Trauma Quality: A Hands-On Approach to Trauma PI/QA and Multidisciplinary Trauma Peer

Introduction

Jose Diaz, MD & Babak Sarani, MD

Wednesday, January 15, 2020
7:30 am-11:15 am
Short Course #4

1

Trauma Quality: A Hands-On Approach to Trauma PI/QA and Multidisciplinary Trauma Peer

Trauma PI QA

7:35 am-7:50 am	The Trauma Outcomes Dashboard & TQIP Metrics for the PI Projects Sarah Mattocks, MSN, FNP-C & Kevin Schuster, MD, MPH
7:50 am-8:30 am	Group Session: Dashboard and TQIP Reports Review/Table Discussion (Attendees are encouraged to bring institutional Dashboards)
8:30 am-8:55 am	Group Presentations: PI Projects (Actionable Correction Strategy Presentations)

Moderators: Kyle Cunningham, MD, Sarah Mattocks, MSN, FNP-C, & Kevin Schuster, MD, MPH

Material: Institutional Dashboards
- Review and identify problems
- Develop Performance Improvement Projects

2

Trauma Quality: A Hands-On Approach to Trauma PI/QA and Multidisciplinary Trauma Peer

Multidisciplinary Trauma Peer Review Committee

8:55 am-9:05 am	Multidisciplinary Trauma Peer Review Committee Babak Sarani, MD & Glen Tinkoff, MD
9:05 am-9:35 am	Group Session: Multidisciplinary Trauma Peer Review Committee – Trauma Peer Review Tool
9:35 am-10:10 am	Group Presentations: Case Presentations-Categorizing and Identified Relevant Variances

Moderators: Jordan Estroff, MD, Babak Sarani, MD, & Glen Tinkoff, MD

Materials: Sample Case Reviews / Sample Case Review Templates
- Review the Cases in a multidisciplinary format
- Discuss the "Providers" Perspective
- Discuss the Multi-D Role and recommendations

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Trauma Quality: A Hands-On Approach to Trauma PI/QA and Multidisciplinary Trauma Peer

Medical Peer Review

10:10 am-10:25 am	The Peer Review Intervention – Jose Diaz, MD & Glen Tinkoff, MD
10:25 am-10:55 am	Group Session: Adjudicate Cases Presented Related to Peer-Related Issues Using "Just Culture" Methodology with a sample "Trauma Case Review Tool"/Table Discussion
10:55 am-11:15 am	Group Presentations: Adjudication of Recommendations and Peer-Related Issues Identified Presentations

Moderators: Jose Diaz, MD, Jordan Estroff, MD, & Jonathan Messing, MSN, ACNP-BC

Materials: Sample Case Reviews
Discuss: Medical Peer review Process
- Case Review
- Committee Review & Recommendations

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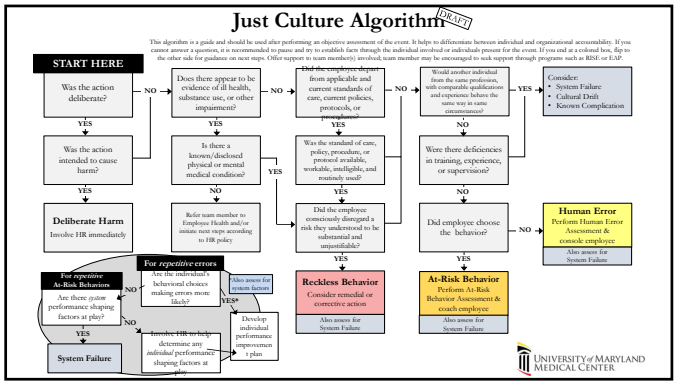

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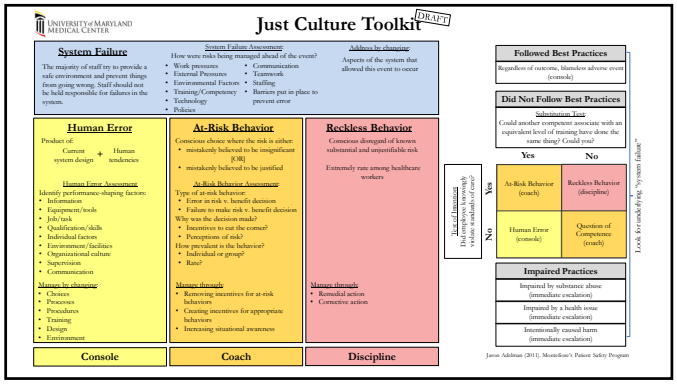

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Just Culture – A Primer

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George Washington University

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1

Disclosures

- None

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Objectives

- What is “just culture”
- How does one create an environment conducive to “just culture”
- How does one create an environment NOT conducive to “just culture”

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Just Culture

- An environment that:
  - 1. Allows all staff to speak openly about any issue without fear of retribution
  - 2. Encourages people to think independently rather than follow protocols blindly
- Detractors:
  - 1. Financial consequences (e.g. CAUTI)
  - 2. Ubiquitous "experts"

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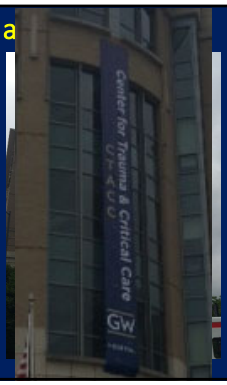
Hearts a

- Branding matters – move beyond mission/vision statements
  - Morale/Bravado
  - Sense of Team
- In God we trust, everyone else needs data



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Utilizing Subject Matter Experts

- TPM
  - Knows how to operationalize strategies set forth by TMD
    - Understands what strategies are feasible and which are not based on resources
  - Knows all aspects of the registry, NTDB, TQIP

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Utilizing Subject Matter Experts

- PI Coordinator
  - Stresses TQIP measures and focuses team
  - Concurrent data abstraction improves accuracy
    - Data available in the real-time for TMD
      - Compliance with CPGs in the real-time
      - Ad-hoc queries on ICP monitoring, etc

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No "One-Offs"

- Evaluate outlier cases and discuss rationale/factors that led it
  - Educate at Multi-D meeting
  - Assume everyone is equally engaged and event will recur
  - Always look for a systematic fix before an individual/personnel issue
- Favoritism breeds malcontent amongst the team

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Working Collaboratively

- Resistance of attending physicians to speak directly to each other (especially in a level 1 center)
  - Delay in care
  - Confusing/changing treatment plans
- Break down silos across disciplines
  - Approach as a friend and others will not be defensive

9

APs

- The "Utility Player"
  - PGY 1 – 5
  - Teacher
  - Continuity of Care/ Compliance with SOPs

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How to Win a Battle But Lose the War

- "I know you're right. You know you're right. The mistake you made is you flexed your muscle"
  - Public display of anger/frustration and/or ridicule
- "All important meetings begin and end before the meeting"
  - Set up the conversation privately before the meeting to allow for emotion-free discourse

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EAST Trauma Quality Short Course:
A Hands-On Approach to Trauma PI/QA and Multidisciplinary Trauma Peer Review

Glen Tinkoff MD, FACS, FCCM
System Chief, Trauma and Acute Care Surgery
University Hospitals
Cleveland Medical Center
33rd EAST Annual Scientific Assembly
Orlando, FL 1/15/2019

Disclosure

- None
- Former TMD
- Former COT PIPS committee chair
- ACS Verification and Consultation Program senior site reviewer

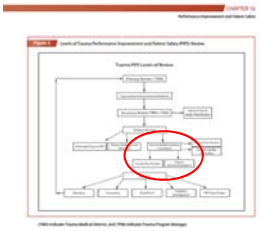
Medical Peer Review

- Peer Review is foundational to professionalism
- Assumptions related to Peer Review:
  - "*Peers*" evaluate "*Peers*"
  - Commitment to high standards and act in **good faith**
  - Environment **supportive** of **candid communication**
- Confers Immunity, Privilege, and Confidentiality

Multidisciplinary Trauma Peer Review

- Chapter 16; page 129-131
- Structure & Process
- "Event Identification and Review"
  - Evaluate the efficacy, efficiency, and safety
  - Provide focused education
  - Provide peer review

Multidisciplinary Trauma Peer Review



Multidisciplinary Trauma Peer Review

Subsection: Mortality and Morbidity Review

- "All trauma deaths and unexpected outcomes should be examined in a traditional mortality and morbidity review." (filter)
- Individual specialties should evaluate cases within their usual departmental PIPS review structure.

Multidisciplinary Trauma Peer Review Meeting

- This meeting should be held monthly (the frequency should be determined by the TMD based on the needs of the PIPS program).
- Attendance *must* be at least 50% of (CD 16–15).
  - Tele- or video-conferencing allowable
  - 50% attendance specific to the physician
  - Not inclusive of excused absences

Multidisciplinary Trauma Peer Review

- "Mortality data, adverse events and problem trends, and selected cases involving multiple specialties *must* undergo multidisciplinary trauma peer review (CD 16–14)."
- "This effort may be accomplished in a variety of formats but *must* involve the participation and leadership of the trauma medical director (CD 5–10); the group of general surgeons on the call panel and the liaisons from emergency medicine, orthopaedics, neurosurgery, anesthesia, critical care, and radiology."

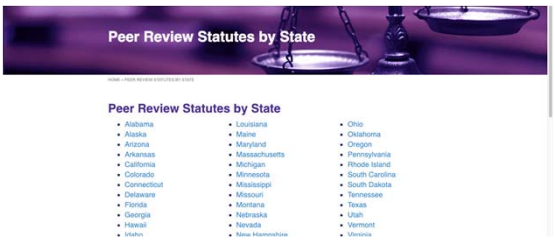
Multidisciplinary Trauma Peer Review Meeting

When general surgeons on the trauma panel cannot attend, the TMD "*must* ensure that they receive and acknowledge the receipt of critical information generated at the multidisciplinary trauma peer review meeting to close the loop (CD 16–16)."

Multidisciplinary Trauma Peer Review Meeting

- Meeting minutes and other documentation "should be recorded discreetly but should chronicle a candid discussion."
- Health Care Quality Improvement Act (1986) confers immunity from litigation.
- "Trauma center personnel should be familiar and comply with state statutes governing medical peer review and the protection from discovery afforded peer review documentation."

