Trauma Quality

From high outlier to top-decile performance

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How did we approach improving our TQIP Report?

- Analyze negative outliers
- Review recent literature, guidelines
- Revise clinical guidelines
- Focus on vulnerable on populations

TQIP 2024 Poster Presentation

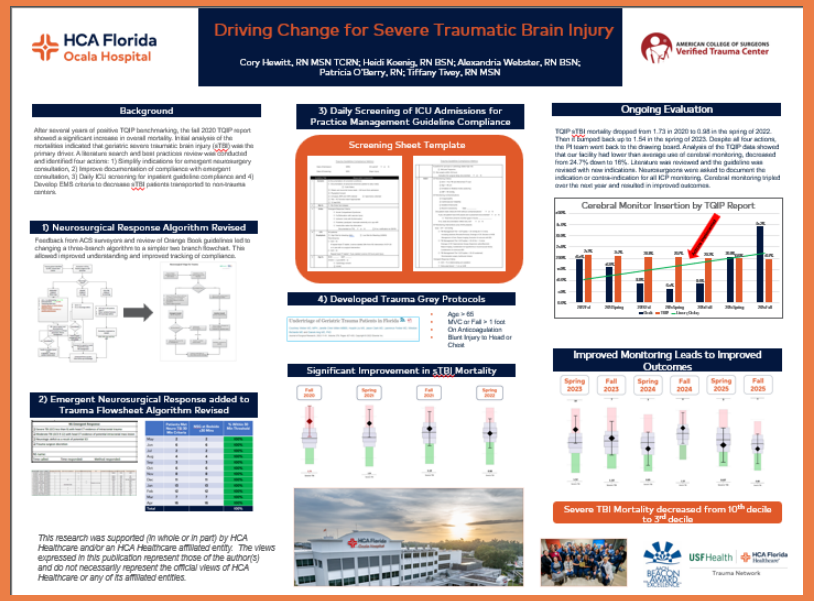


Don't We Have a PMG for That?
A Longitudinal Analysis of Daily PMG Screening

Cory Hewitt, RN MSN TCRN, Heidi Koenig, RN BSN, Alexandria Webster, RN BSN

- Develop Daily PMG Screening Form
  - Review daily in ICU on new admissions
  - Communicate with attending concurrently
  - Track and Trend for system improvement
- Year on Year Evaluation
  - 46% decrease in missing PMG Compliance Measures
  - Simultaneous decrease in ICU LOS, overall mortality
  - Revised annually to reflect current opportunities identified in secondary and tertiary review

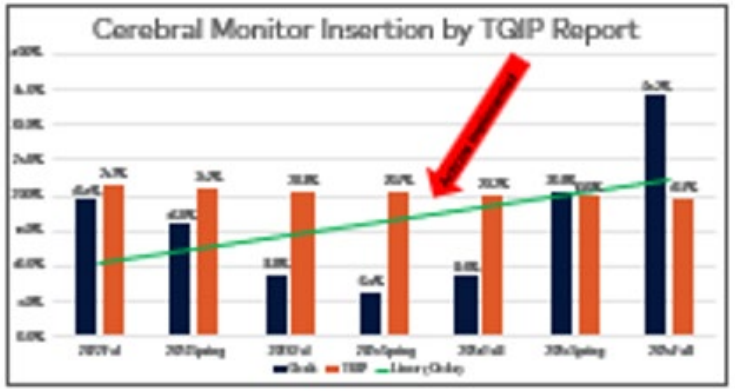
TQIP 2025 Poster Presentation



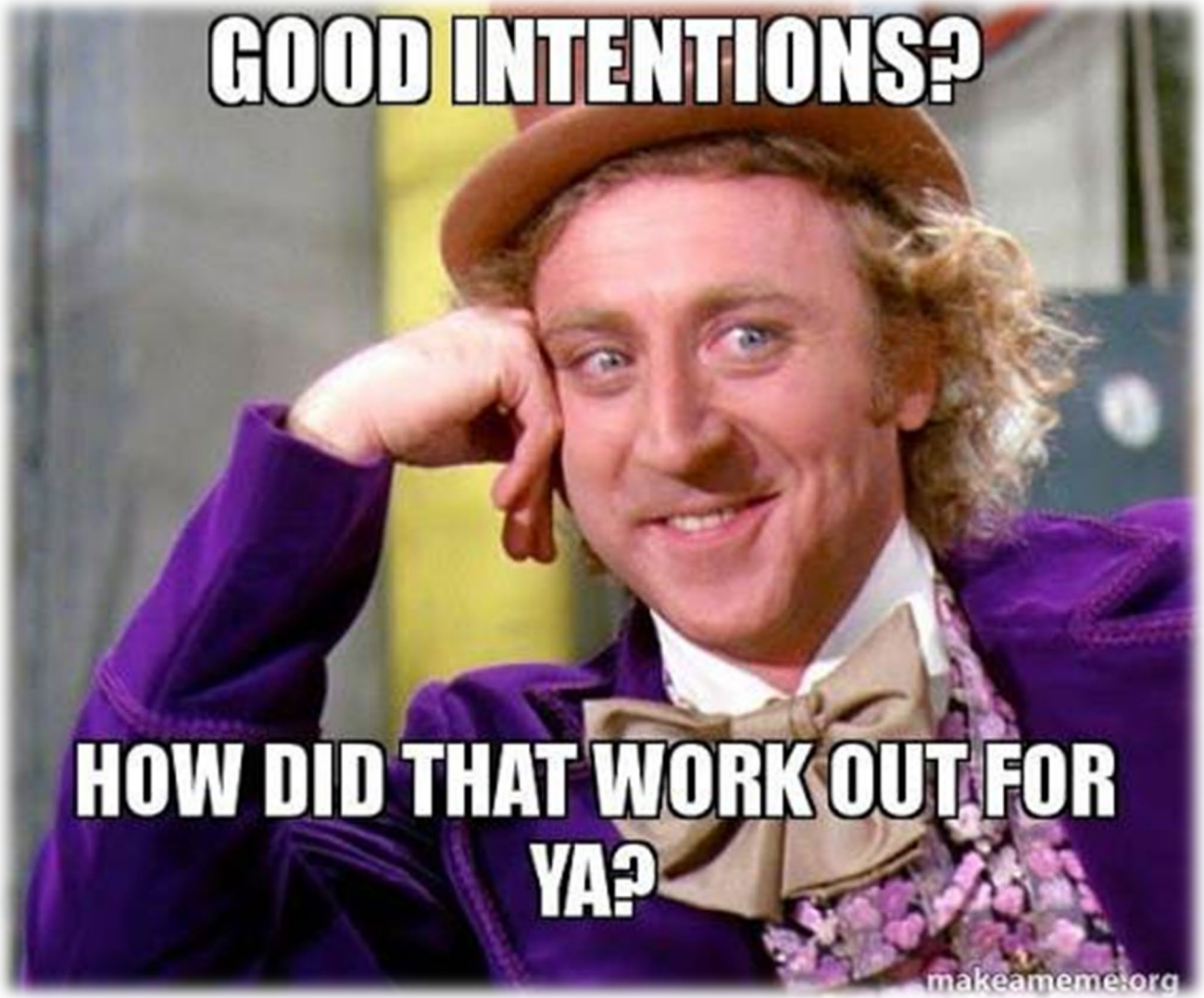
Driving Change for Severe Traumatic Brain Injury

Cory Hewitt, RN MSN TCRN; Heidi Koenig, RN BSN; Alexandria Webster, RN BSN; Patricia O'Berry, RN; Tiffany Tivey, RN MSN

- Severe TBI Mortality
  - Emergent Response Algorithm revised, added to trauma flowsheet, Trauma Grey Protocols
  - Improved from 10th decile (1.52) to 3rd decile (0.88)
- EVD Utilization
  - Literature review, policy revision, education
  - Increased from 14% lower than TQIP average to 14% higher than TQIP average

