

Frailty is the Future

John Young

Geriatrician, Bradford Hospitals Trust
National Clinical Director for Integration & Frailty
Elderly, NHS England
(john.young@bthft.nhs.uk)

Content Summary

- What is frailty?
- How can we identify older people with frailty?
- How does frailty fit in with EoLC?

Frailty: why important?

Some bad news	It's not a disease
Some more bad news	It affects the whole body
Even more bad news	Every person is different
The worst of news	Several things wrong at once

So, frailty lies beyond the comfort zone of
Guideline Based-Medicine

Frailty: what is it?

A summary label ?
OR
An abnormal health state?



- Disability
- Long-term care
- Falls
- Mortality

The Frailty Paradox

National Audit of Community Rehab 2012		N = 3,150
Mean age	82y	
One or more LTC	77%	
Two or more LTC	41%	

The frailty paradox:
We know it's out there, but where exactly?



Frailty tends to present in crisis

BIG question:
"Could we diagnose frailty in routine care?"

"How can I live forever ?"

TOP TIP:

Move from Bradford!

Move to Abkhasia!!

Clinical features of frailty (phenotype)



- Weight loss
- Fatigue
- Sedentary life
- Slow walking
- Weakness

Phenotype Frailty Model

(Cardiovascular Health Study [n=5210] Fried et al 2001)

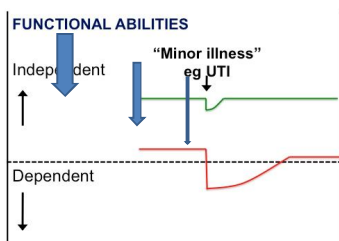
Weight loss:	> 4.5kg or > 5% per year
Fatigue:	US Centre for Epidemiological Studies Depression Scale
Sedentary Life:	< 383 Kcal/week men < 270Kcal/week women
Slow gait speed:	Standardised cut-off times to walk 4.57m stratified by sex & height
Weakness:	Dynamometer measurement stratified by sex & BMI

Cognitive impairment: ???

(Neuro-cognitive slowing associated with frailty. Rolfson et al, Age Ageing 2013)

Frailty as an abnormal health state related to the ageing process

Loss of physiological reserve



Clegg, Young, Iliffe, Olde-Rikkert, Rockwood. Frailty in elderly people. Lancet 2013; 381: 752-762

Phenotype Frailty Model

(Cardiovascular Health Study [n=5210] Fried et al 2001)

Weight loss:	> 4.5kg or > 5% per year
Fatigue:	US Centre for Epidemiological studies depression scale
Sedentary Life:	< 383 Kcal/week men < 270Kcal/week women
Slow gait speed:	Standardised cut off times to walk 4.57M stratified by sex & height
Weakness:	Dynamometer measurement stratified by sex & Body Mass Index

The 4m walking speed test detects frailty



Taking more than 5 seconds to walk 4m predicts future:

- ✓ Disability
- ✓ Long-term care
- ✓ Falls
- ✓ Mortality



Van Kan et al JNHA 2009; 13:881
Systematic Review of 21 cohorts

Cumulative Deficit Model of Frailty: Frailty Index

(Rockwood et al)

"The more things that are wrong with you, the more likely you are to be frail"

- Frailty Index counts "deficits"
- A deficit is a think that is wrong with you (symptom, sign, disease or disability)

Frailty Index = the proportion of deficits accumulated over time

Simple calculation:

- Zero deficits from list of 50: FI = 0/50 = 0
- Ten deficits from list of 50: FI = 10/50 = 0.20
- Frailty Index(s) based on deficit accumulation closely related to risk of death (Mexico, China, Canada, Europe etc. ...)

Cumulative Deficit Model of Frailty

- FI = the proportion of deficits accumulated over time
- Deficits accumulate at a rate of 3% per year
- FI relates to the risk of adverse health outcomes
- FI relates closely to the Personal Biological Age
(Mitnitski et al, BMC Geriatrics 2002)
- The limit of the FI is 0.7
(Bennett et al, Age Ageing 2013)

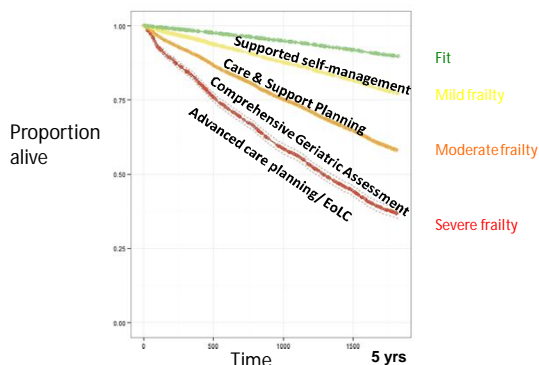
Preliminary Predictive Validity of Primary Care Electronic Frailty Index (eFI)

N=454,051 > 65y; 43 'deficits'; 2,233 Read codes

Frailty Grade	Prevalence	1y Mortality	5y Mortality
Mild	23%	2.31	2.03
Moderate	2.3%	3.97	3.28
Severe	0.2%	5.99	7.13

Useful when discussing planning future care needs / interventions??

Primary care electronic Frailty Index (eFI): survival plots (n=227,648; >65y)



Frailty & End of Life Care

- People in their last year of life are admitted to hospital an average of 3.5 times
(Hunt, 2008; Hunt & Verne 2011)
- 30% of patients in hospital in last year of life
(NAO 2008)
- >40% of patients who died in hospital did not have medication orders that required them to be in hospital. Nearly a quarter had been in hospital for 1 month
(NAO 2008)

Advanced frailty & End of Life Care:

"4 Ts"

- Think Frailty
- Timid: (Be brave(er)!)
 - Timeliness: (When appropriate)
 - Time (Enough thereof!)

Reflective Practitioner Questions

"4 Ts"

- Think Frailty
- Timid: Am I being timid?
- Timeliness: Is this the right time?
- Time: Do I need to make time?

Uncertainty causes anxiety
(for you; your patient and their families)

**Ignored for so long;
Frailty bites back!!**



Frailty is the Future

- Frailty is a practical, unifying concept in the care of older people
- It is a state of vulnerability to poor resolution of homeostasis following a stressor event associated with increased risk of adverse outcomes
- Failure to detect frailty potentially exposes patients to interventions from which they might not benefit and indeed may be harmed
- Advanced frailty means EoL is close and should trigger a proactive care approach