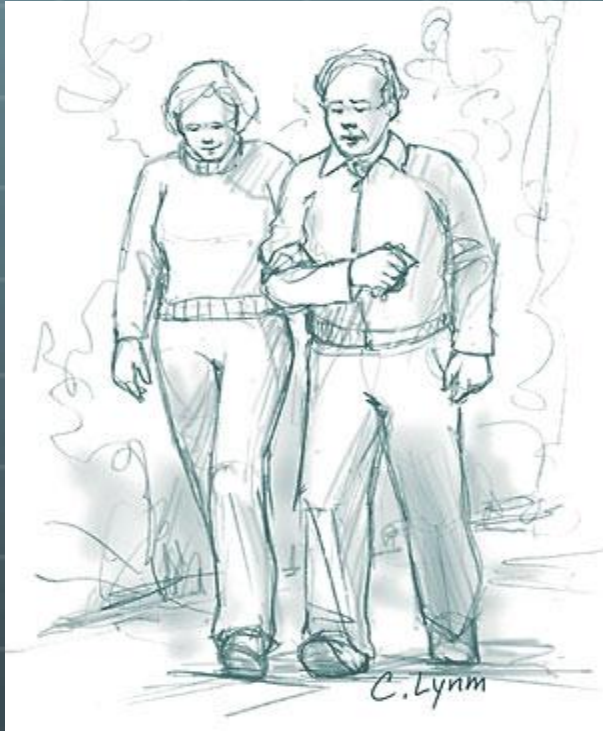


Frailty

Martha Watson, MS, APRN, GCNS
Christie Bowser, RN-BC

Objectives

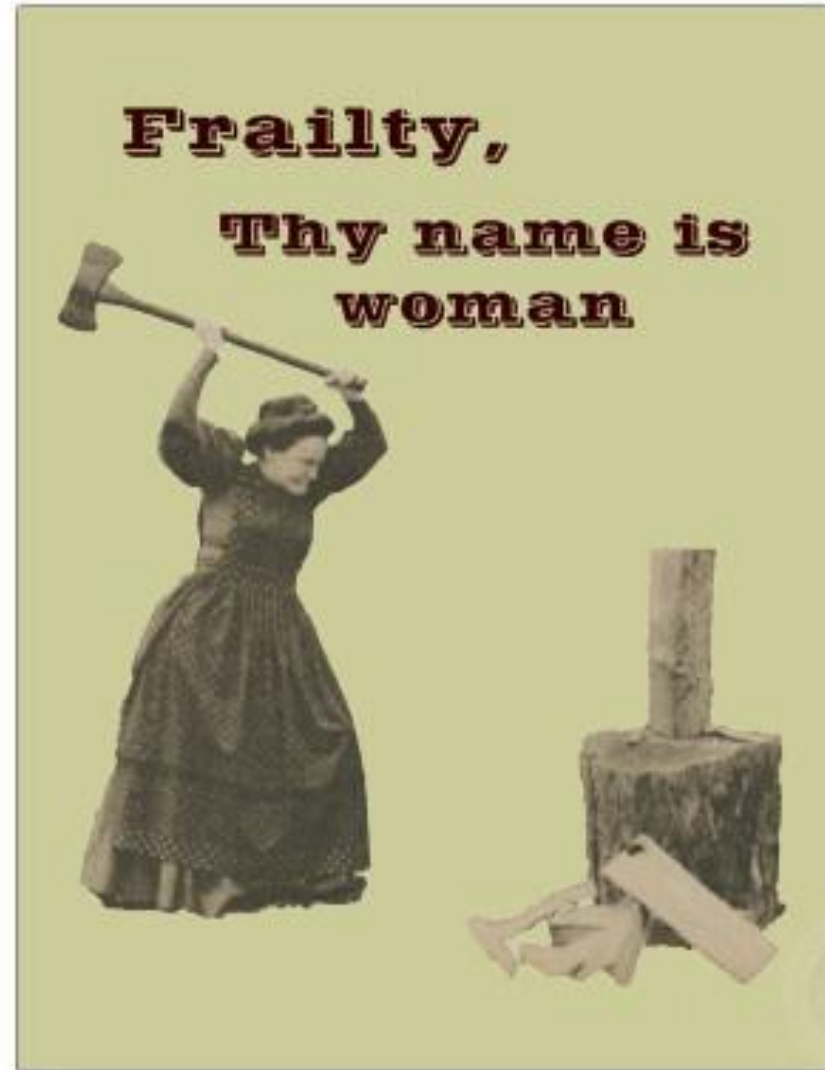


- 🌐 Define the term “frailty”
- 🌐 Identify patients who meet the criteria for frailty
- 🌐 Identify interventions for the frail patient

