The Michigan Trauma Quality Improvement Program

Petoskey, MI
May 14, 2014

Agenda

- Announcements
- MTQIP Data
- TQIP Data
- Validation
- New Data Elements
- Survey Data
  - Topics for Meetings
  - Focus for MTQIP Data/QI
- Breakout

MTQIP

- New Centers Submitting Data
  - Henry Ford Macomb Hospital
  - St. Joseph Mercy Oakland
  - McLaren Lapeer Regional Medical Center
- New Center (July)
  - MidMichigan Medical Center (Midland)
    - Thomas Veverka MD, TMD
    - Tom Wood TPM, Lori Coppola Registrar

ACS-TQIP

- Benchmark Reports
  - March 2013
- ACS-TQIP Meeting
  - Chicago IL, November 9-11, 2014
- Michigan Report
  - 26 MTQIP Centers in aggregate
  - Frequency

Data Submission

- DI
  - XML written and being revised
  - Server configuration and software install
  - Test data
- June Submission
  - 11/1/2012 to 12/31/2013
  - Can send additional data up to 6/6/2014
- Arbor Metrix Web-site
  - Aim for 1 month turn around
  - New data available in late July/early August

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Future Meetings

- Fall
  - MCOT
  - Thursday
- Neurosurgery
  - Feasible?
  - When?
- Options
  - MSQC?
  - Friday/Saturday?

MTQIP Report Tool

Mark Hemmila, MD

Confidentiality Agreement

- Everyone signs a confidentially agreement for entry to the meeting
- Every meeting
- No photos
- Reports distributed at the end of the meeting

Confidentiality Agreement

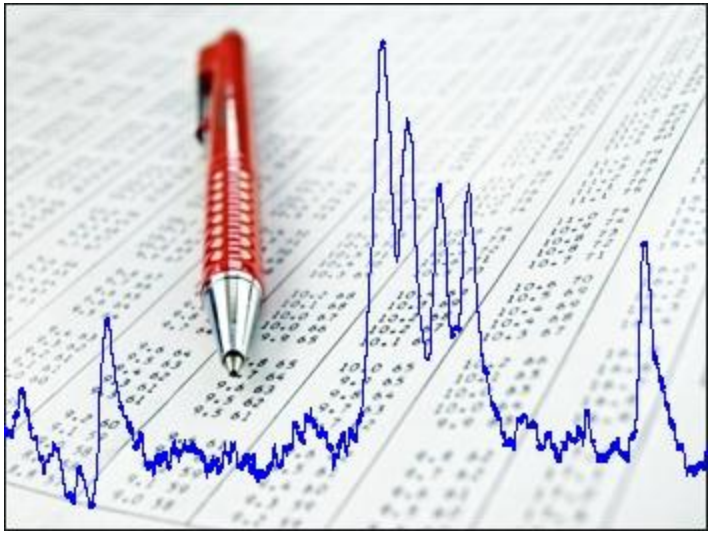
The following examples are to be considered privileged and confidential information and should be discussed only within the confines of the MTQIP Quality Collaborative meetings.

- Any and all patient information.
- Any and all patient identifiers which are considered privileged and protected health information as defined by current HIPPA laws.
- Any specific Michigan trauma case information.
- Any information discussed regarding a specific MTQIP site outcome.
- Any reference to a specific MTQIP site result or analysis.
- All trauma data presented including but not limited to Composite Metrics.

Confidentiality Agreement

By signing this document, I agree to protect the confidentiality of all information discussed at this meeting and take steps to safeguard against any disclosure of privileged information that may have been discussed. I understand that any violation of confidentiality may result in my personal removal from participation in the project as well as the removal of the hospital site I represent.

Hospital Metrics



MTQIP 2014 Hospital Metrics

- Participation 70%
  - Data Submission
  - Surgeon Lead
  - Trauma Program Manager/Registrar
  - Site specific QI project
  - Presentation/Use of MTQIP data
- Performance 30%
  - Data Validation
  - Massive Transfusion Protocol
  - VTE Prophylaxis

2014 MTQIP Hospital Metrics

Measure	Weight	Measure Description	Points (Existing Participants)	Points (New Participants)
PARTICIPATION (70%)				
#1	**10**	**Data Submission**		
		On time 3 of 3 times	10	10
		On time 2 of 3 times	5	5
		On time 1 of 3 times	0	0
#2	**20**	**Meeting Participation – Surgeon Lead**		
		Participated in 3 of 3 meetings	20	20
		Participated in 2 of 3 meetings	10	10
		Participated in 1 of 3 meetings	5	5
		No participation	0	0
#3	**20**	**Meeting Participation – Trauma Manager/Registrar (Avg)**		
		Participated in 3 of 3 meetings	20	20
		Participated in 2 of 3 meetings	10	10
		Participated in 1 of 3 meetings	5	5
		No participation	0	0
#4	**10**	**Site Specific Quality Improvement Project Implementation**		
		Project data submitted	10	10
		Project data not submitted	0	0
#5	**10**	**Surgeon Lead Presents MTQIP Reports at Hospital Meetings**		
		Presented at 3 meetings	10	10
		Presented at 2 meetings	8	8
		Presented at 1 meeting	5	5
		Did not present	0	0
		*Signed attestation required		

PERFORMANCE (30%)					
#6	10	**Accuracy of Data**			
			Visit #1	**Visit #2 or More**	
		5 star validation	0-4.5%	0-4.5%	10
		4 star validation	4.6-5.5%	4.6-5.5%	8
		3 star validation	5.6-8.0%	5.6-7.0%	5
		2 star validation	8.1-9.0%	7.1-8.0%	3
		1 star validation	> 9%	> 8.0%	0
					na
#7	10	**Massive Transfusion (defined as ≥ 4 u PRBC in first 4 hours): Mean PRBC to Plasma Ratio for first 4 hours of admission**			
		≤ 1.5			10
		1.6 - 2.5			7.5
		> 2.5			5
		> 3.0			0
					na
#8	10	**Timely VTE Prophylaxis (< 48 hours of admission)**			
		> 50%			10
		≥ 40%			5
		< 40%			0
					na

Center Acronyms

Borgess	**BO**
Botsford	**BF**
Bronson	**BM**
Covenant	**CO**
Detroit Receiving	**DR**
Genesys	**GH**
Henry Ford Detroit	**HF**
Henry Ford Macomb	**HM**
Hurley	**HU**
Marquette General	**MG**
McLaren Macomb	**MC**
McLaren Lapeer	**ML**
McLaren Pontiac	**PO**
Munson	**MU**
Oakwood Dearborn	**OW**
Oakwood Southshore	**OS**
Sinai Grace	**SG**
Sparrow	**SP**
Spectrum Health	**SH**
St. John	**JO**
St. Joseph Mercy Ann Arbor	**SJ**
St. Joseph Mercy Oakland	**SO**
St. Marys Mercy (Grand Rapids)	**MM**
St. Marys Michigan (Saginaw)	**SM**
U of M	**UM**
William Beaumont	**WB**

Blood Products (7/1/12 to 6/30/13)

Inclusion:

PRBC 4hrs ≥ 4 units

Trauma Center	N Patients	Ratio PRBC/FFP 4 hrs	Ratio PRBC/FFP 4 hrs ≤ 3	Ratio PRBC/FFP 4 hrs ≤ 2.5	Ratio PRBC/FFP 4 hrs ≤ 1.5	Ratio PRBC/FFP 24 hrs	Ratio PRBC/FFP 24 hrs ≤ 2.0	Ratio PRBC/FFP 24 hrs ≤ 1.5	Dead
19	6	1.1	2	2	2	1.2	3	3	2
18	11	1.2	11	11	10	1.1	11	11	5
17	7	1.3	6	5	5	1.3	5	5	3
2	1	1.3	1	1	1	1.5	1	1	0
3	5	1.4	5	5	4	1.5	4	3	1
27	9	1.4	6	5	5	1.1	5	5	3
22	1	1.7	1	1	0	3.3	0	0	1
4	5	1.8	3	2	1	1.8	2	1	4
21	16	2.0	10	8	5	1.9	8	4	8
6	1	2.0	1	1	0	1.4	1	1	1
10	13	2.1	9	9	7	1.6	10	8	1
13	5	2.1	3	3	2	1.5	3	2	0
16	4	2.1	2	2	0	2.0	1	0	2
14	6	2.2	3	3	1	2.3	2	1	5
11	10	2.3	6	6	3	2.1	6	3	6
15	16	2.6	9	8	2	2.1	9	6	4
1	9	2.8	4	4	3	2.6	5	3	5
7	9	2.8	5	5	1	1.9	4	3	2
8	1	3.0	1	0	0	3.0	0	0	0
5	2	3.5	1	0	0	3.5	0	0	1
9	1	--	0	0	0	--	0	0	1
20	2	--	0	0	0	--	0	0	0
Total	140	1.8	89	81	52	1.6	80	60	55

Blood Products (7/1/12 to 6/30/13)

Inclusion:

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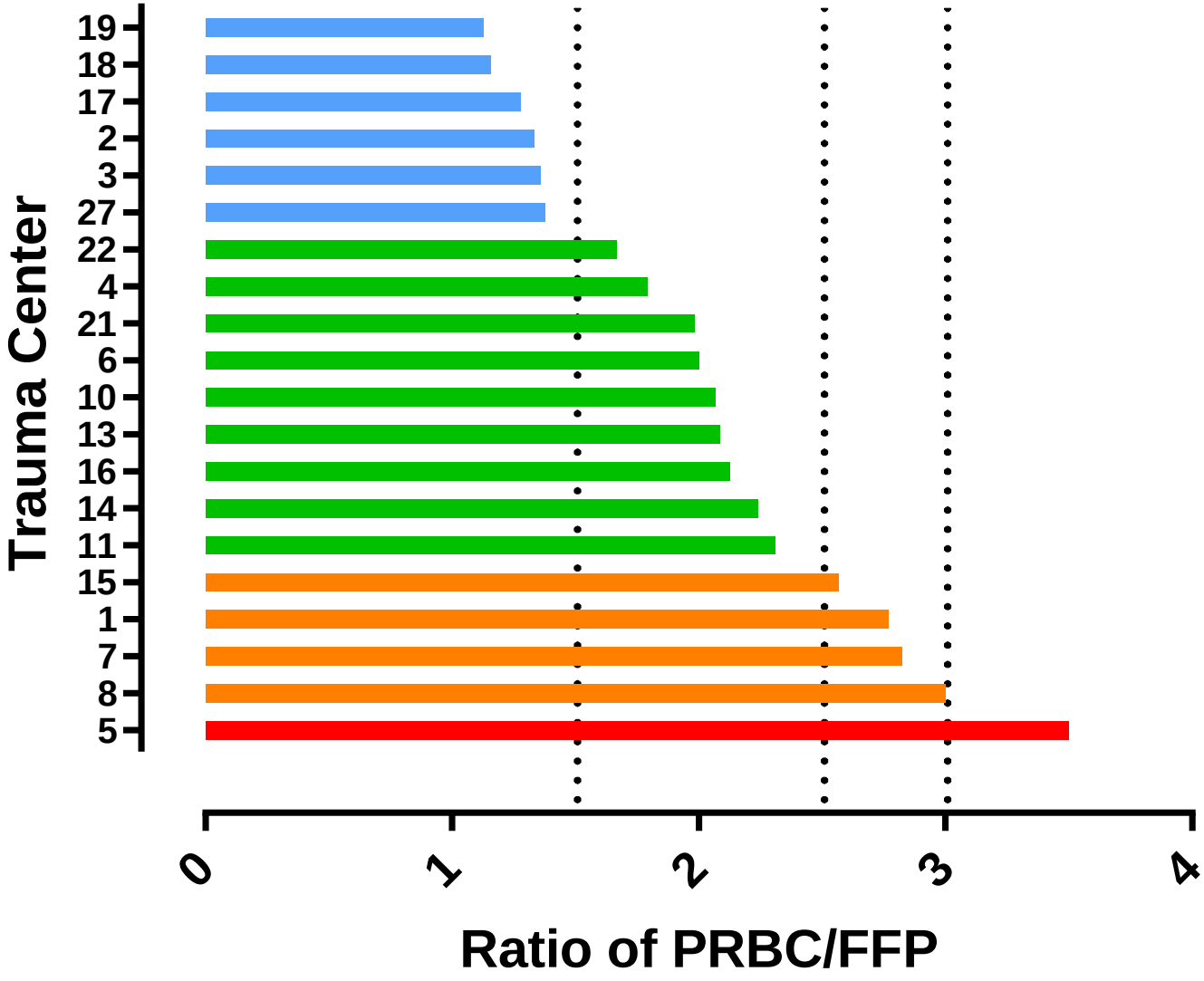
16	4	2.1	2	2	0	2.0	1	0	2
14	6	2.2	3	3	1	2.3	2	1	5
11	10	2.3	6	6	3	2.1	6	3	6
15	16	2.6	9	8	2	2.1	9	6	4
1	9	2.8	4	4	3	2.6	5	3	5
7	9	2.8	5	5	1	1.9	4	3	2
8	1	3.0	1	0	0	3.0	0	0	0
5	2	3.5	1	0	0	3.5	0	0	1
9	1	--	0	0	0	--	0	0	1
20	2	--	0	0	0	--	0	0	0
Total	140	1.8	89	81	52	1.6	80	60	55

MTQIP 2014 Hospital Metrics

- Massive Transfusion
  - ≥ 4 units PRBC's in first 4 hrs
  - Average of ratio for each patient

Ratio PRBC/FFP	Points
< 1.5	10
1.6 – 2.5	7.5
> 2.5	5
> 3.0	0

Blood Product Ratio in first 4 hrs if ≥ 4 uPRBCs



Patient List - Blood

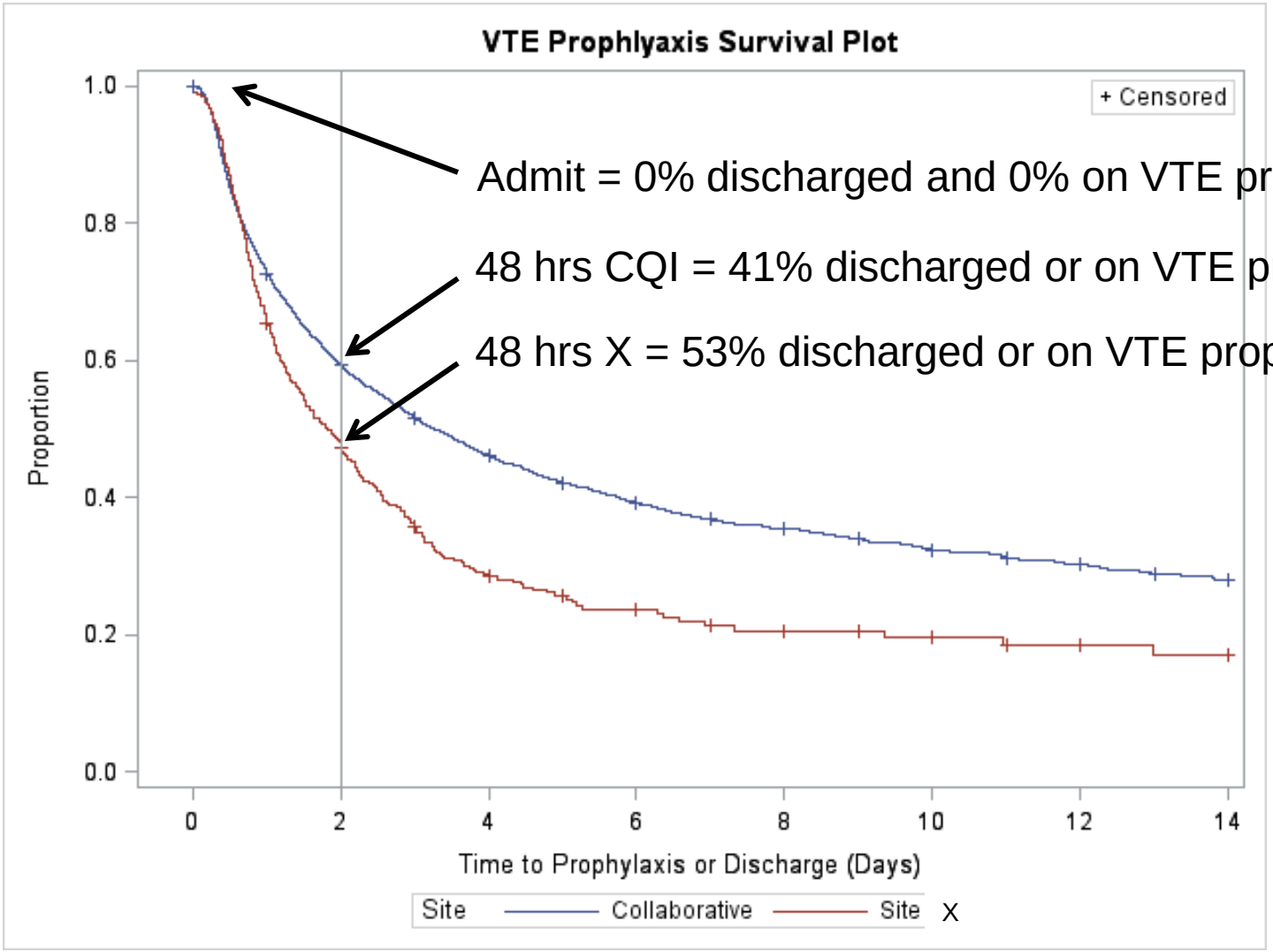
recordno	traumactr	age	blunt	ed_arrdate	ed_arrtime	ed_bp	ed_pulse	ed_mtr	usrais_iss	prbc4	ffp4	plt4	cryo4	ratio4
334189		35.13	Blunt	09-Jul-12	01:35	64	151	6	10	6	2	5	0	3
334900		63.31	Blunt	22-Nov-12	03:11	110	81	1	38	10	10	10	0	1
335005		79.95	Blunt	21-Jan-13	20:48	99	84	1	34	4	4	0	0	1
335037		61.83	Blunt	10-Feb-13	18:03	137	100	1	22	4	0	0	0	
335050		67.66	Blunt	18-Feb-13	15:00	107	106	6	16	7	8	15	0	0.875
335055		31.32	Penetratin	18-Feb-13	17:17	0	0	1	9	11	0	0	0	
335218		61.61	Blunt	08-Mar-13	01:08	65	73	6	59	4	3	0	0	1.333333
335401		23.49	Blunt	21-Jun-13	17:12	137	98	6	16	4	0	0	0	
335425		65.17	Blunt	29-Jun-13	14:41	119	150	6	34	38	36	40	2	1.055556

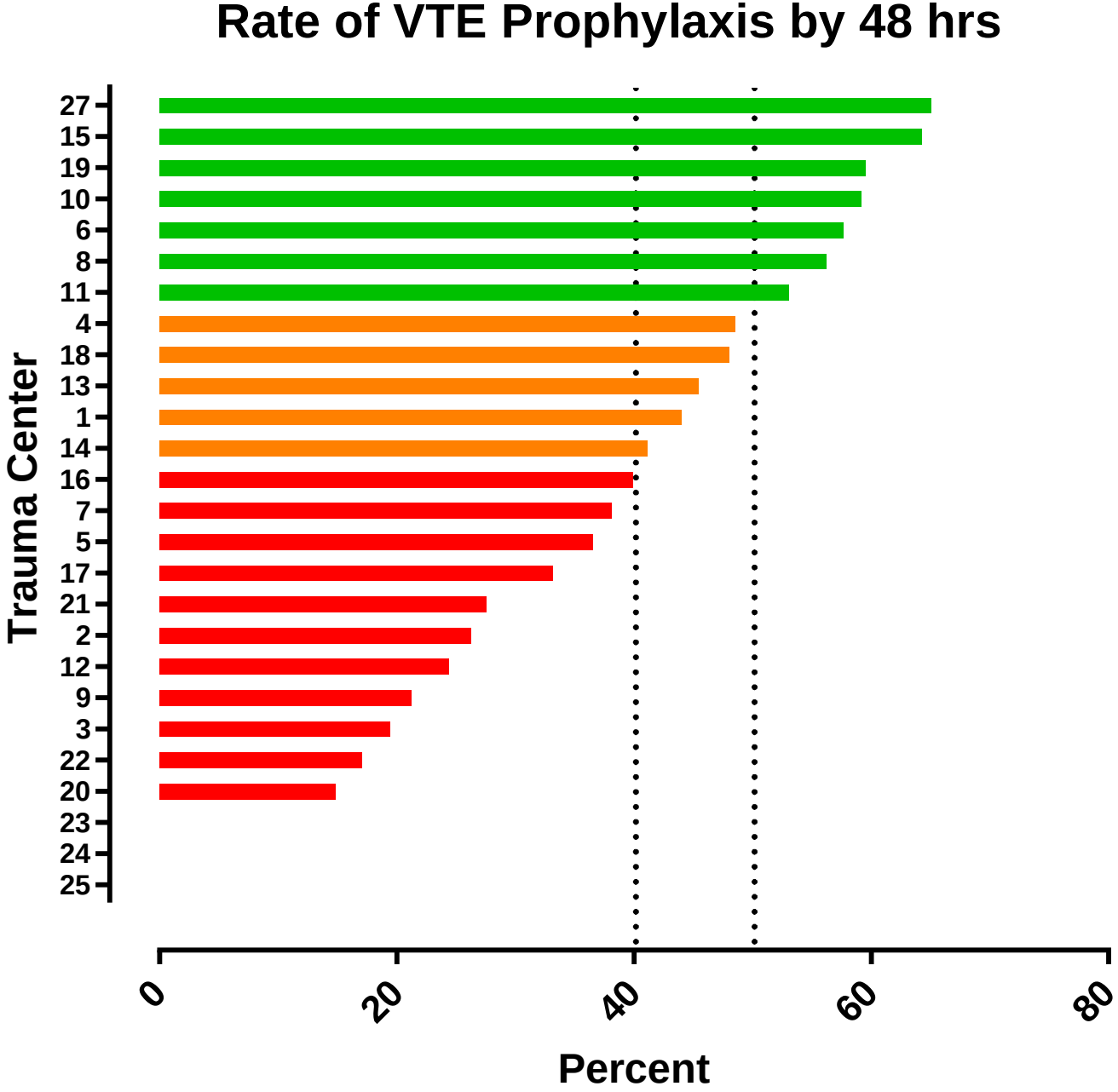
- Your list of patients
- 0 = No
- 1 = Yes
- Injury, Blood products, TXA, Operation, Angio
- Additional data?

