Frailty among Surgical Patients

GRECC Connect
August 2022
Objectives

Be able to describe:

- Why frailty is considered a clinical syndrome
- Clinical manifestations of frailty
- Adverse outcomes that are common in frail surgical patients
- Approaches to prevention of frailty
- Approaches to caring for frail surgical patients
- Older adults account for more than **40 percent of inpatient operations** and **33 percent of outpatient procedures** performed each year in the U.S.

- U.S. Census Bureau anticipates **55% increase in older adults** between 2010 and 2050

Frailty can be understood as a “biologic syndrome of decreased reserve and resistance to stressors, resulting from cumulative declines across multiple physiologic systems, and causing vulnerability to adverse outcomes” (Fried et al 2001)

Increasingly being seen as a concept that can enhance surgical decision making, and targeting of interventions, beyond consideration of age alone

All frailty theories suggest:

- Frailty involves \( \uparrow \) vulnerability to adverse outcomes, which may most likely manifest in the face of stressors – such as surgery

Aggregate loss of physiologic function is the process thought to underlie the high risk of adverse outcomes


Disease, environment, medications

Chronic undernutrition

Total energy expenditure

Anorexia of aging

Activity

Walking speed

Disability

Dependency

Strength and power

Immobilization

Impaired balance

Falls and injuries

VO₂ max, exhaustion

Sarcopenia, weight loss

Insulin sensitivity

Osteopenia

Disease, medications, age-related changes
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Criteria</th>
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<tbody>
<tr>
<td>Weight loss</td>
<td>Lost &gt;10 pounds unintentionally last year</td>
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<tr>
<td>Exhaustion</td>
<td>Felt last week that “everything I did was an effort” or “I could not get going”</td>
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<tr>
<td>Slowness</td>
<td>Gait speed (cutoffs relate to gender and height)</td>
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<tr>
<td>Low activity level</td>
<td>Expends &lt;270 kcal/week (calculated from activity scale incorporating episodes of walking, household chores, yard work, etc.)</td>
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<tr>
<td>Weakness</td>
<td>Grip strength measured using hand dynamometer (cutoffs depend on gender and BMI)</td>
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**CLINICAL FRAILTY SCALE**

1. **VERY FIT**  
   People who are robust, active, energetic, and motivated. They tend to exercise regularly and are among the fittest for their age.

2. **FIT**  
   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, even if occasionally symptomatic, but often are not regularly active beyond routine walking.

4. **LIVING WITH VERY MILD FRAILTY**  
   Previously “vulnerable,” this category marks early transition from complete independence. 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. **LIVING WITH MILD FRAILTY**  
   People who often have more evident slowing, and need help with high order instrumental activities of daily living (finances, transportation, heavy housework). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation, medications and begins to restrict light housework.

6. **LIVING WITH MODERATE FRAILTY**  
   People who 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. **LIVING WITH SEVERE FRAILTY**  
   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. **LIVING WITH VERY SEVERE FRAILTY**  
   Completely dependent for personal care and approaching 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 living with severe frailty. (Many terminally ill people can still exercise until very close to death.)

**SCORING FRAILTY IN PEOPLE WITH DEMENTIA**

The degree of frailty generally 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. In very severe dementia they are often bedfast. Many are virtually mute.

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**DEFICIT ACCUMULATION METHOD OF FRAILTY ASSESSMENT**

Annual Review  
September 1, 2022
Outcomes of Patients with Frailty

As a group, frail older adults are more likely to:

- Have delayed recovery from illness and/or to fall
- Develop greater functional impairment, including becoming disabled or dependent
- Be hospitalized, with worse outcomes once hospitalized, including dependency
- Die
Clinical Courses of Frailty

- Frailty is generally thought of as a chronic, progressive condition, with a spectrum of severity
  - The most severely frail older adults often appear to be in an irreversible, pre-death phase with high mortality over 6–12 mo
  - Earlier phases may be more responsive to treatment, either to prevent or ameliorate the clinical manifestations of frailty

- **Primary frailty**—results from intrinsic aging processes

- **Secondary frailty**—exists in tandem with one or more chronic diseases
Post-op Risks for Surgical Patients with Frailty

