

Understanding Pathways into Care-homes using Data (UnPiCD study): a two-part model to estimate inpatient and care-home costs using national linked health and social care data

G. Ciminata¹, J.K. Burton², T.J. Quinn², C. Geue¹

1. Health Economics and Health Technology Assessment, School of Health & Wellbeing, University of Glasgow, Glasgow, Scotland, United Kingdom
2. Academic Geriatric Medicine, School of Cardiovascular & Metabolic Health, University of Glasgow, Glasgow, Scotland, United Kingdom

Introduction

- Pathways into care-homes are poorly understood.
- Individuals can move-in to care-homes directly from a hospital admission or from the community.
- Our research demonstrates clinical differences in the people moving-in from hospital and the community, so we sought to understand their resource use and costs.
- Better understanding pathways may help shape care service planning more effectively.
- This study, is part of a wider project, Understanding Pathways into Care-homes using project Data (UnPiCD)

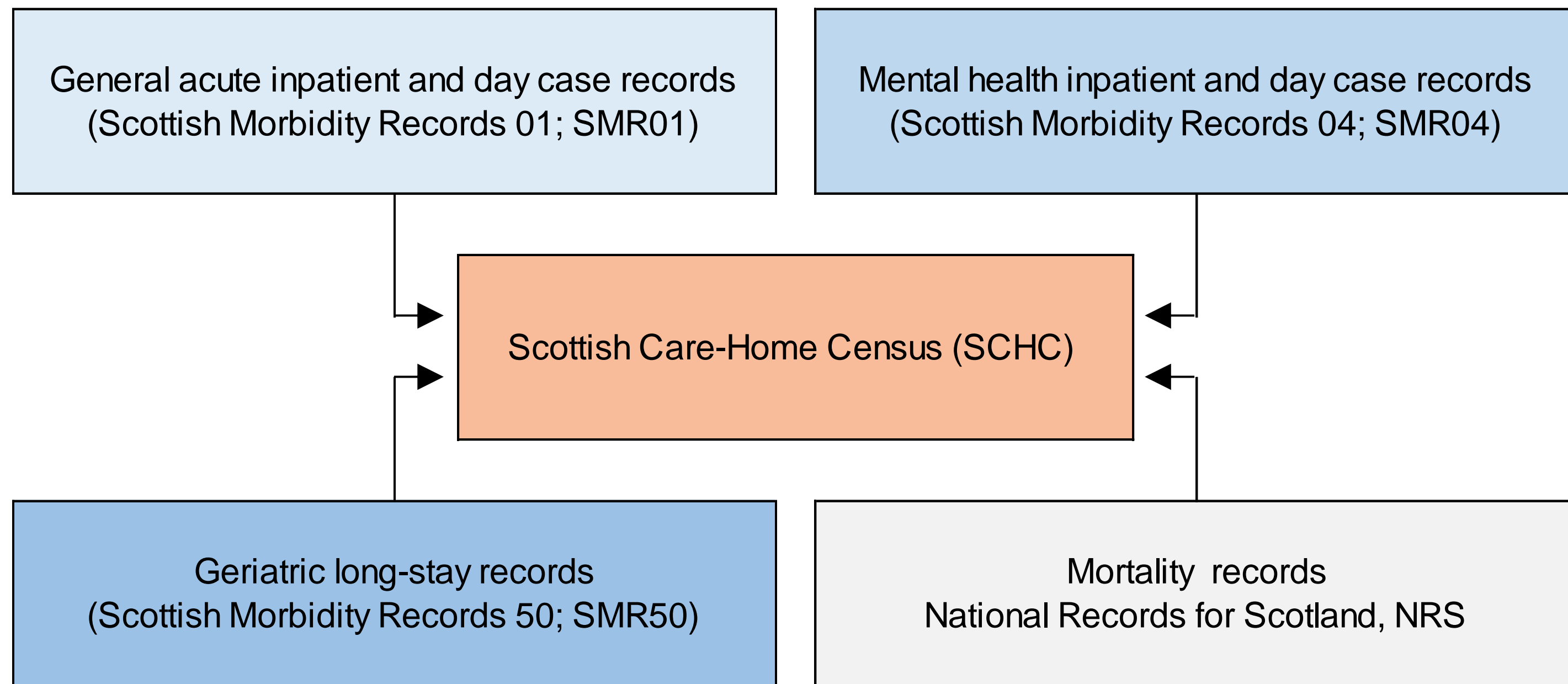


Objectives

To quantify, within a novel framework, inpatient and care-home costs, using the Scottish Care-Home Census (SCHC) as a unique data source linked to health data sets.

