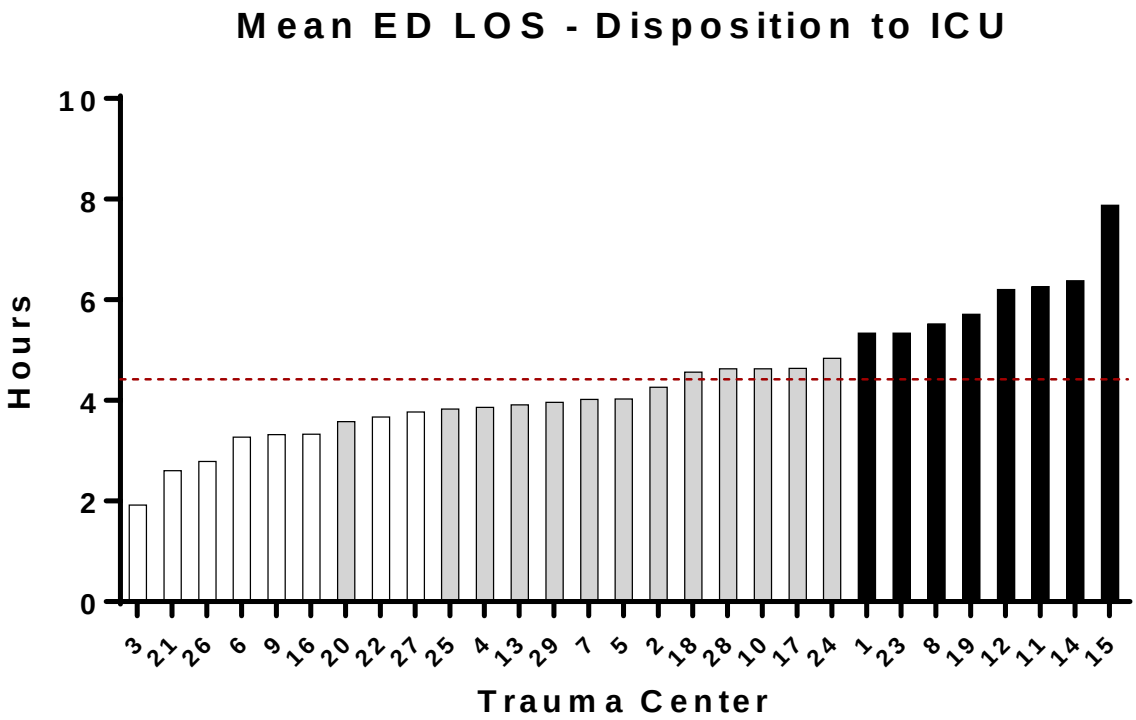

Adjusted Antibiotic Days
5
4
3
2
1
0
Days
28 29 2 21 9 22 7 25 14 3 16 1 11 26 19 15 12 20 13 6 27 23 8 10 18 24 5 17 4
Trauma Center