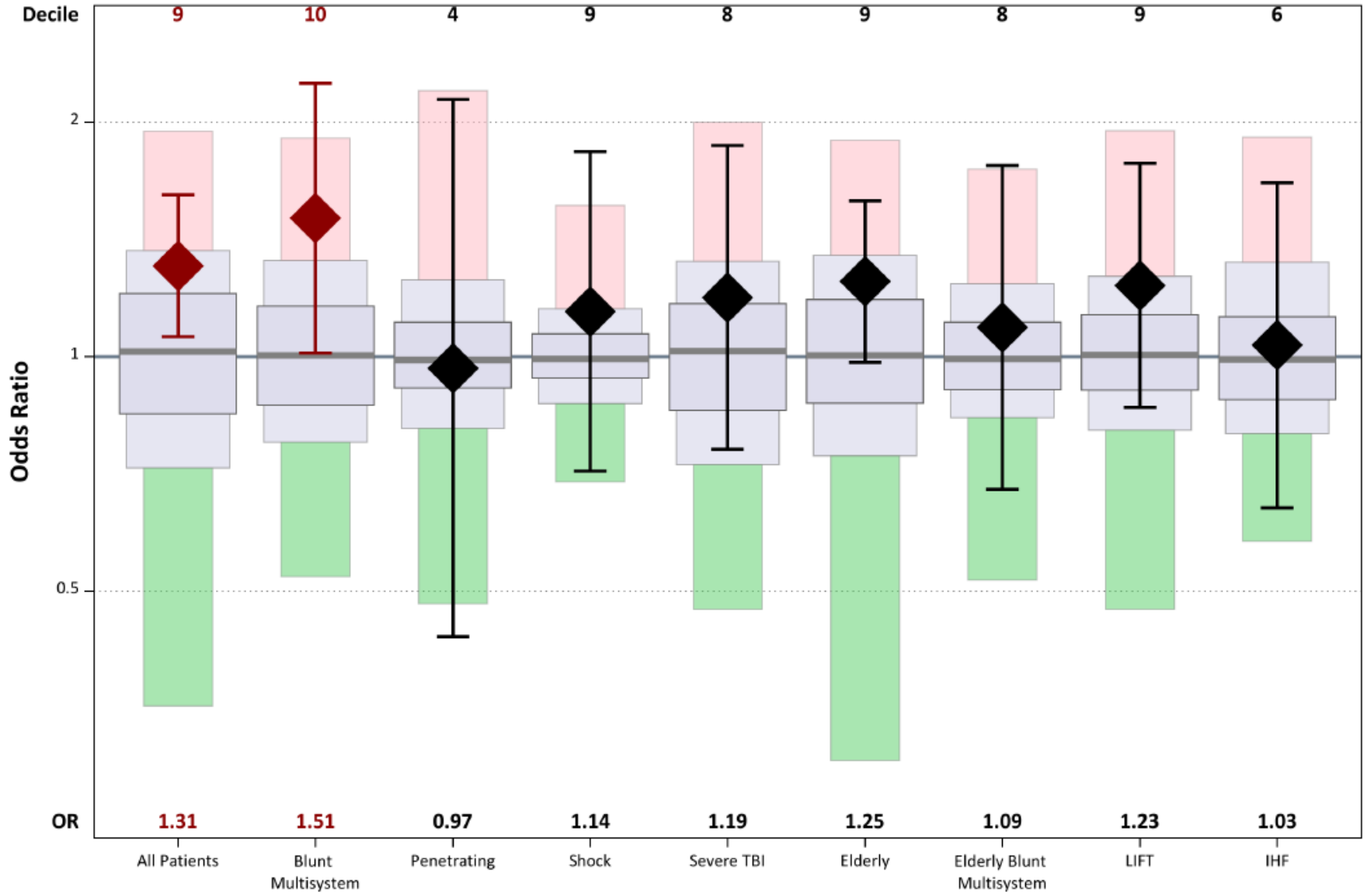


Did all of these actions actually improve the TQIP report?



Fall 2024 TQIP Mortality

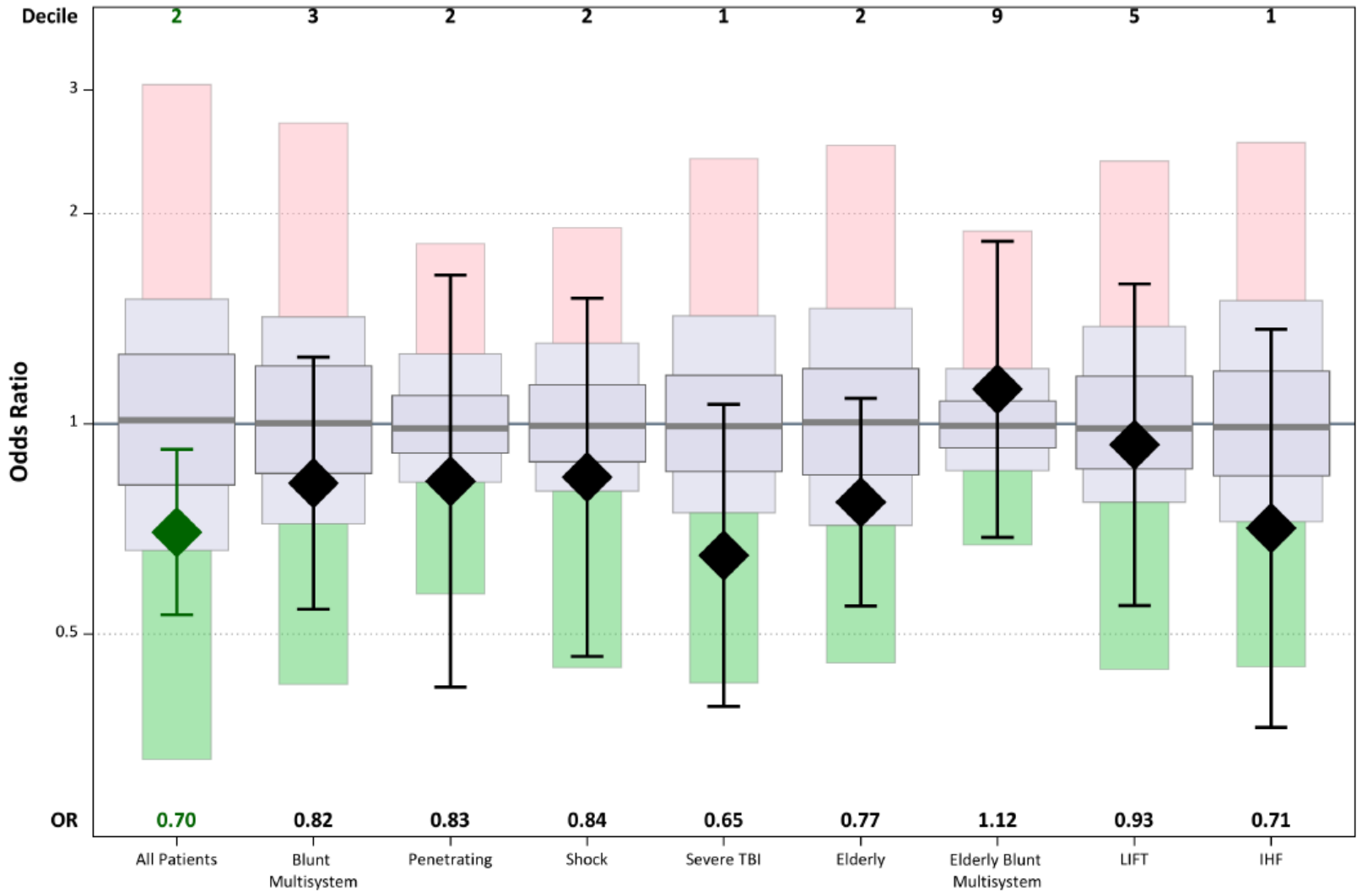
Figure 2: Risk-Adjusted Mortality by Cohort



Spring 2024	Fall 2024
1.05	1.31
1.09	1.51

Fall 2024 TQIP Hospital Events

Figure 3: Risk-Adjusted Major Hospital Events by Cohort



Remains Strong

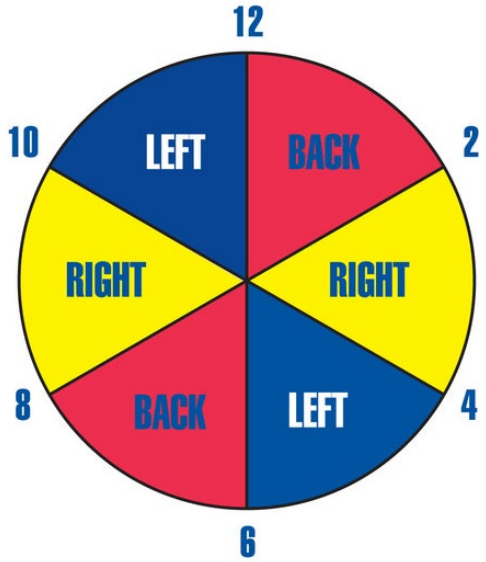
Back to the Basics: MD and RN Collaboration

- Time to Turn Clock implemented – q2 hour turn direction
- Out to Eat protocol – Must be out of bed for meals unless ordered otherwise
- Audited and reported at monthly Trauma Operations Meeting



Time to Turn

- Education of benefits to primary nurses
- Attestation of commitment
- Evaluation by Quality Nurse
- Coaching form to help move change hesitant staff



Poor Data Integrity and Systemic Issues

- Misclassification of DOA patients
  - Missing Initial Pulse, SBP of “0” or registry coded as arrived with signs of life
  - Monthly audits with chart review and registry correction prior to submission
  - Trauma Flowsheet audits and scribe education

- Incomplete documentation of Initial vital sign data
  - Weekly audit of TFS, targeting transfers in from FSED
  - Increased from 78.5% to 93.5%

