

# 2018 CQI Scoring Index Data



## #9 Open Fracture Antibiotic Usage

- ◆ Type of antibiotic administered along with date and time for open fracture of femur or tibia
- ◆ Presence of acute open femur or tibia fracture based on AIS or ICD10 codes (See list)
- ◆ Cohort = Cohort 1 (All)
- ◆ Exclude direct admissions and transfer in
- ◆ No Signs of Life = Exclude DOAs
- ◆ Transfers Out = Include Transfers Out
- ◆ Time Period = 7/1/17 to 6/30/18

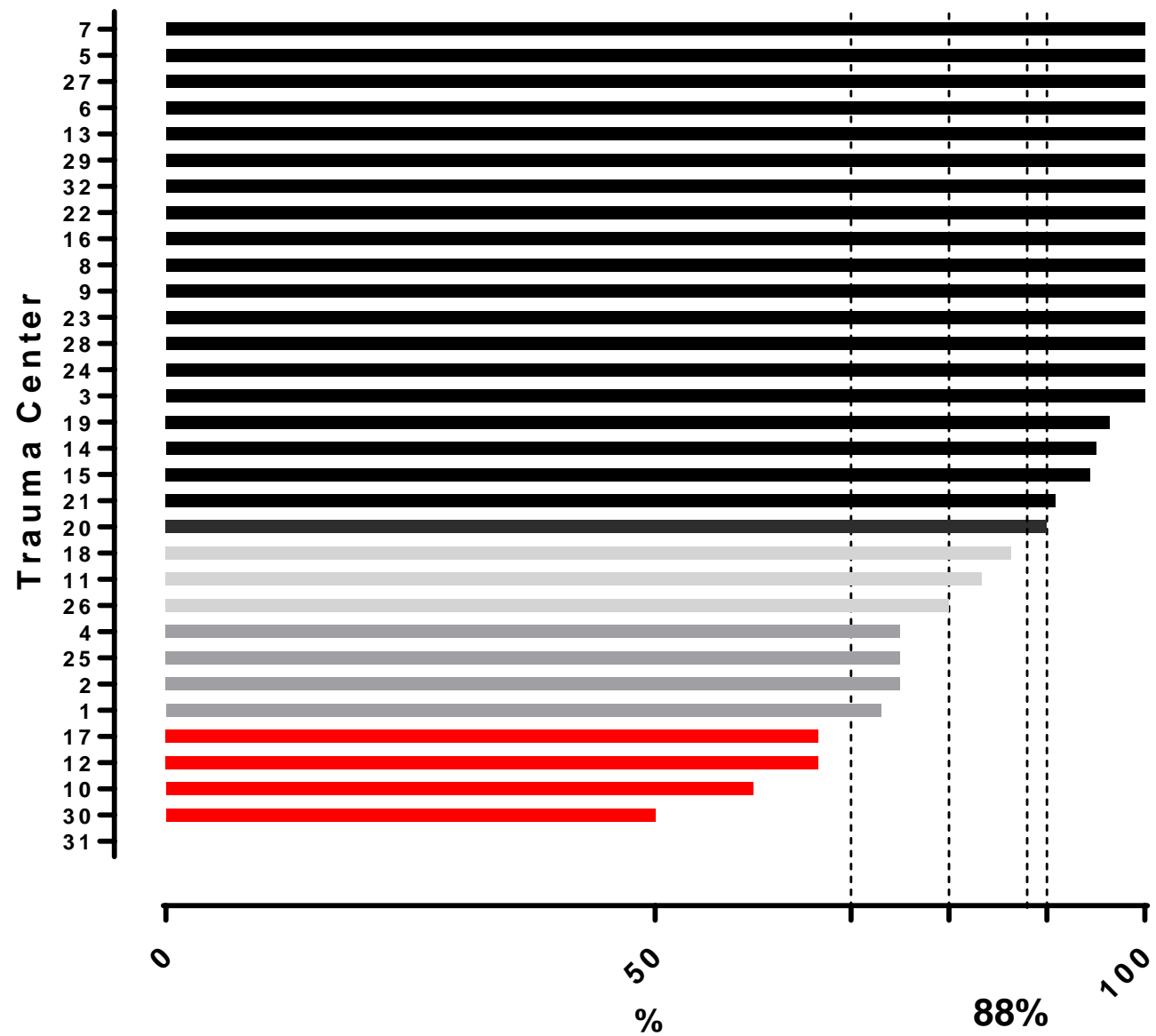
## #9 Open Fracture Antibiotic Usage

- ◆ Measure = % of patients with antibiotic type, date, time recorded
- ◆ ACS-COT Orange Book – VRC resources
  - Administration within 60 minutes
    - ◆ ACS OTA Ortho Update
    - ◆ ACS TQIP Best Practices Orthopedics

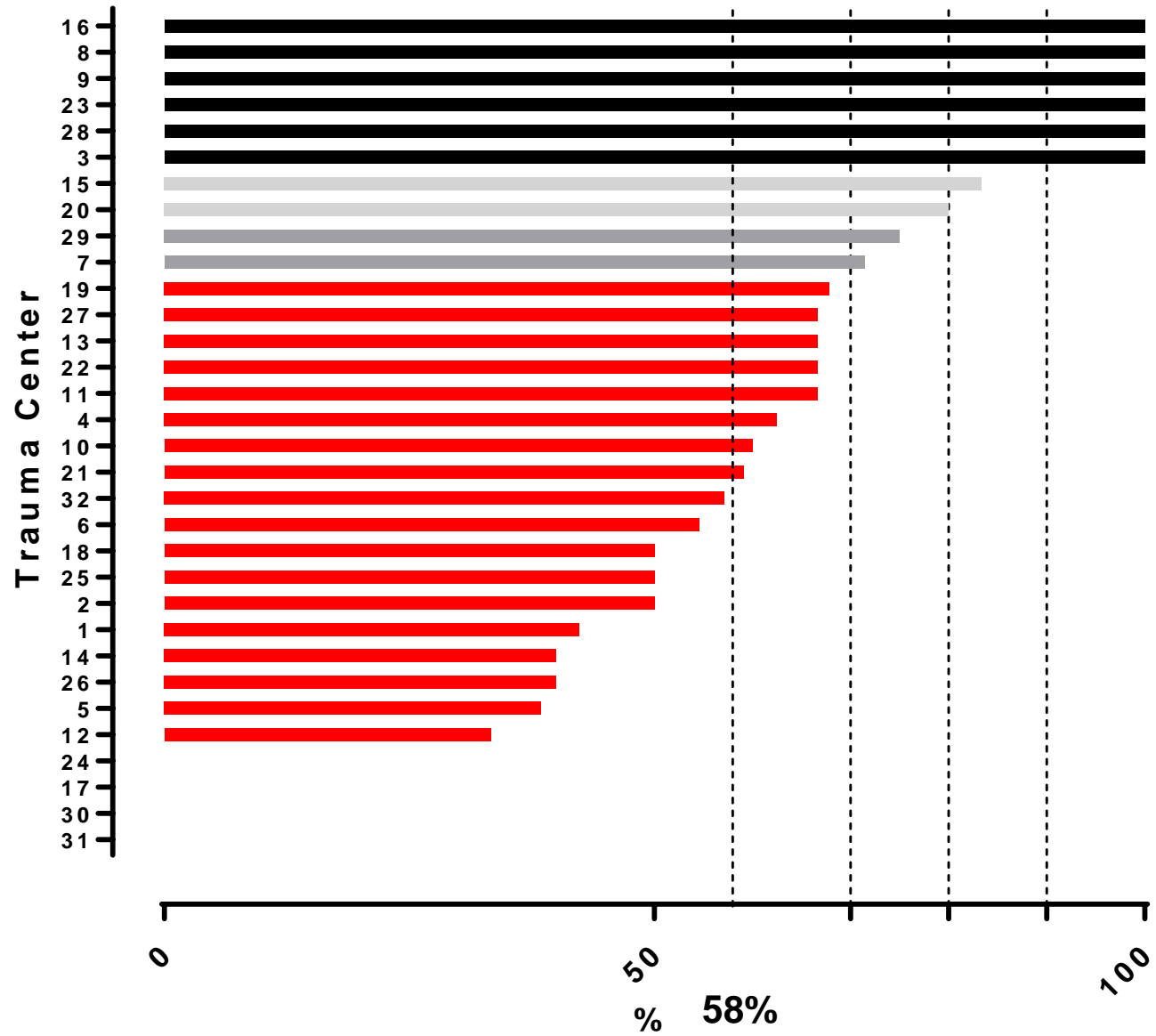
Trauma C	N	Data OK	< 60	61 to 120	> 120	% OK	% < 60	% 61-120	% > 120
31	8	0	0	0	0	0	0	0	0
8	4	4	4	0	0	100	100	0	0
3	1	1	1	0	0	100	100	0	0
9	3	3	3	0	0	100	100	0	0
5	13	13	5	6	2	100	38	46	15
1	26	19	11	5	3	73	42	19	12
12	3	2	1	1	0	67	33	33	0
11	12	10	8	1	1	83	67	8	8
23	2	2	2	0	0	100	100	0	0
18	22	19	11	3	5	86	50	14	23
10	5	3	3	0	0	60	60	0	0
29	8	8	6	2	0	100	75	25	0
13	9	9	6	1	2	100	67	11	22
2	4	3	2	0	1	75	50	0	25
26	10	8	4	1	3	80	40	10	30
32	7	7	4	1	2	100	57	14	29
24	1	1	0	0	1	100	0	0	100
16	5	5	5	0	0	100	100	0	0
20	10	9	8	1	0	90	80	10	0
22	6	6	4	1	1	100	67	17	17
14	20	19	8	4	7	95	40	20	35
6	11	11	6	1	4	100	55	9	36
15	18	17	15	0	2	94	83	0	11
21	22	20	13	4	3	91	59	18	14
7	14	14	10	2	2	100	71	14	14
17	3	2	0	1	1	67	0	33	33
25	4	3	2	1	0	75	50	25	0
19	28	27	19	4	4	96	68	14	14
30	2	1	0	1	0	50	0	50	0
27	12	12	8	3	1	100	67	25	8
28	1	1	1	0	0	100	100	0	0
4	8	6	5	0	1	75	63	0	13
	302	265	175	44	46	88%	58%	15%	15%

