SE 88

Palliative Care in Geriatric Orthopaedic Trauma Patients: What is It and How to Improve Quality and Efficiency of Care

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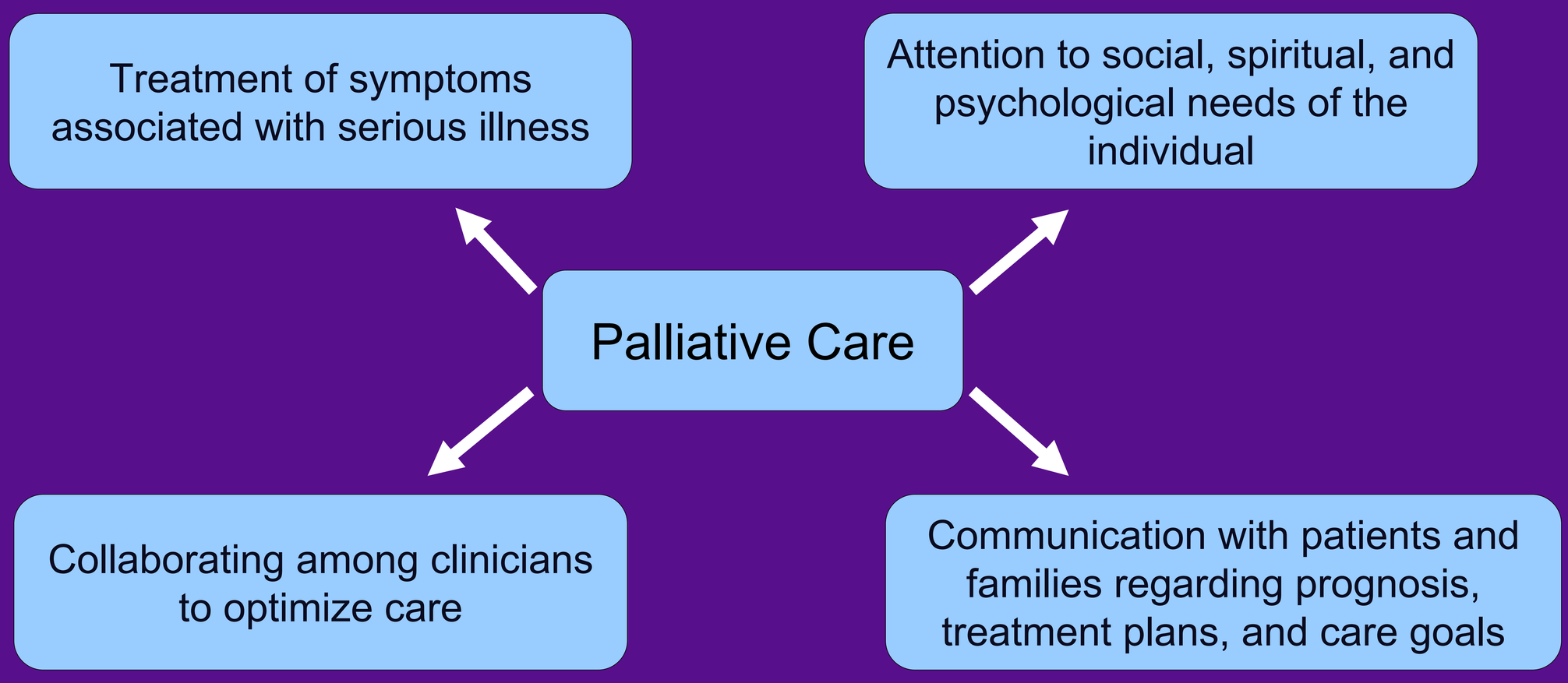
PALLIATIVE CARE IN GERIATRIC TRAUMA PATIENTS

Background and Objective

- By 2050, older people will account for over 20% of the population and at least 40% of the general trauma population
- Physiologically old patients with orthopaedic injuries have a high risk of in-hospital mortality
- *Objective: evaluate the utility of palliative care consultations in the geriatric orthopaedic trauma population and to demonstrate the benefit of these palliative care services on both improving patient satisfaction and reducing hospital resource utilization*

Introduction to Palliative Care Services

- What is Palliative Care?
  - Defined by the World Health Organization as: "an approach that improves the quality of life of patients facing the problem associated with life-threatening illness"



