

2025 FCOT TQIP Review

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2025 FCOT TQIP Review

- **Axiom**
 - Outcomes are a marker of:
 - Care delivered (Care Issue!)
 - Documentation provided (Documentation Issue)
 - Data extraction (Data Extraction Issue)
 - PIPS
- **OWN IT!**
- **“You cannot fix a problem you refuse to acknowledge.”**
 - -Margaret Heffernan- author, professor, businesswoman



2025 FCOT TQIP Review

- Each TQIP report is shared with stakeholders
 - Trauma Surgeons
 - Orthopedics
 - Neurosurgery
 - Emergency Medicine
 - Anesthesia
 - Radiology
 - Geriatric Providers
 - Nursing
 - Administration
- TQIP (portions) presented at monthly TOPSC to highlight issues
- TQIP reports presented biannually at Trauma Conference and to hospital executives
- TQIP benchmarking incorporated in Peer Review
- Plans developed and again shared with stakeholders-everyone has to provide 2 possible ways to get better

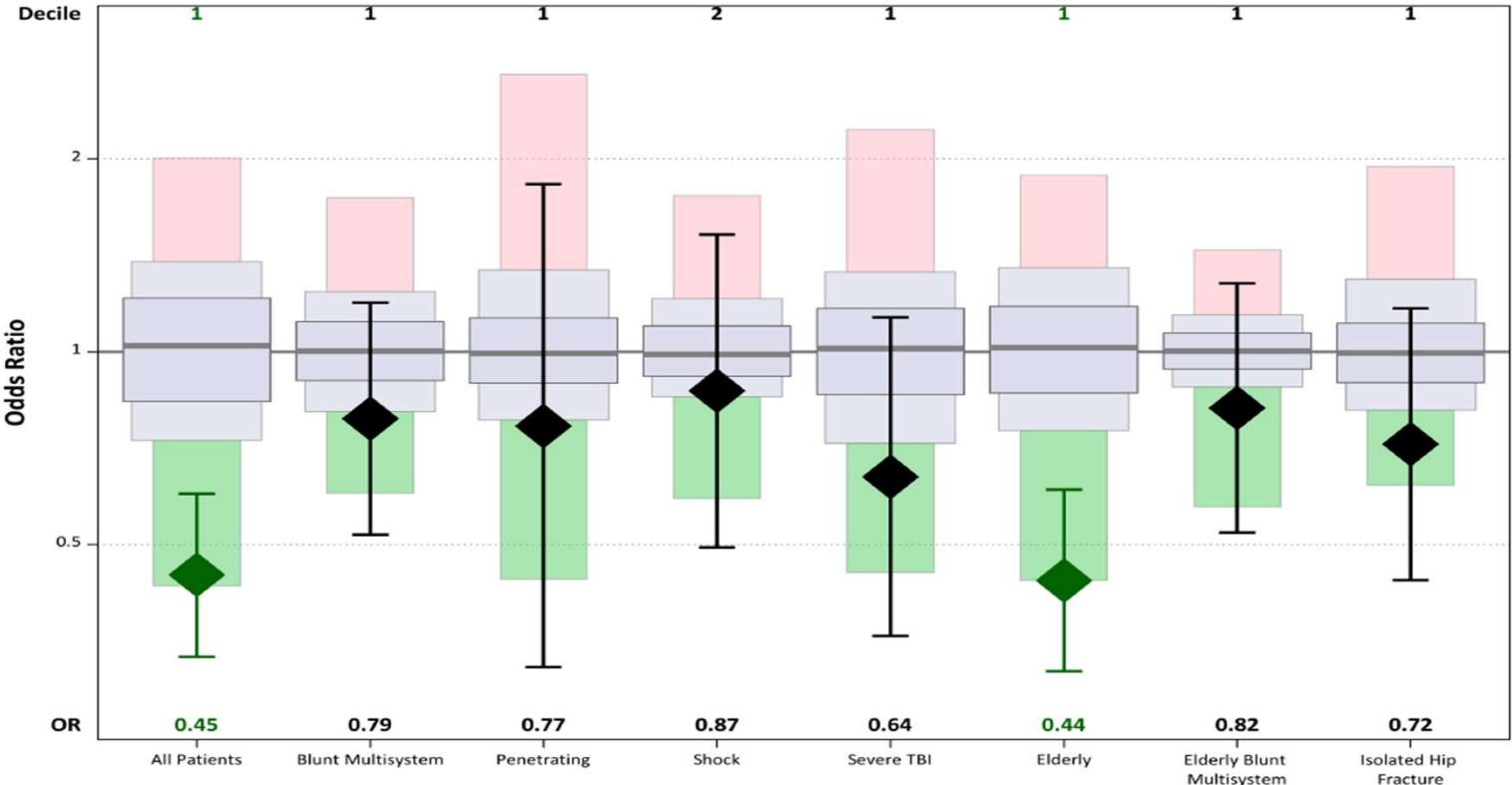
2025 FCOT TQIP Review

- Where are we? (Current Report)
- Where were we? (Previous 2 Reports)
- Where are we going? (plan for the future)

