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FRAILTY – WHAT IS IT: MEASURING AND USE CLINICALLY
OBJECTIVES

- Define frailty
- Discuss impact on care
- Tools to use for providing medical care to the elderly
Ms. DK

- 88 yo female, sent to ER from an ALF for new onset stroke
Ms. DK

- Other history
  - Dementia
  - Stroke in past
  - Wheel chair bound
  - Had been on hospice in the past
  - POLST available
  - Daughter at bedside
  - Pleasant but speaks in word salad
DK

- TPA protocol began, includes blood work, emergency CT scan, cardiac monitoring
- Neurology alerted by ER per protocol
- Daughter calls primary care provider for advice
Primary care MD speaks to neurology and comes to the ER
Nurses upset when told to not continue stroke protocol
POLST at patient’s bedside
ER doctor informed of patient’s functional status which he stated he did not know what her functional status was prior to “stroke”
Guidelines – TPA

- **Absolute contraindications**
  - Intracranial hemorrhage
  - Subarachnoid hemorrhage
  - History of prior stroke and diabetes
  - Any anticoagulation use
- **Relative contraindications**
  - Advanced age
  - Mild or improving symptoms
  - Coma or severe stroke
  - Dementia
  - Recent severe illness
Follow up on case

- Discussion with both neurology and ER about stroke protocol
- Patient readmitted to hospice, died 3 weeks later
Number of people age 65 and over, by age group, selected years 1900-2000 and projected 2010-2050

Note: Data for 2010-2050 are projections of the population.
Reference population: These data refer to the resident population.
Source: U.S. Census Bureau, Decennial Census and Projections.
Contributors to Frailty

Cancer
Cancer Treatment
Catabolism
Deconditioning
Nutrition
Falls/Injuries
Chronic conditions
Medications
Disease
Osteopenia
Sarcopenia
Aging
Immune Dysregulation
Neuroendocrine Dysregulation
Different goals of therapy

medications and therapies

Increased rates of adverse effects to

Increased importance of social support

Illnesses

Atypical presentation of common

Under-reporting of symptoms

Interacting, diseases

Tendency to have multiple, often

Increased prevalence of disease

Physiologic changes

Heterogeneity of health status

PATIENTS

WHAT'S DIFFERENT ABOUT OLDER
(Bergman, Ferucci, et al. 2007)

Pathophysiology: „As a syndrome with distinct
accelerated aging.

At the other, frailty is conceptualized as
are spread along a continuum.

At one end, frailty is viewed as
Contrasting viewpoints about frailty

Frailty
Two Dominant Paradigms of
PROLIFERATION OF FRAILTY TOOLS

- Frailty is the wild west of geriatrics
- At least 75 assessment tools and increasing
- Lack of specificity (how is frailty distinct from aging or chronic diseases?)
- No agreement on best measure
- Impedes progress in biological discovery, clinical care and intervention development
FRAILTY

- I KNOW IT WHEN I SEE IT
- DESPITE VARYING DEFINITIONS RESEARCH ABOUNDS
Domains of frailty instruments: Most to least used in tools

- Physical
- Cognitive
- Medical nutritive
- Psychological
- Sensory
- Social
- Demographic
- Economic
- Environmental
Different tools for different uses?

- Are the frailty tools inter-changeable across contexts and purposes?
- Does it really matter?
- Are different tools needed for different purposes?
Frailty assessment in clinical settings

- Multiple assessment tools have been in used in clinical specialties including:
  - Oncology
  - Cardiology
  - Surgery/transplant
  - Trauma
  - Primary care
Oncology and Frailty

- Frail and pre-frail cancer patients at greater risk for all-cause mortality; postop mortality; chemotherapy intolerance and post op complication (Handforth et al, Ann Oncol, 2014)

- Routine frailty and fitness assessments can help to guide cancer treatment but how to make them useful
Older cancer patients, Comprehensive geriatric assessment (CGA) may be best approach for determining risk and treatment plan.

However, CGA is time-consuming and not always best use of time or resources not available.

- Hamacker, Lancet Oncol, 2012
- Smets, BMC Geriatrics, 2014
Oncology

- Modified Frailty Index
- 11 items (COPD, CHF, MI, PCI, DM, HTN, PVD, Impaired sensoria, TIA or stroke, neuro deficits, functional status)

- High index predictive of increase likelihood of critical care support and 30 day mortality following surgery
  - Uppal, gyn onc 2015
Cardiology and Frailty Assessment

- 2-fold increase in mortality for older CVD
- Impact across stable CVD, subclinical CVD, heart failure, coronary syndromes and cardiac surgery
- 5 meter gait speed > 6 seconds associated with increased mortality and major morbidity

- Afilato JACC 2014
The story continues

Among older surgical patients, frailty is an independent risk factor for major morbidity, mortality, protracted length of stay and institutional discharge.

Choice of frailty tool pre-surgery should consider its utility for “risk stratification and identification of factor for potential modification”

- Partridge et al, Age Ageing, 2012
Cognitive Assessment in Frailty tools?