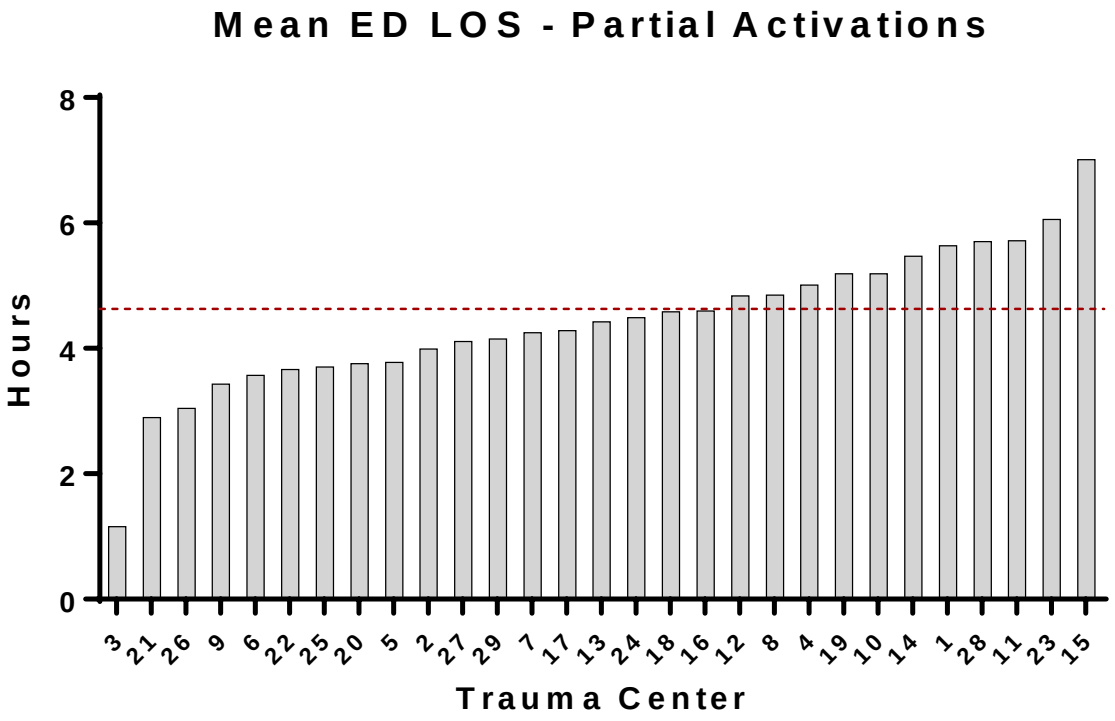
System Efficiency – New Section

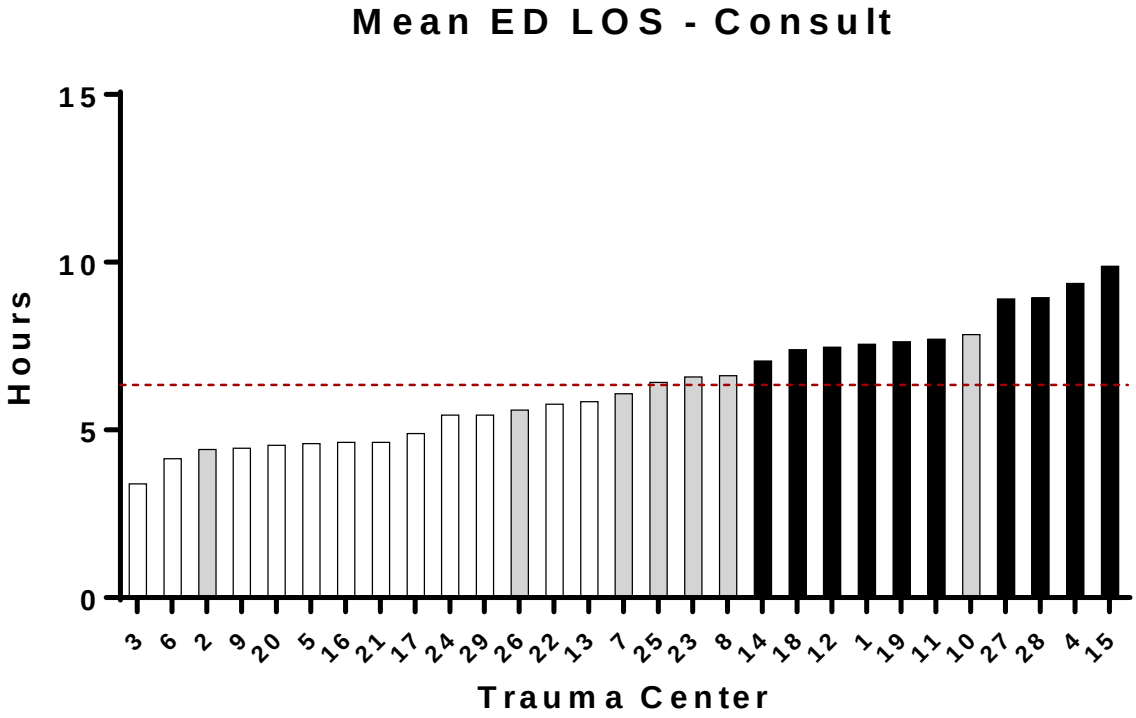




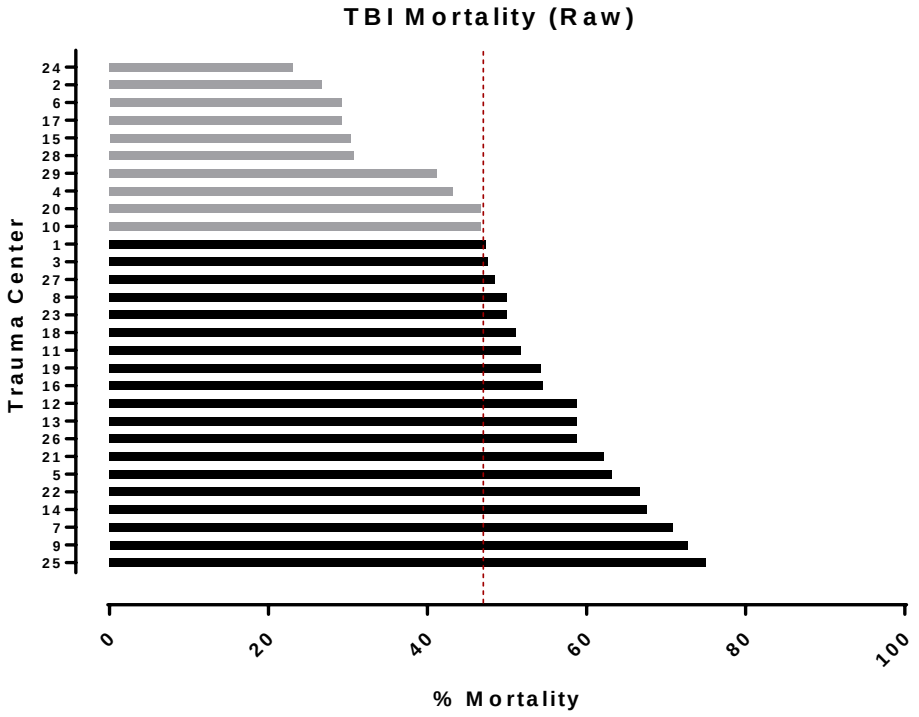

Mean ED LOS - Full Activations
Hours
0
1
2
3
4
5
3 4 22 21 25 16 6 27 9 26 18 11 12 24 23 13 7 29 28 20 2 8 1 5 17 14 10 19 15
Trauma Center

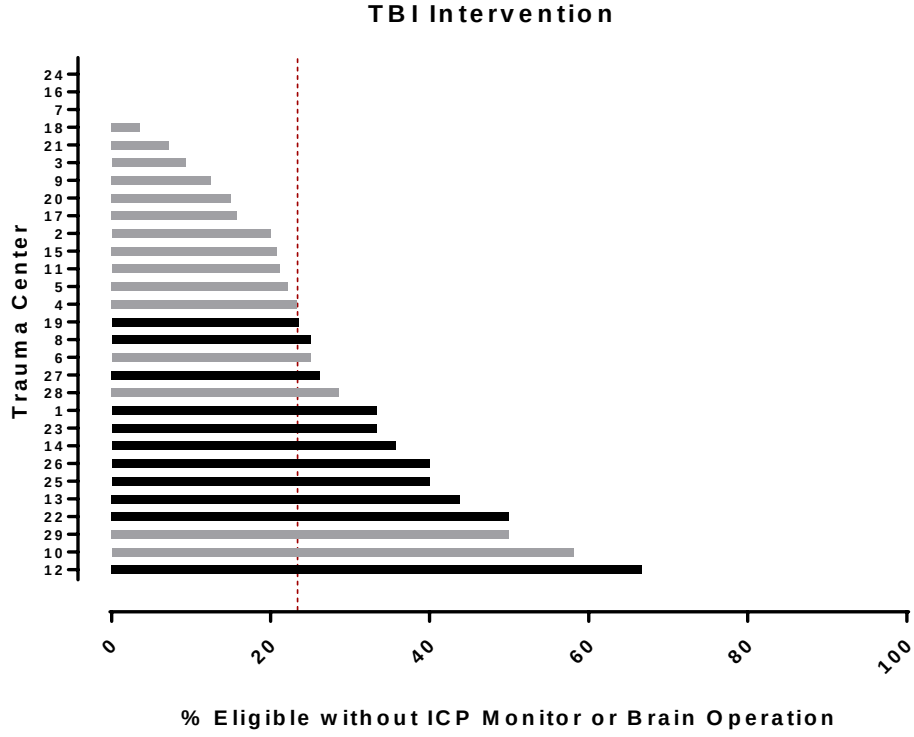

Mean ED LOS - Disposition to ICU
Hours
0
2
4
6
8
10
3 21 26 6 9 16 20 22 27 25 4 13 29 7 5 2 18 28 10 17 24 1 23 8 19 12 11 14 15
Trauma Center