VTE Prophylaxis

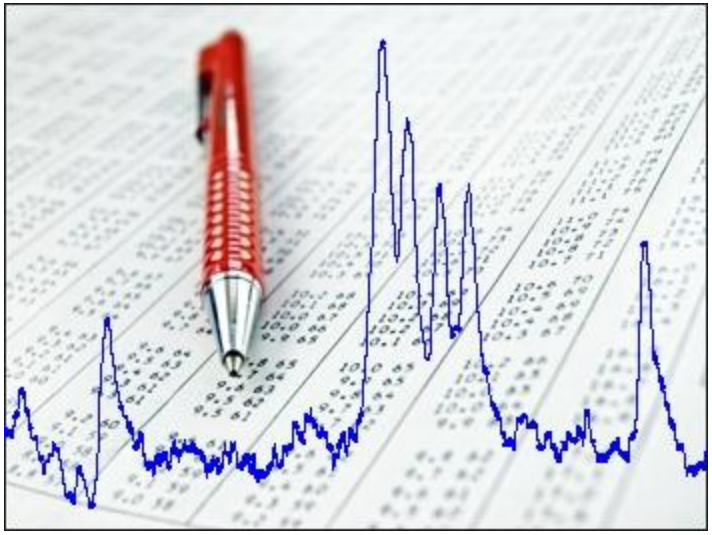
- Admit Trauma Service
  - In hospital with no VTE pro = non-Event
  - Discharge Home in 48 hrs = Event
  - VTE Prophylaxis in 48 hrs = Event
- Rate
  - > 50% (10 points)
  - > 40% (5 points)
  - 0 – 40% (0 points)

VTE Prophylaxis



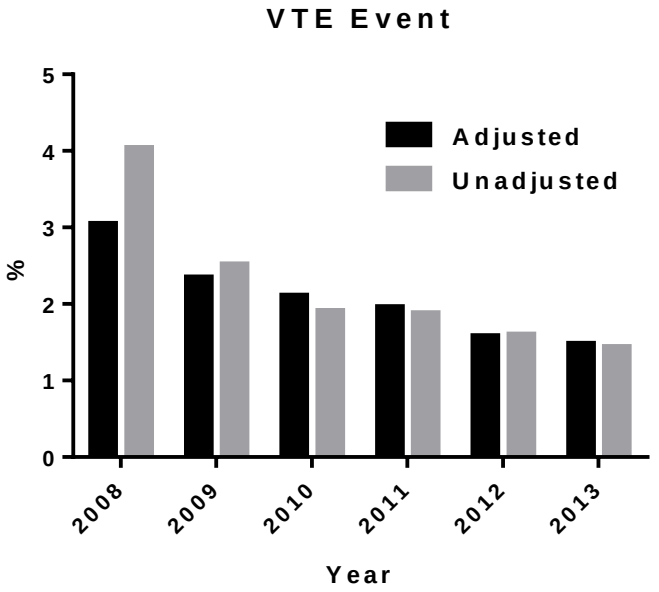

Rate of VTE Prophylaxis by 48 hrs
Trauma Center
27
15
19
10
6
8
11
4
18
13
1
14
16
7
5
17
21
2
12
9
3
22
20
23
24
25
0
20
40
60
80
Percent

Collaborative Metrics

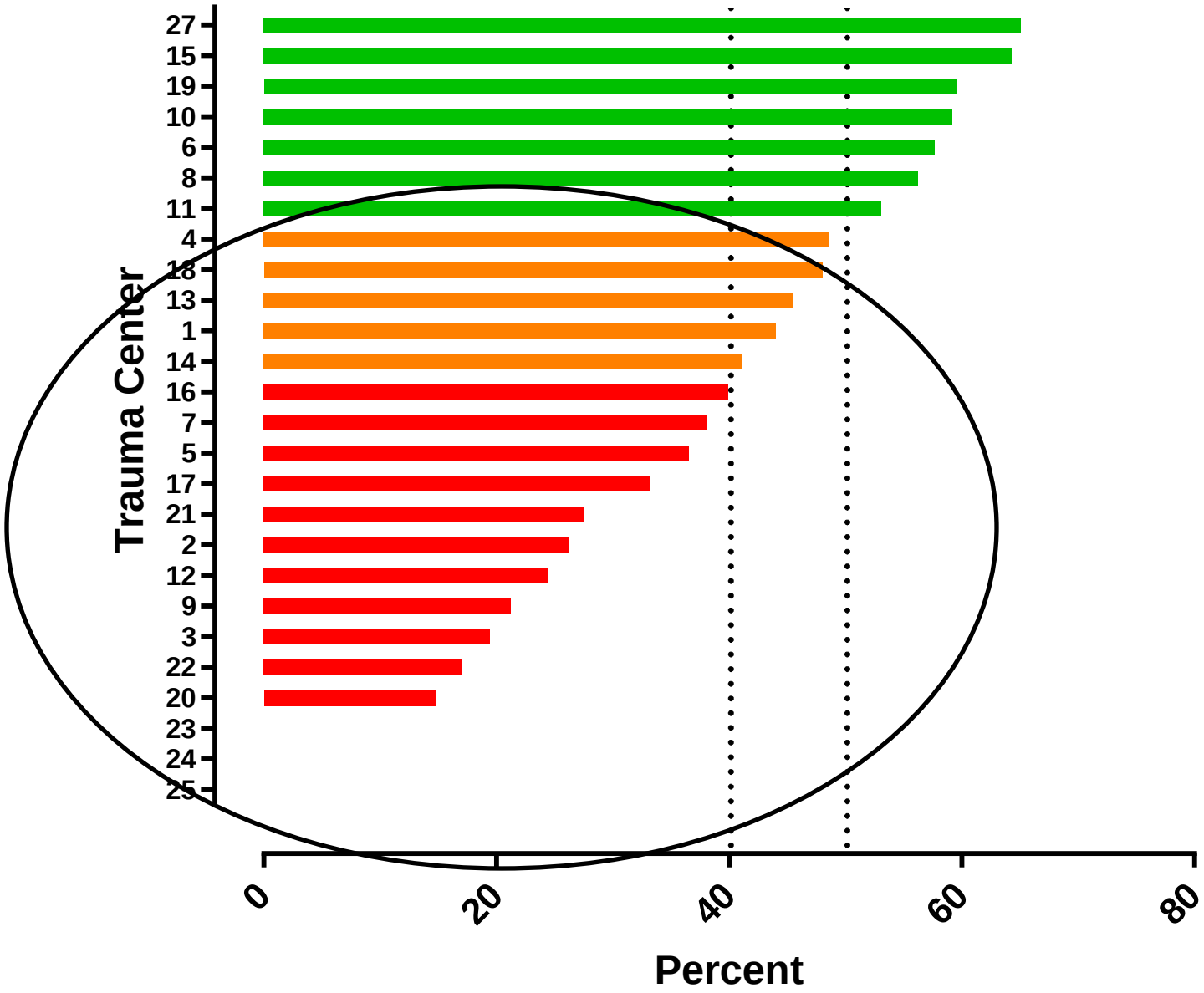


MTQIP 2014 Collaborative Metrics

- VTE
  - VTE Rate
    - Begin = 2.5 %
    - Current = 1.6 %
    - Target = 1.5 %
  - 48 hr VTE Prophylaxis Rate
    - Begin = 38 %
    - Current = 41 %
    - Target = 50 %



Rate of VTE Prophylaxis by 48 hrs



MTQIP 2014 Collaborative Metrics

- Hemorrhage (≥ 4 u PRBC's first 4 hrs)
  - % of patients with 4hr PRBC/FFP ratio < 2.5
    - Begin = 34 %
    - Current = 58 %
    - Target = 80 %

Blood Products (7/1/12 to 6/30/13)

Inclusion:

PRBC 4hrs ≥ 4 units

Trauma Center	N Patients	Ratio PRBC/FFP 4 hrs	Ratio PRBC/FFP 4 hrs ≤ 3	Ratio PRBC/FFP 4 hrs ≤ 2.5	Ratio PRBC/FFP 4 hrs ≤ 1.5	Ratio PRBC/FFP 24 hrs	Ratio PRBC/FFP 24 hrs ≤ 2.0	Ratio PRBC/FFP 24 hrs ≤ 1.5	Dead
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17	7	1.3	6	5	5	1.3	5	5	3
2	1	1.3	1	1	1	1.5	1	1	0
3	5	1.4	5	5	4	1.5	4	3	1
27	9	1.4	6	5	5	1.1	5	5	3
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4	5	1.8	3	2	1	1.8	2	1	4
21	16	2.0	10	8	5	1.9	8	4	8
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10	13	2.1	9	9	7	1.6	10	8	1
13	5	2.1	3	3	2	1.5	3	2	0
16	4	2.1	2	2	0	2.0	1	0	2
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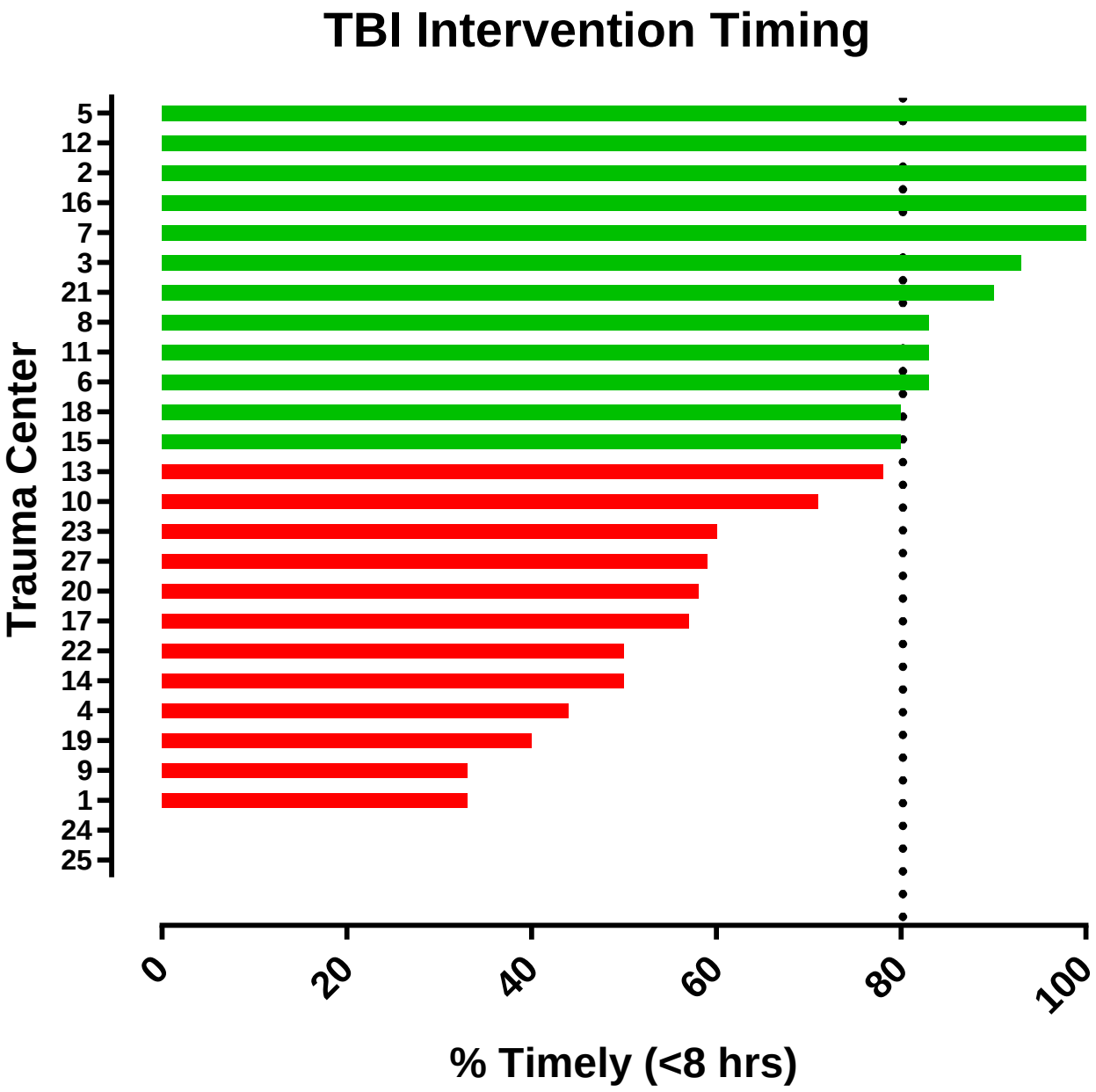
11	10	2.3	6	6	3	2.1	6	3	6
15	16	2.6	9	8	2	2.1	9	6	4
1	9	2.8	4	4	3	2.6	5	3	5
7	9	2.8	5	5	1	1.9	4	3	2
8	1	3.0	1	0	0	3.0	0	0	0
5	2	3.5	1	0	0	3.5	0	0	1
9	1	--	0	0	0	--	0	0	1
20	2	--	0	0	0	--	0	0	0
Total	140	1.8	89	81	52	1.6	80	60	55

MTQIP 2014 Collaborative Metrics

- Brain Injury
  - % of eligible patients with intervention ≤ 8 hours after arrival
    - Begin = 65 %
    - Current = 72 %
    - Target = 80 %


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

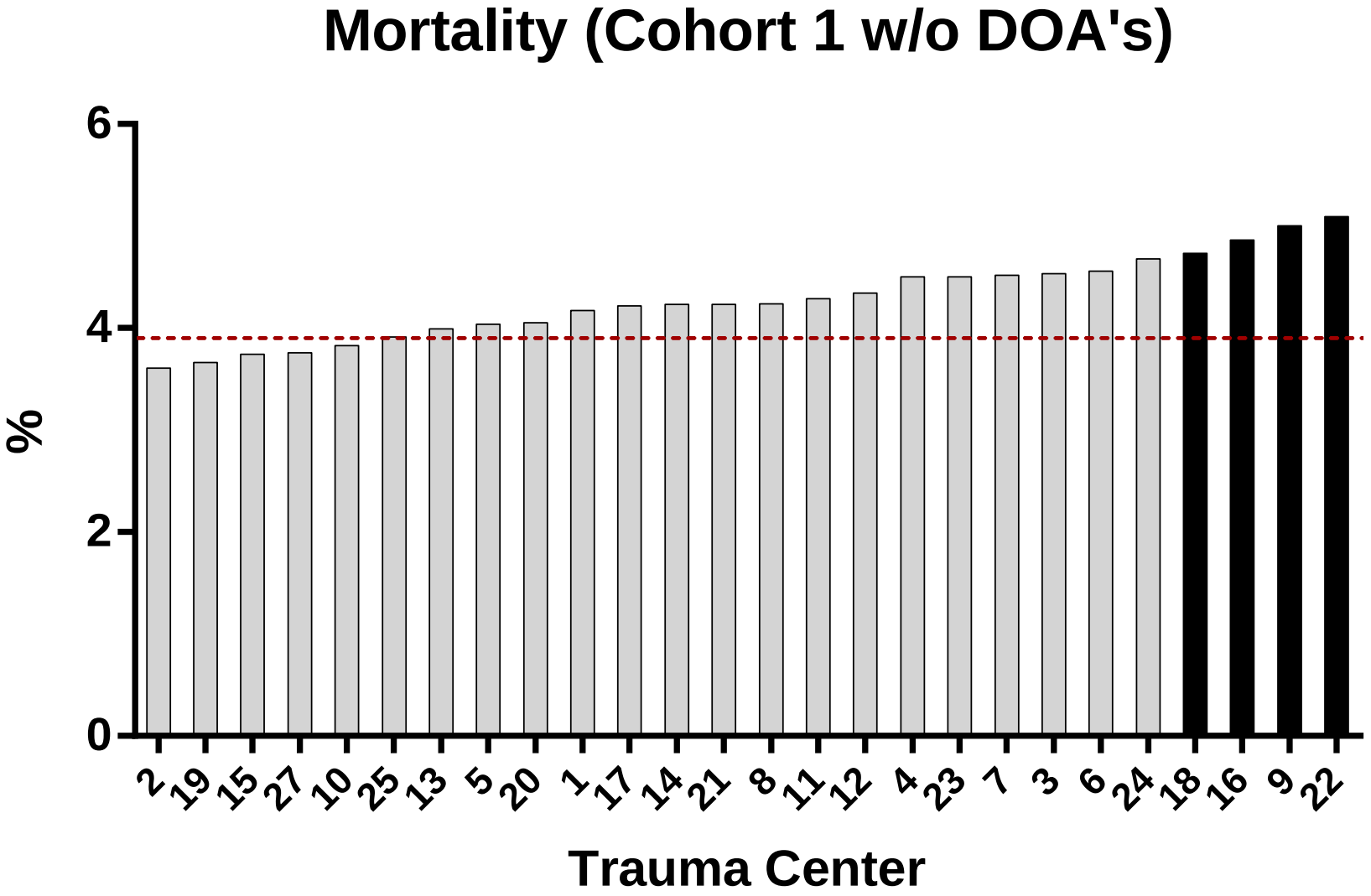
Patient List – TBI Intervention

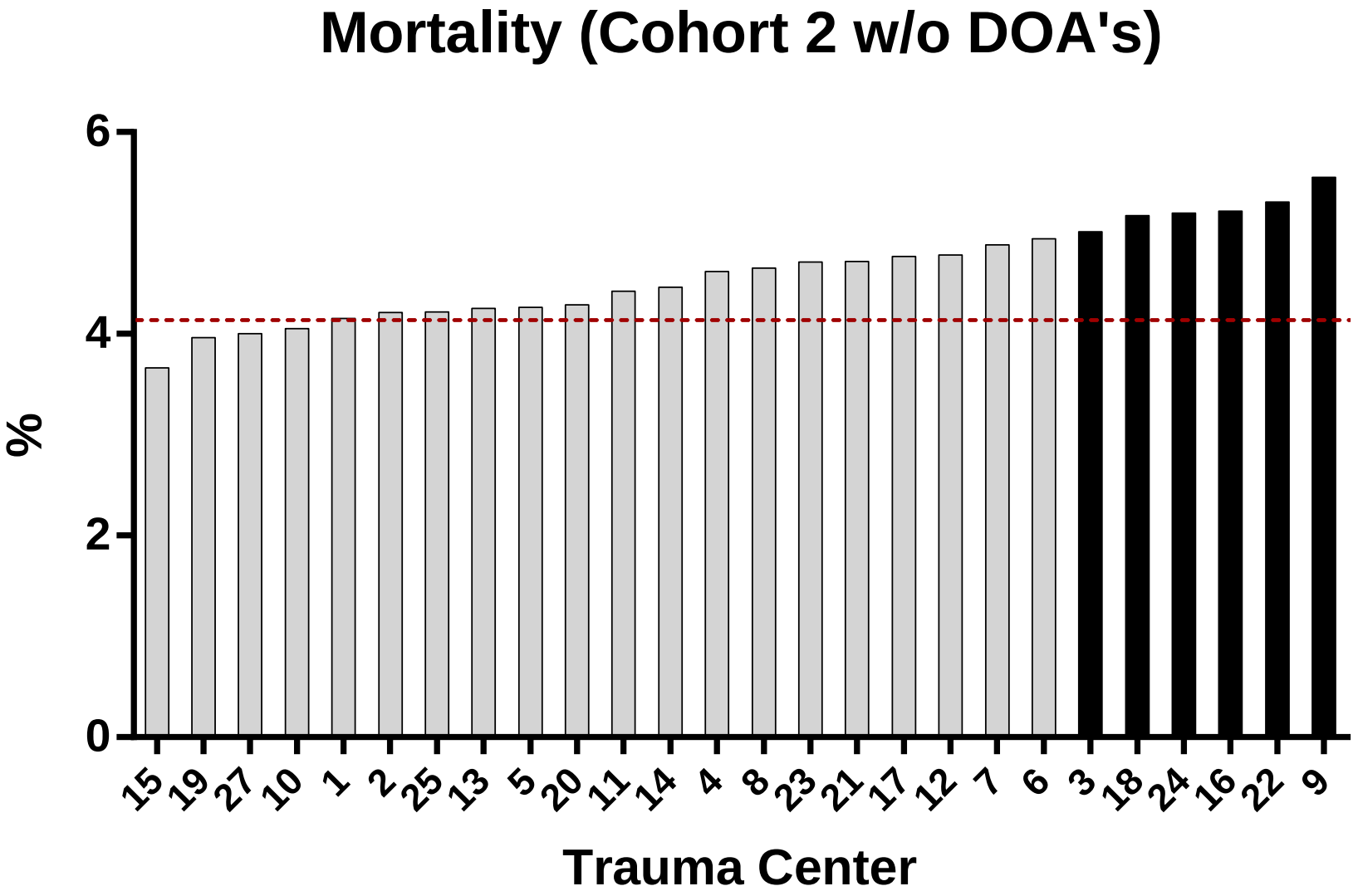
any_m	brain_op	vent	ippm	o2mon	jvb	time_to_br	time_to_ve	time_to_ip	time_to_o2	time_to_jv	minimum_	earliest_pl	timely
1	0	1	0	0	0		700				11.66667	vent	0
1	0	1	1	0	0		944	944			15.73333	multiple	0
1	0	1	0	0	0		1696				28.26667	vent	0
1	0	0	1	0	0			1640			27.33333	ippm	0
1	0	1	1	0	0			402			6.7	ippm	1
0	0	0	0	0	0								0
0	0	0	0	0	0								0
1	0	1	0	0	0		278				4.633333	vent	1
0	0	0	0	0	0								0
0	0	0	0	0	0								0
1	1	1	0	0	0	410	410				6.833333	multiple	1
1	0	1	0	0	0		1248				20.8	vent	0

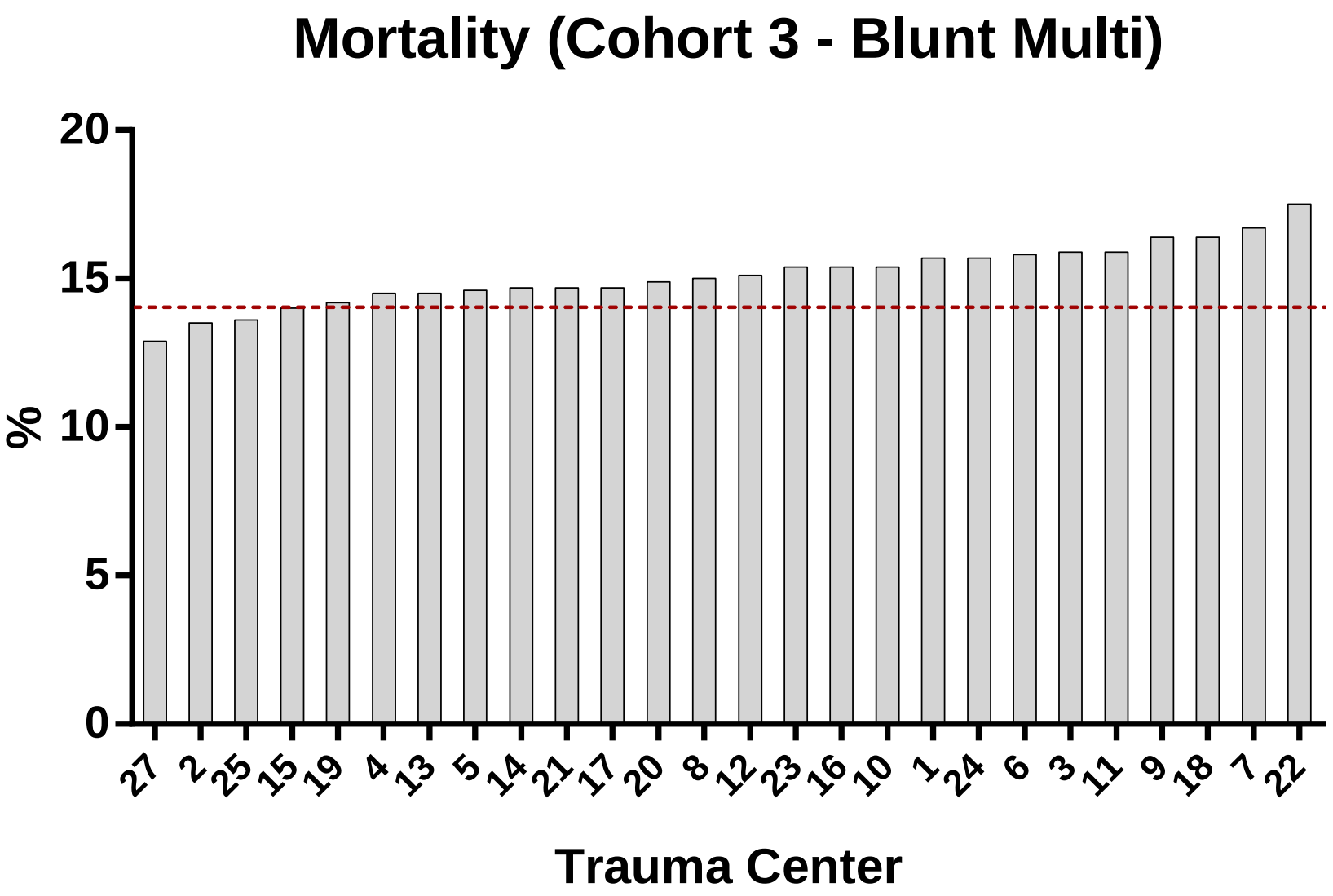
- Your list of patients
- 0 = No
- 1 = Yes
- Injury, Treatments, Time to, etc.
- Additional data?