Methods

- Costing-study linking Scottish Care-Home Census (SCHC) to individual level health data sets



- Cohort consisting of people moving into care-homes from hospital and community settings between 1/4/13-31/3/15 based on records from SCHC.
- Following the method of classification described in the UnPiCD study we classified individuals according to their source of care-home admission.



- Unit costs on weekly charges for long stay residents in care-homes, were obtained from SCHC, for the years 2013/14 to 2015/16. Inpatient and mental health unit costs were obtained from Specialty Group Costs for the years 2013 to 2016.
- Costs associated with care-home and hospital stay, conditional on having incurred positive costs, were estimated with a two-part model, adjusted for route of care-home admission, age, sex, year of admission, main client group, frailty risk score and mortality.
- Additional analyses estimated differences in costs for the one-year period preceding and following care-home admission

Results

Table 1. Baseline characteristics of people moving-in from hospital and community

	Hospital (8,472)	Community (6,405)
Sex		
Male	3,015 (35.6)	2,008 (31.4)
Female	5,457 (64.4)	4,397 (68.6)
Age		
<60	262 (3.1)	373 (5.8)
60-69	424 (5.0)	240 (3.8)
70-79	1,535 (18.1)	1,145 (17.9)
80-89	4,016 (47.4)	2,964 (46.3)
90-99	2,156 (25.5)	1,623 (25.3)
>100	79 (0.9)	60 (0.9)
Main client group		
Older adult	8,257 (97.4)	6,076 (94.9)
Learning disabilities	56 (0.7)	127 (2.0)
Other adult*	159 (1.9)	202 (3.1)
Frailty		
Low risk (<5)	1,383 (16.3)	3,515 (54.9)
Intermediate risk (5-15)	4,103 (48.4)	2,006 (31.3)
High risk (>15)	2,986 (35.3)	884 (13.8)
Funding		
All	8,412	6,355
Public with nursing	4,241 (50.4)	2,334 (36.7)
Public without nursing	1,583 (18.8)	2,002 (31.5)
Private with nursing	1,901 (22.6)	1,130 (17.8)
Private without nursing	687 (8.2)	889 (14.0)
Switch funding	108 (1.3)	105 (1.7)
From public to private (with nursing)	40 (37.0)	26 (24.8)
From public to private (without nursing)	25 (23.2)	40 (38.1)
From private to public (with nursing)	24 (22.2)	23 (21.9)
From private to public (without nursing)	19 (17.6)	16 (15.2)
Died during follow up		
All	3,988	2,277
2013/2014	818 (20.5)	328 (14.4)
2014/2015	1,742 (43.7)	918 (40.3)
2015/2016	1,428 (35.8)	1,031 (45.3)
Time to death or end of follow up		
Range	0 - 1,095	0 - 1,095
Mean (SD)	549 (294.74)	596 (282.31)
Median (IQR)	548 (356 - 783)	594 (401 - 828)

Individuals moving-in to care-home from the community incurred higher costs at £27,117 (95% CI £ 26,641 to £ 27,594) than those moving-in from hospital with £24,426 (95% CI £ 24,037 to £ 24,814).