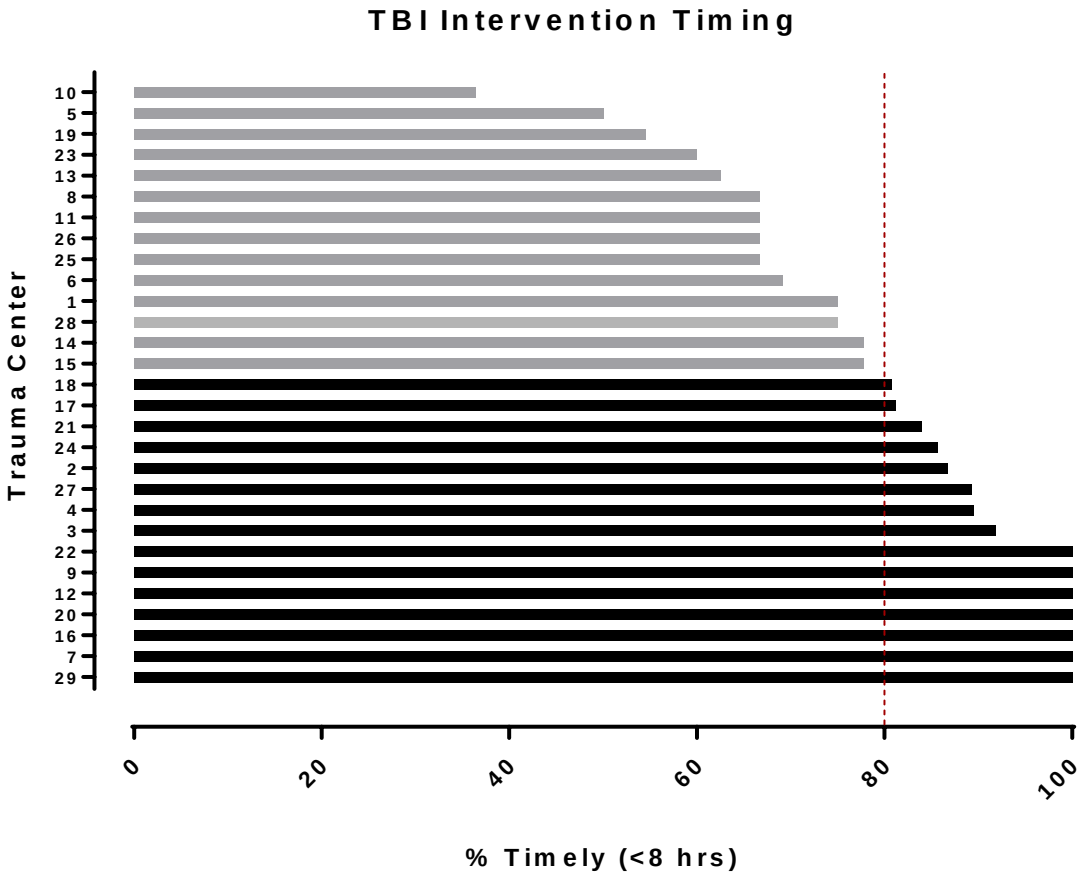

Mean ED LOS - Partial Activations
Hours
0
2
4
6
8
3 21 26 9 6 22 25 20 5 2 27 29 7 17 13 24 18 16 12 8 4 19 10 14 1 28 11 23 15
Trauma Center


Mean ED LOS - Consult
Hours
0
5
10
15
3 6 2 9 20 5 16 21 17 24 29 26 22 13 7 25 23 8 14 18 12 1 19 11 10 27 28 4 15
Trauma Center

