A scoping review of “remote” rehabilitation interventions to address COVID-19 sequalae

Lindsay

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Plain English Summary

Many people who have been unwell with COVID-19 are suffering long-term problems with their fitness and ability to participate in usual activities of daily life. Symptoms include muscle weakness, breathlessness, changes in sensation, pain and fatigue. There are also effects on psychological and mental health. Rehabilitation could help with these issues. However, there are challenges in providing this rehabilitation because so many patients need to access these services and because face to face treatment is not always possible due to social distancing.

There has been increasing interest in remote rehabilitation interventions from researchers and App. developers in recent years. Remote interventions use technology such as video, smartphone applications and interactive conferencing (i.e. Zoom) to deliver rehabilitation programmes.

We will search for evidence about remote rehabilitation interventions and application stores to identify existing remote interventions that might meet the needs of COVID-19 survivors. This information will allow rehabilitation teams to direct patients to suitable remote interventions. This may be needed to replace or to enhance their rehabilitation programme.
**Protocol status:** In development
We are still developing and optimizing this protocol

**Created:** Jul 06, 2020

**Last Modified:** Jul 08, 2020

**PROTOCOL integer ID:**
38914

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**Protocol registration**
The protocol is registered on protocols.io.

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**Inclusion criteria**

Papers / applications that describe a rehabilitation intervention:
- that is aimed at long-term symptoms known to be associated with COVID-19 (i.e. fatigue, breathlessness, weakness)
- aimed at community based or self-management level of acuity (excluding hospital or inpatient rehabilitation)
- delivered remotely

The intervention type, dose and delivery should be clearly described / replicable.
The intervention should be currently accessible as an application / web-based tool to the public (although may be behind a paywall).
Programmes should be available in English language and based in the UK.
Types of evidence sources: meta-analysis, systematic review, randomised controlled trial, non-randomised or before / after study design as well as selected commentaries.

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**Search strategy**

The review will use a five-step search strategy:
1. An initial search of two databases (MEDLINE and CINAHL) with selected papers analysed for potential additional keywords.
2. A full search across all databases (Embase, Cochrane trails register) using any newly identified keywords as search terms.
3. A search of reference lists of selected papers.
4. A search of grey literature including conference proceedings from tech in health conferences; selected commentaries
5. App. Stores search (Apple, Google Play and NHS Apps library) and in the website www.fnd.io.
4 Data extraction

Data from papers:

- Source details
  - Author / date
  - Conditions / populations for which the intervention is designed (including acuity)
  - Media type

- Type of rehabilitation
  - Type of exercise / activity
  - Dose (intensity / frequency / duration) of intervention

- Delivery of the intervention
  - Qualifications / profession of developer / instructor
  - Motivational tools incorporated into the intervention (use template to quantify)
  - Theories to support delivery
  - Opportunity for social interaction / peer support incorporated into the intervention
  - Follow up / support provided within the tool / intervention
  - Costs of the interventions (simple i.e. whether it requires a fee to use)

Data from applications:

- Source information
  - App name, platform, version, developer, size, star rating, number of installs.
  - Privacy policy statement and medical product status.
  - Conditions / populations for which the intervention is designed (and acuity)

- Type of rehabilitation
  - Type of exercise / activity
  - Dose (intensity / frequency / duration) of intervention

- Delivery of the intervention
  - Qualifications / profession of developer / instructor
  - Motivational tools incorporated into the intervention (use template to quantify)
  - Theories to support delivery
  - Opportunity for social interaction / peer support incorporated into the intervention
  - Follow up / support provided within the tool / intervention
  - Costs of the interventions (simple i.e. whether it requires a fee to use)

5 Analysis

Interventions will be summarised narratively according to target condition and demographic, media type and rehabilitation type (dose (frequency, intensity, duration) and support provided
(including motivational tools / theories to support delivery)) using tables and/or charts. Interventions relevant to different COVID-19 rehabilitation needs (addressing different symptoms) will be illustrated using tables and/or charts.

Consultation
Findings will be reviewed by a stakeholder group of rehabilitation clinicians and academics that we have assembled for a related project.