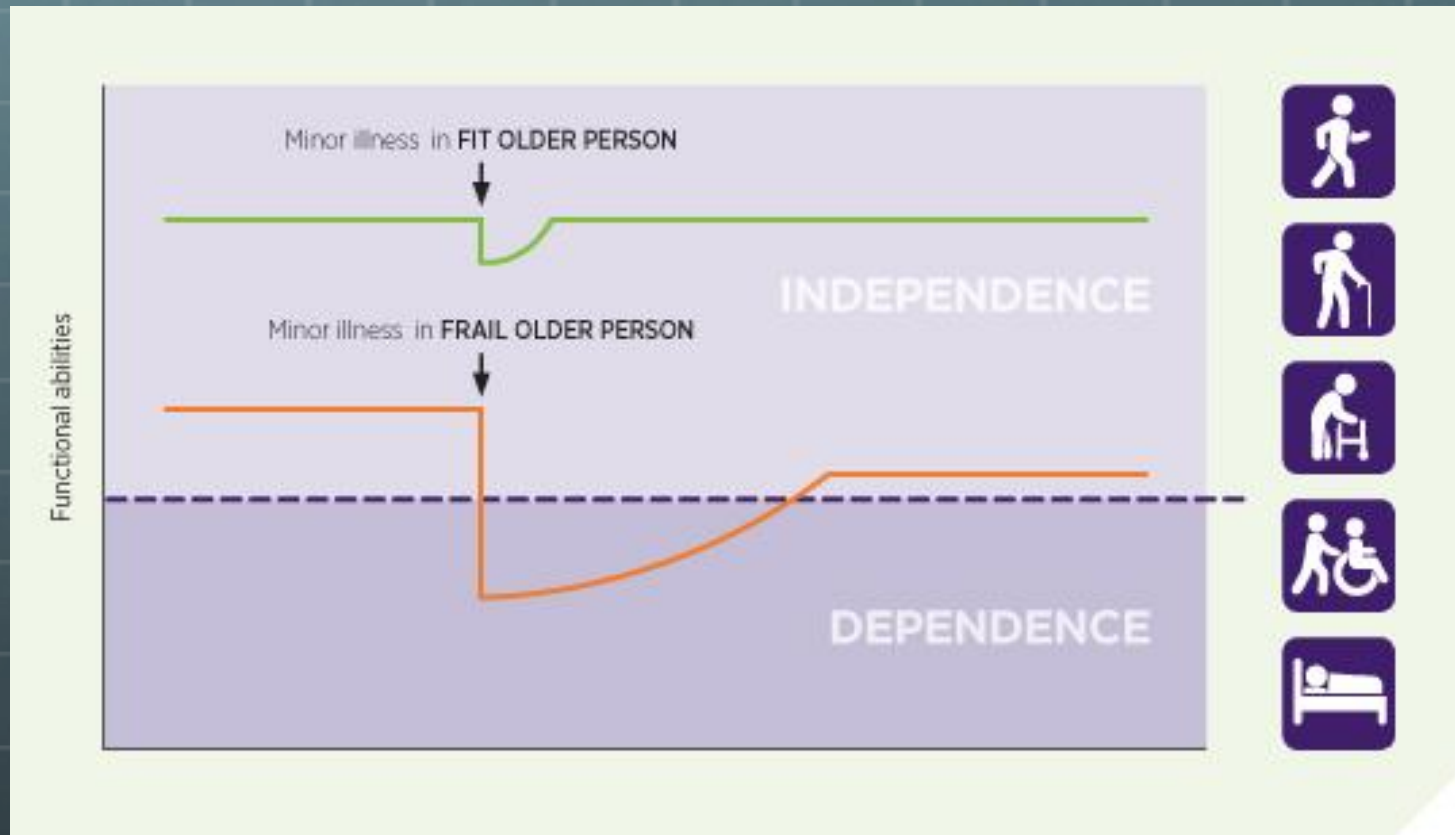
Why Is This New?

