

Development of the Bradford E-Care Home Cohort

Matthew Knight, Andrew Clegg, Oliver Todd

Academic Unit for Ageing and Stroke Research, University of Leeds, Bradford Teaching Hospitals NHS Foundation Trust, Bradford, UK
Email: m.o.knight@leeds.ac.uk



Introduction

Many UK care home (CH) residents live with multiple long-term conditions and have high levels of healthcare utilisation. However, they are poorly understood relative to community-dwelling older adults. Previous studies have used routine data to explore health and social care characteristics separately¹.

Aim

To create a combined health and social care profile of a cohort of long-stay CH residents, at the point of admission, using anonymously linked primary, secondary and social care data

Methods



Connected Bradford

Individuals aged 65 in the Connected Bradford² dataset admitted to a CH between January 2016 and December 2019 were included.



Local Authority social care data

Start and end dates of social care packages were determined from Bradford Council's social care records. This method did not identify complete self-funders.



Primary care records

Primary care records provide prescribing data, codes for multiple long-term conditions and enable calculation of electronic risk prediction models to characterise the risk of mortality and falls³⁴.



Secondary care records

Secondary care records enable important clinical outcomes, including injurious falls and cardiac events to be captured with superior contemporaneity to primary care records.

Results

2,801 individuals were admitted to a CH during the study period of whom 1998 (71%) were long-stay residents (>6 weeks). 72% of participants identified using local authority data, had a primary care code indicating CH residency. 53% percent had died within 12 months of admission. According to the electronic falls index, 28% of care home residents were predicted to suffer an injurious fall or fracture within the first year. 12% had suffered a fall resulting in hospital admission in the first year.

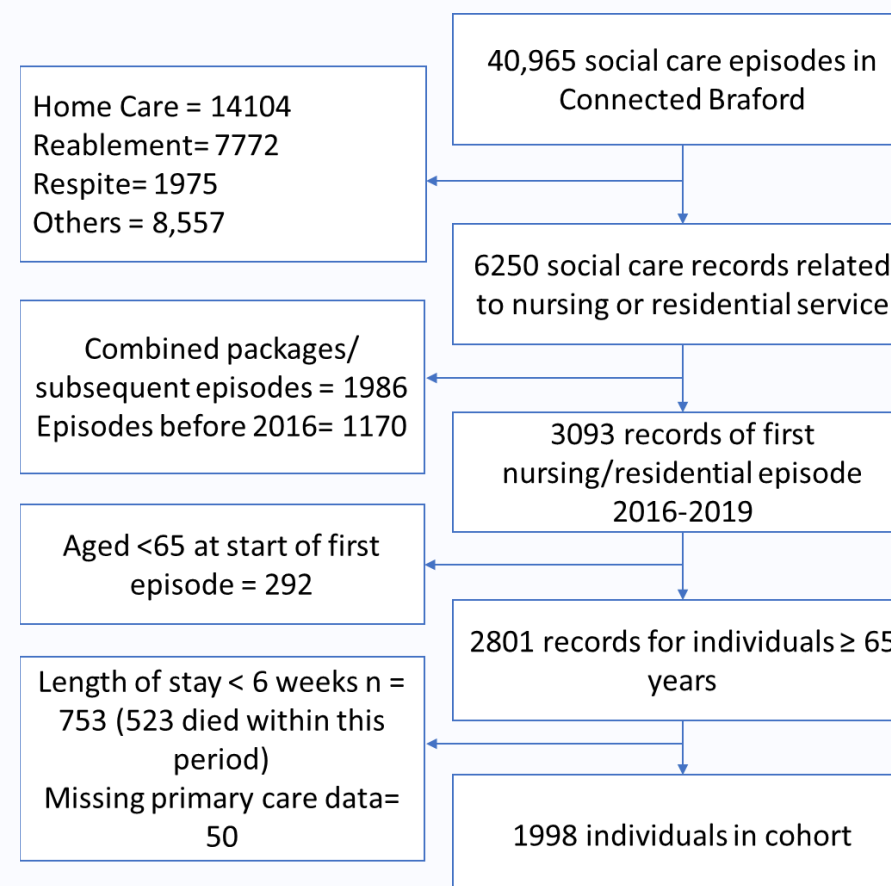


Figure 1: Flow diagram of Connected Bradford adult social care records

Variable		Value (n=1998)
Age at admission	Mean (SD)	85 (8.1)
Type of service	Nursing	1179 (59.0)
	Residential	819 (41.0)
Gender	F	1243 (62.2)
	M	755 (37.8)
Ethnicity	White	1544 (77.3)
	Other	9 (0.4)
	Missing	445 (22.3)
Stroke in previous year	no	1919 (96.0)
	yes	79 (4.0)
Life expectancy from admission (months)	Median(IQR)	10 (4-22)
Number of repeat medications	Median(IQR)	10 (6-14)