State Medical Peer Review Statutes



www.hortyspringer.com/peer-review-statutes-by-state

State Peer Review Statutes

"Evidentiary" Privilege

- Addresses a person's right not to have another testify as to certain matters as part of a judicial process
- Evidence concerning peer review proceedings is inadmissible in court and not subject to discovery
- No analogous federal statutory privilege
- Scope varies as to meeting type, health facility, information granted privilege, and type of actions to which privilege is extended

State Peer Review Statutes

Confidentiality

- Privilege infers confidentiality - obligation to refrain from disclosing information to third parties
- All peer review related materials must be identified, clearly marked, and stored securely.
- Refrain from informal oral or written comments (discoverable)

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www.east.org
@EAST_Trauma

Multidisciplinary Trauma Peer Review Meeting

***Determination* (pg 131)**

- "…must systematically review mortalities, significant, complications, and process variances associated with unanticipated outcomes and determine opportunities for improvement (CD 16–17).
- "…should determine the definition and classification of these events in a manner consistent with the trauma center's institution-wide performance improvement program.

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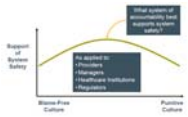
Multidisciplinary Trauma Peer Review Meeting

- "… the appropriateness and timeliness of care should be reviewed, and opportunities for improvement should be determined and documented."
- "When an error can be attributed to a single credentialed provider, use of the departmental or institutional formal medical peer review process should be considered."

Multidisciplinary Trauma Peer Review Meeting

- "When an error can be attributed to a single credentialed provider, use of the departmental or institutional formal medical peer review process should be considered."

"Just" Culture in Healthcare



- Balance between a *Punitive* and *Blameless* Culture
- "To Err is Human"
- Contribution of faulty systems
- Mistakes = Opportunity
- Promotes "self" reporting
- No tolerance for "reckless" behavior

JUST CULTURE PROCESS MODEL

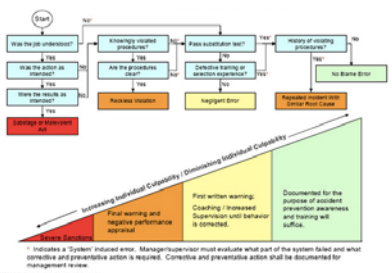
- "Standard of care"
- System factors
- Behavioral factors
- Individual culpability

JUST CULTURE PROCESS MODEL

Behavioral Factors

- Human Error – inadvertent action (slip, lapse, mistake)
- At-Risk Behavior – risk was not recognized or believed to justified
- Reckless Behavior – conscious disregard of substantial or unjustified risk

JUST CULTURE PROCESS MODEL



* Indicates a 'System' induced error. Manager/supervisor must evaluate what part of the system failed and what corrective and preventative action is required. Corrective and preventative action shall be documented for management review.

JUST CULTURE PROCESS MODEL

Pass Substitution Test

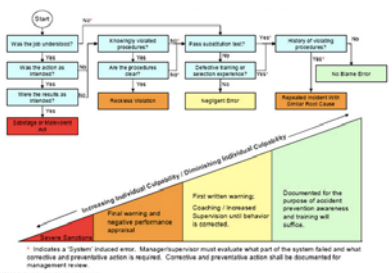
"Would three other individuals with similar experience and in similar situation and environment act in the same manner as the person being evaluated?"

JUST CULTURE PROCESS MODEL

"Corrective" Actions

- Human Error
  - Counsel, Education, Procedures, Processes
- At-Risk Behavior
  - Counsel, Remediate, Adjust Incentives, Monitor
- Reckless Behavior
  - Reprimand, Remediate, Sanction

JUST CULTURE PROCESS MODEL



* Indicates a 'System' induced error. Manager/supervisor must evaluate what part of the system failed and what corrective and preventative action is required. Corrective and preventative action shall be documented for management review.

Example dashboards if needed

Additional examples of clinical vignettes on later slides
(fictional events, we can tweak these as needed to meet your needs)

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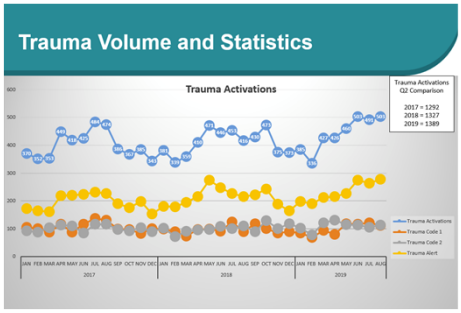

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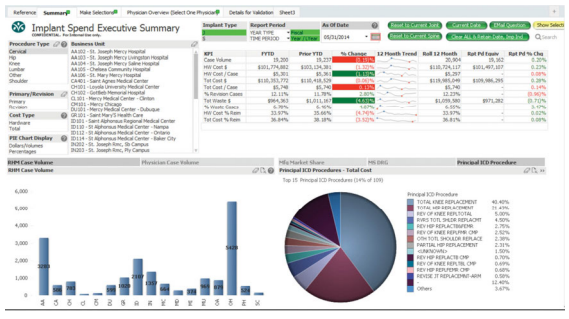

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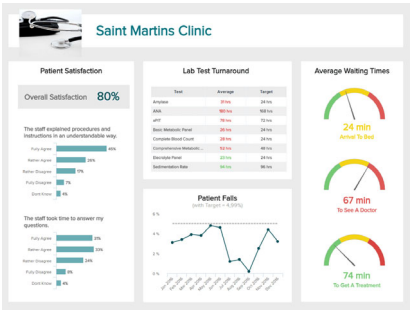

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APP Vignette

- 65yo M with minor procedure (subspecialist, we could make urology, neurosurgery, etc as they routinely use PA's/1st assists) under general anesthesia. Induction, case start "per usual routine". Case performed by APP and as closing pt becomes unstable, concern for complication of procedure and supervising physician called immediately. Physician unavailable as scrubbed at another hospital in town. Pt stabilizes with anesthesia resuscitation and undergoes immediate treatment of MI.
  - Discussion:
    - Appropriate forum to discuss?
    - Roles/scope of APP vary by state
    - Billing/compliance?
    - Credentialing
    - Should APP and physician be reviewed independently?

5

Flagrant behavior vignette

- 25yo M with basic laparoscopic case (lap appy). Counts incorrect at end of case, reported incorrect by tech. Retained foreign body protocol discontinued (refused foreign body radiograph, refused additional counts "probably in trash", directed anesthesia to wake pt) by attending staff. Event not reported outside case log. 3days later, pt develops abdominal pain prompting CT which demonstrates retained object.

  Review finds that attending frequently throws objects in OR, verbally abuses staff. Staff did not report initial event out of fear of retaliation. Attending "technically good" with no previous complaints regarding surgical judgement and outcomes are above average. No previous formal complaints but upon additional staff interviews it is apparent this is a "well-known", "frequent", and "long standing" pattern of behavior in OR and office practice

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Critical Care Note

Date of Service: 11/10/2018	**Patient Name**: JS
Hospital Admit Date: 11/06/2018	**Hospital Day**: 3
SICU Admission Date: 11/10/18	
Primary Service and Physician Consulting Critical Care: Thoracic	
C/C: 72 y.o. male s/p pericardial window on 11/8 and now s/p cardiac arrest on 11/10	

History of Present Illness: 72 y.o. male with significant history of CAD s/p LCx PCI (4/2019), NSCLC s/p chemo and XRT (2009), HTN, HLD, COPD, and DM who was found to have small-moderate pericardial effusion without evidence of tamponade on ECHO in July 2019. He underwent a pericardiocentesis with negative cytology on 9/27/19. On 11/6 he presented to his cardiology office with complaints of worsening DOE, new O2 requirement, and volume overload. A TTE at this time showed a moderate circumferential pericardial effusion (measure 1.3 cm at the LV apex to anterior RV) without tamponade physiology. He underwent a pericardial window via intercoastal approach with pericardial drainage on 11/8.

On 11/10, patient was noted to be bradycardiac 40s-20s, found to be unconscious (with either asystole or pulseless bradycardia). Patient had 3 rounds of chest compressions and received 2 mg epinephrine with ROSC in NSR in 100s. Patient was moving extremities but somnolent therefore intubated and transferred to SICU.

Patient arrived to SICU, intubated on epinephrine gtt at 2mcg/min.

Intercurrent History / 24 hour events:
Patient admitted to the SICU. CVC and a-line placed. Non-con CT head and chest.

Assessment and Plans:

The Critical Care Service is actively evaluating and managing the following critical care issues:

I have examined the patient, reviewed the chart/available data, and have personally formulated the plan outlined below.

NEUROLOGIC / PSYCHIATRIC / SLEEP:
General Appearance: critical and intubated
Neurologic: CAM negative, follows commands and no focal deficits
HEENT: atraumatic and normocephalic

Pain Score: 3

Acute post-operative pain

-post cardiac arrest- neurological exam intact without any obvious focal deficits
-pain regimen prn for pain goal <4
-propofol gtt, titrate to RASS goal 0
-Fentanyl gtt, titrate to RASS goal 0
-plan for STAT CT head to r/o stroke or hemorrhage

CARDIAC:
Cardiovascular: RRR and S1, S2
Pulses: palpable R DP and PT and palpable L DP and PT
Extremities: Cool to touch and Edema: b/l LE's

BP Min: 83/59 Max: 161/78
Pulse Avg: 85.4 Min: 74 Max: 100

Vital Signs

	11/10/19 1130	11/10/19 1145	11/10/19 1151	11/10/19 1200
BP:	111/59	103/56	98/57	97/56
Pulse:	80	81	81	81

Hypervolemia, Hypertension, Shock: Cardiogenic shock, CAD and Hyperlipidemia s/p pericardial window
-Hx of PCI to LCx in 4/2019 on ASA and plavix

-q1h vital signs
-MAP goal >65
-epinephrine gtt, titrate to meet above MAP goal
-Bair hugger for hypothermia, goal temp > 96 F
-STAT TTE
-cardiology consult
-continue ASA, plavix and statin

PULMONARY:
Respiratory: symmetrical chest expansion and clear to auscultation

Resp Avg: 18.6 Min: 12 Max: 32
SpO2 Avg: 96.7 % Min: 87 % Max: 100 %

Arterial Blood Gas Results
11/10/2019: pH Art 7.44
11/10/2019: MEASURED O2 SAT ART >99.0
11/10/2019: pCO2 Art 36
11/10/2019: HCO3 Art 24.7
11/10/2019: Base Excess Art 0.1
No results

