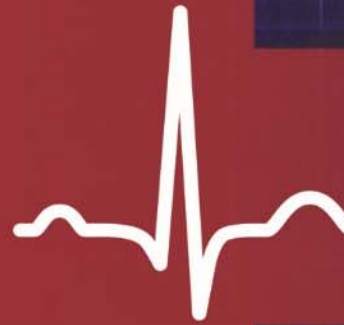


March 30 – April 2, 2016 ANAHEIM, CALIFORNIA

SOCIETY OF TRAUMA NURSES

TRAUMA CON



SOCIETY OF TRAUMA NURSES



Improving Palliative Care Consultation in a Trauma ICU & Step- Down Unit

Teresa Hobt-Bingham, MSN, RN, NE-BC



SOCIETY OF TRAUMA NURSES

Learning Objectives

- Define palliative care and frailty
- Understand the link between frailty and functional decline
- Demonstrate a nurse driven palliative care screening



Disclosure Statement

- Faculty/Presenters/Authors/Content Reviewers/Planners disclose no conflict of interest relative to this educational activity.



Successful Completion

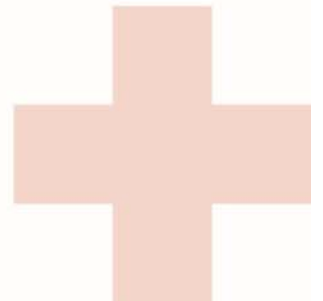
- To successfully complete this course, participants must attend the entire event and complete/submit the evaluation at the end of the session.
- Society of Trauma Nurses is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.





Our Aging Population

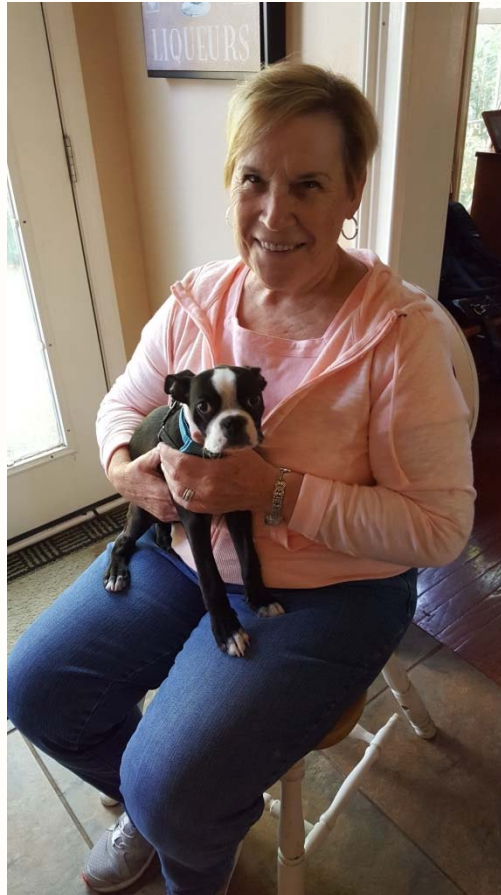
Our aging population is growing.
We are living a longer, more active and independent life.



Dorothy Pearl Hobt



Carolyn Hobt





Study Participants

- Teresa Hobt-Bingham, MSN, RN
- Cathy Maxwell, PhD, RN
- Richard Miller, MD
- Mohana Karlekar, MD
- Ryan Vance, RN (along with other RNs on the Trauma Unit)



Original Hypothesis

- Pre-Injury physical frailty and cognitive decline will predict functional decline & overall mortality in geriatric trauma patients at 6 months and 1 year after hospitalization



Older Adult Population

- Considerable growth in older population over next 40 years
- Population 65 and over projected to be 83.7 million by 2050
 - Almost double estimated population of 43.1 million in 2012



Incidence

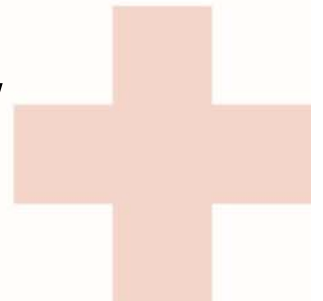
- “Approximately 25% of trauma admissions across country are from the geriatric population.”