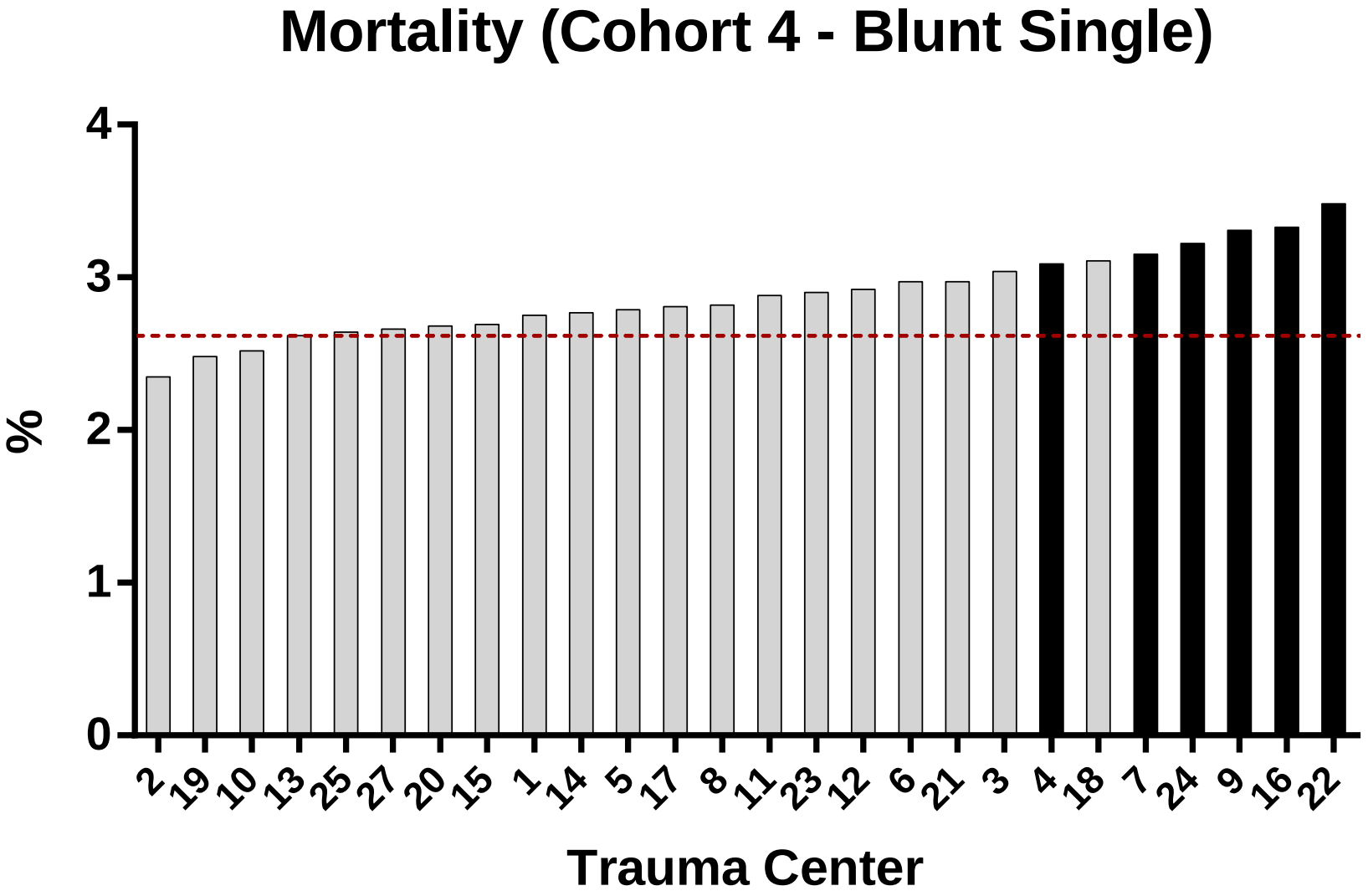
MTQIP Outcomes

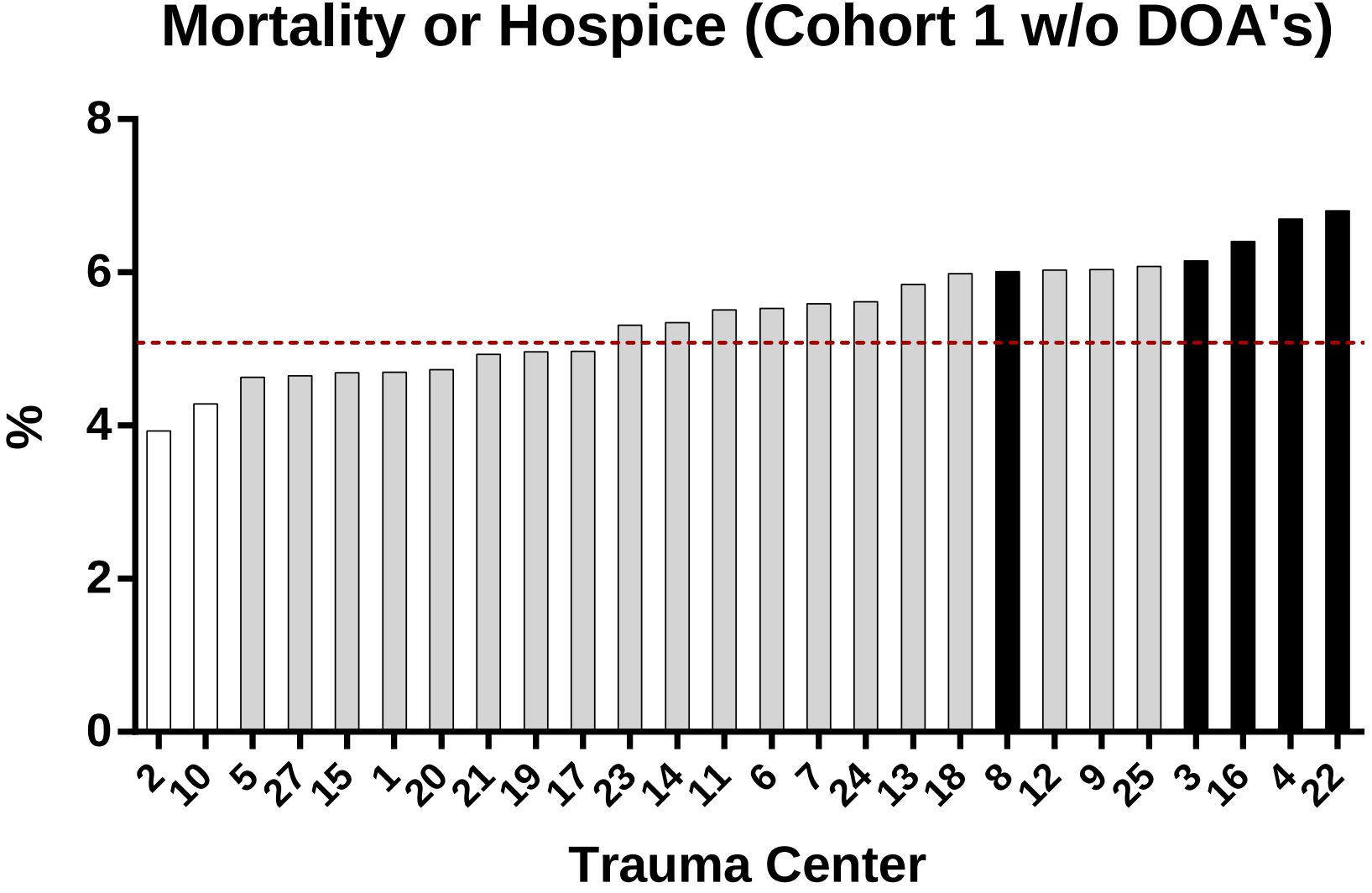
- Arbor Metrix Report
- 7/1/2012 to 6/30/2013
- Rates
  - Risk and Reliability adjusted
  - Red line is mean
- Legend
  - □ Low-outlier status (better performance)
  - ▒ Non-outlier status (average performance
  - ■ High-outlier status (worse performance)

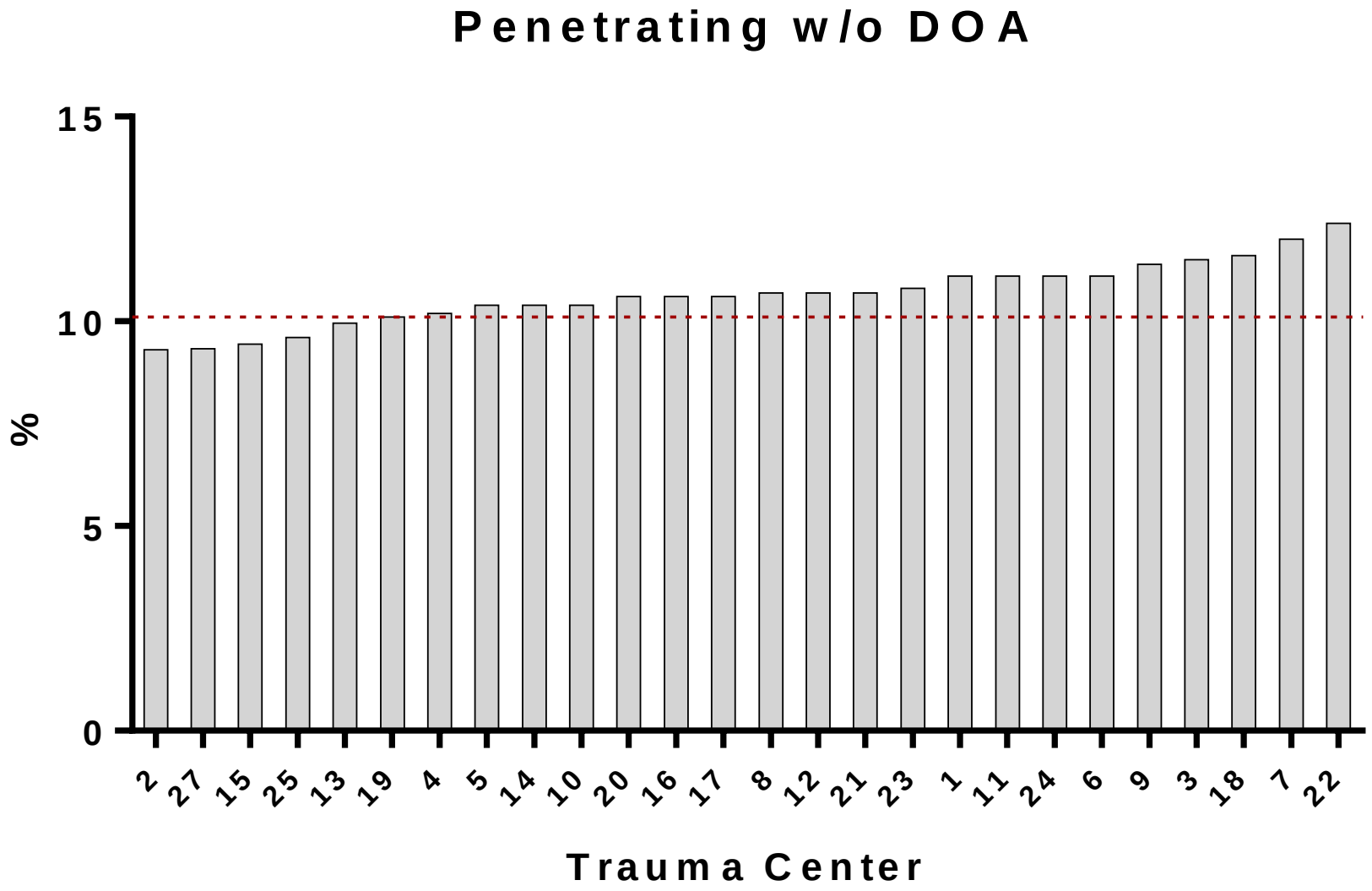

Mortality (Cohort 1 w/o DOA's)
6
4
2
0
%
2 19 15 27 10 25 13 5 20 1 17 14 21 8 11 12 4 23 7 3 6 24 18 16 9 22
Trauma Center

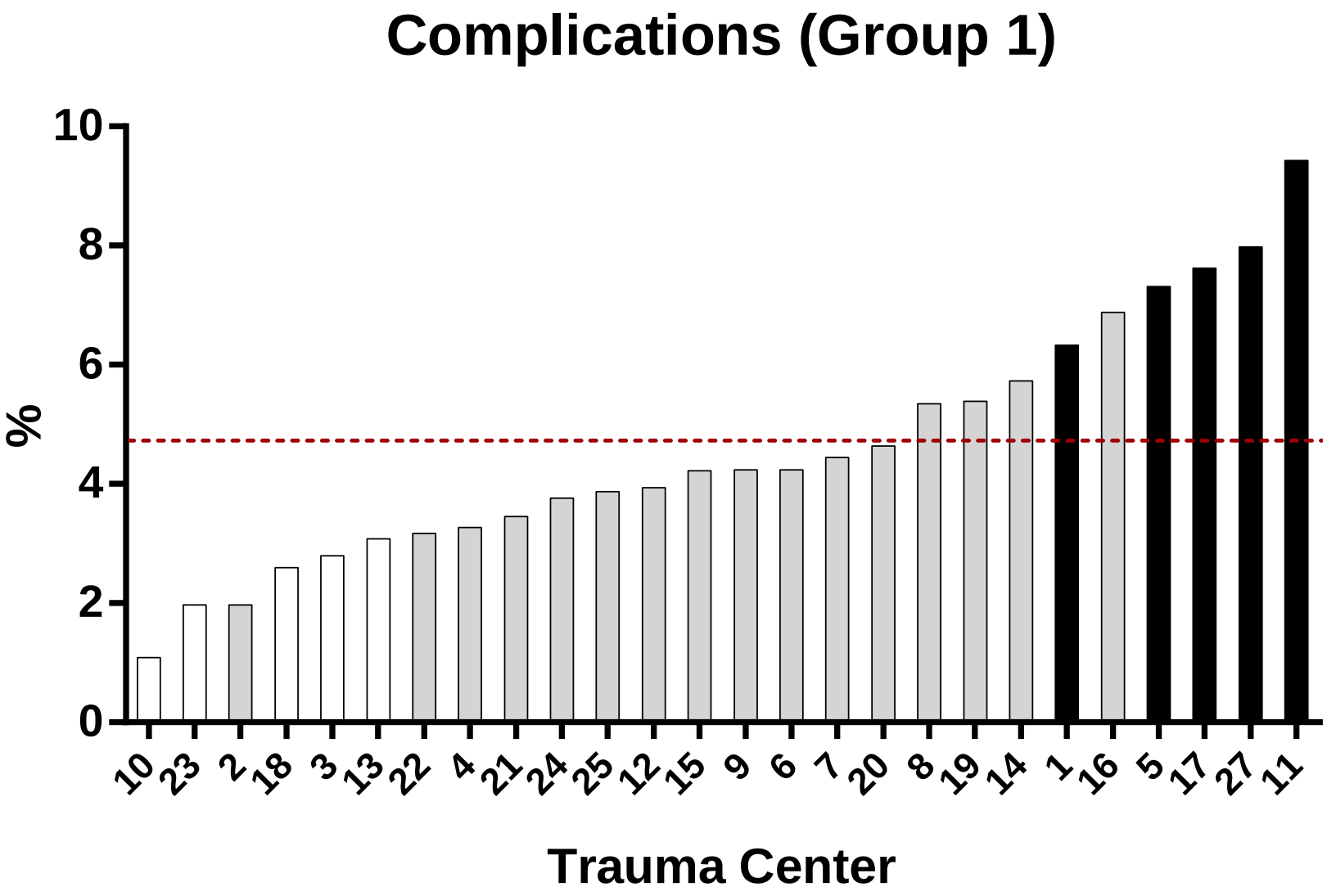

Mortality (Cohort 2 w/o DOA's)
6
4
2
0
%
15 19 27 10 1 2 25 13 5 20 11 14 4 8 23 21 17 12 7 6 3 18 24 16 22 9
Trauma Center

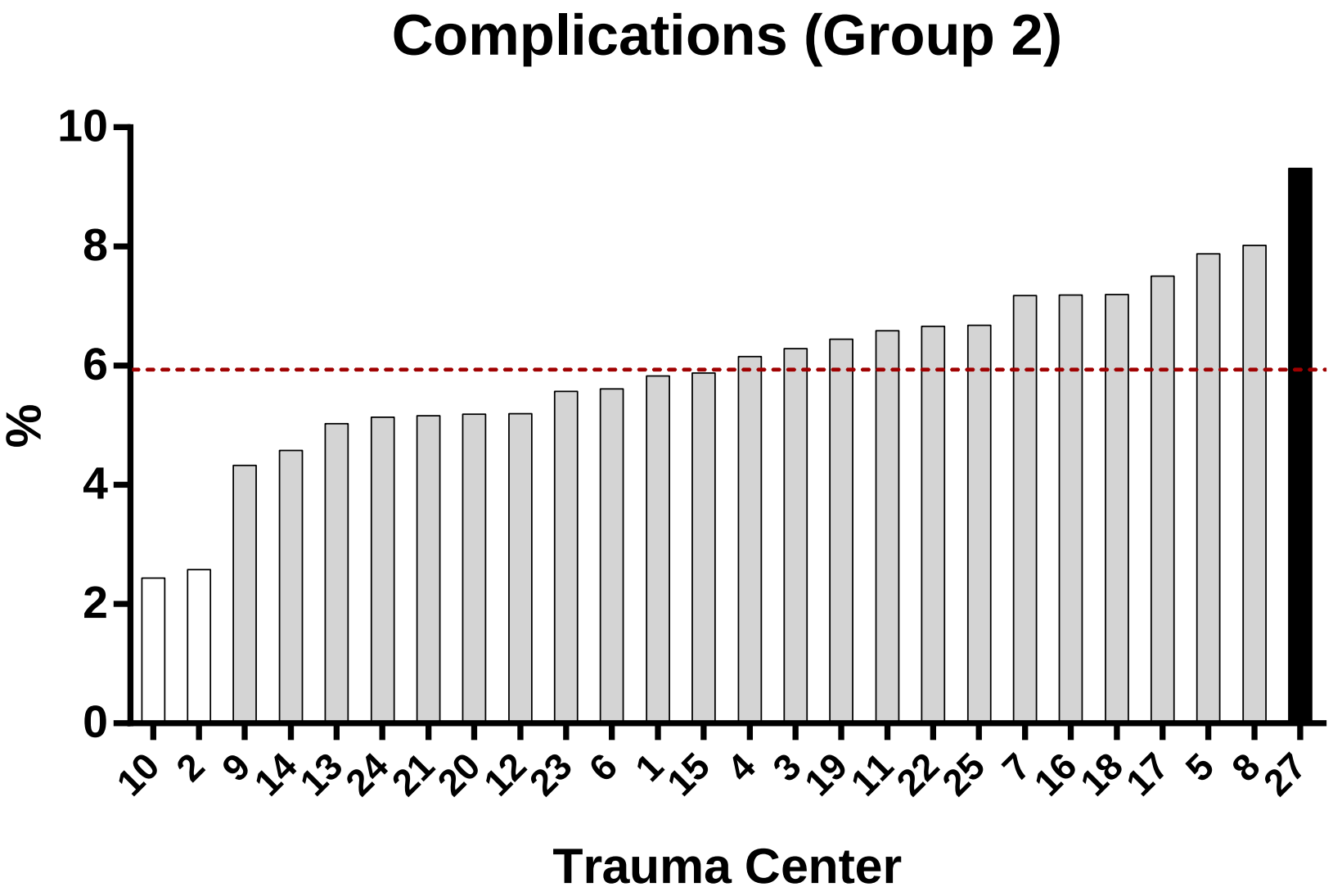

Mortality (Cohort 3 - Blunt Multi)
20
15
10
5
0
%
27 2 25 15 19 4 13 5 14 21 17 20 8 12 23 16 10 1 24 6 3 11 9 18 7 22
Trauma Center