Acute respiratory failure: with hypoxia, Atelectasis and COPD
-hx of NSCLC s/p chemo and radiation (2009)

-Wean O2 for goal SaO2 > 92 %
-CXR to confirm ETT placement
-Vent settings: 25/450/50%/ 5
-f/u ABG
-Daily SBT, goal to extubate unless hemodynamic or respiratory contraindications
-HOB >30 degrees
-chlorhexidine q4h with oral care
-non-con CT chest - c/f PE but given AKI will hold off on contrast
-f/u AM CXR

GASTROINTESTINAL / HEPATIC:
Abdomen: soft, non-tender and non-distended

Results from last 7 days

Lab	Units	11/10/19

		0918
ALBUMIN	g/dL	**3.4***

NPO Standard

-place OGT and confirm placement
-NPO, f/u primary team for advancement goals
-Scheduled Colace and Senna for bowel regimen
-GI ppx with famotidine

RENAL:
Foley to gravity

Results from last 7 days

Lab	Units	11/10/19 1054		11/10/19 0918
SODIUM	mmol/L	**131***	< >	**131***
POTASSIUM	mmol/L	**6.7***	< >	**6.7***
CHLORIDE	mmol/L	98	< >	**99***
CARBON DIOXIDE	mmol/L	--	--	**19***
ANION GAP		--	--	**13***
UREA NITROGEN	mg/dL	--	--	**52***
CREATININE	mg/dL	--	--	**2.60***
GLUCOSE	mg/dL	**426***	--	**480***
CALCIUM	mg/dL	--	--	**7.6***
MAGNESIUM	mg/dL	--	--	2.1
PHOSPHATE	mg/dL	--	--	**5.6***

< > = values in this interval not displayed.

CREATININE: 11/9/2019: Creatinine 1.66
11/10/2019: Creatinine 2.32; Creatinine 2.60

11/09 0700 - 11/10 0659
In: 360 [P.O.:360]
Out: 725 [Urine:525; Chest Tube:200]

Acute Kidney Injury: pre-renal, Electrolyte abnormality Hyperkalemia and Hypervolemia

-Monitor UOP, goal > 0.5cc/kg/hr
-send urine lytes
-Reassess daily need for foley catheter
-Replete electrolytes to maintain K>4, Mg>1.8, Phos >2.2
Hyperkalemia: Lasix x1 dose 40mg IV to reduce K

HEMATOLOGIC:
HGB: 11/10/2019: Hgb Arterial 10.8
HCT: 11/10/2019: Hct Arterial 33
PLT: 11/10/2019: Platelets 153

PT: 11/10/2019: PT 14.1
INR: 11/10/2019: INR 1.2

PTT: 11/10/2019: PTT 36.9

-subcutaneous heparin for VTE ppx - given concern for PE, will obtain CT head and if negative will empirically treat with heparin gtt
-continue ASA and plavix given stent
-Bilateral LE SCD
-Transfuse with PRBCs for goal Hgb > 7

INFECTIOUS DISEASE / SEPSIS:
Temp Avg: 97.9 °F (36.6 °C) Min: 97.5 °F (36.4 °C) Max: 98.7 °F (37.1 °C)

WBC: 11/10/2019: White Blood Cells 12.0
-less likely septic, no antibiotics, continue to monitor

ENDOCRINE:

Glucose

Date	Value	Ref Range	Status
11/10/2019	167 (H)	70 - 99 mg/dL	Final
11/09/2019	162 (H)	70 - 99 mg/dL	Final
11/08/2019	138 (H)	70 - 99 mg/dL	Final
06/10/2019	116 (A)	70 - 99 mg/dL	Final
01/29/2013	123 (H)	70 - 99 mg/dL	Final
01/31/2012	135 (H)	70 - 99 mg/dL	Final

Gluc BF Type

Date	Value	Ref Range	Status
09/27/2019	Pleural Fluid		Final

Hyperglycemia and Type 2 DM

-At risk for hyperglycemia related to critical illness, q6 FSBS with SSI coverage while NPO
-BG goal 80-180

MUSCULOSKELETAL:
Musculoskeletal: normal strength

SCCS MSK: Critical illness myopathy

- Weight-bearing status: no restrictions
- Acute care PT/OT consult to enhance health and functioning, assess rehabilitation potential, and return to baseline activity status.

History:

Past Medical History:
Past Medical History
Past Medical History:

Diagnosis	Date

- CAD (coronary artery disease)
  noncritical based on coronary angiogram
- COPD (chronic obstructive pulmonary disease) (CMS-HCC)
- Diastolic dysfunction 7/25/2019
- DM (diabetes mellitus) (CMS-HCC)
- Gastroenteritis 2/2006
- HTN (hypertension)
- Hyperlipidemia
- Non-small cell lung cancer (NSCLC) (CMS-HCC)
- Pericardial effusion 7/25/2019
- S/P drug eluting coronary stent placement 7/25/2019
  4/2019, DES to distal Cfx
- Syncope

Past Surgical History:

Past Surgical History

Past Surgical History:

Procedure	Laterality	Date
DRAINAGE OF HEART SAC *Procedure: EP PERICARDIOCENTESIS INITIAL; Service: CARDVASC*	N/A	9/27/2019
HX CARDIAC CATHERIZATION		2019
HX TURP		1/2008
INCIS HEART SAC WINDW FOR DRAIN *Procedure: CREATION PERICARDIAL WINDOW/PARTIAL RESECTION W/ DRAINAGE/BIOPSY; Service: THORSURG*	N/A	11/8/2019

Family History:

Family History

Problem	Relation	Age of Onset
Cancer-Other	Mother *liver cancer*	
Lung Cancer	Father	

Social History:

Social History

Social History

Tobacco Use

- Smoking status: Former Smoker
  - Packs/day: 1.00
  - Years: 40.00
  - Pack years: 40.00
  - Types: Cigarettes
  - Last attempt to quit: 10/4/2006
  - Years since quitting: 13.1
- Smokeless tobacco: Never Used
- Tobacco comment: Quit in 2/2006

Substance Use Topics

- Alcohol use: Yes
  Comment: socially
- Drug use: No

Home Medications:

Prescriptions Prior to Admission

Medications Prior to Admission

Medication	Sig	Dispense	Refill	Last Dose
• [DISCONTINUED] Albuterol Sulfate (2.5 MG/3ML) 0.083% IN NEBU	inhale contents of 1 vial via nebulizer 3-4 times a day	30 day supply	2	Taking at Unknown time
• Albuterol Sulfate 108 (90 Base) MCG/ACT inhalation AEPB	Inhale 2 puffs every 4 hours as needed (shortness-of-breath or wheezing).			
• [DISCONTINUED] ALLEGRA-D 24 HOUR 180-240 MG OR TB24	1 tab qdaily	30	0	Taking at Unknown time
• Ascorbic Acid (VITAMIN C) 1000 MG OR TABS	1 TABLET DAILY AT DINNER			Taking at Unknown time
• Aspirin 81 MG OR TABS	1 TABLET DAILY			Taking at Unknown time
• Calcium-Vitamin D (CALCIUM + D OR)	600 mg daily			Taking at Unknown time
• clopidogrel 75 MG tablet	Take 1 tablet by mouth daily.	30 tablet		Taking at Unknown time
• esomeprazole 40 MG DR capsule	Take 40 mg by mouth daily before breakfast.			
• [DISCONTINUED] Esomeprazole Magnesium (NEXIUM) 20 MG PO PACK	1 TABLET DAILY			Taking at Unknown time
• furosemide 20 MG tablet	Take 1 tablet by mouth daily.	30 tablet	3	Taking at Unknown time
• ibuprofen 600 mg tablet	Take 1 tablet by mouth every 6 hours as needed for mild pain (1-3) or moderate pain (4-6).	90 tablet		Taking at Unknown time
• icosapent (VASCEPA) 1 g capsule	Take 2 g by mouth 2 times a day with meals.			
• levocetirizine 5 MG tablet	Take 5 mg by mouth daily at bedtime.			
• metoprolol SUCCINATE ER 25 MG tablet	Take 25 mg by mouth daily.			Taking at Unknown time

• [DISCONTINUED] Omega-3-acid Ethyl Esters (LOVAZA PO)	2 tablets daily	Taking at Unknown time
• pancrelipase LPA - 12/38/60 12000 38000-60000 units CPEP DR capsule	Take 1 capsule by mouth 3 times a day with meals.	
• pravastatin 10 MG tablet	Take 10 mg by mouth every other day.	Taking at Unknown time
• RAMIPRIL PO	Take 1.25 mg by mouth daily.	Taking at Unknown time

Scheduled Meds:

• acetaminophen	975 mg	oral	Q8H
• albuterol	2.5 mg	nebulizer	4x daily RT
• vitamin C	1,000 mg	oral	Daily with dinner
• aspirin	81 mg	oral	Daily
• clopidogrel	75 mg	oral	Daily
• famotidine	20 mg	intraVENOUS	Daily
• heparin	5,000 Units	subcutaneous	Q8H
• insulin aspart	0-12 Units	subcutaneous	Q4H
• omega-3 fatty acids	1,000 mg	oral	Daily
• pravastatin	10 mg	oral	Q2 Days
• senna	17.2 mg	oral	Q12H

Continuous Infusions:

• EPINEPHrine	1-20 mcg/min	4 mcg/min (11/10/19 1149)
• fentaNYL	12.5-400 mcg/hr	50 mcg/hr (11/10/19 1149)
• propofol	5-80 mcg/kg/min (Dosing Weight)	20 mcg/kg/min (11/10/19 1300)

PRN Meds:

albuterol
- bisacodyl
- carboxymethylcellulose
- dextrose
- dextrose
- fentaNYL 16 mcg/mL
- insulin pen device (NOVOLOG) aspart
- polyethylene glycol
- sodium chloride

Allergies:

Allergies

Allergen	Reactions
• Nitroglycerin	Hypotension
• Nitroglycerin	Hypotension
Occurred one time	
• Voltaren	
He is intolerant	

DEVICE ASSESSMENT:
Based on this patient's current critical care needs, the following devices are appropriate:

-OETT
-CVP Line
-Arterial Line
-Foley
-Chest tube
-NGT

GOALS OF CARE:
Full Code

Trauma & Critical Care Note

Date of Service: 12/20/2019	**Patient Name**: JC
Hospital Admit Date: 12/19/2019	**Hospital Day**: 0
SICU Admission Date: 12/20/19	
Primary Service and Physician Consulting Critical Care: Trauma	
C/C: 71 y.o. male s/p auto vs ped w/ rib fractures and tibial fx	

History of Present Illness: JC is a 71 y.o. male with significant history of HTN, DM, ETOH abuse, and untreated lung ca (diagnosed ~2015 without treatment or follow-up) who presents s/p auto vs. ped. The car reportedly ran over his L leg and the bumper hit him in the chest as he was sleeping on a grate. Arrived to trauma bay awake and alert, GCS 15. C/o chest pain. He had CT scan of chest. In the bay his PICS score is 6, very poor IS, he is admitted to TSICU for further monitoring and Pulmonary toilet. Injuries include:

-R side rib fractures 2-3
-L proximal fibular fx

Incidentally found to have RLL (6.6 x4.5 x 5.3cm) and LUL (1.7x1.6cm) masses which are concerning for primary lung ca. Patient states he is aware of "spots" on his lungs as these were seen on a CXR at OSH ~4-5 years ago. He was unable to follow up with oncology as an outpatient and never received treatment due to being homeless/uninsured. He denies dyspnea or chest pain prior to this accident. He admits to 20# weight loss over the last several months but consistent access to food has been a struggle (last "full meal" about a week ago per patient).

