Organisational interventions to reduce length of stay in hospital: a rapid evidence assessment

Céline Miani,¹ Sarah Ball,¹ Emma Pitchforth,¹ Josephine Exley,¹ Sarah King,¹ Martin Roland,² Jonathan Fuld³ and Ellen Nolte^{4*}

¹RAND Europe, Cambridge, UK

- ²Cambridge Institute of Public Health, University of Cambridge School of Clinical Medicine, Cambridge, UK
- ³Addenbrooke's Hospital, Cambridge, UK

⁴European Observatory on Health Systems and Policies, London School of Economics and Political Science and the London School of Hygiene & Tropical Medicine, London, UK

*Corresponding author

Declared competing interests of authors: none

Published December 2014 DOI: 10.3310/hsdr02520

Plain English summary

Interventions to reduce length of stay in hospital

Health Services and Delivery Research 2014; Vol. 2: No. 52 DOI: 10.3310/hsdr02520

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

Plain English summary

nterventions that lead to a reduction in the length of time patients have to stay in hospital are widely considered as effective measures to increase the efficiency of hospitals and, potentially, reduce costs. However, a large number of interventions could contribute to achieving this goal, ranging from planned shorter stays, such as day surgery, to those involving complex organisational changes, such as stroke units.

In this study we sought to better understand the evidence base on whether or not, and how well, different types of organisational interventions in acute hospitals contribute to reducing length of stay, and other impacts these might have, for example on patient health status and experience, or on costs. We conducted a review of the literature published between 2003 and 2013, and carried out interviews with a small set of NHS managers to help place the findings of the evidence review in the current NHS context.

Our findings showed that several interventions could potentially help to reduce length of stay. These included multidisciplinary team care, which brings together different types of professionals to deliver, for example, stroke care or rehabilitation; improved processes facilitating early discharge from hospital through, for example, better communication between specialists in hospital, general practitioners and community services; and clinical care pathways, which describe, for example, the key elements of care and how these should be co-ordinated. We also found that several interventions contributed to improvements in patient outcomes, such as reducing mortality and complications rates, and organisational processes, such as better collaboration between teams, although they might not have resulted in reduced length of stay.

Health Services and Delivery Research

ISSN 2050-4349 (Print)

ISSN 2050-4357 (Online)

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

Editorial contact: nihredit@southampton.ac.uk

The full HS&DR archive is freely available to view online at www.journalslibrary.nihr.ac.uk/hsdr. Print-on-demand copies can be purchased from the report pages of the NIHR Journals Library website: www.journalslibrary.nihr.ac.uk

Criteria for inclusion in the Health Services and Delivery Research journal

Reports are published in *Health Services and Delivery Research* (HS&DR) if (1) they have resulted from work for the HS&DR programme or programmes which preceded the HS&DR programme, and (2) they are of a sufficiently high scientific quality as assessed by the reviewers and editors.

HS&DR programme

The Health Services and Delivery Research (HS&DR) programme, part of the National Institute for Health Research (NIHR), was established to fund a broad range of research. It combines the strengths and contributions of two previous NIHR research programmes: the Health Services Research (HSR) programme and the Service Delivery and Organisation (SDO) programme, which were merged in January 2012.

The HS&DR programme aims to produce rigorous and relevant evidence on the quality, access and organisation of health services including costs and outcomes, as well as research on implementation. The programme will enhance the strategic focus on research that matters to the NHS and is keen to support ambitious evaluative research to improve health services.

For more information about the HS&DR programme please visit the website: http://www.nets.nihr.ac.uk/programmes/hsdr

This report

The research reported in this issue of the journal was funded by the HS&DR programme or one of its proceeding programmes as project number 11/1026/09. The contractual start date was in October 2012. The final report began editorial review in August 2013 and was accepted for publication in February 2014. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HS&DR 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 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&DR programme or the Department of Health. 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&DR programme or the Department of Health.

© Queen's Printer and Controller of HMSO 2014. This work was produced by Miani *et al.* under the terms of a commissioning contract issued by the Secretary of State for Health. This issue may be freely reproduced for the purposes of private research and study and extracts (or indeed, the full report) may be included in professional journals provided that suitable acknowledgement is made and the reproduction is not associated with any form of advertising. Applications for commercial reproduction should be addressed to: NIHR Journals Library, National Institute for Health Research, Evaluation, Trials and Studies Coordinating Centre, Alpha House, University of Southampton Science Park, Southampton SO16 7NS, UK.

Published by the NIHR Journals Library (www.journalslibrary.nihr.ac.uk), produced by Prepress Projects Ltd, Perth, Scotland (www.prepress-projects.co.uk).

Health Services and Delivery Research Editor-in-Chief

Professor Ray Fitzpatrick Professor of Public Health and Primary Care, University of Oxford, UK

NIHR Journals Library Editor-in-Chief

Professor Tom Walley Director, NIHR Evaluation, Trials and Studies and Director of the HTA Programme, UK

NIHR Journals Library Editors

Professor Ken Stein Chair of HTA Editorial Board and Professor of Public Health, University of Exeter Medical School, UK

Professor Andree Le May Chair of NIHR Journals Library Editorial Group (EME, HS&DR, PGfAR, PHR journals)

Dr Martin Ashton-Key Consultant in Public Health Medicine/Consultant Advisor, NETSCC, UK

Professor Matthias Beck Chair in Public Sector Management and Subject Leader (Management Group), Queen's University Management School, Queen's University Belfast, UK

Professor Aileen Clarke Professor of Public Health and Health Services Research, Warwick Medical School, University of Warwick, UK

Dr Tessa Crilly Director, Crystal Blue Consulting Ltd, UK

Dr Peter Davidson Director of NETSCC, HTA, UK

Ms Tara Lamont Scientific Advisor, NETSCC, UK

Professor Elaine McColl Director, Newcastle Clinical Trials Unit, Institute of Health and Society, Newcastle University, UK

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

Professor Geoffrey Meads Professor of Health Sciences Research, Faculty of Education, University of Winchester, UK

Professor John Powell Consultant Clinical Adviser, National Institute for Health and Care Excellence (NICE), UK

Professor James Raftery Professor of Health Technology Assessment, Wessex Institute, Faculty of Medicine, University of Southampton, UK

Dr Rob Riemsma Reviews Manager, Kleijnen Systematic Reviews Ltd, UK

Professor Helen Roberts Professor of Child Health Research, UCL Institute of Child Health, 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 members of the NIHR Journals Library Board: www.journalslibrary.nihr.ac.uk/about/editors

Editorial contact: nihredit@southampton.ac.uk