2025 FCOT TQIP Review

2024 Spring TQIP MORTALITY

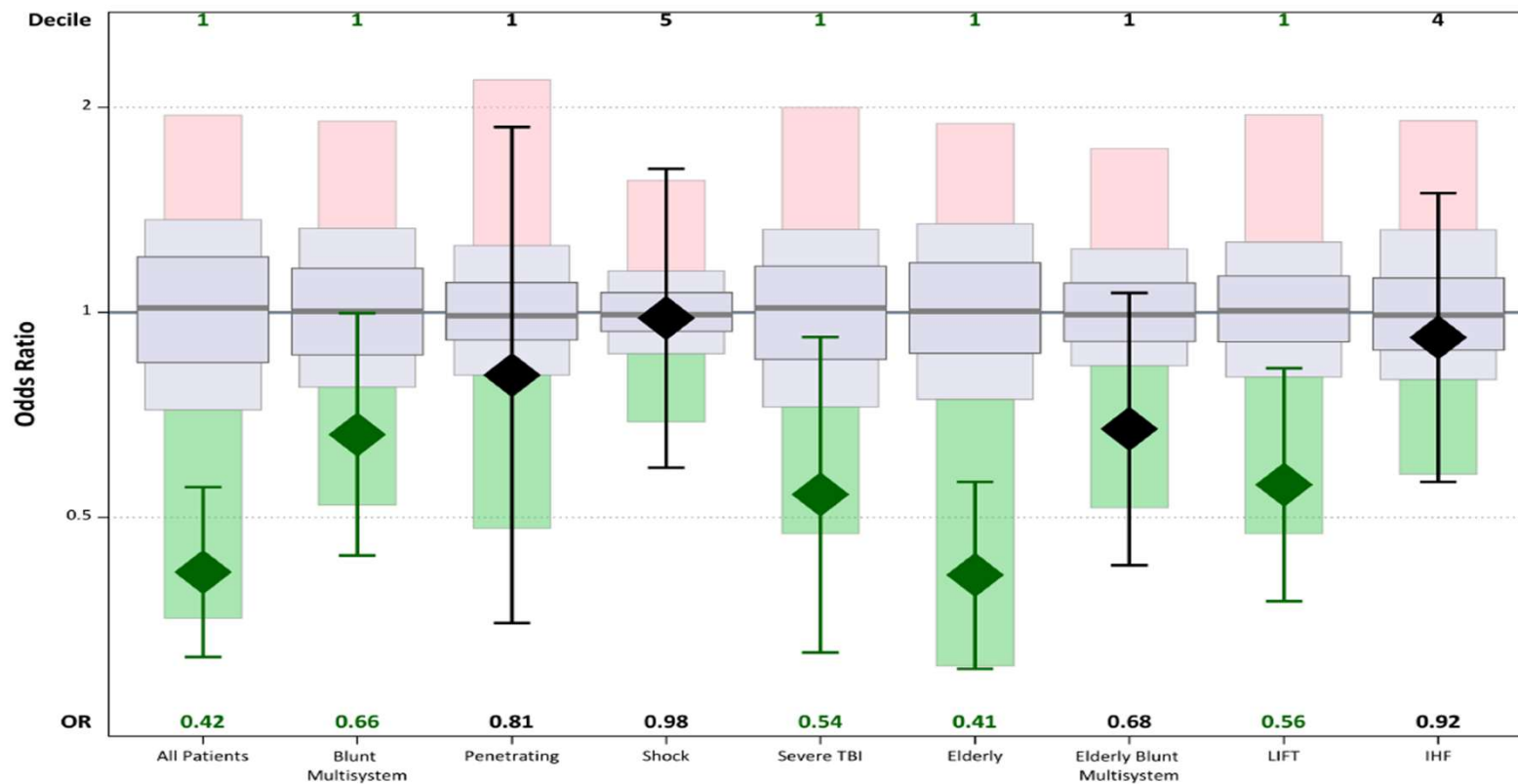
Figure 2: Risk-Adjusted Mortality by Cohort



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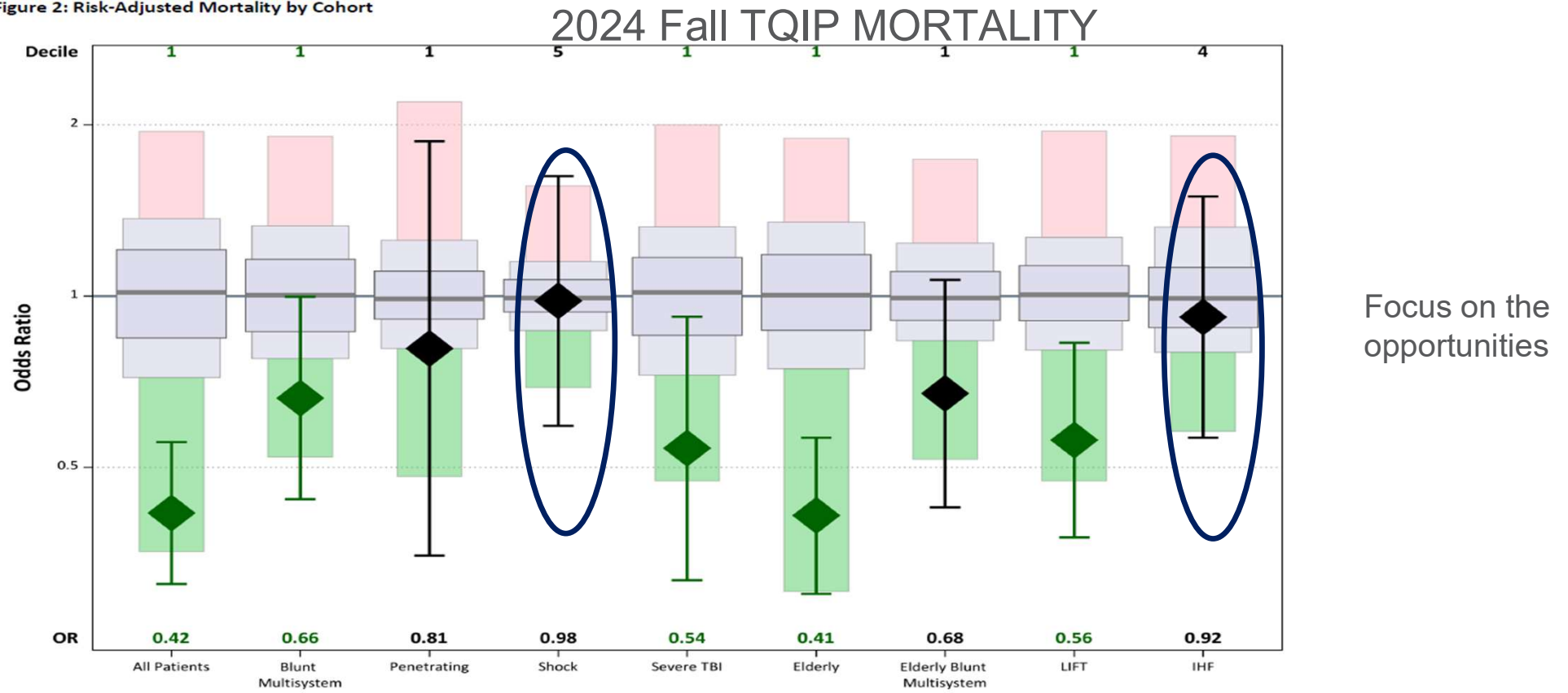
2024 Fall TQIP MORTALITY

