Multimorbidity and Access to Social Care Exploiting emerging adminsitrative datasets in Scotland

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Introduction

- Personal Background
- Project funding and supervision
- Project outline
- Progress



Personal Background







http://www.thedailymash.co.uk/news/science-technology/people-doing-phds-admit-its-just-an-excuse-to-fanny-about-201709261364

Urban Big Data

- Scottish Government
- ESRC
- UBDC
- Nick Bailey, Colin McCowan, Stewart Mercer



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Background (a) Multimorbidity

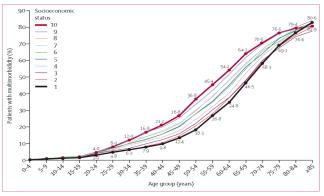
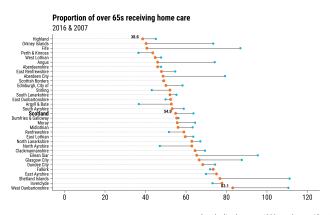


Figure 2: Prevalence of multimorbidity by age and socioeconomic status On socioeconomic status scale, 1=most affluent and 10=most deprived.



Barnett et al (2012)

Background (b) Social Care



Standardised rate per 1000 people over 65



Aims

- Describe and and compare social inequalities in the use of social care services using linked health and social care data.
- Explore the effects of social care use for those with multimorbidity on;
 - unscheduled health care use
 - mortality
- Assess how measures of multimorbidity and health & social care service use can be operationalised using existing linked health & social care administrative data



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Research questions:

In people over the age of 65 in Scotland:

- 1. (a) What are the socioeconomic, demographic, and geographic patterns in the use of social care?
 - (b) Is there an association between multimorbidity status and the amount and type of social care use over time? Does this vary by the patterns described in 1(a)?
- 2. (a) Is there an association in the use of social care services, multimorbidity status and unscheduled health care use?
 - (b) Do multimorbidity status and social care use predict mortality?



Data sources

- Demographics, Deaths, and SIMD (CHI database and NSS)
- Social care survey (Scottish Government)
- Prescribing information (ISD)
- Unscheduled Care Data Mart (ISD)

Study period

• 1st April 2011 to 31st March 2016

Cohort

• Everyone born before 31st March 1951 (over 65s)



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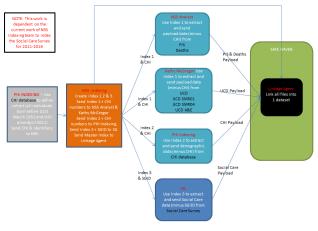
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Data Linkage



 $Linkage\ process\ for\ 1617-0304\ -\ Using\ linked\ data\ to\ understand\ the\ relationships\ between\ Multimorbidity\ and\ the\ use\ of\ Health\ and\ Social\ Care\ -\ David\ Henderson$



| | n | Total number of records |
|--------------------------------|-----------|-------------------------|
| Total Cohort | 1,134,445 | |
| Total Deaths | 274,011 | |
| At least one prescription | 1,109,168 | 134 million |
| Captured by Social care survey | 227,345 | 663,809 |
| At least one episode USC | 845,893 | 3,772,402 |



References

Barnett, K., S. W. Mercer, M. Norbury, G. Watt, S. Wyke, and B. Guthrie. 2012. "Epidemiology of Multimorbidity and Implications for Health Care, Research, and Medical Education: A Cross-Sectional Study." Journal Article. *Lancet* 380 (9836): 37–43. doi:10.1016/S0140-6736(12)60240-2.