Underutilization of Palliative Care in Trauma Surgery

- American College of Surgeons created a Palliative Care Task Force in 1998 to improve the knowledge or surgeons in end of life care
  - 2005: ACS published the Statement of Principles of Palliative Care affirming that palliative care is *"required in the management of a broad range of surgical patients and is not restricted to those at the end of life"*
- However, knowledge of palliative care among surgical residents is low: <10% of surgical residents report receiving adequate training in palliative care although 100% said it would be valuable *(Karistenfeld et al., 2007)*
- 2014 National Survey of 362 Trauma Surgeons affiliated with the Eastern Association for the Surgery of Trauma (EAST):
  - 46% of surgeons felt that palliative care services were underutilized at their Level 1 Trauma Center *(Karlekar et al., 2014)*
- Patients who are uninsured or of African American or Hispanic race are less likely to receive palliative care services and when they do receive care they have longer delays to hospice care *(Haines et al., 2018)*

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SUCCESS OF PALLIATIVE CARE CONSULTATIONS

Introduction:

- Palliative care consultations (PCCs) are invaluable to both the patient, patient families, and hospitals
- Consultations that address patient/family concerns about the location of death (eg. Intensive care unit versus hospice) led to families that are 1.7 x more satisfied with the overall end-of-life care *(Sadler et al., 2014)*
- Hospital Savings:
    - PCCs are associated with a reduction in net hospital costs for patients that are discharged alive and those who died in the hospital *(Morrison et al., 2008)*

	Net Savings Per Admission	Net Savings per Day
Patients Discharged Alive who received PCC	$2642	$279
Patients who died in hospital who received PCC	$6896	$549

Success in Surgical Populations:

- Introduction of Structured Palliative Care Discussions→ increased discussion of pain and goals of care in trauma ICU setting *(Mosenthal et al., 2008)*
- Analysis of a Palliative Care Program at a VA Medical Center demonstrated nearly a 2x increase in palliative care consultations; associated with a 33% reduction in 180-day mortality when controlling for age, frailty, and if patients had surgery *(Ernst et al., 2014)*
- Improves recognition and treatment of delirium in the critical care setting *(de la Cruz et al., 2015)*

Tools Used to Identify Patients who Would Benefit from Palliative Care Services:

Tools to Identify Patients in Need of Palliative Care:	Variables Included:
Score for Trauma Triage in the Geriatric and Middle Aged (STTGMA)/PERSONACare	Age, GCS, CCI, Abbreviated Injury Severity (AIS) Head/Neck, AIS Chest, AIS Extremity/Pelvis, high/low energy injury, use of anticoagulation, use of assistive device, ambulatory level, albumin
Palliative Performance Scale (PPS)	Ambulation, activity level/evidence of disease, self-care, intake, and level of consciousness
FRAIL Scale	Assessment of fatigue, resistance, aerobic capacity, illnesses, and loss of weight
Risk Analysis Index (RAI)	Age, sex, cancer, comorbidities, cognition, residence, ADLs

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USING STTGMA TO TRIGGER PALLIATIVE CARE CONSULTATIONS

- The Score for Trauma Triage in the Geriatric and Middle-Aged was initially designed to predict inpatient mortality
- The score has been prospectively validated at multiple institutions and has been shown to also correlate with hospital quality measures, functional outcomes, readmissions, and 1-year mortality

Objective

- To determine the implementation of a mortality risk score (Score for Trauma Triage in the Geriatric and Middle Aged [STTGMA]) as a trigger for early PCCs in orthopaedic trauma patients.