Figure 2: Risk-Adjusted Mortality by Cohort



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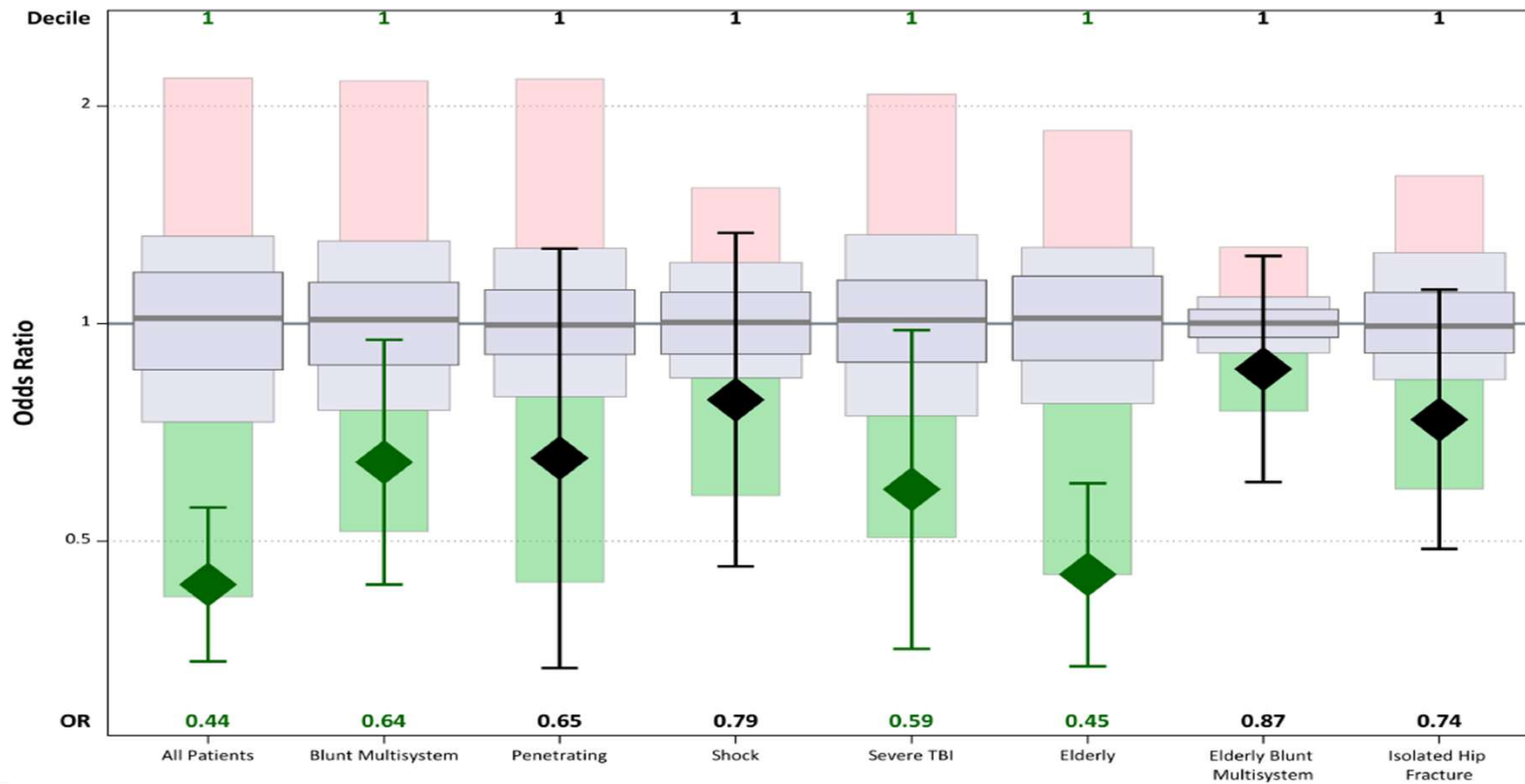
Figure 2: Risk-Adjusted Mortality by Cohort



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2024 Spring TQIP EVENTS (Complications)