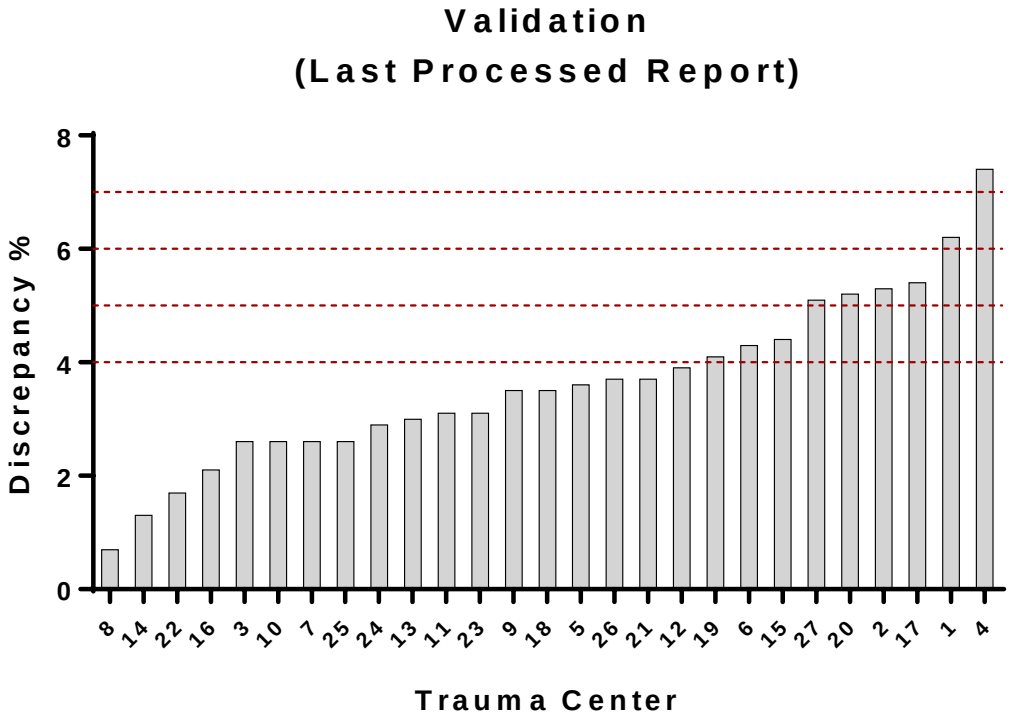
Process Measures

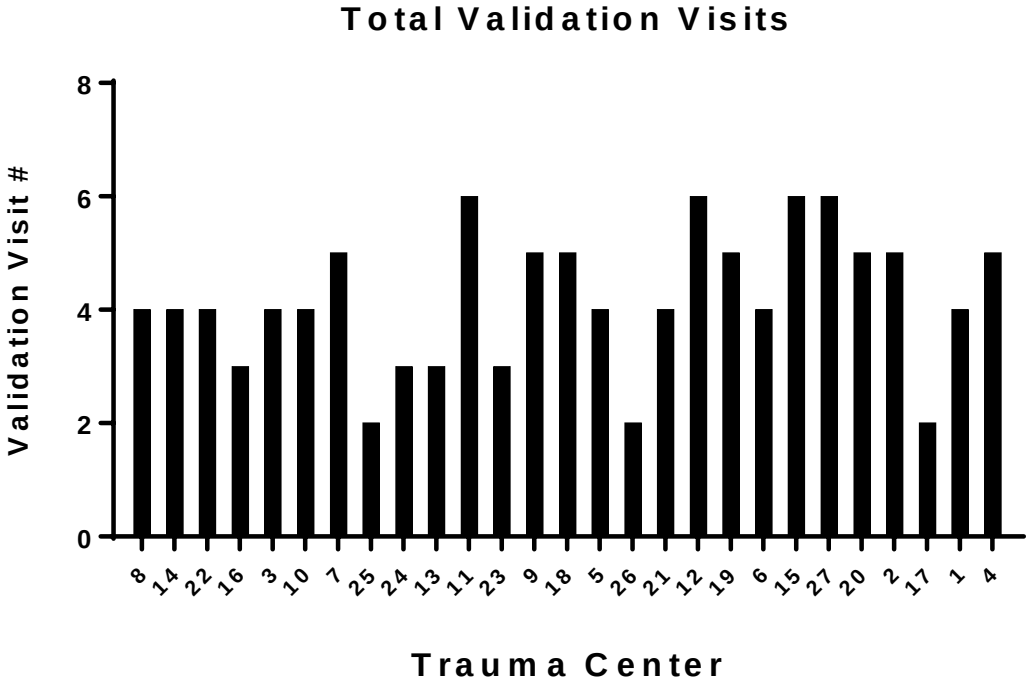




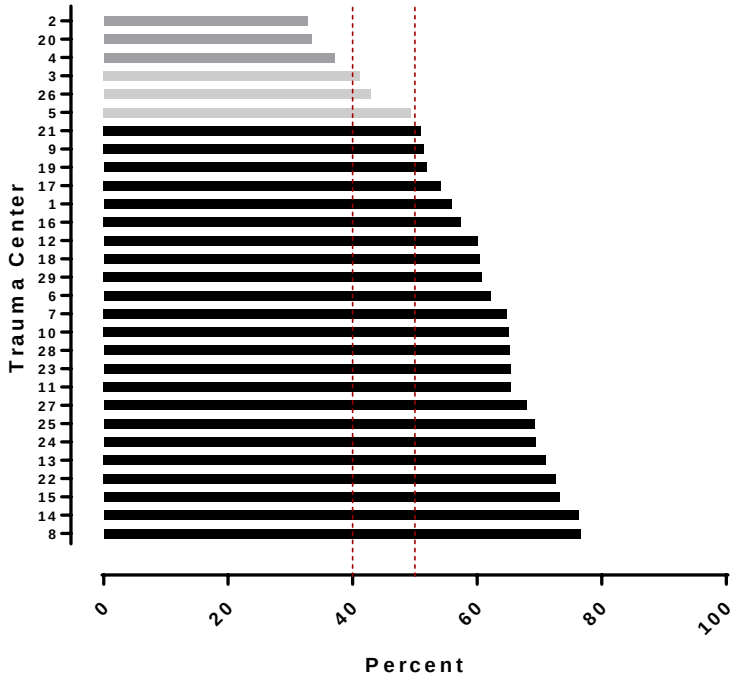

TBI Intervention Timing
Trauma Center
10
5
19
23
13
8
11
26
25
6
1
28
14
15
18
17
21
24
2
27
4
3
22
9
12
20
16
7
29
0
20
40
60
80
100
% Timely (<8 hrs)

