# The concept of frailty and its significance in the consequences of care or neglect for older people: an analysis

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Older people, and particularly those of advanced age, become increasingly vulnerable to the consequences of abuse or neglect and, since the birth of specialist services for older people, researchers and clinicians have sought to understand the reasons for this. Multi-agency work across the UK is developing innovative strategies, protocols and tools to support investigation into situations of possible neglect in formal care settings. Emerging within this work has been a dilemma concerning which terminology should be used to most accurately describe care in specific situations, for example should care be described as 'inadequate' or 'poor', or as 'neglect'. One key element in this decision is the consequence, or consequences, of the care for the vulnerable person, i.e. its impact on the individual. Because of the complex changes which accompany ageing, and particularly older age, this is not straightforward. Is a person's health deteriorating as a consequence of ageing or disease? Are factors such as mental state or motivation impacting on their health? Is this the trajectory that their health would naturally follow? Or is the deterioration a direct consequence of the care that they have, or have not, been given? And, if so, to what degree? Identifying ways of addressing these questions could support the development of a lexicon of terms and definitions which could be used to accurately define specific categories of neglect in specific circumstances.

This paper describes the practice based dilemmas that prompted this work. It briefly sets a historical context for contemporary understandings of the mechanisms that render older people particularly vulnerable to the effects of neglect. Some perspectives on defining neglect are offered. The paper then outlines the findings of a literature review and concepts analysis of the term frailty. It offers a new definition of frailty and explains the theoretical approach within which this nests. The paper concludes with a discussion on the implications of frailty as a consequence of care or neglect for older people.

**Key words**: abuse, care outcomes, frailty, neglect, older people, poor care

## Introduction

It has long been recognized that the consequences of abuse or neglect for older people can be devastating but the precise mechanisms that cause them to be particularly at risk have not always been understood. As specialist study into geriatrics, gerontology and older people's care has evolved, a range of ideas have been explored. Ageing is generally acknowledged to increase the risk of ill-health, disability and ultimately mortality, but the mechanisms which underlie this are complex, influenced by many different factors, and distinct in each individual.

In the UK, as multi-agency work on safeguarding vulnerable adults has developed, there have been a number of investigations into possible neglect in formal care settings (e.g. Healthcare Commission, 2008). Key determinants of whether care is defined as neglectful have been identified as:

- The omission or commission of care to meet the needs of the person;
- The expectation of what the caregiver should know and how the caregiver could reasonably have acted;
- Whether, within the specific context, the caregiver took all reasonable actions to prevent adverse consequences occurring;
- The consequences of the action or inaction for the vulnerable person, i.e. its impact on him or her.

The fourth criterion has raised dilemmas in that it is not always straightforward to determine whether the health of an older person deteriorates as a consequence of normal ageing and disease or whether that deterioration is a direct consequence of care that has, or has not, been given (Hansford & Vowder, 2006; Jones *et al.*, 2008).

From the early days of geriatrics, factors distinct to later life that influenced the degree of vulnerability of older individuals were recognized as a compromised ability to maintain homeostasis and multiple pathology, compounded by the effects of multiple drug treatments. Particularly distinct to people in older age has been the 'altered presentation of illness' whereby physiological change and disease processes manifest differently in older people to younger people, typically with a delirium, falling, immobility and/or incontinence (Millard & Bennett, 1984), collectively known as 'The Giants of Geriatrics' (Isaacs, 1981); later identified as mental instability, physical instability, immobility and incontinence and renamed 'The Four I's'. Also recognized as distinct in older age was the particular phenomenon whereby an older person might experience a single event such as a bereavement or acute illness, which sets in motion a sequence of additional problems, for example a chest infection, fall and gradual loss of independence (Millard & Bennett, 1984). Depicting the knock-on effect of the chain of events, this was described as 'the domino effect' (Isaacs, 1981).

Gradually emerging as significant among the attempts to explain these phenomena distinct to older age has been the concept of frailty as, over the last two decades, teams of researchers and clinicians around the world are investigating its impact on older people and its implications for their care. For example, in USA, the Institute of Medicine, (2003) identified frailty as a top priority area for national action in transforming health care quality, and a team in Canada have highlighted that, as frail older people are the chief mandate of healthcare clinicians, we must come to terms with understanding frailty (Rockwood & Hubbard, 2004).

This paper offers some perspectives on defining 'neglect' with particular reference to formal care settings. It then outlines the findings of the literature review and analysis of the concept of frailty. The paper offers a new definition of frailty and explains the theoretical approach within which this nests. It concludes with some implications of frailty as a consequence of care or neglect for older people.

## Defining neglect

Neglect, intentional or unintentional, is identified as an aspect of abuse within international definitions (WHO, 2002) and the WHO describes neglect as 'pervasive' (WHO, 2008, p. v11). The Department of Health (DH) in England states that: 'Abuse may consist of a single act or repeated acts. It may be physical, verbal or psychological, it may be an act of neglect or an omission to act. Abuse can occur in any relationship and may result in significant harm to, or exploitation of, the person subjected to it'. Among the forms of abuse listed are 'neglect and acts of omission, including ignoring medical or physical care needs, failure to provide access to appropriate health, social care or educational services, the withholding of the necessities of life, such as medication, adequate nutrition and heating' (DH, 2000, p. 9).