Richard Miller, MD

Professor of Surgery

Chief, Division of Trauma and Surgical Critical Care

- Only 18% of our geriatric patients are discharged back to their home or independent living after a trauma injury



Falls

- The leading cause of trauma in older adults is falls
- Usually related to underlying disease, malnutrition and dehydration
- Most are living independently



Frailty

- A condition of vulnerability characterized by inconsistency and instability after a stressor event
- Result of physiologic cumulative decline over a lifetime
- Often a traumatic event is the tipping point that leads to decline



Cerebral Cortex

COGNITION

19 to 23 billion neurons

Global cognition & executive function



Cerebellum

PHYSICAL FUNCTION

~ 66 billion neurons

Motor control, movement, balance (coordination, precision, timing)



Palliative Care

- Early and holistic assessment of problems
- Pain interventions
- Psychological and Spiritual support
- Support systems for patient/family coping
- Integrated therapies which may prolong life



Age Groups (2011-2013)	Number (%) of Admitted Patients and Palliative Care Consultations		
	2011	2012	2013
< Age 55	1959 (63%) / 38 (2%)	2185 (66%) / 48 (2%)	2027 (68%) / 48 (2%)
55 to 64	469 (15%) / 27 (6%)	438 (13%) / 20 (5%)	389 (13%) / 34 (9%)
65 to 74	289 (9%) / 24 (8%)	315 (9%) / 37 (12%)	365 (12%) / 26 (7%)
75 to 84	221 (7%) / 36 (16%)	243 (7%) / 37 (15%)	174 (6%) / 28 (16%)
Age 85+	149 (5%) / 34 (23%)	149 (4%) / 22 (15%)	113 (4%) / 20 (18%)
Total Admissions/ Total PC Consults	3117 (100%) / 159 (5%)	3330 (100%) / 164 (5%)	2968 (100%) / 156 (5%)
Older Adult Admissions/PC Consults	659/94 (14%)	707/96 (14%)	652/74 (11%)
Inpatient Mortality	226 (7.6%)	249 (7.4%)	258 (8.3%)

Palliative Care Consultation

- Karlekar et al. surveyed 362 trauma surgeons to determine perceptions of indications, barriers, and benefits r/t PC consultation
- Among surgeon respondents, almost half felt that PC was under-utilized



Reasons for PC Consultation

- Expected survival 1 week – 1 month
- Multi-system organ failure
- Minimal neurological responsiveness
- Referral to hospice



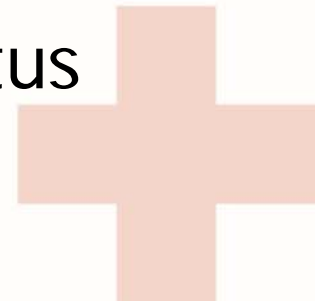
Barriers to PC Consultation

- Resistance of families
- Perception of “giving up”
- Miscommunication of prognosis
- Diagnosis by PC physician



Primary Study

- QI: Cathy Maxwell, PhD, RN
- Primary study of admitted Trauma patients
- October 2013 through March 2014 (6 mos.)
- Caregiver interviews of 188 patients
- Determined pre-injury cognitive & physical frailty status
- Follow up calls made at 30, 90, 180 and 365 days to determine post-hospitalization status and outcomes



Primary Study

- The research team tested 5 different screening instruments:
 - AD8 Dementia Screen
 - Informant Questionnaire on Cognitive Decline in the Elderly
 - Vulnerable Elderly Study
 - Barthel Index
 - Life Space Assessment
- 38 frailty questions & 24 cognitive questions
- Interviews 30 minutes in length



Primary Study

- 100% of patients were interviewed with their surrogate
- Only 41% of screenings included the patient due to: pain, medications, sedation or cognitive deficits & various other reasons
- Having a primary surrogate was part of the inclusion criteria



Primary Study Findings

- 3 groups: Non-Frail, Pre-Frail & Frail
- All 3 groups declined within the first 30 days
- Non-Frail – returned to baseline
- Pre-Frail – some returned to baseline others did not
- Frail – none returned to baseline and 25% died with 1 year of hospitalization