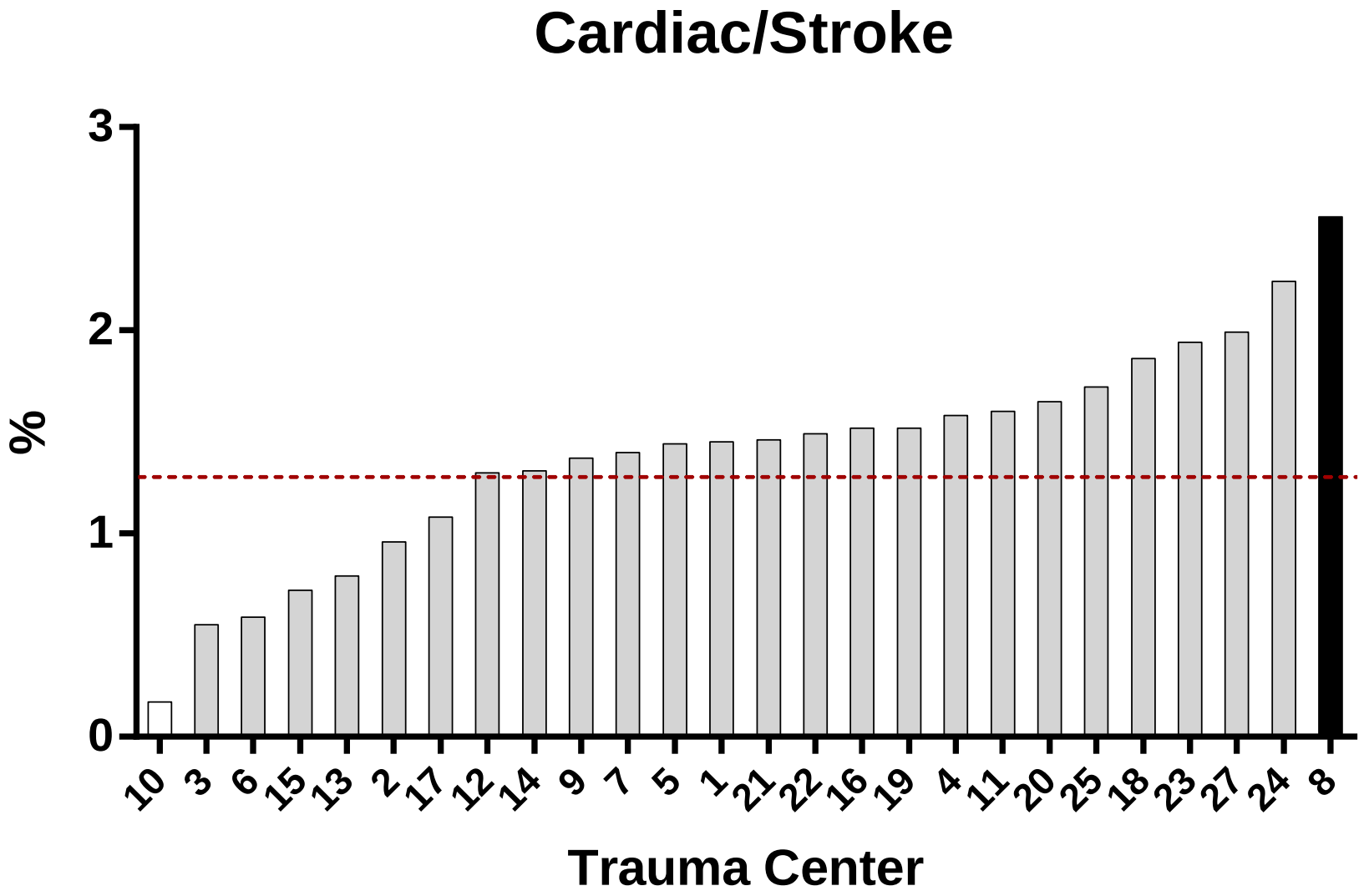

Mortality (Cohort 4 - Blunt Single)
%
4
3
2
1
0
2 19 10 13 25 27 20 15 1 14 5 17 8 11 23 12 6 21 3 4 18 7 24 9 16 22
Trauma Center

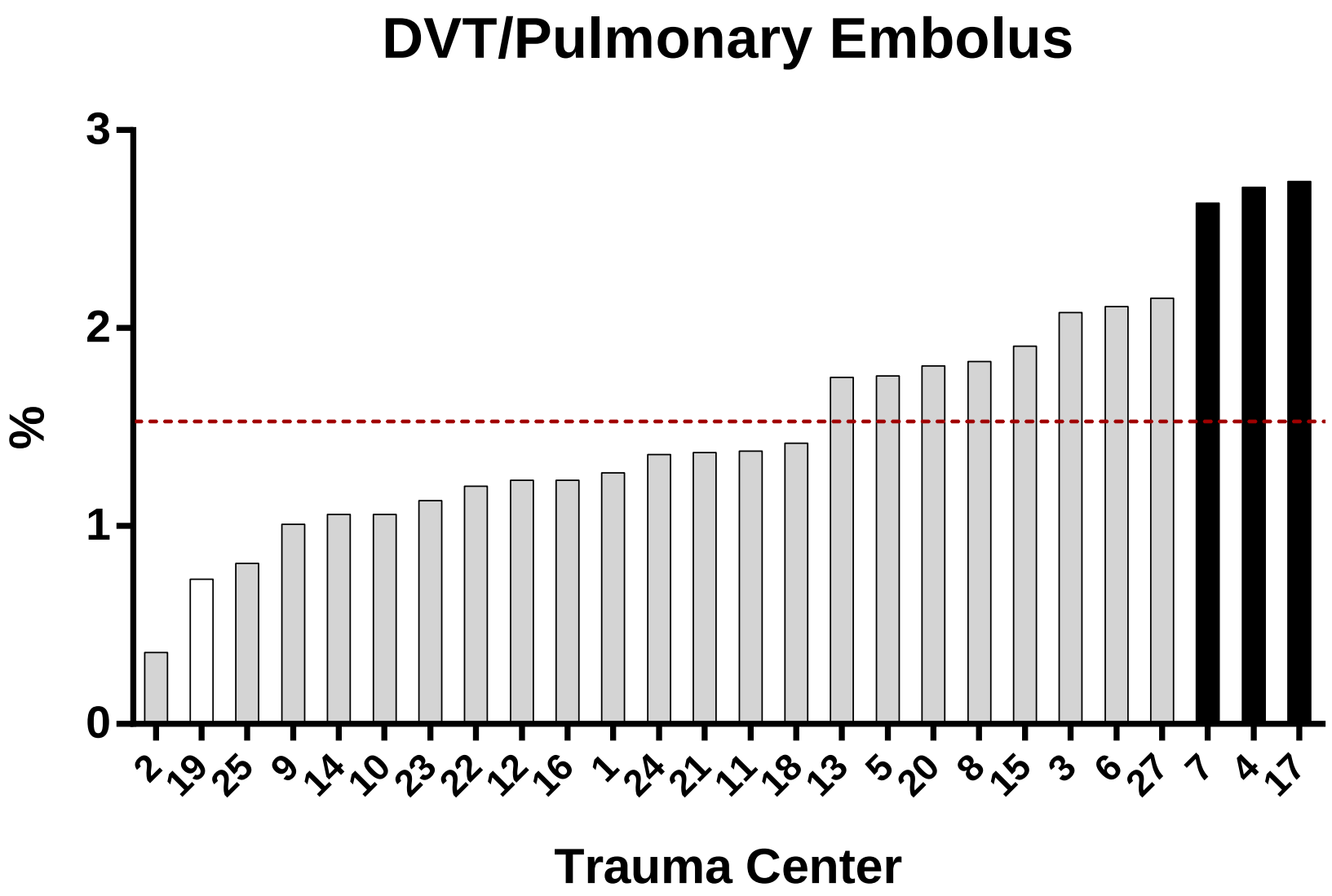

Mortality or Hospice (Cohort 1 w/o DOA's)
%
8
6
4
2
0
2 10 5 27 15 1 20 21 19 17 23 14 11 6 7 24 13 18 8 12 9 25 3 16 4 22
Trauma Center

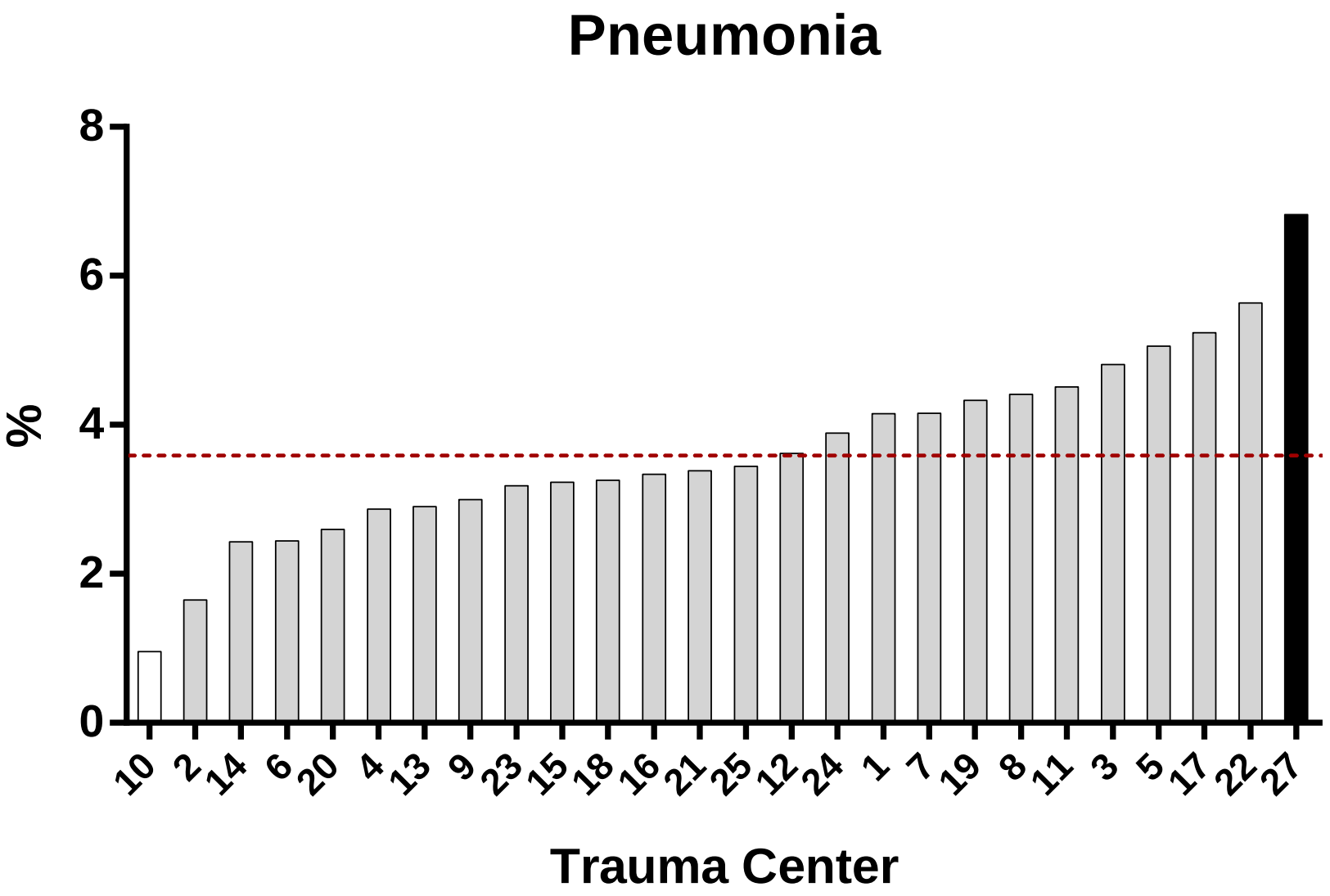

Penetrating w/o DOA
15
10
5
0
%
2
27
15
25
13
19
4
5
14
10
20
16
17
8
12
21
23
1
11
24
6
9
3
18
7
22
Trauma Center

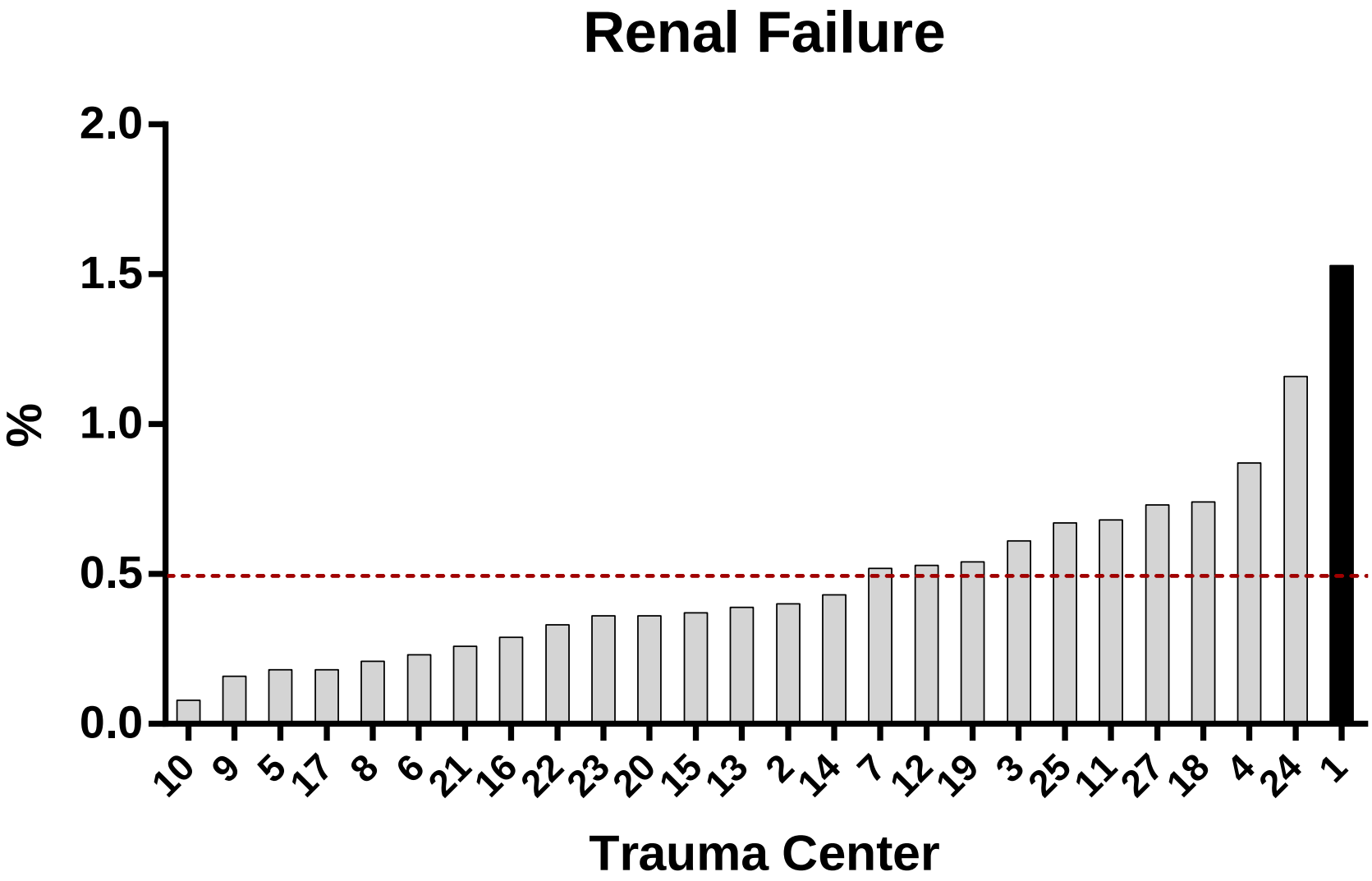

Complications (Group 1)
%
10
8
6
4
2
0
10 23 2 18 3 13 22 4 21 24 25 12 15 9 6 7 20 8 19 14 1 16 5 17 27 11
Trauma Center

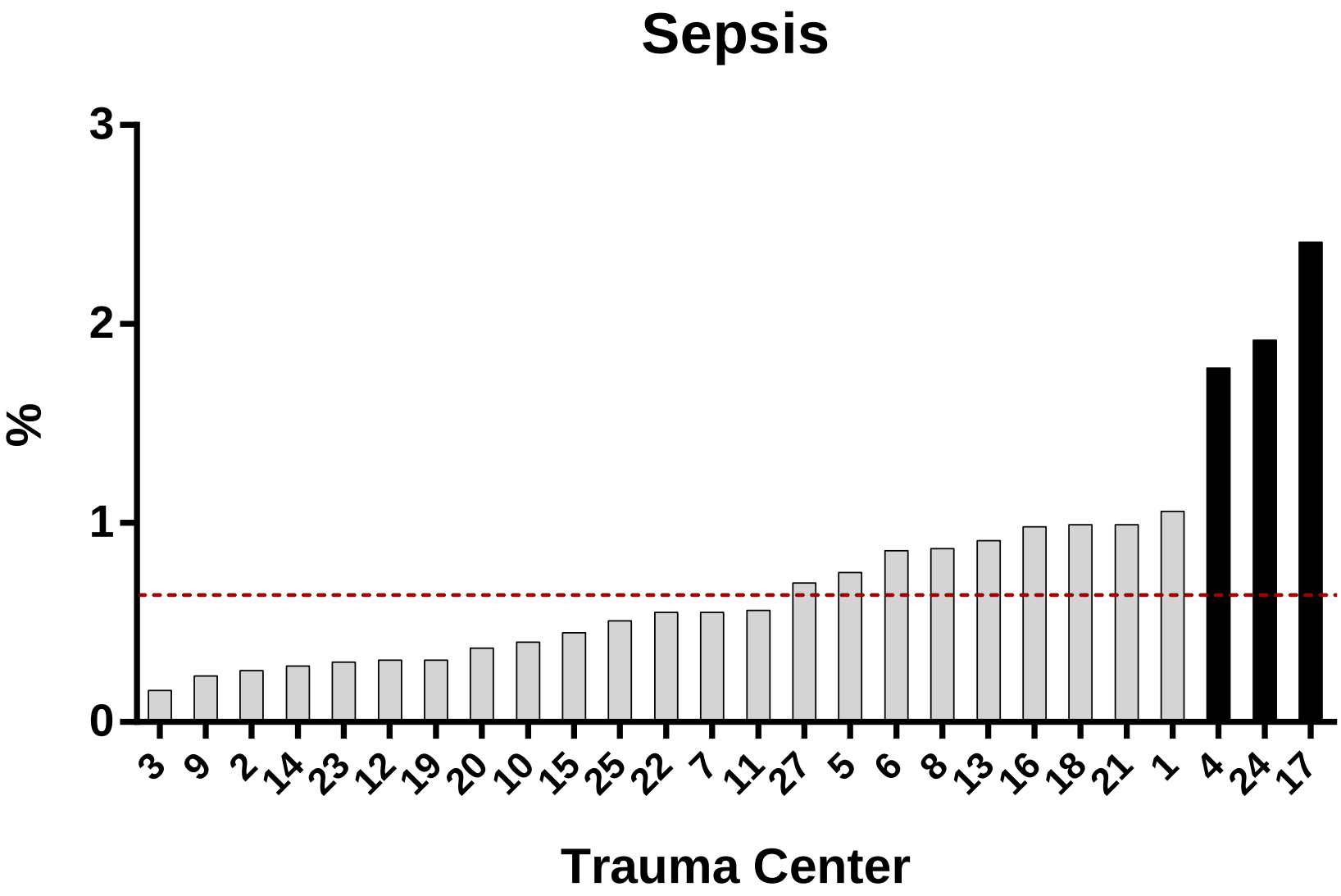

Complications (Group 2)
10
8
6
4
2
0
%
10 2 9 14 13 24 21 20 12 23 6 1 15 4 3 19 11 22 25 7 16 18 17 5 8 27
Trauma Center

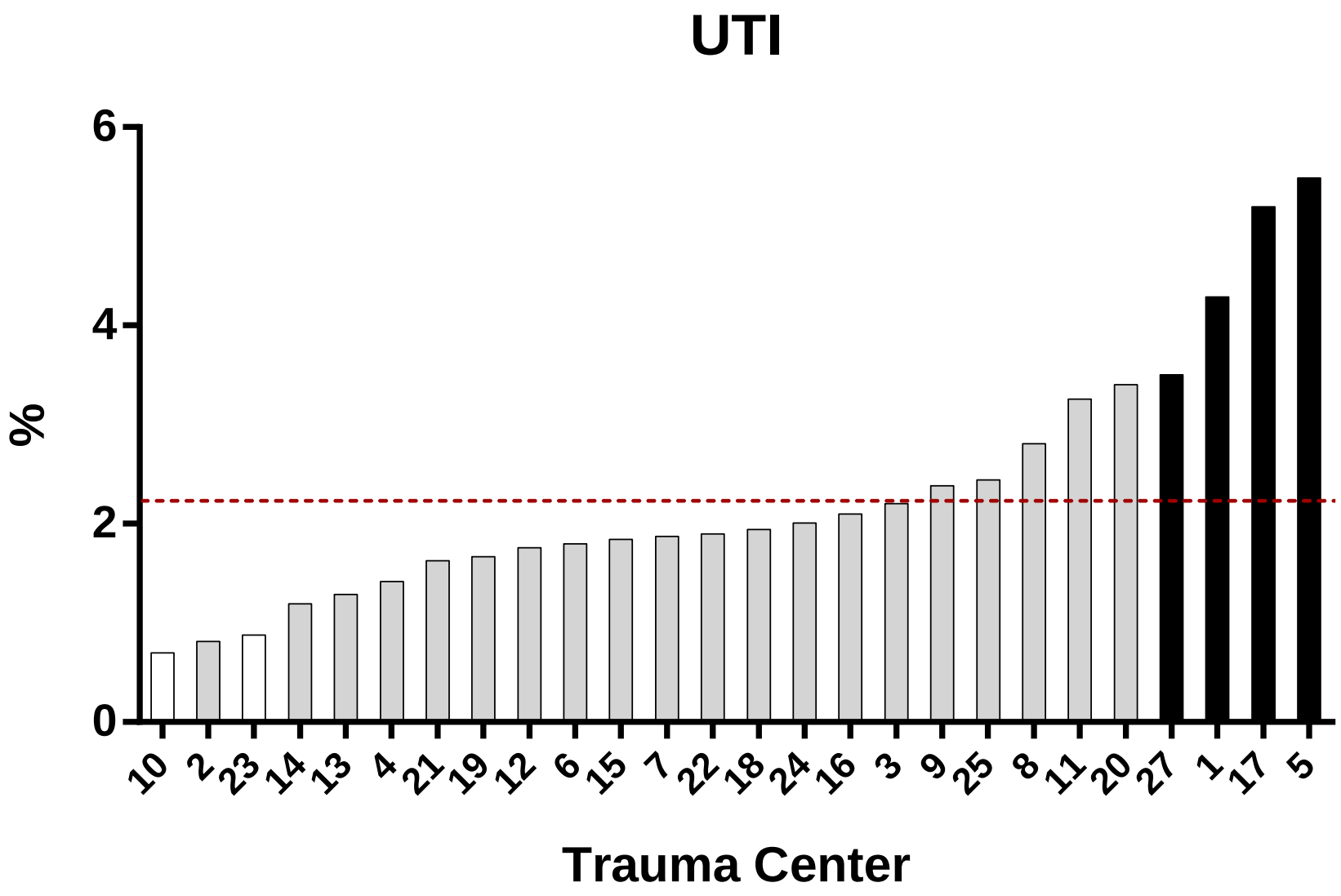

Cardiac/Stroke
3
2
1
0
%
10 3 6 15 13 2 17 12 14 9 7 5 1 21 22 16 19 4 11 20 25 18 23 27 24 8
Trauma Center

