

# Telerehabilitation in Children and Adolescents with Cystic Fibrosis - Scoping Review

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## Introduction

Cystic Fibrosis (CF) is a chronic, progressive genetic disease that primarily affects the respiratory system<sup>(1)</sup>. Treatment is complex, involving multiple daily care routines and regular rehabilitation interventions<sup>(2)</sup>. However, adherence is often unsatisfactory<sup>(2)</sup>. Recent technological advances have increased accessibility to care and adherence to treatment, although studies on telerehabilitation remain limited and scattered<sup>(1)</sup>.

## Objective

To identify the rehabilitation interventions mediated by information and communication technologies (ICT) and understand how they are developed in providing care to children and adolescents with CF.

## Methods

The review was guided by the steps recommended by the Joanna Briggs Institute (JBI), using the PCC mnemonic (Population – children and adolescents; Concept – ICT-mediated rehabilitation interventions; Context – health care practice environments). The search was conducted in MEDLINE, CINAHL, Scopus, JBI, Web of Science and grey literature. The process of identification and selection of studies was described through a flowchart, according to the PRISMA guidelines.

## Results

Of the 425 studies identified, 5 were included: 2 clinical trials, 1 quasi-experimental study, 1 feasibility study, and 1 cross-sectional study. In 3 of the included studies, telerehabilitation programs consisted of home exercise training<sup>(1-3)</sup>, and in 2 of them, the promotion of therapeutic regimen and symptomatic control through teleconsultations or telemonitoring<sup>(2,3)</sup>. The ICT used were web platforms, video game consoles, and telephone. The intervention was monitored via teleconsultation (telephone or web platform) or heart rate monitor<sup>(3)</sup>.

## Conclusion

Telerehabilitation interventions in children and adolescents with CF focus on physical exercise, therapeutic regimen management, and symptom control through web platforms, video game consoles, and telephone. The results provide suggestions for clinical practice, identifying components for structuring telerehabilitation interventions and highlighting gaps in intervention and research in this area.

## Keywords

Cystic Fibrosis; Child; Adolescent; Telerehabilitation; Review.

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