

# What is the relationship between social deprivation, frailty and end of life care? Evidence from primary care electronic health records

Daniel Stow, Fiona E Matthews, Barbara Hanratty

Institute of Health and Society, Newcastle University, United Kingdom

## Abstract

**Background:** GPs are tasked with identifying people approaching end of life (EoL) in order to organise timely, appropriate care. Frailty and deprivation are both associated with a decreased likelihood of receiving high quality EoL care.

**Aim:** To investigate the relationship between frailty, deprivation and identification of EoL.

**Method:** We used the electronic frailty index (eFI), generated automatically in health records at monthly intervals for a one-year period in 13,149 people age >75 who died (cases), matched (age, sex, practice) to 13,149 people without a record of death over the same period (controls). We used Index of Multiple Deprivation (IMD) quintiles and latent growth curve models to investigate the impact of deprivation on frailty trajectories. In ongoing work, we are examining the relationship between IMD and EoL coding.

**Results:** Greater deprivation was associated with higher baseline frailty, but not with rate of change of frailty over one year. At baseline, we observed greater deprivation related differences in frailty amongst controls compared to cases, suggesting eFI scores converge as people near end-of-life. Amongst cases 10,767 (82%) had at least one Read code indicating that their GP recognised they were near EoL/discussed preferences for care, and 1,659(12%) were coded as being on a palliative register. The first recording of any EoL code was at a median 7 months prior to death, entry onto the palliative register was at a median of 4 months prior to death.

**Discussion:** We discuss our results in light of end-of-life care policy and planning.

## Patient and Public Involvement (PPI)

Members of VoiceNorth (a Newcastle University funded organisation that aims to capture the public's views on research and policy developments) were involved in this research. A number of them had been caregivers for a relative or friend at the end of life. Their views helped to shape the research questions.