Data Quality Filter	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024	Spring 2025	Fall 2025	Spring 2026	
More than 10% of patients with an unknown Initial ED/hospital Systolic Blood Pressure (SBP)	19.91%	19.06%	18.89%	14.50%	15.27%	14.50%	13.60%	10.90%	**43%**
More than 10% of patients with an unknown Initial ED/hospital Pulse	19.34%	19.00%	19.19%	14.70%	15.07%	14.90%	14.40%	11.30%	**42%**
More than 10% of patients with an unknown Initial ED/hospital GCS Motor	14.41%	20.12%	18.65%	12.50%	13.91%	12.00%	8.50%	6.20%	**57%**

Comparative Data Shows Older Patients Fall 2024

Table 6: Patients by Cohort

Elderly	All Hospitals	181,034 (37.1)
	Your Hospital	966 (48.5)

Table 7: Patient Demographic Characteristics by Cohort

		Patients	
Cohort	Group	N	Mean±STD Age (years)
All Patients	All Hospitals	416,038	57.5±22.2
	Your Hospital	1,650	64.7±20.2

Higher % Geriatric

Higher Average Age

Table 2: Risk-Adjusted Mortality by Cohort

	Patients	Mortality			
Cohort	N	Observed Events	Observed (%)	Expected (%)	TQIP Average (%)
All Patients	1,650	152	9.2	7.9	7.5

Expected mortality only slightly higher than average

Shows less acuity and fewer co-morbidities

Table 6: Patients by Cohort

Cohort	Group	N	Median (IQR) ISS	GCS Total 8 or less (%)[1]	Midline Shift (%)[2]	Pupillary Response-Abnormal (%)[3]
All Patients	All Hospitals	416,038	13 (10-19)	10.0	5.1	3.5
	Your Hospital	1,650	11 (9-17)	9.3	5.8	2.7

ISS, Low GCS and Abnormal Pupils are Lower

Cohort	Group	N	Unknown (%)[1]	None (%)	At least 3 Pre-Existing Conditions[2] (%)
All Patients	All Hospitals	416,038	0.8	29.0	27.6
	Your Hospital	1,650	0.0	30.9	22.7

Pre-Existing Conditions are lower

TQIP Documentation PI Project Timeline

2/21/25 Deep dive into comparative TQIP data

2/22/25 Release of Action Plan

2/24/25 Daily ICU screening of documentation criteria

2/25/25 TOPSC/MDR grand rounds

2/26/25 Grand rounds with residents

3/6/25 Added random sampling of 5 charts to SMART action plan

3/10/25 Reviewed example documentation at sign out Mon/Fri

5/14/25 Developed audit flowsheet

5/19/25 PI nurses began 100% audit admitted patients >65, > 3 days

5/23/25 Revised documentation guide, posted ICU breakroom

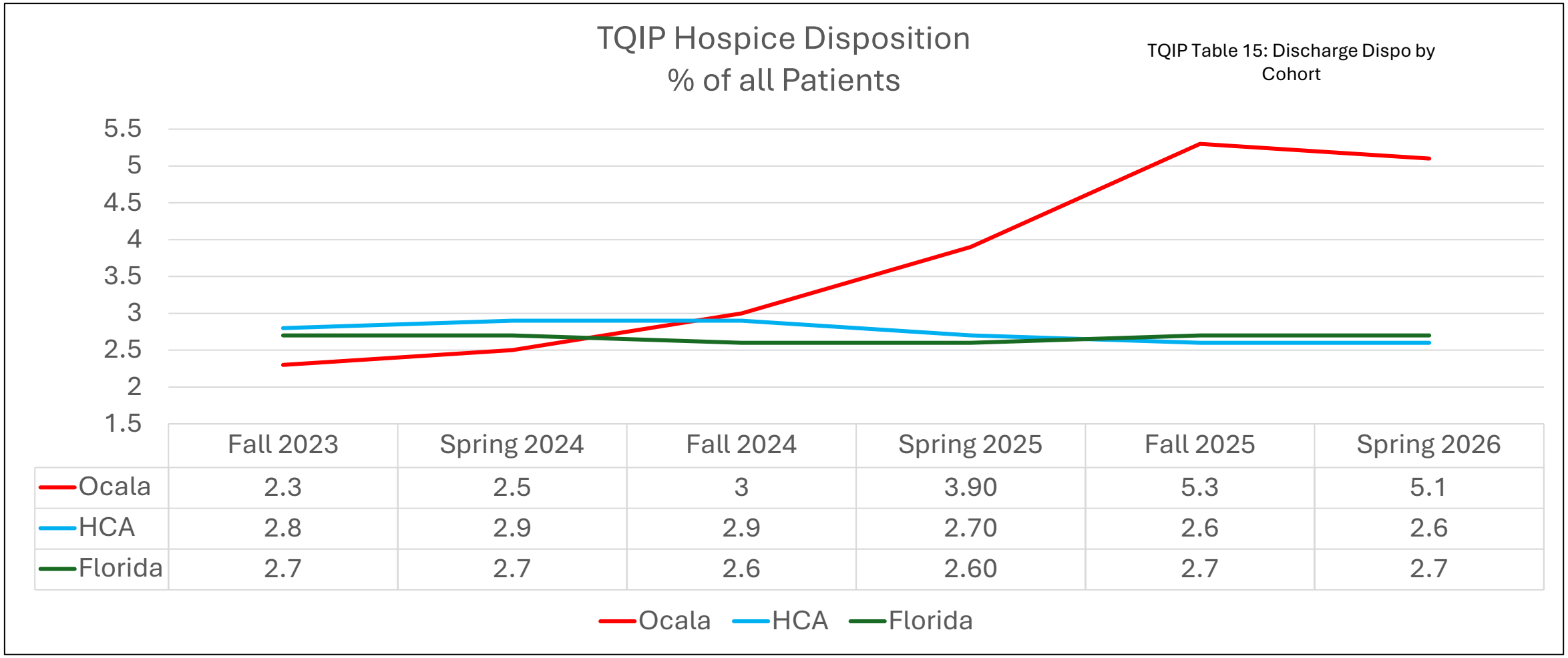
6/2/25 Meeting with Scribes, education provided to scribe supervisor

6/23/25 Orientation documentation education to intern class

Ongoing Review of Pre-Existing Conditions, Risk Adjusted Variables and Injury Severity

- New PI Action started 5/19/25
  - PI Nurses reviewing documentation for all admits >2 days over 65
  - Reviewing for:
    - All injuries are graded for severity
    - Home Medications are listed
    - PEC match home medications
    - Risk Adjusted Variable are documented
  - Real time contact with documenting provider to correct
  - Follow up on next day to validate correction made
  - Extensive resident education including pocket guides, recommending description of injuries and PEC
    - Posted laminated documentation checklist by resident workroom

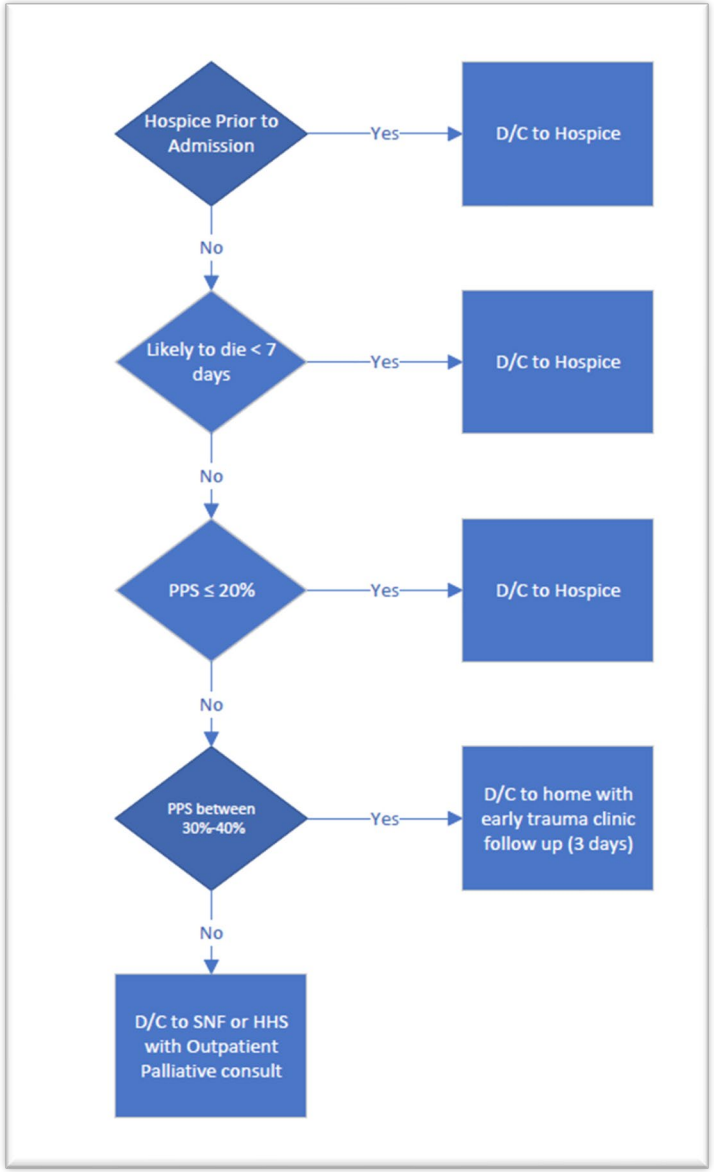
Variance in TQIP % Disposition to Hospice