# Open Fracture - Abx Type and Date/Time

## 7/1/17 - 1/31/18



# Open Fracture - Time to Abx $\leq$ 60 min 7/1/17 - 1/31/18



# #9 Open Fracture Antibiotic Usage

## ◆ Cephalosporin

- 229 Patients
- Ceftriaxone – grade 3, Kefzol – grade 1,2

## ◆ Other

- 36 Patients
- Nafcillin, Clindamycin, Gentamycin, Aztreonam, other

## ◆ Combo

- 58 Patients Cephalosporin and Aminoglycoside
- 11 Patients Cephalosporin and Other
- 5 Clindamycin and Aminoglycoside

## ◆ None

- 37 Patients

# #10 Head CT Scan in ED on patient taking anticoagulation medication with TBI

- ◆ Head CT date and time from procedures
- ◆ Presence of prehospital anticoagulation or anti-platelet use
- ◆ TBI (AIS Head, excluding NFS, scalp, neck, hypoxia)
- ◆ Cohort1, Blunt mechanism
- ◆ Exclude direct admissions and transfer in
- ◆ No Signs of Life = Exclude DOAs
- ◆ Transfers Out = Include Transfers Out
- ◆ Time Period = 7/1/17 to 6/30/18

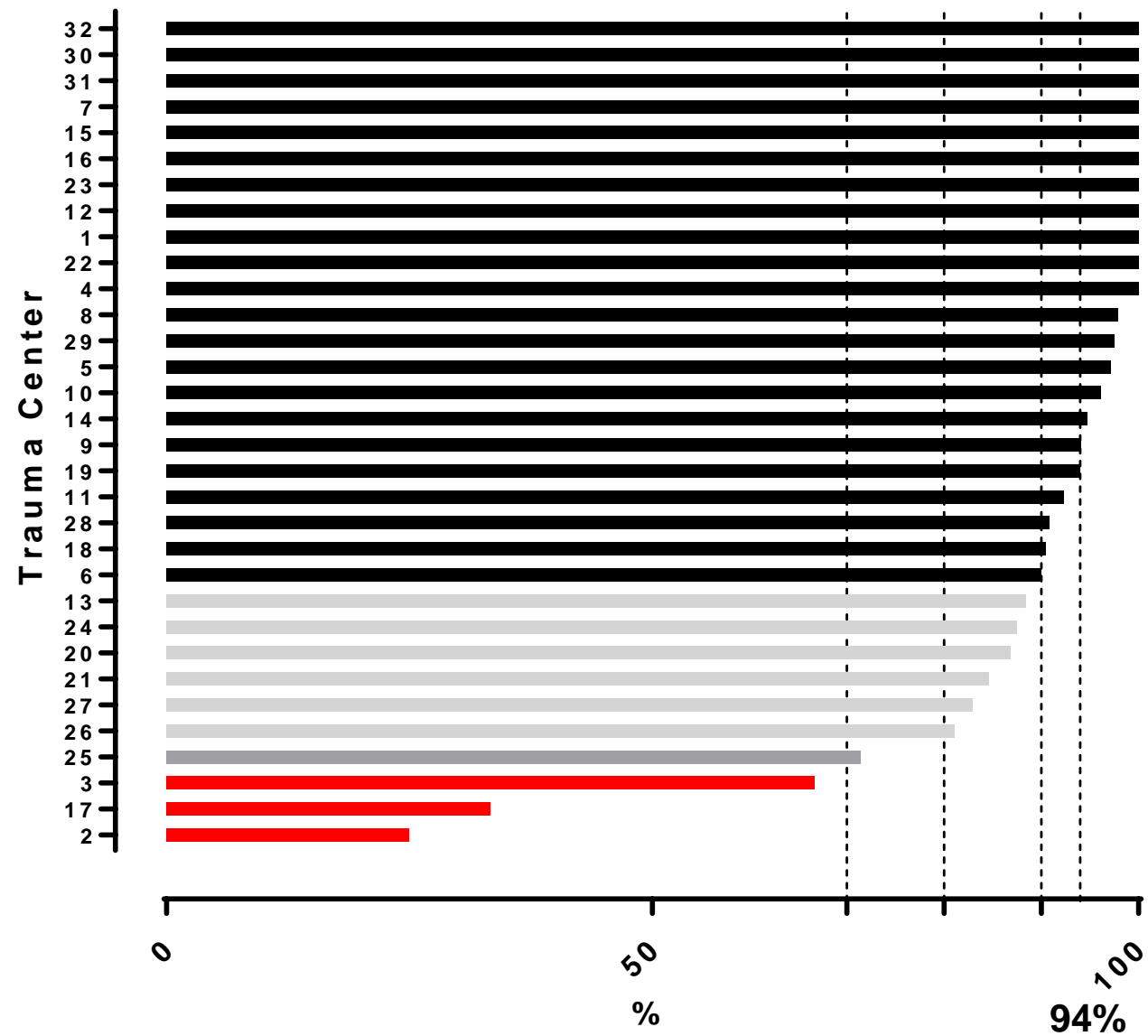


## #10 Head CT

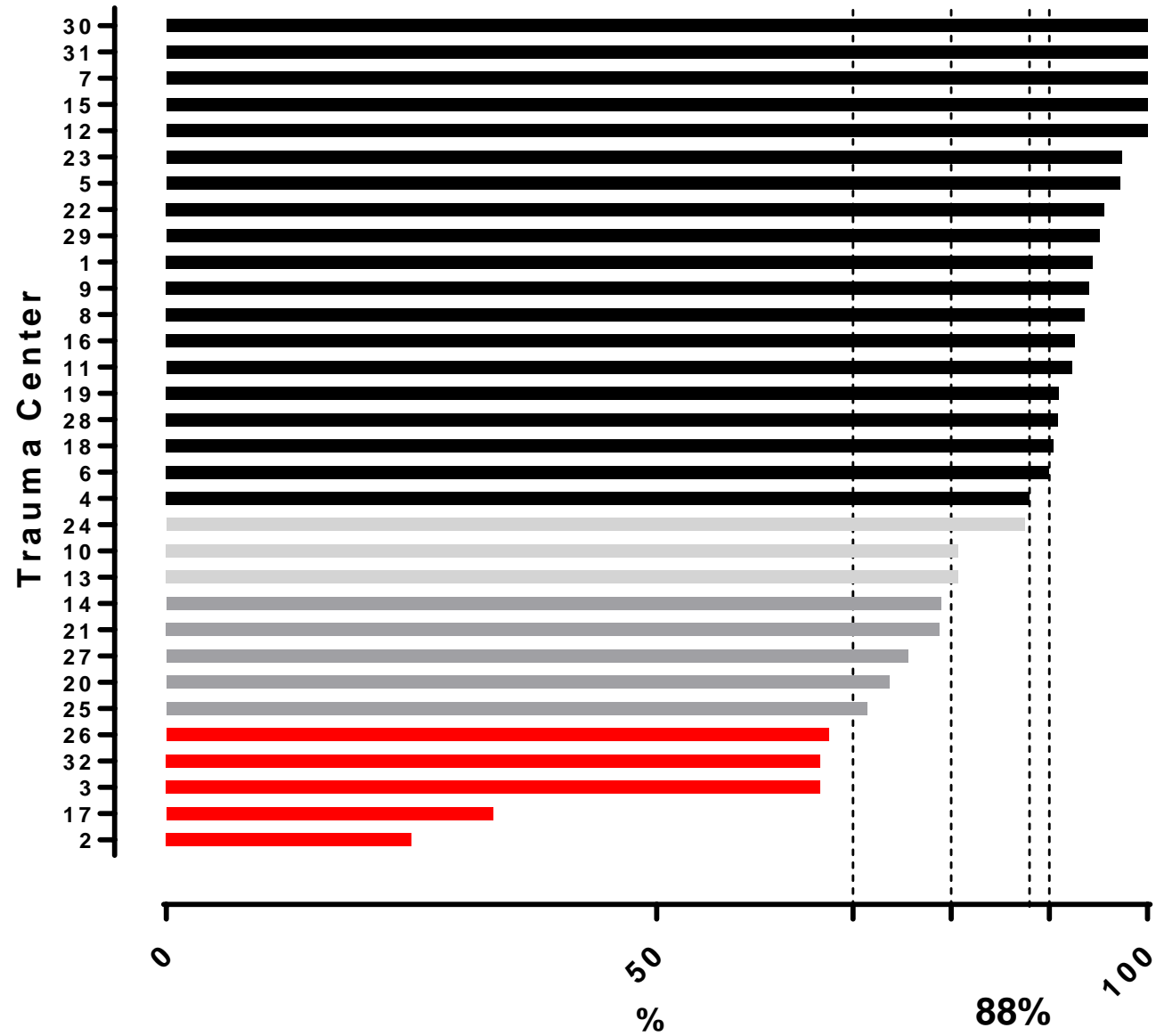
- ◆ Measure = % of patients with Head CT, date, and time
- ◆ Timing
- ◆ Treatment
  - 2018 Data