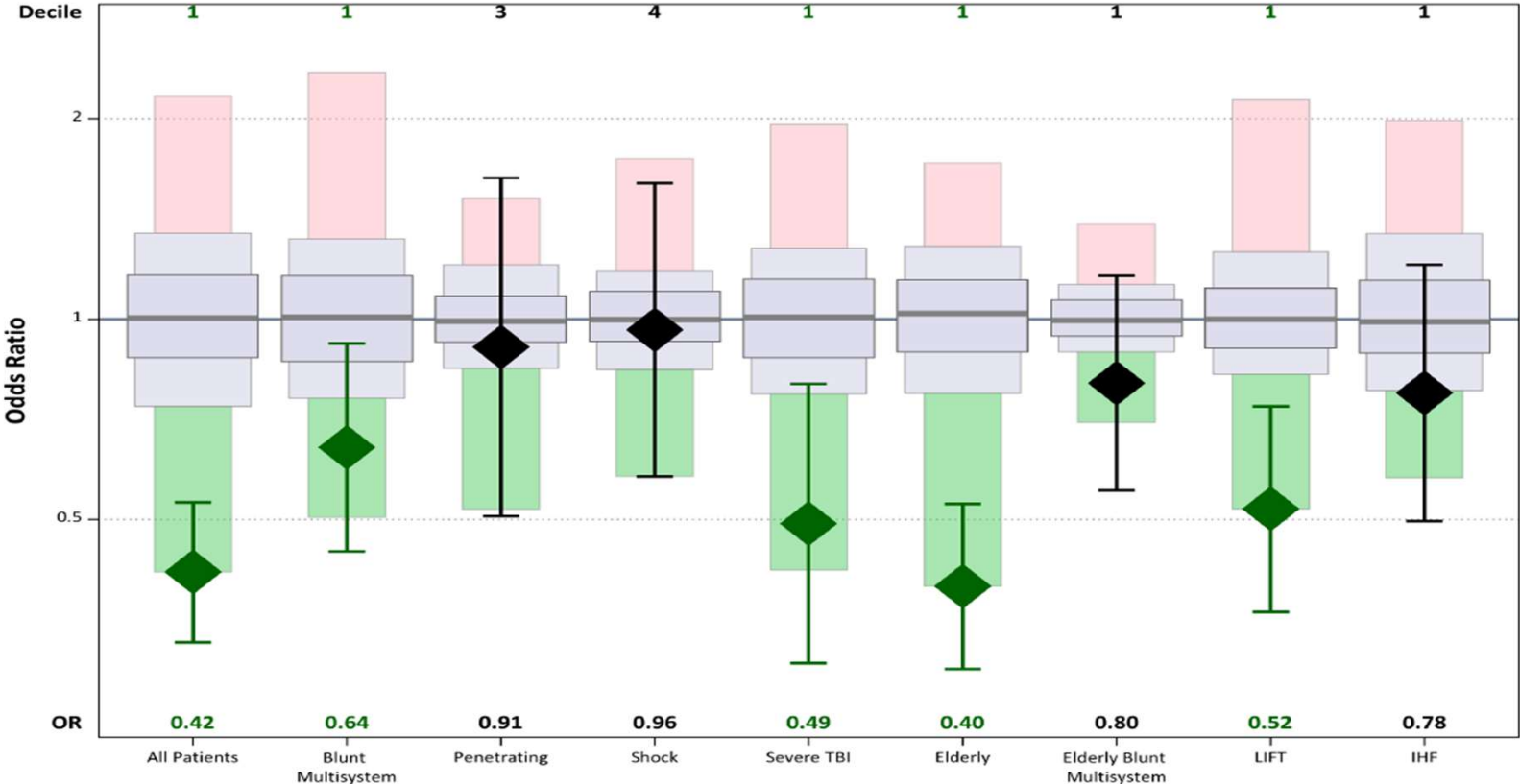
Figure 4: Risk-Adjusted Major Hospital Events Including Death by Cohort



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2024 Fall TQIP EVENTS (Complications)