The UK Nursing and Midwifery Council (NMC, 2008a) defines neglect as: 'the refusal or failure on the part of the registrant to meet the essential care needs of a client, for example failure to attend to personal hygiene, failure to communicate adequately with the client, Inappropriately withholding food, fluids, clothing, medication, medical aids, assistance or equipment'. To this, McGarry & Simpson (2008) add inadequate heating and/or lighting, poor physical condition, pressure ulcers, clothing in bad condition unclean

or wet, poor physical hygiene, lack of privacy or lack of stimulation.

In 2007–2008, 9.16% of referrals to the NMC Professional Conduct Committee were for neglect of basic care (NMC, 2008c). Examples included failure to:

- Ensure the checklist for a patient was completed before the patient had been sent home;
- Administer appropriate medication;
- Oversee the basic needs of service users in that their positions were not changed for hours to minimize the risk of pressure sores.

Despite definitions, descriptors and examples, there would appear to be a variety of perspectives about precisely what constitutes neglect in formal care settings and a paucity of case law on the meaning of neglect (Papworth, 2007). However, some defining attributes can be gleaned from legal and professional literature. For example:

- For a person to be charged with neglect, there must exist some obligation or duty on that person (Papworth, 2007), e.g. a nurse's duty of care (NMC, 2008b).
- The expectation of the knowledge and skills that the caregiver should possess and use should also be taken into account (Allin & Grose, 2008), for example The Bolam Test (Bolam v Friern, 1957). The test is 'what the ordinary skilled person exercising and professing to have that special skill, and determined by a responsible body of professional opinion, would have done in the same circumstances' (http://www.wikipedia.org/wiki/bolam_Test).
- Neglect can be inaction/omission, for example withholding or failing to provide basic forms of care (Gifis, 1998; Jenkins, 2004; NMC, 2008a; Stevenson, 2008) or action/commission (Pritchard 2001 in Jenkins 2004; Hirst, 2002; Barber, 2007) such as the act of taking a decision not to perform an action. Professionals should anticipate the consequences of both action and inaction (Papworth 2007).
- Neglect can be both intentional and unintentional (Hirst, 2002; Jenkins, 2004; Garner, 2006; Barber, 2007; NMC, 2008a) and in England a new offence of willful neglect (of someone who lacks mental capacity to make a decision) was introduced in Section 44 of the Mental Capacity Act 2005.
- Neglect can be considered as context-bound or context-free. Hirst (2002) contends that in some care environments a culture of abusive behaviour may already be embedded. Gifis (1998) suggests that neglect may be excusable if procedural in nature and occurring in unusual circumstances, i.e. the context influenced the actions.
- The degree of regard for the risks involved, for example if someone displays a conscious disregard of a substantial and unjustifiable risk (Gifis, 1998).
- The distinction between neglect and negligence. Negligence can be defined as 'a failure to exercise a degree of care that a person of ordinary prudence (a reasonable man) would exercise under the same circumstances' (Gifis, 1998) or 'the omission to do something a reasonable man would do' or to 'do something a prudent and reasonable man would not do' (Blyth v Birmingham Waterworks Co., 1856).

Interestingly, as Castledine (2004) identifies, the same behaviour can be defined in one situation as neglect, in another, seemingly possessing the same characteristics, as poor care.

## Aims of the literature review and the concept analysis

To explore frailty and its implications for nursing practice with older people, a literature review and analysis of the concept of frailty (within the framework of Walker & Avant, 1983) were undertaken. The purpose of the review and analysis was to:

- Draw from the literature implications for nursing practice in formal care settings with particular relevance to the neglect of older people;
- Develop a definition of frailty which could help staff to understand the potential impact of their actions or inactions on outcomes for older individuals;
- Identify any instruments or tools which could be used to assess or measure frailty;

For the purposes of this analysis, a definition of frailty would need to:

- Be readily understandable to the range of health and social care professionals who work with older people in formal care settings;
- Be readily understandable to staff working with older people in formal care settings;
- Prove to be consistent in use in practice across disciplines.

The search terms used were, with particular reference to older adults: 'frail' and 'frailty'. Other related concepts identified during the search, particularly in the professional literature were: 'vulnerable' and 'vulnerability'; fragile, fragility; co-morbidity; dependency.

The search of professional literature encompassed international sources from the perspectives of nursing, medicine, social care and various traditions within gerontology. Databases included are:

- British Nursing Index;

- AgeInfo (database of the Centre for Policy on Ageing);
- BioMed Central (BMC Geriatrics);
- Ovid

In order that the definition and explanation of frailty would be understandable, and as recommended by Walker & Avant (1983), general uses of the concept were searched through Google, including Oxford English Dictionary, Webster's Dictionary, Wikipedia.

## Overview of the literature on frailty

Since 1990s, the notion of frailty has seen a dramatic increase in popularity in the medical literature and also, although to a lesser degree, in the psychological, sociological (Guilley *et al.*, 2008) and nursing literature.