PMH: HTN, DM (takes no meds for last year or so, multiple meds started for diabetes)

Recent History / 24 hour events:
Patient admitted to the SICU.

The Critical Care Service is actively evaluating and managing the following critical care issues:

I have examined the patient, reviewed the chart/available data, and have personally formulated the plan outlined below.

NEUROLOGIC / PSYCHIATRIC / SLEEP:
General Appearance: no acute distress, thin, frail, appears older than stated age
Neurologic: AAO X3, CAM negative, follows commands and cranial nerves intact
HEENT: atraumatic, normocephalic and moist mucous membranes

Pain Score: 10 - worst pain ever

Acute pain due to trauma and Substance abuse disorder: Alcohol use disorder
Monitoring for:

#acute pain

-pain regimen prn for pain goal <4
-multimodal therapies including tylenol ATC, lidocaine patches, and prn dilaudid
-t/c APS consult for epidural if pain not well controlled and continues to have poor respiratory effort

#ETOH abuse (beer 3 times weekly)
-will score on minds protocol to watch for s/s of withdrawal while admitted
-daily thiamine and folate

CARDIAC:
Cardiovascular: RRR, S1, S2, no murmurs, normal PMI, no thrill and no edema
Pulses: palpable R radial and DP and palpable L radial and DP
Extremities: Warm, Well perfused and No edema

BP Min: 150/74 Max: 204/98
Pulse Avg: 70.2 Min: 57 Max: 98

Vital Signs

	12/20/19 0500	12/20/19 0644	12/20/19 0700	12/20/19 0800
BP:	**(!) 196/77**	**(!) 186/82**		180/81
Pulse:	63	61	70	57

Hypertension
Monitoring for:

#HTN
-q1h vital signs
-SBP goals 130-170 given h/o uncontrolled HTN (200 on admission to trauma bay)
-restart oral agent as able

PULMONARY:
Respiratory: symmetrical chest expansion and clear to auscultation, significant splinting and poor inspiratory effort, no flail

Resp Avg: 20.9 Min: 16 Max: 26
SpO2 Avg: 98.3 % Min: 97 % Max: 100 %

Acute respiratory insufficiency, Atelectasis and Rib fractures (location R 2-3)
Monitoring for:
#rib fractures (R 2 & 3)
-PICS score in bay 6, in ICU 6
-pain control as above
-currently on RA
-educate and reinforce IS 10x/hr while awake for goal >1000ml
-cough, turn, and deep breathe q2 hours

#COPD on CT scan
-no current bronchospasm and sounds well controlled as outpatient (no wheezing or dyspnea)
-smoking cessation counseled

#RUL lung mass with prior h/o lung ca dx (lost to follow up)
-consult palliative care to explore options of treatment versus palliative measures as cancer progresses
-if patient wishes for aggressive care, consult thoracic and heme-onc

GASTROINTESTINAL / HEPATIC:
Abdomen: soft, non-tender and non-distend
Regular Diet

Constipation, Malnutrition
Monitoring for:
-regular diet with boost three times a day
-check nutritional markers as patient has limited access to consistent meals
-consult nutrition
-Scheduled Colace and Senna for bowel regimen

RENAL:
Voiding

Results from last 7 days

Lab	Units	12/20/19 0815
SODIUM	mmol/L	**135***
POTASSIUM	mmol/L	6.2
CHLORIDE	mmol/L	105
CARBON DIOXIDE	mmol/L	24
ANION GAP		**13**
UREA NITROGEN	mg/dL	**27***
CREATININE	mg/dL	1.25
GLUCOSE	mg/dL	489
CALCIUM	mg/dL	**8.4***
MAGNESIUM	mg/dL	**1.7***
PHOSPHATE	mg/dL	3.5

CREATININE: 1/25/2016: Creatinine 1.07
12/19/2019: Creatinine 1.29
12/20/2019: Creatinine 1.25

12/19 0700 - 12/20 0659
In: 1000 [IV Piggyback:1000]
Out: 500 [Urine:500]

Electrolyte abnormality Hyperkalemia (mild), CKD
Monitoring for:

#hyperkalemia, mild
-repeat BMP after lasix
-EKG
-Maintenance IVF while NPO
-40mg Lasix to clear potassium
-Monitor UOP, goal > 0.5cc/kg
-Replete electrolytes to maintain K>4, Mg>1.8, Phos >2.2
-follow up on BMP; repeat with AM labs

#CKD
-creat appears to be 1-1.3
-currently close to baseline

HEMATOLOGIC:
HGB: 12/20/2019: Hemoglobin 10.6
HCT: 12/20/2019: Hematocrit 32
PLT: 12/20/2019: Platelets 181

Anemia: Chronic disease, likely in s/o ETOH abuse
Monitoring for:

-SQH for VTE ppx in s/o potential epidural
-Bilateral LE SCD
-add thiamine and folate
-check iron studies
-Transfuse with PRBCs for goal Hgb >7
-f/u CBC and repeat with AM labs

INFECTIOUS DISEASE / SEPSIS:
Temp Avg: 98.1 °F (36.7 °C) Min: 97.9 °F (36.6 °C) Max: 98.2 °F (36.8 °C)

WBC: 12/20/2019: White Blood Cells 4.1

-no acute indication for abx
-monitor fever and WBC trends

ENDOCRINE:

Glucose

Date	Value	Ref Range	Status
12/19/2019	320	70 - 99 mg/dL	Final

Type 2 DM
Monitoring for:

-Hyperglycemia related to critical illness and hx of DM, FSBS qAC/HS with SSI coverage
-BG goal 80-180
-check HgbA1c
-hold off on oral medications for now

MUSCULOSKELETAL:
Musculoskeletal: impaired mobility 2/2: pain or device: pain

SCCS MSK: Fracture: LLE proximal fibular fx
Monitoring for:

- Weight-bearing status: WB status: LLE: WBAT
- Ortho consulted - placed in KI and will need to follow up in fracture clinic
-Acute care PT/OT consult to enhance health and functioning, assess rehabilitation potential, and return to baseline activity status.

History:

Past Medical History: see HPI
Past Medical History
Past Medical History:

Diagnosis	Date
• Alcohol abuse	
• Cancer (CMS-HCC)	
• Diabetes (CMS-HCC)	
• Drug abuse and dependence (CMS-HCC)	
• Hypertension	

Past Surgical History: denies

Past Surgical History
History reviewed. No pertinent surgical history.

Family History:

Family History
No family history on file.

Social History:
Social History
Social History

Tobacco Use	
• Smoking status:	Never Smoker
• Smokeless tobacco:	Never Used
Substance Use Topics	
• Alcohol use:	No
Comment: pt reports drinking 3 cans of beer 3 days per week x past 2 weeks age of 1st use 20 years	
• Drug use:	Yes
Frequency:	3.0 times per week
Types:	Marijuana, Cocaine
Comment: pt reports using marijuana and cocaine x 30 years last use 1/10/2019	

Home Medications:
Prescriptions Prior to Admission
No medications prior to admission.

Scheduled Meds:

Continuous Infusions:
- lactated ringers 75 mL/hr 75 mL/hr (12/20/19 0722)

PRN Meds:

Allergies: No Known Allergies

DEVICE ASSESSMENT:
Based on this patient's current critical care needs, the following devices are appropriate:
-PIVs

GOALS OF CARE:
Full Code

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MEDICAL PEER REVIEW ANALYSIS FORM

National Guidelines for Hospital Peer Review

1. Maryland - Md. Code Ann., Health Oc. 1-401 "Medical review committees"

2. The Joint Commission on Accreditation requires hospitals to conduct peer review to retain accreditation. The Health Care Quality Improvement Act (HCQIA) granting comprehensive legal immunity for peer reviewers to increase participation.
    a. Requires hospital to conduct peer review to maintain accreditation
    b. Congressional mandate IAW Health Care Quality Improvement Act (HCQIA)
        i. *Curran WJ. Legal immunity for medical peer-review programs. New policies explored. N Engl J Med. 1989;320:233–235.*

3. American Medical Association
        i. *Code of Medical Ethics, Opinion 9.4.1*

4. CMS- Requirement *CMS requires peer review*
    a. *Greeley White Paper (2015) - Must be unbiased, reliable, efficient*
    b. *Can be done by one of 4 models:*
        i. *Department chair model (committee of one)*
        ii. *Department-based PRC*
        iii. *Single, central, multispecialty PRC*
        iv. *Several multispecialty PRCs*

************REVIEW REQUIREMENTS************

1. *Review of this case is mandatory before or on the review deadline listed below. Review by the committee chair and others is required prior to presentation to the Medical Peer Review Committee.*
2. *As you review this case, be sure to take notes so you are prepared to present to the full Committee if required.*