Trauma C	N	Head CT	Time OK	Time < 4	% OK	% No HCT	% OK CT	% OK Time	% < 4 hrs
31	2	2	2	2	100	0%	100	100	100
8	47	46	46	44	98	2%	98	98	94
3	3	2	2	2	67	33%	67	67	67
9	17	17	16	16	94	0%	100	94	94
5	36	35	35	35	97	3%	97	97	97
1	18	18	18	17	100	0%	100	100	94
12	36	36	36	36	100	0%	100	100	100
11	13	12	12	12	92	8%	92	92	92
23	38	38	38	37	100	0%	100	100	97
18	21	20	19	19	90	5%	95	90	90
10	26	25	25	21	96	4%	96	96	81
29	41	41	40	39	98	0%	100	98	95
13	52	46	46	42	88	12%	88	88	81
2	4	1	1	1	25	75%	25	25	25
26	37	30	30	25	81	19%	81	81	68
32	3	3	3	2	100	0%	100	100	67
24	8	8	7	7	88	0%	100	88	88
16	27	27	27	25	100	0%	100	100	93
20	38	34	33	28	87	11%	89	87	74
22	23	23	23	22	100	0%	100	100	96
14	19	18	18	15	95	5%	95	95	79
6	10	10	9	9	90	0%	100	90	90
15	9	9	9	9	100	0%	100	100	100
21	52	51	44	41	85	2%	98	85	79
7	40	40	40	40	100	0%	100	100	100
17	3	2	1	1	33	33%	67	33	33
25	14	13	10	10	71	7%	93	71	71
19	166	156	156	151	94	6%	94	94	91
30	13	13	13	13	100	0%	100	100	100
27	41	41	34	31	83	0%	100	83	76
28	11	11	10	10	91	0%	100	91	91
4	25	25	25	22	100	0%	100	100	88
	394	372	369	350	94%	6%	94%	94%	89%

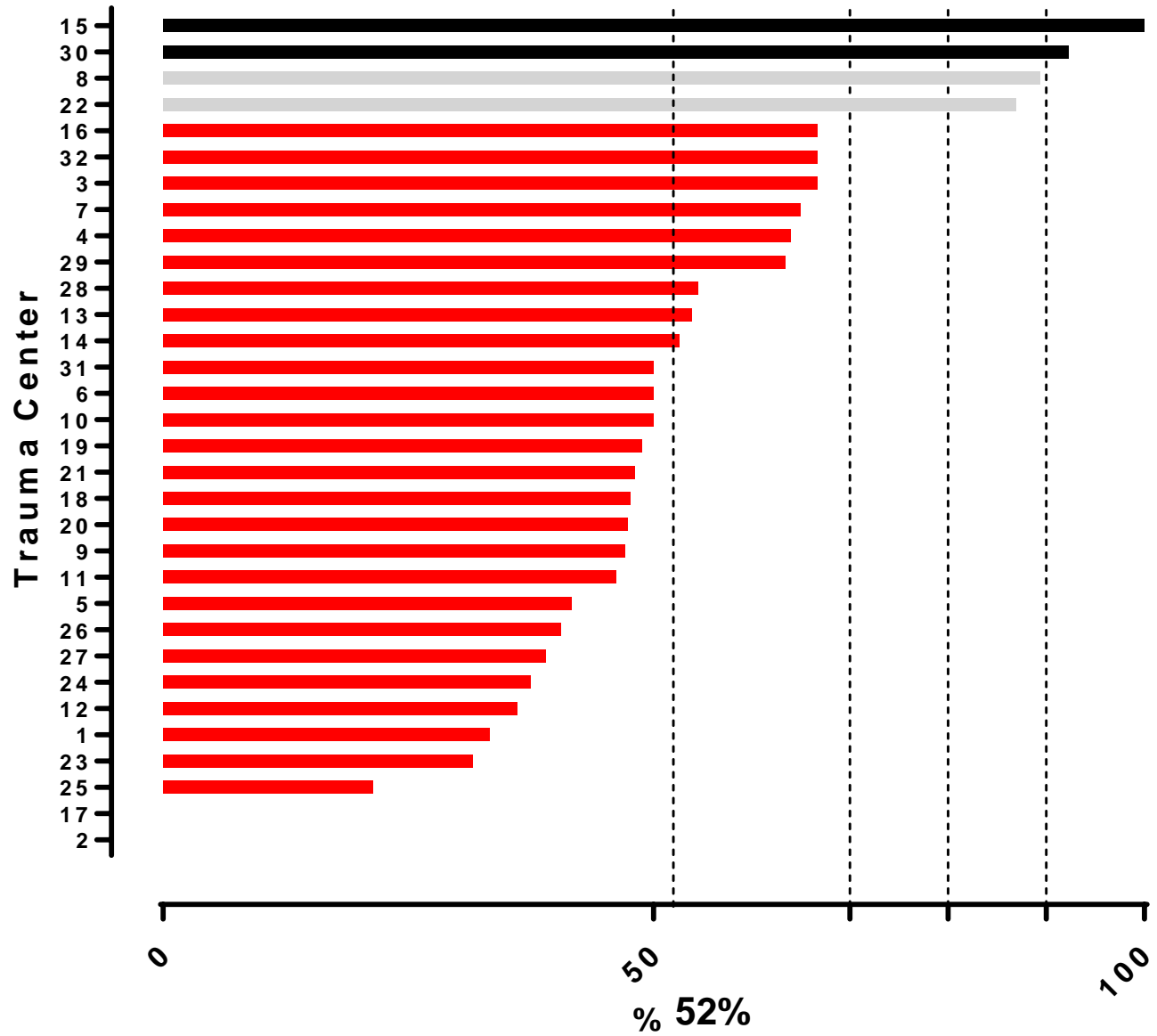
# Head Injury and Anticoagulation - Head CT Date/Time 7/1/17 - 1/31/18



# Head Injury and Anticoagulation - Head CT < 4 hrs 7/1/17 - 1/31/18



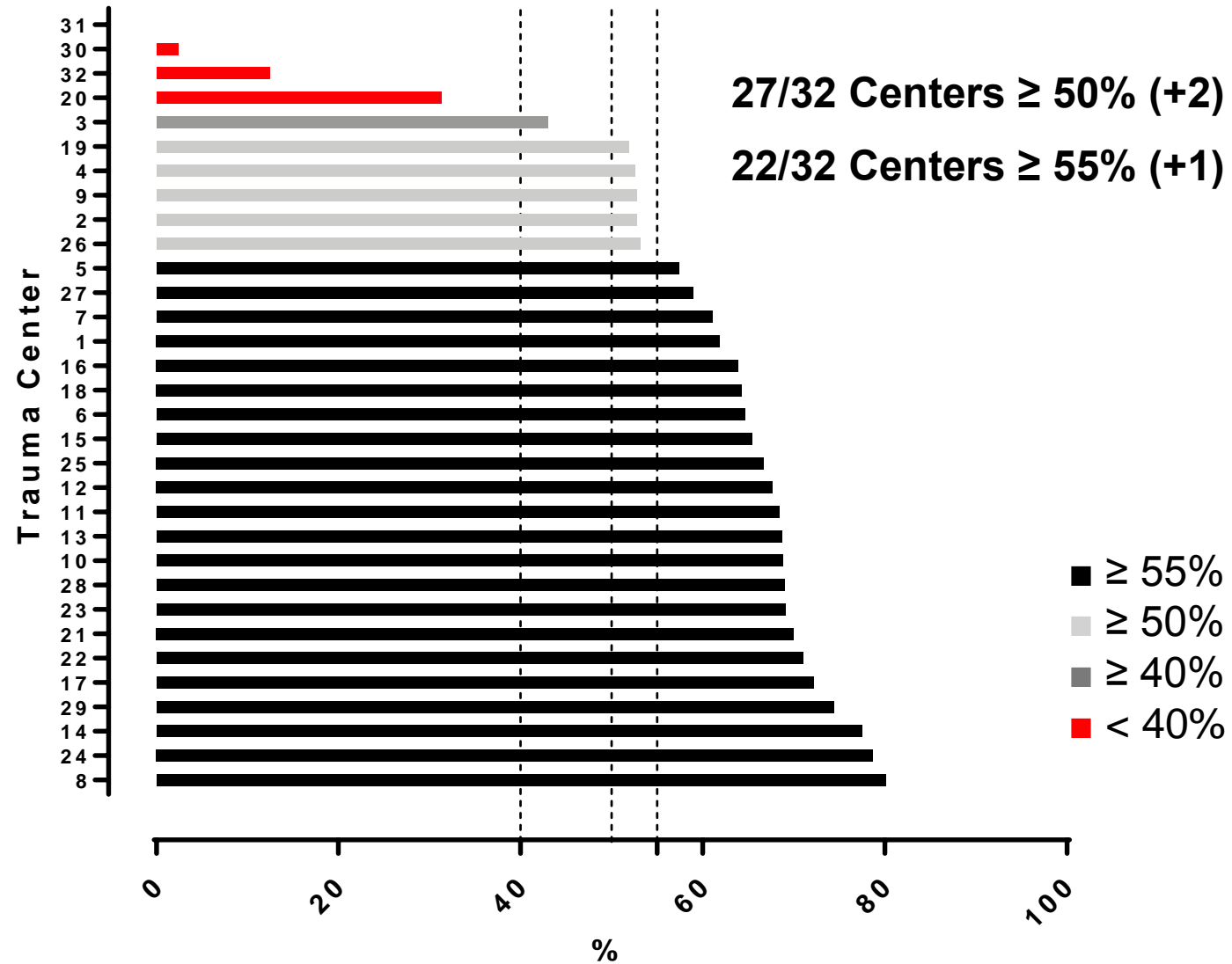
# Head Injury and Anticoagulation - Head CT < 1 hrs 7/1/17 - 1/31/18