CQI Performance Index – New Section

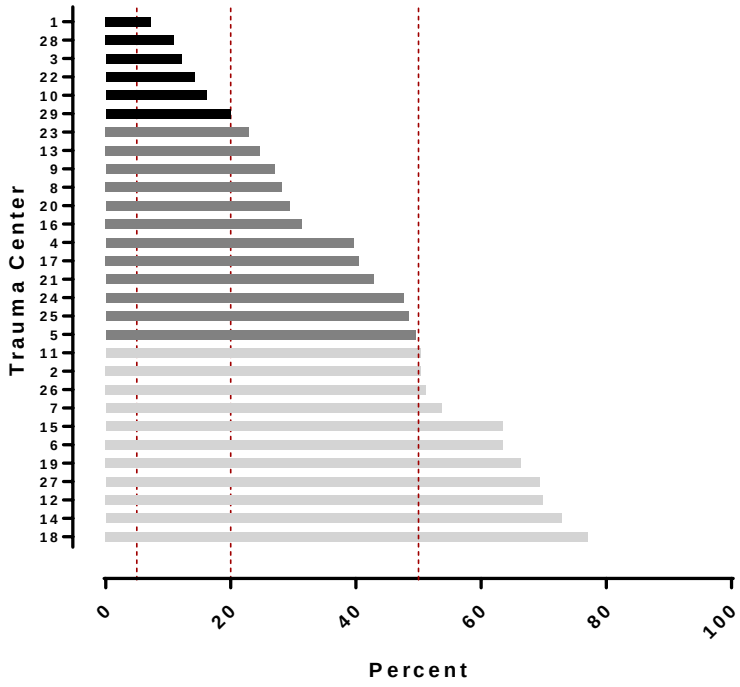


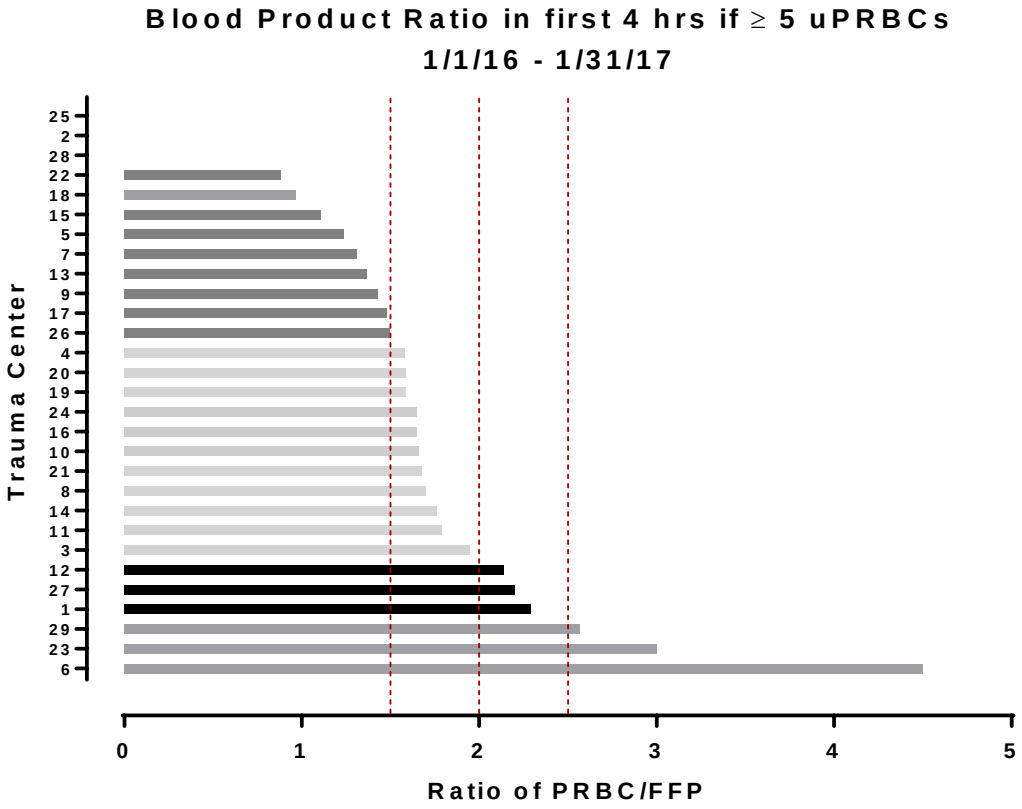


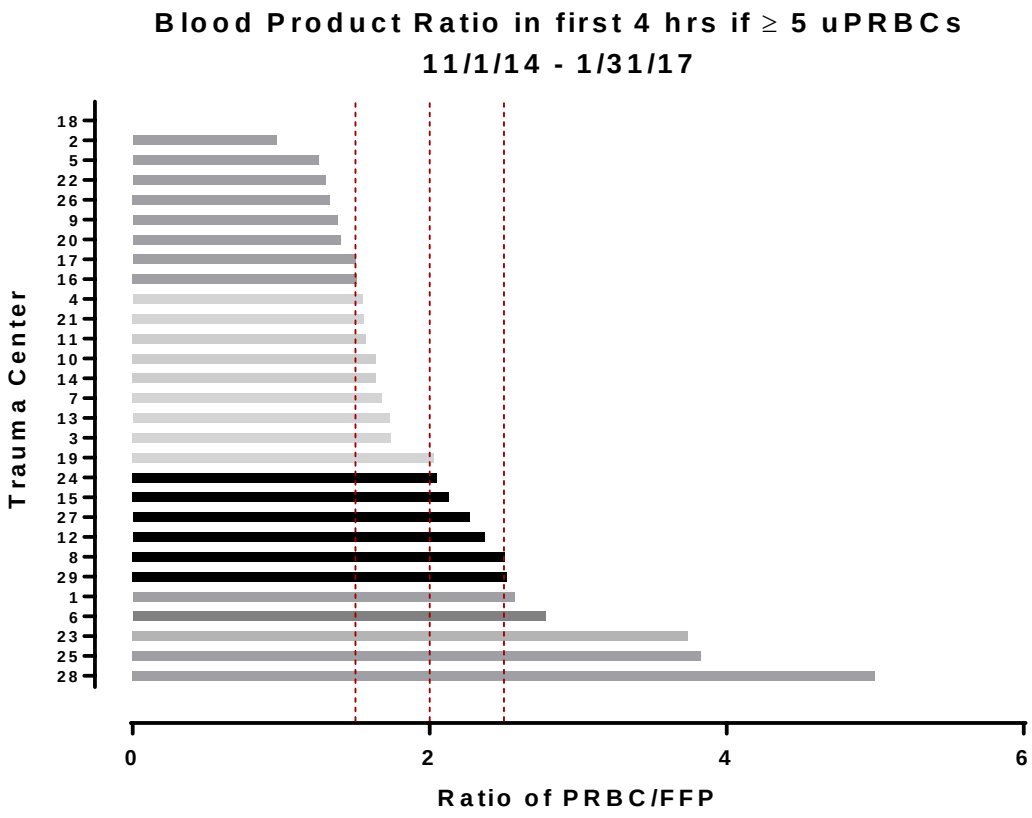
VTE Prophylaxis Timing ≤ 48 hrs
1/1/16 - 1/31/17



