

A tailored psychological intervention for anxiety and depression management in people with chronic obstructive pulmonary disease: TANDEM RCT and process evaluation

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Disclosure of interests

Full disclosure of interests: Completed ICMJE forms for all authors, including all related interests, or available in the toolkit on the NIHR Journals Library report publication page at <https://doi.org/10.3310/PAWA7221>.

Primary conflicts of interest: Karen Heslop-Marshall received payment from GlaxoSmithKline plc (GSK) (Brentford, UK), AstraZeneca (Cambridge, UK) and Chiesi Farmaceutici (Parma, Italy) for online presentations. She also received payment from Boehringer Ingelheim (Ingelheim am Rhein, Germany) for development of patient information on mental health, payment for teaching on the Train the Trainer course for ILD, and payment from *Nursing Times* for writing article on cognitive-behavioural therapy (CBT) in respiratory patients. She received sponsorship support from GSK to attend the European Respiratory Society 2021 virtual meeting and has stock/shares in, and is Director of Pivotal Healthcare Education Limited (Newcastle Upon Tyne, UK) to provide online educational training company for CBT foundation course. Vari Wileman's salary was funded by NIHR Collaborations for Leadership in Applied Health Research and Care North Thames (2017–20). Stefan Priebe was a member of the Health Technology Assessment (HTA) Mental, Psychological and Occupational Health Panel (2014–18). Mike Roberts has received an honorarium from the National Institute for Health and Care Research (NIHR) HTA programme (reference 15/153/02). Sally Singh's institution has received grant funding for her involvement in the following NIHR projects: NIHR PG 202020, NIHR131015, NIHR 17/63/20, NIHR and UK Research and Innovation (UKRI) (administered by the Medical Research Council) MR/V02776X/1, NIHR HTA 17/129/02, NIHR PB-PG-0317-20032. In addition, Sally Singh's institution has received grant funding for her involvement in the Wellcome PhD Programmes for Health Professionals, Programme LHIIP (reference 223512/Z/21/Z). She has received a speaker's fee from Cipla Limited (Mumbai, India) and Singh has the following positions: British Thoracic Society Pulmonary Rehabilitation Statement Group (co-chairperson 2021–23), American Thoracic Society Pulmonary Rehabilitation Assembly (chairperson 2021–23), NIHR Clinical Doctoral Research Fellowship review panel (2019–present), World Health Organization (WHO) Development Group for COPD (packages of interventions for pulmonary rehabilitation) (2020–1), WHO Guideline Development Group Clinical Management – Clinical Guidance COVID-19 (2021), and Royal College of Physicians Clinical Lead Pulmonary Rehabilitation Services Accreditation Scheme and Pulmonary Rehabilitation Audit. Martin Underwood reports that he is chief investigator or co-investigator on multiple previous and current research grants from NIHR and Arthritis Research UK (London, UK), and is a co-investigator on grants funded by the Australian National Health and Medical Research Council (Canberra, ACT, Australia). Martin Underwood was a NIHR Senior Investigator until March 2021 and has received travel expenses for speaking at conferences from the professional organisations hosting the conferences. He is a director and shareholder of Clinvivo Ltd (Kent, UK), which provides electronic data collection for health services research. He is part of an academic partnership with Serco Group plc (Hook, UK), funded by the European Social Fund, related to return to work initiatives. He receives some salary support from University Hospitals Coventry and Warwickshire (Coventry, UK) and Martin Underwood is a co-investigator on three NIHR-funded studies, receiving additional support from Stryker Ltd (Newbury, UK). He has accepted honoraria for teaching/lecturing from consortium for advanced research training in Africa. Until March 2020, he was an editor of the NIHR journal series, and a member of the NIHR Journal Editors Group, for which he received a fee. Patrick White's institution has received grant funding from the NIHR HTA programme, NIHR Health and Social Care Delivery Research (HSDR) programme, NIHR Research for Patient Benefit programme and NIHR In-Practice Fellowship programme. He participates in the Data Management and Ethics Committee for UKRI/NIHR Principle Trial (Oxford, UK), in the Trial Steering Committee for the Excalibur Trial (Southampton, UK) UKRI Innovate UK and in the Project Oversight Committee for the NIHR HSDR 17/99/72. He is a voluntary patron/trustee for Millennium Community Solutions (London, UK). Stephanie JC Taylor's institution has received research grant funding from NIHR Applied Research Collaboration (ARC) North Thames (London, UK), and Barts