	Fall 2023	Spring 2024	Fall 2024	Spring 2025	Fall 2025	Spring 2026
Ocala	2.3	2.5	3	3.90	5.3	5.1
HCA	2.8	2.9	2.9	2.70	2.6	2.6
Florida	2.7	2.7	2.6	2.60	2.7	2.7

Development of Palliative Algorithm

- August 2025
  - Met with Case management and identified obstacles
  - Met with Hospice Providers to identify criteria
  - Created Algorithm based on PPS
- September
  - Met with Division Case Management leaders
  - Started by TPD/



Palliative Performance Scale (PPSv2)
version 2

PPS Level	Ambulation	Activity & Evidence of Disease	Self-Care	Intake	Conscious Level
100%	Full	Normal activity & work No evidence of disease	Full	Normal	Full
90%	Full	Normal activity & work Some evidence of disease	Full	Normal	Full
80%	Full	Normal activity *with* Effort Some evidence of disease	Full	Normal or reduced	Full
70%	Reduced	Unable Normal Job/Work Significant disease	Full	Normal or reduced	Full
60%	Reduced	Unable hobby/house work Significant disease	Occasional assistance necessary	Normal or reduced	Full or Confusion
50%	Mainly Sit/Lie	Unable to do any work Extensive disease	Considerable assistance required	Normal or reduced	Full or Confusion
40%	Mainly in Bed	Unable to do most activity Extensive disease	Mainly assistance	Normal or reduced	Full or Drowsy +/- Confusion
30%	Totally Bed Bound	Unable to do any activity Extensive disease	Total Care	Normal or reduced	Full or Drowsy +/- Confusion
20%	Totally Bed Bound	Unable to do any activity Extensive disease	Total Care	Minimal to sips	Full or Drowsy +/- Confusion
10%	Totally Bed Bound	Unable to do any activity Extensive disease	Total Care	Mouth care only	Drowsy or Coma +/- Confusion
0%	Death	-	-	-	-

Did All These Actions Make a Difference?

Impact of PI Project

Easier D/C to Rehab

1

Case Management reports decrease in Peer to Peer and increase on first request authorization due to better documentation

Higher Accuity

2

Case Mix Index (CMI) increased from 2.670 to 2.987 (+12%)

Shorter Length of Stay

3

GLOS decreased from 120% in 2024 to 108% in 2025

Fall 2026 Demonstrated Higher Acuity and more Pre-Existing Conditions

Median (IQR) ISS
10 (9-17)
10 (9-17)

Midline Shift (%)[2]	Pupillary Response-Abnormal (%)[3]
4.3	2.7
4.1	2.8

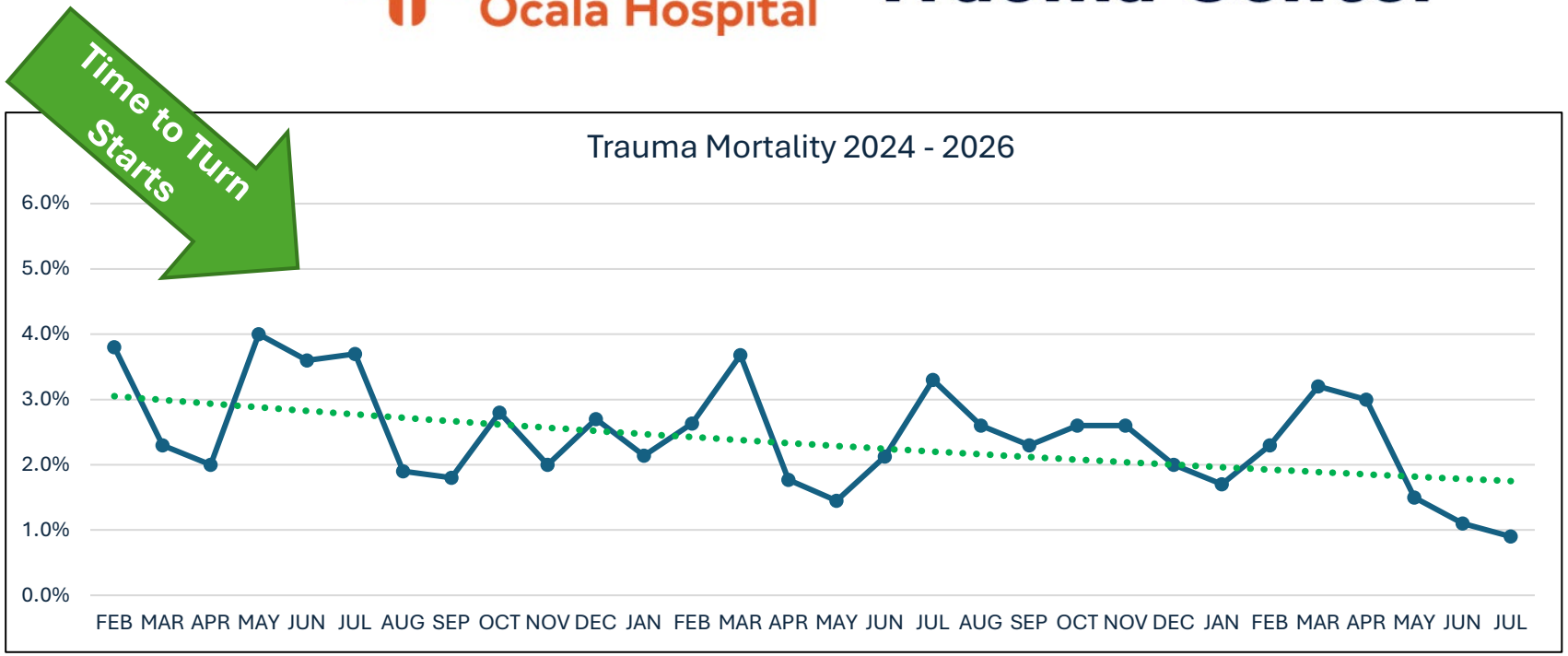
Ocala higher than TQIP average in GCS <9, Midline Shift and Abnormal Pupils

ISS is now on par with TQIP average

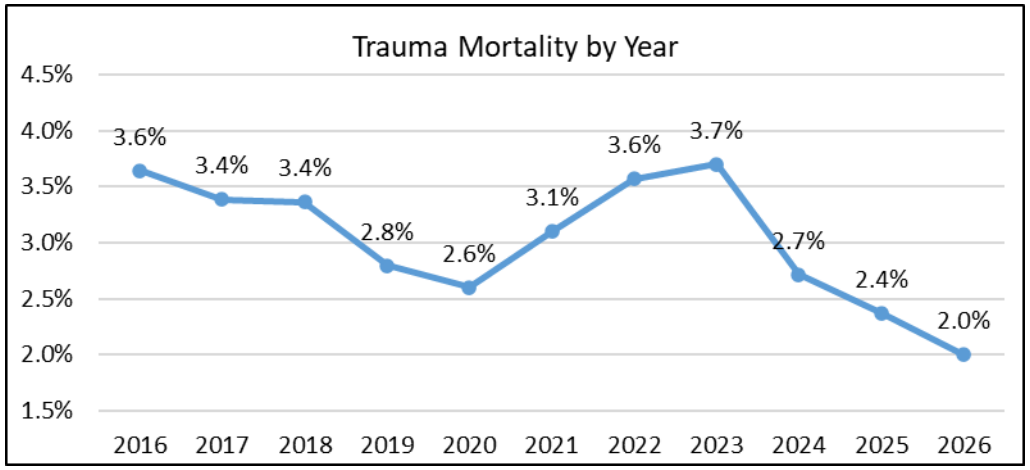
At least 3 Pre-Existing Conditions[2] (%)
34.6
35.3