The aspects within the literature which are particularly relevant to the concept analysis and development of the definition of frailty for use in formal care settings are discussed through the different sections of this paper.

The literature base is truly international, with significant work emanating from, for example, Canada (Rockwood *et al.*, 2004; Rolfson *et al.*, 2006; Stienstra & Chochinov 2006, Grenier, 2006, 2007), USA (Andersen & Johnson, 1996), Australia (Scanlon & Lee, 2007), the Netherlands (Izaks & Westendorp, 2003), Sweden (Sørlie *et al.*, 2006) and Switzerland (Santos-Eggimann *et al.*, 2008).

Frailty is most often described in predominantly physical terms (McDougall & Balyer, 1998) and much of the research has focused on identifying the determinants, components and consequences of frailty (e.g. Santos-Eggimann *et al.*, 2008).

Frailty is emerging as a key concept in the clinical work of geriatrician teams (e.g. Rockwood & Hubbard, 2004; Rockwood *et al.*, 2004; Rolfson *et al.*, 2006) and also teams working in geriatric oncology. In Italy, Basso & Monfardini (2004) developed an approach to treating older people with tumours which identifies three groups:

- Patients who are 'fit' and receive the same treatment as younger patients;
- Those partially impaired who require tailored approaches;
- Frail people who are deemed to be at high risk of complications from cancer treatment so are candidates for supportive care only.

A similar approach has been adopted in Groningen, the Netherlands (reported by Birmingham, 2006) where a team has developed a 'frailty indicator'. Using this, frailty is proving to be an effective predictor of patient outcomes following treatment.

Comprehensive literature reviews have been undertaken, mainly by nurses (e.g. Levers *et al.*, 2006) and Markle-Reid & Brown (2003) who also presented a synthesis of definitions and conceptual models of frailty in relation to older adults.

Psychosocial literature includes the work of Grenier (2006, 2007) who identified a range of discourses on frailty, including descriptions of older women's experiences, and distinguished between being frail and feeling frail. Grenier's (2006, 2007) research identified that, although the concept of frailty is used by professionals, relatives and carers, it is rarely used by older people.

International research into frailty is ongoing and a range of current projects can be identified through online searches (e.g. Fairhall *et al.*, 2008; Santos-Eggimann *et al.*, 2008; Searle *et al.*, 2008).

## Frailty, vulnerability and care dependency

The concept of vulnerability was considered for its usefulness in this analysis as there is some overlap between how the concepts of frailty and vulnerability are used in the literature. Frailty is widely conceived as a state of vulnerability (Rolfson *et al.*, 2006) and the term 'medically vulnerable' has also been used to denote older people who are frail (Rogers, 1997).

There are similarities in respect of, using Walker & Avant's (1983) framework, the general uses of the terms frail and vulnerable, their defining attributes and the empirical referents for these, their antecedents and consequences. Distinct from the term frailty however, the defining attributes of the concept of vulnerability are identified as a 'susceptibility to' (Malone, 2000 in Scanlon & Lee, 2007; Rogers, 1997), 'at risk of' (Rogers, 1997), 'openness to' (Purdy, 2004) stressors or negative circumstances. Scanlon & Lee (2007) suggest that vulnerability can be actual or potential, and Stienstra & Chochinov (2006) that vulnerability can be socially constructed.

Generally the concept of vulnerability is not well defined in the literature (Rogers, 1997; Scanlon & Lee, 2007) and Sellman (2005) suggests that, without more explicit understanding about the specific susceptibility and the harm to which a person might be susceptible, the term vulnerability becomes conceptually unsustainable. Writing on child protection, Newland & Cowley (2003, p. 464) conclude that, 'despite the identified significance of vulnerability, it remains a complex, nebulous concept that lacks any clear understanding to support its application to practice'.

Other concepts considered in the literature review included fragility, co-morbidity and dependency or care dependency. For example, Boggatz *et al.* (2007) used Walker & Avant's (1983) framework to explore conceptual relationship between functional limitation, care dependency, and unmet

need, but they concluded that the relationship was unclear and that the distinctions between these concepts may be meaningless in practice.

## Defining frailty in the literature

In the literature, synonyms for frailty included:

- Biological old age;
- Failure to thrive;
- Wasting syndrome common in people of advanced age;
- Chronically dependent in a variety of ways;
- Functional vulnerability, disability, dependency;
- Chronic illness and disability;
- General vulnerability, decreased ability to respond to stressful situations.

Antonyms for frailty included:

- Independence, autonomy;
- Chronologically old (distinct from being biologically old);
- Vitality, vigour;
- Hardiness, robustness (Guilley *et al.*, 2008);
- Wellness.

As observed by Watson (2008), definitions of frailty abound, for example, from their literature review, Levers *et al.* (2006) identified 17 definitions.