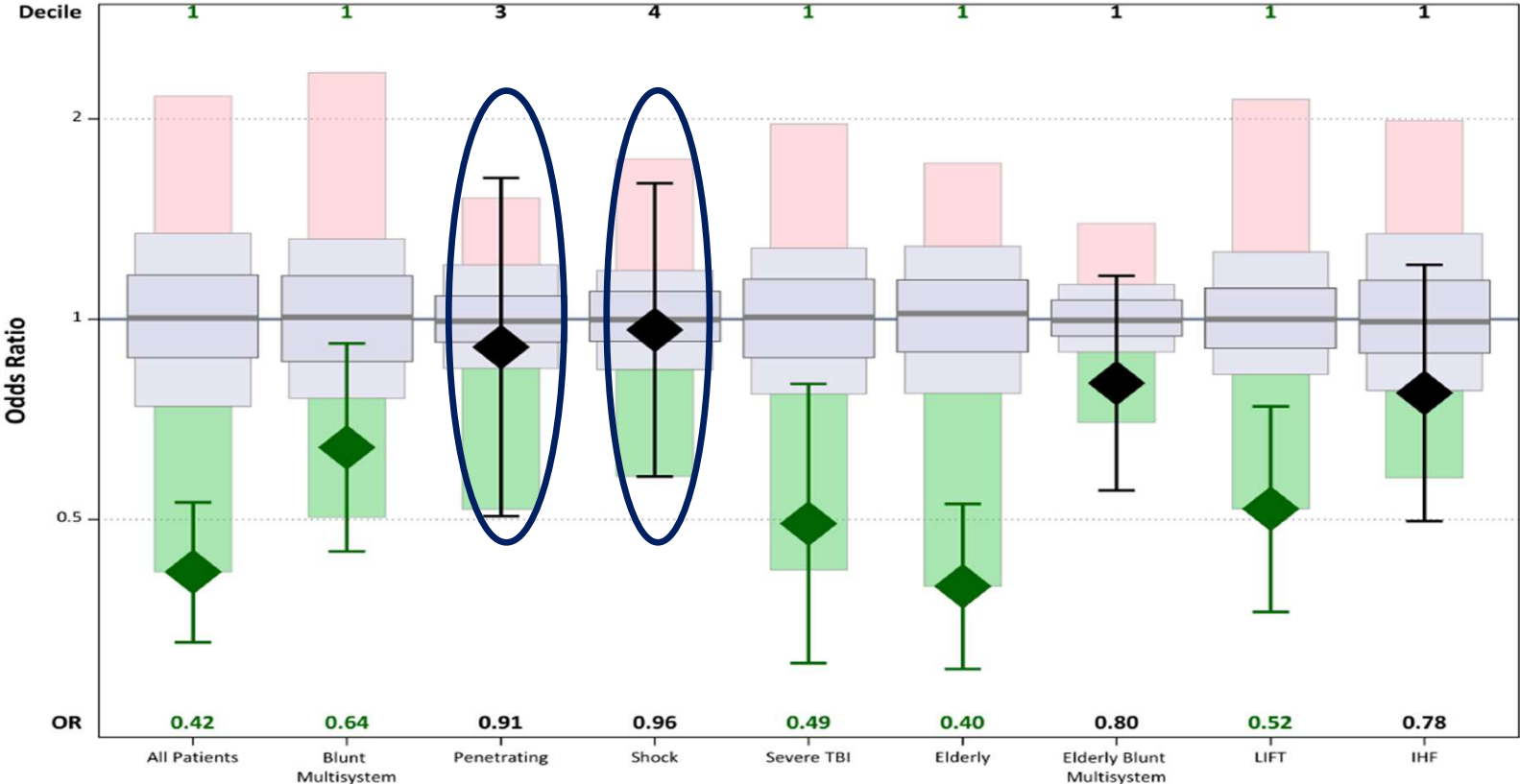
Figure 4: Risk-Adjusted Major Hospital Events Including Death by Cohort



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2024 Fall TQIP EVENTS (Complications)

Figure 4: Risk-Adjusted Major Hospital Events Including Death by Cohort



Focus on the opportunities

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Events=Complications

Table 12: Hospital Events by Cohort*

Cohort	Group	Patients N	Null Values		Organ Dysfunction				
			Unknown (%) ¹	None (%)	Acute Kidney Injury (%)	Acute Respiratory Distress Syndrome (%)	Cardiac Arrest with CPR (%)	Stroke/CVA (%)	Myocardial Infarction (%)
All Patients	All Hospitals	416,038	0.0	88.5	0.8	0.4	1.3	0.5	0.1
	Your Hospital	1,078	0.0	91.8	0.6	0.0	1.6	0.1	0.4
Blunt Multisystem	All Hospitals	60,844	0.0	75.9	2.0	1.3	3.4	1.2	0.2
	Your Hospital	172	0.0	82.6	2.9	0.0	5.8	0.6	1.2
Penetrating	All Hospitals	17,294	0.1	80.7	1.8	0.7	4.4	0.5	0.1
	Your Hospital	18	0.0	88.9	0.0	0.0	0.0	0.0	0.0
Shock	All Hospitals	16,983	0.0	71.5	3.3	1.6	7.3	1.2	0.2
	Your Hospital	23	0.0	73.9	0.0	0.0	8.7	0.0	4.3
Severe TBI	All Hospitals	27,803	0.1	72.6	1.7	1.6	5.5	1.6	0.1
	Your Hospital	62	0.0	83.9	1.6	0.0	6.5	0.0	1.6
Elderly	All Hospitals	181,034	0.0	88.3	0.7	0.2	1.2	0.5	0.2
	Your Hospital	559	0.0	91.1	0.2	0.0	1.3	0.2	0.5
Elderly Blunt Multisystem	All Hospitals	18,734	0.0	75.6	2.3	0.7	3.8	1.3	0.4
	Your Hospital	74	0.0	82.4	1.4	0.0	5.4	1.4	2.7
LIFT	All Hospitals	69,543	0.0	90.0	0.6	0.1	0.7	0.4	0.3
	Your Hospital	334	0.0	93.4	0.3	0.0	1.5	0.0	0.0
IHF	All Hospitals	71,283	0.0	92.6	0.4	0.0	0.5	0.4	0.2
	Your Hospital	196	0.0	94.9	0.5	0.0	2.0	0.0	0.0

* In addition to centers excluded from all risk-adjusted models, centers excluded from risk-adjusted hospital events models are excluded from the All Hospitals rows
¹ Unknown (%) is calculated as the total number of unknown hospital events among all possible hospital events for patients included in this table

2025 FCOT TQIP Review

Events=Complications

Table 12: Hospital Events by Cohort* (continued)

