

Early, specialist vocational rehabilitation to facilitate return to work after traumatic brain injury: the FRESH feasibility RCT

Kate Radford,^{1*} Chris Sutton,² Tracey Sach,³
Jain Holmes,¹ Caroline Watkins,² Denise Forshaw,²
Trevor Jones,¹ Karen Hoffman,⁴ Rory O'Connor,⁵
Ruth Tyerman,⁶ Jose Antonio Merchán-Baeza,⁷
Richard Morris,¹ Emma McManus,³ Avril Drummond,¹
Marion Walker,¹ Lelia Duley,¹ David Shakespeare,⁸
Alison Hammond⁹ and Julie Phillips¹

¹Division of Rehabilitation and Ageing, School of Medicine, University of Nottingham, Nottingham, UK

²Faculty of Health and Wellbeing, University of Central Lancashire, Preston, UK

³Health Economics Group, Norwich Medical School, University of East Anglia, Norwich, UK

⁴Centre for Trauma Sciences, Queen Mary University of London, London, UK

⁵Academic Department of Rehabilitation Medicine, School of Medicine, University of Leeds, Leeds, UK

⁶Community Head Injury Service, Buckinghamshire Healthcare NHS Trust, Aylesbury, UK

⁷Department of Physiotherapy, University of Málaga, Málaga, Spain

⁸Lancashire Teaching Hospitals Trust, Preston, UK

⁹Health Sciences Research Centre, University of Salford, Salford, UK

*Corresponding author Kate.Radford@nottingham.ac.uk

Declared competing interests of authors: Jain Holmes received consultancy fees as an employee of Obair Associates to train and mentor FRESH therapists and was subsequently granted PhD Studentship funding from the University of Nottingham and UK Occupational Therapy Research Foundation to work on this study. She was a paid employee of Obair Associates Ltd during the conduct of the study. Tracey Sach was a member of the Health Technology Assessment Efficient Study Designs Board during the conduct of the trial.

Published May 2018

DOI: 10.3310/hta22330

Plain English summary

The FRESH feasibility RCT

Health Technology Assessment 2018; Vol. 22: No. 33

DOI: 10.3310/hta22330

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

Plain English summary

Every year, about 160,000 people in the UK have a traumatic brain injury (TBI), affecting intellectual ability and social skills, and causing emotional problems, which affects the ability to return to work. This is an important rehabilitation goal, but vocational rehabilitation (VR) services are rare and little is known about their effectiveness or whether they represent good value for money. The National Institute for Health Research funded a study to test if it would be feasible to conduct a future large-scale study to determine whether or not VR to support people with TBI in returning to work is clinically effective and cost-effective.

We trained staff in three NHS trauma centres to provide VR. We recruited 78 adults with TBI who intended to return to work/education. Everyone received their usual NHS rehabilitation and half were chosen at random to receive VR as well.

We asked participants to fill in a questionnaire at the start of the intervention and 12 months later. This measured the effects and costs of the VR over and above usual rehabilitation.

We interviewed 30 patients and six employers to obtain their views of the support.

Vocational rehabilitation was valued by recipients. The trial was feasible, but the majority of people who took part had mild brain injury. Two-thirds of the questionnaires were returned at 12 months, allowing us measure the costs and effects of the VR. However, fewer people in usual rehabilitation responded and those that did tended to be in work, which potentially inflated the estimate of how many people can return to work without specialist help.

A large-scale study is feasible, but ways of recruiting more severely injured people and ensuring that everybody returns their questionnaire need further testing.

We also recommend broadening the outcome measure from just returning to work to 'work or other activities'.

ISSN 1366-5278 (Print)

ISSN 2046-4924 (Online)

Impact factor: 4.236

Health Technology Assessment is indexed in MEDLINE, CINAHL, EMBASE, The Cochrane Library and the Clarivate Analytics Science Citation Index.

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

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

Criteria for inclusion in the *Health Technology Assessment* journal

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

Reviews in *Health Technology Assessment* are termed 'systematic' when the account of the search appraisal and synthesis methods (to minimise biases and random errors) would, in theory, permit the replication of the review by others.

HTA programme

The HTA programme, part of the National Institute for Health Research (NIHR), was set up in 1993. It produces high-quality research information on the effectiveness, costs and broader impact of health technologies for those who use, manage and provide care in the NHS. 'Health technologies' are broadly defined as all interventions used to promote health, prevent and treat disease, and improve rehabilitation and long-term care.

The journal is indexed in NHS Evidence via its abstracts included in MEDLINE and its Technology Assessment Reports inform National Institute for Health and Care Excellence (NICE) guidance. HTA research is also an important source of evidence for National Screening Committee (NSC) policy decisions.

For more information about the HTA programme please visit the website: <http://www.nets.nhr.ac.uk/programmes/hta>

This report

The research reported in this issue of the journal was funded by the HTA programme as project number 11/66/02. The contractual start date was in March 2013. The draft report began editorial review in February 2017 and was accepted for publication in September 2017. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HTA editors and publisher have tried to ensure the accuracy of the authors' report and would like to thank the reviewers for their constructive comments on the draft 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 HTA 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 HTA programme or the Department of Health and Social Care.

© Queen's Printer and Controller of HMSO 2018. This work was produced by Radford *et al.* under the terms of a commissioning contract issued by the Secretary of State for Health and Social Care. 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.nhr.ac.uk), produced by Prepress Projects Ltd, Perth, Scotland (www.prepress-projects.co.uk).

NIHR Journals Library Editor-in-Chief

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

NIHR Journals Library Editors

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

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

Dr Martin Ashton-Key Consultant in Public Health Medicine/Consultant Advisor, NETSCC, 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 Senior Scientific Advisor, Wessex Institute, UK

Dr Peter Davidson Director of the NIHR Dissemination Centre, University of Southampton, UK

Ms Tara Lamont Scientific Advisor, NETSCC, UK

Dr Catriona McDaid Senior Research Fellow, York Trials Unit, 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 Professor of Wellbeing Research, University of Winchester, UK

Professor John Norrie Chair in Medical Statistics, University of Edinburgh, 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 Great Ormond Street Institute of Child Health, 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

Professor Jim Thornton Professor of Obstetrics and Gynaecology, Faculty of Medicine and Health Sciences, University of Nottingham, UK

Professor Martin Underwood Director, Warwick Clinical Trials Unit, Warwick Medical School, University of Warwick, UK

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

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