

FRAILITY IN EAST SUSSEX

Introduction

This document is a high level review of the published epidemiological information on frailty and how this relates to the health needs of the East Sussex population.

This report is part of the Joint Strategic Needs and Asset Assessment for the county.

The increasing health and social care needs of the growing older population are important public health and policy concerns.

What is frailty?

Frailty is a reduction of the built-in reserves of multiple bodily systems, leading to increased vulnerability.¹ The most widely accepted definition is the frailty description [phenotype] proposed by Fried and colleagues.² This model is based on the co-occurrence of at least three of five apparently non-specific features including: *unintentional weight loss*; self-reported exhaustion; weakness (low grip strength); slow walking speed; and low physical activity.

A fall, new drugs or minor infections can result in disproportionate deterioration in physical, functional and mental health in frail compared to non-frail people. Frailty is not a specific disease and can occur at any age. It is an interaction of physical, psychological and social deficits which is also associated with ageing.²

Frailty and multi-morbidity [the presence of two or more long term conditions] commonly coexist in older populations, and are both predictors of disability.

Frailty is a condition associated with increased risk of deterioration. This can present or become apparent as:

- “acute frailty syndromes” – falls, delirium (or acute confusion)

- “off legs” which may result from a relatively minor insult
- Higher risk of acute hospital admission
- Care home admission
- Death

Why is frailty important?

Currently older people with mild, moderate or severe frailty often present to services when in crisis. Early identification of frailty and optimising the care and support for people with multiple long term conditions [multi morbidity] can reduce the likelihood, or the impact of crises and promote earlier and better recovery.

Frail individuals endure extended stays in hospital that worsen their frailty and accelerate their dependency. They are also the patients most likely to have delayed transfers of care out of hospital or spend their last days on a hospital ward.

What is the natural course of frailty?

Frailty develops insidiously over time and ranges from the pre-frail (people who are at risk of developing frailty), to the mildly frail (who may be able to self-care), to the moderately frail (who might benefit from case-management), to severe frailty (where care planning and end-of life care may be appropriate).³

The prognosis of frailty is poor. For any given stage of frailty, about 40% of individuals progress to a more frail stage, while only 25% recover to a less frail stage. Moreover, once an individual becomes frail, they have a less than 1% chance of ever becoming non frail again and this chance reduces over time.⁴ Hospital admission can be a key trigger to acquiring frailty amongst non-frail people and can seriously impede recovery and discharge in frail individuals.⁵

What are the implications of frailty?

Frailty has been shown to be a predictor of death and institutionalisation in the elderly.^{6,7}

Health Service Use and Cost: Frailty is associated with increased health service use, most commonly for hospital admissions and care home admissions.^{8,9,10,11}

Hospital Admissions: Frailty is also associated with approximately double the number of first hospital admissions compared to non-frail individuals.²

Long Term Admission to Care Homes: Frail individuals are more likely to be admitted to care homes. Care home residents are more likely to be frail than community dwelling people. Huge variation exists and prevalence of frailty in nursing homes can reach 68% in some countries.

Mental Illness: Dementia is common in frail older people.¹²

Falls: Frail people are also at greater risk of falls and their adverse effects such as fractures, long term dependence and death.^{2,13}

How is frailty diagnosed in clinical practice?

Different assessment methods are used, depending on whether this is being carried out as an inpatient or in a community setting.

According to the British Geriatric Society, frailty in practice can be diagnosed in two main ways:¹⁴

1. Describing how people are:
 - Walking speed reduced, grip strength low, immune deficits, reduced ability to withstand an “insult”
 - Timed up and go test (TUGT)
2. Defining frailty in terms of an accumulation of deficits with ageing.

This second method relies on looking for 36 specified items (diagnoses, symptoms, sensory impairments, disabilities) in a person’s primary care [GP] record. Out of this possible total, how many of these possible deficits a person has accumulated are then counted. This proportion is defined as the eFrailty Index.

This method has been proven to identify risk of hospital admission, care home admission, death.¹⁵

How are general practices using the eFrailty Index?

