

Impact of frailty in older people on health care demand: simulation modelling of population dynamics to inform service planning

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Plain language summary

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Why was this research needed?

More people are living longer with long-term medical conditions or disabilities. They are more likely to be admitted to hospital and need health care. People with these vulnerabilities are living with 'frailty', which can be mild, moderate or severe. Our research is aimed to produce information on how common frailty is, how it changes over time, what can influence it getting worse, and how it will impact our future population.

What did we do?

We analysed two large data sets from England and Wales (2006–17) to find out the numbers of people aged 50 + living with frailty, their characteristics (e.g. age, sex, living in deprived areas) and how these influenced frailty occurring and worsening. We explored how often they used general practitioner/hospital services and how much that cost. This information was used in a computer model to predict what would happen in the future.

What did we find?

The proportion of people with frailty increased from 26.5% in 2006 to 38.9% in 2017, including large increases in people with mild and moderate frailty. Older age, female sex, Asian ethnicity, and living in more deprived or urban areas, all increased the risk of someone becoming frail, and of their frailty worsening. The large numbers of people with mild and moderate frailty led to the highest costs overall. The computer model predicted that the proportion of people with frailty will increase by another 7.1% between 2017 (41.5%) and 2027 (48.7%), and associated costs will rise by £5.8 billion over an 11-year period.

What does this mean?

We have estimated how the number of people with frailty and their use of services will continue to rise in the future. Taking action to reduce people's risk of becoming frail, particularly before age 65, and slowing frailty progression can reduce the need for services. We will report this information to people who plan health care so they can provide more effective care for people with frailty.

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