ADDITIONAL REQUIREMENTS

1. ***Based on your review findings, you MAY be asked to attend a future Medical Peer Review Committee meeting to discuss this case. The Medical Peer Review Committee meets the second Tuesday of every month at 12:30 p.m. in room P1G01.***
2. ***Once invited to a Medical Peer Review Committee attendance is mandatory per medical staff requirements. You are expected to find coverage to attend this meeting. The ONLY exception will be a last minute emergency or if you are previously scheduled to be out of town.***
3. ***If for some reason you can not attend as scheduled, it is your responsibility to inform both myself and Susan Leone in the Shock Trauma Quality Management Office (8-6946)***
4. ***Failure to complete this review WILL result in an AUTOMATIC invitation to attend a future Medical Peer Review Committee meeting to discuss this case.***
5. ***Failure to complete a review as assigned WILL result in a notification of non-compliance being sent to your division Chief.***

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MEDICAL PEER REVIEW ANALYSIS FORM

Determination:

Appropriateness of Care will be determined by utilizing the guidelines for Judgments regarding mortality from the ACS Manual, 1993, page 94, and contributing factors related to morbidity and mortality. This list was adapted by the ACS manual with permission from Shackford SR, Hollingsworth-Fridlund P, McArdle M, Eastman AB: "Assuring quality in a trauma system – the medical audit committee: Composition, cost, and results." *J. Trauma* 1987;27 (8):866-875

Judgments Regarding Mortality

Judgment		Guidelines		Documentation
Not preventable ***(Mortality without opportunity for improvement)***	1.	Anatomic injury or combination of injuries considered nonsurvivable with optimum care.	1.	Findings at operation; ISS determined by postmortem examination.
	2.	Physiologic state at time of arrival of first responder important but not critical to Judgment of nonpreventability	2.	Field and admission RTS, vital signs.
	3.	Evaluation and management appropriate to ACLS and ATLS guidelines; suboptimal care, if identified, is deemed not to have influenced outcome.	3.	Prehospital and hospital records.
	4.	Probability of survival (P) <0.25.	4.	Age, RTS, ISS
Potentially Preventable ***(Anticipated mortality with opportunity for improvement)***	1.	Anatomic injury or combination of injuries considered to be very severe but survivable under optimal conditions.	1.	Findings at operation; ISS determined by postmortem examination.
	2.	Physiologic state at time of arrival of first responder critical to Judgment of potential survivability.	2.	Field and admission RTS, vital signs.
	3.	Evaluation and management generally appropriate to ACLS and ATLS guidelines; any suboptimal care directly or indirectly implicated in patient's demise.	3.	Prehospital and hospital records.
	4.	0.50>P>0.25.	4.	Age, RTS, ISS
Preventable ***(Unanticipated mortality with opportunity for improvement)***	1.	Anatomic injury or combination of injuries considered survivable.	1.	Findings at operation; ISS determined by postmortem examination.
	2.	Physiologic state at time of arrival of first responder critical to Judgment of preventability; patient generally stable; if unstable, patient becomes stable with treatment.	2.	Field and admission RTS, vital signs.
	3.	Suboptimal care clearly related to unfavorable outcome.	3.	Prehospital and hospital records
	4.	P>0.5.	4.	Age, RTS, ISS.

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MEDICAL PEER REVIEW ANALYSIS FORM

STC #:	**MRN:**	**Admit/Acct #:**
Provider:		**Department:**
Log Date:	**Occurrence Date:**	**Completed Date:**
Local Case #:		

Primary Diagnosis:

Reason for Referral:

Case Description:

Patient Chart Information

Patient Name:

DOB:	**Age:**	**Sex:**
Admitting Provider:		
Admission Date:		**Discharge Date:**

Assessment

Physician Case Review	***Answers***
(Please add additional pertinent patient/case information)	

TEAM CASE REVIEW

Team Case Review-Findings	***Answers***
I. Overall Appropriateness of Care	
1. Clinical Care in accordance with current standards of practice	☐ Yes ☐ No
2. Care deviates from the current standard of practice (please outline areas of inadequacy below)	☐ Yes ☐ No

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MEDICAL PEER REVIEW ANALYSIS FORM

II. Did it Contribute to Patient's Outcome? ☐ Yes ☐ No

III. Potential Preventability of Death (Check One):

☐ Definitely Preventable

☐ Potentially Preventable

☐ Not Preventable

IV. Complications:

1. **Surgical Complication:** ☐ Mortality ☐ Morbidity ☐ Yes ☐ No

☐ Complication of the operative procedure:

a. ☐ Judgement

☐ System

b. ☐ Definitely Preventable

☐ Potentially Preventable

☐ Not Preventable

2. **Non-surgical complications**:

Cardiac: ☐ Acute MI ☐ Arrhythmia ☐ Tamponade

VTE: ☐ PE / ☐ DVT

CNS: ☐ CVA

Bleeding: ☐ Major Vascular ☐ Due to Anticoagulation (systemic of DOAC)

Sepsis/Infection: ☐ PNA ☐ BSI ☐ UTI ☐ SSI ☐ Fungemia

Respiratory: ☐ ARDS ☐ Loss Airway

Organ Failure:_____

V. Cause of Death (Check Primary Cause):

☐ Acute MI

☐ Cardiac Tamponade

☐ CNS

☐ Exsanguination

☐ Hypoxia

☐ Organ Failure (Specify): _____

☐ Other (Specify): _____

☐ PE

☐ Sepsis/Infection

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MEDICAL PEER REVIEW ANALYSIS FORM

Did the Peer Review team find the physician's medical decisions/actions to be:

Acceptable	☐ Yes ☐ No
Acceptable with reservations	☐ Yes ☐ No
Not acceptable	☐ Yes ☐ No
Please comment why:	

Did the Peer Review team find the system/process to be:

Acceptable	☐ Yes ☐ No
Acceptable with Reservations	☐ Yes ☐ No
Not Acceptable	☐ Yes ☐ No
Please comment why:	
- Clinical Judgement – care within acceptable clinical practice	☐ Yes ☐ No
- Lack of adequate dissemination of clinical information to surgical team members (documentation / communications / timeliness)	☐ Yes ☐ No
- Lack of Up to date medical knowledge (any team member)	☐ Yes ☐ No
- Clinical decision by any team member outside the standard of clinical practice with knowledge of clinical practice standards.	☐ Yes ☐ No

End of Life Care

Did the Family Request Withdraw of Life Support:	☐ Yes ☐ No
Did the Family Request DNR:	☐ Yes ☐ No
Did the Physician Staff Advise DNR Status	☐ Yes ☐ No
Was Life Support Withdrawn:	☐ Yes ☐ No

ANALYSIS

Please classify the case as one of the following	***Answers***
I. **Morbidity/mortality without opportunity for improvement (NP)**	☐ Yes ☐ No ☐ N/A

Comments:

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MEDICAL PEER REVIEW ANALYSIS FORM

II. **Anticipated morbidity/mortality with opportunity for improvement (PP)** ☐ Yes ☐ No ☐ N/A

Comments:

III. Unanticipated morbidity/mortality with opportunity for improvement (P) ☐ Yes ☐ No ☐ N/A

Comments:

FACTORS CONTRIBUTING	***Answers***
(Please list additional Factors that might have contributed to the outcome)	

OPPORTUNITIES	***Answers***
(Please list areas for improvement both from a physician and systems standpoint)	

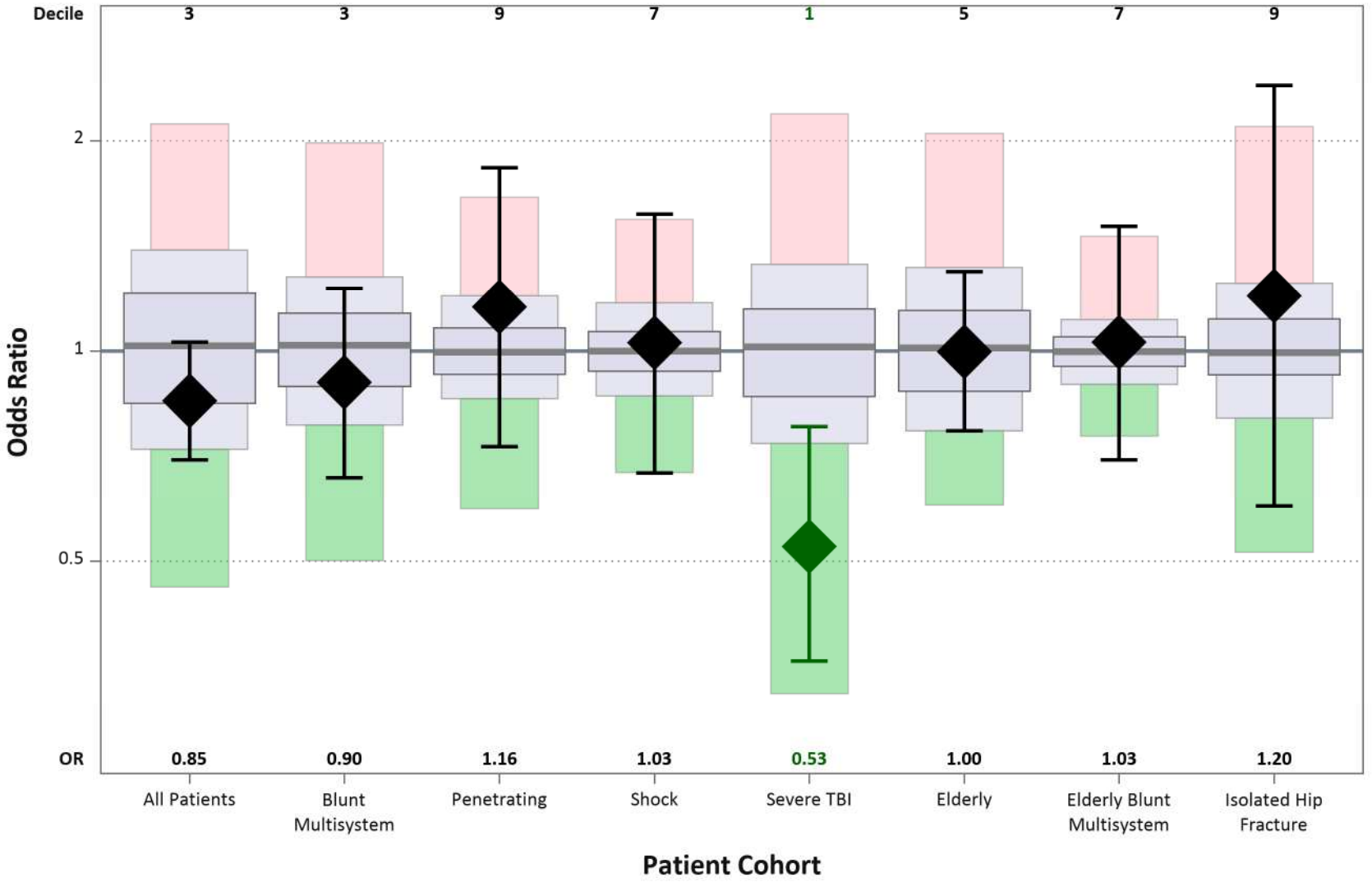
Additional Actions	***Answers***
Refer to Multi-disciplinary (SQPIP) review	☐ Yes ☐ No