Figure 1. Average annual care-home and hospital cost per person by sex

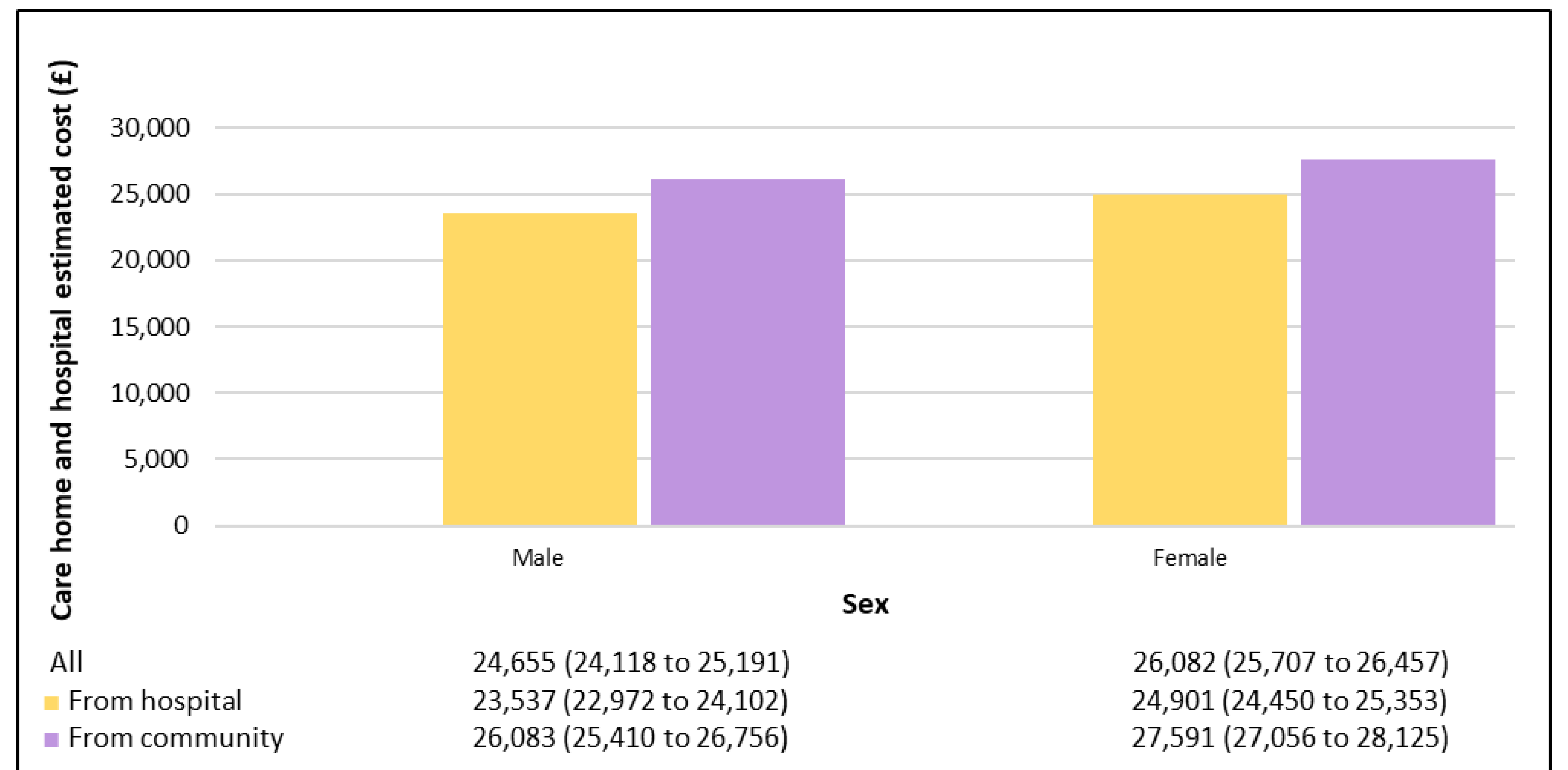


Figure 2. Average annual care-home and hospital cost per person by client group

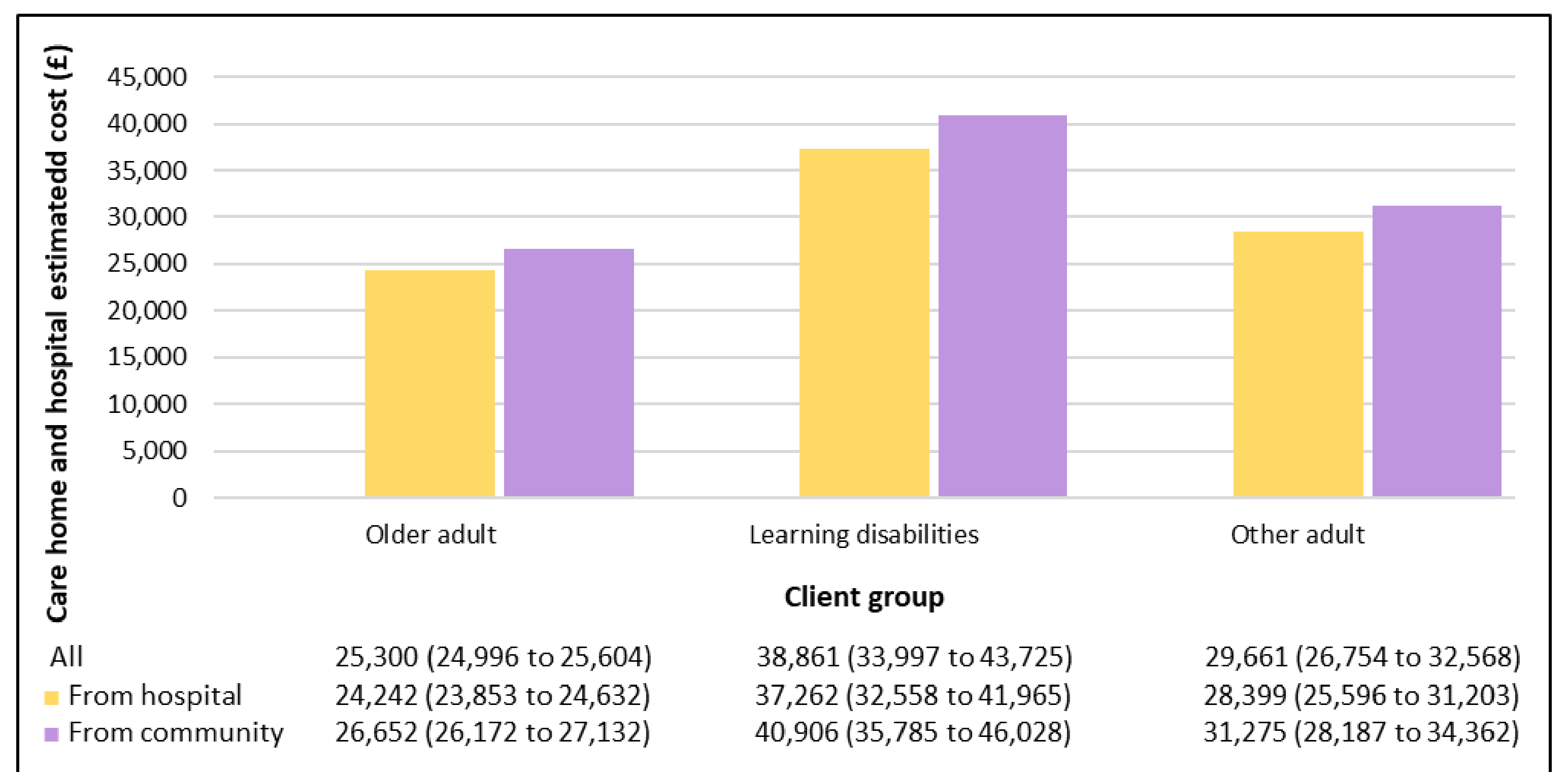
