

Factors which facilitate or impede patient engagement with pulmonary and cardiac rehabilitation: a rapid evaluation mapping review

Lindsay Blank,^{*} Anna Cantrell, Katie Sworn and Andrew Booth

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

^{*}Corresponding author l.blank@sheffield.ac.uk

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Scientific summary

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Introduction

There is a considerable body of systematic review evidence considering the effectiveness of rehabilitation programmes on clinical outcomes, comparing one mode of delivery with another (e.g. community vs. centre-based rehabilitation) or considering the relative effectiveness of rehabilitation using new technologies. However, much less is known about what is effective in terms of engaging patients in rehabilitation and sustaining that engagement over time. Despite increasing awareness of the factors that influence engaging with and sustaining rehabilitation, a lack of understanding of these factors (particularly in relation to differential effects for different populations) continues to impact on implementation of rehabilitation programmes. Existing reviews do not focus on understanding what might work for populations with lower uptake. There is therefore a need to map the evidence across both pulmonary and cardiac rehabilitation to understand the full range of potential intervention strategies.

We conducted a time-constrained mapping review of factors which facilitate or impede engagement (commencement, continuation and completion) with pulmonary and cardiac rehabilitation. The review searched for evidence at the systematic review level.

This review addresses three related sub-questions:

- What are the factors that impede or facilitate engagement (commencement, continuation or completion) in rehabilitation by patients with heart disease or chronic lung disease?
- Which intervention components, evaluated or innovative, have been proposed to increase engagement in rehabilitation and which factors do they propose to address?
- What evidence is there for the effectiveness of such interventions as documented at a review level?

An important subtext of these questions relates to health inequalities and differential uptake. Evidence suggests that inequalities that are already present are further exacerbated due to intrinsic features of rehabilitation programmes (Campkin LM, Boyd JM, Campbell DJT. Coronary artery disease patient perspectives on exercise participation. *J Mol Signal* 2017;**37**:305–14; Mamataz T, Ghisi GLM, Pakosh M, Grace SL. Nature, availability, and utilization of women-focused cardiac rehabilitation: a systematic review. *BMC Cardiovasc Disord* 2021;**21**:459; Resurreccion DM, Motrico E, Rigabert A, Rubio-Valera M, Conejo-Ceron S, Pastor L, Moreno-Peral P. Barriers for nonparticipation and dropout of women in cardiac rehabilitation programs: a systematic review. *J Womens Health (Larchmt)* 2017;**26**:849–59; Vanzella LM, Oh P, Pakosh M, Ghisi GLM. Barriers to cardiac rehabilitation in ethnic minority groups: a scoping review. *J Immigr Minor Health* 2021b;**23**:824–39).

Methods

For inclusion, a review must have reported factors affecting commencement, continuation or completion of cardiac or pulmonary rehabilitation, or an intervention that aims to increase the commencement, continuation or completion of rehabilitation. We included systematic reviews that reported factors identified from a UK context published between 2017 and 2021. Reviews that focused on the clinical effectiveness of rehabilitation or compare modes of rehabilitation (e.g. physical activity vs. other), or location of rehabilitation (e.g. community vs. hospital) were considered to be outside the scope of this review.

We conducted a single search process to retrieve both systematic reviews of intervention effectiveness (i.e. quantitative) and of factors impacting upon engagement (i.e. qualitative). The search privileged the

main subject headings for the two focal topics of interest: Cardiac Rehabilitation [MESH] and Lung Diseases/rehabilitation* OR Pulmonary Disease, Chronic Obstructive/rehabilitation. The main subject headings were combined with free-text terms and synonyms for engagement, uptake, completion, barriers and facilitators. The searches on MEDLINE, EMBASE and Cumulative Index to Nursing and Allied Health (CINAHL) used filters to retrieve references to review publications.

Further web-based searches were also conducted to facilitate the inclusion of recent initiatives that are not yet reported in the systematic review literature. Sources of recent initiatives included the databases of the King's Fund and Health Services Management Centre, alongside brief internet-based searches.

Study selection was undertaken independently by two reviewers. Following piloting of a test set each record was screened by two of the three reviewers. In cases of uncertainty each was cross referred to the third reviewer. Data synthesised from quantitative studies were determined by the reporting characteristics of the included reviews. Interventions have been tabulated alongside the summary results of included reviews. Data relating to PROGRESS-Plus variables were also extracted where reported. The review includes published and formally evaluated projects and programmes together with recent initiatives awaiting evaluation.

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