## #4 VTE Prophylaxis Initiated $\leq$ 48 hrs

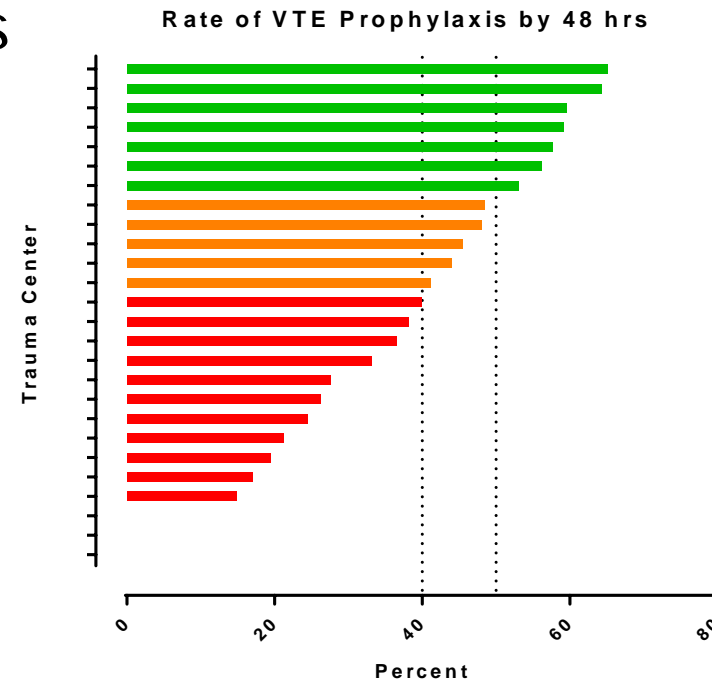
- ◆ Website
  - Practices > VTE Prophylaxis Metric
  - Cohort = Cohort 2 (admit to Trauma)
  - No Signs of Life = Exclude DOAs
  - Transfers Out = Exclude Transfers Out
  - Default Period = Set for CQI Index time period
- ◆ Heparin, LMWH  $\leq$  48 Hours
  - Hospital - Unadj %

VTE Prophylaxis Timing  $\leq$  48 hrs  
1/1/17 - 1/31/18



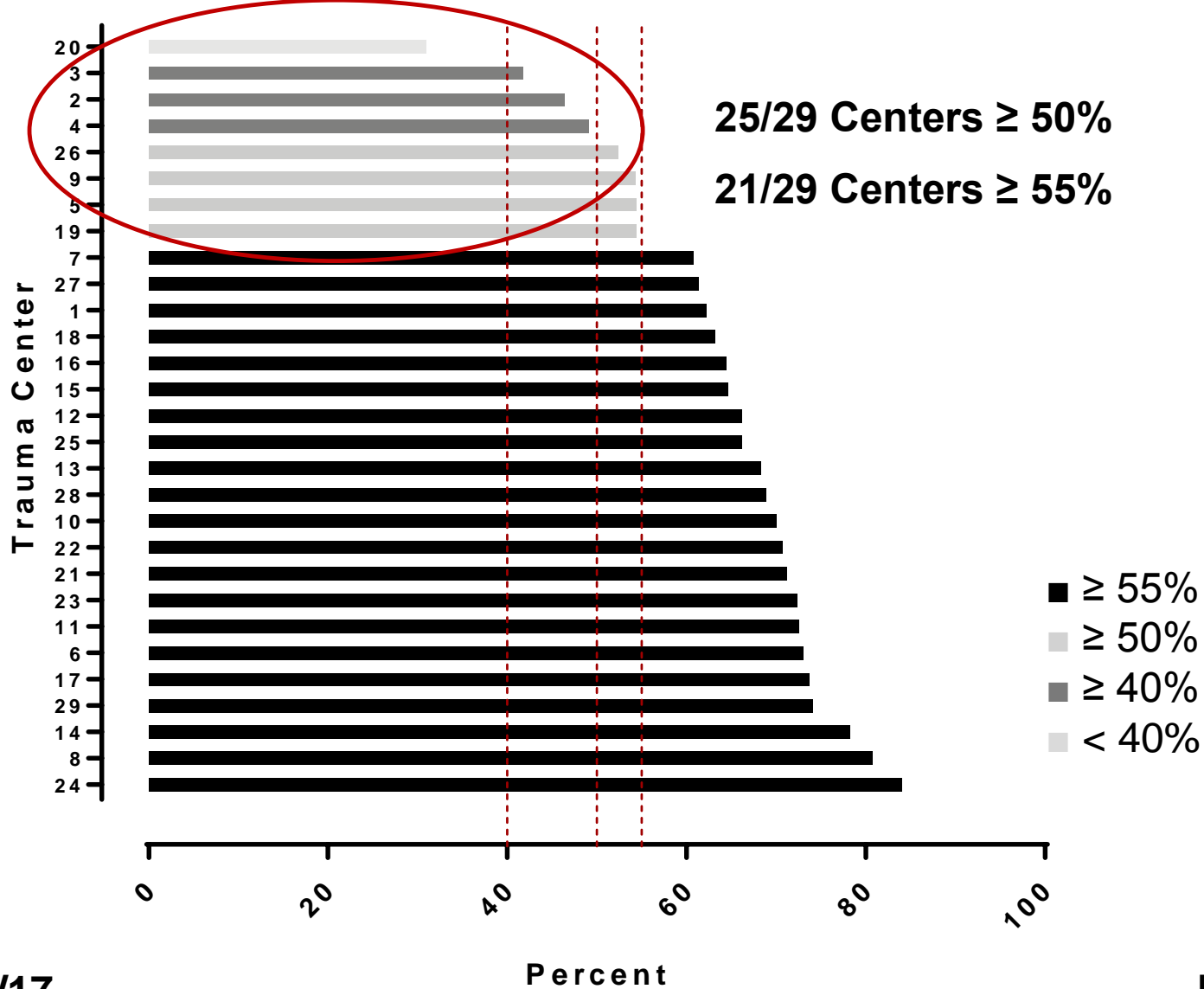
## #4 VTE Prophylaxis Initiated $\leq$ 48 hrs

- ◆ Hospital Target  $\geq$  55% = 10 points
- ◆ CQI Target 75% of hospitals  $\geq$  55%
  - 24/32 hospitals
  - Current is 21  $\rightarrow$  22 hospitals
  - May 2014: 7  $>$  50%