Reviewer	
(Please list additional comments as needed below)	***Answers***
Reviewer Comments:	

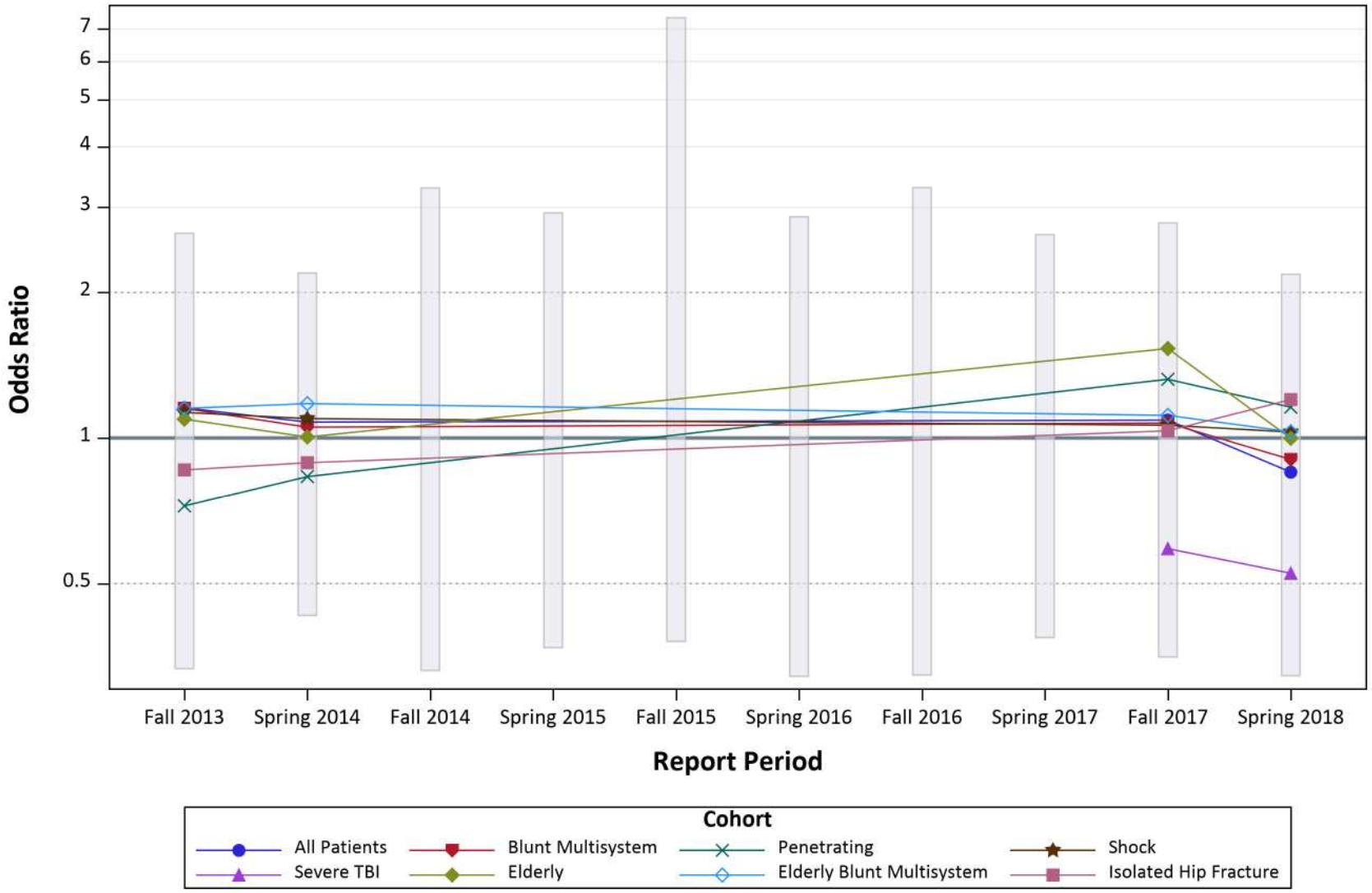
I have reviewed the medical record noted and any additional relevant information that I deemed necessary.

Date Completed: _____ Electronic Signature: _____

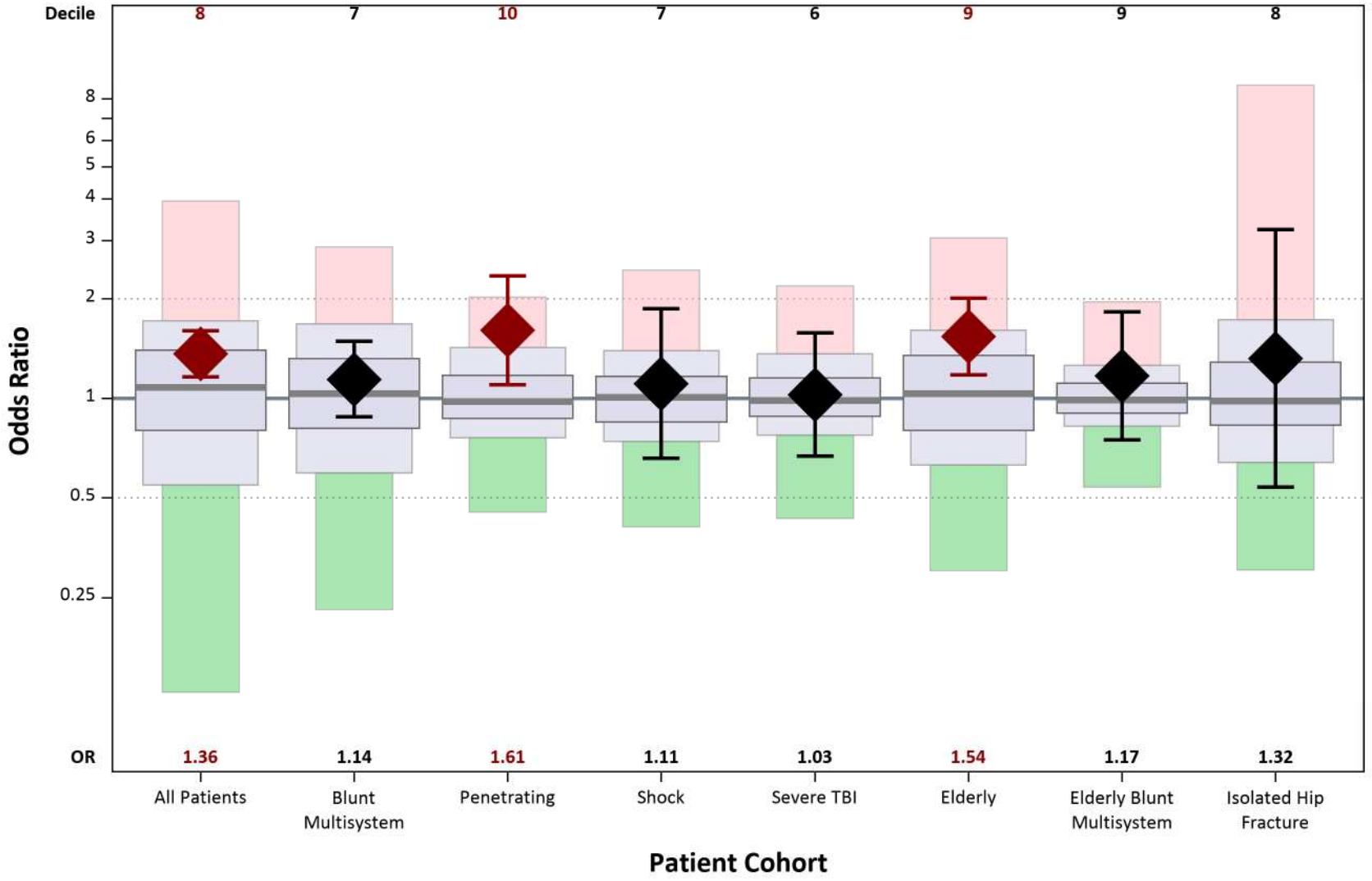
Risk-Adjusted Mortality by Cohort - Spring 2018