The new 2017/18 GP contract introduced routine frailty identification for patients who are 65 and over.¹⁶ Having identified a list of people who may be frail by searching GP records, a clinical assessment should follow.

The eFrailty Index [eFI] has been proven statistically to identify a group of people who are *highly likely* to be frail. Like any other statistical tool the eFI will identify false positives [people with clinical problems who are not frail].

The eFI is being used to identify mild, moderate and severe frailty and then followed by health and social care interventions. These can be, for example, health promotion and exercise for people with mild frailty, case management for moderate frailty and a comprehensive geriatric assessment [CGA] for people with severe frailty.¹⁷

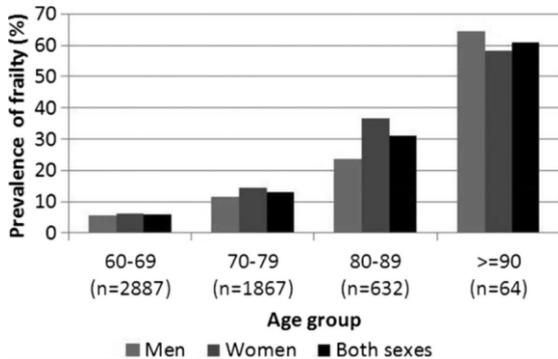
A CGA enables the design of a co-ordinated, integrated plan for long term treatment and follow up. As part of this process, severely frail patients should receive a falls assessment and a medication review.

Rates of coded frailty diagnoses, medication reviews, and referrals for falls assessments show variation between practices nationally and locally.¹⁸

Who is most at risk and why?

Age:

Frailty mainly affects older people.² The age specific prevalence rates increase with age, Figure 1.



Gender:

Women have greater risk of developing frailty compared to men.¹⁹ Coupled with a 40% loss of mobility in women between the ages of 75 and 85, this makes older women particularly vulnerable to the effects of both frailty and disability.²⁰

Malnutrition:

Frail individuals often have difficulty with eating and absorbing nutrients and consequently can develop malnutrition, which is often unrecognised.^{21,22} Most measures of frailty also include a measure of nutritional status such as the [Malnutrition Universal Screening Tool \(MUST\)](#).²³

Inequalities

Two well-known UK cohort studies, the Whitehall II and UK Biobank studies have looked at frailty at a population level.^{24,25} They identified substantial inequalities in the occurrence of frailty.

In the Whitehall study fewer than 2% showed evidence of frailty under the age of 65, increasing to more than 10% at 75 years or older. *Frailty was more frequent in women, ethnic minority groups and those with low employment grade.* Participants who had *long-term conditions or lifestyle risk factors for long-term conditions at the age of 50 years were more likely to develop frailty in later life,*

and these characteristics largely accounted for inequalities in frailty observed in later life.

Multiple long term conditions were strongly associated with frailty in the UK Biobank data in participants with four or more long term conditions.

Obesity at midlife was associated with frailty in both studies, suggesting that targeting modifiable risk factors at midlife might reduce the occurrence of frailty at later ages.

These studies show that *long-term conditions and their risk factors are often antecedents of frailty.*

What is the East Sussex picture?

Using the age-sex specific prevalence from Figure 1 above gives an estimated 24,000 people living in East Sussex with frailty.²⁶ [Frailty was defined using the descriptive Fried criteria.]

Using the eFrailty Index [eFI] prevalence estimate instead gives a slightly lower figure of approximately 21,400 moderate and severely frail people in East Sussex in 2018. There are approximately 50,000 mildly frail older people in 2018, Table 1.

	2018 population estimate	Mild	Moderate	Severe
Prevalence		0.35	0.12	0.03
Eastbourne	25,700	9,000	3,100	800
Hastings	18,400	6,400	2,200	600
Lewes	26,200	9,200	3,100	800
Rother	30,200	10,600	3,600	900
Wealden	41,800	14,600	5,000	1,300
East Sussex	142,400	50,000	17,100	4,300
	2028	Mild	Moderate	Severe
Prevalence		0.35	0.12	0.03
Eastbourne	30,400	10,600	3,600	900
Hastings	22,800	8,000	2,700	700
Lewes	32,000	11,200	3,800	1,000
Rother	36,000	12,600	4,300	1,100
Wealden	53,100	18,600	6,400	1,600
East Sussex	174,400	61,000	21,000	5,200

Source: ESiF ESCC population projections;Ref²⁶

The number of moderate and severely frail persons in East Sussex is expected to increase to 26,000 by 2028.

