

Telehealth Interventions for Pediatric Asthma Management

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BACKGROUND

Asthma is a chronic disease of the airways involving airway inflammation and remodeling. It includes both genetic and environmental elements as causative factors. Exacerbations are related to increased acute symptoms, decreased quality of life, and asthma fatalities (Papi et al., 2018).

National and state objectives underscore the importance of asthma management, which is supported through effective asthma education.

What remains unknown is if telehealth technology is an effective way to deliver asthma education.

Project Objectives

This inquiry has led to the PICO question, In pediatric patients with asthma (P), how does telehealth asthma education (I) compared to standard care (C) impact asthma management and adherence?

PsychINFO, PubMed, Cumulative Index of Nursing and Allied Health Literature (CINAHL), and The Cochrane Library were extensively searched.

Ten studies were retained for evaluation and synthesis. The appraised body of evidence is relevant to interventions for asthma management and helps determine if telehealth is an effective way to deliver asthma education to patients and their caregivers.

Summary of Findings

The evidence supports the use of telehealth technology to help support and improve pediatric asthma management.

Telehealth for the management of asthma can effectively increase medication adherence and asthma control.

The synthesis supports telehealth asthma education that is engaging to both patient and caregiver and includes multiple interactions to promote behavior change.

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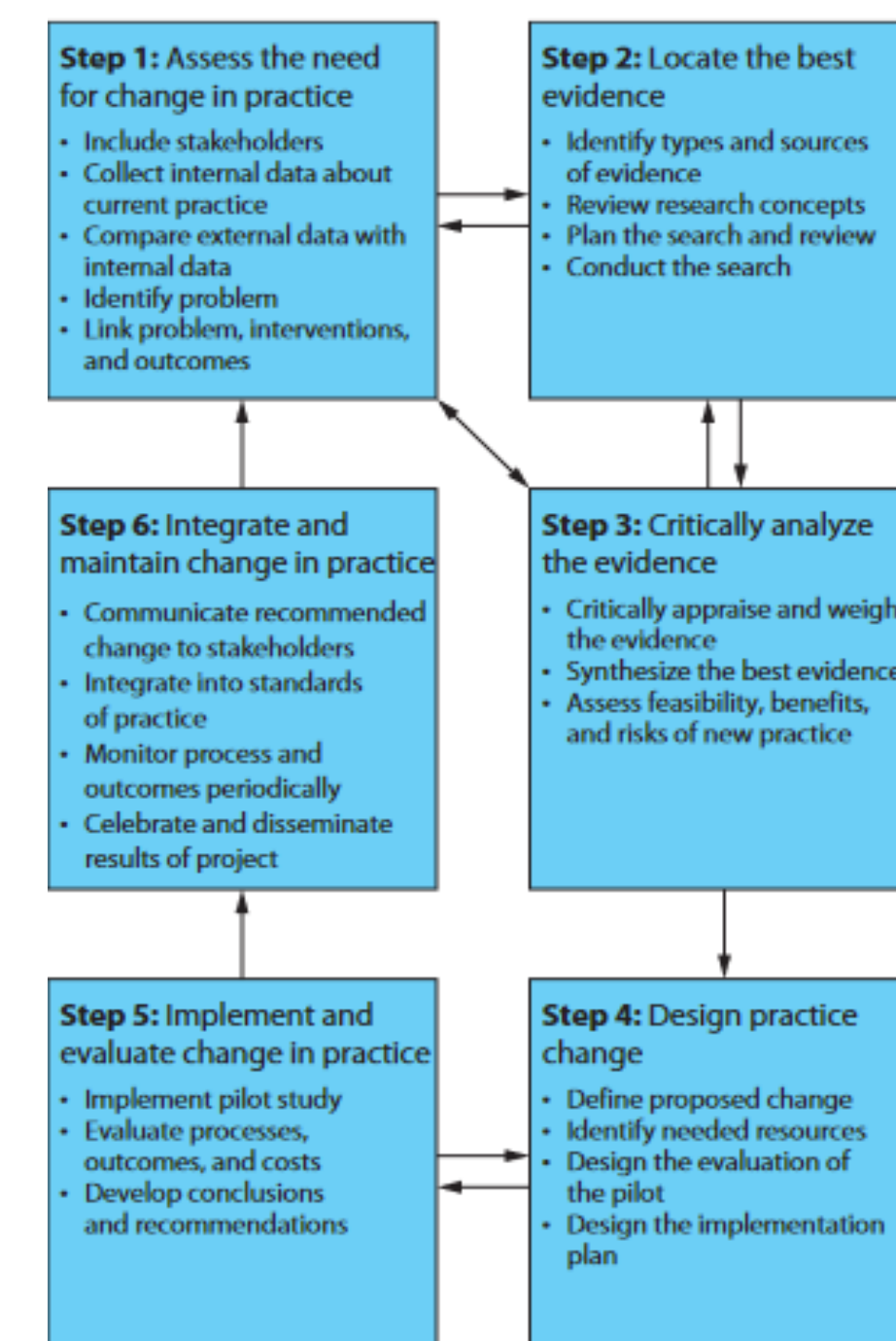
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Appraised Body of Evidence

Studies		Bender et al.	Halterman et al.	Johnson et al.	Kolmodin MacDonell et al.	Kose et al.	Koufopoulos et al.	Koumpagioti et al.	Lin et al.	Lv et al.	Perry et al.
Basics	Year	2015	2018	2015	2016	2019	2016	2019	2020	2019	2018
	LOE	II	II	II	II	II	II	II	II	II	II
	Design	RCT	RCT	RCT	RCT	RCT	RCT	RCT	QE	RCT	CRT
	Mean Age	8.1	7.8	13.93	22.4	15.1	28.1	8.4	13.7	7.95	9.6
	Attrition	10%	<1%	<1%	<1%	<1%	52%	12%	0	<1%	<1%
	Country	USA	USA	USA	USA	NL	UK	Greece	USA	China	USA
	n participants	1756	400	98	50	253	216	96	21	152	393
Interventions	Phone call reminders	X									
	SB program		X						X		
	Texting			X	X						
	Phone App					X				X	
	Online Community						X				
	ED Program							X			X

Future Directions

The Model for Evidence-Based Practice Change will guide the implementation of this telehealth asthma education project at the project site. A search for current evidence will be ongoing during this project as new evidence is expected to be reported in the coming year.



(Larrabee, 2008)