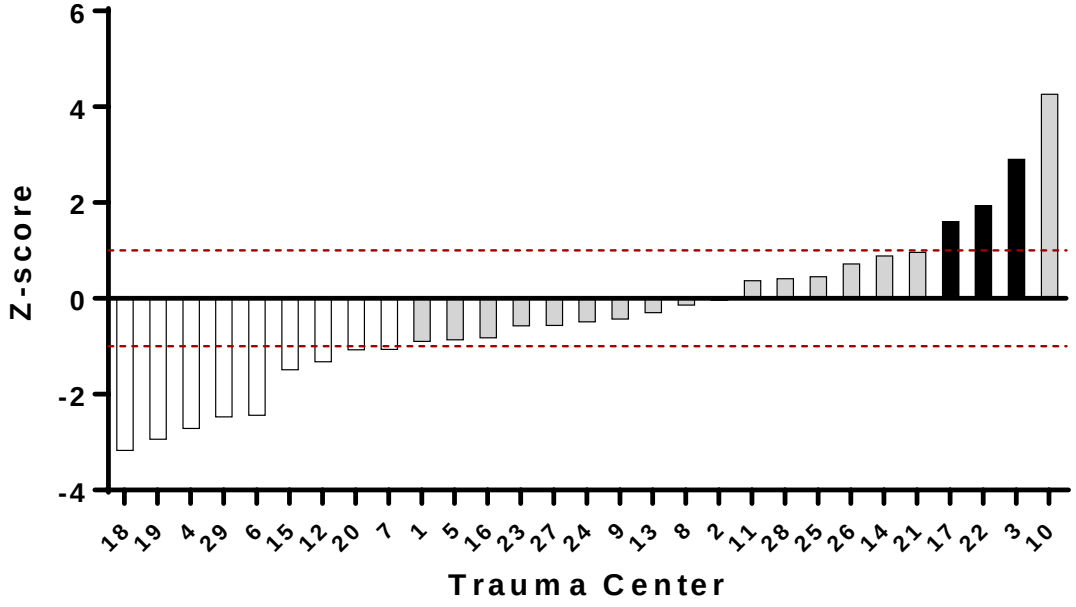
VTE Prophylaxis Type - LMWH
1/1/16 - 1/31/17



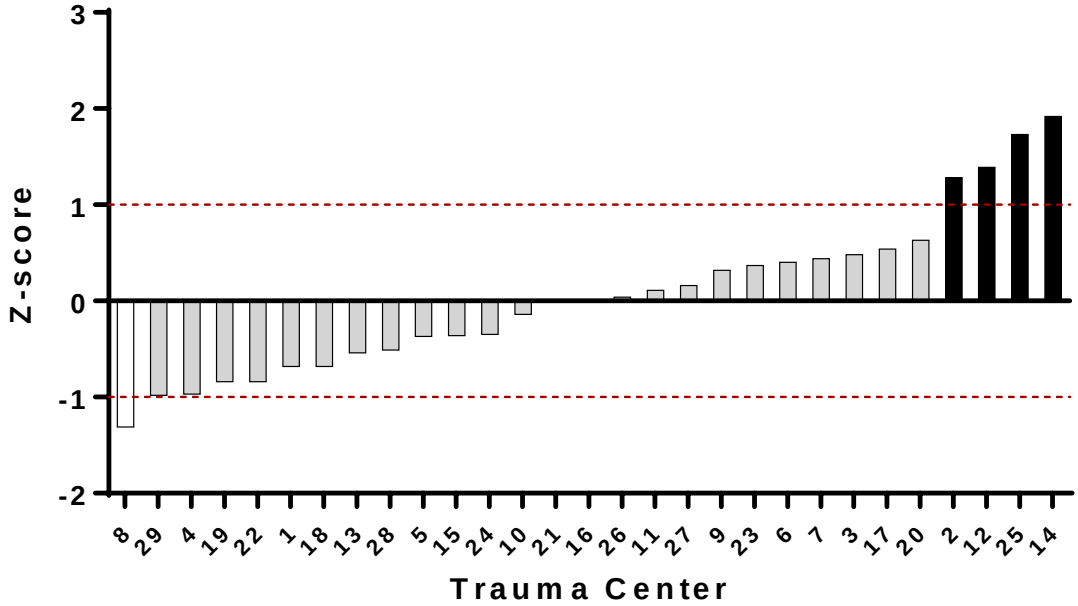

Blood Product Ratio in first 4 hrs if ≥ 5 uPRBCs
1/1/16 - 1/31/17
Trauma Center
25
2
28
22
18
15
5
7
13
9
17
26
4
20
19
24
16
10
21
8
14
11
3
12
27
1
29
23
6
0
1
2
3
4
5
Ratio of PRBC/FFP

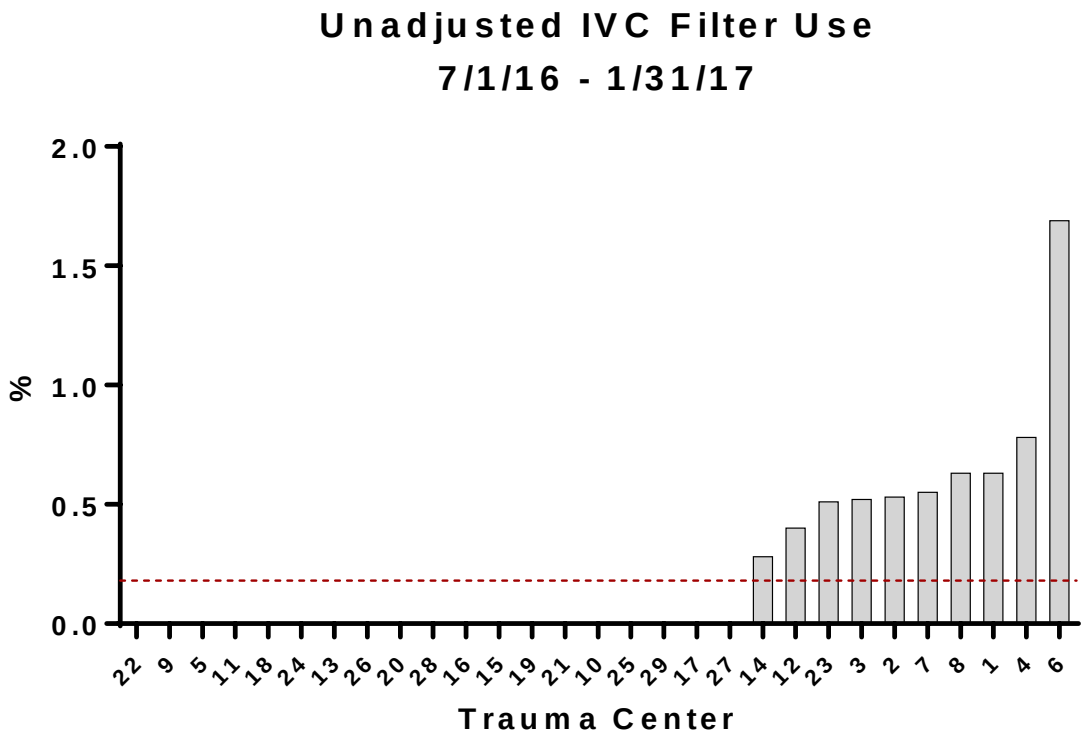

Blood Product Ratio in first 4 hrs if ≥ 5 uPRBCs
11/1/14 - 1/31/17
Trauma Center
18
2
5
22
26
9
20
17
16
4
21
11
10
14
7
13
3
19
24
15
27
12
8
29
1
6
23
25
28
0
2
4
6
Ratio of PRBC/FFP