Cohort	Group	Patients	Assorted							
		N	Pressure Ulcer (%)	Alcohol Withdrawal Syndrome (%)	Deep Vein Thrombosis (%)	Delirium (%)	Pulmonary Embolism (%)	Unplanned Intubation (%)	Unplanned Visit to OR (%)	Unplanned Admission to ICU (%)
All Patients	All Hospitals	416,038	0.9	1.0	1.1	2.5	0.6	2.0	1.9	3.0
	Your Hospital	1,078	0.5	0.3	0.6	0.0	0.5	1.2	1.0	4.5
Blunt Multisystem	All Hospitals	60,844	2.4	1.2	2.8	5.1	1.6	4.3	4.4	4.5
	Your Hospital	172	1.2	0.0	0.6	0.0	0.6	1.7	2.3	5.2
Penetrating	All Hospitals	17,294	1.2	0.8	2.5	1.9	1.4	1.9	6.5	3.5
	Your Hospital	18	0.0	0.0	5.6	0.0	5.6	5.6	5.6	0.0
Shock	All Hospitals	16,983	2.9	1.2	3.7	3.7	1.7	4.1	6.2	3.8
	Your Hospital	23	0.0	0.0	0.0	0.0	4.3	0.0	4.3	4.3
Severe TBI	All Hospitals	27,803	2.9	1.4	3.3	4.6	1.3	3.3	4.3	3.1
	Your Hospital	62	1.6	0.0	1.6	0.0	1.6	0.0	0.0	3.2
Elderly	All Hospitals	181,034	0.8	0.6	0.7	3.8	0.4	2.3	1.2	3.6
	Your Hospital	559	0.4	0.0	0.5	0.0	0.0	1.3	0.5	5.5
Elderly Blunt Multisystem	All Hospitals	18,734	2.1	0.9	1.8	7.4	1.0	5.7	2.9	5.9
	Your Hospital	74	1.4	0.0	1.4	0.0	0.0	2.7	2.7	4.1
LIFT	All Hospitals	69,543	0.8	0.1	0.4	4.4	0.3	1.2	0.3	3.7
	Your Hospital	334	0.3	0.0	0.0	0.0	0.0	1.8	0.0	4.2
IHF	All Hospitals	71,283	0.5	0.2	0.3	3.2	0.3	0.6	0.2	2.6
	Your Hospital	196	0.0	0.0	0.0	0.0	0.0	1.5	0.0	3.1

* In addition to centers excluded from all risk-adjusted models, centers excluded from risk-adjusted hospital events models are excluded from the All Hospitals rows

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- **Table 12, 20 tracked “Events” (Complications)**
- **Less (16/20)**
- AKI
- ARDS
- Stroke/CVA
- CAUTI
- SSSI
- DSSI
- OSSI
- VAP
- Severe Sepsis
- Pressure ulcer
- Alcohol withdrawal
- DVT
- Delirium
- PE
- Unplanned intubation
- Unplanned OR

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- **Table 13, 20 tracked Events (Complications)**
 - Same (1/20)
 - CLABSI 0 (zero) reported in the country, again (750,000 pts)-

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- Table 12, 20 tracked **Events (Complications)-More (3/20)**
 - Unplanned ICU admission CI (**4.5% vs 3.0%**)
 - Cardiac arrest/CPR (**1.6% vs 1.4%**) CI- Medicine Reconciliation, Goals of Care
 - MI (**0.4% vs 0.1%**) CI PLAN: Medicine Reconciliation

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Table 7: Patient Demographic Characteristics by Cohort

Cohort	Group	Patients	
		N	Mean±STD Age (years)
All Patients	All Hospitals	416,038	57.5±22.2
	Your Hospital	1,078	62.4±22.4
Blunt Multisystem	All Hospitals	60,844	51.2±21.7
	Your Hospital	172	57.8±23.5
Penetrating	All Hospitals	17,294	34.5±14.1
	Your Hospital	18	35.8±14.9
Shock	All Hospitals	16,983	48.8±20.7
	Your Hospital	23	62.2±24
Severe TBI	All Hospitals	27,803	48.7±21.7
	Your Hospital	62	57.8±23.8
Elderly	All Hospitals	181,034	78.5±8.5
	Your Hospital	559	80.8±8.9
Elderly Blunt Multisystem	All Hospitals	18,734	77.3±8.5
	Your Hospital	74	81.3±8.3
LIFT	All Hospitals	69,543	84.6±6.2
	Your Hospital	334	86±6.2
IHF	All Hospitals	71,283	81.3±8.4
	Your Hospital	196	83.5±8.3

+5 years

+6 years

+1 years

+14 years

+9 years

+2 years

+4 years

+2 years

+2 years

There are 9 cohorts
Including the "ALL" cohort

Our pts are 2-14 years older
Depending on cohort

2025 FCOT TQIP Review

- Where were we 1 year ago and 6 months ago?
- Outliers from Fall 2023- 1 year ago to now
 1. **AKI**- CI!-Dr. Wilson Grand Rounds (avoidance of contrast with renal dysfunction, pharmacist and nephrologist on MDR. New PMG in place.
 2. **VAP** – CI! Dr. Renda, early bronchoscopy for TBI w/ RSI to diagnose aspiration and suction, lavage. New PMG in place.
 3. **Unplanned ICU – CI! still an issue (benchmark is adjusted)**
 4. ***Cardiac arrest/CPR – CI! still an issue (not adjusted)**
 5. ***MI – still an issue CI! (not adjusted)**

*= Not Adjusted for risk factors
CI=Care Issue, DI=Documentation Issue

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Spring 2024

1. Unplanned ICU admission, 5.3% vs 4.4% Expected
2. Cardiac arrest/CPR (still above benchmark, 16 pts vs 14 pts)
3. MI (still an issue, 5 pts vs 1 pt)
4. Pupillary response for sTBI (new issue)- (Table 8 for sTBI, 27.3%% vs 43.0%)
5. Midline shift with sTBI- (Table 8 for sTBI, 30.4% vs 33.5%)

Fall 2024

1. Unplanned ICU admission CI! better, 4.5% vs Expected 4.3%
2. *Cardiac arrest/CPR CI!(still above benchmark, 17 pts vs 14 pts)
3. *MI CI!(still an issue, 4 pts vs 1 pt)
4. Pupillary response DI WORSE 25.8% Ave 42.6% in sTBI in Table 8 for sTBI (Documentation issue)
5. Midline shift DI now above benchmark (41.9%, Ave 33.3%)