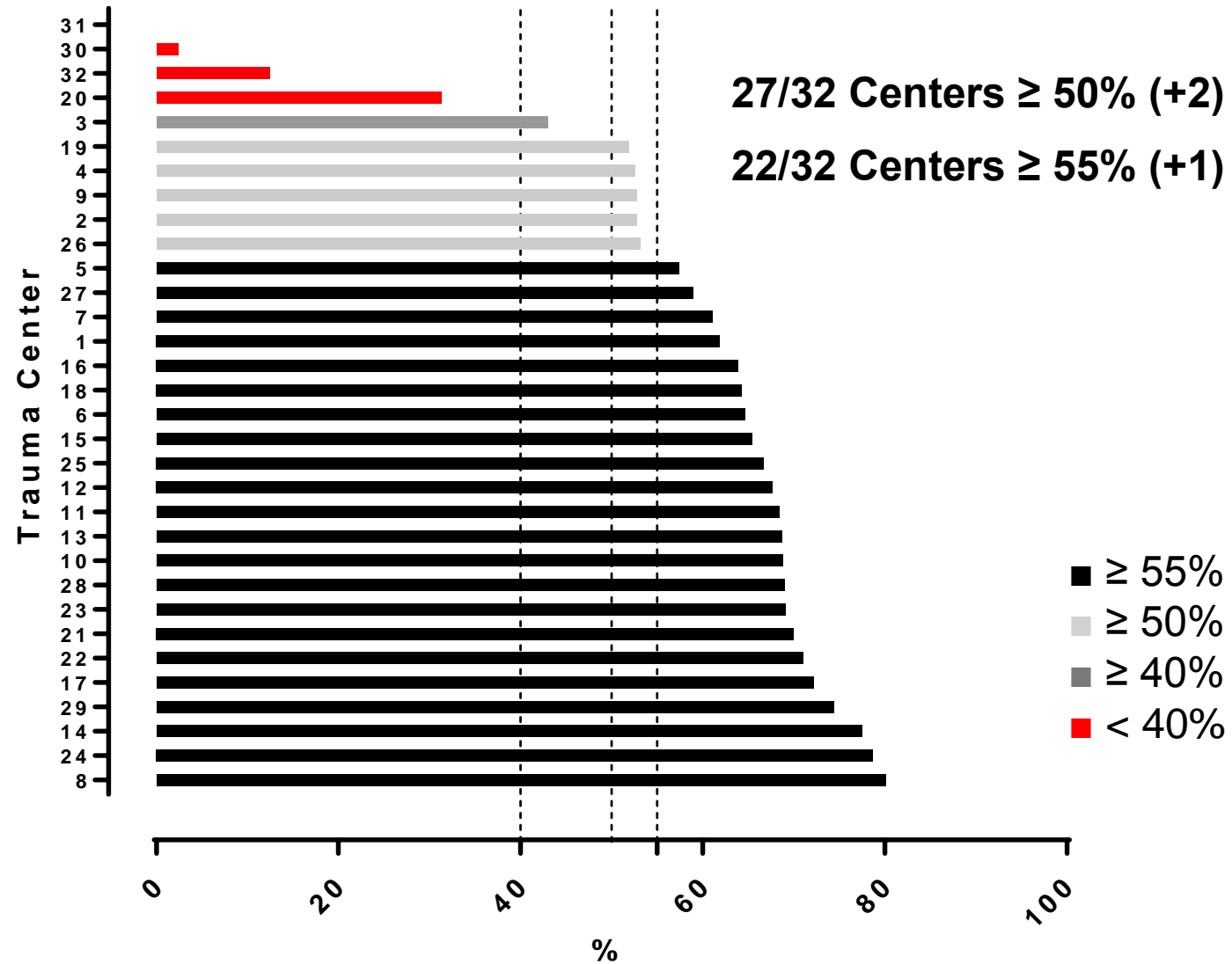




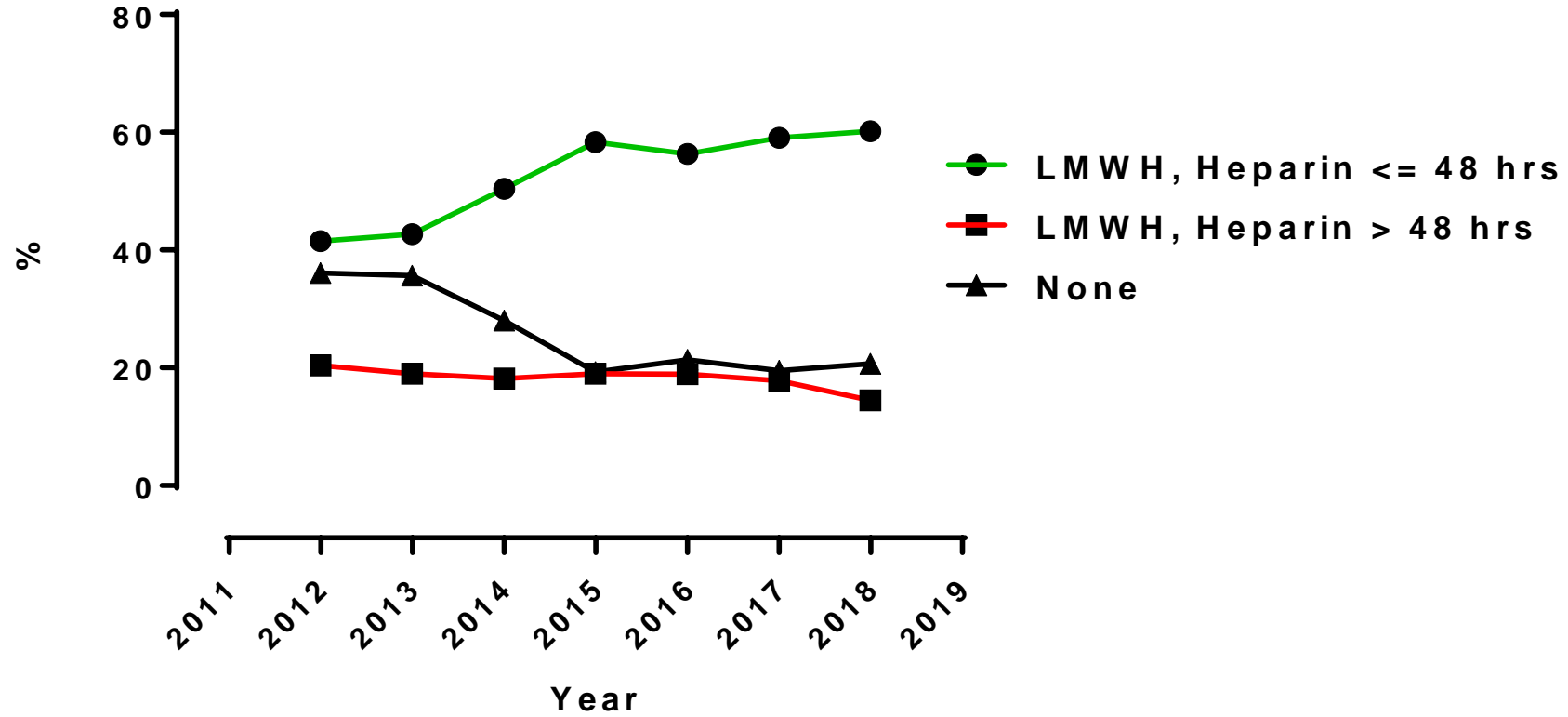
VTE Prophylaxis Timing  $\leq$  48 hrs  
 1/1/17 - 9/30/17



