

Written evidence Advanced Care Research Centre, University of Edinburgh (SPF0011)

The Advanced Care Research Centre is a multi-disciplinary research programme at the University of Edinburgh focused on examining health and social care needs in later life. Its aim is to facilitate dignified, independent living among older adults by bringing together

A. Executive Summary

A.1. A range of social, economic and neighbourhood factors are strongly associated with the development of frailty, however these factors are often not discussed in strategies for frailty prevention and are rarely taken into account in tools for predicting frailty risk. This represents a serious oversight in policy on supporting frail populations.

A.2. The National Audit Office's 2025 report on frailty highlights the focus on prevention in current government policy and calls for a joined-up strategy to be developed in this area. Our evidence shows that strategies for frailty prevention must take into account the difficult social circumstances faced by many older adults, alongside the clinical and health behaviour factors that are commonly focused on.

A.3. Our modelling shows that a summary index of social stressors is strongly associated with the development of frailty in older people. Frailty identification and evaluation in primary care should pay more attention to these social characteristics, such as housing tenure, fuel poverty and poor housing conditions.

A.4. Overall, we recommend that more attention should be paid to specific social factors influencing the development of frailty, both in terms of policy responses and the prediction of risk.

expertise from medicine, social science, data science, design and engineering.

B. Centring Social Stressors in Frailty Prevention Strategies

B.1. The National Audit Office's 2025 report on frailty¹ discussed the government's focus on prevention, as set out in the 10-Year Health Plan and the commitment to neighbourhood health services, but highlighted the need for joined-up strategies tackling frailty. Our evidence suggests that social factors are strongly involved in the development of frailty and therefore need to be adequately accounted for in such prevention strategies if they are to be successful.

B.2. We analysed data on over 15,000 older adults in the English Longitudinal Study of Ageing (ELSA) – a nationally representative sample of adults aged 50 plus – and tracked detailed information on their levels of frailty and social circumstances over a 14-year period.

¹ National Audit Office, 2025, *Primary and community healthcare support for people living with frailty*, available at: <https://www.nao.org.uk/reports/primary-and-community-healthcare-support-for-people-living-with-frailty/>

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B.3. We found that a large number of social stressors combine to create precarious ageing conditions which are associated with the development of frailty over time. As well as general markers of socio-economic status (SES), such as wealth and income, a number of stressors stood out as being especially important even when controlling for standard SES measures, for example:

- renting in later life
- poor housing conditions (e.g., mould, damp and pests)
- fuel poverty
- food insecurity
- having experienced homelessness
- self-reported financial insecurity.

B.4. The magnitude of the effects associated with such stressors was also substantial. For example, individuals living in the poorest quality housing had a Frailty Index that was 0.027 points higher than those in good quality housing, which is equivalent to the increase in frailty the average individual experiences between the ages of 50 and 65. Poor housing conditions were therefore associated with an acceleration in frailty progression by fifteen years.

B.5. Our modelling also identified social groups that have especially elevated levels of frailty. For example, divorced/widowed women who lack a pension tend to experience particularly high levels of frailty. Identifying such groups might inform direction of limited resources around frailty prevention in the most effective ways

B.6. Our analysis paints a picture of a myriad of overlapping social stressors that can result in older adults living in a general state of later life precarity which is associated with the development of frailty. However, these stressors are often overlooked when discussing policies around frailty prevention.

B.7. The National Audit Office report highlights the need for the Department of Health and Social Care and NHS England to develop a joined-up strategy for dealing with and preventing frailty. We recommend that, as such a strategy is developed, significant attention should be paid to the role of social stressors in the development of frailty and ways in which such stressors can be avoided or mitigated.

C. Including Social Stressors in Frailty Prediction and Evaluation Tools

C.1. Commonly used tools to screen for frailty risk in clinical contexts either focus almost entirely on clinical data (QFrailty, Hospital Frailty Index) or combine clinical characteristics and physical/mental function (Electronic Frailty Index). Although current screening tools are constrained by available data, clinical evaluation of those identified through screening should include consideration of social stressors. In the longer term, making data on social factors available for screening tools (e.g., through questionnaires or linkage to other data sources such as benefits data or census data) would improve screening performance.

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C.2. In the ELSA data, we created a summary index of social stressors facing older adults and found that this was strongly associated with the development of frailty. Notably this index was associated with changes in an individual's frailty levels over time – as the presence of social stressors increased or decreased for an individual, so did their level of frailty.

C.3. In this regard, this relatively simple social index outperforms more biologically-focused measures (such as epigenetic clocks designed to predict the rate of ageing) which are associated with cross-sectional differences in frailty between individuals but are often unable to track within-individual changes over time^{2 3}.

C.4. While the index we developed is not specifically designed for predicting risk or use in clinical evaluation, these findings suggest that risk prediction and evaluation tools would benefit from the inclusion of more detailed social variables alongside factors relating to a patient's medical history, biological markers and health behaviours.

C.5. Although factors such as housing tenure, poor housing conditions or food insecurity are not commonly recorded in health records, we suggest that evaluation and/or screening tools could be substantially improved by incorporating such social factors, either through simple questionnaires or through linkage to other data sources. Pilot projects (e.g., the Wellbeing in Later Life in Bradford study⁴) are seeking to integrate such information into frailty prediction and management, and we recommend that the insights from such projects be used to inform wider data collection for frailty prediction, evaluation and prevention.

D. Acknowledgments

This evidence has been prepared by the Advanced Care Research Centre, with contributions from:

- Laurence Rowley-Abel, Research Fellow in Social Policy
- Alan Marshall, Professor of Social Research on Inequality
- Bruce Guthrie, Professor of General Practice

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² Mak et al., 2023, *Temporal dynamics of epigenetic aging and frailty from midlife to old age*, The Journals of Gerontology: Series A, glad251, available at: <https://doi.org/10.1093/gerona/glad251>

³ Gonçalves et al., 2022, *Frailty biomarkers under the perspective of geroscience: a narrative review*, Ageing Research Reviews, 81, 101737, available at: <https://doi.org/10.1016/j.arr.2022.101737>

⁴ NHS Bradford Teaching Hospitals, 2024, *The Wellbeing in Later Life in Bradford study – a pioneering new project funded by the Nuffield Foundation*, available at: <https://www.bradfordhospitals.nhs.uk/the-wellbeing-in-later-life-in-bradford-study-a-pioneering-new-project-funded-by-the-nuffield-foundation/>