At least 3 Pre-Existing Conditions increased from 22.7 to 35.3

HCA Florida Ocala Hospital **Trauma Center**



45% Reduction in Crude Mortality



1.7%

Lowest Mortality in 10 years

Next Generation Analytics

Podium Presentation
TQIP 2026

HCA Healthcare® Quality Construct Trending

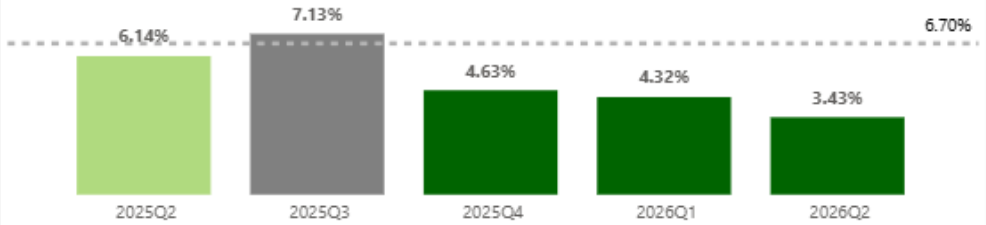
Behavioral | Cardio | Crit Care | Emer Dept | Engage
Inf Prev | NICU | Non-Service | OB | Trauma

Organization Level

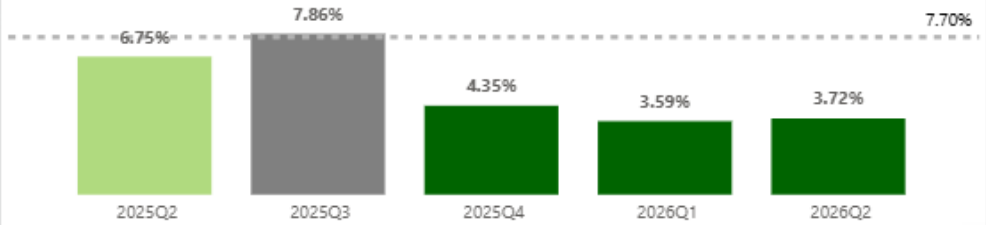
HCA Florida - Ocala Hospital (28000)

Metric	Latest Quarter to Date
Trauma	2026Q2

TQIP All Patients Trauma Mortality (Non-risk-adjusted)



TQIP Elderly Trauma Mortality (Non-risk-adjusted)



Year Over Year

↓	-45.97%
↓	-53.03%

Metric	Performance Goal	Benchmark	Prior 12 Months	Current 12 Months	Year Over Year	Current 12M Rank
TQIP All Patients Mortality	Lower	6.70%	8.88%	4.80%	↓ -45.97%	15 out of 47
TQIP Elderly Mortality	Lower	7.70%	10.21%	4.80%	↓ -53.03%	15 out of 47

Pheonix September 22, 2026

All Cohorts Below Goal in Spring 2027

All Patients (Goal: 6.7%)

26 Spring	26 Fall	27 Spring
8.20%	5.49%	4.07%

26 Spring to 27 Spring Trend: Improving ▼

Elderly (Goal: 7.7%)

26 Spring	26 Fall	27 Spring
9.22%	5.53%	4.03%

26 Spring to 27 Spring Trend: Improving ▼

Iso Hip Fracture (Goal: 3.3%)

26 Spring	26 Fall	27 Spring
2.92%	2.61%	2.25%

26 Spring to 27 Spring Trend: Improving ▼

Blunt Multisystem (Goal: 14%)

26 Spring	26 Fall	27 Spring
16.81%	9.73%	11.40%

26 Spring to 27 Spring Trend: Improving ▼

Elderly Blunt Multisystem (Goal: 19.5%)

26 Spring	26 Fall	27 Spring
16.96%	9.60%	11.00%

26 Spring to 27 Spring Trend: Improving ▼

Penetrating (Goal: 10.2%)

26 Spring	26 Fall	27 Spring
25.00%	15.79%	5.71%

26 Spring to 27 Spring Trend: Improving ▼

Shock (Goal: 25.7%)

26 Spring	26 Fall	27 Spring
40.43%	23.08%	13.33%

26 Spring to 27 Spring Trend: Improving ▼

sTBI (Goal: 46.2%)

26 Spring	26 Fall	27 Spring
44.52%	39.68%	34.07%

26 Spring to 27 Spring Trend: Improving ▼

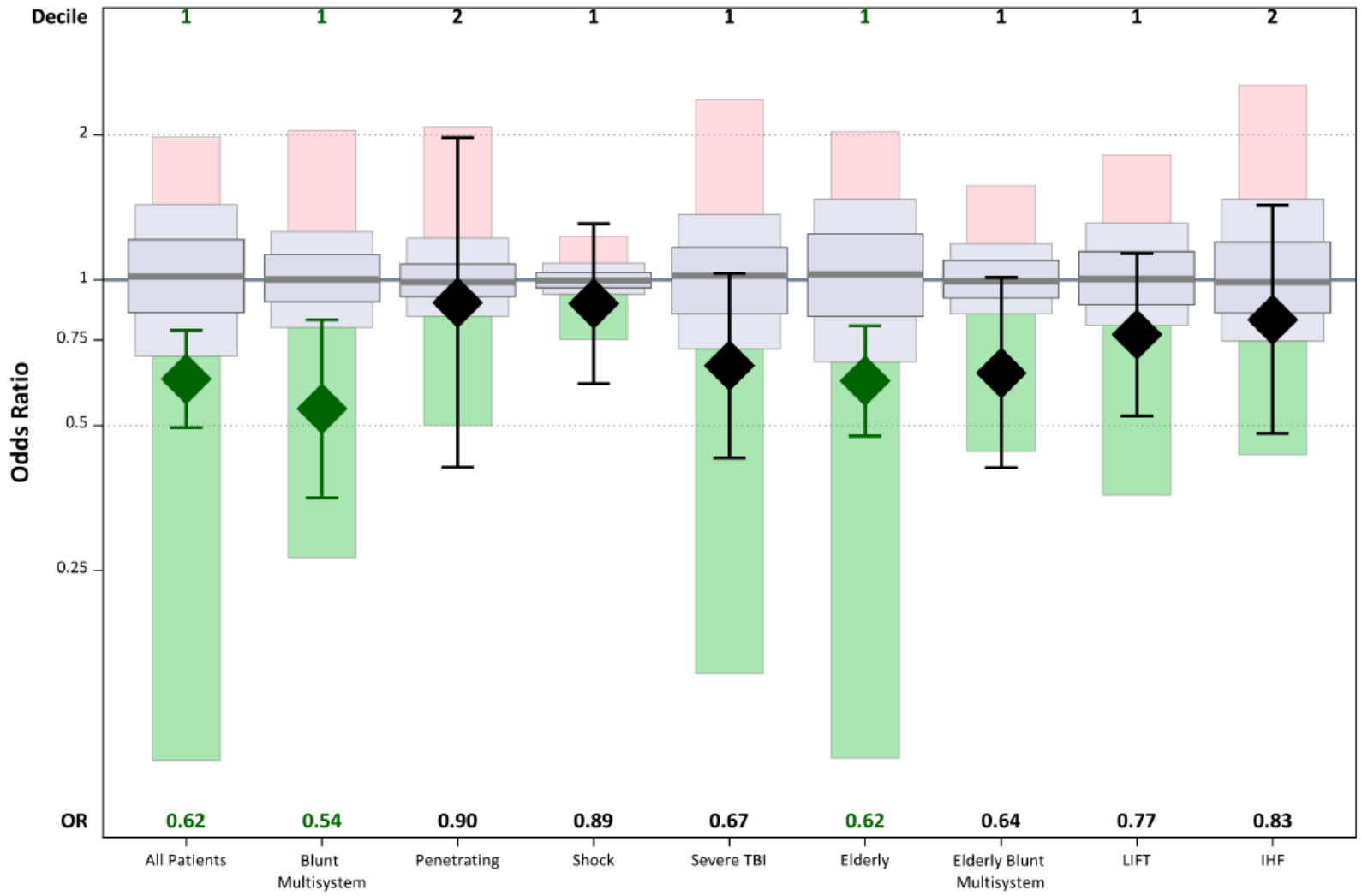
LIFT (Goal: 5.9%)