But I have heard this expression for a LONG time?

- This is a field of study that is rapidly expanding in:
 - Publications
 - Definitions
 - Screening Tools
 - Biological Understanding
 - Clinical Utility

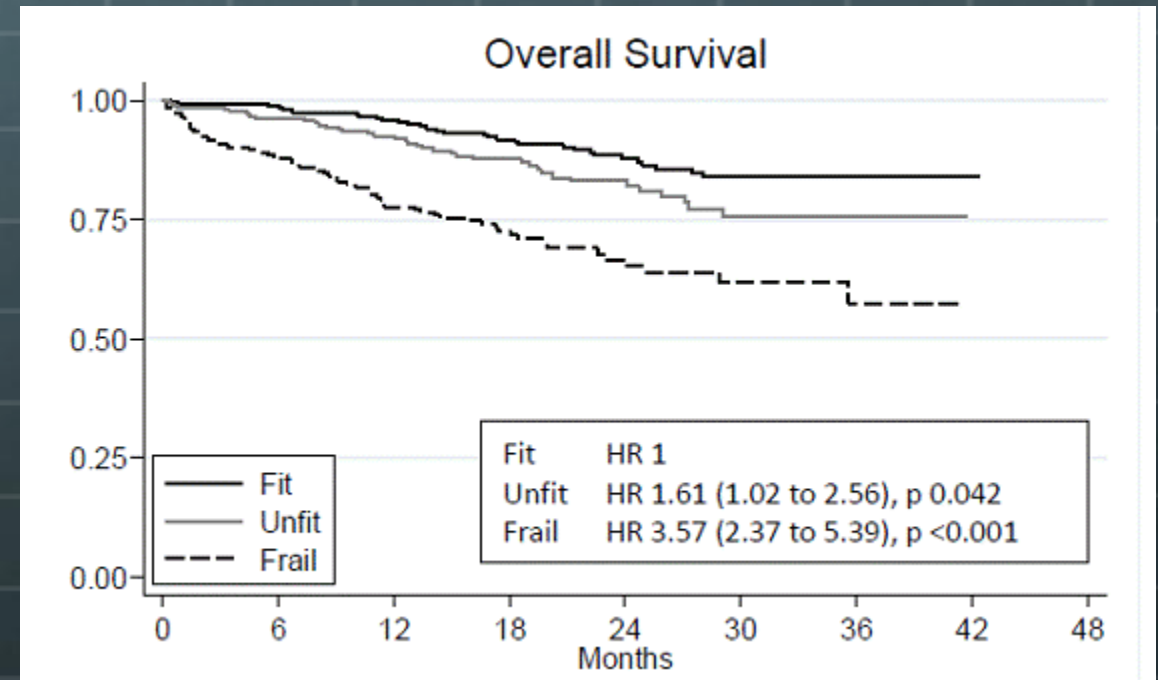


Why Frailty Matters



Incidence

- 🌐 Just think about the size of the always increasing aging population...
- 🌐 3-7% of 65-75 year olds
- 🌐 20% of those >80 years old
- 🌐 33% of those >90%



Why Frailty Matters

- 🌐 Up to 15% of community dwelling older adults
- 🌐 A higher percentage of residents of assisted living communities
- 🌐 Prevalence increases with age
- 🌐 All will likely meet criteria if live long enough

POOR OUTCOMES!

- ✓ Increase incidence of falls
- ✓ Worsening mobility
- ✓ Social withdrawal
- ✓ Worsening ADL disability
- ✓ Delirium
- ✓ Increase hospitalizations
- ✓ Cognitive decline
- ✓ Death



What is frailty?

- 🌐 A person must exhibit 3 out of 5 of the following:
 - 🌐 Low physical activity
 - 🌐 Muscle weakness (decreased hand grips)
 - 🌐 Slowed performance
 - 🌐 Fatigue or poor endurance
 - 🌐 Unintentional weight loss



TABLE 2. Criteria for Characterizing the Frail Elderly Person

1. Clinical criteria	Multiple comorbidities Polymedication Frequent hospitalizations Repeat falls Sensory deficit Urinary incontinence
2. Functional criteria	Dependency in the basic activities of daily life Dependency in the instrumental activities of daily life
3. Socioeconomic criteria	Lives alone Recently widowed Institutionalization Age >80 y Low economic status
4. Cognitive-affective criteria	Depression Cognitive deterioration

Adapted from Martínez Martín et al²⁵.