VTE Prophylaxis Timing  $\leq$  48 hrs  
1/1/17 - 1/31/18



## Timely VTE Prophylaxis

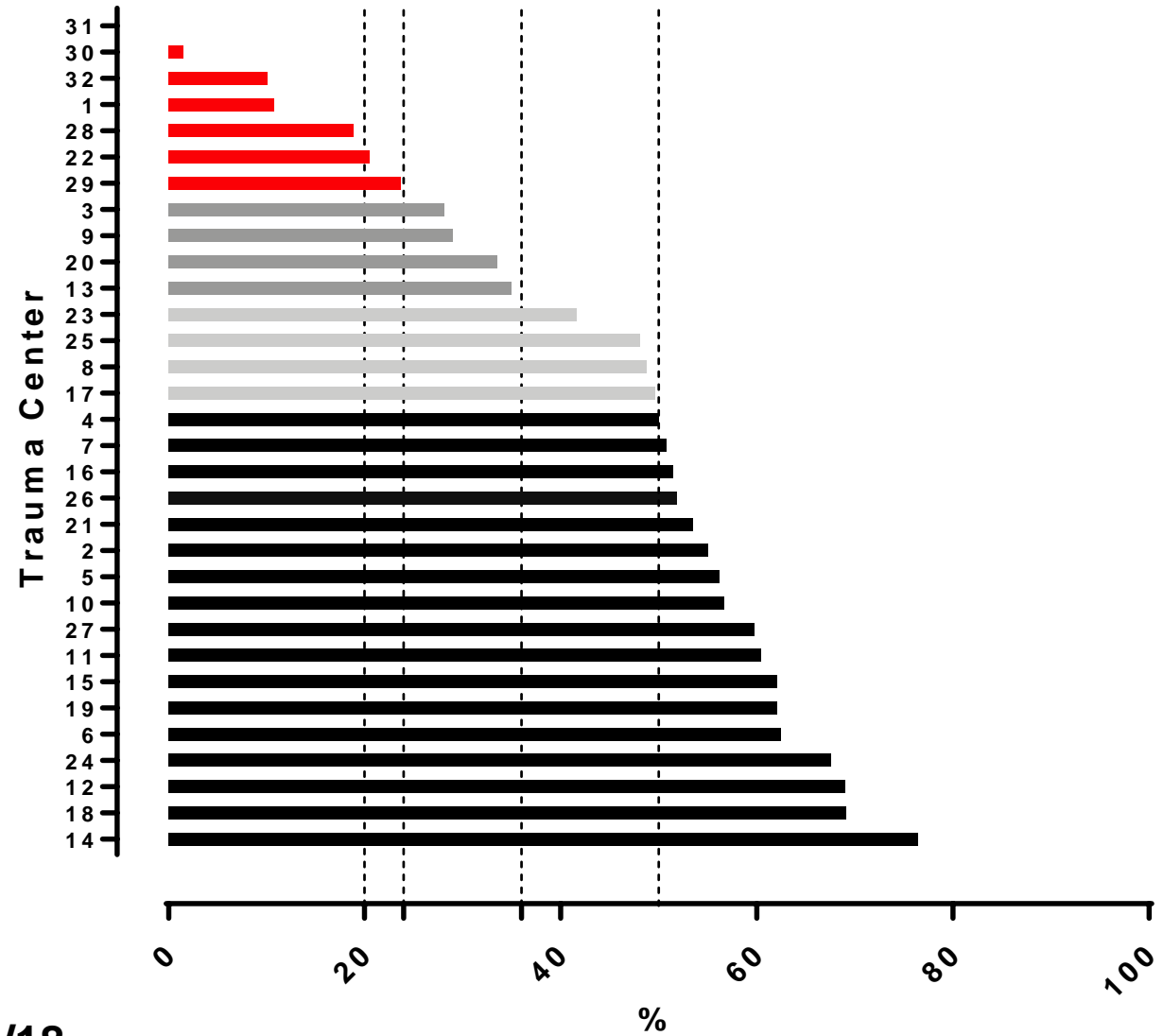


## #5 VTE Prophylaxis with LMWH

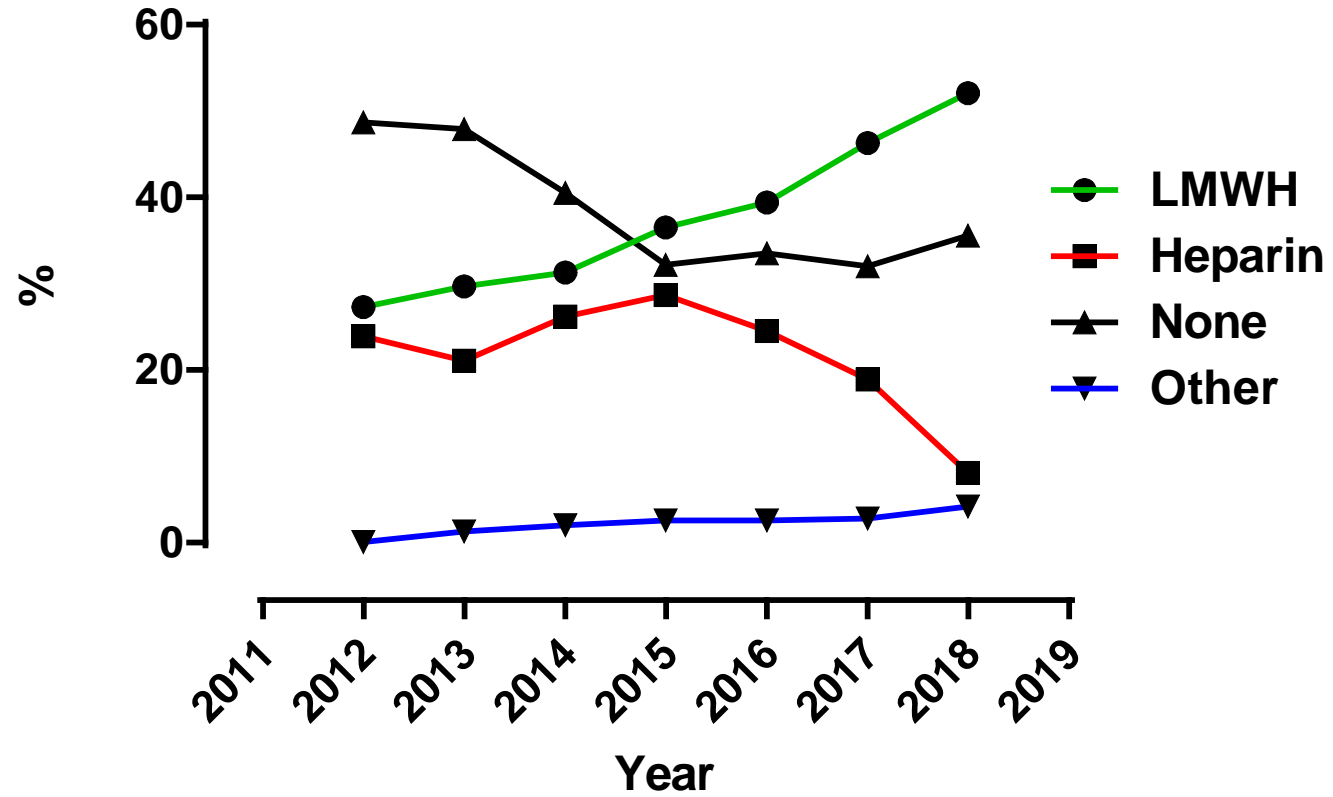
- ◆ Website
  - Practices > VTE Prophylaxis Type
  - Cohort = Cohort 2 (admit to Trauma)
  - No Signs of Life = Exclude DOAs
  - Transfers Out = Exclude Transfers Out
  - Default Period = Set for CQI Index time period
- ◆ LMWH (Type)
  - Hospital - Unadj %

# VTE Prophylaxis Type - LMWH

1/1/17 - 1/31/18



## Type VTE Prophylaxis



## Z-score

- ◆ Measure of trend in outcome over time
- ◆ Hospital specific
  - Compared to yourself
- ◆ Standard deviation
- ◆  $> 1$  getting worse
- ◆ 1 to -1 flat
- ◆  $< -1$  getting better

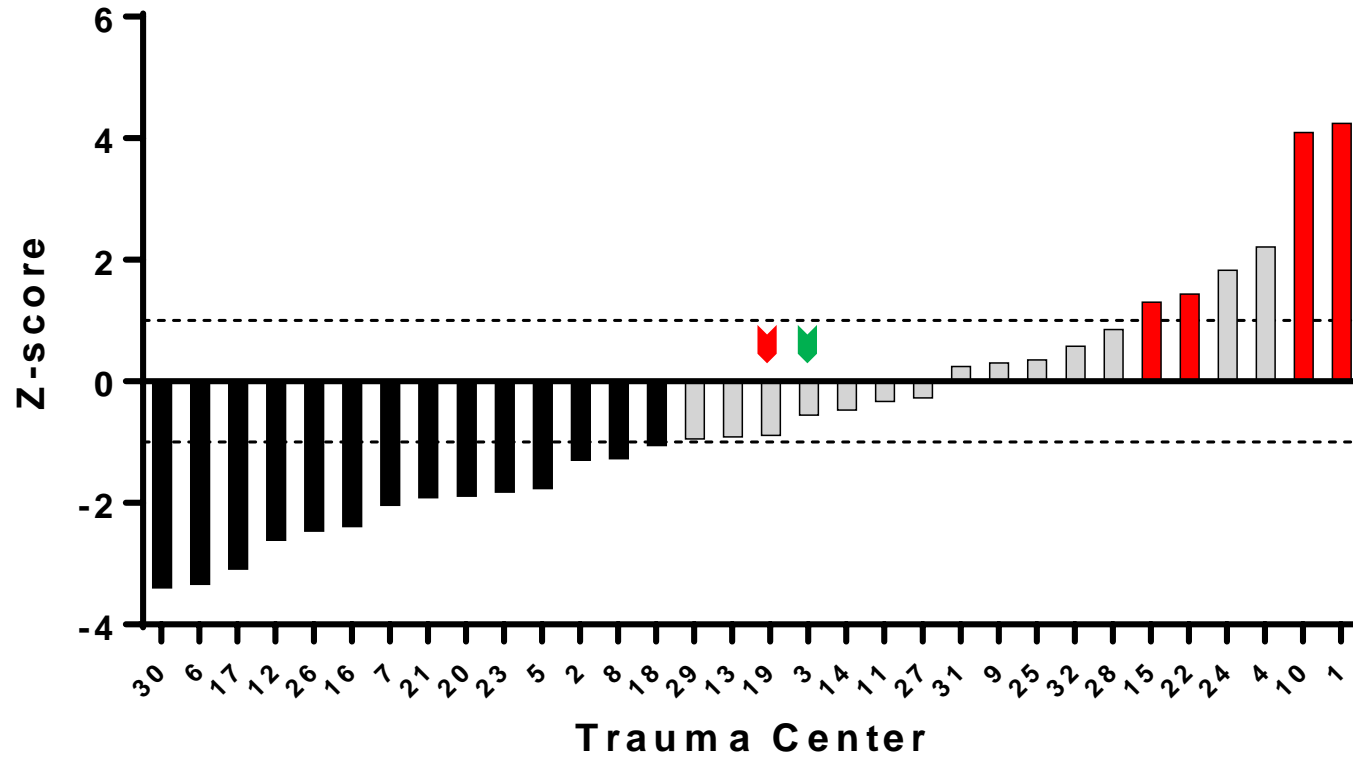
## Z-score

- ◆ Time: 7/1/2015 to 1/31/18
- ◆ Cohort 2
- ◆ Exclude if no signs of life
- ◆ Exclude transfers out



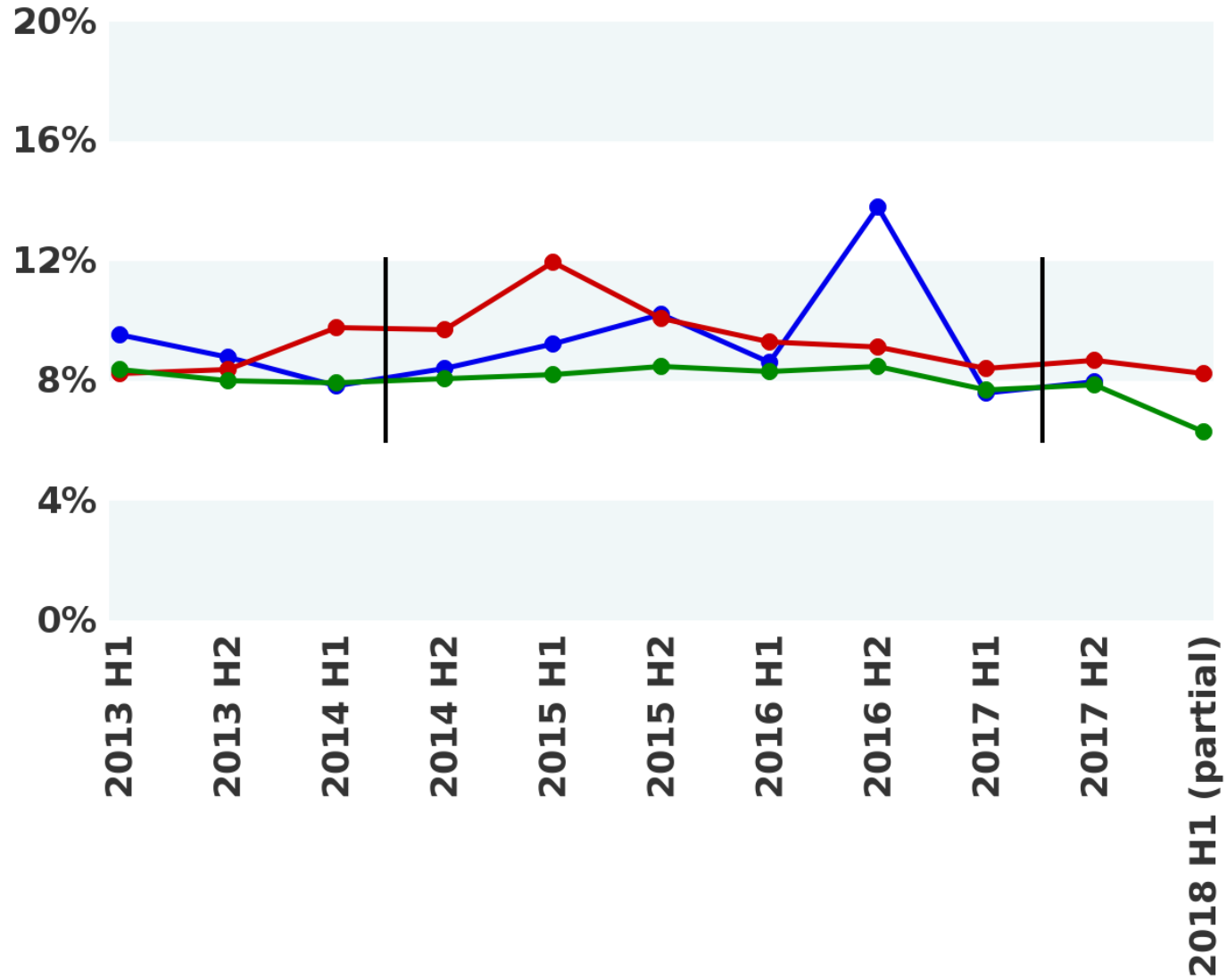
# #7 Serious Complication Rate (Z-score)