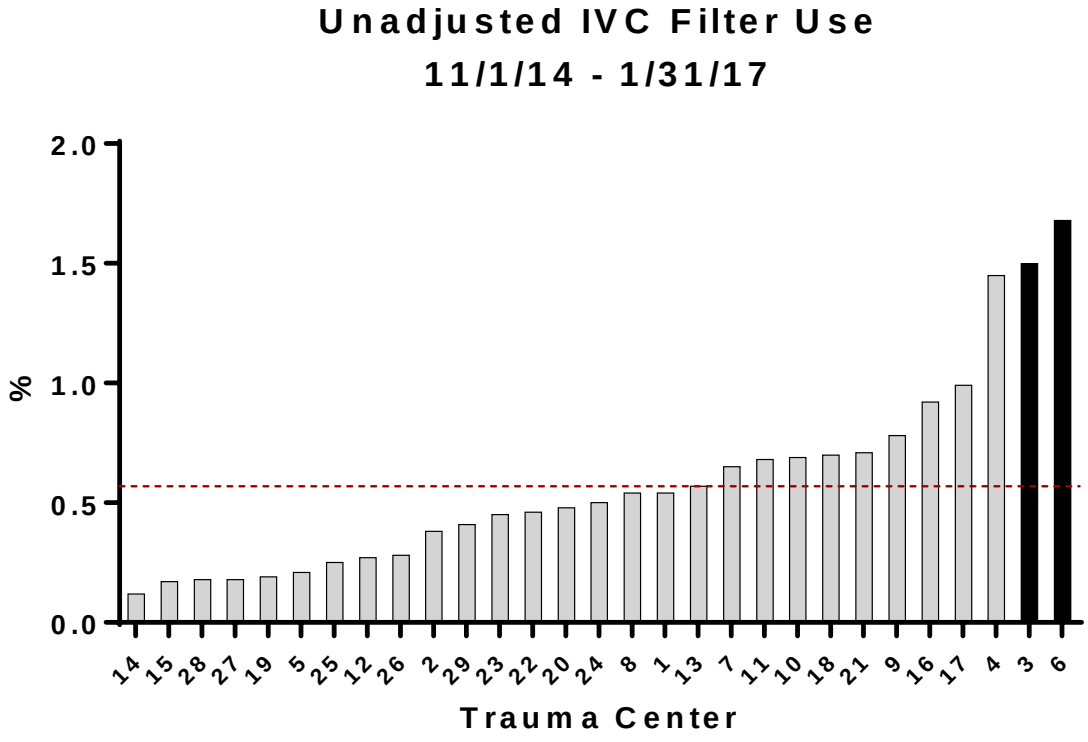
Z-score - Serious Complication Rate
7/1/14 - 1/31/17



Z-score - Mortality Rate
7/1/14 - 1/31/17




Unadjusted IVC Filter Use
7/1/16 - 1/31/17
2.0
1.5
1.0
0.5
0.0
%
22 9 5 11 18 24 13 26 20 28 16 15 19 21 10 25 29 17 27 14 12 23 3 2 7 8 1 4 6
Trauma Center


Unadjusted IVC Filter Use
11/1/14 - 1/31/17
2.0
1.5
1.0
0.5
0.0
%
14 15 28 27 19 5 25 12 26 2 29 23 22 20 24 8 1 13 7 11 10 18 21 9 16 17 4 3 6
Trauma Center

