

Reducing unplanned hospital admissions from care homes: a systematic review

Duncan Chambers,^{1*} Anna Cantrell,¹ Louise Preston,¹
Carl Marincowitz,¹ Lynne Wright,² Simon Conroy³
and Adam Lee Gordon^{4,5}

¹School of Health and Related Research (SchARR), University of Sheffield, Sheffield, UK

²Public co-applicant

³MRC Unit for Lifelong Health and Ageing at UCL, London, UK

⁴Academic Unit of Injury, Recovery and Inflammation Sciences (IRIS), School of Medicine, University of Nottingham, Nottingham, UK

⁵NIHR Applied Research Collaboration, East Midlands (ARC-EM), Nottingham, UK

*Corresponding author d.chambers@sheffield.ac.uk

Disclaimer: This report presents independent research funded by the National Institute for Health and Care Research (NIHR). The views and opinions expressed by authors in this publication are those of the authors and do not necessarily reflect those of the NHS, the NIHR, NETSCC, the HS and DR programme or the Department of Health and Social Care. If there are verbatim quotations included in this publication the views and opinions expressed by the interviewees are those of the interviewees and do not necessarily reflect those of the authors, those of the NHS, the NIHR, NETSCC, the HS and DR programme or the Department of Health and Social Care.

Disclosure of interests

Full disclosure of interests: Completed ICMJE forms for all authors, including all related interests, or available in the tool kit on the NIHR Journals Library report publication page at <https://doi.org/10.3310/KLPW6338>.

Primary conflicts of interest: Duncan Chambers reports research funding from NIHR (reference 16/47/17 and NIHR 130588); Anna Cantrell reports research funding from NIHR (reference 16/47/17 and NIHR 130588); Louise Preston reports research funding from NIHR (reference 16/47/17; NIHR 130588; 17/05/96; NIHR127659 and NIHR131238); Simon Conroy reports membership of HTA Prioritisation Committee (2019–23), research funding from NIHR (references 17/05/96; NIHR 127905; NIHR 200718; RP-DG-0218-10001; 09/55/63 and NIHR 134439; 13/115/29; 17/05/30; and NIHR203451), royalties from Springer and consulting fees from NHS Elect. Adam Gordon reports research funding from the NIHR (NIHR Senior Investigator; NIHR Applied Research Collaboration East Midlands; references COV0051; NIHR 127234; NIHR 128240; NIHR 132197; NIHR 135190; NIHR 135262; NIHR 154310; 13/115/29), Wellcome Trust, Asthma UK and Dunhill Medical Trust; royalties from John Wiley & Sons; consulting fees from East Midlands Academic Health Sciences Network, Patient Records Standards Body and Gilead Sciences Ltd; speaker fees from the Turkish Geriatrics Society, HC-Healthcare Conferences, Spanish Geriatrics Society and Canadian Geriatrics Society; and a role as President-elect and Charity Trustee of the British Geriatrics Society. Carl Marincowitz reports

NIHR Academic Clinical Lecturer Emergency Medicine; NIHR Doctoral Research Fellowship-2016-09-086; and Grand Challenges ICODA pilot initiative, delivered by Health Data Research UK and funded by the Bill and Melinda Gates Foundation and the Minderoo Foundation. Lynne Wright has no competing interests to report.

Published October 2023
DOI: 10.3310/KLPW6338

Plain language summary

Reducing unplanned hospital admissions from care homes:
a systematic review

Health and Social Care Delivery Research 2023; Vol. 11: No. 18
DOI: 10.3310/KLPW6338

NIHR Journals Library www.journalslibrary.nihr.ac.uk

Plain language summary

Older people living in care homes often have complex health problems such as dementia and frailty, and they may need to be taken to hospital at short notice. This can lead to them being admitted for further tests and treatment. We know that some of these unplanned hospital admissions might be avoided if health and social care services worked together to meet residents' needs.

We looked for published research on methods (interventions) used in health and social care to reduce these admissions. Interventions could be carried out by care home staff, general practitioners, nurses, paramedics or other specialists individually or in teams. We asked which interventions have been evaluated, how strong is the evidence that they work and how acceptable they are to care home residents, family carers and staff. We also looked for information on how easy or difficult they are to implement and whether they represent good value for money.

We included 124 research studies (30 from the UK). We found that integrated care programmes linking care homes with general practitioners and community services can be effective but need time and support (such as extra money and specialist staff) to implement them. Quality improvement programmes and training to improve staff skills may also reduce admissions. For care home residents nearing the end of life, advance care planning and palliative care can ensure that wishes are followed and avoid potentially burdensome admissions to hospital. Hospital-based teams providing 'outreach' services to care homes have been evaluated in Australia and could be suitable for UK research. We found limited evidence on interventions involving paramedics and on 'value for money'.

We found many barriers to implementing new services in the UK, particularly staff shortages and high staff turnover, together with care homes closing down or changing ownership. Successful interventions have often been based on existing services and relationships.