26 Spring	26 Fall	27 Spring
6.32%	4.15%	3.29%

26 Spring to 27 Spring Trend: Improving ▼

FALL 2026 TQIP Report

Figure 2: Risk-Adjusted Mortality by Cohort

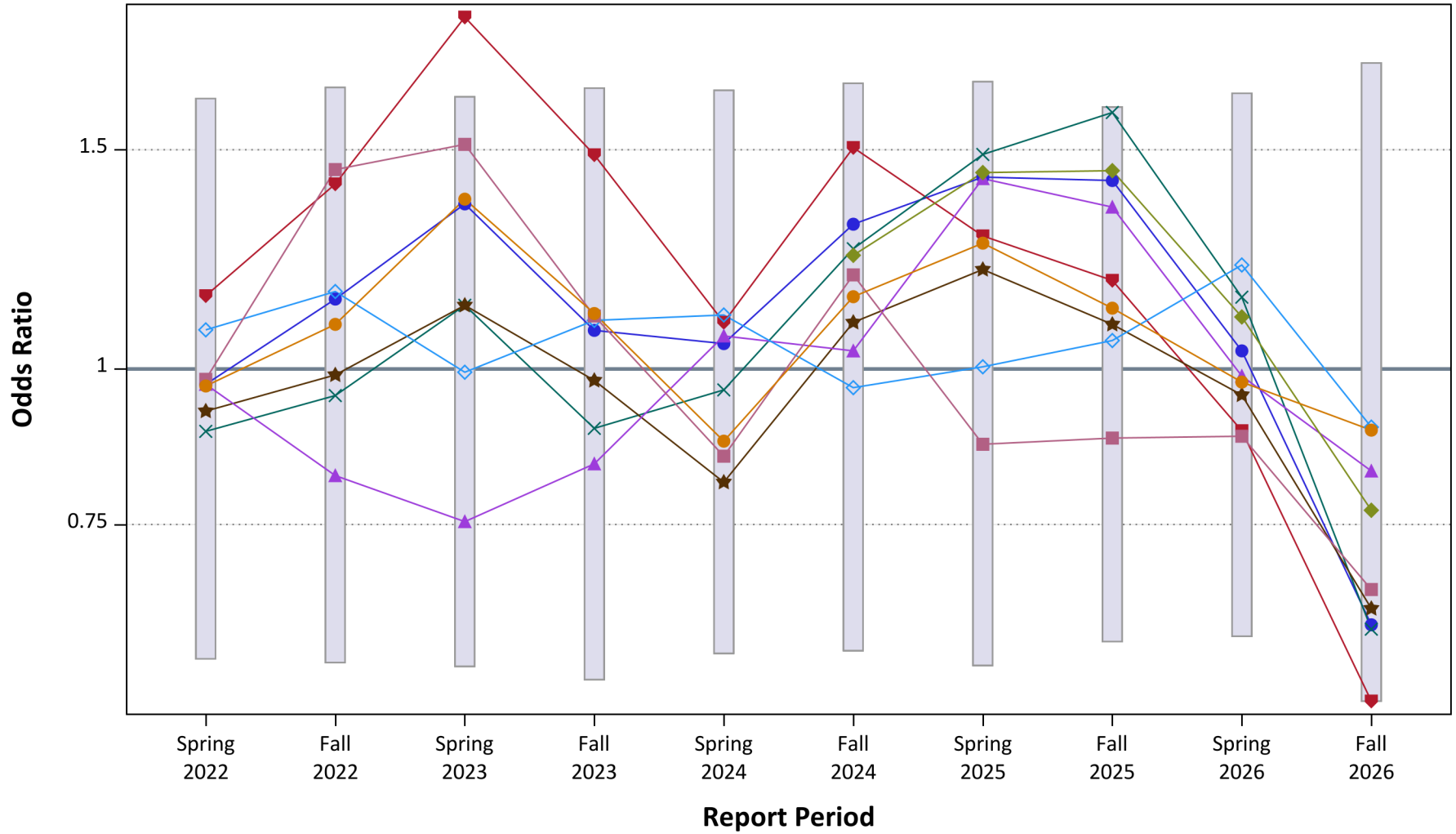


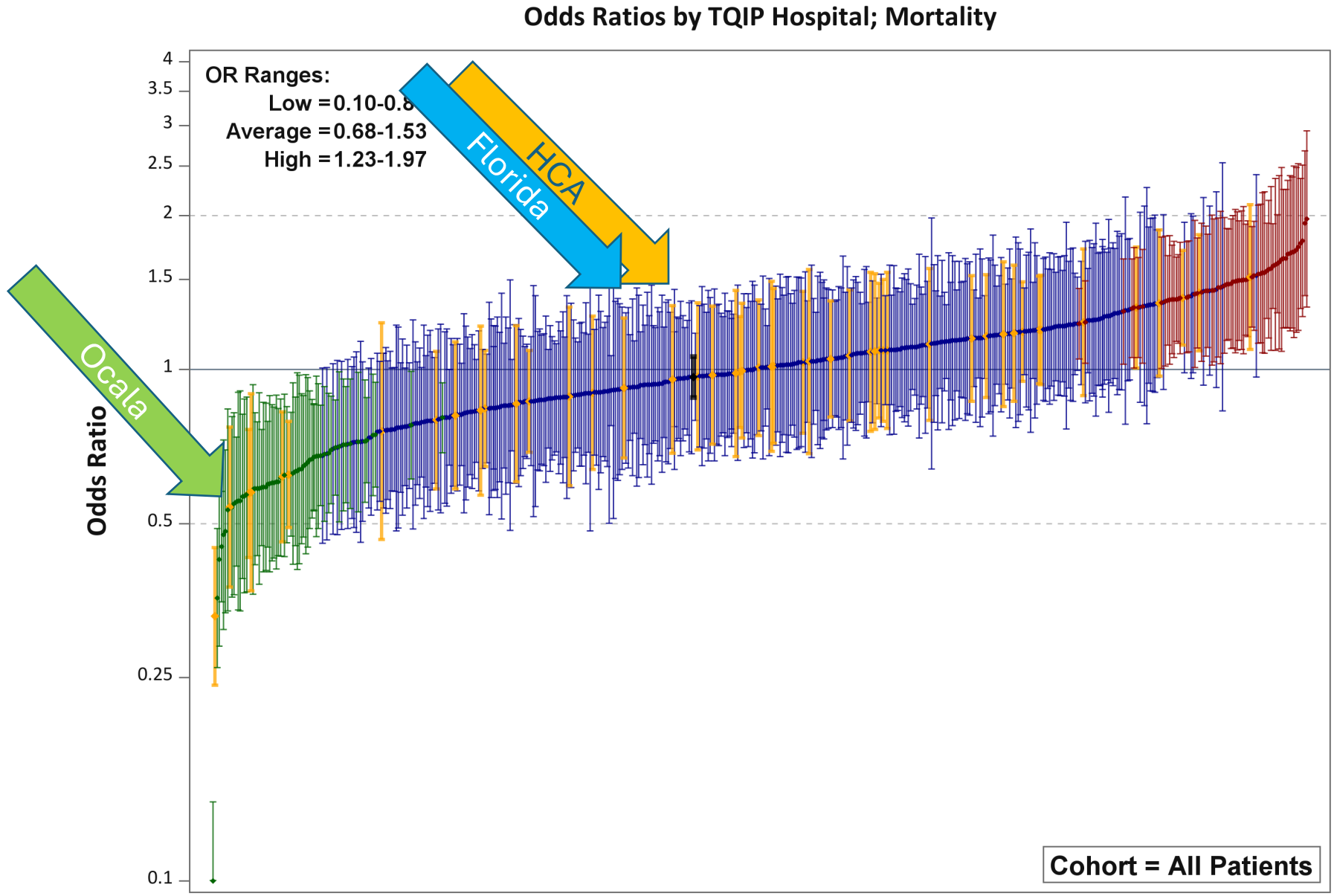
10th Decile in Fall 2025

To

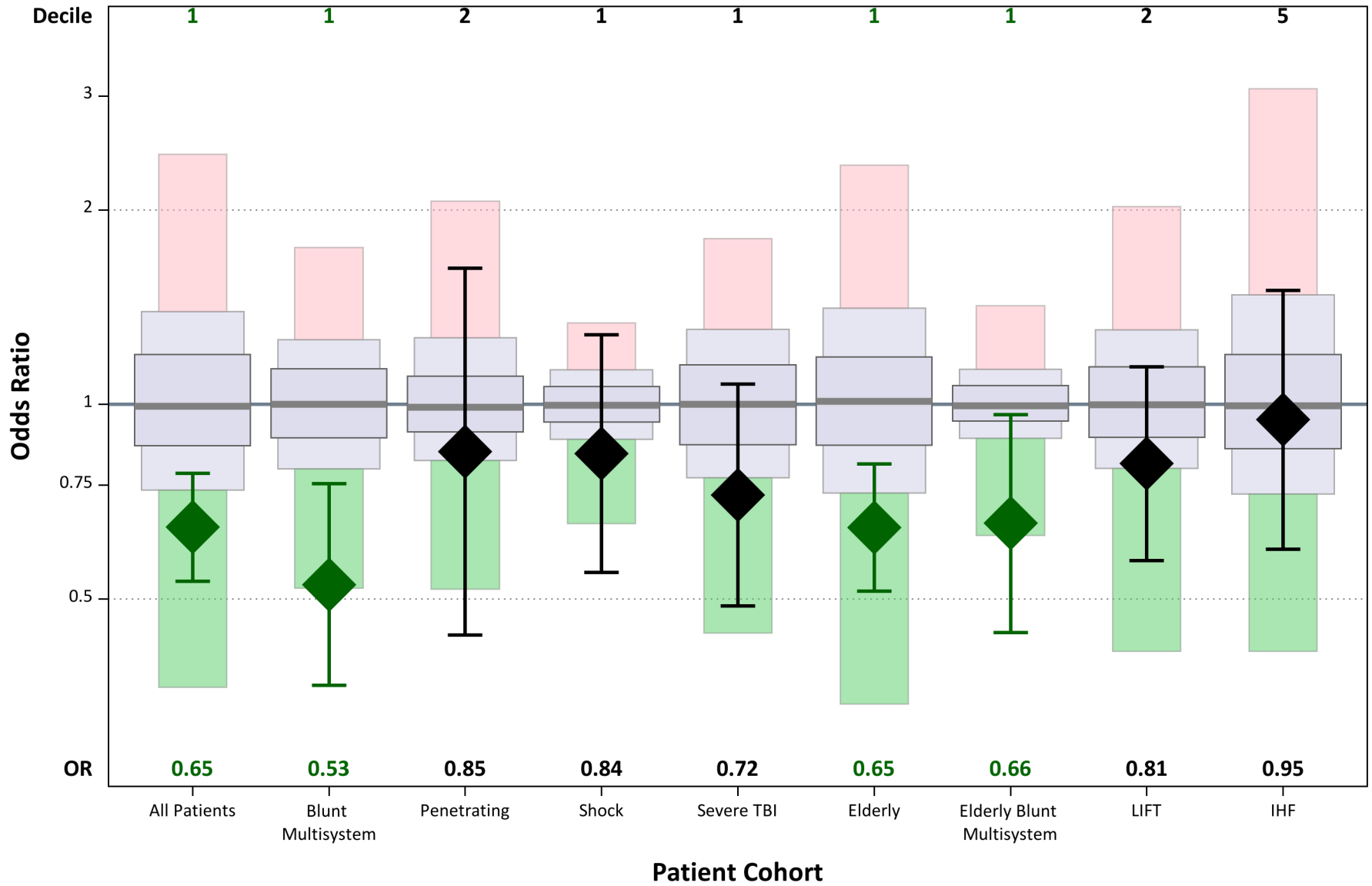
1st Decile Fall 2026

Risk-Adjusted Mortality by Cohort - Fall 2026