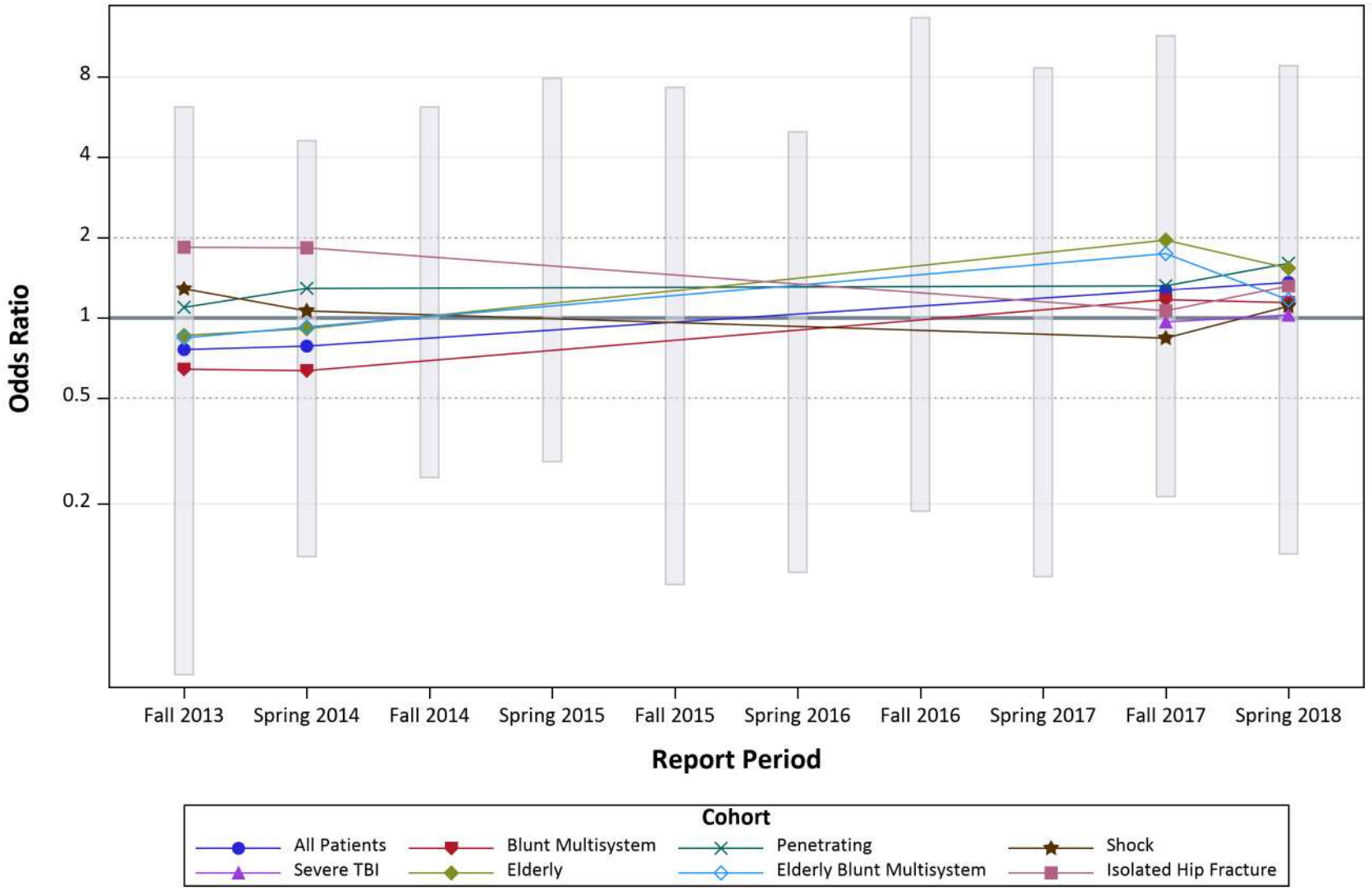
Risk-Adjusted Mortality by Cohort - Spring 2018



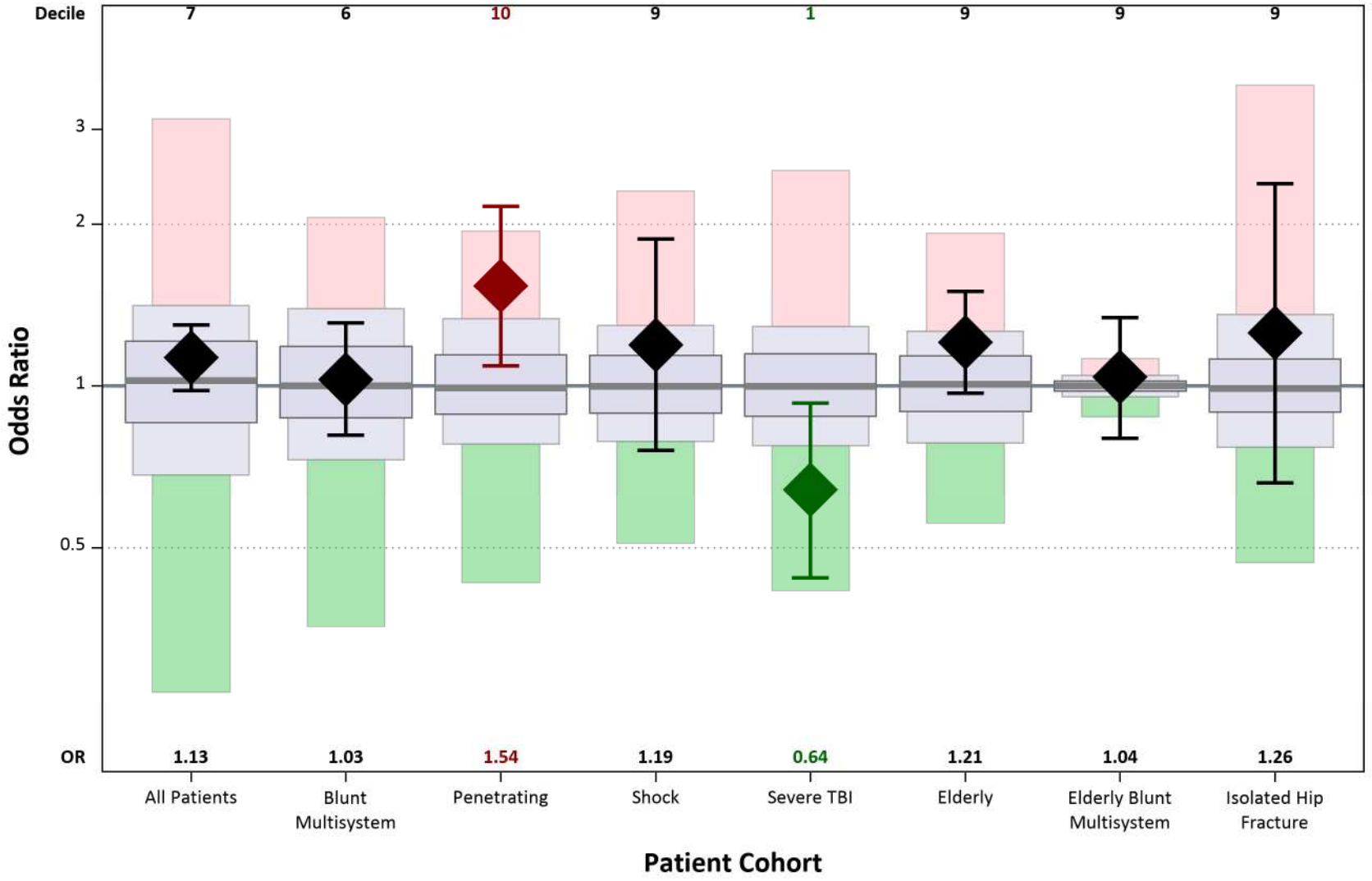
Risk-Adjusted Major Complications by Cohort - Spring 2018



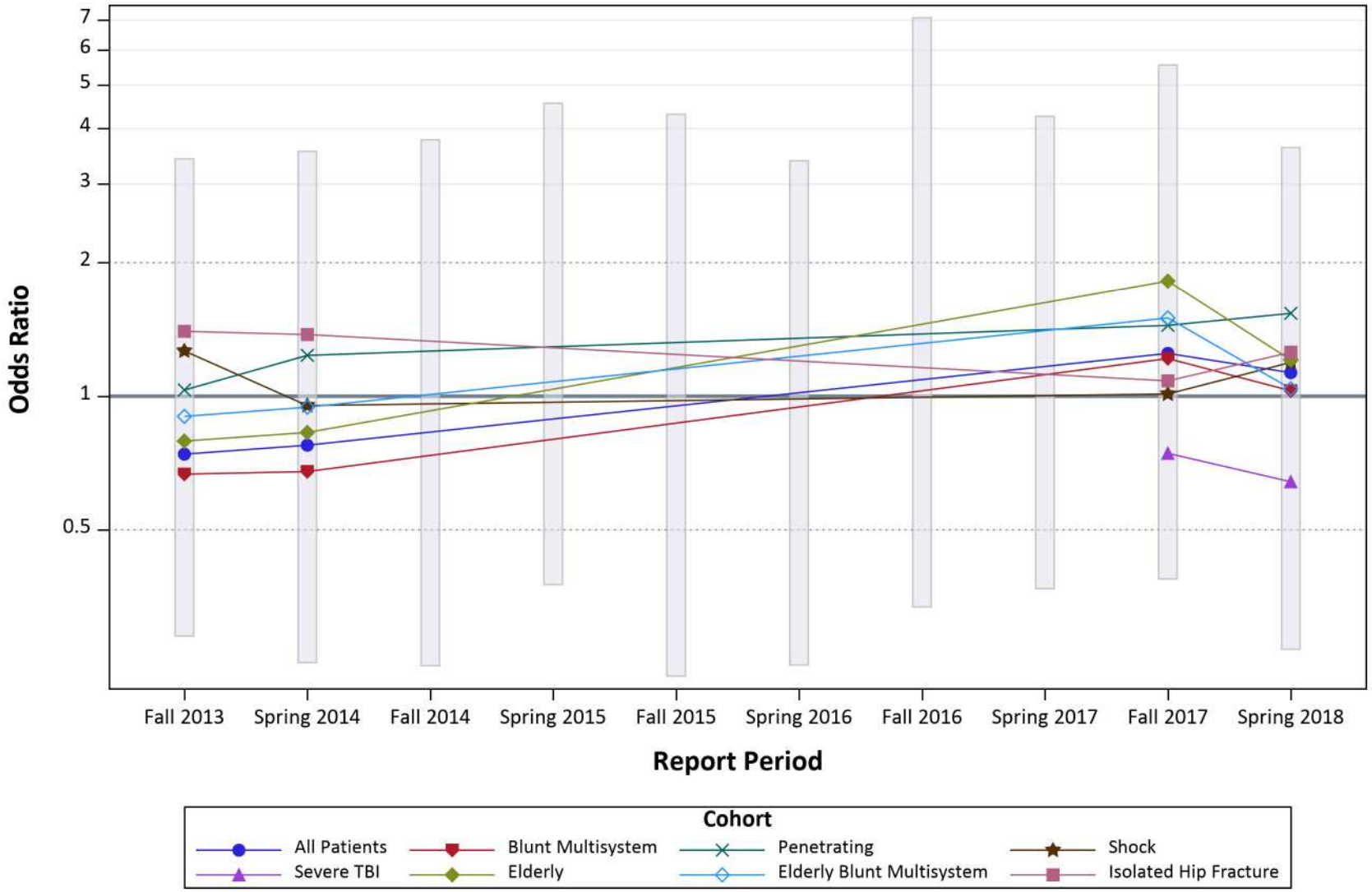
Risk-Adjusted Major Complications by Cohort - Spring 2018