Health and Social Care Delivery Research

ISSN 2755-0060 (Print)

ISSN 2755-0079 (Online)

Health and Social Care Delivery Research (HSDR) was launched in 2013 and is indexed by Europe PMC, DOAJ, INAHTA, Ulrichsweb™ (ProQuest LLC, Ann Arbor, MI, USA), NCBI Bookshelf and MEDLINE.

This journal is a member of and subscribes to the principles of the Committee on Publication Ethics (COPE) (www.publicationethics.org/).

Editorial contact: journals.library@nhr.ac.uk

This journal was previously published as *Health Services and Delivery Research* (Volumes 1–9); ISSN 2050-4349 (print), ISSN 2050-4357 (online)

The full HSDR archive is freely available to view online at www.journalslibrary.nhr.ac.uk/hsdr.

Criteria for inclusion in the *Health and Social Care Delivery Research* journal

Reports are published in *Health and Social Care Delivery Research* (HSDR) if (1) they have resulted from work for the HSDR programme, and (2) they are of a sufficiently high scientific quality as assessed by the reviewers and editors.

HSDR programme

The HSDR programme funds research to produce evidence to impact on the quality, accessibility and organisation of health and social care services. This includes evaluations of how the NHS and social care might improve delivery of services.

For more information about the HSDR programme please visit the website at <https://www.nhr.ac.uk/explore-nhr/funding-programmes/health-and-social-care-delivery-research.htm>.

This report

The research reported in this issue of the journal was funded by the HSDR programme or one of its preceding programmes as project number NIHR133884. The contractual start date was in November 2021. The final report began editorial review in November 2022 and was accepted for publication in March 2023. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HSDR editors and production house have tried to ensure the accuracy of the authors' report and would like to thank the reviewers for their constructive comments on the final report document. However, they do not accept liability for damages or losses arising from material published in this report.

This report presents independent research funded by the National Institute for Health and Care Research (NIHR). The views and opinions expressed by authors in this publication are those of the authors and do not necessarily reflect those of the NHS, the NIHR, the HSDR programme or the Department of Health and Social Care. If there are verbatim quotations included in this publication the views and opinions expressed by the interviewees are those of the interviewees and do not necessarily reflect those of the authors, those of the NHS, the NIHR, the HSDR programme or the Department of Health and Social Care.

Copyright © 2023 Chambers *et al.* This work was produced by Chambers *et al.* under the terms of a commissioning contract issued by the Secretary of State for Health and Social Care. This is an Open Access publication distributed under the terms of the Creative Commons Attribution CC BY 4.0 licence, which permits unrestricted use, distribution, reproduction and adaptation in any medium and for any purpose provided that it is properly attributed. See: <https://creativecommons.org/licenses/by/4.0/>. For attribution the title, original author(s), the publication source – NIHR Journals Library, and the DOI of the publication must be cited.

Published by the NIHR Journals Library (www.journalslibrary.nhr.ac.uk), produced by Newgen Digitalworks Pvt Ltd, Chennai, India (www.newgen.co).

NIHR Journals Library Editor-in-Chief

Dr Cat Chatfield Director of Health Services Research UK

NIHR Journals Library Editors

Professor Andrée Le May Chair of NIHR Journals Library Editorial Group (HSDR, PGfAR, PHR journals) and Editor-in-Chief of HSDR, PGfAR, PHR journals

Dr Peter Davidson Interim Chair of HTA and EME Editorial Board, Consultant Advisor, School of Healthcare Enterprise and Innovation, University of Southampton, UK

Professor Matthias Beck Professor of Management, Cork University Business School, Department of Management and Marketing, University College Cork, Ireland

Dr Tessa Crilly Director, Crystal Blue Consulting Ltd, UK

Dr Eugenia Cronin Consultant in Public Health, Delta Public Health Consulting Ltd, UK

Ms Tara Lamont Senior Adviser, School of Healthcare Enterprise and Innovation, University of Southampton, UK

Dr Catriona McDaid Reader in Trials, Department of Health Sciences, University of York, UK

Professor William McGuire Professor of Child Health, Hull York Medical School, University of York, UK

Professor Geoffrey Meads Emeritus Professor of Wellbeing Research, University of Winchester, UK

Professor James Raftery Professor of Health Technology Assessment, School of Healthcare Enterprise and Innovation, University of Southampton, UK

Dr Rob Riemsma Consultant Advisor, School of Healthcare Enterprise and Innovation, University of Southampton, UK

Professor Helen Roberts Professor of Child Health Research, Child and Adolescent Mental Health, Palliative Care and Paediatrics Unit, Population Policy and Practice Programme, UCL Great Ormond Street Institute of Child Health, London, UK

Professor Jonathan Ross Professor of Sexual Health and HIV, University Hospital Birmingham, UK

Professor Helen Snooks Professor of Health Services Research, Institute of Life Science, College of Medicine, Swansea University, UK

Please visit the website for a list of editors: www.journalslibrary.nihr.ac.uk/about/editors

Editorial contact: journals.library@nihr.ac.uk