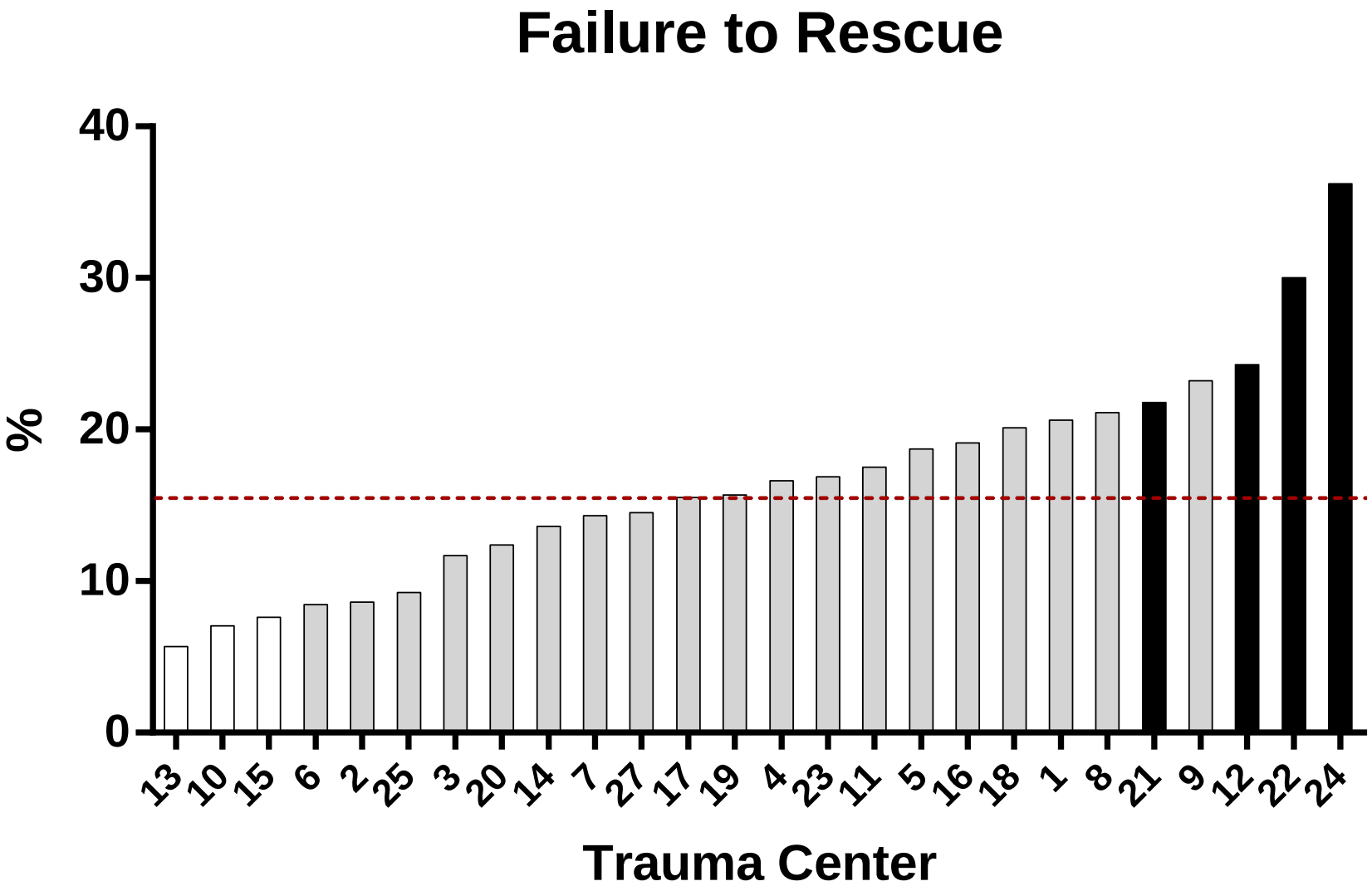

DVT/Pulmonary Embolus
%
3
2
1
0
2 19 25 9 14 10 23 22 12 16 1 24 21 11 18 13 5 20 8 15 3 6 27 7 4 17
Trauma Center

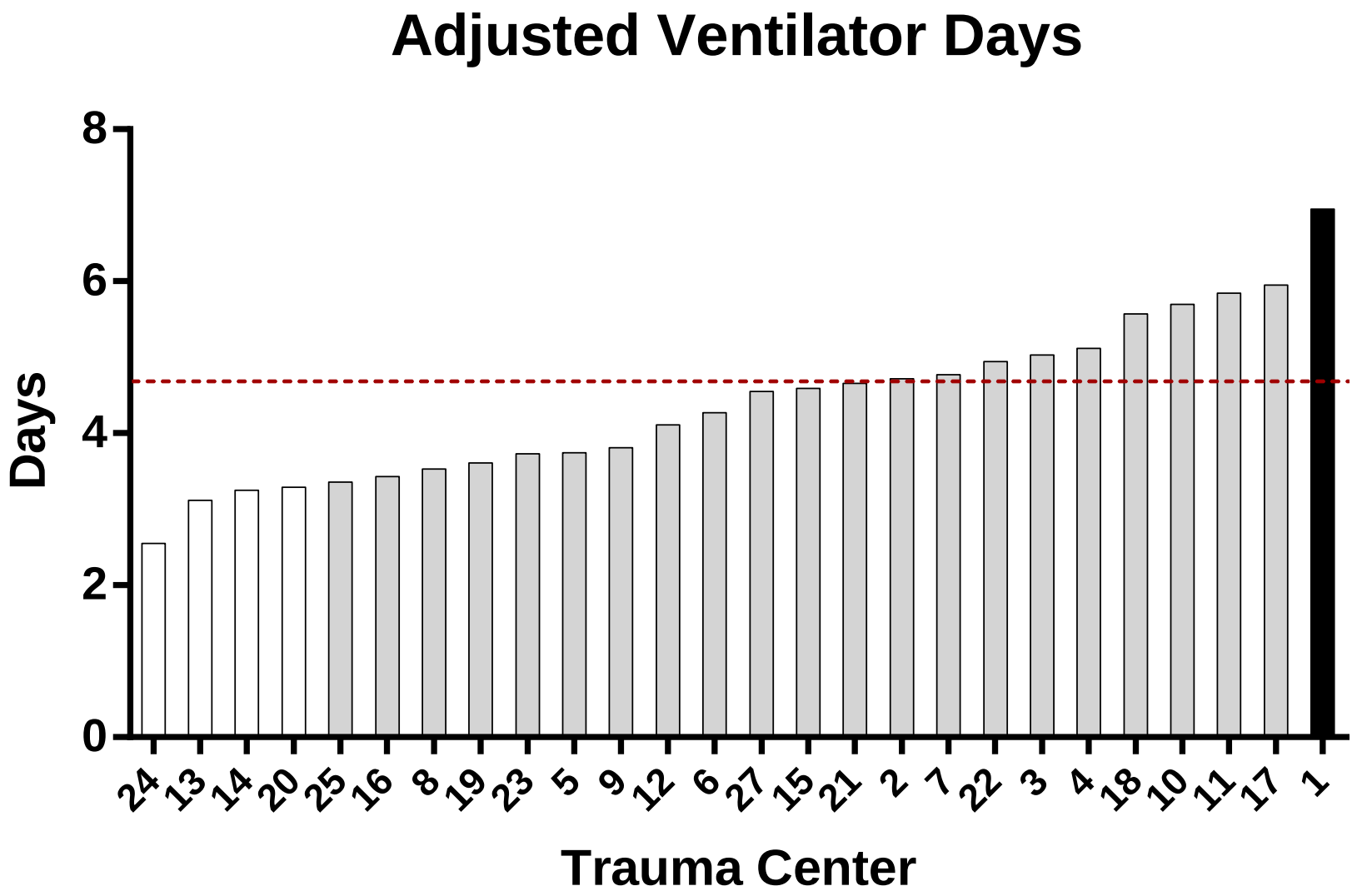

Pneumonia
8
6
4
2
0
%
10 2 14 6 20 4 13 9 23 15 18 16 21 25 12 24 1 7 19 8 11 3 5 17 22 27
Trauma Center

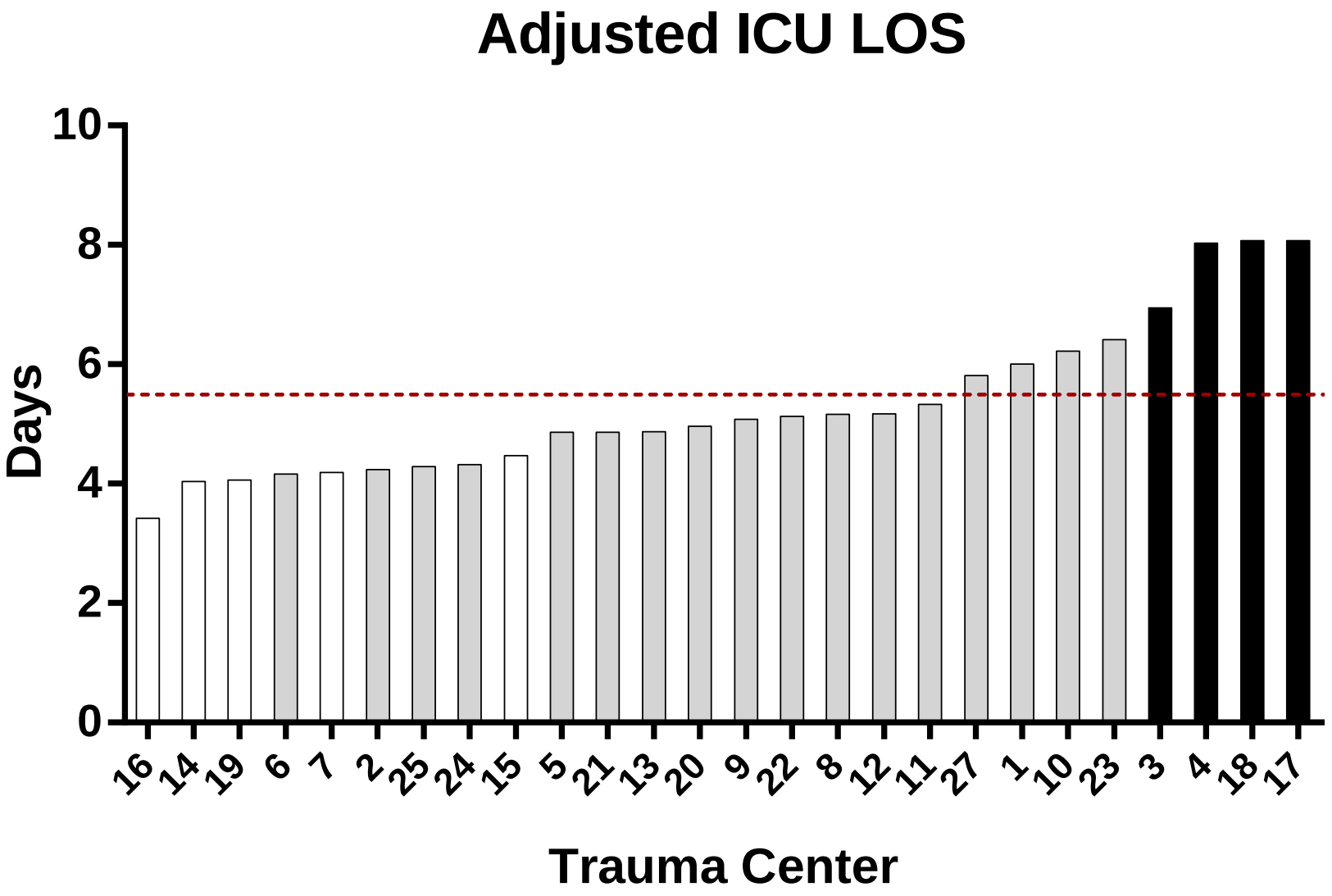

Renal Failure
2.0
1.5
1.0
0.5
0.0
%
10 9 5 17 8 6 21 16 22 23 20 15 13 2 14 7 12 19 3 25 11 27 18 4 24 1
Trauma Center

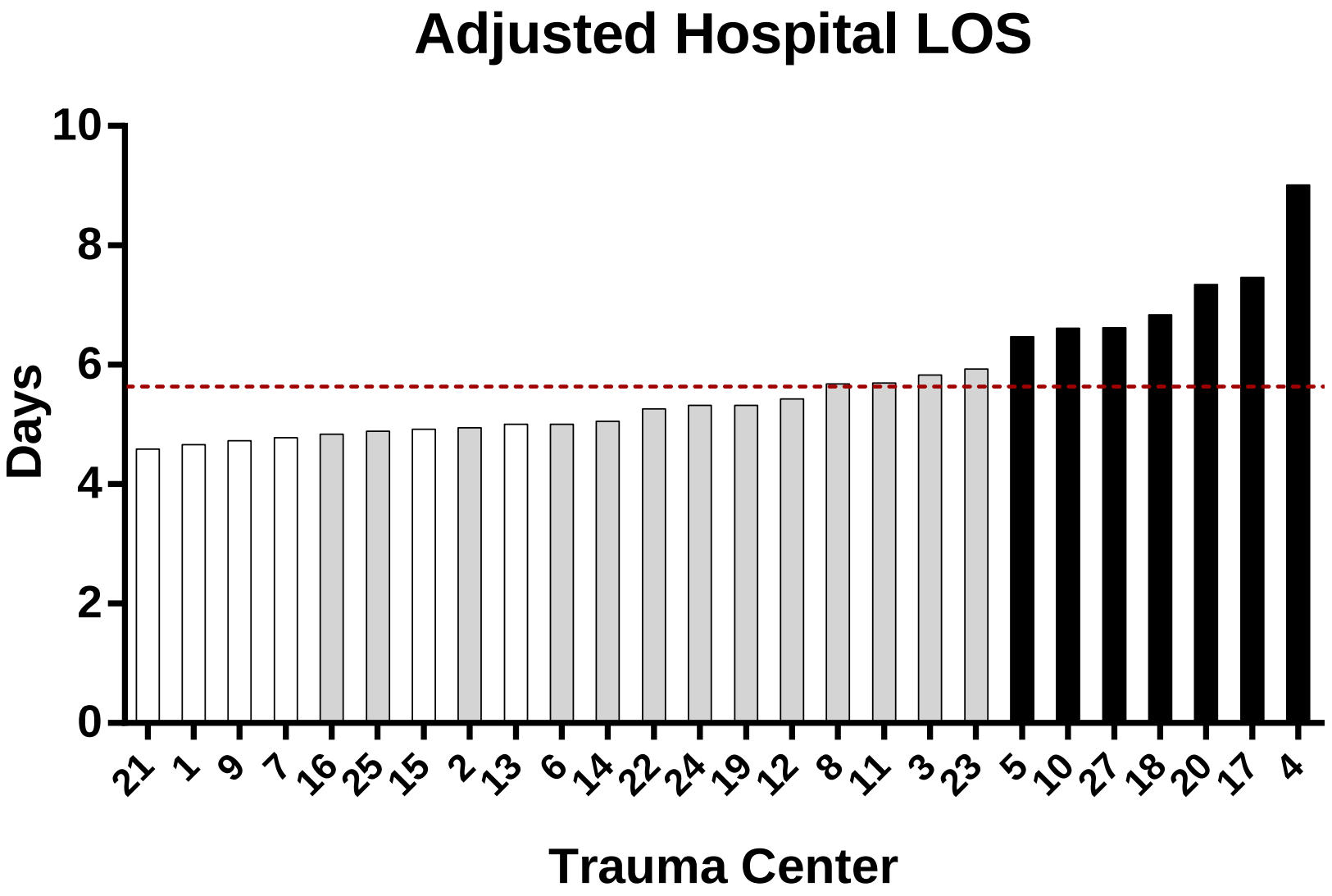

Sepsis
%
3
2
1
0
3 9 2 14 23 12 19 20 10 15 25 22 7 11 27 5 6 8 13 16 18 21 1 4 24 17
Trauma Center

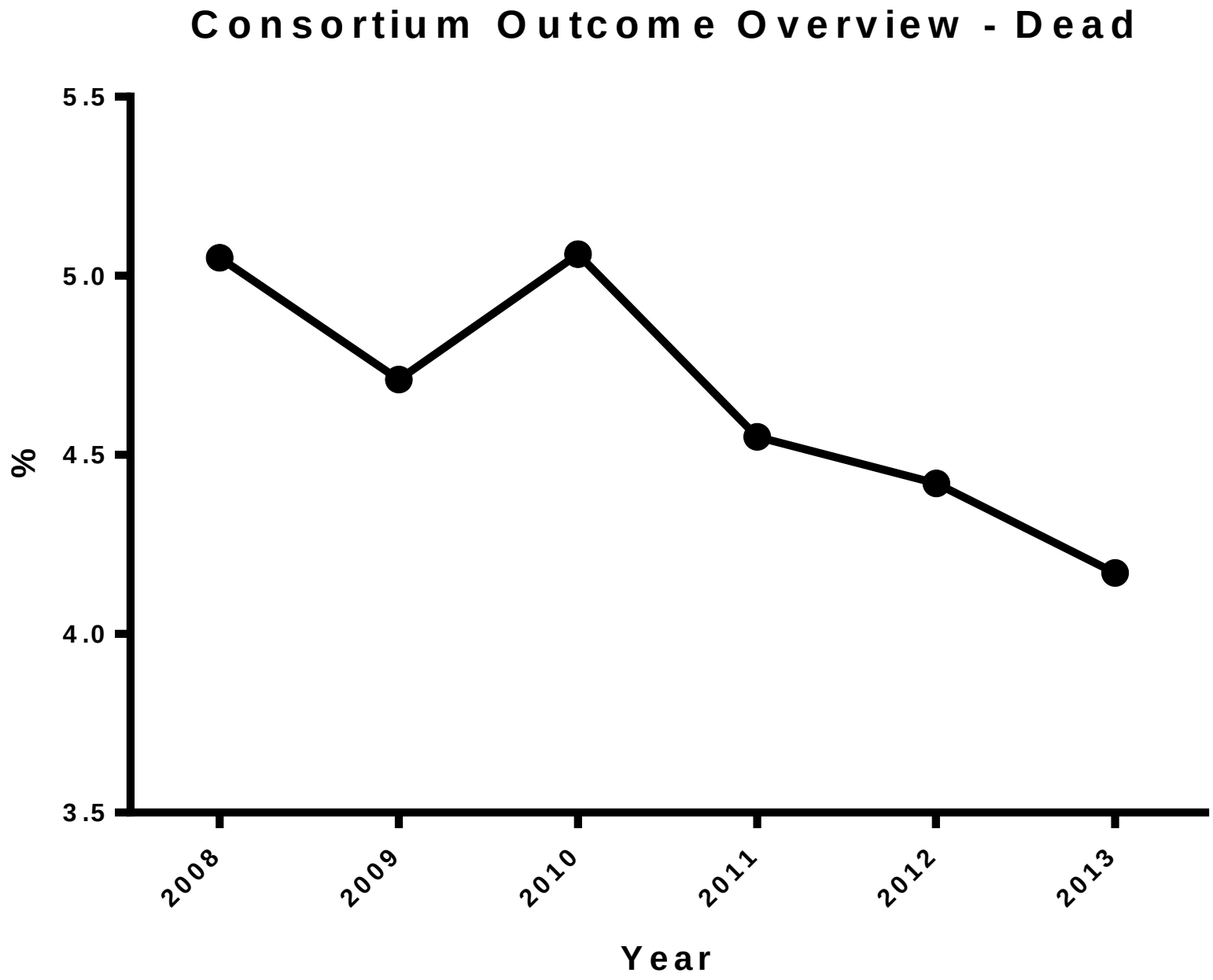

UTI
6
4
2
0
%
10 2 23 14 13 4 21 19 12 6 15 7 22 18 24 16 3 9 25 8 11 20 27 1 17 5
Trauma Center


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

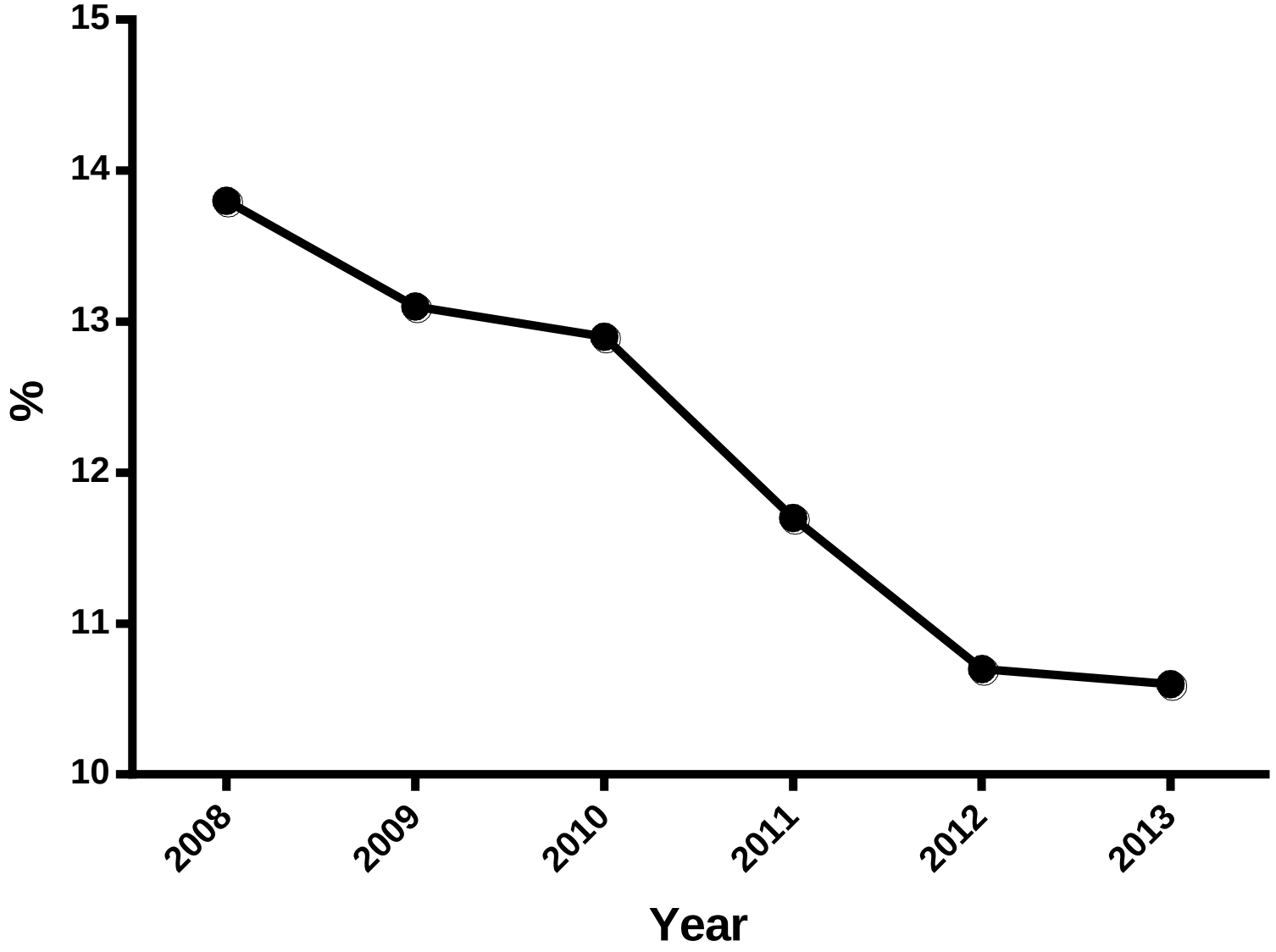

Adjusted Ventilator Days
Days
8
6
4
2
0
24 13 14 20 25 16 8 19 23 5 9 12 6 27 15 21 2 7 22 3 4 18 10 11 17 1
Trauma Center