The themes defining frailty in the literature predominantly reflect a biomedical perspective, equating frailty with ageing, disease, decline, loss and dependence on others (Markle-Reid & Brown, 2003). These concerned:

- Old age;
- Poor physical health, chronic health problems (Fairhall *et al.*, 2008), acute on chronic illness;
- Vulnerability or lack of strength and resilience;
- Loss of capacity to adapt to complexity and to environmental stressors (Santos-Eggimann *et al.*, 2008);
- Functional impairment that threatens the ability of a person to live independently (Fairhall *et al.*, 2008);
- Disability or multiple disabilities;
- Poor mental health and functioning, cognitive impairment or depression;
- Requiring care and help to meet basic needs;
- Likely to deteriorate further (Fairhall *et al.*, 2008);

Signs and symptoms linked with frailty included:

- Reduced physiological reserve, compromised homeostatic mechanisms;
- Decreased muscle strength, flexibility, cardiovascular endurance;
- Reduced mobility and compromised balance;
- Change in body composition, weight loss;
- Dependence in activities of living, needing assistance with personal care;
- Acute illness such as confusion, falls, immobility, incontinence.

Some authors projected a unidimensional view of frailty, e.g. medical frailty, functional frailty, physical frailty or mental frailty (Markle-Reid & Brown, 2003).

Frailty was also commonly described as a syndrome or phenotype incorporating, for example:

- Impairment in one or more aspects of the activities of daily living or cognitive impairment or poor self-related health;
- Weight loss, fatigue, impaired grip strength, diminished physical activity or a slow gait (Rockwood, 2005; Fairhall *et al.*, 2008);
- Weight loss, weakness as measured by grip strength, poor endurance resulting in self-reported exhaustion, slowness as measured by walking speed, and self-reported low physical activity (Fried *et al.*, 2001).

As concluded by Markle-Reid & Brown's (2003, p. 58) review 'despite the increase in the use of the term frailty over the last two decades there is lack of consensus in the literature about its meaning and use and no clear conceptual guidelines for establishing criteria to describe older adults as frail'.

What was clear from the literature was that frailty is multidimensional and that interacting physical, psychological and social factors can contribute to frailty in older people. These put frail older people at risk for increased morbidity, acute hospital and long-term care use and death.

## Measuring frailty

Researchers have sought to identify whether frailty can be quantified in individuals, what exactly constitutes frailty, what has led to the condition and what happens to someone who is frail? Measurement can be controversial and Watson (2008) suggests that the number of potential items, physical, psychological etc, that could be included in such measurements is large. Research has focused on identifying the items that best indicate frailty from those that do not and discovering those that best predict the outcomes of frailty such as loss of independence.

Various tools have been developed and, while some of these have advanced our understanding of frailty, Rolfson *et al.* (2006) observe that most are impractical for bedside screening by front-line providers because they require the multidimensional clinical data that constitute a comprehensive geriatric assessment and/or require special training.

In Canada, Rolfson *et al.* (2006) developed and tested a brief screening interview for frailty in older people in both inpatient and outpatient settings. The Edmonton Frail Scale (EFS) measured a range of domains of frailty, i.e. cognition,

general health status, functional independence, social support, medicine use, nutrition, mood, continence and functional performance. The study concluded that the EFS is a brief, valid and reliable tool that can be completed by people without special training in geriatric medicine.

A frailty indicator developed in Groningen, the Netherlands (reported by Birmingham, 2006) assessed:

- Mobility/Activities of Daily Living (shopping, walking outdoors, undressing, use of toilet);
- Physical fitness, vision, hearing, nutritional state, weight loss;
- Co-morbidity and medication use;
- Cognition and memory loss;
- Psychosocial aspects (loneliness, missing people, social support, feeling down or anxious).

This is proving to be useful in predicting treatment outcomes for older people.

In Switzerland, Guilley *et al.* (2008), investigated the predictive validity of an expanded working definition of frailty (based on deficiencies in mobility, memory, energy and physical or sensory capacities) and analysed the resulting health transitions. The five domains were considered as predictors of the onset of dependence in activities of daily living and death.

Through ongoing research in Canada, Searle *et al.* (2008) suggested that, using a frailty index, frailty can be measured in relation to the accumulation of deficits. They contended that a frailty index could be developed from most ageing databases and plan to systematically describe a standard procedure for constructing a frailty index.

Watson (2008) concluded that the development of tools is unlikely to lead to instruments that are entirely precise because measuring frailty is complicated by the fact that not everyone who is considered frail will display the same underlying factors and any factors will present to a different extent in different people.

The way in which frailty is conceptualized and interpreted has profound implications for social responses, care practice a person's experience of care (Grenier, 2007). Frailty can operate as a means of 'dividing-practice' through the classification of those eligible for care (Grenier, 2007) and those who are most likely to benefit from specific interventions (Basso & Monfardini, 2004).

## Conclusions from the literature review and concept analysis

This review, along with others (e.g. Markle-Reid & Brown, 2003) concludes that there is a need for a new theoretical approach to frailty in older adults that incorporates key concepts lacking in current models and definitions. The literature overall suggests that conceptions of frailty should:

- Be multidimensional;
- Acknowledge the complex inter-relationship of individual (physical, psychological, social and spiritual) factors and environmental factors;
- Acknowledge individual context and subjective perceptions;
- Acknowledge that frailty is not age-related, avoiding negative and stereotypical views of older age.