The Downward Spiral...

- 🌐 More likely to become disabled, hospitalized, and have more health problems
- 🌐 Susceptible to infection
 - 🌐 Simple infections may even result in death
- 🌐 Loss of muscle mass
- 🌐 Inability to prepare meals increases malnutrition

- ↓ Taste, smell
- Poor dentition
- Dementia
- Depression
- Illness
- Hospitalization

Neuroendocrine
Dysregulation

Anorexia
of aging

↓ Total Energy Expenditure

↓ Activity

- Disease
eg, depression, dementia
- Acute illness
- Medication (eg, sedating)
- Stressful life events
- Falls

**Chronic
Undernutrition**
[Inadequate intake
of protein and
energy; micronutrient
deficiencies]

Disease
Medications
Aging:
Senescent
musculoskeletal
changes

Negative
Energy
Balance

Negative
Nitrogen
Balance

Loss of muscle mass
Sarcopenia

↓ Resting
Metabolic
Rate

↓ Strength
&
Power

↓ Insulin
sensitivity

Osteopenia

↓ Walking
Speed

Disability
↓
Dependency

Immobilization

Impaired
balance

Falls & Injuries

↓ VO₂ max

Disease
(eg, cardiopulmonary)

Chronic inflammation/
Cytokines

Catabolic state

Weight loss

Disability

A Venn diagram with three overlapping circles. The left circle is labeled 'SARCOPENIA', the middle circle is labeled 'PHYSICAL FUNCTION IMPAIRMENT', and the right circle is labeled 'FRAILTY'. The intersection of Sarcopenia and Physical Function Impairment is the largest, and the intersection of Physical Function Impairment and Frailty is also significant. The intersection of Sarcopenia and Frailty is smaller. The central intersection of all three is the smallest.

SARCOPENIA

- Skeletal muscle loss
- Poor muscle quality

PHYSICAL FUNCTION IMPAIRMENT

- Weak muscle strength
- Slow gait speed
- Poor balance

FRAILTY

- Deficits accumulation
- Fatigue
- Sedentary behaviour
- Weight loss
- Cognitive impairment
- Social isolation

Frailty Tools- Which One?

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 forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal. In **moderate dementia**, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting. In **severe dementia**, they cannot do personal care without help.

* 1. Canadian Study on Health & Aging, Revised 2008.
2. K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. JAMA 2005; 294:1188-95.

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Frailty Wheel

Measure of frailty in elderly people with health problems. The wheel shows the degree of frailty based on the number of health conditions and the degree of difficulty with activities of daily living (ADLs).

NO Assistance Needed with Medications (0-10)

Health Conditions Interfere? (11-20)

Bathing Assistance? (21-30)

YES - Needs Assistance with Medications (31-40)

ADLs (Activities of Daily Living) are the things you do every day to take care of yourself. They include things like getting dressed, eating, walking, and taking care of your house.

ADLs (Activities of Daily Living) are the things you do every day to take care of yourself. They include things like getting dressed, eating, walking, and taking care of your house.

No consensus on how to best measure it!!!

Goals for Frailty Interventions

- 🌐 Improve quality of life
- 🌐 Prevent worsening of chronic diseases
- 🌐 Reduce risk for adverse or catastrophic outcomes
- 🌐 Risk assessment to guide therapeutic options and goal setting

Treating Frailty

- 🌐 Individualized (determine goals & priorities of care)
- 🌐 Coordinate services- TEAM based care for inpatients and outpatients
- 🌐 Treating underlying disease process
- 🌐 Medication management (BEERS list)
- 🌐 PT/OT - EXERCISE
- 🌐 Nutrition
- 🌐 Pain management
- 🌐 Fall prevention
- 🌐 Environmental assessment
- 🌐 Encourage socialization
- 🌐 Palliative Care approaches – sometimes less is better.....