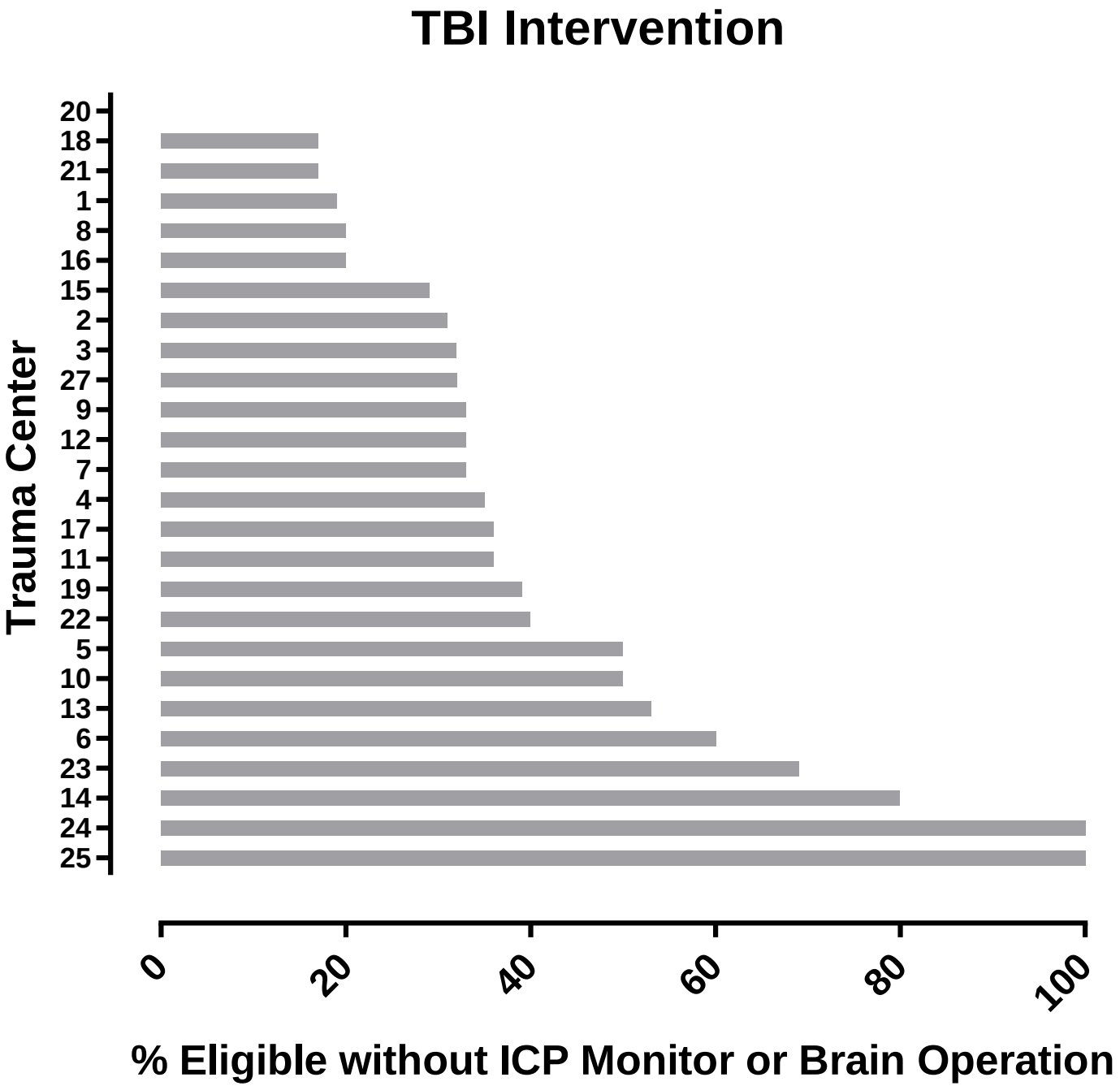

Adjusted ICU LOS
Days
10
8
6
4
2
0
16 14 19 6 7 2 25 24 15 5 21 13 20 9 22 8 12 11 27 1 10 23 3 4 18 17
Trauma Center

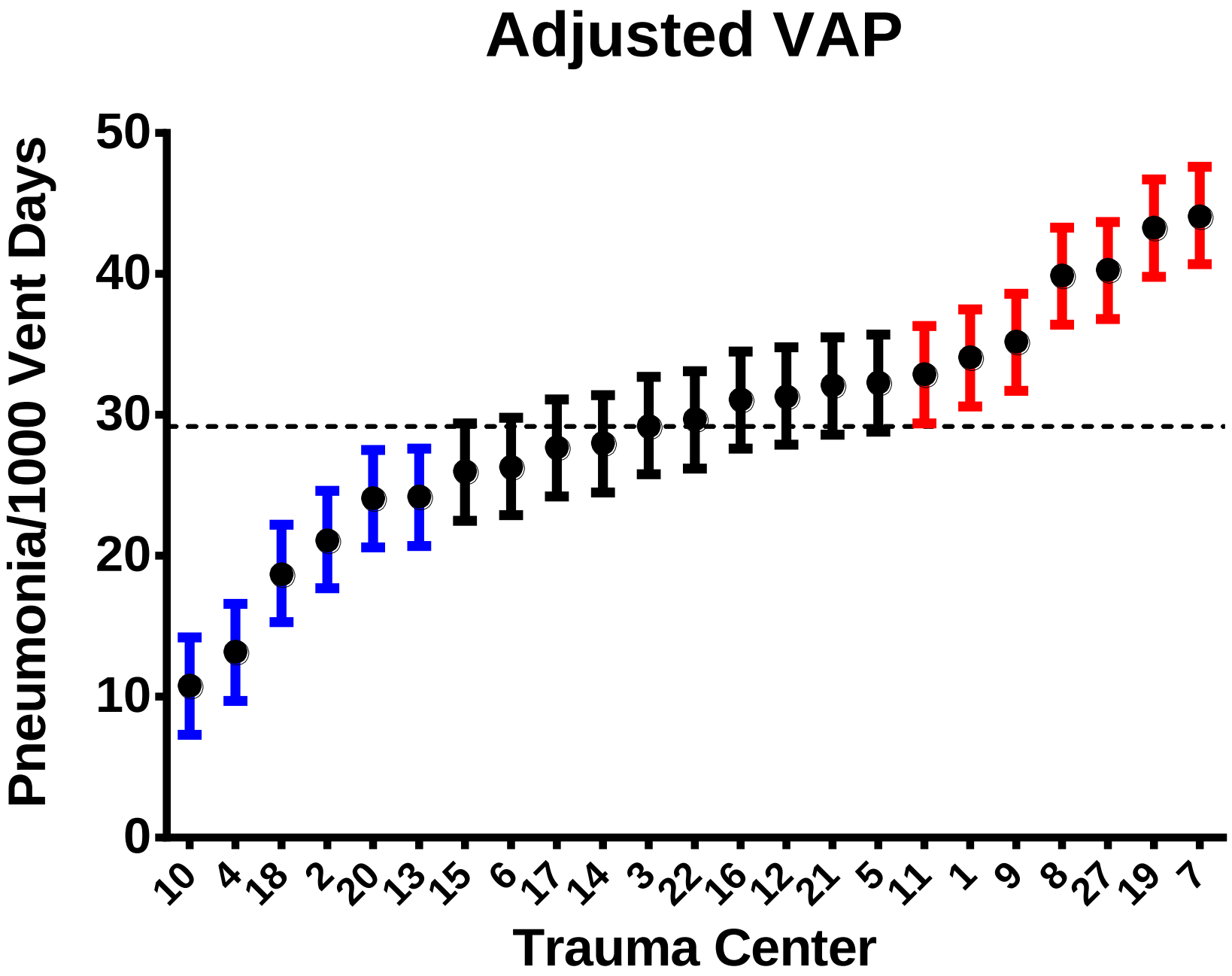

Adjusted Hospital LOS
Days
10
8
6
4
2
0
21 1 9 7 16 25 15 2 13 6 14 22 24 19 12 8 11 3 23 5 10 27 18 20 17 4
Trauma Center


Consortium Outcome Overview - Dead
5.5
5.0
4.5
4.0
3.5
%
2008
2009
2010
2011
2012
2013
Year

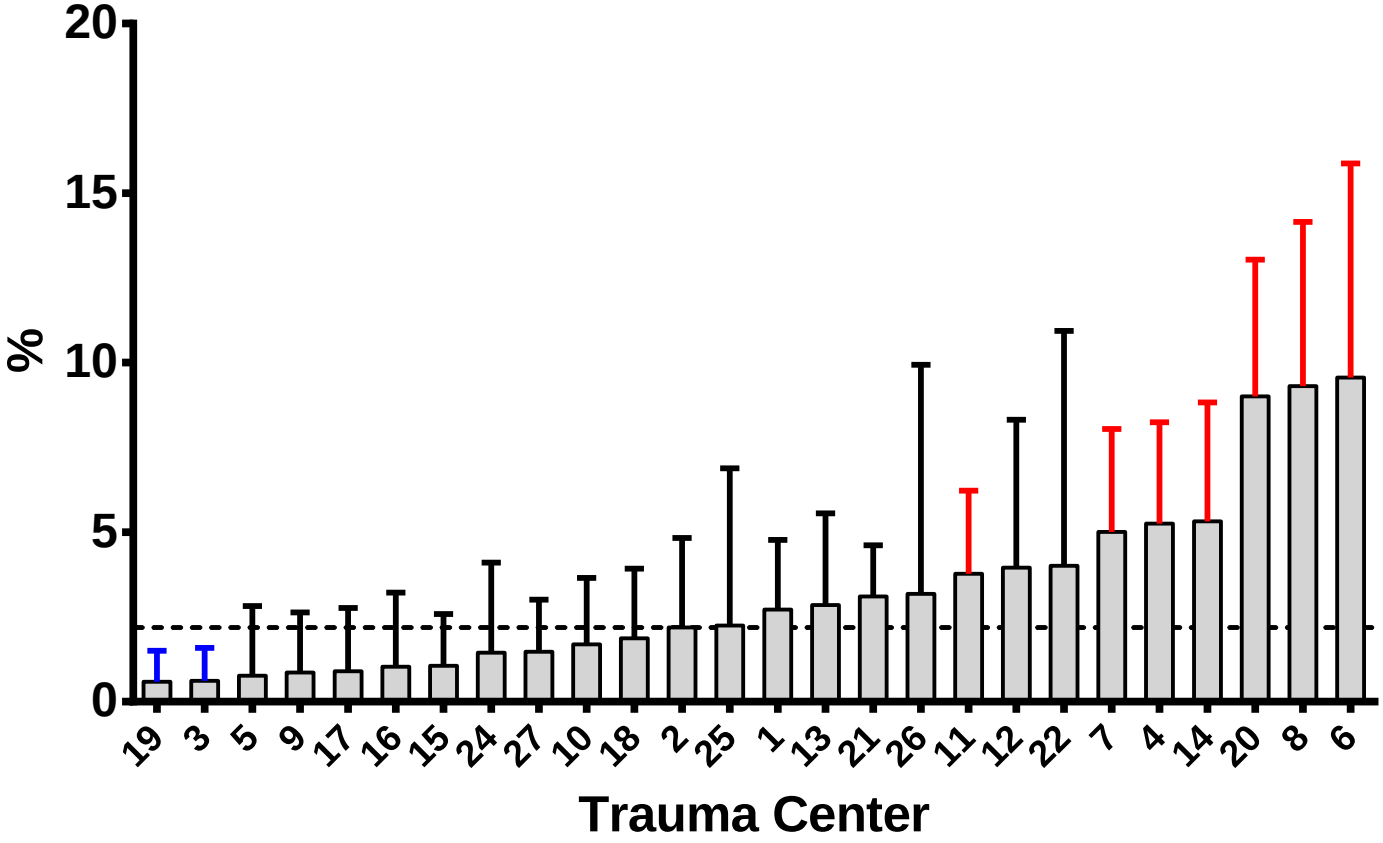
Consortium Outcomes Overview - Serious Complications




TBI Intervention
Trauma Center
20
18
21
1
8
16
15
2
3
27
9
12
7
4
17
11
19
22
5
10
13
6
23
14
24
25
0
20
40
60
80
100
% Eligible without ICP Monitor or Brain Operation


Adjusted VAP
Pneumonia/1000 Vent Days
50
40
30
20
10
0
10 4 18 2 20 13 15 6 17 14 3 22 16 12 21 5 11 1 9 8 27 19 7
Trauma Center

Risk and Reliability Adjusted IVC Filter Use



Mean IVC Filter Rate 2.6 → 2.2 %

ACS TQIP BENCHMARK REPORT:

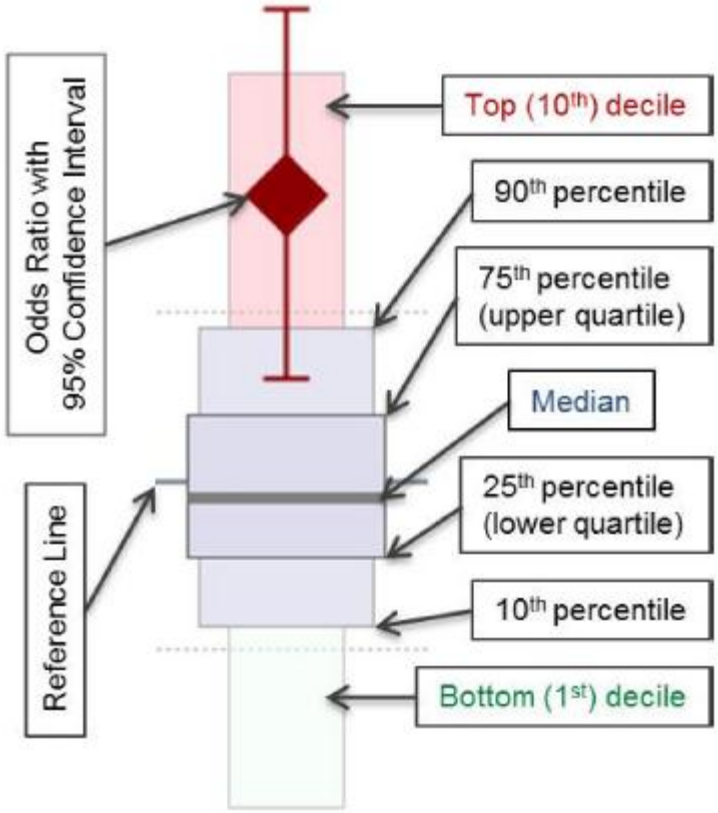
March 2014 - Michigan

ACS tqip TRAUMA QUALITY IMPROVEMENT PROGRAM

AMERICAN COLLEGE OF SURGEONS

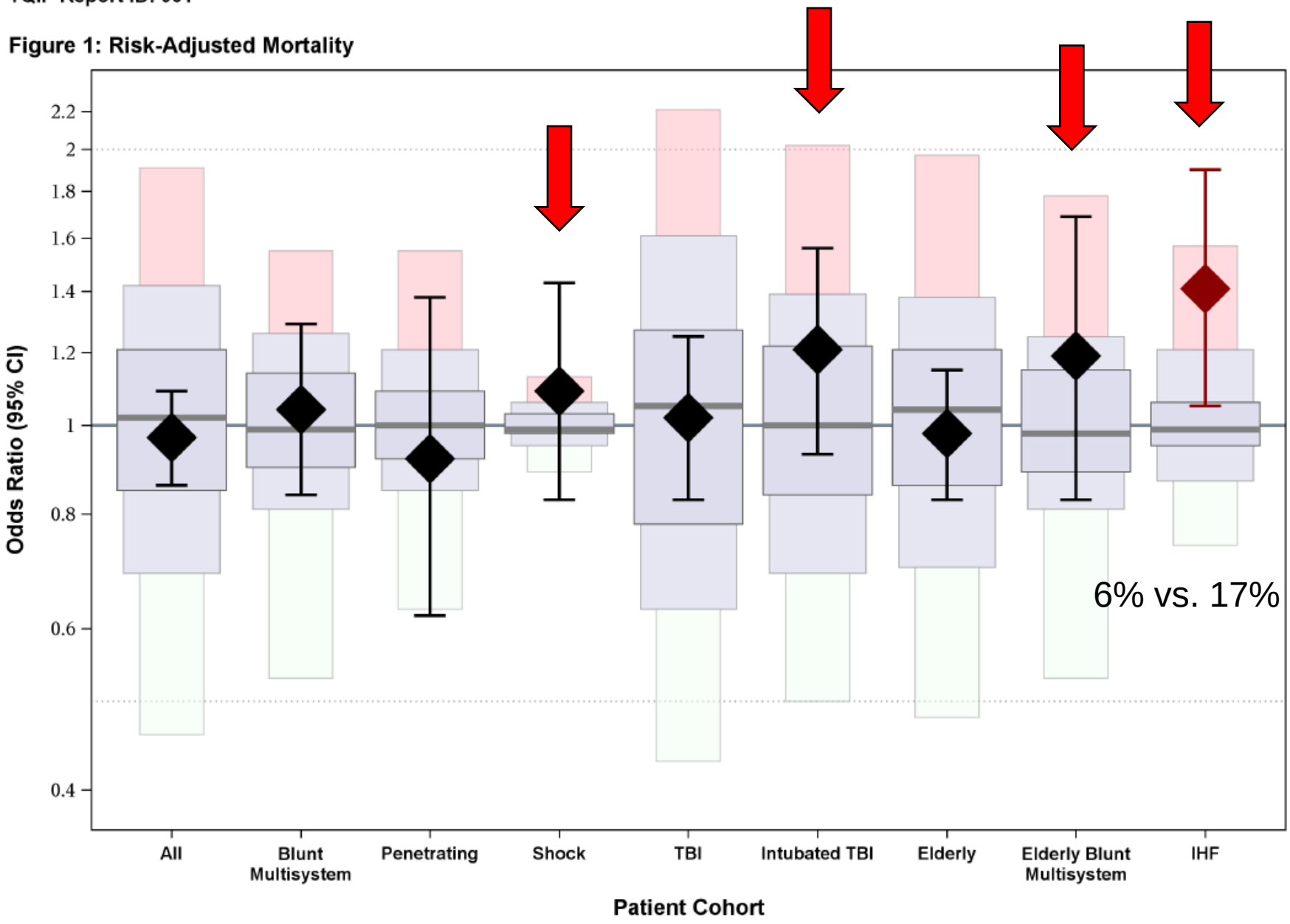
Inspiring Quality:
Highest Standards, Better Outcomes

COMMITTEE ON TRAUMA


Odds Ratio with 95% Confidence Interval
Reference Line
Top (10th) decile
90th percentile
75th percentile (upper quartile)
Median
25th percentile (lower quartile)
10th percentile
Bottom (1st) decile

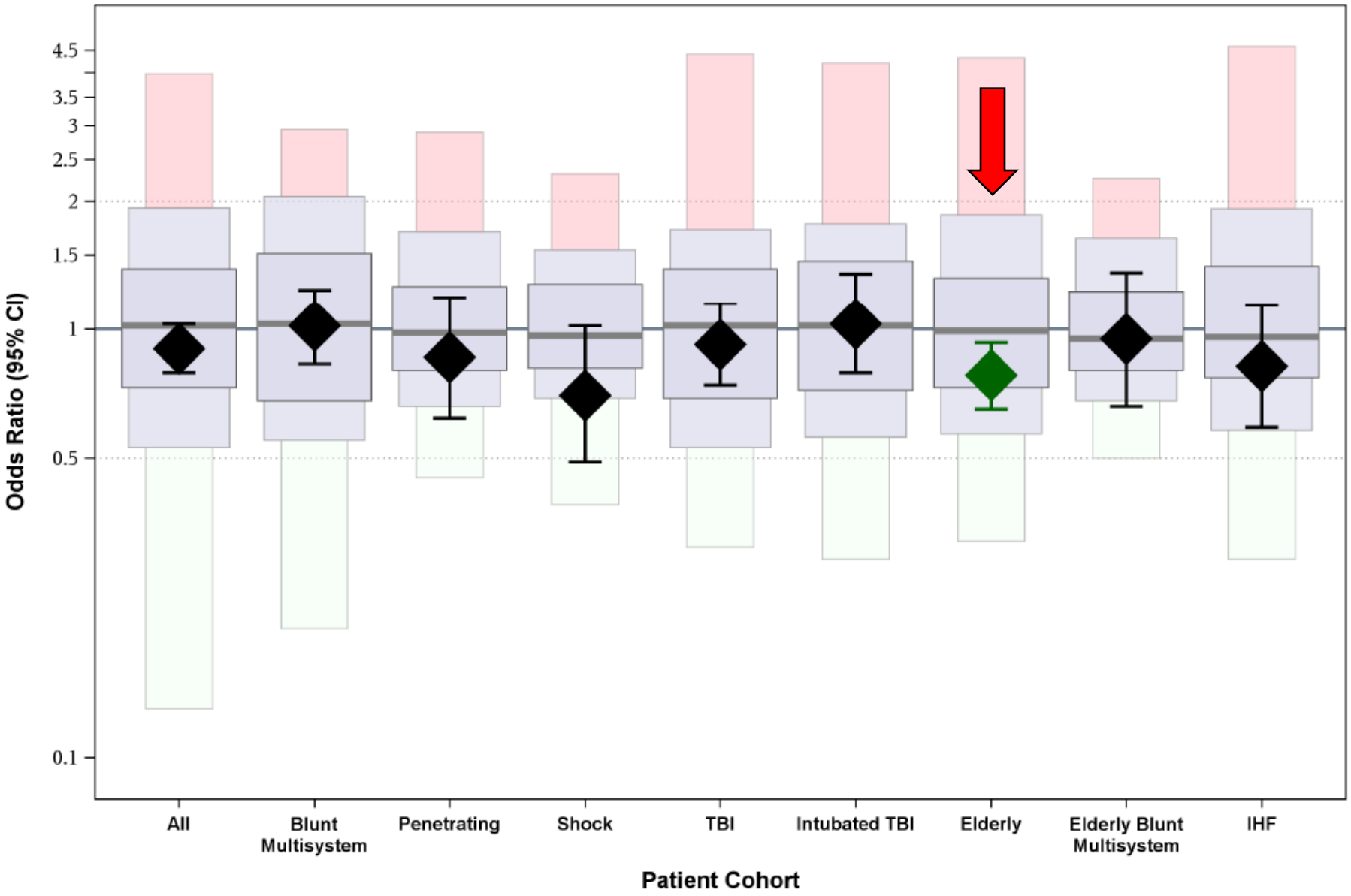
March 2014
TQIP Benchmark Report
TQIP Report ID: 901

