Exercise training for people with pulmonary hypertension

Introduction

The aim of the HTA Programme is to ensure that high quality research information on the effectiveness, costs and broader impact of health technology is produced in the most efficient way for those who use, manage, provide care in or develop policy for the NHS. Topics for research are identified and prioritised to meet the needs of the NHS. Health technology assessment forms a substantial portfolio of work within the National Institute for Health Research and each year about fifty new studies are commissioned to help answer questions of direct importance to the NHS. The studies include both primary research and evidence synthesis.

Research Question:

What is the clinical and cost-effectiveness of supervised exercise therapy for people with pulmonary hypertension?

1. Intervention: Supervised exercise therapy in addition to current routine treatment. Applicants to define and justify exercise regimes.
2. Patient group: Patients with diagnosed pulmonary hypertension. Applicants to define and justify the patient groups, but must include those with pulmonary hypertension secondary to underlying heart or lung conditions (groups 2 and 3 of the European Society of Cardiology/European Respiratory Society classification).
3. Setting: Outpatient or community outreach.
5. Study design: A randomised controlled trial with an internal pilot phase to demonstrate ability to recruit and to retain participants, as well as safety, compliance and fidelity.
6. Important outcomes: Exercise capacity; health-related quality of life.
   Other outcomes: Adverse events; mortality; functional class; time to clinical worsening; change in medication; cost effectiveness. Applicants should consider and justify whether particular sub-group analyses should be conducted, and define these a priori.
7. Minimum duration of follow-up: 1 year.
   Longer-term follow up: Applicants may consider building in provision, if appropriate, for a simple mechanism for long-term follow up using routine data bases/sets; including obtaining consent for this from participants at trial entry.
NHS decision problem to be addressed by this research:

Pulmonary hypertension (PH) is a condition that is characterised by an increase in mean pulmonary arterial pressure. It is associated with a variety of underlying conditions, but can also be idiopathic or inherited. PH is a serious disease that may cause right heart failure. It can progress rapidly and is associated with high morbidity and mortality.

People with PH have reduced exercise capacity and quality of life. In the past, guidelines cautioned against physical activity and exercise, but it is now acknowledged that exercise may be beneficial in this patient group.

A recent Cochrane review identified moderate quality evidence from small studies, suggesting that supervised exercise is likely to be safe for people with PH who are stable with medical therapy. Participants in the included trials experienced improvement in both exercise capacity and in quality of life.

In addition, there is evidence to suggest economic benefits of exercise therapy, in that the initiation of high-cost PH-specific medication may be delayed in some patients, due to the clinical benefits of exercise therapies, as demonstrated in a small German study.

However, most of the studies only recruited patients with pulmonary arterial hypertension (PAH, a subgroup of PH), and there is a lack of evidence of effectiveness and cost-effectiveness of exercise interventions in patients with other types of pulmonary hypertension, e.g. in those with cardiac or pulmonary disease related PH, which are the largest PH sub-groups.

Making an application

If you wish to submit a Stage 1 application against this topic, the on-line application form can be found along with the details for this brief at www.nihr.ac.uk/funding-and-support/current-funding-opportunities/ The HTA Programme can be selected using the filters and the application should be submitted on-line no later than 1pm on the 28 March 2018. Applications will be considered by the HTA Funding Board at its meeting in May 2018.

The guidance notes for this call can be found at: www.nihr.ac.uk/hta_st1_guidancenotes. The supporting information can be found at: www.nihr.ac.uk/hta_supportinfo.

IMPORTANT: For Stage 1 applications, if shortlisted, investigators will be given a minimum of eight weeks to submit a Stage 2 proposal. The Stage 2 proposal will be considered at the Funding Board in September 2018.

Applications received electronically after 1300 hours on the due date will not be considered.

Should you have any queries please contact us:
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