NIHR | Policy Research Unit Older People and Frailty

Using individual and neighbourhood profiles and trends to understand frailty with nationally representative population data

Part 2: Frailty and receipt for care in England

Asri Maharani, David Sinclair, Peter Bower, Tarani Chandola, Barbara Hanratty, James Nazroo, Gindo Tampubolon, Terence O'Neill, Chris Todd, Raphael Wittenberg, Fiona Matthews, Neil Pendleton

Briefing Report

June 2021

Using individual and neighbourhood profiles and trends to understand frailty with nationally representative population data

Part 2: Frailty and receipt for care in England

Briefing Report

Asri Maharani*, David Sinclair*, Peter Bower, Tarani Chandola, Barbara Hanratty, James Nazroo, Gindo Tampubolon, Terence O'Neill, Chris Todd, Raphael Wittenberg, Fiona Matthews*, Neil Pendleton*

**these authors contributed equally to this work*

National Institute for Health Research (NIHR) Older People and Frailty Policy Research Unit, Population Health Sciences Institute, Newcastle University, Newcastle-upon-Tyne, NE4 5PL, UK.

This report presents independent research funded by the National Institute for Health Research Policy Research Unit in Older People and Frailty. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

Policy Research Unit Programme Reference Number PR-PRU-1217-21502

Background

In 2017, there were around 10 million individuals aged 65 and older in the UK. This number is projected to increase by 49% to 14.9 million by the year 2040 (1). The population aged 85 and over - the group most likely to need health and care services – is expected to increase from 1.4 to 2.7 million over the same period (1). With advancing chronological age, many individuals experience difficulties with activities needed for everyday life, termed functional limitations (2). Some limitations can be accommodated by older adults adjusting their lifestyle, or using aids or physical adaptations. For more severe impairments, individuals may require support from others to undertake these tasks. The provision of this support is the basis of social care, provided either by family and friends, or by social care providers. As the population ages, demands on the system for providing care services to older people are likely to increase. Social care is organised at local authority district level in England. Over the next decade, the number of local authority districts in England which have at least one-quarter of their population aged 65 years and over, is predicted to increase from 36 in 2016 to 97 in 2026 (1).

This report aims to identify the relationship between frailty levels and receipt of care, at upper-tier local authority level in England. The absence of official data sources on this information makes it difficult to estimate the size and scale of informal, privately funded and voluntary funded care. This report thus focuses only on publicly funded care.

Methods

Data sources

The study drew on five different data sources for the analysis: i) the English Longitudinal Study of Ageing (ELSA) (3); ii) the Cognitive Function and Ageing Study II (CFAS II) (4); iii) 2011 UK Townsend Deprivation Scores (5); iv) 2020 Office for National Statistics population projections for local authorities (1); and v) the Short and Long Term Support (SALT) and Adults Social Care Finance Return (ASC-FR) 2018-2019.

A frailty index was constructed using ELSA and CFAS II, from variables or deficits representing conditions that a) accumulate with age and b) are associated with adverse outcomes. Deficits included functional and sensory impairments, clinical diagnoses, and poor cognitive function. The frailty index was categorised into frailty, pre-frailty and non-frailty, based on the proportion of accumulated conditions present in each person (6). Care receipt is given by the number of adults aged 65 and over who received formal care funded by a local authority during the year of 2018-2019.

Data analysis

First, we generated the area-level distribution of frailty in England using small area estimation. This method gives an estimation of the prevalence of pre-frailty and frailty in each local authority, based on its age-banded population size, the proportion of male and females, and its deprivation level (measured by the Townsend deprivation index (5)). We then compared the area-level distribution of frailty with the prevalence of formal local authority care recipients in each local authority (calculated as the proportion of the 65 and over population receiving local authority funded care).

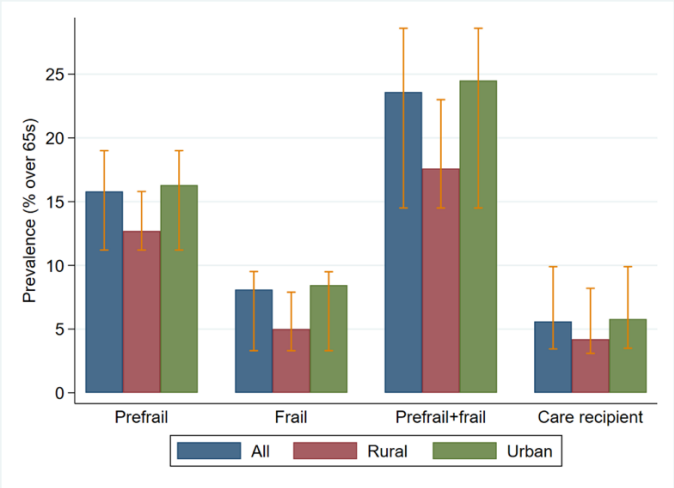
Finally, deficit scores were generated as the prevalence of pre-frailty and frailty in the 65 and over population minus the
prevalence of formal local authority care receipt. Higher deficit scores represent a higher discrepancy between prefrailty and frailty prevalence and the prevalence of care receipt.

Results

We estimate that around 1.6 and 0.7 million people aged 65 and older in England were estimated to be pre-frail and frail, respectively, using 2018 population estimates. The Short- and Long-Term Support (SALT) and Adults Social Care Finance Return (ASC-FR) 2018-2019 show that 0.5 million adults in the same age group received local authority funded long-term care in 2018-2019.

