Pelvic floor muscle training for women with pelvic organ prolapse: the PROPEL realist evaluation

Margaret Maxwell,^{1*} Karen Berry,¹ Sarah Wane,² Suzanne Hagen,³ Doreen McClurg,³ Edward Duncan,¹ Purva Abhyankar,⁴ Andrew Elders,³ Catherine Best,¹ Joyce Wilkinson,⁴ Helen Mason,⁵ Linda Fenocchi,⁵ Eileen Calveley,¹ Karen Guerrero⁶ and Douglas Tincello⁷

- ¹Nursing, Midwifery and Allied Health Professions Research Unit, University of Stirling, Stirling, UK
- ²Department of Sport, Exercise and Rehabilitation, University of Northumbria, Newcastle upon Tyne, UK
- ³Nursing, Midwifery and Allied Health Professions Research Unit, Glasgow Caledonian University, Glasgow, UK
- ⁴Division of Health Sciences, Faculty of Health Sciences and Sport, University of Stirling, Stirling, UK
- ⁵Yunus Centre for Social Business and Health, Glasgow Caledonian University, Glasgow, UK
- ⁶Department of Urogynaecology, Queen Elizabeth University Hospital, NHS Greater Glasgow and Clyde, Glasgow, UK
- ⁷Department of Health Sciences, Centre for Medicine, University of Leicester, Leicester, UK

*Corresponding author margaret.maxwell@stir.ac.uk

Declared competing interests of authors: Andrew Elders reports a grant from the National Institute for Health Research (NIHR) Health Services and Delivery Research programme during the conduct of this study. Douglas Tincello and Karen Guerrero report grants from NIHR during the conduct of this study.

Published December 2020 DOI: 10.3310/hsdr08470

Plain English summary

The PROPEL realist evaluation

Health Services and Delivery Research 2020; Vol. 8: No. 47 DOI: 10.3310/hsdr08470

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

Plain English summary

Pelvic organ prolapse (or prolapse) affects 40–50% of women aged > 40 years. Previous research [the Pelvic Organ Prolapse PhysiotherapY (POPPY) trial (Hagen S, Stark D, Glazener C, Dickson S, Barry S, Elders A, *et al.* Individualised pelvic floor muscle training in women with pelvic organ prolapse (POPPY): a multicentre randomised controlled trial. *Lancet* 2014;**383**:796–806)] found that pelvic floor muscle training can improve women's prolapse symptoms and quality of life. However, pelvic floor muscle training for prolapse is not widely available in the UK, and there are few specialist physiotherapists who are trained to deliver it. We wanted to know whether or not other staff types could deliver pelvic floor muscle training and still achieve the same outcomes for women, which would mean that more pelvic floor muscle training could be made available to women. We worked with five NHS sites to train different staff to deliver pelvic floor muscle training to women with prolapse. Sites had access to different resources (staff) and their current pathways for prolapse were different. We worked more in depth with three sites, at four time points, to learn lessons about 'what worked and why'.

We recruited a total of 102 women (out of a target of 120) and measured their prolapse symptoms, their self-reported quality of life, whether or not the severity of their prolapse had changed and whether or not they needed further treatment. We studied the benefits (outcomes) of pelvic floor muscle training for women and for the services that delivered it. We assessed the costs and benefits of different delivery methods. Finally, we followed up the original POPPY trial participants to see if pelvic floor muscle training had prevented treatment in the longer term.

Women's prolapse symptoms significantly improved at 6 and 12 months following pelvic floor muscle training. All services successfully delivered pelvic floor muscle training. There was no statistically significant difference in outcomes between pelvic floor muscle training delivered by specialist physiotherapists and pelvic floor muscle training delivered by other health-care professionals. Services that used higher-band physiotherapists only were more costly. Longer-term pelvic floor muscle training still reduced the likelihood of further treatment.

Conclusion

Pelvic floor muscle training can be successfully delivered by non-specialist health-care professionals with the relevant background, training and support. This has important implications for delivering pelvic floor muscle training to the large numbers of women who could benefit from this treatment.

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: journals.library@nihr.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, and (2) they are of a sufficiently high scientific quality as assessed by the reviewers and editors.

HS&DR programme

The HS&DR 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 HS&DR programme please visit the website at https://www.nihr.ac.uk/explore-nihr/funding-programmes/health-services-and-delivery-research.htm

This report

The research reported in this issue of the journal was funded by the HS&DR programme or one of its preceding programmes as project number 14/04/02. The contractual start date was in April 2016. The final report began editorial review in March 2019 and was accepted for publication in August 2019. 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 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&DR programme or the Department of Health and Social Care.

© Queen's Printer and Controller of HMSO 2020. This work was produced by Maxwell *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.nihr.ac.uk), produced by Prepress Projects Ltd, Perth, Scotland (www.prepress-projects.co.uk).

Editor-in-Chief of Health Services and Delivery Research and NIHR Journals Library

Professor Ken Stein Professor of Public Health, University of Exeter Medical School, UK

NIHR Journals Library Editors

Professor John Powell Chair of HTA and EME Editorial Board and Editor-in-Chief of HTA and EME journals. Consultant Clinical Adviser, National Institute for Health and Care Excellence (NICE), UK, and Professor of Digital Health Care, Nuffield Department of Primary Care Health Sciences, University of Oxford, UK

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

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 Consultant Advisor, Wessex Institute, University of Southampton, UK

Ms Tara Lamont Senior Scientific Adviser (Evidence Use), Wessex Institute, University of Southampton, 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 Emeritus Professor of Wellbeing Research, University of Winchester, UK

Professor John Norrie Chair in Medical Statistics, University of Edinburgh, 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 Ken Stein Professor of Public Health, University of Exeter Medical School, UK

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

Professor Martin Underwood 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