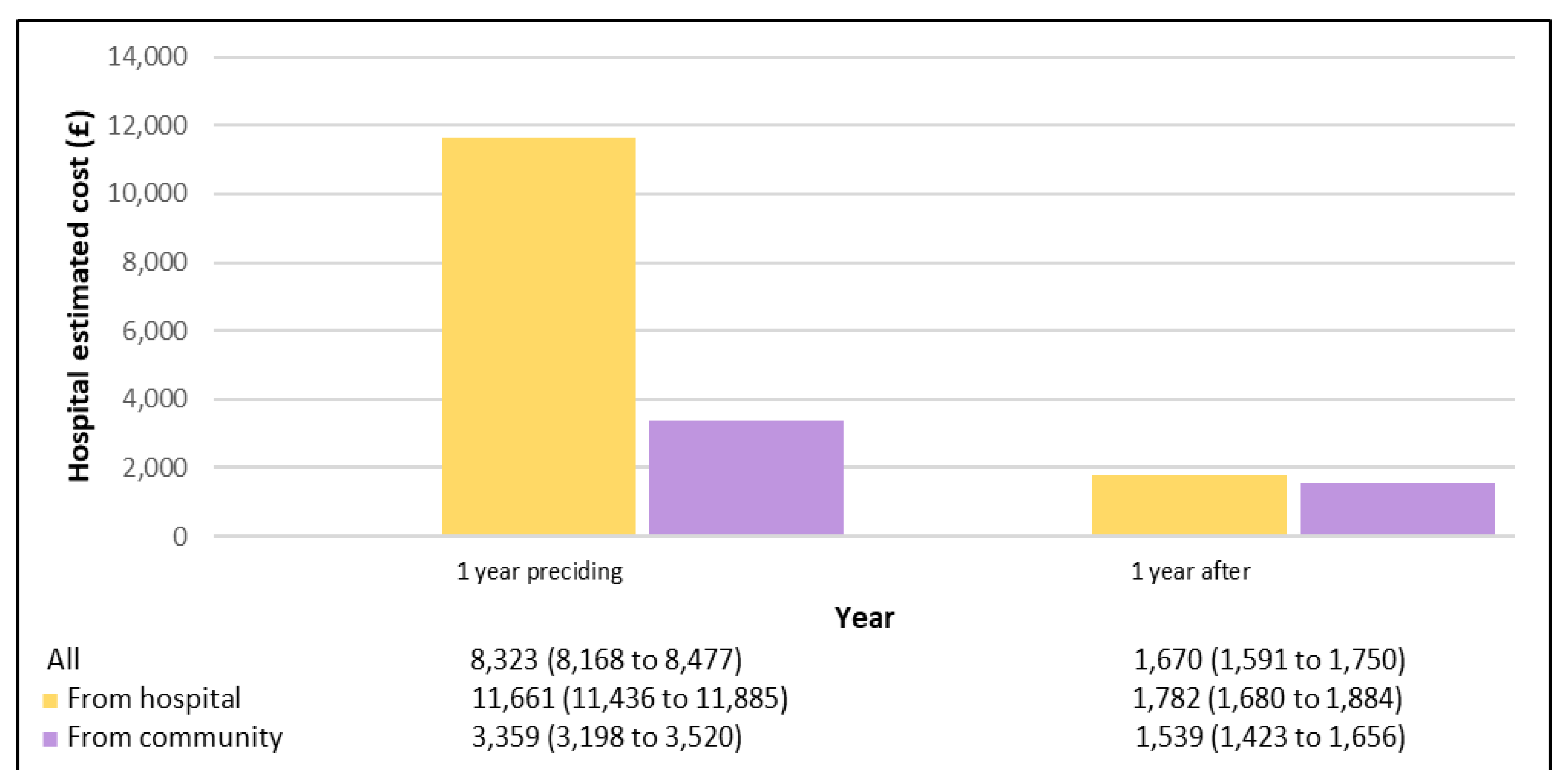


Figure 3. Hospital cost in the year preceding and the year after care-home admission



Conclusions

Individuals moving-in from hospital and community have different needs, and this is reflected in the difference in costs incurred. The reduction in hospital costs in the year after moving-in to a care-home indicates the positive contribution of care-home residency in supporting those with complex needs.

Disclosures and source of funding

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