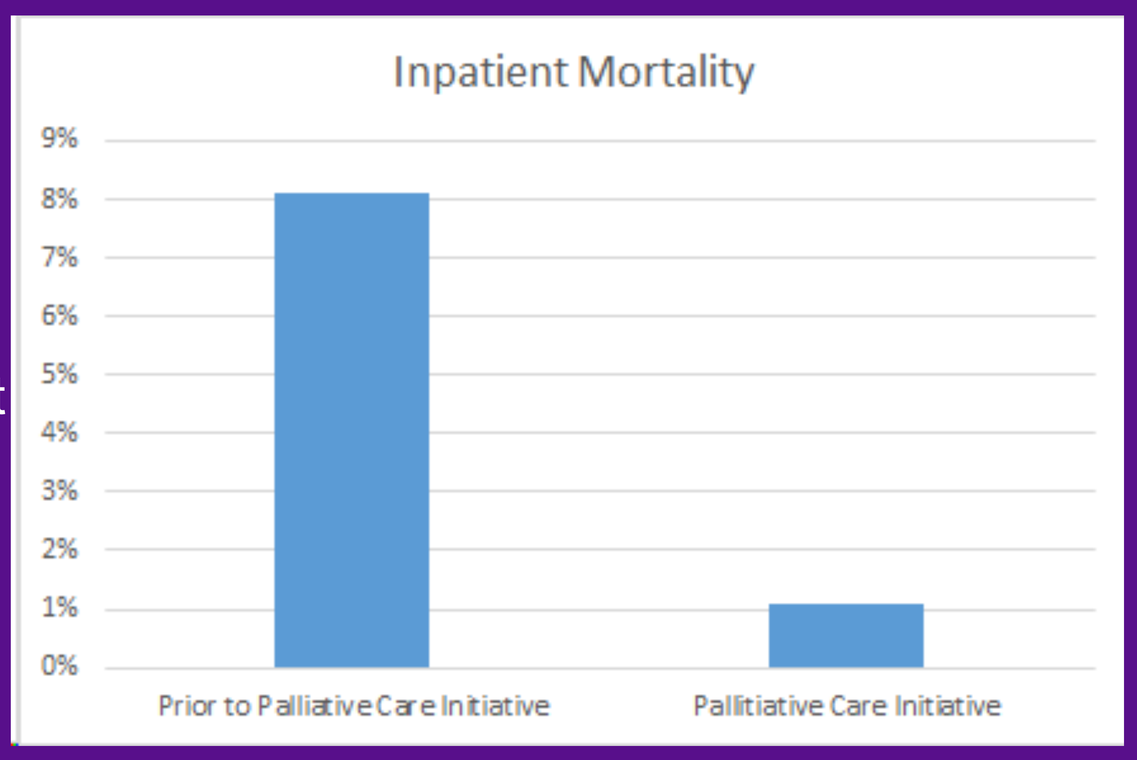
Methods

- From 10/2014 to 9/2017, patients aged 55 years of age or older who were orthopaedic surgery consults with extremity fractures or trauma surgery consults meeting American College of Surgeon Tier 1-3 criteria were enrolled in this study
- Each patient's demographics, injury severity, and functional status were used to calculate a **STTGMA score at time of admission**
- February 2017-September 2017: all patients with a STTGMA score greater than 1% automatically received a PCC at time of admission.
- Outcomes: length of stay, major inpatient complications, and discharge disposition

Injury	Health	Function
GCS	Charlson Comorbidity Index	Ambulatory status
AIS Head/Neck	Anti-Coagulation	Use of assistive device
AIS Chest	Albumin level	
AIS Extremity/Pelvis		

Results

- 695 patients with a STTGMA score greater than 1% were admitted during the study period
    - 93 were admitted after January 31, 2017, and automatically received a PCC at the time of admission
- Inpatient mortality: significantly lower in the PCC cohort (1.1% vs 8.1%, p = .014)
- Major complications: significantly lower in the PCC cohort (0.15 +/- 0.53 vs. 0.29 +/- 0.74, p=0.023)
- No difference in length of stay (7.7 vs 7.7 days, p = .988) or 30 day readmission rate (8.6% vs 9.3%, p = .828)
- Patients who received a PCC were more likely to be discharged to a skilled nursing facility or subacute rehabilitation center (55.9% vs 30.4%, p < .01) and less likely to be discharged home (32.3% vs 47.7%, p < .01)



Conclusions

- Preliminary results of a new pilot program suggest that the STTGMA tool can effectively be implemented to prompt palliative care consults in orthopaedic trauma patients
- In this cohort, patients who received care during the palliative care initiative had lower inpatient mortality rates than those who received care prior to the introduction of this pilot program
- Next steps:
    - 1. Assess the cost-savings associated with the introduction of palliative care consults
    - 2. Determine the appropriate STTGMA score cutoff to initiate mandatory palliative care consults that provides maximum value for patients and providers

GUIDELINES FOR PALLIATIVE CARE UTILIZATION

Which Geriatric Trauma Patients should receive a palliative care consult?

	Negative Screen	Positive Screen
Injury Status?	Non-life-threatening injuries	Potentially life-threatening injuries or expected inpatient morality
Presence of Spinal Cord Injury?	No	Yes
Expected Disability?	Non-disabling trauma injuries	Potentially disabling injuries or expected permanent disability
Preadmission Frailty?	No	Yes
Chronic Illness Status?	One or less pre-admission chronic illnesses	More than one pre-admission chronic illnesses
Would you be expected if this patient was dead within the next year?	Yes	Maybe/No
Clear end-of-life goals have been expressed by the patient	Yes	No
Symptoms management challenges?	No	Yes
Psychosocial support issues?	No	Yes
Disparities in Perception of Treatment Plan and Prognosis?	No	Yes

Adapted from the ACS TQIP Palliative Care Best Practice Guidelines

What are the barriers?

- Limited Palliative Care resources
- Lack of training of surgeons in end-of-life care and goals of care discussions
- The “rescue culture” the exists in surgery
- Current outcome measures used for hospital evaluation prioritize survival
    - Quality of life measurements are not included in this evaluation process
- While there are potential cost savings on a system level with the palliative care consultations, in the current fee-for-service model, palliative care consultations are not directly profitable to the hospital

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