Z-score - Serious Complication Rate  
7/1/15 - 1/31/18



**Outcomes Overview - Serious Complications  
Cohort 2 (Admit to Trauma Service), Exclude DOAs**

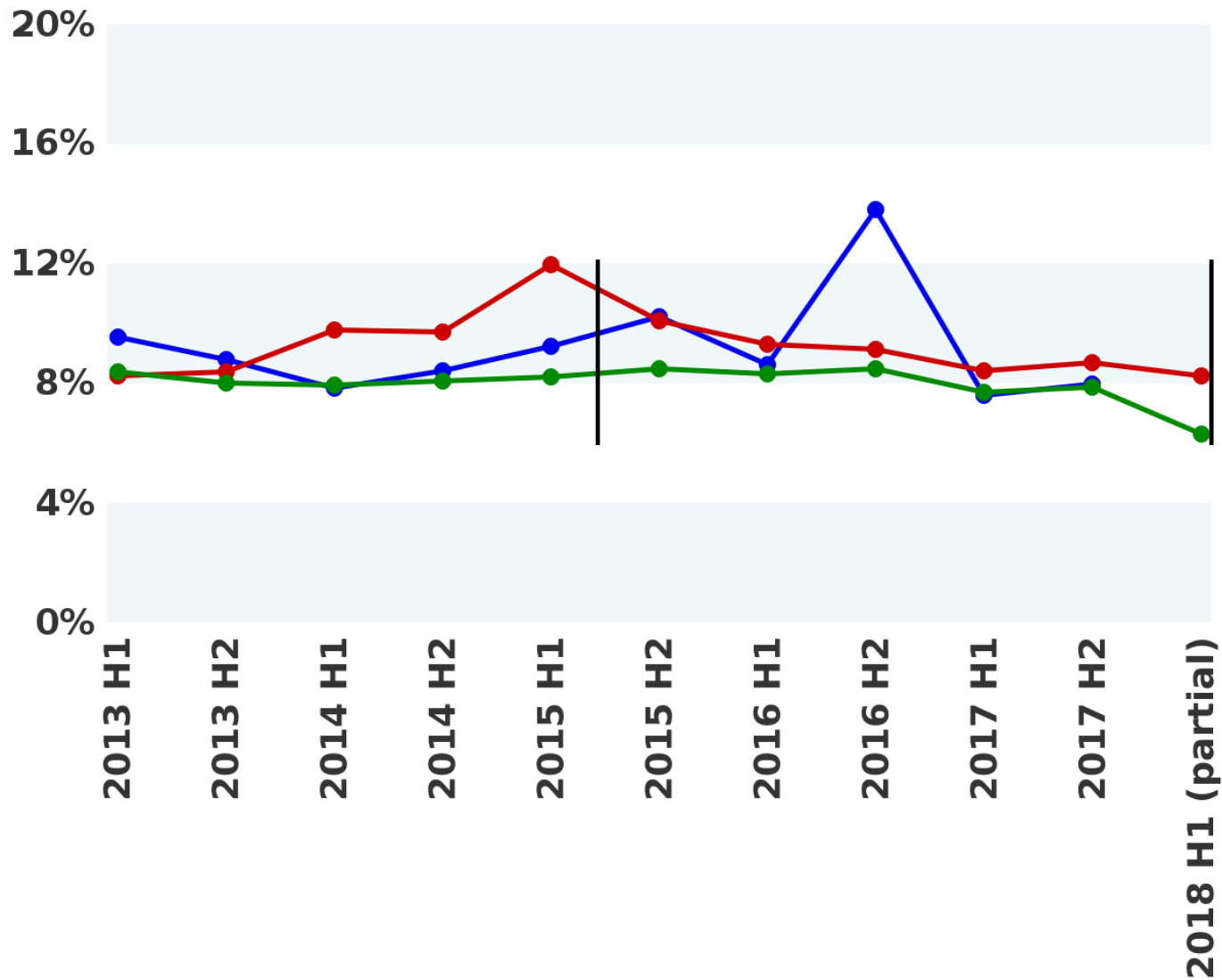
- ◆ Center 19
  - Getting better
    - ◆ - Z score
  - Plateau
    - ◆ ave Z score
  
- ◆ Center 3
  - Getting worse
    - ◆ + Z score
  - Plateau
    - ◆ ave Z score



LEGEND ■ Center 3 ■ Center 19 ■ MTQIP - All

**Outcomes Overview - Serious Complications  
Cohort 2 (Admit to Trauma Service), Exclude DOAs**

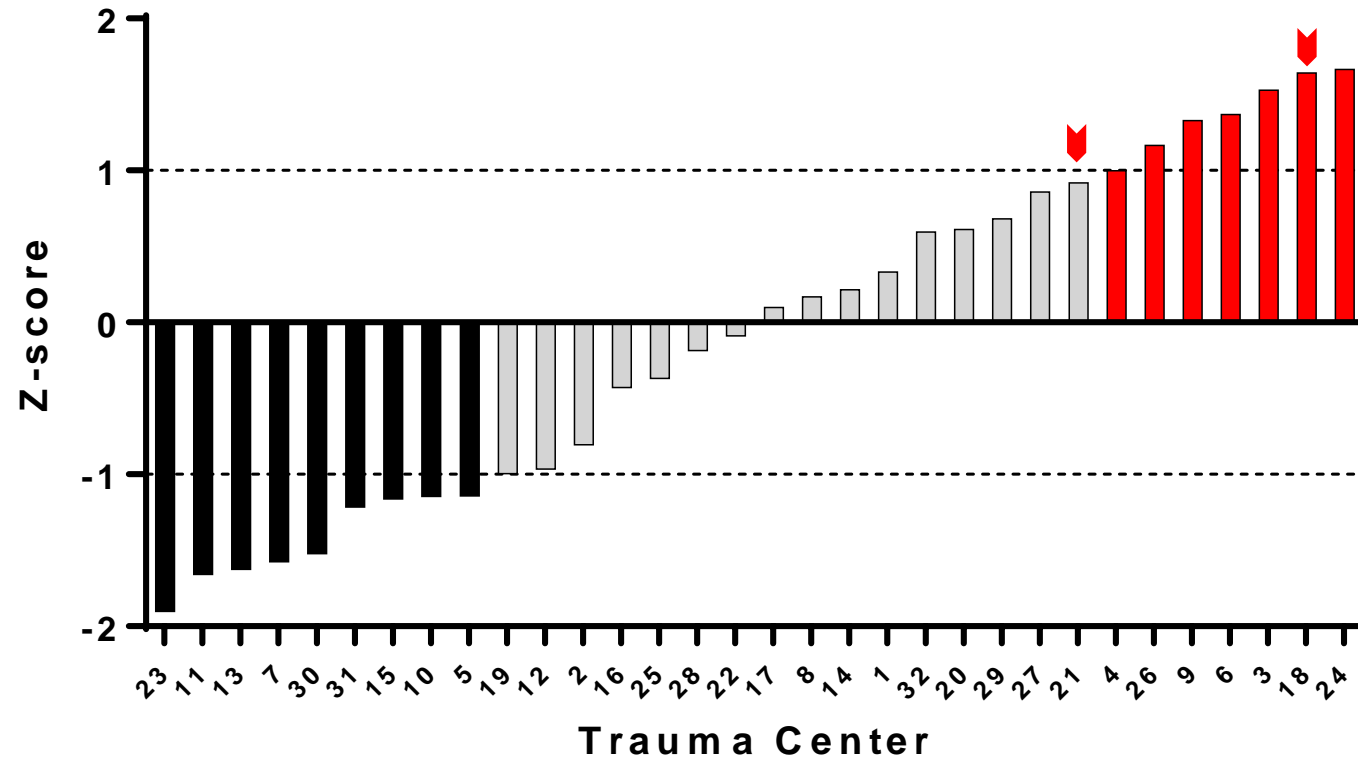
- ◆ Center 19
  - Getting better
  - ◆ - Z score
  - Plateau
  - ◆ ave Z score
- ◆ Center 3
  - Getting worse
  - ◆ + Z score
  - Plateau
  - ◆ ave Z score