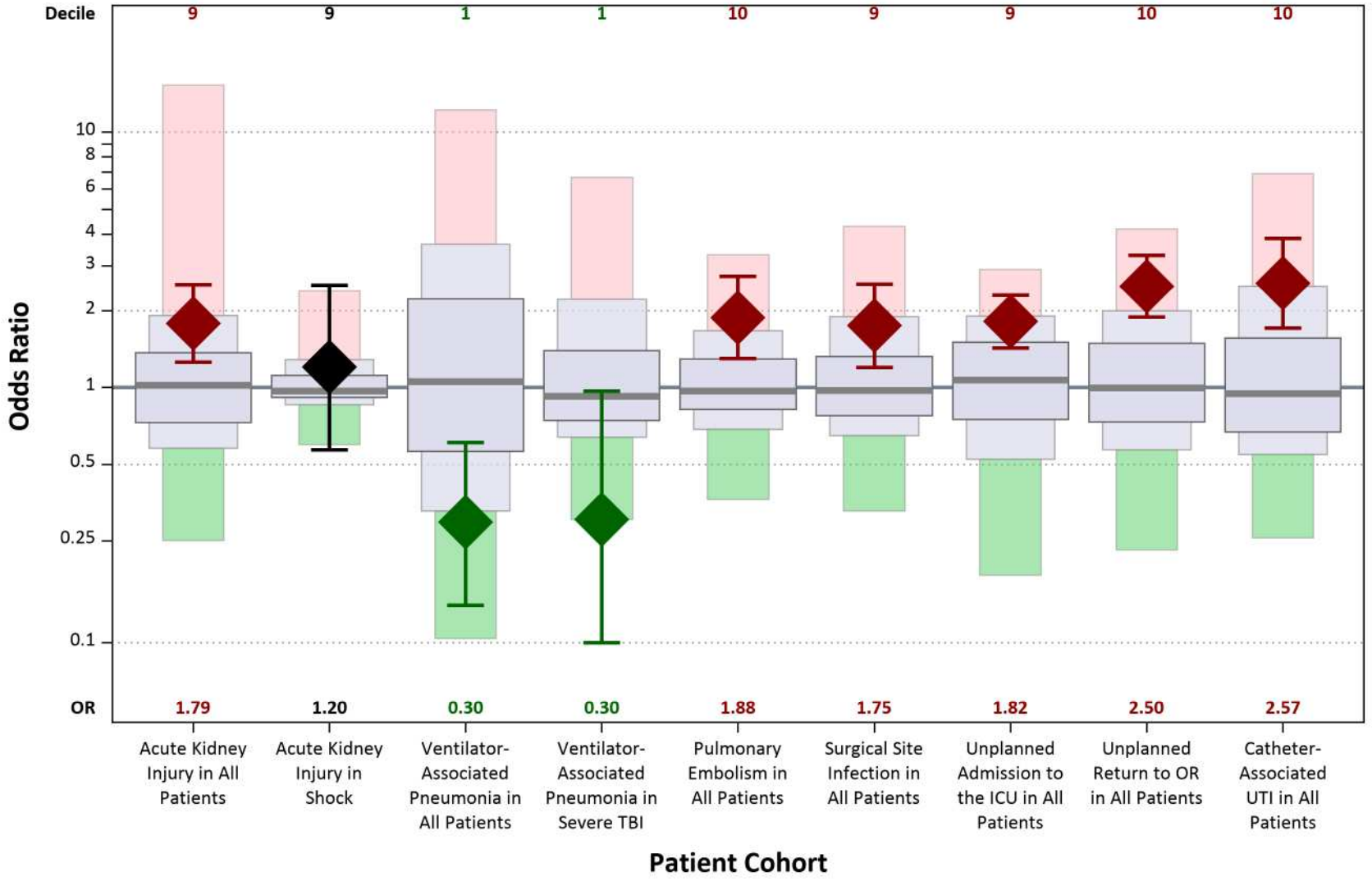
Risk-Adjusted Major Complications Including Death by Cohort - Spring 2018



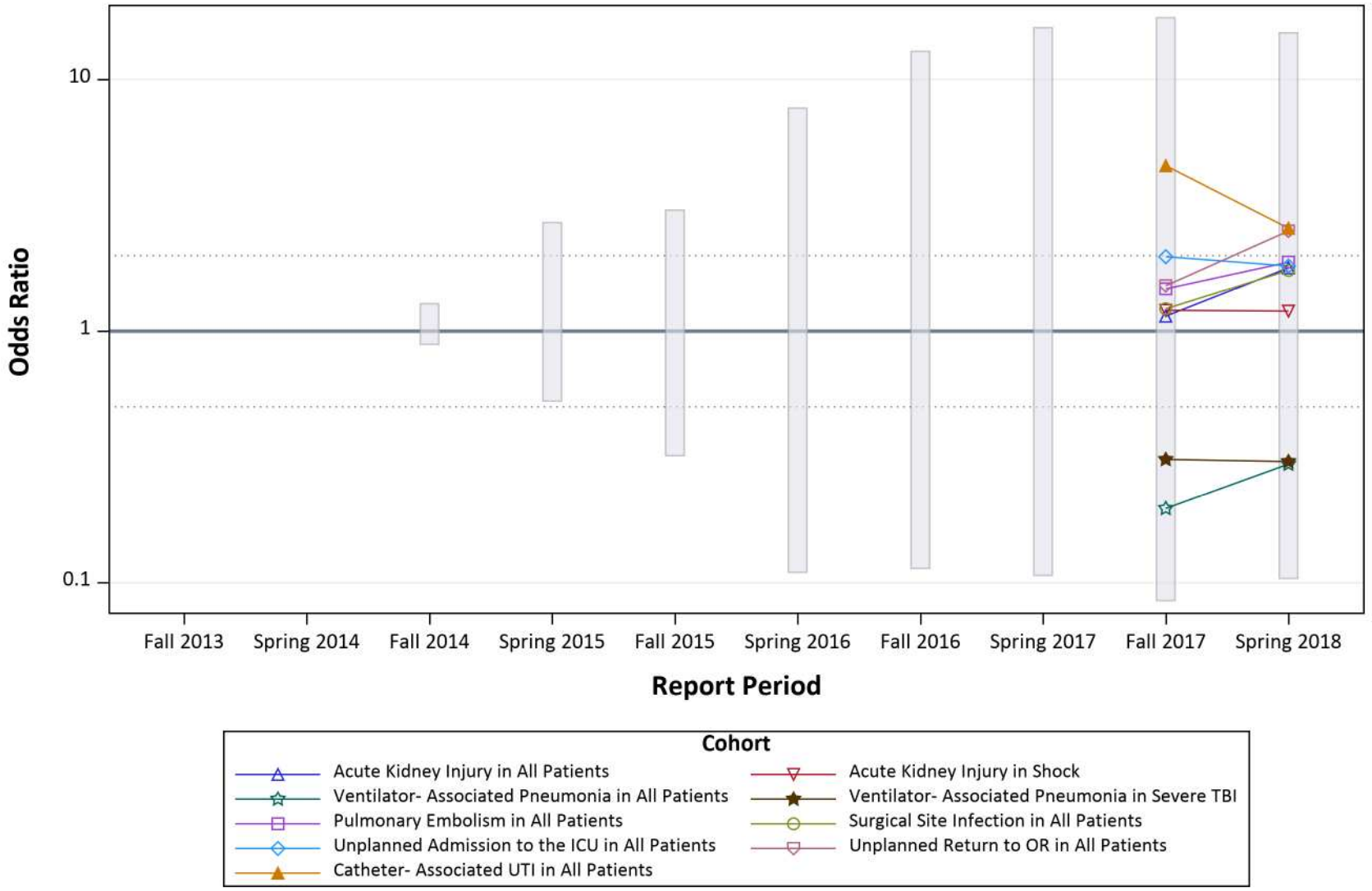
Risk-Adjusted Major Complications Including Death by Cohort - Spring 2018



Risk-Adjusted Specific Complications by Cohort - Spring 2018



Risk-Adjusted Specific Complications by Cohort - Spring 2018



Attachment A

COACHING RECORD

Documentation of the coaching process is the responsibility of the manager, and will be maintained in the manager's department file. A copy will be provided to the employee upon request. Coaching documentation will be forwarded to the employee's Human Resources file in the event that the employee is subject to a subsequent Progressive Step within a 365-day period immediately following Coaching, or will be deactivated in accordance with the Documentation Deactivation Schedule outlined in this policy.

Employee Name _____ Title _____

[redacted] Entity _____ Department _____

Immediate Manager _____ Manager's Title _____

Subject of Coaching:

_____

_____

_____

_____

Performance Improvement/Corrective Action Plan:

_____

_____

_____

_____

Follow Up Date _____ By Whom _____

Follow Up Date _____ By Whom _____

Employee's Signature _____ Date _____

Manager's Signature _____ Date _____

Attachment B

DOCUMENTATION OF PROGRESSIVE STEP FOR PERFORMANCE IMPROVEMENT

Employee Name _____ **Title** _____

[redacted] **Entity** _____ **Department** _____

Immediate Manager _____ **Manager's Title** _____

Progressive Step: First Written Warning ____ **Second Written Warning** ____ **Final Warning** ____

Basis for Progressive Step: (specify performance deficiency or violation, dates, times, other individuals involved, etc., and attach relevant documentation):

_____

_____

_____

Corrective Action Required including applicable time frame(s):

_____

_____

_____

I acknowledge that this Progressive Step has been discussed with me by my manager. I further acknowledge that if I fail to demonstrate immediate and sustained improvement I may be subject to additional disciplinary action up to and including termination of employment.

I further acknowledge that nothing in this Documentation of Progressive Step for Performance Improvement alters the at-will employment relationship between [redacted] and me, and that either [redacted] or I may terminate the employment relationship at any time without cause and without notice.

I have been made aware that I have the right to appeal this Progressive Step under the Management Decision Review Policy provided that the timeliness and eligibility requirements described in that policy are met.

Employee's Signature _____ Date _____

Comments:

_____

_____

_____

_____

I have attached additional comments I wish to make regarding this action.

Manager's Signature _____ **Date** _____

Next Level Manager's Signature _____ Date _____