*= Not Adjusted for risk factors

CI=Care Issue, DI=Documentation Issue

2025 FCOT TQIP Review

- Previous issues- still issues (One of Four)- Care Issue

1. Unplanned ICU admission Care Issue

1. (Table 5, adjusted, better, 4.5% vs Expected (adjusted) 4.3%, (3% not adjusted)
2. New PMG on discharge/admit to SICU
 1. Oxygen requirement of NC or less to admit to floor or discharge from SICU
 2. Cardiac medications restarted, pharmacist at MDR
 3. Normalize electrolytes (K+, Mg++, nephrologist on MDR)
 4. No vasoactive drips if discharging from SICU

**If the patient needs ICU admission, ignore this issue and transfer to the ICU
“Patients first!”**

2025 FCOT TQIP Review

- Previous issues- still issues (Two of Four)- Care Issue

1. *Cardiac arrest/CPR Care Issue! (Table 12, still above benchmark, 1.6% (17pts) vs Ave 1.3% (14 pts))

1. Not adjusted

2. PLAN: Medical Reconciliation, esp. BB, statins, angina meds, CHF meds

3. Medical Reconciliation button stays RED until medications reconciled

4. Pharmacist at MDR

5. Review “Goals of Care”

6. Of note, this does NOT count pts who arrive in cardiac arrest with CPR.

*= Not Adjusted for risk factors

2025 FCOT TQIP Review

- Previous issues- still issues (Three of Four)- Care Issue

1. *MI Care Issue! (still an issue, 5 pts vs 1 pt)- Table 12

1. Not adjusted

2. PLAN: Medical Reconciliation, esp. BB, statins, angina meds, CHF meds

3. Medical Reconciliation button stays RED until medications reconciled

4. Pharmacist at MDR, Nephrologist at MDR

5. Geriatric provider utilized for older patients, more common to get troponins, EKG if new issues arise, such as atrial fibrillation with RVR

6. To lower atrial fibrillation with RVR, attention to fluid status of elderly patients

7. Daily BNaP on patients with CHF

*= Not Adjusted for risk factors

2025 FCOT TQIP Review

- **Previous issues- still issues (Four of Four)- Documentation Issue**

Pupillary response – Documentation Issue, ATLS recommends two variables be considered on all TBIs- 1)GCS and 2)pupillary response

- Pupillary response documentation -WORSE 25.8% Avg 42.6% in sTBI
- On review of the Spring 2024 report, pupillometer readings were not consistently documented despite using a pupilometer on all activations
 - All Level 1 and Level 2 activations need pupilometer results in H&P, spot checks by TMD with education to the team as needed
 - All TBI bleeds need pupilometer results in medical record.

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- **Table 8, Injury Severity**

		Pupillary Response-Abnormal (%) ³
Severe TBI	All Hospital	42.6
	Your Hospital	25.8

Deficiency 4 of 4
sTBI GCS 8 and bleed

2025 FCOT TQIP Review

- **Progress over last year**

1. **AKI**- Care Issue! resolved, Dr. Wilson Grand Rounds, avoid contrast in elderly, avoid nephrotoxic meds, MDR, nephrologist on daily MDR
2. **VAP** – Care Issue! resolved, Dr. Renda recommended early bronchoscopy for TBI/RSI during Trauma Grand Rounds
3. **Midline shift** –Documentation issue resolved. Continue to place this in injury pattern in the EMR
4. **Unplanned ICU – Care Issue!** (Registry data predicts 2% (3%) for Spring 2025) (benchmark is adjusted) **New PMG**
5. ***Cardiac arrest/CPR – Care Issue!** (Registry data predicts 1.1% (1.3%) Spring 2025) (not adjusted), **Medicine Reconciliation, Pharmacist at MDR, Goals of Care**
6. ***MI – Care Issue!** (Registry data predicts *Zero* (0.1%) MI for Spring 2025) (not adjusted), **Medical Reconciliation, Pharmacist at MDR**
7. **Pupillary Response in sTBI-** Documentation Issue, spot checks (Registry data suggests still an active issue for Spring 2025 TQIP)

2025 FCOT TQIP Review

2024 Fall TQIP MORTALITY

Table 2: Risk-Adjusted Mortality by Cohort

Cohort	Patients N	Mortality				Odds Ratio and 95% Confidence Interval			Outlier	Decile
		Observed Events	Observed (%)	Expected (%)	TQIP Average (%)	Odds Ratio	Lower	Upper		
All Patients	1,078	60	5.6	10.4	7.5	0.42	0.31	0.55	Low	1
Blunt Multisystem	172	31	18.0	24.0	14.6	0.66	0.44	1.00	Low	1
Penetrating	18	0	0.0	6.6	10.7	0.81	0.35	1.87	Average	1
Shock	23	9	39.1	40.4	26.4	0.98	0.59	1.63	Average	5
Severe TBI	62	20	32.3	46.4	46.9	0.54	0.32	0.92	Low	1
Elderly	559	48	8.6	16.3	9.8	0.41	0.30	0.56	Low	1
Elderly Blunt Multisystem	74	21	28.4	39.0	20.4	0.68	0.43	1.07	Average	1
LIFT	334	12	3.6	8.8	5.9	0.56	0.38	0.83	Low	1
IHF	196	10	5.1	5.8	3.4	0.92	0.56	1.50	Average	4

2025 FCOT TQIP Review

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Penetrating	18	0	0.0	6.6	10.7	0.81	0.35	1.87	Average	1
Shock	23	9	39.1	40.4	26.4	0.98	0.59	1.63	Average	5
Severe TBI	62	20	32.3	46.4	46.9	0.54	0.32	0.92	Low	1
Elderly	559	48	8.6	16.3	9.8	0.41	0.30	0.56	Low	1
Elderly Blunt Multisystem	74	21	28.4	39.0	20.4	0.68	0.43	1.07	Average	1
LIFT	334	12	3.6	8.8	5.9	0.56	0.38	0.83	Low	1
IHF	196	10	5.1	5.8	3.4	0.92	0.56	1.50	Average	4