Filter Index

ID	Pg	Pg	Graph	Menu	Sub-Menu	Cohort	Dead	No Signs of Life	ISS	Age	Transfer Out	Period	Period	Internal Filter
1	9		Mortality (Cohort 1 - all)	Mortality Drill-Down	Dead	1	No Filter	All	All	All	Include	11/1/2014	1/31/2017	
2	9	15	Mortality (Cohort 1 - all w/o DOA)	Mortality Drill-Down	Dead	1	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
3	10		Mortality (Cohort 2 - admit trauma)	Mortality Drill-Down	Dead	2	No Filter	All	All	All	Include	11/1/2014	1/31/2017	
4	10	27	Mortality (Cohort 2 - admit trauma w/o DOA)	Mortality Drill-Down	Dead	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
5	11		Mortality (Cohort 3 - blunt multi w/o DOA)	Mortality Drill-Down	Dead	3	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
6	12		Mortality (Cohort 4 - blunt single w/o DOA)	Mortality Drill-Down	Dead	4	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
8	15		Mortality or hospice (Cohort 1 w/o DOA)	Mortality Drill-Down	Dead or Hospice	1	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
9	13		Mortality (Cohort 5 - penetrating)	Mortality Drill-Down	Dead	5	No Filter	All	All	All	Include	11/1/2014	1/31/2017	
10	13		Mortality (Cohort 5 - penetrating w/o DOA)	Mortality Drill-Down	Dead	5	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
11	17		Mortality (<65 yo w/o DOA)	Mortality Drill-Down	Dead	1	No Filter	Exclude DOA	All	< 65	Include	11/1/2014	1/31/2017	
12	17		Mortality (>65 yo w/o DOA)	Mortality Drill-Down	Dead	1	No Filter	Exclude DOA	All	> 65	Include	11/1/2014	1/31/2017	
13	21		Complications (Grade 1) - Chg to any	Complications Drill-Down	Any Complications	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
15	22		Cardiac/Stroke	Complications Drill-Down	Cardiac/Stroke	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
16	22		VTE	Complications Drill-Down	VTE	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
17	31		Pneumonia	Complications Drill-Down	Pneumonia	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
18	24		Renal failure	Complications Drill-Down	Acute Renal Failure	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
19	25		Sepsis	Complications Drill-Down	Severe Sepsis	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
20	24		CAUTI	Complications Drill-Down	Urinary Tract Infection	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
21	26	27	Failure to rescue	Complications Drill-Down	Failure to Rescue	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
22	21	26	Complications (FTR)	Complications Drill-Down	Serious Complications	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
24	29		Adjusted hospital LOS	Utlization Drill-Down	LOS (days)	2	Alive	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
25	29		Adjusted ICU LOS	Utlization Drill-Down	ICU LOS (days)	2	Alive	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
26	31	32	Adjusted ventilator days	Utlization Drill-Down	Mean Ventilator Support Days	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
27	20		Outcomes overview - dead	Mortality Drill-Down	Dead	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
28	20		Outcomes overview - serious complications	Complications Drill-Down	Serious Complications	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
29	43		Unadjusted IVC filter use	IVC Summary	IVC Filter Use - Unadj	1	No Filter	Exclude DOA	All	All	Include	7/1/2016	1/31/2017	
33	37		TBI intervention	TBI Management	Eligible & No Intervention	1	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
34	38		TBI intervention timing	Timing of TBI Interventions	Timely	1	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
37	32		Adjusted VAP	Internal analysis		2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	Vent Day $\geq$ 1
38	41		Blood product ratio in first 4 hours if > 4 uPRBC	Hemorrhage	Mean Ration PRBC/FFP 4 hrs	1	No Filter	Exclude DOA	All	All	Include	1/1/2016	1/31/2017	
39	39		Validation	Internal analysis										
42	33		Patients on ventilator	Utlization Drill-Down	Patients on Ventilator (%)	1	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
43	28		Unplanned return to OR	Complications Drill-Down	Unplanned Return to OR	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
44	14		Mortality (Cohort 6 - admit non-trauma w/o DOA)	Mortality Drill-Down	Dead	6	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
45	28		Unplanned return to ICU	Complications Drill-Down	Unplanned Return to ICU	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
46	25		C. difficile	Complications Drill-Down	C. Diff Colitis	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
47	19		GCS 3-8	Mortality Drill-Down	Total GCS: 3-8	1	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
48	16		ISS greater than 25	Mortality Drill-Down	Dead	2	No Filter	Exclude DOA	> 25	All	Include	11/1/2014	1/31/2017	
49	30		Patients admitted to ICU	Utlization Drill-Down	Patients Admitted to ICU (%)	1	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
50	37		TBI mortality (raw)	TBI Management	Dead (with TBI) unadj	1	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
51	39		VTE prophylaxis timing	VTE Prophylaxis Metric	Heparin, LMWH <= 48 Hours	2	No Filter	Exclude DOA	All	All	Include	1/1/2016	1/31/2017	LOS $\geq$ 3
52	19		Adjusted TBI mortality	TBI Management	Dead (with TBI) unadj	1	No Filter	Exclude DOA	All	All	Exclude	11/1/2014	1/31/2017	
53	30		Extended LOS	Utlization Drill-Down	Extended LOS (%)	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
54	23		Unplanned intubation	Complications Drill-Down	Unplanned Intubation	2	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
55	18		Mortality GCS 3-8 and Above 65	Mortality Drill-Down	Dead	1	No Filter	Exclude DOA	All	> 65	Include	11/1/2014	1/31/2017	
56	40		VTE prophylaxis type - LMWH	VTE Prophylaxis Types	LMWH (Type)	2	No Filter	Exclude DOA	All	All	Exclude	1/1/2016	1/31/2017	
57	40		Antibiotic days	Internal Analysis								11/1/2014	1/31/2017	
58	14		Mortality (Cohort 7 - Benchmark)	Mortality Drill-Down	Dead	7	No Filter	Exclude DOA	> 8	All	Exclude	11/1/2014	1/31/2017	
60			Mean time to tracheostomy	Internal analysis								11/1/2014	1/31/2017	
61			Percent with tracheostomy (vent > 1 day)	Internal analysis								11/1/2014	1/31/2017	
62			Percent with tracheostomy (vent > 5 days)	Internal analysis								11/1/2014	1/31/2017	
63			Mean time to tracheostomy (TBI)	Internal analysis								11/1/2014	1/31/2017	
64	34		Mean ED LOS (Cohort 1 - all)	ED LOS	ED LOS Mean (hrs)	1	No Filter	Exclude DOA	All	All	Exclude	11/1/2014	1/31/2017	
65	34		Mean ED LOS (Cohort 2 - admit to trauma)	ED LOS	ED LOS Mean (hrs)	2	No Filter	Exclude DOA	All	All	Exclude	11/1/2014	1/31/2017	
66	35		Mean ED LOS - full activations	ED LOS	ED LOS Mean Full Activation (hrs	2	No Filter	Exclude DOA	All	All	Exclude	11/1/2014	1/31/2017	
67	35		Mean ED LOS - disposition ED to ICU	ED LOS	ED to ICU (hrs)	2	No Filter	Exclude DOA	All	All	Exclude	11/1/2014	1/31/2017	
68	36		Mean ED LOS - partial activation	ED LOS	ED LOS Mean Partial Activation (	2	No Filter	Exclude DOA	All	All	Exclude	11/1/2014	1/31/2017	
69	36		Mean ED LOS - consult	ED LOS	ED LOS Mean Consult (hrs)	2	No Filter	Exclude DOA	All	All	Exclude	11/1/2014	1/31/2017	
70	41		Blood product ratio in first 4 hours if > 4 uPRBC	Hemorrhage	Mean Ration PRBC/FFP 4 hrs	1	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
71	43		Unadjusted IVC filter use	IVC Summary	IVC Filter Use - Unadj	1	No Filter	Exclude DOA	All	All	Include	11/1/2014	1/31/2017	
72	42		Z-score - complication rate	Internal analysis	Dead							7/1/2014	1/31/2017	
73	42		Z-score - mortality rate	Internal analysis	Dead							7/1/2014	1/31/2017	