- Cognitive measures may improve ability to identify most vulnerable people.
- Multiple studies document poor outcomes for patients with dementia after hip fractures.
- However, may not facilitate identification of biological underpinnings, or
- May not be useful in intervention development targeting frailty per se.
What is feasible versus valid
Should we standardize frailty assessment for clinical care, preop settings, primary care
Or, should frailty tools be tailored to each application?
What is the place for advance care planning in this conversation
“I’m going to send you to someone who’s not afraid of doing a little harm.”
Tools

- Let’s look at some examples
- Dialogue about what is feasible
- FYI – multiple examples
Timed Get Up and GO

- Easy to do in office practice
- Normal is 10 or less seconds
- Over 13.5 secs very predictive of high risk of falls
- 87% sensitivity, 87% specificity
- Where does it get recorded
Clinical Frailty Scale*

1. Very Fit – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.

2. Well – People who have no active disease symptoms but are less fit than category 1. Often, they exercise or are very active occasionally, e.g. seasonally.

3. Managing Well – People whose medical problems are well controlled, but are not regularly active beyond routine walking.

4. Vulnerable – While not dependent on others for daily help, often symptoms limit activities. A common complaint is being “slowed up”, and/or being tired during the day.

5. Mildly Frail – These people often have more evident slowing, and need help in high order IADLs (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.

6. Moderately Frail – People need help with all outside activities and with keeping house. Inside, they often have problems with stairs and need help with bathing and might need minimal assistance (cuing, standby) with dressing.

7. Severely Frail – Completely dependent for personal care, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).

8. Very Severely Frail – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.

9. Terminally Ill - Approaching the end of life. This category applies to people with a life expectancy <6 months, who are not otherwise evidently frail.

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common symptoms in mild dementia include difficulty with language and memory, and difficulty planning and organizing. The person may have difficulty with daily activities and may need help with some activities. In moderate dementia, recent memory is very impaired, even though they seemingly can remember past life events well. They can do personal care with prompting. In severe dementia, they cannot do personal care without help.

Polypharmacy
Psychosocial Status
Nutritional Status
Cognition
Comorbidity
Functional status

Standard medical evaluation

In geriatric settings, uses health care personnel
complex elderly individuals
contributing to the health and well-being of

A multi-faceted assessment of factors

What is comprehensive geriatric assessment?
<table>
<thead>
<tr>
<th>Domain</th>
<th>Functional Status Measures</th>
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<tr>
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<td>ADL of MOS Physical Health Scale</td>
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<td>IADL (Subscale of the OARS)</td>
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<td>Karnofsky Performance Status (Physician-Rated)</td>
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<td>Karnofsky Performance Status (Patient-Rated)</td>
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<td>Blessed Orientation-Memory-Concentration Test</td>
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<td>Social Support</td>
<td>MOS Social Activity Limitations Measure</td>
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<td>Social Functioning</td>
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<td>Psychological Cognition</td>
<td>Hospital Anxiety and Depression Scale</td>
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<td>Comorbidity</td>
<td>Emotion/Information and Tangible Subscales</td>
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<td>Seeman and Berkman Social Ties</td>
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<tr>
<td>Nutrition</td>
<td>Body Mass Index</td>
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<tr>
<td>Medications</td>
<td>% Unintentional Weight Loss in Last 6 Months</td>
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<td>Likert Prescribed, Herbal, OTC</td>
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AND PROGNOSTIC VALUE

BASED ON RELIABILITY, VALIDITY, BREVITY

GERIATRIC ASSESSMENT MEASURES SELECTED
Frailty Index for Elders (FIFE)

Christie Tocchi, Duke Univ School of Nursing

- Do you need help getting in and out of bed
- Do you need help washing or bathing
- Without wanting to in the last 6 months have you lost or gained 10 pounds
- Do you have teeth or mouth problems that make it hard to eat
- Do you have poor appetite
- Did your physical health or emotional problems interfere with your social activities
- Would you say your health is fair or poor
- Do you get tired easily
- Were you hospitalized or in the ER in the past 3 months
Risk Stratification Criteria

- Patient age >65 years
- Hospital and or ED encounter in past 180 days
- Diagnosis in the past 180 days:
  - Anxiety, Depression, Substance abuse
  - Asthma
  - CAD/IVD, Hypertension
  - CHF
  - CKD
  - Diabetes
Advance Care Planning

- We know this prevents unwanted procedures and hospitalizations
- Improves quality and quantity of life (?)
- Improves patient/family satisfaction
- Continues to be an ongoing project for appropriate conversations and documentation
- Does it help in the frailty conversation?
British Geriatric Society

- Fit for Frailty
- Several tools that might be useful in clinical practice that are not burdensome
- Website: www.bgs.org.uk
Develop an optimized plan - BGS

- What are the individual’s goals
- What actions are going to be taken
- Who is responsible for doing what
- What is the timescale and when to review
- How to deal with changes
- What a patient and/or caregiver need to look out for
- Who to call for problems
  - BGS recommendations
Summary

- Frailty has a major impact on outcomes for our elderly patients
- It affects all areas
- Is there a best tool that we could use
- Current tools for identifying “high risk” patients need to be identified and appropriate work flows identified
- Advance care planning
WHAT MATTERS TO THE PATIENT IS AS IMPORTANT AS WHAT IS THE MATTER WITH THE PATIENT