AoC- The IHF cohort has gone from Decile 1 to 4

2025 FCOT TQIP Review

Table 2a: Risk-Adjusted Mortality by Reporting Period and Cohort

Cohort	Odds Ratio									
	Spring 2020	Fall 2020	Spring 2021	Fall 2021	Spring 2022	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024
All Patients	1.04	0.73	0.39	0.47	0.45	0.44	0.45	0.49	0.45	0.42
Blunt Multisystem	1.07	0.87	0.65	0.63	0.58	0.52	0.60	0.75	0.79	0.66
Penetrating	0.91	0.88	0.84	0.81	0.99	0.87	0.82	0.87	0.77	0.81
Shock	0.90	0.91	0.96	1.03	0.98	0.85	0.87	0.95	0.87	0.98
Severe TBI	0.67	0.95	0.85	0.73	0.49	0.36	0.39	0.59	0.64	0.54
Elderly	1.00	0.74	0.37	0.42	0.52	0.51	0.50	0.50	0.44	0.41
Elderly Blunt Multisystem	1.19	0.98	0.58	0.58	0.71	0.86	0.70	0.72	0.82	0.68
LIFT	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.56
IHF	0.88	0.68	0.66	0.60	0.44	0.67	0.81	0.64	0.72	0.92

2025 FCOT TQIP Review

Table 2a: Risk-Adjusted Mortality by Reporting Period and Cohort

Cohort	Odds Ratio									
	Spring 2020	Fall 2020	Spring 2021	Fall 2021	Spring 2022	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024
All Patients	1.04	0.73	0.39	0.47	0.45	0.44	0.45	0.49	0.45	0.42
Blunt Multisystem	1.07	0.87	0.65	0.63	0.58	0.52	0.60	0.75	0.79	0.66
Penetrating	0.91	0.88	0.84	0.81	0.99	0.87	0.82	0.87	0.77	0.81
Shock	0.90	0.91	0.96	1.03	0.98	0.85	0.87	0.95	0.87	0.98
Severe TBI	0.67	0.95	0.85	0.73	0.49	0.36	0.39	0.59	0.64	0.54
Elderly	1.00	0.74	0.37	0.42	0.52	0.51	0.50	0.50	0.44	0.41
Elderly Blunt Multisystem	1.19	0.98	0.58	0.58	0.71	0.86	0.70	0.72	0.82	0.68
LIFT	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.56
IHF	0.88	0.68	0.66	0.60	0.44	0.67	0.81	0.64	0.72	0.92

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All Patients	1.04	0.73	0.39	0.47	0.45	0.44	0.45	0.49	0.45	0.42
Blunt Multisystem	1.07	0.87	0.65	0.63	0.58	0.52	0.60	0.75	0.79	0.66
Penetrating	0.91	0.88	0.84	0.81	0.99	0.87	0.82	0.87	0.77	0.81
Shock	0.90	0.91	0.96	1.03	0.98	0.85	0.87	0.95	0.87	0.98
Severe TBI	0.67	0.95	0.85	0.73	0.49	0.36	0.39	0.59	0.64	0.54
Elderly	1.00	0.74	0.37	0.42	0.52	0.51	0.50	0.50	0.44	0.41
Elderly Blunt Multisystem	1.19	0.98	0.58	0.58	0.71	0.86	0.70	0.72	0.82	0.68
LIFT	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.56
IHF	0.88	0.68	0.66	0.60	0.44	0.67	0.81	0.64	0.72	0.92

Palliative Care joins MDR



2025 FCOT TQIP Review

Report	Spring 2022	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024
Hospice %	1.2%	0.6%	1.1%	2.2%	2.7%	3.1%
Hard Hospice	2	1	2	2	1	1
Soft Hospice	0	0	0	2	4	5
Decile	1	1	1	2	1	4

Hard Hospice= non op management, or on vent, or non-ambulatory

Soft Hospice= post op from hip repair surgery, off ventilator, and ambulatory

Concerns for increasing IHF mortality. “Soft hospice” - increased from rarely to ~3%.

Increase in IHF mortality started when palliative care/hospice team started attending multi-disciplinary rounds.

2025 FCOT TQIP Review

- **Summary**

- Over the last year, two care outliers of seven have been corrected (AKI, VAP)
- Over last 6 months, one documentation outlier corrected (midline shift documentation)
- Three of seven care outliers still exist, making some progress (unplanned ICU admission, Cardiac arrest with CPR, and MI)
 - Cardiac arrest/MI –medical reconciliation, restart beta blockers, statins. Consider Goals of Care
 - Unplanned ICU admission-new policy implemented, near adjusted benchmark. Threshold monitoring
- 1 new documentation outlier (pupillary response). Pupilometer reading on all patients in trauma resuscitation. All pts should have this result documented in medical record, twice weekly audit by TMD/ATMD. Education provided as necessary.
- Palliative Care and Hospice Care are current issue. Palliative Care team will initiate “Soft Hospice” discharges with the trauma attending.

2025 FCOT TQIP Review

- **Summary – continued actions**
 - Unplanned ICU admission-new policy approved, near adjusted benchmark
 - Cardiac arrest –medical reconciliation, goals of care
 - MI –medical reconciliation, restart beta blockers, statins. Consider Goals of Care

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Comments/Questions/Queries?

Ideas?

Thank you