Importantly, the literature confirms that, because frailty can originate from factors within an individual or from factors in the person's context or environment, these are usually modifiable, i.e. amenable to intervention. Proactive, individualized, multi-disciplinary interventions, targeted at the individual or the environment, can be developed to identify and strengthen available resources, thereby reducing frailty (Markle-Reid & Brown, 2003). As frailty is affected by individual subjective perceptions and sense of self, interventions offering psychological, emotional or social support can help to reduce the degree of frailty. In her discourse analyzing older women's experiences of feeling frail alongside assessment of their frailty, Grenier (2007) identified that strategies to reduce older women's 'feelings' of frailty could service as protective mechanisms for becoming frail.

Two key concepts were identified in the review and analysis:

- Reserve capacity: this concept, whether stated explicitly or not, underpins much of the literature on frailty, although it is most often described as predominantly physical in nature and as a reflection of a physical state or of disease.
- Thresholds or threshold limits: Some of the literature identifies that there are stages in the development of frailty and thresholds between these.

Although frailty scales have been found useful in assessing individuals in the early stage of frailty (e.g. Rolfson *et al.*, 2006), no instruments were identified that could predict the outcomes for individuals with more advanced frailty.

## A new definition of frailty

To assist in decision-making concerning possible neglect in formal care settings, a new definition of frailty was developed from the literature review and concept analysis.

This definition acknowledges that frailty is not an absolute term (i.e. in that adults are either frail or not frail). Rather, frailty is a relative term in that individuals are at a point on a continuum of frailty (i.e. they are more or less frail). Frailty is

also a dynamic concept in that it varies over time as individuals become more or less frail.

The trajectory of frailty is unique for each individual (Markle-Reid & Brown, 2003).

This definition addresses the criteria suggested by the themes in the literature. It is multidimensional; it focuses on individuals and can accommodate subjective perceptions. It is not reductionist or mechanistic and does not focus on problems. Influencing factors are likely to be proximal rather than distal, thus encompassing acknowledgement of the impact of care on frailty.

The definition is offered in Box 1, followed by a diagram representing the theoretical conception of the stages of frailty in Box 2, and an explanation of the key elements within this theoretical conception. The underlying mechanisms of frailty and consequences for older people of care or neglect, are shown in Fig. 1.

## Box 1: A new definition of frailty

Frailty is a weakened state of being in which a person's reserve capacity is reduced to an extent where health, functioning and wellbeing are compromised.

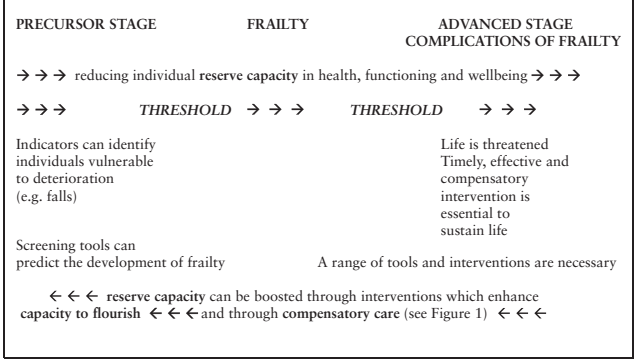
In the Precursor Stage a range of indicators can identify people who are vulnerable to frailty.

Advanced frailty threatens life.

Complications of frailty occur when the care delivered fails to compensate for the impact of frailty and other medical conditions on the person's physical, psychological or spiritual health, resulting in harm to the person.

Complications are mostly avoidable but are occasionally unavoidable, despite evidence to show that appropriate care has been delivered.

## Box 2: Diagrammatic representation of the theoretical conception of frailty




## Key components of this conception

### Reserve capacity

The ability of an individual to withstand internal changes (e.g. physiological ageing, disease processes, infection, drugs; psychological stressors, emotion; cognitive change) or stressors from the environment is a function of their individual reserve capacity (Markle-Reid & Brown, 2003). Reserve capacity can be gradually compromised by an accumulation of factors, such as ageing, illnesses, injuries or stressors (see Fig. 1). Conversely, reserve capacity can be boosted through interventions which enhance an individual's 'capacity to flourish' (Sellman, 2005) and through compensatory care (see Fig. 1).

### Stages of frailty

Some literature suggests that there are stages in the development of frailty and thresholds between these.

*Precursor stage*

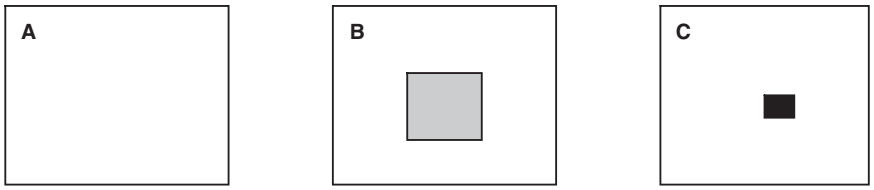
Before frailty occurs, deterioration in health and functioning is not sufficiently severe to interfere with the person's activities of daily living, or the person is able to use coping strategies to compensate. People can appear to function well (Andersen & Johnson, 1996) but are at risk of deteriorating (Izaks & Westendorp, 2003) and a 'vicious circle' of frailty can develop whereby, for example, a person fears falling → then falls → consequently moves about less → which reduces physical function → leading to diminished postural control → difficulty with activities of living → limited independence → increased fear of falling (Delbaere *et al.*, 2004, p. 372).

