



TReAT trial: Mobile application for rehabilitation support after knee replacement – August 2022



The George Institute
for Global Health India

Facts:

- Annually, more than 100,000 people undergo knee replacement in India and this number is expected to rise.
- There is a lack of research regarding which of the available rehabilitation monitoring strategies (tele-based/clinic-based/home-based) lead to better health outcomes.
- Currently in-person rehabilitation strategies can be unaffordable for many, costing up to one-third of the surgical cost in three months.

Project Cycle:

2021–2026

Partners:

The George Institute India

Department of Orthopaedics, All India Institute of Medical Sciences, New Delhi

Supporters:

DBT/ Wellcome Trust India Alliance

Principal Investigators

Dr Niveditha Devasenapathy

Project priority area

Scaling Health Innovations

Strategic Pillar

Social Entrepreneurship

Background:

- Physical rehabilitation is an important component following knee replacement surgery to hasten recovery and restore knee function. However, poor adherence to therapy due to pain and lack of motivation leads to suboptimal outcomes.
- Tele-rehabilitation using various technologies has proven to be cost-effective in high-income countries. However, a mobile phone-based rehabilitation intervention to improve continuum of care that is suitable for low-to middle-income countries is currently not available.

Aims:

- The overall goal of this five-year project is to develop, test and evaluate mobile application-aided telemonitoring to improve functional outcomes among individuals undergoing knee replacement.

Methods:

- The project will develop an 'm-health' intervention based on literature evidence, mixed-methods studies design to capture user perspectives, stakeholder consultations, and end-user testing.
- The intervention will be based on the Capability, Opportunity, Motivation-Behaviour (COM-B) framework to improve adherence to the rehabilitation.
- The mobile application will first be pilot tested before a randomised controlled trial is conducted at AIIMS-Delhi to evaluate the effectiveness, cost, safety and end-user satisfaction of the intervention.

Impact:

- To expand opportunities for improving care of chronic musculoskeletal ailments, specifically in the elderly.
- The mobile application will enable elderly patients to connect with health professionals without having to physically travel, thereby increasing their self-reliance.
- The intervention will reduce out-of-pocket expenditure and aid in continuum of care, potentially leading to better health outcomes.

Contact:

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