Health NHS Trust (London, UK) provided some research capacity funding, which was used to bridge fund Dr Vari Wileman and this enabled her to contribute to the fidelity and process evaluation work on TANDEM (Tailored intervention for ANxiety and DEpression Management in COPD). She received funding from NIHR ARC North Thames to fund her time [5% whole time equivalent (WTE)] for work on multimorbidity. TANDEM was adopted as an ARC project by the NIHR ARC North Thames Multimorbidity Themes. She has various other NIHR grants as chief investigator and co-applicant: NIHR Public Health Research (PHR) 19/03, RP-PG-1016-10014, RP-PG-1016-10012, RP-PG-0616-20002, RP-PG-0216-20001, HSDR NIHR 19/103, NIHR AI_AWARD02204, 223501/Z/21/Z and 'PhD Programme for Primary Care Clinicians'. NIHR School for Primary Care Research pay 0.5 WTE of salary for the academic capacity development lead for the school. She was a member of HTA Clinical Evaluation and Trials Committee (2016–20) and is a member of NIHR Programme Grants for Applied Research Committee A (2021–present). She has a small number of AstraZeneca shares, representing < 3% of the value of her share portfolio.

Published January 2024
DOI: 10.3310/PAWA7221

Plain language summary

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Health Technology Assessment 2024; Vol. 28: No. 1
DOI: 10.3310/PAWA7221

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

Plain language summary

People with long-standing lung problems, such as chronic obstructive pulmonary disease, often also have anxiety and depression, which further reduces their quality of life. Two existing treatments could help. Pulmonary rehabilitation (a programme of exercise and education) improves both the physical and mental health of people with chronic obstructive pulmonary disease. Cognitive-behavioural therapy (a talking therapy) may reduce anxiety and depression. The TANDEM [Tailored intervention for Anxiety and Depression Management in chronic obstructive pulmonary disease (COPD)] intervention linked these two treatments by providing talking therapy based on cognitive-behavioural therapy during the waiting time following referral for pulmonary rehabilitation.

The TANDEM treatment was delivered by respiratory healthcare professionals (e.g. nurses or physiotherapists) trained to deliver the talking therapy in six to eight weekly sessions. The sessions were conducted in the participant's home (or another convenient location), with brief telephone support during the pulmonary rehabilitation.

Of 423 participants recruited to the study, 242 participants received TANDEM talking therapy and 181 participants received usual care (including a referral to pulmonary rehabilitation). We measured mental health, quality of life, social life, attendance at pulmonary rehabilitation and healthcare use in both groups at 6 and 12 months. Forty-three carers joined the study and we assessed their mental well-being. We interviewed patients, carers and health professionals to find out their views and experience of the TANDEM treatment. We also examined whether or not the TANDEM treatment was good value for money.

The TANDEM treatment did not improve the mental or the physical health of people with chronic obstructive pulmonary disease. In addition, the TANDEM treatment cost the NHS an extra £770 per patient, which was not good value for money. The TANDEM treatment was well received, and many participants told us how it had helped them. Health-care professionals noted how participants did not just have chronic obstructive pulmonary disease, but were coping with many physical, mental and social problems.

The TANDEM intervention was not effective and, therefore, other strategies will be needed to help people with chronic obstructive pulmonary disease and mental health problems live with their condition.

Health Technology Assessment

ISSN 1366-5278 (Print)

ISSN 2046-4924 (Online)

Impact factor: 3.6

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This report

The research reported in this issue of the journal was funded by the HTA programme as project number HTA 13/146/02. The contractual start date was in April 2016. The draft report began editorial review in November 2021 and was accepted for publication in June 2022. 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 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 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, the HTA programme or the Department of Health and Social Care.

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