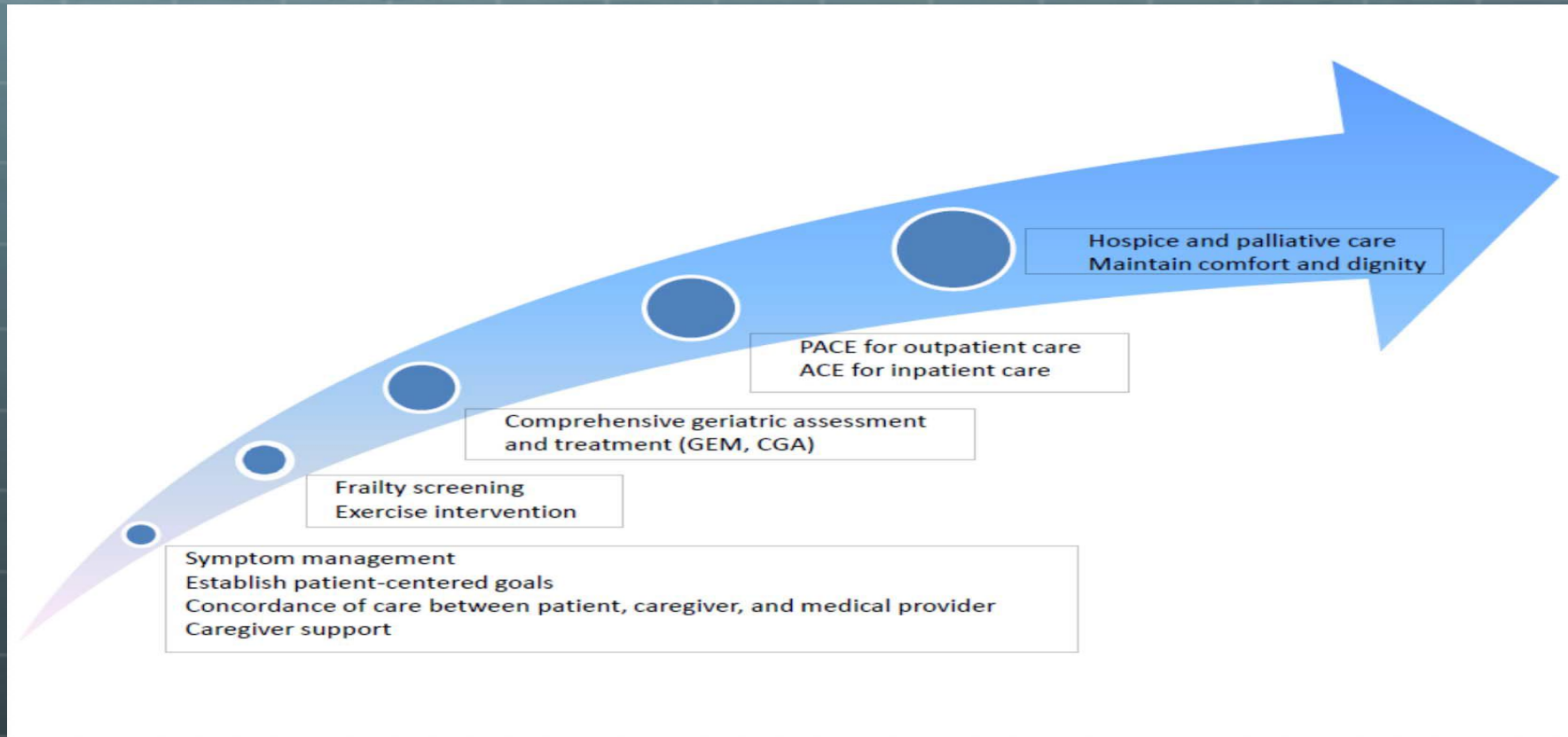
Prevention

- 🌐 **Manage comorbidities – DM, CHF, HTN, PVD**
- 🌐 **Daily exercise**
- 🌐 **Keep the mind active (i.e. crossword puzzles, reading, socializing)**
- 🌐 **Treat depression**
- 🌐 **Seek treatment of medical and psychiatric problems**
- 🌐 **Healthy diet**



Interventions

Ko FC. Clin Geriatr Med 2011 Feb;27(1):89-100.



On-Line Resources

<http://www.frailty.net>



Frailty.net is an international educational resource that aims to help geriatricians, primary care physicians and other health care professionals involved in the care of older persons implement frailty into clinical practice.

Questions?



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