TQIP Report ID: 233

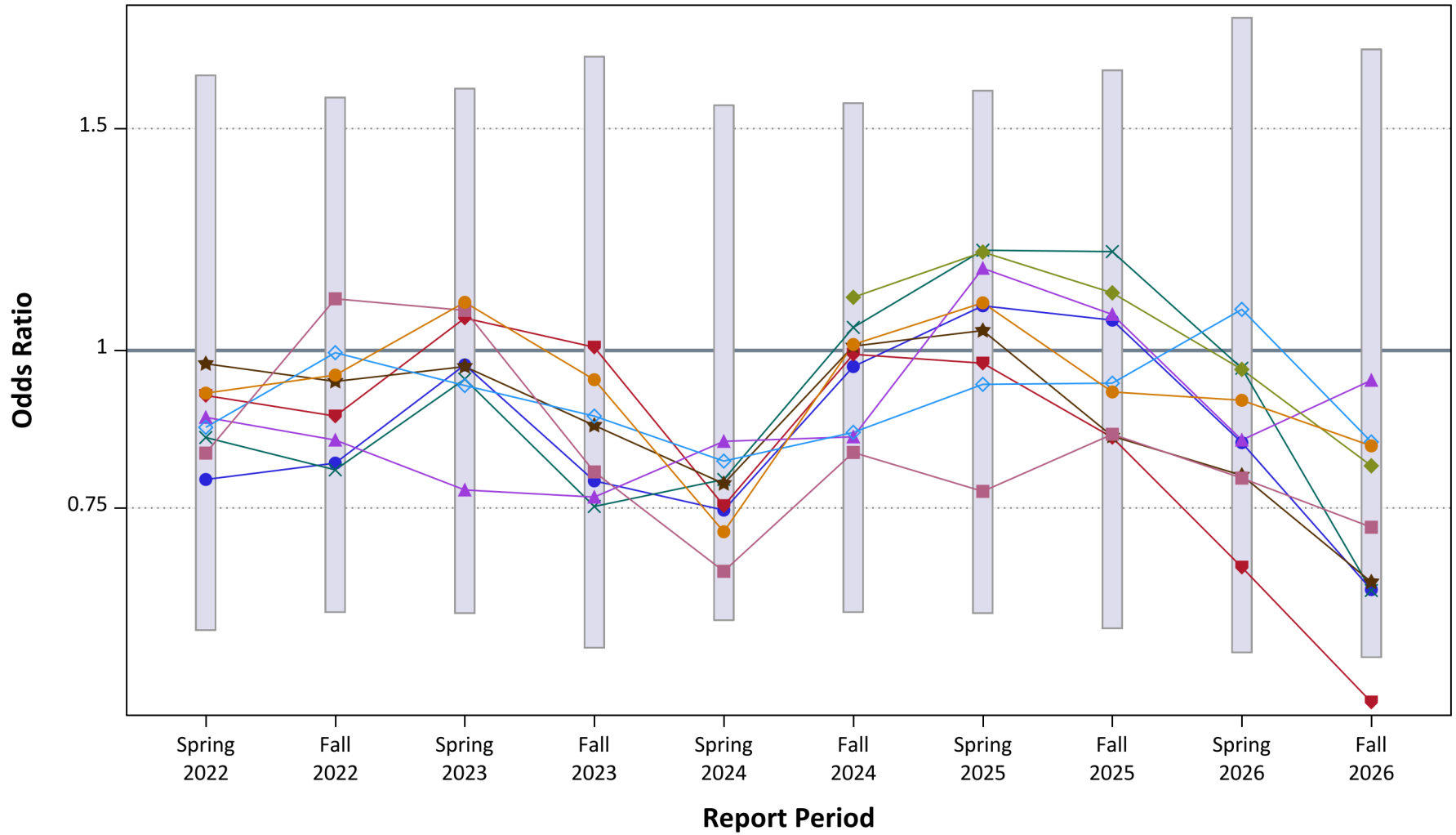



Odds Ratios by TQIP Hospital; Mortality
OR Ranges:
Low = 0.10-0.8
Average = 0.68-1.53
High = 1.23-1.97
Florida
HCA
Ocala
Odds Ratio
4
3.5
3
2.5
2
1.5
1
0.5
0.25
0.1
Cohort = All Patients

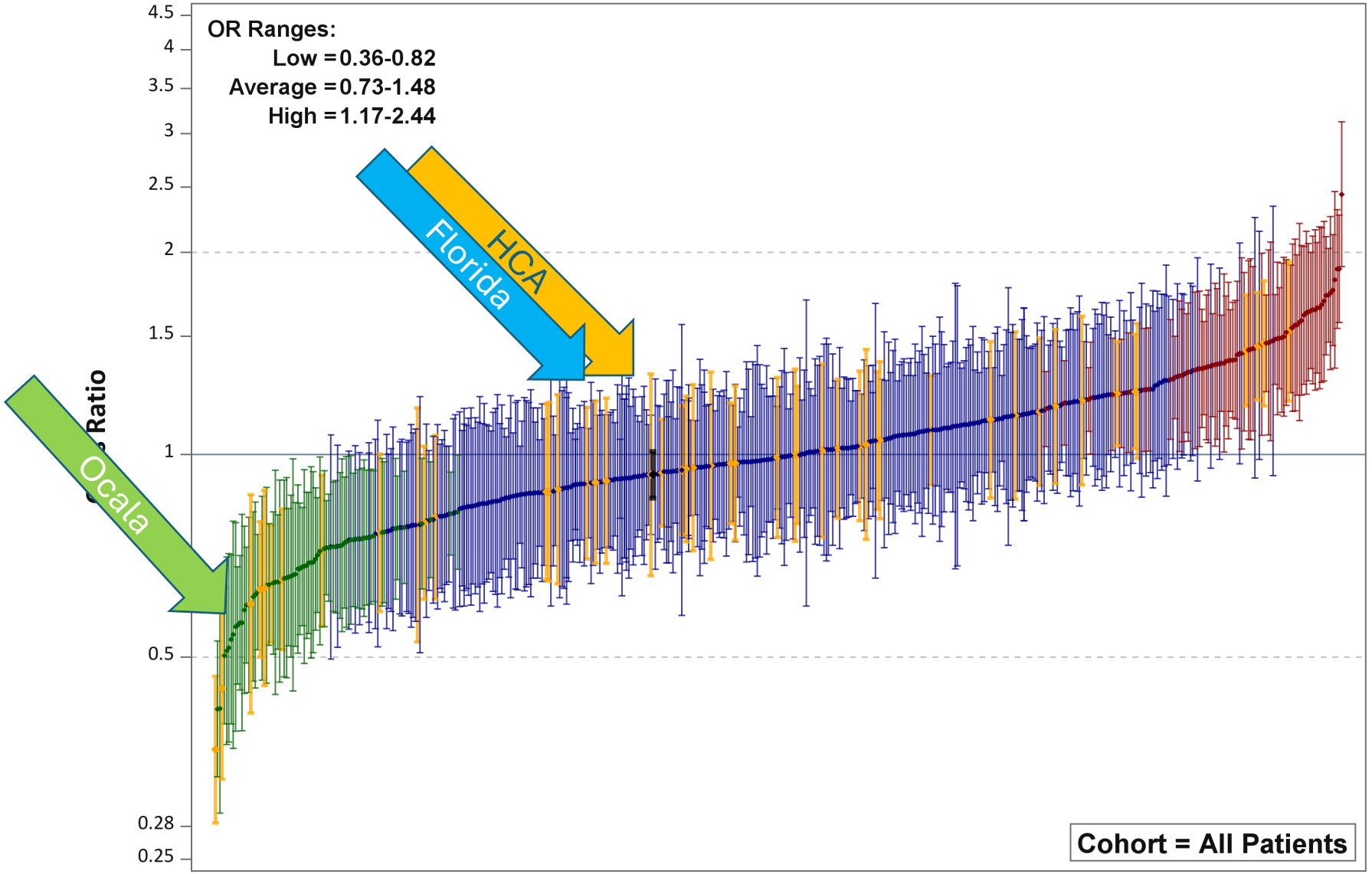
Risk-Adjusted Major Hospital Events Including Death by Cohort - Fall 2026
TQIP Report ID: 233