The median estimated prevalence of pre-frailty and frailty in each local authority in 2018 is estimated at 16% of the >65 population pre-frail (median, 95% confidence interval; 2.5 and 97.5 percentiles) and 8 (3-10)%, respectively (Figure 1). The median prevalence of care receipt was 6 (3-10)%. On average, urban areas had a higher prevalence of prefrailty and frailty and local authority funded care recipients than rural areas.

Figure 1: The prevalence of prefrail and frail older adults and care recipients in local authorities. Bars shows median (2.5 and 97.5 percentiles).



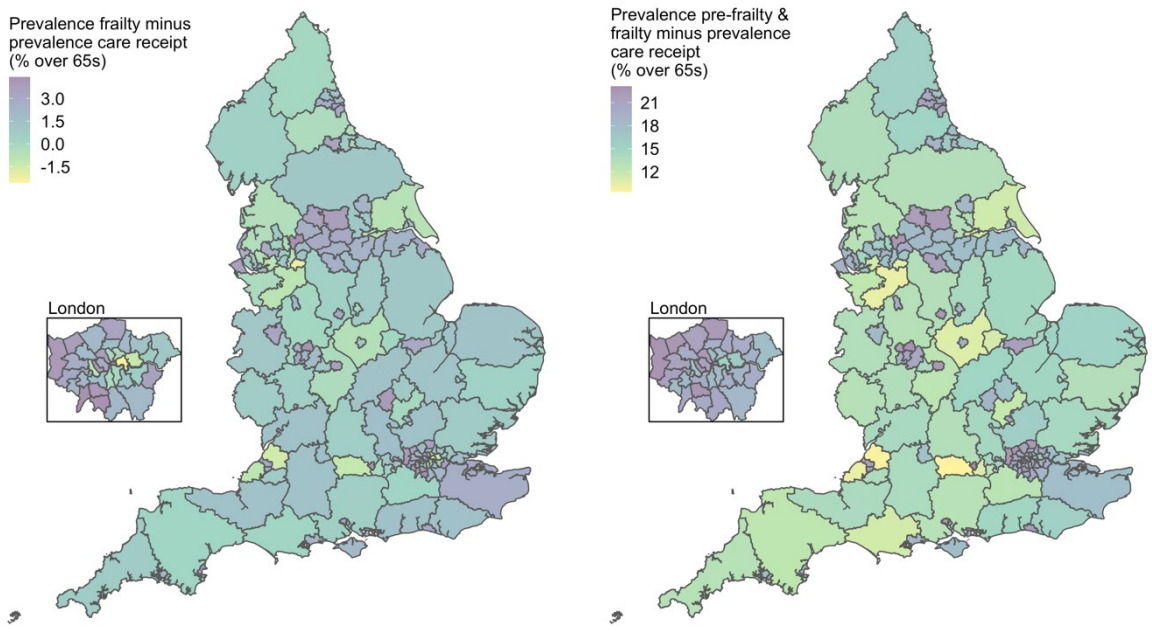
81.4% of local authorities were estimated to have more frail people aged 65 and older than receive formal care. Figure 2a shows the spatial distribution of differences between the prevalence of frailty and receipt of local authority care. Darker colours indicate larger differences; median difference 1.4 (-1.3 to 4.2)% (Figure 2a, left). The combined prevalence of pre-frailty and frailty exceeded the prevalence of formal care receivers in every local authority (median difference 18 (11 to 22)%) (Figure 2b, right). Care from family and friends and privately funded formal care can be assumed to be available to some older people. However, there may also be pre-frail and frail people who receive no care, despite a need.

Conclusion

- The number of adults aged 65 years and older with prefrailty or frailty in England was estimated at 1.6 and 0.7 million, respectively, in 2018. The most recent survey for the same age group shows that 0.5 million individuals received formal care in the same year.
- There is a variation between areas of the number of prefrail and frail adults aged 65 and older in local authorities and the number of long-term care recipients in the same age group.

- 124 local authorities (82.1%) have a greater number of frail persons over 65s than care recipients. If frail people require care this suggests there is a formal care deficit present in much of the country. It is unclear how much of this discrepancy in care needs is made up for by unpaid and privately paid care.

Figure 1: The spatial distribution of deficit care a) frailty and b) pre-frailty/frailty.



References and bibliography

1. Office National Statistics. Subnational population projections for England: 2016-based. London.2018 [Available from: www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/subnationalpopulationprojectionsforengland/2016based.

2. Verbrugge LM, Jette AM. The disablement process. 1994.

3. Banks J, Blake M, Clemens S, Marmot M, Nazroo J, Oldfield Z, et al. English Longitudinal Study of Ageing: Waves 0-8, 1998-2017.[data collection]. 2018;29.

4. Matthews FE, Arthur A, Barnes LE, Bond J, Jagger C, Robinson L, et al. A two-decade comparison of prevalence of dementia in individuals aged 65 years and older from three geographical areas of England: results of the Cognitive Function and Ageing Study I and II. The Lancet. 2013;382(9902):1405-12.

5. Yousaf S, Bonsall A. UK Townsend Deprivation Scores from 2011 census data: UK Data Service; 2017 [Available from: https://www.statistics.digitalresources.jisc.ac.uk/dataset/2011-uk-townsend-deprivation-scores.

6. Clegg A, Bates C, Young J, Ryan R, Nichols L, Ann Teale E, et al. Development and validation of an electronic frailty index using routine primary care electronic health record data. Age and Ageing. 2016;45(3):353-60.

NIHR | Policy Research Unit Older People and Frailty

This document is available in large print.

Please contact the NIHR Older People and Frailty PRU for assistance.

Email: pru-manager@manchester.ac.uk

Telephone: 0161 306 7797

MANCHESTER 1824
The University of Manchester

Newcastle University

CPEC
CARE POLICY AND EVALUATION CENTRE
Research at LSE