Figure 1: Risk-Adjusted Mortality



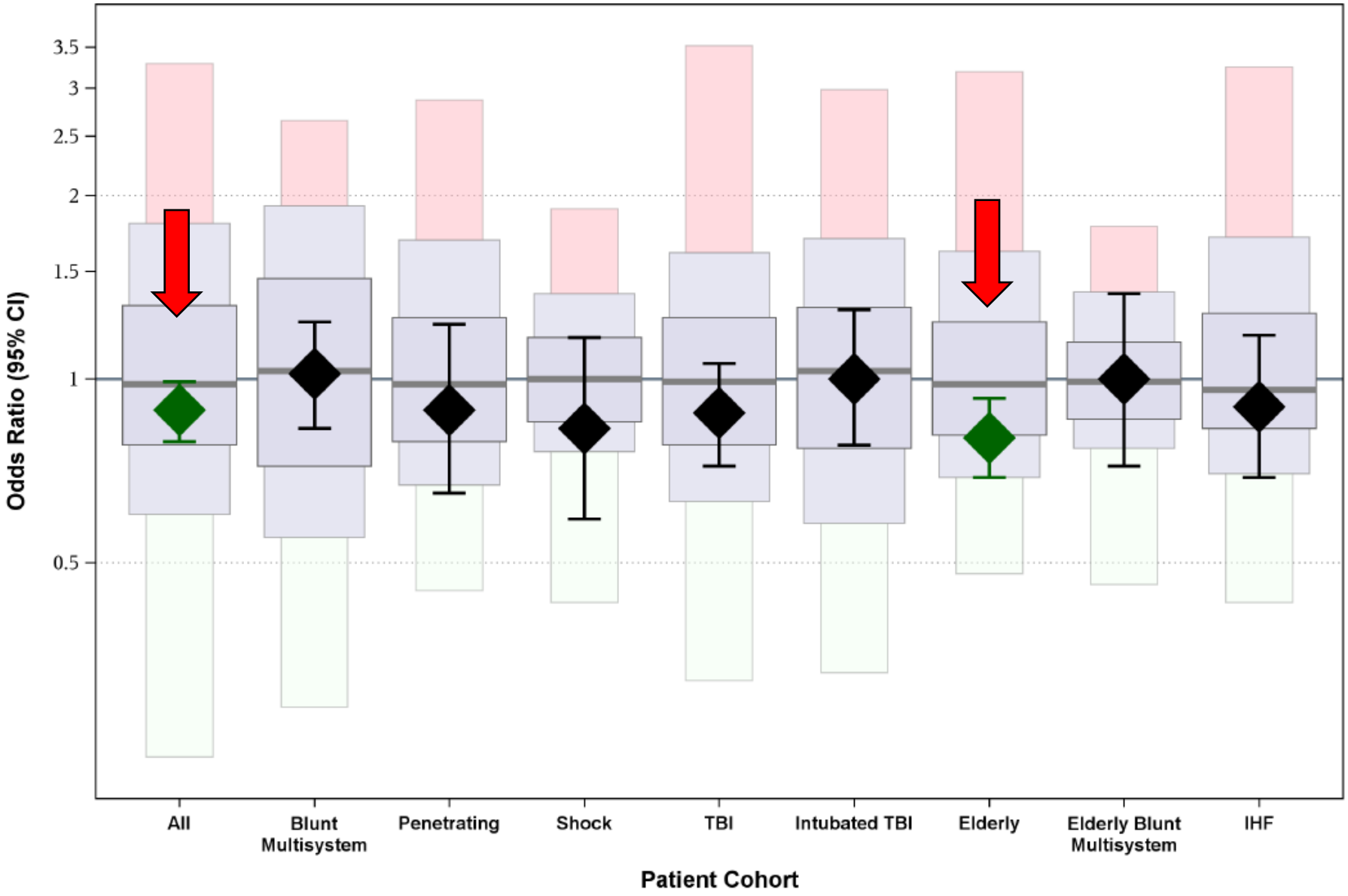
March 2014
TQIP Benchmark Report
TQIP Report ID: 901

Figure 2: Risk-Adjusted Major Complications



March 2014
TQIP Benchmark Report
TQIP Report ID: 901

Figure 3: Risk-Adjusted Major Complications Including Deaths



VTE

- DVT
  - TQIP = 1.8%
  - MTQIP = 1.3%
- PE
  - TQIP = 0.7%
  - MTQIP = 0.3%

VTE Prophylaxis

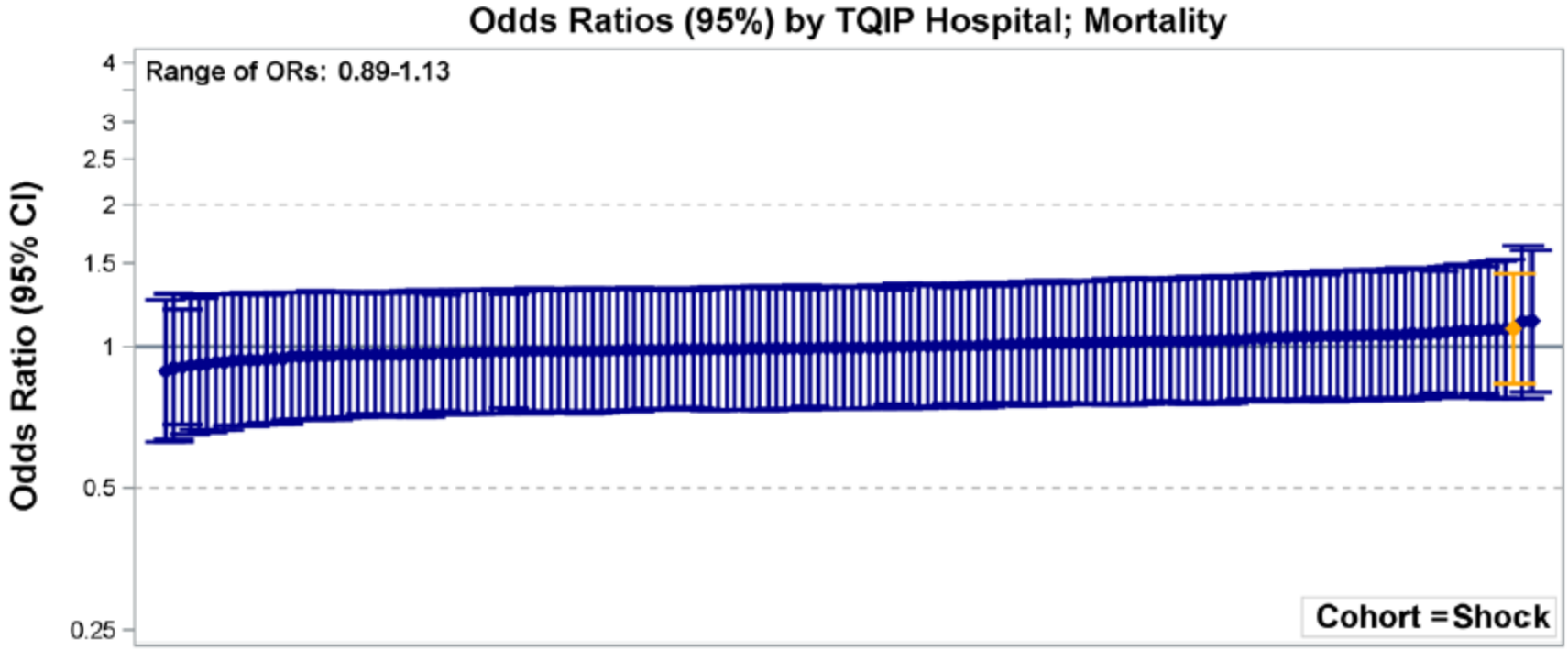
- All
  - TQIP = 56%
  - MTQIP = 52%
- Intubated TBI
  - TQIP = 46%
  - MTQIP = 36%
- Elderly Blunt Multisystem
  - TQIP = 65%
  - MTQIP = 54%

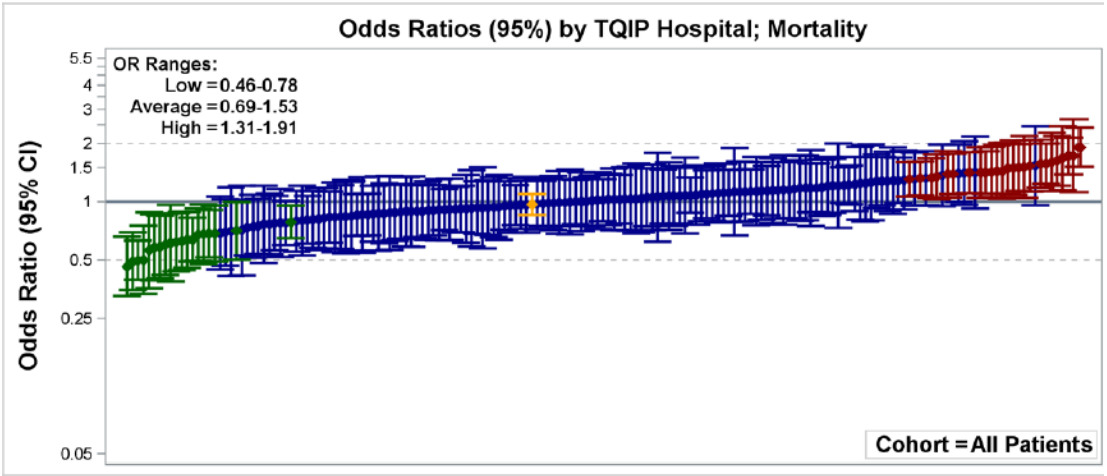
VTE Prophylaxis Type

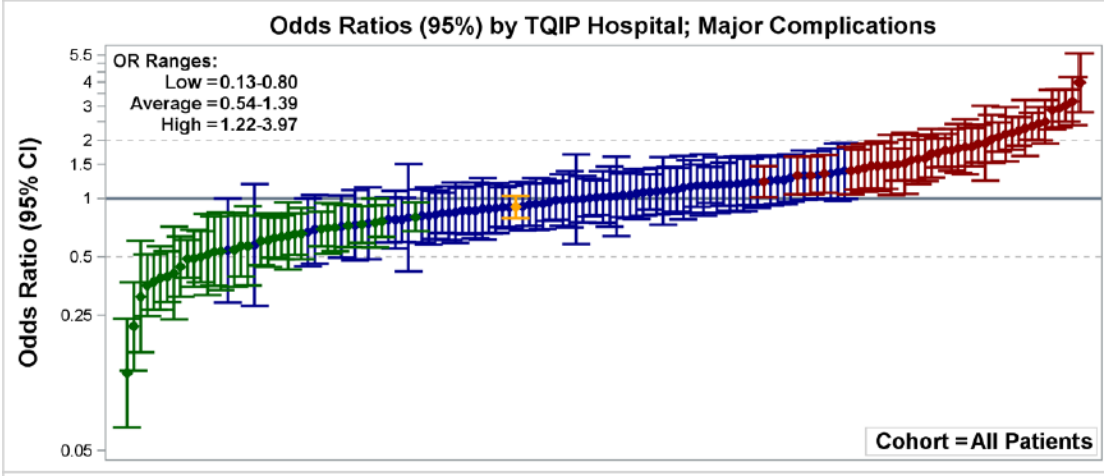
- Heparin
  - TQIP = 25%
  - MTQIP = 44%
- LMWH
  - TQIP = 72%
  - MTQIP = 52%

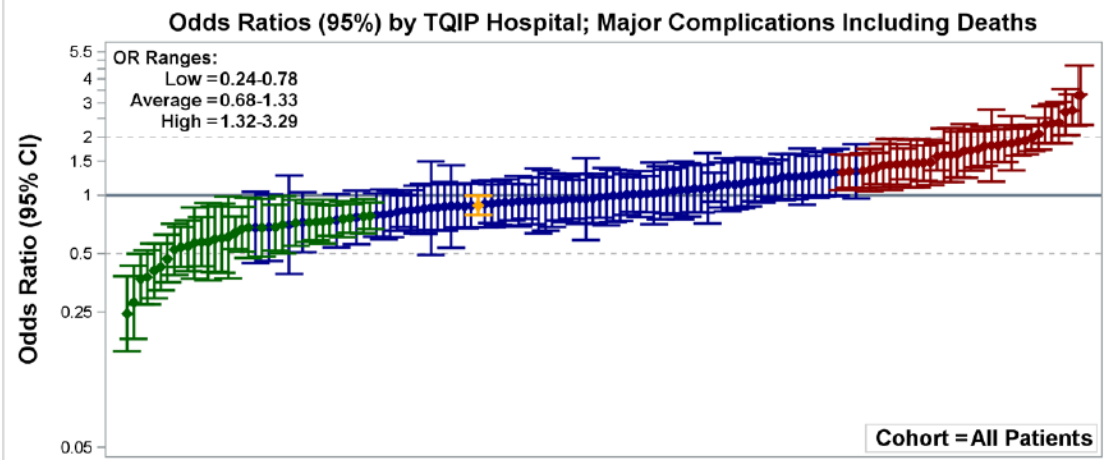
Hemorrhagic Shock

- Surgery for Hemorrhage Control
  - TQIP = 45%
  - MTQIP = 37%
- Median Time to Surgery for Hemorrhage Control
  - TQIP = 1.0 hrs
  - MTQIP = 1.9 hrs
- Angiography
  - TQIP = 14%
  - MTQIP = 13%


Odds Ratios (95%) by TQIP Hospital; Mortality
Range of ORs: 0.89-1.13
Odds Ratio (95% CI)
4
3
2.5
2
1.5
1
0.5
0.25
Cohort =Shock


Odds Ratios (95%) by TQIP Hospital; Mortality
OR Ranges:
Low = 0.46-0.78
Average = 0.69-1.53
High = 1.31-1.91
Odds Ratio (95% CI)
5.5
4
3
2
1.5
1
0.5
0.25
0.05
Cohort = All Patients


Odds Ratios (95%) by TQIP Hospital; Major Complications
OR Ranges:
Low = 0.13-0.80
Average = 0.54-1.39
High = 1.22-3.97
Odds Ratio (95% CI)
5.5
4
3
2
1.5
1
0.5
0.25
0.05
Cohort = All Patients


Odds Ratios (95%) by TQIP Hospital; Major Complications Including Deaths
OR Ranges:
Low = 0.24-0.78
Average = 0.68-1.33
High = 1.32-3.29
Odds Ratio (95% CI)
5.5
4
3
2
1.5
1
0.5
0.25
0.05
Cohort = All Patients

Future Meetings

- Fall
  - MCOT
  - Thursday
- Neurosurgery
  - Feasible?
  - When?
- Options
  - MSQC?
  - Friday/Saturday?

Data Validation
New Data Elements

Jill Jakubus, PA-C

Overview

- Initiated March 30, 2010
- 21 centers
- 63 visits
- Over 40,680 elements validated

Previous Models

- General validation
  - NSQIP methodology
  - Logic-based case selection
  - 103 variables/case
  - 10 cases over 2 days
- Focus variable validation
  - Logic-based case selection
  - Discrepancy-based variable selection
  - 18 variables/case
  - 10 cases over 1 day

Process Improvement

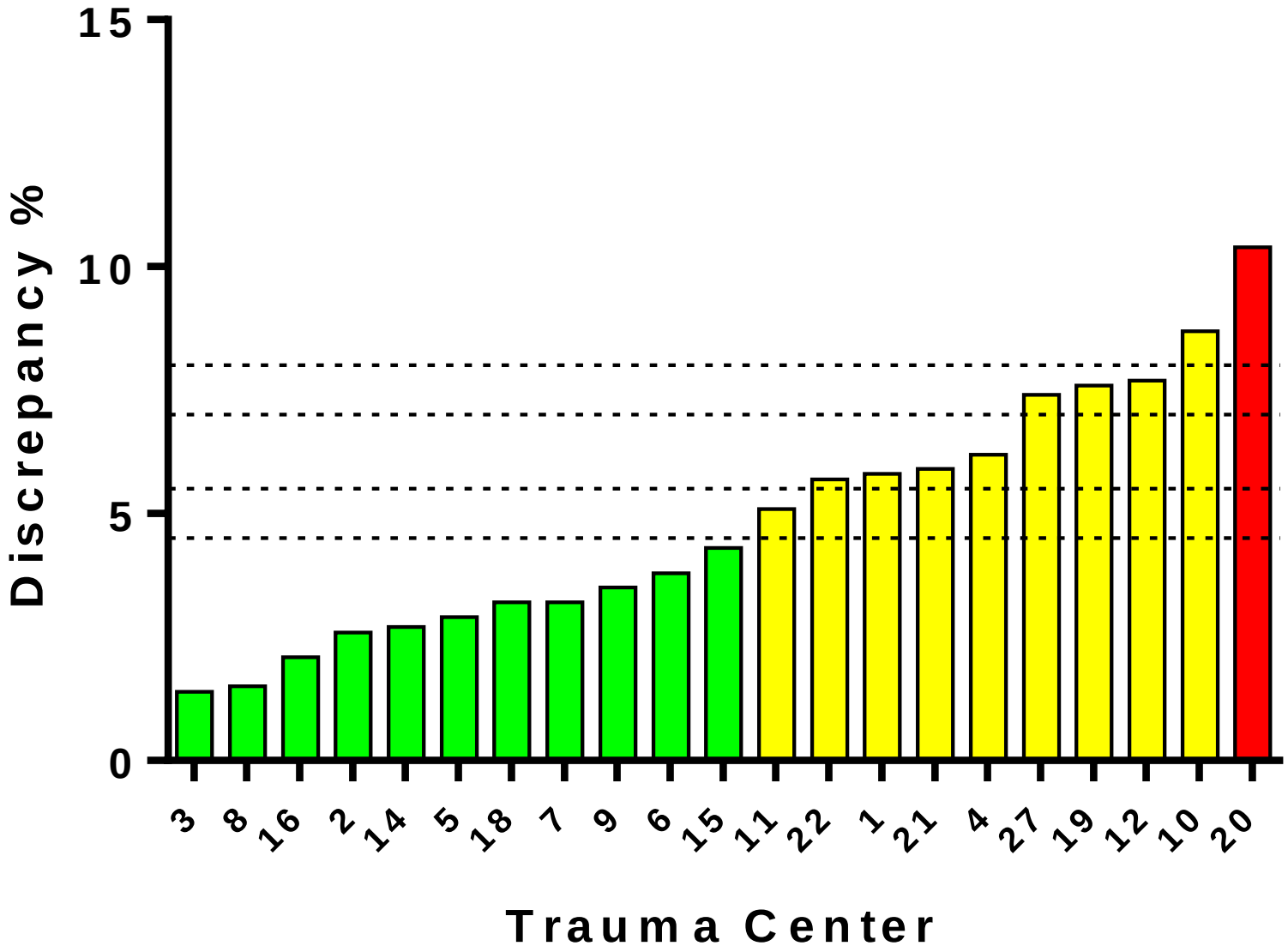
- General validation
  - Low yield for low incidence events
  - Lacked concentration to specific user needs
  - Time intensive site burden
- General validation + focus variables
  - Initial promise
- Focus
  - Lacked significant impact

Current Model

- General validation
  - Logic-based case selection
  - Variable selection based on impact & discrepancy
  - Automated abstraction sheet adapts based on year
  - ~100 variables/case x 7 cases
  - 1 day visit
  - Validation sheet sharing via MiShare
  - 7 day appeal interval
  - Center preferred date selection

Validation Overall Discrepancy

(2014 4 centers, 2013 12 centers, 2012 3 centers, 2011 2 centers)