Not Just a Statistic



Primary Study Summary

- Physical frailty was the primary predictor of decline and one year mortality



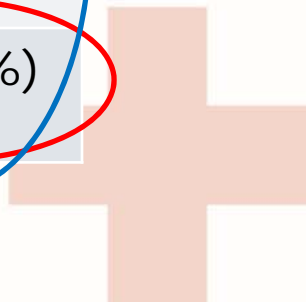
Injured Older Adult Study

Pre-injury Impairments

Pre-injury Impairments of Injured Older Adults (N=188)			
Cognition AD8 Dementia Screen (Range: 0-8)	Frailty Vulnerable Elders Survey (VES-13) (Range: 0-10)		
	0 No frailty	1-2 Pre-frail	≥3 Frail
0 No impairment	23 (12%)	21 (11%)	28 (15%)
1 Impairment	2 (1%)	9 (5%)	12 (6%)
2 through 8 Possible dementia	2 (1%)	9 (5%)	82 (44%)

65%

Potential eligibility for PC consult



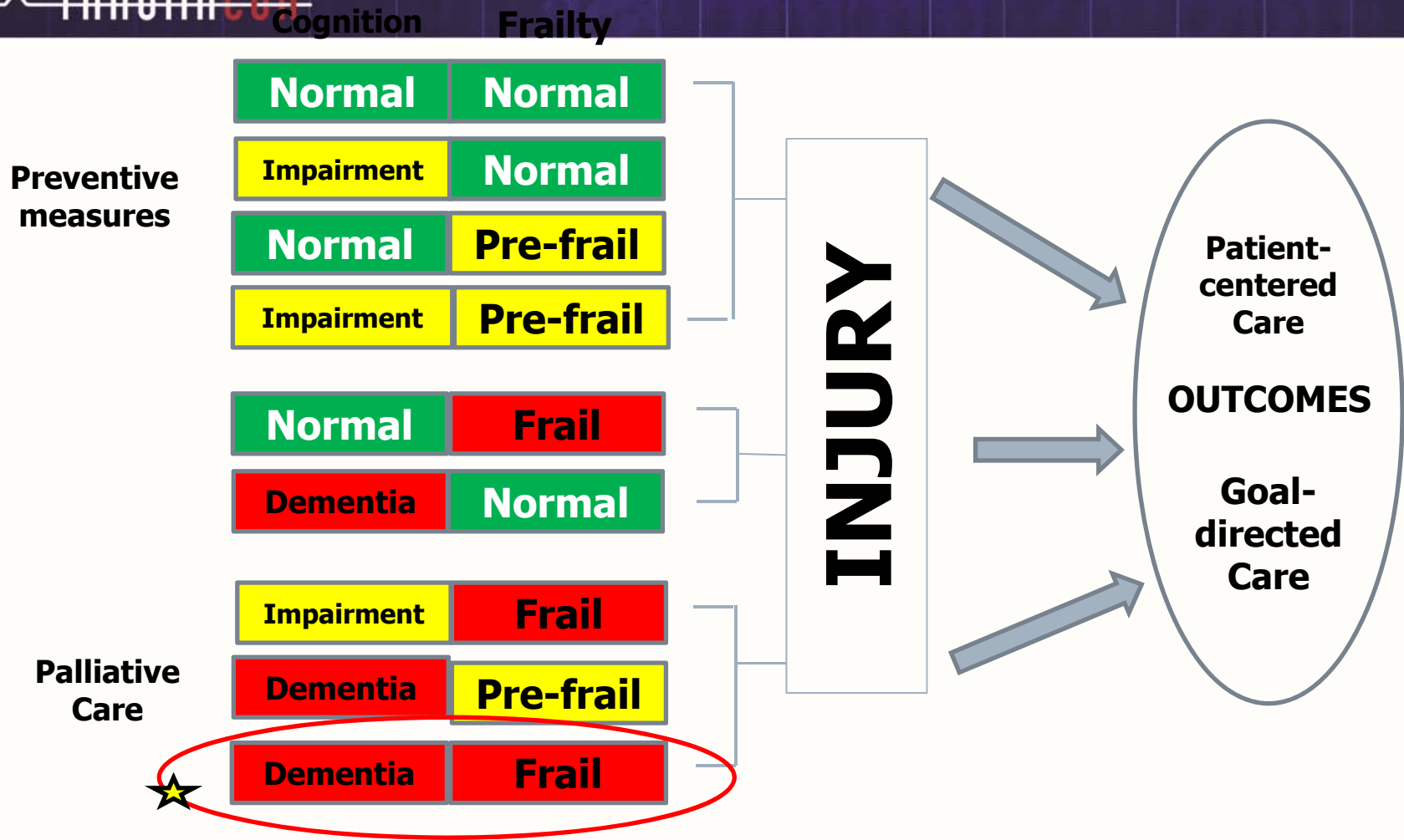
IOA-PII Study

Overall Mortality- 6 months

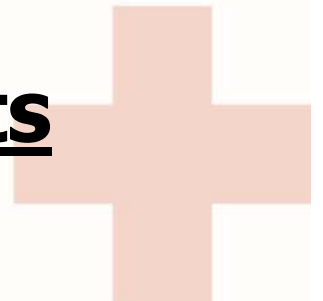
(N=34)