*Threshold between the precursor stage and frailty*

There then appears to be, theoretically at least, a threshold between the precursor stage and the development of frailty. At this point screening (e.g. Rolfson *et al.*, 2006) can identify those on the threshold on frailty. At this threshold, physical and psychosocial strategies can support individual protective mechanisms to prevent the 'downhill course' through which people become frail (Andersen & Johnson, 1996; Grenier, 2007).

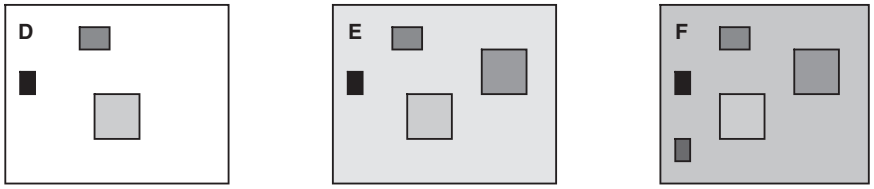
*Frailty*

Campbell & Buchner (1997) describe frailty as a condition or syndrome which results from a multi-system reduction in reserve capacity to the extent that a number of physiological systems are close to, or past, the threshold of symptomatic clinical failure. The term can be used to describe older adults



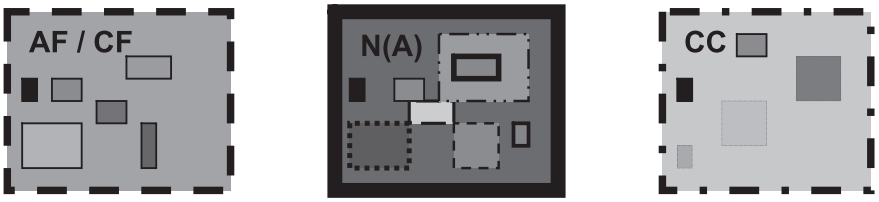

**A, B, C: The fundamental process of damage and repair in human beings**

**A**: represents a person.
**B**: Illness, injury or stressor (extrinsic or intrinsic) affects the person.
**C**: Healing has occurred but there is residual damage.
NB. Damage can affect any or all aspects of a person (e.g. physical, psychological, social, sexual, spiritual)




**D, E, F: The process of frailty development**

**D**: Several episodes of damage have occurred and been repaired to varying degrees by various repair mechanisms.
**E**: Illness, injury and stressors continue to accumulate but repair is not always complete, particularly if the resources needed to achieve this are considerable or multiple.
**F**: Frailty: Repair resources have been mobilised to an extent where the person's reserve capacity (in any or all aspects of human life) is compromised. Further stressors will likely result in the person crossing the thresholds of Frailty (see Box 1 and 2)




**AF/CF. N(A), CC: Frailty outcomes and responses to frail persons**

**AF/CF: An Advanced Stage of Frailty / Complications of Frailty**: Advanced Frailty is the natural progression of the process of frailty without external intervention. Damage continues to accumulate and the reserve capacity to repair is severely compromised. Illness, injury or stressors continue to occur. Life is threatened. One single factor is then sufficient to cause a cascade of events (the 'domino' effect) leading to the deterioration of many body functions, and eventually to death.
**N(A): Neglect (Abuse):** This can lead to **Complications of Frailty**, the effects of which match those of Advanced Frailty. **The crucial distinction is that care/treatment/support could prevent or avoid the single factor which triggers the 'domino' effect and the crossing of the threshold towards death.** Importantly, distinct, additional potential single triggers intrinsically exist in formal care settings (for example an unfamiliar environment, the trauma of leaving one's home, separation from loved ones, being in a communal care setting with strangers, being dependent on others for everyday functioning, needing intimate care and potentially intense feelings of vulnerability). Acts or omissions of care, particularly when cumulative, also serve as single triggers. For example for someone on the threshold of Advanced Frailty, immobility, insufficient fluid intake, untreated pain and a sense of hopelessness, even within a relatively short time span, are potentially sufficient to trigger the 'domino' effect resulting in death. In people on the threshold of Advanced Frailty, care which is insufficiently anticipatory, proactive, preventative and compensatory (such as custodial, maintenance, neglectful or 'poor' care) will in most cases result in Complications of Frailty and eventually to death.
**CC: Compensatory Care**: Complications of Frailty can, in many older people, be prevented by early recognition, diagnosis and comprehensive assessment of the individual, timely and effective compensatory support and treatment, particularly when multidisciplinary, and care which is anticipatory, proactive and preventative. Importantly, such care recognises potential sub-clinical states and pre-symptomatic conditions and instigates preventative or curative strategies.


