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# Early Comfort Care Following Operative Intervention for Traumatic Injury

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# Early Comfort Care Following Operative Intervention for Traumatic Injury

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Melissa Red Hoffman

“Nothing To Disclose”

# Withdrawal of Life-Sustaining Treatment

- More than 1 million geriatric trauma patients per year
- Ground level falls are most common mechanism
- Withdrawal of life sustaining treatment (WLST) accounts for the death of 2/3 of trauma patients without severe brain injuries who die in the hospital



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# Research Question

What are the demographics, injury patterns and prior advance directives of patients who undergo WLST after operative intervention for traumatic injuries?

What is the role of palliative care discussions in this patient population?

# Literature Review

- Affects of pre-existing advance directives
  - 5.2-fold increase in mortality
  - Confirmed multiple studies
  - Most likely related to overall poor health status
- Early palliative care discussions
  - Shorter LOS
  - May improve patient and family satisfaction
- Withdrawal of life-sustaining treatment (WLST)
  - Based primarily on the severity of neurologic condition
  - Less likely in those that had surgery
  - More common in those with complications

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# Methods

- Retrospective chart review of all trauma patients treated in 2017
- Patients under 18 and those who died in ED or OR were excluded
- Charts of all patients who died or were discharged to hospice were further analyzed
- All advance directives were reviewed

# Demographics

- 3025 adult trauma patients
- 1495 (49.4%) had operations
  
- 30 (2%) died after WLST
  - 14 (46.7%) male
  - Mean age 72.6 (19 – 94)
  - Mean ISS 16.5 (1 – 36)
  - 15 (50%) died in hospital
  - 15 (50%) discharged to hospice



# Injury Patterns



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| Diagnosis         | n  | ISS   |
|-------------------|----|-------|
| Femur fracture    | 12 | 9.25  |
| SDH               | 10 | 23.1  |
| Chest wall injury | 4  | 15.75 |
| Spleen injury     | 2  | 20    |
| T spine fx        | 1  | 25    |
| Cervical Spine fx | 1  | 17    |

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# Prior Advanced Directives and Palliative Care

- 12 (40%) with prior advance directives
  - Living will – 7
  - DNR – 3
  - MOST forms - 2
- 26 (86.7%) had palliative care (PC) consult
- Surgery to PC consult: 2.9 days (17h – 8.9d)
- PC consult to WLST: 2.6 days (0h – 9.9d)
- Surgery to WLST: 5.7 days (1.2d – 11.8d)

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# WLST Femur vs Brain Injuries

|  | Femur Injury | Brain Injury |          |
|--|--------------|--------------|----------|
|  | n=12         | n=10         | p-value* |
| Median age (IQR)                           | 83 (79-90)   | 68 (48-71)   | <0.01    |
| White race, n (%)                          | 12 (100%)    | 7 (70.0%)    | 0.08     |
| Median Age-adjusted CCI (IQR)              | 7 (6-9)      | 4 (2-4)      | <0.01    |
| Median time to OR, hrs. (IQR)              | 17 (9-21)    | 5 (3-8)      | <0.01    |
| Median time OR to comfort care, hrs. (IQR) | 98 (67-143)  | 159 (95-239) | 0.11     |

\*p-value for Mann-Whitney U test or Fisher's Exact test  
 IQR: interquartile range, CCI: Charlson Comorbidity Index

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# WLST Femur vs Brain Injuries

Femur fracture patients compared to head injured:

- average 8.8 more hours prior to OR  
(95% CI 2.1-15.4, p=0.01)
- average 39 fewer hours from OR to Comfort Care  
(95% CI -107 - 29, p=0.26)

Adjusted for age, white race, and age-adjusted CCI

# Conclusion

- Short time between surgical treatment and WLST may demonstrate that surgery was not aligned with the patient's goals of care
- A patient-centered approach which includes palliative care discussion before surgery is necessary to decrease number of non-beneficial surgeries
- We firmly believe in surgeon-led goals of care discussions

# Questions?



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