Cognitive Impairment (AD8)	Physical Frailty (VES-13)	
	No	Yes
No	3/53 (6%)	10/40 (25%)
Yes	1/10 (10%)	20/77 (26%)





Injured Older Adults



Next Step

- How can we provide proactive Palliative Care for these patients and their families?



A Closer Look

- Partnership for a new project called, “Geriatric Trauma and the Need for Proactive Palliative Care”
- Partnership included Palliative Care physicians, Trauma Unit Bedside Nurses and Trauma Surgeons



The Challenge

- Frailty was a primary predictor for poor outcomes in older adults
- Few hospitals screen for pre-hospital frailty upon admission
- Frailty and dementia are not standard triggers for a palliative consult
- Providers as well as the public have misconceived notions about frailty & palliative care



Goals of Palliative Care

- Improve symptoms to help maximize quality of life
- Help patients transition to hospice if appropriate
- Help establish goals of care that are consistent with patient wishes & are medically possible



Secondary Study

- Design a quick and reliable frailty screening tool that could be given by a bedside nurse
- 5 questions on frailty using the Frail Scale
- 8 questions on cognitive impairment using the AD8 Screen
- February 2015: daily PC rounding to identify patients fitting new criteria
- March 2015: Nurse screen implemented



Frailty Screening Tool

_____ **Pre-injury Frailty** (FRAIL Scale: 3 or more = frailty)

- _____ Fatigue easily?
- _____ Inability to walk up one flight of stairs?
- _____ Inability to walk one block (or ¼ mile)?
- _____ Has 5 or more illnesses?
- _____ Has lost weight (more than 5-10%) in the last 6 months?

_____ **Pre-injury Cognitive Decline** (AD8 Screen: ≥ 2 [Impairment likely present])

Answer 'yes' or 'no' to the following questions about your loved one over the past few years.

Yes	No	Question
		Problems with judgment (e.g. problems making decisions, bad financial decisions, problems with thinking)?
		Less interest in hobbies or activities?
		Repeats the same things over and over? (questions, stories or statements)
		Trouble learning to use a tool, appliance or gadget? (computer, microwave, remote control)?
		Forgets correct month or year?
		Trouble handling complicated financial affairs? (balancing checkbook, income taxes, paying bills)?
		Trouble remembering appointments?
		Daily problems with thinking or memory?
		TOTAL points



Team Collaboration

- Project presented at unit shared governance meeting & staff meeting
- Frailty tool was introduced
- Demonstration was provided
- Provided input on design and scripting
- Identified exceptions and challenges



Process Implementation

- Decided on a process for delivery, retrieval and storage of frailty forms
 - *Medical Receptionist ownership*
- All staff trained, nurses provided screening
- Inter-rater reliability tested by QI Coordinator
- Designated unit champions
- Tracking & Progress reported



Proactive Palliative Consultation

- Nurse identifies the trigger
- Doctor initiates the referral
- Palliative Care physician/NP provides the consult & closes the loop



Proactive Palliative Findings

Older Patients admitted to the Trauma Service	All Older Admitted Patients (N=136)	Screened N=70	Non-screened N = 66	P-value
Month				
March	40 (100%)	25(63%)	15 (37%)	
April	46 (100%)	21(46%)	15 (33%)	
May	50 (100%)	24(48%)	26 (52%)	
Age (Mean, SD)	76.2 (8.9)	75.6 (8.5)	76.8 (9.2)	.428
Age groups				
65-74	76	37 (49%)	39 (51%)	.775
75-84	35	17 (49%)	18 (51%)	
85+	21	12 (57%)	9 (43%)	
Mechanism of injury				
Fall from standing	53	25 (47%)	28 (53%)	.221
Fall-other	19	11 (58%)	8 (42%)	
MVC	46	25 (54%)	21 (46%)	
MCC	6	2 (33%)	4 (67%)	
Pedestrian	1	1 (100%)	0 (0%)	
Other	11	2 (18%)	9 (82%)	