**Figure 1** Frailty: underlying mechanisms and consequences for older people of care or neglect (Adapted from Izaks & Westendorp, 2003).

who are in a precarious balance between their abilities to maintain health and functioning and their deficits that threaten that balance (McDougall & Balyer, 1998). Frailty can be considered to be a transitional period between a state of robustness and a critical situation of functional dependence (Guilley *et al.*, 2008) and, as the effects of chronic, low-grade physiological losses accumulate, compounded by additional stressors such as an acute illness, the person's reserve capacity gradually declines. The person becomes increasingly frail.

*Threshold between frailty and advanced frailty*

There is then a threshold that Andersen & Johnson (1996) describe as 'teetering on the edge of decline'. At this stage, the person's reserve capacity is severely compromised.

*Advanced frailty*

If illness, injury or stressors continue to occur, life is threatened. At this stage, one single factor is sufficient to set in motion a cascade of events (the 'domino' effect) causing deterioration in the functioning of multiple bodily systems, and eventually to death.

Thesholds of frailty are not defined by purely physical factors, but by the complex interplay of biological, psychological and social factors but, the more impaired an individual is, the less likely he or she is to return to the baseline level of health and functional capacity after an illness or acute episode (Andersen & Johnson, 1996).

## Implications for preventing neglect

Understanding frailty can help us to understand the potential impact of neglect on older people, to recognize neglect when it does occur and hopefully to prevent it.

An important implication of this definition and conception is that the progress of frailty in an individual can be modified (Markle-Reid *et al.*, 2006) and is potentially reversible (Guilley *et al.*, 2008), particularly if intervention strategies are introduced at the earliest phase of the frailty process (Gill *et al.*, 2002, Guilley *et al.*, 2005). However, the more frail a person becomes, the more critical it is that timely and effective care is offered (Andersen & Johnson, 1996).

The development of frailty can in many cases be prevented by:

- Bolstering personal resources (physical, psychological, emotional). For example, through comprehensive health assessment, identifying and managing risk for functional decline (i.e. depression, dementia, polypharmacy). Markle-Reid *et al.* (2006) suggest that identifying coping styles, providing education regarding healthy lifestyles and the management of chronic illness using a participatory approach can be effective. Empowerment strategies designed to promote positive attitudes, knowledge and skills to maintain and enhance health and enhance self-efficacy and participation can be helpful. Support to stabilize mental frailty can also be effective (McDougall & Balyer, 1998). Importantly, measures should seek to enhance an individual person's 'capacity to flourish' (Sellman, 2005).
- Bolstering environmental resources and support (social, material and cultural). Well-designed, well-equipped and well-organized environments in formal care settings can support individual functioning. Building trusting, supportive and meaningful relationships with families and carers can also help to bolster an older person's supportive resources (Markle-Reid *et al.*, 2006).

Despite the best possible care and treatment, some frail people deteriorate and die; conversely others continue to live despite an apparent prognosis to the contrary.

While no interventions have been developed specifically to reverse the syndrome of frailty, previous studies have shown that clinical outcomes for frail older people can be improved by multi-factorial interventions such as comprehensive geriatric assessment and single interventions such as exercise programmes or nutritional supplementation (Fairhall *et al.*, 2008). The more frail a person becomes, the more critical it becomes to ensure that they receive good care. Deterioration in health and functioning are exacerbated by potentially modifiable factors such as the adverse effects of treatment, inadequate fluid intake and nutrition, and immobility. As Andersen & Johnson (1996) suggest, adopting a proactive approach to the syndrome of frailty can keep patients functioning safely and independently, as far away as possible from 'the edge of decline'.

Complications of frailty can generally be prevented by early recognition, diagnosis and comprehensive assessment followed by timely and effective multiprofessional support and treatment. To sustain life and prevent complications of frailty, care must be anticipatory, proactive, preventative and compensatory.

The importance of identifying sub-clinical changes and presymptomatic conditions to prevent complications of frailty should not be underestimated. In older adults diseases commonly develop for some considerable time before they are identified, either because they are misdiagnosed or viewed as a consequence of normal ageing (Andersen & Johnson, 1996; Izaks & Westendorp, 2003; Wolinski *et al.*, 2005).

## Implications for defining neglect

Understanding frailty can also help us to recognize neglect in formal care settings and thus work towards preventing

### Box 3: Determining neglect in the context of frailty. An example

An older woman was found to be malnourished with a body mass index of 17, showing signs of dehydration, with a pressure ulcer, disorientated in time and place, unable to stand or maintain a sitting balance and very drowsy. She had a diagnosis of dementia, and a previous cerebral vascular accident.

This presentation was examined within the context of the action taken by the Registered Nurse (RN) to prevent the person's condition deteriorating. The records were examined for evidence of compensatory assessment activity, including fluid and diet interventions and monitoring, passive physiotherapy, pressure risk assessment and management, psychosocial interventions relevant to the person's culture and biography.

Examining the care which had been assessed, delivered and evaluated, or omitted, enables the investigator to give an opinion in respect of whether the complications of her frailty and her conditions were inevitable despite active compensatory interventions or, alternatively, were neglectful as the RNs had not carried out the duties that are reasonably expected of them.

neglect occurring in the future. Understanding the impact of care on an older person who is frail can help to determine whether the care given 'met the person's essential needs' (NMC, 2008b) or, at the opposite extreme, was neglectful. An example is offered in Box 3.