LEGEND ■ Center 3 ■ Center 19 ■ MTQIP - All

# # 8 Mortality Rate (Z-score)

Z-score - Mortality Rate  
7/1/15 - 1/31/18



### Outcomes Overview - Dead Cohort 2 (Admit to Trauma Service), Exclude DOAs

#### ◆ Center 18

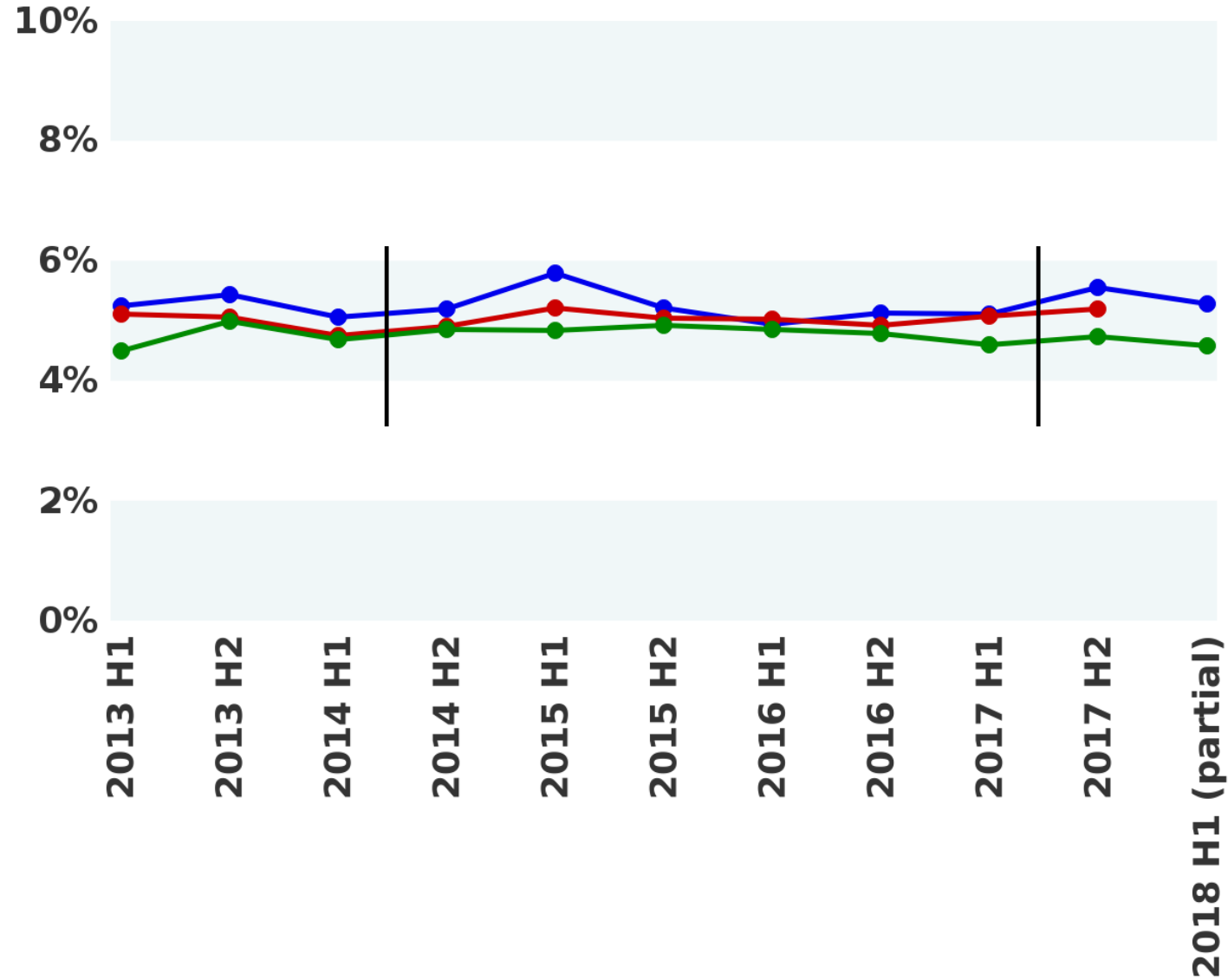
■ Getting better  
◆ - Z score

■ Getting worse  
◆ + Z score

#### ◆ Center 21

■ Plateau  
◆ ave Z score

■ Getting slightly worse  
◆ + Z score



LEGEND ■ Center 18 ■ Center 21 ■ MTQIP - All

### Outcomes Overview - Dead Cohort 2 (Admit to Trauma Service), Exclude DOAs

#### ◆ Center 18

■ Getting better

◆ - Z score

■ Getting worse

◆ + Z score

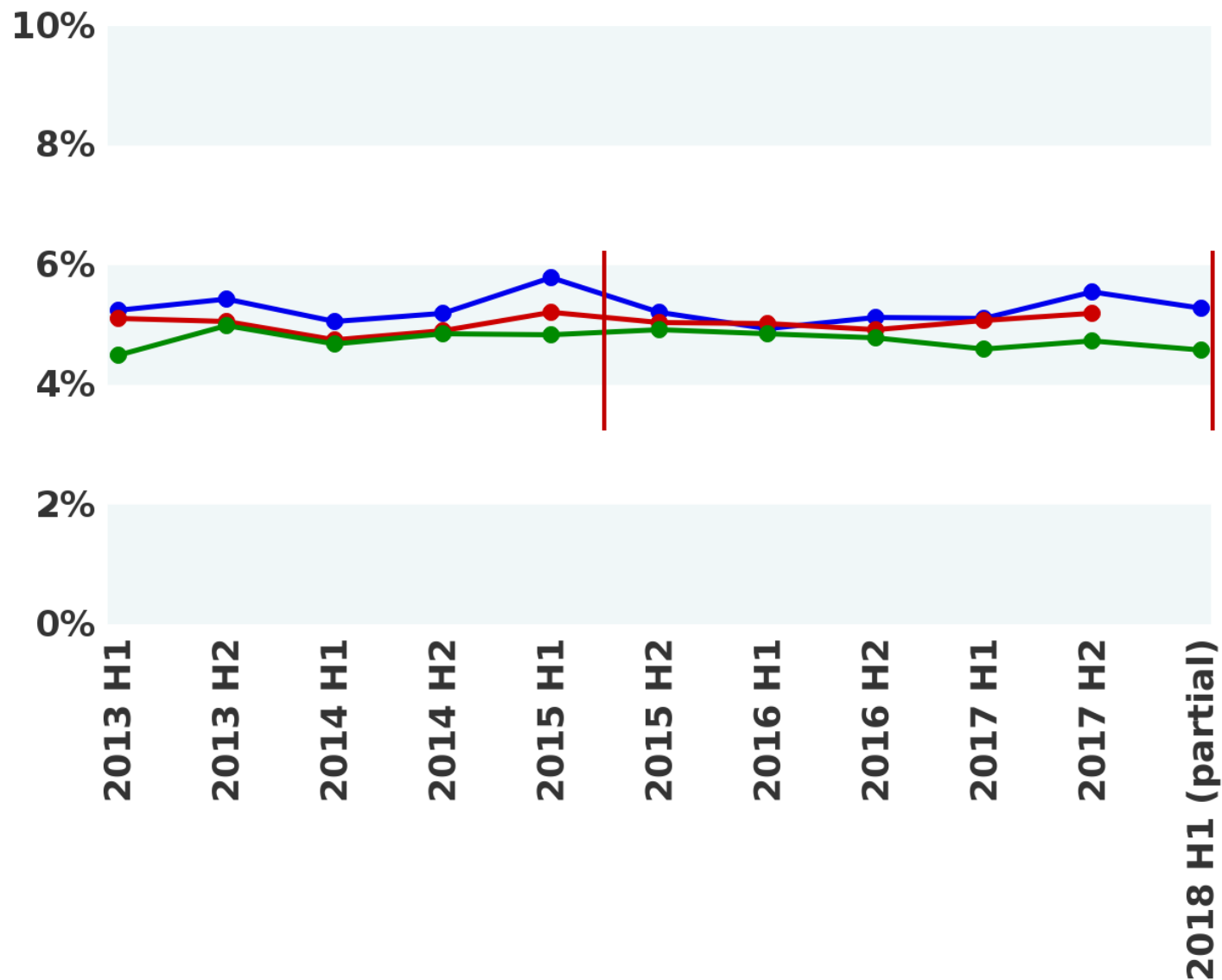
#### ◆ Center 21

■ Plateau

◆ ave Z score

■ Getting slightly worse

◆ + Z score



LEGEND ■ Center 18

■ Center 21

■ MTQIP - All

# Collaborative

- ◆ VTE rate 1.3 → 1.1% (2017, 1.2%)
- ◆ LMWH use > 50% collaborative (2017, 46%)
- ◆ VTE prophylaxis timely
  - ≥ 55% within 48 hrs (hospital)
  - 75% of hospitals (24/32), current 22/32
- ◆ PRBC to plasma ratio ≤ 2.0 in 80% of patients (2017, 79%)
- ◆ Serious complication rate, improvement (2017, 7.8% ↓ from 8.5%)
- ◆ Mortality rate, improvement (2017, 4.4% ↓ from 4.8%)
- ◆ IVC filter rate, maintain ≤ 0.5% (2017, 0.38%)
- ◆ TBI intervention in eligible patients ≥ 75% (2017, 69%)
- ◆ TBI intervention timeliness ≥ 80% (2017, 80.5%)
- ◆ Open Fracture, TBI and anticoagulation baseline

# Isolated Hip Fracture Volume (2017)