Deprivation increases the risk of frailty.²⁷ The proportion of the population over 60 living in poverty [IDAOP index] in East Sussex ranges from 2% in lower super output areas in Wealden to 48% in Hastings local authority.

What can be done about frailty?

Social inequality has a major negative effect on healthy ageing.²⁸ “Healthy ageing” reduces the risk of developing frailty by paying attention to:

- Good nutrition
- Not too much alcohol
- Staying physically active
- Remaining engaged in local community/ avoiding loneliness

What can be done about established frailty?

Adverse effects of frailty can be mitigated- for example:

- Falls risks can be reduced
- Timely medication review can reduce risk of Adverse Drug Reactions, drug interactions, non-adherence with medicines.

These interventions are included in the GP contract.

Other evidence based interventions include:

- Proactive and targeted case finding.
- Exercise and nutrition interventions.
- Integrated healthcare providing a person-centred single point of care.
- Use of electronic notes and telecare.
- Housing with extra care and support.

Conclusion

Frailty is a useful concept which describes the process of ageing, although it is not

appropriate simply to divide people into those who are frail and those who are not.²⁹

It is important to encourage healthy ageing to prevent frailty. It is equally important to target prompt health and social care interventions once frailty is identified.

More refined means are needed for robustly identifying frail patients and for planning and delivering frailty appropriate care.

Links to main evidence sources:

[British Geriatric Society: frailty what's it all about](#)

[NHS England toolkit for general practice in supporting older people living with frailty](#)

¹ Turner G, Clegg A. Best practice guidelines for the management of frailty: A British Geriatrics Society, Age UK and Royal College of General Practitioners report. Age Ageing. 2014. doi:10.1093/ageing/afu138.

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⁴ Gill TM. Transitions Between Frailty States Among Community-Living Older Persons. Arch Intern Med. 2006. doi:10.1001/.418.

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- ¹² Panza F, Solfrizzi V, Tortelli R, Resta F, Sabba C, Logroscino G. Prevention of Late-life Cognitive Disorders: Diet-Related Factors, Dietary Patterns, and Frailty Models. *Curr Nutr Rep*. 2014;3(2):110-129. doi:10.1007/s13668-014-0080-8.
- ¹³ Ensrud K, Ewing S, Taylor B, et al. Comparison of 2 Frailty Indexes for Prediction of Falls, Disability, Fractures, and Death in Older Women. doi:10.1001/archinternmed.2007.113.
- ¹⁴ <https://www.bgs.org.uk/resources/frailty-what%E2%80%99s-it-all-about>
- ¹⁵ <https://academic.oup.com/ageing/article/45/3/353/1739750>
- ¹⁶ <https://www.england.nhs.uk/publication/supporting-routine-frailty-identification-and-frailty-through-the-gp-contract-20172018/>
- ¹⁷ An evidence based approach to managing frailty is a comprehensive geriatric assessment [CGA]. This is a multidisciplinary, diagnostic process describing the medical, psychological and functional capabilities of a frail older person.
- ¹⁸ <http://fusion48.net/frailty/frailty-contract-analysis>
- ¹⁹ Collard RM, Boter H, Schoevers RA, Oude Voshaar RC. Prevalence of frailty in community-dwelling older persons: A systematic review. *J Am Geriatr Soc*. 2012;60(8):1487-1492. doi:10.1111/j.1532-5415.2012.04054.x.
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- ²⁸ Cooper R Socioeconomic adversity—an important barrier to healthy aging. *BMJ*. 2018; 360: k1288
- ²⁹ [https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667\(18\)30112-9/fulltext](https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(18)30112-9/fulltext)