Determining whether care has been neglectful requires a wide range of considerations including not only the presentation of the person (Hansford & Vowder, 2006) but also how the person has come to be in this situation (McGarry & Simpson, 2008). The considerations highlighted here are those specifically relevant to frailty.

The person in this example was frail and, considering the cumulative effects of her conditions, her future pathway would likely be through advanced frailty towards death. However, the complications identified could be caused if measures are not taken to prevent or avoid the single factor that starts the cascade of detrimental changes leading to death. The opinion on whether the care received was neglectful or not is determined, therefore, not simply by the condition in which the person is found, but by the actions that have been taken to prevent such a presentation, i.e. the preventative, ancitipatory and compensatory actions taken by the RN. Within this example, care records, interventions, equipment and activity around the older person should demonstrate that the nurse has assessed and implemented care practices designed to prevent such complications of frailty occurring, for example fluid and diet assistance and monitoring, pressure risk management, passive limb exercises, sound infection prevention procedures, effective pain management and psychosocial interventions to assist in the maintenance of social engagement. In the context of frailty, undertaking fundamental (basic) forms of care (Gifis, 1998; Jenkins, 2004; NMC, 2008a; Stevenson, 2008) becomes increasing critical. The skill of the nurse is in anticipating the deficits that frail older persons might experience (for example not recognizing that they are thirsty or that they are cold) and compensating for these deficits (by ensuring adequate fluid intake and warm clothing).

Coupled with this is not only the need to identify what the RNs did but also how quickly compensatory action was taken. One commonly used defining factor for neglect is that is takes place over time but, for frail older people, time can be particularly critical. Once 'the domino effect' is set in motion, and the person becomes increasingly unable to compensate for health deficits themselves, the speed and intensity of RN compensatory intervention becomes increasingly crucial if the complications of frailty are to be prevented. For a young person who is generally well, failing to take sufficient fluid during one day will not likely be detrimental to health. For a frail older person insufficient fluid for one day could trigger 'the domino effect' and complications of frailty which could be fatal. Thus a consideration for determining neglect is how quickly RN compensatory action was taken in the context of the condition of the individual older person.

In some situations nurses implement care which they believe to be in patients' 'best interests' because they protect them from harm but which, particularly if it does not follow good practice guidance, could be deemed to be abusive. Restraint is an example of this. A key issue in this situation is, as illustrated in Box 2, whether the actions ultimately contribute to, or detract from, a person's 'capacity to flourish' (Sellman, 2005, p. 9). Stopping someone falling out of bed may protect them from harm; stopping someone getting out of bed when they wish to, theoretically at least, detracts from their capacity to flourish.

Consideration should be given to what knowledge could be expected of the RNs and how they could reasonably have acted. RNs have a duty of care and a duty to meet the essential needs of the person (NMC 2008b). Registered Nurses also required to have the knowledge and skills to assess, plan, implement and evaluate care and be able to identify when meeting a person's needs are outside their sphere of competence (Allin & Grose, 2008). The consideration is then 'what a responsible body of professional opinion

would have done in the same circumstances' (The Bolam Test, Bolam v Friern 1957).

Within the multi-agency approach to safeguarding adults described above, considerations in determining whether care was neglectful, and if so who was responsible, should also include information in respect of how the RN attempted to ensure correct care was given, the support of the organization, e.g. staffing levels, resources and equipment and training opportunities for staff. The context of care should also be considered, for example institutionalized practices (Hirst, 2002) which, in the literature, are defined as abusive but have become accepted norms of practice within individual organizations or, sometimes, recognized as sub-optimal and labelled as 'poor care' (Barber, 2007). Such wider issues will not necessarily change the view of whether the care was neglectful or not, but will assist in understanding why the situation has occurred, where responsibilities rest and what actions need to be undertaken within the care setting both to safeguard others and to improve practice in the future.

## Conclusion

Frailty is emerging as a powerful indicator of health status and of health care needs (Santos-Eggimann *et al.*, 2008) and, as Rockwood & Hubbard (2004, p. 434) argue, 'the nature of frailty must remain an active area of enquiry if we are to face up to the challenges it poses'.

This paper has offered a new conceptualization of frailty and, in Fig. 1, an explanation of the mechanisms which underpin this. Our work does not claim to address all the dilemmas which accompany decisions about neglect but, particularly in the context of the neglect that has been identified in formal care settings (e.g. Healthcare Commission, 2008), as Rockwood (2005, p. 432) states, 'for many purposes, we need to just get on with it … to propose a definition, see how it relates to earlier work and, by dint of consensus, compromise or momentum, to advocate vigorously for it. There is ample precedent for this'. The work in this paper is a starting point which we hope will be developed, refined and validated through multi-agency practice. As Rockwood (2005, p. 434) states, 'that definitions change should not be a source of concern'.

We need to continue to develop our thinking on frailty to better understand the impact of care on older people. Low expectations of care for older people have in the past been reinforced by legislative systems (such as the UK Poor Laws, Barber, 2007) and by ageist assumptions, but there are international commitments to improve care for older people and to prevent abuse (WHO, 2008).

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