Risk-Adjusted Major Hospital Events Including Death by Cohort - Fall 2026
TQIP Report ID: 233



Odds Ratios by TQIP Hospital; Major Hospital Events Including Death



RISK-MODEL VISIBILITY

Older, comorbid patients were represented more accurately

ELDERLY COHORT SHARE

67.3%

Ocala Fall 2026; all hospitals 56.6%

≥3 PECS CAPTURED

26.3% → 35.3%

+9.0 percentage points

NO PEC DOCUMENTED

29.3% → 22.5%

fewer charts looked risk-empty

WHY IT MATTERS

When PECs and RAVs are missing, TQIP sees a lower-risk patient than the one clinicians actually treated.

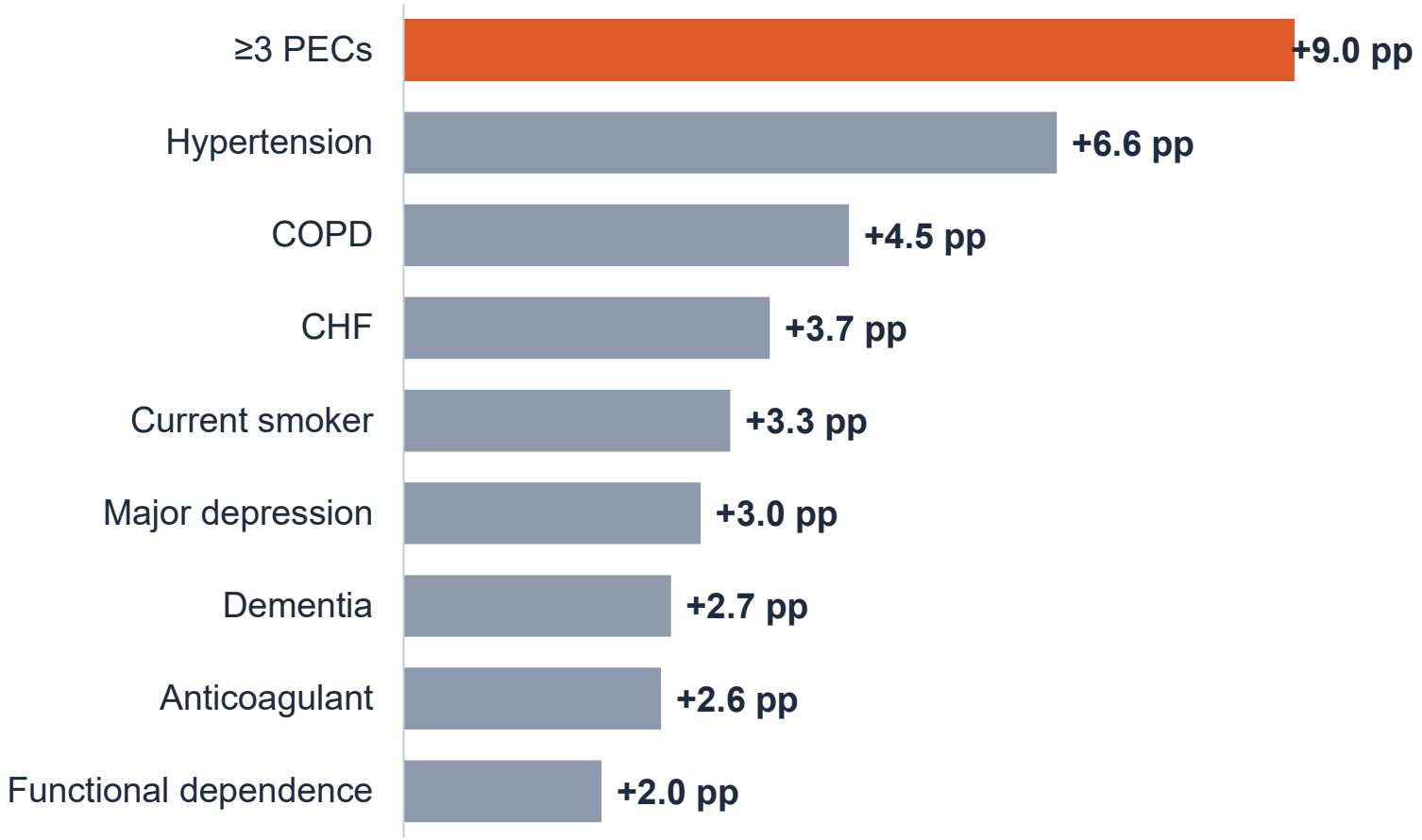
This is not generic “data integrity.” It is risk-adjustment visibility.

Source: Fall 2025 and Fall 2026 ACS TQIP Benchmark Reports, Tables 7, 8, and 12

PEC CAPTURE

Comorbidity capture improved where it matters

Change in PEC capture rate, Fall 2025 → Fall 2026



KEY READ

Risk burden became visible.

≥3 PECs

+9.0 pp

No PEC documented

-6.8 pp

Source: Fall 2025 and Fall 2026 ACS TQIP Benchmark Reports, Table 12

COMPLICATIONS AND COMPOSITE OUTCOMES

Mortality improved without creating a broad complication penalty

MHE + DEATH OR

1.06 → 0.65

Average → low outlier

ALL-PATIENT MHE OR

0.61 → 0.82

still below expected

VAP ALL-PATIENT OR

2.50 → 1.02

High outlier resolved

SSI	**1.78 → 0.61**
AKI SHOCK	**1.33 → 0.86**
PE	**0.54 → 0.66**

> The Fall 2026 report is not perfect. **It is strong, and it shows where the next cycle should focus.**

Source: Fall 2025 and Fall 2026 ACS TQIP Benchmark Reports, Tables 3, 4, and 5

MORTALITY REVIEW

Deaths and hospice cases became a weekly review pathway

ALL MORTALITY EVENTS

199 → 112

Fall 2025 → Fall 2026

ED / HOSPITAL DEATHS

89 → 52

fewer in-hospital deaths

ED / HOSPITAL HOSPICE

110 → 60

hospice still counts in mortality

> The goal is not to avoid hospice. The goal is the right pathway, the right documentation, and real-time review.

Weekly review turned mortality from a report surprise into an active operating metric.

Source: Fall 2025 and Fall 2026 ACS TQIP Benchmark Reports, Tables 2 and 15

WEEKLY LOOP

The system that made the turnaround stick

01

Identify

Deaths + complications

02

Validate

PEC / RAV / PME capture

03

Fix

Pathway, education, escalation

04

Close loop

TOPSC / MEC accountability

Same cadence. Same team. Same standards. Every week.

Source: 2025 TQIP action plan and Fall 2026 outcome review

SUSTAINMENT

Protect the gain before the next report

Risk capture before registry close

PEC/RAV/PME checklist for high-risk admissions

Elderly / LIFT / IHF focus

older, frailer, lower-impact injuries with high lethality

Shock + severe TBI variables

physiology, pupils, midline shift, transfer-in

Known process OFIs

VAP, IHF timing, VTE prophylaxis, documentation nulls

Goal: stay top decile - not simply return to average.

Source: Fall 2026 TQIP report and current TOPSC action plan

TAKE-HOME MESSAGE

You can climb back.

Better care + accurate risk capture + weekly accountability rebuilt TQIP performance.



1.42 → 0.62
MORTALITY OR

10 → 1
DECILE

199 → 112
DEATHS

3rd worst → 6th best
ENTERPRISE RANK

Fall 2025 → Fall 2026

Source: Fall 2025 and Fall 2026 ACS TQIP Benchmark Reports; enterprise caterpillar graphs

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We show up