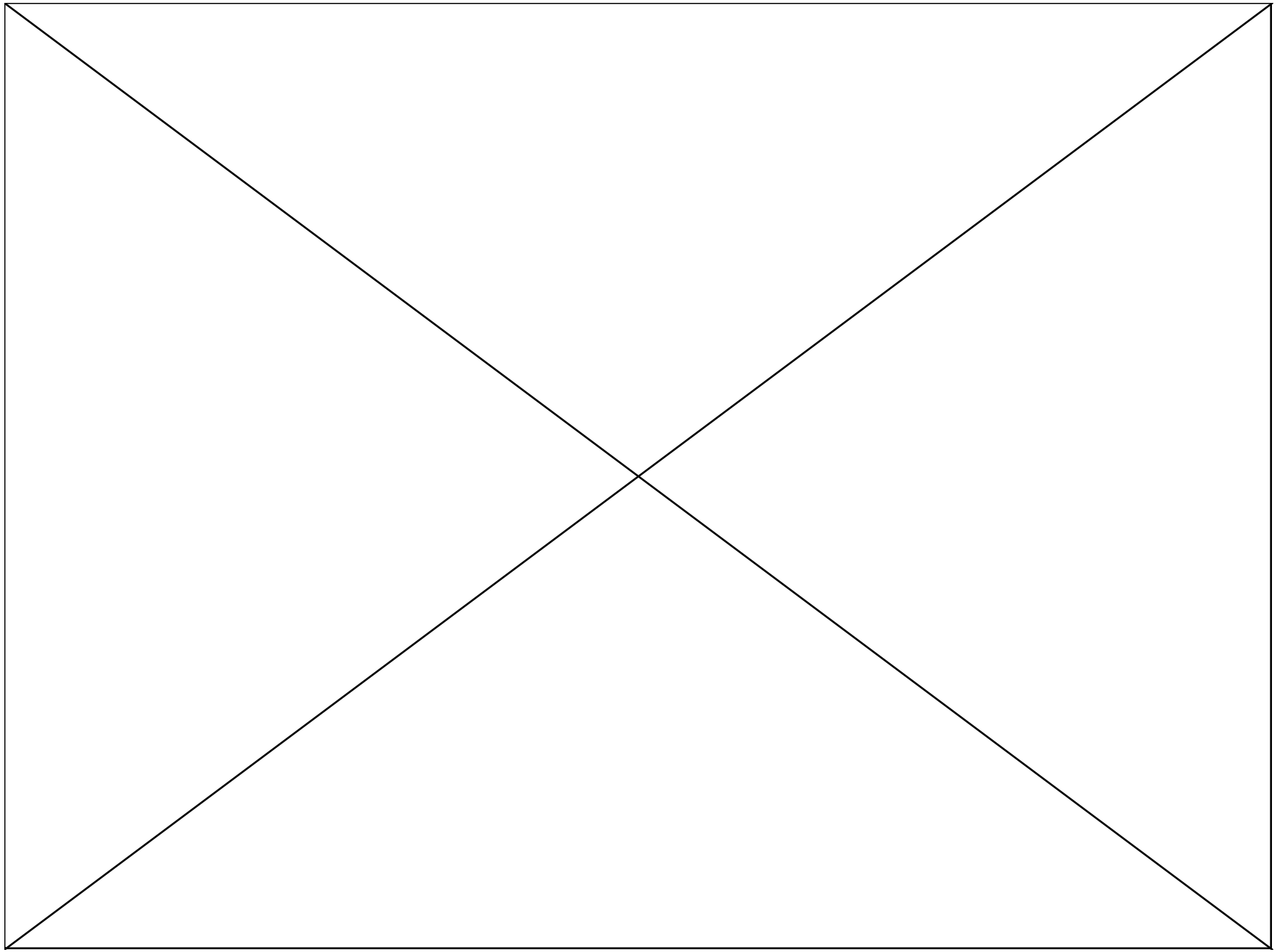


Validation Discrepancy Rate by Category

ID	Date	Visit #	ED	Injury	Comorbities	Operative	Blood	Complications	TBI	VTE	Discharge	Overall
4	12/12	3	4.5	10	4.4	17.2	3.3	4.2	8.6	80	5.5	6.2
19	8/13	2	18.2	7.1	3.5	0	19	2.6	25	19	16.7	7.6
1	8/13	2	13	14.3	2.9	0	4.8	2.6	21.9	0	0	5.8
7	10/11	2	5	6.7	1.4	15	1.3	2.4			3.6	3.2
15	7/13	3	7.8	9.5	4	0	0	2.1	11.1	13.3	2.4	4.3
10	9/13	1	18.2	7.1	9.7	0	4.8	2.1	18.4	23.8	4.8	8.7
21	6/13	1	8	8.3	3.6	0	8.3	1.4	23.3	25	0	5.9
11	7/12	3	5	8.3	1.4	15	22.5	1			6.4	5.1
18	11/11	2	2.5	3.3	3.3	25	0	1			5.5	3.2
14	11/13	1	4.5	5.6	0.5	0.6	11.1	0.6	5.9	16.7	2.8	2.7
12	10/13	3	7.8	19	5.2	0	19	0.5	72.2	28.6	0	7.7
9	8/13	2	3.9	14.3	2.3	0	4.8	0.5	25	9.5	0	3.5
2	9/13	2	1.1	8.3	1.9	0	8.3	0.5	20.8	4.2	0	2.6
3	4/14	2	2.6	7.1	0.4	14.3	2.4	0.5	0	0	2	1.4
27	4/14	1	10.4	16.7	6.5	0	0	0.5	16.4	28.6	14	7.4
22	11/13	1	7.8	16.7	4.8	0	4.8	0.5	11.8	33.3	4.8	5.7
16	3/14	1	3.9	4.8	1.7	0	5.4	0.5	7.1	0	1.8	2.1
20	10/13	2	13	9.5	6.5	0	19	0	65.1	9.5	16.7	10.4
6	1/12	2	3.5	13.3	2.4	5	17.5	0			0.9	3.8
5	3/14	1	6.5	11.9	2.2	0	0	0	5.4	14.3	0	2.9
8	10/13	1	3.9	0	0.4	0	0	0	23.1	0	0	1.5
Ave			7.2	9.6	3.3	4.4	7.4	1.1	21.2	18.0	4.2	4.8

> 4.5%

Highest rate per catergory



Future Model

- Time lag
  - Unconstrained submission
  - XML
- Site burden
  - Remote validation progress
- Systematic dimensions
  - Strategic registrar collaboration
  - Lean
  - TQIP
  - Logic

Direction

Current Logic

- ISS < 16 and mortality
- ISS > 24 and no complications and hospital days > 1
- Length of stay > 14 days and no complication or mortality
- Age > 64 and no co-morbidities
- Mechanical ventilator days > 7 and no pneumonia
- Motor GCS = 1 and no complications and hospital days > 1

New Data Elements

- MTQIP
  - Antibiotic days
- TQIP
  - Pre-hospital cardiac arrest
    - Indication of whether patient experienced cardiac arrest prior to ED/Hospital arrival.

Break

MTQIP: Next Steps and Moving Forward

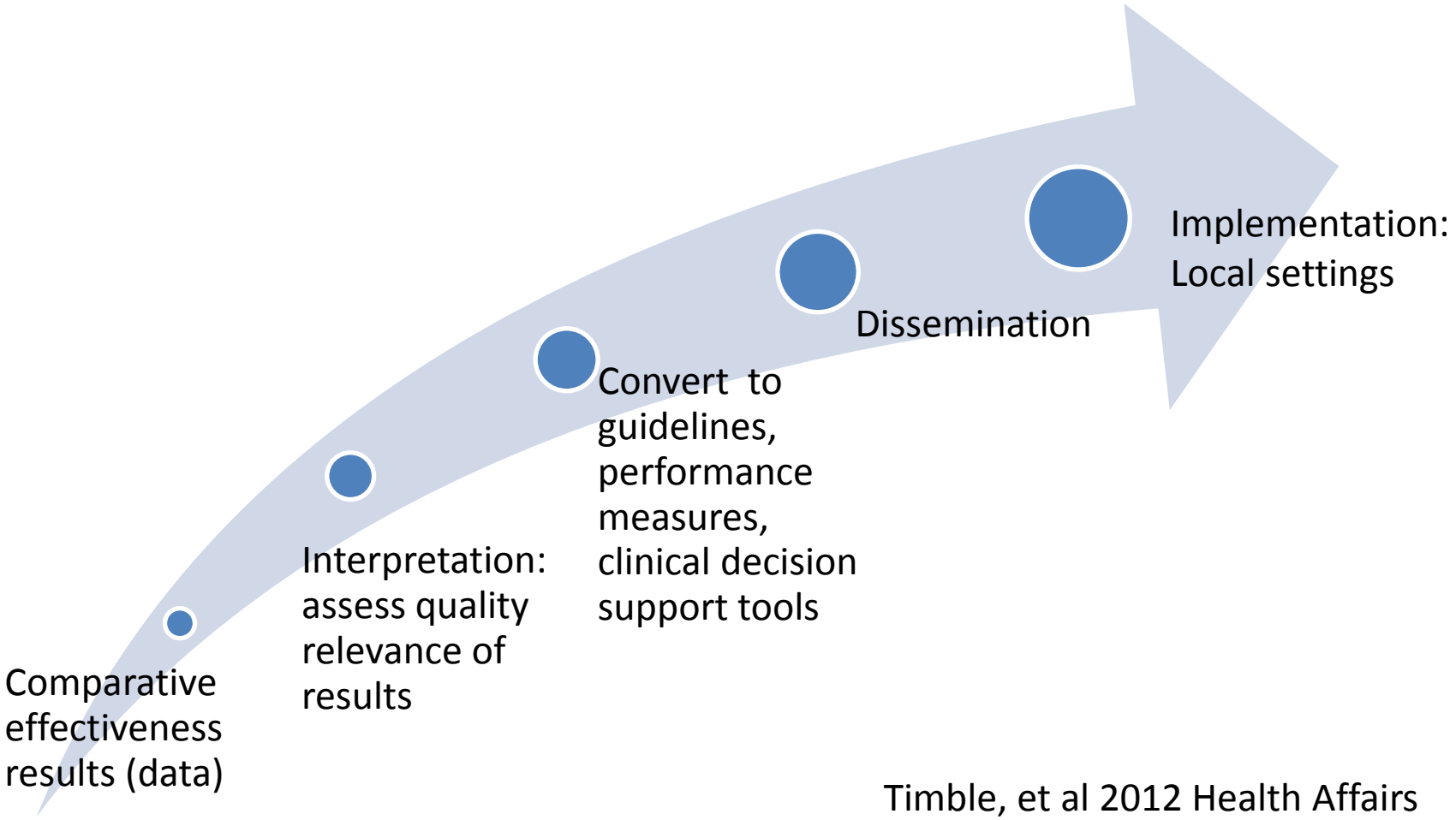
Judy Mikhail MSN, MBA
MTQIP Program Manager

Evidence to Practice Gap

American healthcare
"gets it right"
54.9%
of the time

McGlynn, et al The quality of healthcare delivered to adults
In the United States NEJM 2003

Conceptual Framework for Evidence Translation



Timble, et al 2012 Health Affairs

MTQIP Evidence Translation

MTQIP Steps

1. Generate data
2. Interpret results
3. Convert to practical tools
4. Disseminate
5. Implement
6. Re-measure
7. Provide feedback

Continuous feedback loop

Context Shaped:

- Existing practices
- "Where I trained"
- Professional expectations
- Financial incentives
- Local market demands
- Regulation
- Competition
- Litigation
- Case mix
- QI Culture

COMPARATIVE EFFECTIVENESS RESEARCH

By Justin W. Timbie, D. Steven Fox, Kristin Van Busum, and Eric C. Schneider

Five Reasons That Many Comparative Effectiveness Studies Fail To Change Patient Care And Clinical Practice

1. Misalignment of financial incentives
2. Ambiguity of results hamper decision making
3. Cognitive biases:
   [confirmation, pro-intervention, pro-technology]
4. Failure to address the needs of end users
5. Limited use of decision support

Health Affairs 2012

Facilitators of Evidence Translation

1. Develop consensus objectives
2. Use multidisciplinary groups
3. Promote emerging payment/coverage policies
   - Accountable Care Organizations
   - Global/bundled payment to encourage efficiencies
     - Adherence to guidelines
     - Performance feedback
     - Implementation of clinical decision support tools

"Sounds like MTQIP"

Health Affairs 2012

Ways MTQIP Can Facilitate Evidence Translation

- Audit & feedback
- Sharing best practices
- Literature reviews
- Expert outside speakers
- Expert local speakers
- Panel discussions
- Hospital PI presentations
- Focus groups/interviews
- Surveys/questionnaires
- Consensus building exercises
- Guideline development
- Clinical decision support tools

Example:
Summary of a Moderated Panel

Academic Emergency Medicine
Official Journal of the Society for Academic Emergency Medicine

PRESENTATION

Practical Implications of Implementing Emergency Department Crowding Interventions: Summary of a Moderated Panel

Jesse M. Pines, MD, MBA, MSCE, Randy L. Pilgrim, MD, Sandra M. Schneider, MD, Bruce Siegel, MD, MPH, and Peter Viccellio, MD

Abstract

Emergency department (ED) crowding continues to be a major public health problem in the United States and around the world. In June 2011, the *Academic Emergency Medicine* consensus conference focused on exploring interventions to alleviate ED crowding and to generate a series of research agendas on the topic. As part of the conference, a panel of leaders in the emergency care community shared their perspectives on emergency care, crowding, and some of the fundamental issues facing emergency care today. The panel participants included Drs. Bruce Siegel, Sandra Schneider, Peter Viccellio, and Randy Pilgrim. The panel was moderated by Dr. Jesse Pines. Dr. Siegel's comments focused on his work on Urgent Matters, which conducted two multihospital collaboratives related to improving ED crowding and disseminating results. Dr. Schneider focused on the future of ED crowding measures, the importance of improving our understanding of ED boarding and its implications, and the need for the specialty of emergency medicine (EM) to move beyond the discussion of unnecessary visits. Dr. Viccellio's comments focused on several areas, including the need for a clear message about unnecessary ED visits by the emergency care community and potential solutions to improve ED crowding. Finally, Dr. Pilgrim focused on the effect of effective leadership and management in crowding interventions and provided several examples of how these considerations directly affected the success or failure of well-constructed ED crowding interventions. This article describes each panelist's comments in detail.

ACADEMIC EMERGENCY MEDICINE 2011; 18:1278–1282

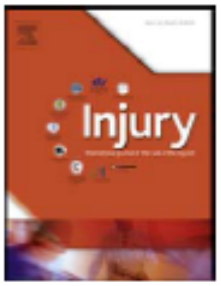
Consensus Example 1

Injury, Int. J. Care Injured 43 (2012) 1662–1666

Contents lists available at SciVerse ScienceDirect

Injury

journal homepage: www.elsevier.com/locate/injury



Outcome measurements in major trauma—Results of a consensus meeting

A. Ardolino *, G. Sleat, K. Willett

Department of Health, Wellington House, London, United Kingdom

ARTICLE INFO

Article history:
Accepted 7 May 2012

Keywords:
Trauma
Outcome measures
Consensus statement

ABSTRACT

Background: The NHS Outcomes Framework for England has identified recovery from major injury as an important clinical area. At present, there are no established outcome indicators. As more patients survive major trauma, outcomes will need to be measured in terms of morbidity and not mortality alone.
Objective: To make recommendations for a selection of outcome measures that could be integrated into National Clinical Audit data collection and form part of clinical governance requirements for Regional Trauma Networks (RTNs) and measures by which RTNs are held to account by government. Specific focus was given to acute care and rehabilitation for both adults and children.

Example 1: Continued Outcomes Measures for Trauma

- Literature review
- Expert presentations
- Trauma registry queries

Trauma Audit and Research Network (TARN)
&
Cochrane Collaboration

1. Process indicators
2. QoL measures
3. Functional measures
4. Long term outcomes
5. Rehab measures

Workshop:

- structured discussions

- <u>Assessment Criteria</u>
  1. Ease of data collection
  2. Reliability
  3. Applicability to most pts
  4. Validity (link to pt outcomes)

Consensus Example 2

Curr Oncol, Vol. 20, pp. e289-299; doi: http://dx.doi.org/10.3747/co.20.1378

ORIGINAL ARTICLE

2013

Canadian integrative oncology research priorities: results of a consensus-building process

L.C. Weeks PhD, D. Seely ND MSc,*†‡*

- Lit review, Pre workshop stakeholder interviews, assigned pre-readings
- Questionnaire to select 3 priority research areas
- Feedback/questionnaire: additional topics added by members
- Consensus Workshop
  - Final ranking of priorities
    - Small group work, facilitated group discussions, brainstorming, speed-dating format

Consensus Example 3

Consensus strategies for the nonoperative management of patients with blunt splenic injury: A Delphi study

J Trauma Acute Care Surg 2013

Dominique C. Olthof, Cornelius H. van der Vlies, MD, PhD, Pieter Joosse, MD, Otto M. van Delden, MD, PhD, Gregory J. Jurkovich, MD, PhD, *and* J.C. Goslings, MD, PhD, on behalf of the PYTHIA Collaboration Group, *Amsterdam, The Netherlands*

BACKGROUND: Nonoperative management is the standard of care in hemodynamically stable patients with blunt splenic injury. However, a number of issues regarding the management of these patients are still unresolved. The aim of this study was to reach consensus among experts concerning optimal treatment and follow-up strategies.

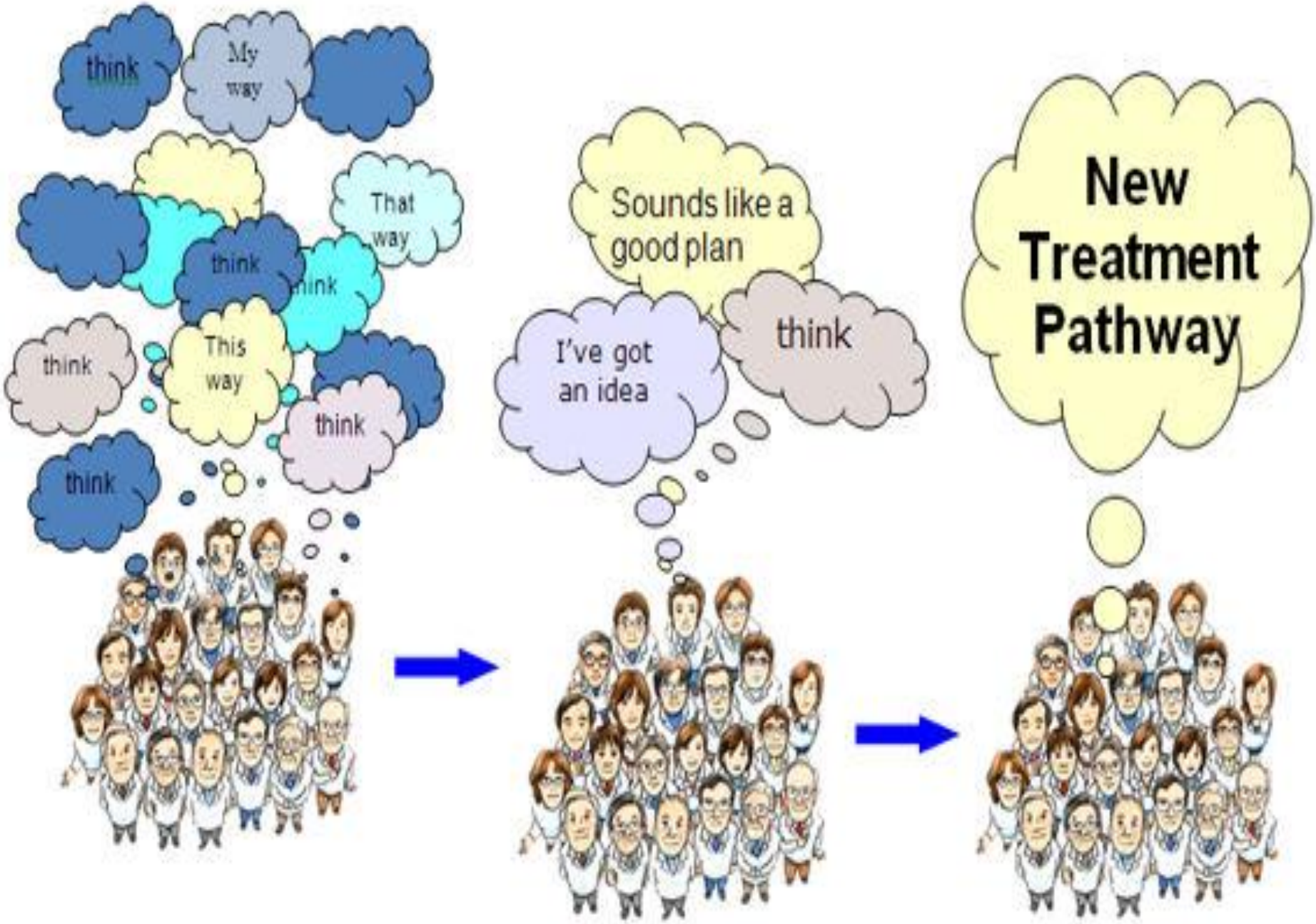
METHODS: The Delphi method was used to reach consensus among 30 expert trauma surgeons and interventional radiologists from around the world. An online survey was used in the two study rounds. Consensus was defined as an agreement of 80% or greater.

RESULTS: Response rates of the first and second rounds were 90% and 80%, respectively. Consensus was reached for 43% of the (sub)questions. The

- Lit review and development of questionnaires
- Round 1: 34 questions with clinical scenarios
- Round 2: 30 questions incorporating suggestions from 1st round and dropped questions that already had consensus
- Round 3: Final recommendations

Delphi Technique

- Validated structured group communication technique
- Seek nonbiased consensus of opinions on specific topic
- Among group of knowledgeable stakeholders -multidisciplinary
- Performed in staged “rounds” of anonymous data gathering
- Responses statistically summarized & fed back
- Participants reevaluate own views in light of others opinions
- Continues as an **iterative** process until consensus reached
  - Percent agreement (determined a priori)


think
My way
That way
think
think
This way
think
think
think
Sounds like a good plan
I've got an idea
think
New Treatment Pathway

Now It's Your Turn

Instructions

Check the # corresponding to the first initial of your **last** name

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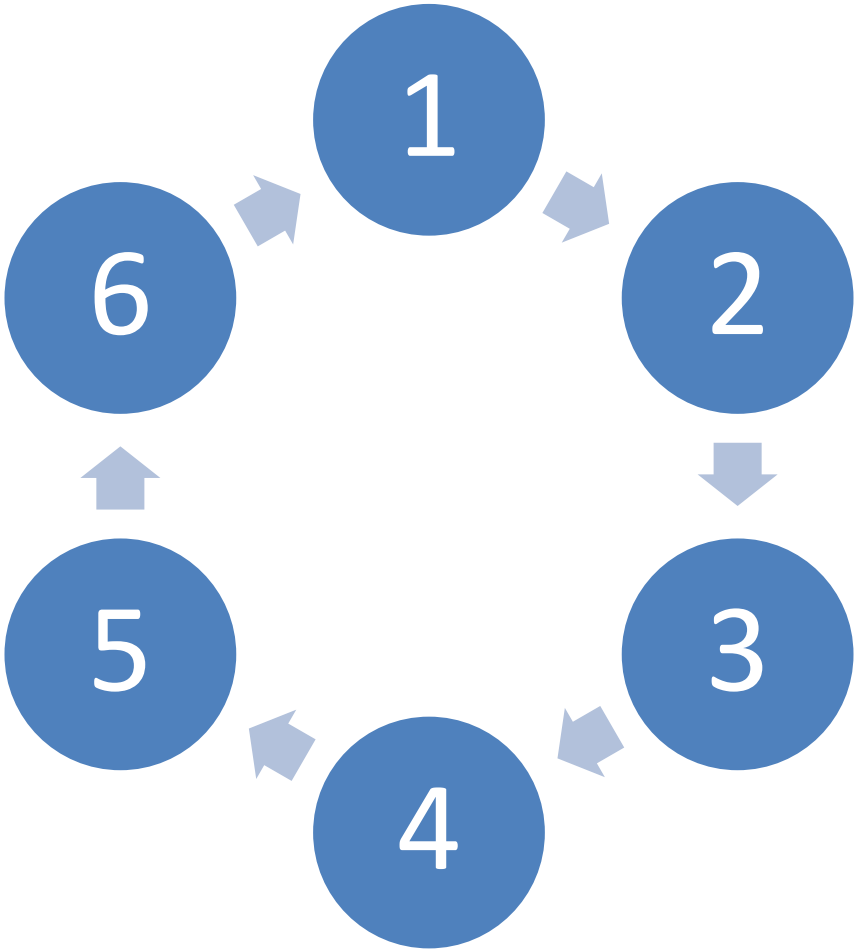
This is Table # where you start

Initials	Number
A-E	1
F-J	2
K-L	3
M-P	4
Q-S	5
T-Z	6

Rotate to next numbered table every 15 mins



Instructions at Table

1. Moderator to provide feedback from round 1
2. Brief group discussion
3. Individually, on paper rate each priority on:
   a) Impact
   b) Ability to affect change
   c) Data collection

4. We will then follow up via survey monkey after meeting
5. Prep for next meeting in October

See you at the next MTQIP meeting!

Thursday October 16, 2014

Eagle Crest Marriott

Ypsilanti, MI

One more time…

Instructions

Check the # corresponding to the first initial of your **last** name

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This is Table # where you start

Initials	Number
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Future Meetings

- Tuesday June 3, 2014
  - Location: Ann Arbor (NCRC)
  - Registrar's
- Thursday October 16, 2014
  - Location: Ypsilanti (Eagle Crest)
- Tuesday February 10, 2015
  - Location: Ypsilanti (Eagle Crest)

Conclusion

- MTQIP Reports
  - On way out
- Evaluations
  - Fill out and turn in