- Increased mortality at 30 days, 90 days and one year follow-up
- Increased post-operative complications
- Increased length of stay
- Increased discharge to institutional care
- Greater functional decline
- Lower quality of life after surgery

Risks for Surgical Patients with Frailty

General Options for Management of Frailty (Medical and Surgical Patients)

- Full geriatric assessment and multidisciplinary care addressing the four geriatric domains (medical, functional, psychological, social)
  - Management programs for comorbidities such as heart-failure, diabetes, COPD, depression
  - Exercise programs (resistance training/strengthening, aerobic, balance/Tai Chi, flexibility)
  - Nutrition optimization (especially related to addressing malnutrition, calorie deficits, protein intake)
- Consideration of decreasing environmental risks and stressors, such as surgeries
- Shared decision making/careful choosing of goals
- Compensation for diminished competencies through increased reliance on other functions and/or replacement


From: Association of a Frailty Screening Initiative With Postoperative Survival at 30, 180, and 365 Days

Interventions: Geriatric Surgery Verification (GSV) Program

- Evidence-based standards developed by the American College of Surgeons to optimize perioperative care of older adults (with and without frailty)

- For patients ≥ 75 years of age having inpatient surgeries

- Levels of hospital participation
  - Level 1/Comprehensive Excellence (program reaching at least 50% of eligible patients; ACS visits for verification process)
  - Level 2/Focused Excellence (reaching 25-49% of eligible patients; ACS visits for verification process)
  - Commitment Level (reaching less than 25% of eligible patients; no verification process)

- Anticipated to improve clinical care, patient satisfaction, interdisciplinary communication and results with payment/incentive programs

Components of the Geriatric Surgery Verification Program

- Institutional Administrative Commitment
- Program Governance/Personnel
- Facilities and Equipment Resources
- Patient Care Expectations
- Data Surveillance
- Quality Improvement
- Professional and Community Outreach
- Research (optional)
# GSVP Patient Care

## 1. Goals and Decision Making
- Treatment and Overall Health Goals
- Code Status and Advanced Directives
- Medical Proxy
- LST Discussion for Patients with Planned ICU Admission
- Reaffirm Surgical Decision-Making

## 2. Preoperative Work-Up
- Geriatric Vulnerability Screens
- Management Plan for Patients with Positive Geriatric Vulnerability Screens
- Interdisciplinary Input or Conference for High-Risk Elective Patients
- Surgeon-PCP Communication for High-Risk Elective Patients

## 3. Postoperative Management
- Return of Personal Sensory Equipment
- Inpatient Medication Management
- Opioid-Sparing, Multimodality Pain Management
- Standardized Post-Operative Care
- Interdisciplinary Care for High-Risk Patients
- Revisiting Goals of Care for ICU Patients
- Assessment of Geriatric Vulnerabilities

## 4. Transitions of Care
- Discharge Documentation and Hand-Off Communication
- Communication with Post-Acute Facilities
Patients cared for by the GSV Program had a reduced postoperative length of stay (median 4 days [range 1,31] vs. 5 days [range 1,86]; p < 0.01; and mean 5.4 ± 4.8 vs. 8.8 ± 11.8 days; p < 0.01) compared with the matched cohort.”

“In a multivariable regression model, the GSV Program's reduced length of stay was independent of other associated covariates including age, operative time, and comorbidities (p < 0.01).”

We've been seeing lower numbers of readmissions of GSVP participants at Miami VA than would be expected based on their NSQIP scores.

Management of Surgical Patients with Frailty: Prehabilitation

“Prehabilitation shows promising results in recovery of functional capacity and may reduce complications after colorectal surgery. Patients who are less fit may be more likely to benefit. Further research is required before considering this as a mandatory item in an ERAS protocol.”

“Based on the consensus of best practices from the Society for Perioperative Assessment and Quality Improvement, a patient who has a positive frailty screening result should be followed up with a diagnostic assessment of frailty, and, when feasible, a comprehensive geriatric assessment with a tailored intervention (shared decision-making or prehabilitation) should be performed, ideally by a geriatric specialist.”

Frailty and Goals of Care: The “Surprise Question”

- “Would I be surprised if the patient were to die in the coming year even with having the surgery?”

- If answer is no, consider involvement of the hospice/palliative care team in further discussion of goals of care
Questions? Things you’d like to discuss?
References