Proactive Palliative Findings

- 36% frail
- 34% pre-frail
- 29% non-frail
- 34% dementia

- Palliative Care screenings increased to 32%



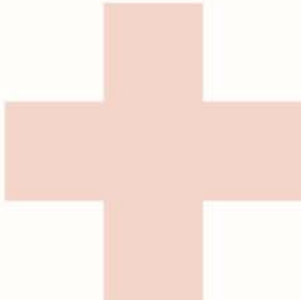
Proactive Palliative Findings

Nurse Screening for Frailty and Cognitive Impairment	N (%)
FRAIL Scale	
Non-frail (Score = 0)	20 (29%)
Pre-frail (Score = 1 or 2)	24 (34%)
Frail (Score ≥ 3)	25 (36%)
Missing	1 (1%)
AD8 Dementia Screen	
Score 0-1 (No impairment)	41 (59%)
Score ≥ 2 (Possible dementia)	24 (34%)
Missing	5 (7%)
Patients screened as BOTH frail and possible dementia	16 (23%)



Palliative Care Consultations

VUMC Trauma Service Palliative Care Consultations				
Pre-project	Quality Improvement Project (February-May 2015)			
Palliative Care Consults 2011-2014	Increased PC Service Rounding (PC consults/# older patients admitted)	Nurse Screening for Dementia and Frailty (PC consults/# older patients admitted)		
	February 2015	March 2015	April 2015	May 2015
365/2792 (13%)	12/43 (28%)	18/40 (45%)	13/46 (28%)	12/50 (24%)



Conclusion

- Goal was not to change the level of care, but to provide patients and their families with a realistic clinical trajectory and to help them be more prepared to make end of life decisions outside of a crisis situation.



Demo

- Practice Session



Questions?



References

- Nelson JE, Curtis JR, Mulkerin C, et al. Choosing and Using Screening Criteria for Palliative Care Consultation in the ICU: A Report From the Improving Palliative Care in the ICU (IPAL-ICU) Advisory Board*. *Critical Care Medicine* 2013;41(10):2318-2327.
- Karlekar M, Collier B, Parish A, Olson L, Elasy T. Utilization and determinants of palliative care in the trauma intensive care unit: Results of a national survey. *Palliative Medicine*. 2014:0269216314534514.
- Maxwell CA ML, Mukherjee K, Dietrich MS, Minnick A, May A, Miller RS,. Pre-injury physical frailty and cognitive decline predicts 6-month mortality in hospitalized injured older adults. *In preparation*.
- Maxwell CA, Mion, L.C., Mukherjee, K., Dietrich, M.S., Minnick, A., May, A., Miller, R.S.,. Feasibility of screening for pre-injury frailty in hospitalized injured older adults. Accepted for publication- *J Trauma Acute Care Surg*.00-000.
- Ortman, J., Velkoff, V.A. (2014). An aging nation: The older population in united states. *Population Estimates and Projections*, (5), 25.



Recent Literature

Studies

Boyle PA, Buchman AS, Wilson RS, Leurgans SE, Bennett DA. **Physical Frailty Is Associated with Incident Mild Cognitive Impairment in Community-Based Older Persons.** *J Am Geriatr Soc.* 2010;58(2):248-255.

Zahodne LB, Manly JJ, MacKay-Brandt A, Stern Y. **Cognitive Declines Precede and Predict Functional Declines in Aging and Alzheimer's Disease.** *PLoS One.* 2013;8(9):e73645.

Beeri MS, Middleton L. **Being physically active may protect the brain from Alzheimer disease.** *Neurology.* 2012;78(17):1290-1291.

Baker LD, Frank LL, Foster-Schubert K, et al. **Effects of aerobic exercise on mild cognitive impairment: a controlled trial.** *Arch Neurol.* 2010;67(1):71-79.

Kemoun G, Thibaud M, Roumagne N, et al. **Effects of a physical training programme on cognitive function and walking efficiency in elderly persons with dementia.** *Dement Geriatr Cogn Disord.* 2010;29(2):109-114.

Ratey JJ, Loehr JE. **The positive impact of physical activity on cognition during adulthood: a review of underlying mechanisms, evidence and recommendations.** *Rev Neurosci.* 2011;22(2):171-185.

Booth FW, Roberts CK, Laye MJ. **Lack of exercise is a major cause of chronic diseases.** *Comprehensive Physiology.* 2012.

