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## The impact of social care expenditure at the end of life: a novel linkage study in Scotland

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### Background

Analyses of inpatient care admissions have shown that population ageing does not lead to an increase in future healthcare expenditure to the extent that might be expected and that remaining time to death (TTD) is an equally important cost element. But as people live longer and the onset of disease and death are postponed to older ages the utilisation of social care services is another major cost component for elderly people, in particular those with chronic diseases. However, there is a distinct lack of social care data in Scotland to estimate the impact of population ageing and TTD on social care expenditure.

### Objectives

This study aims to estimate the utilisation and associated costs of inpatient and home care services among end-of-life patients. It will also determine the feasibility of undertaking the linkage of home care service utilisation data, inpatient care episodes and death records.

### Methods

NHS Greater Glasgow and Clyde (NHSGGC) social home care data (Cordia), Scottish Morbidity Records (SMR01) and death records (National Records for Scotland, NRS) will be utilised in order to estimate utilisation and costs for home care services and inpatient care at the end of life. The 'Cordia' data is available for the period September 2013 to November 2013 and includes information on the type, duration and frequency of home care services utilised. Costs will be assigned using 'Personal Social Services Research Unit' (PSSRU) costs. Using multilevel modelling techniques the association between TTD, age, demographic and socio-economic measures and expenditure on home care services will be estimated, while allowing the effect of covariates to vary over hierarchical levels, such as episode of care

and the patient.

### Expected Outcomes

The wider literature suggests that contrary to inpatient care, costs at the end of life for the oldest old might be higher when considering elements of social care provision. The 'Cordia' data consists of 7,367 individuals with 1,620 observed deaths. Further results are forthcoming and findings will significantly add to the knowledge base in the area of population ageing and related health- and social care expenditure. This is a novel linkage and given the difficulties in obtaining social care data, this study will i) help to evaluate the feasibility of using these data for research, and ii) identify where costs at the end of life occur, thus facilitating more targeted approaches to end-of-life care.

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