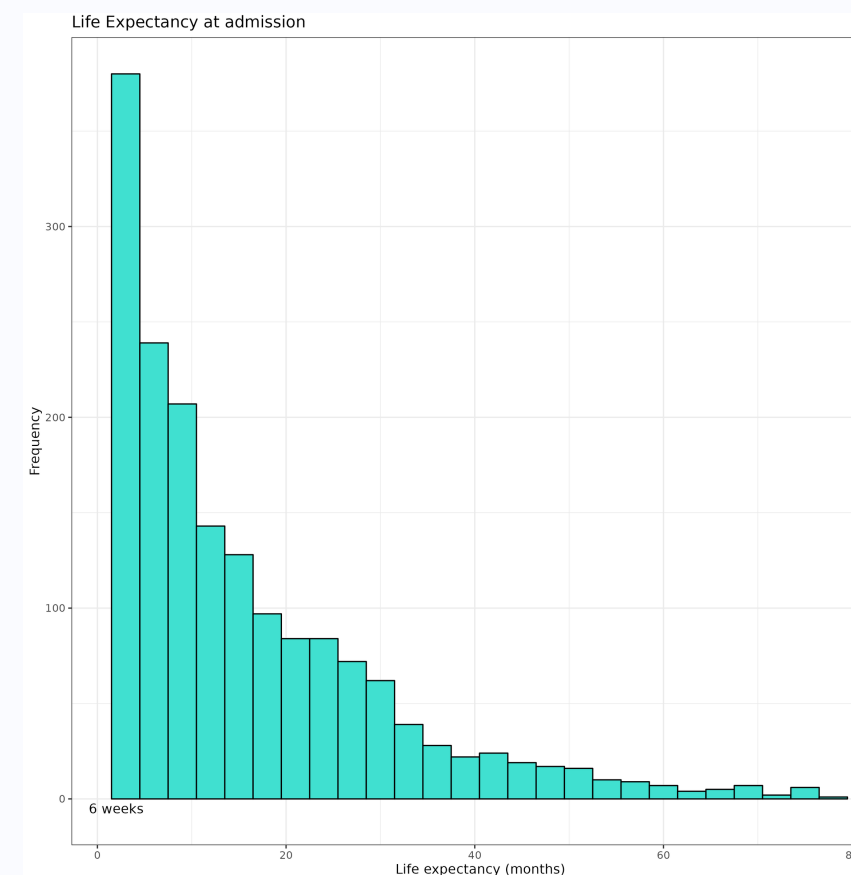


Figure 2: Histogram of life expectancy from admission in long-stay residents

Conclusion

Linked health and social care datasets allow a comprehensive cohort profile of care home residents to be developed. Additional linkage with address history will allow agreement between methods to be analysed.

Acknowledgements: Thanks to John Birkinshaw, Rob Shore and Kuldheep Mughal at Connected Bradford for providing access to the data and to the people of Bradford for sharing their data.

¹Burton JK, Lynch E, Love S, Rintoul J, Starr JM, Shenkin SD. Who Lives in Scotland's Care Homes? Descriptive Analysis Using Routinely Collected Social Care Data 2012–16. *Journal of the Royal College of Physicians of Edinburgh*. 2019;49(1):12–22. doi:10.4997/jrcpe.2019.103

²Sohal K, Mason D, Birkinshaw J et al. Connected Bradford: a Whole System Data Linkage Accelerator [version 2; peer review: 2 approved]. *Wellcome Open Res* 2022, 7:26 (https://doi.org/10.12688/wellcomeopenres.17526.2)

³Best K, Shuweihdi F, Relton S, et al. OP117 Development, validation and national implementation of the electronic frailty index 2 (eFI2) *Epidemiol Community Health* 2023;77:A119.

⁴Lucinda Archer, Samuel D Relton, Ashley Akbari, Kate Best, Milica Bucknall, Simon Conroy, Miriam Hattle, Joe Hollinghurst, Sara Humphrey, Ronan A Lyons, Suzanne Richards, Kate Walters, Robert West, Danielle van der Windt, Richard D Riley, Andrew Clegg, The eFI+ investigators. Development and external validation of the eFalls tool: a multivariable prediction model for the risk of ED attendance or hospitalisation with a fall or fracture in older adults, *Age and Ageing*, Volume 53, Issue 3, March 2024, afae057, https://doi.org/10.1093/ageing/afae057. 1.