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CFIR DOMAIN	CFIR CONSTRUCT Name and Definition	IDENTIFIED FROM QUALITATIVE LITERATURE
I. Innovation		
<i>The “thing” being implemented -- oxygen therapy for people with interstitial lung disease</i>		
	A. Innovation Source The group that developed and/or visibly sponsored use of the innovation is reputable, credible, and/or trustable	Yes - International respiratory bodies
	B. Innovation Evidence Base The innovation has robust evidence supporting its effectiveness	Partial - Paucity of evidence to support benefits of oxygen – very few RCTs, small sample sizes
	C. Innovation Relative Advantage The innovation is better than other available innovations or current practice	Partial - Oxygen provides some symptom relief for some people with ILD - Lack of technology to provide fit-for-purpose oxygen supply - Portable oxygen concentrators better than tanks but limitations with oxygen supply and battery life
	D. Innovation Adaptability The innovation can be modified, tailored, or refined to fit local context or needs	Partial - Some choice of delivery devices allowing tailoring of device choice to patient needs, but all have limitations - Portable oxygen concentrators better than tanks - Need for better equipment to meet physical and physiological needs
	E. Innovation Trialability The innovation can be tested or piloted on a small scale and undone	Not applicable
	F. Innovation Complexity The innovation is complicated, which may be reflected by its scope and/or the nature and number of connections and steps	Partial - Not too complex if provided with information and support for using
	G. Innovation Design The innovation is well designed and packaged, including how it is assembled, bundled, and presented	No - Current equipment is a significant issue Equipment (tanks) -heavy, difficult to manage, oxygen supply inadequate to meet patient needs in many circumstances, tubing gets tangled - Restricted mobility for users
	H. Innovation Cost The innovation purchase and operating costs are affordable	No - Initial and ongoing costs restrictive for many - Prohibitive cost of portable concentrators - Funding varies across and within jurisdictions










II. Outer setting <i>The setting in which the Inner Setting exists, e.g., healthcare systems</i>		
	A. Critical Incidents Large-scale and/or unanticipated events disrupt implementation and/or delivery of the innovation	Not applicable
	B. Local Attitudes Sociocultural values (e.g., shared responsibility in helping recipients) and beliefs (e.g., convictions about the worthiness of recipients) encourage the Outer Setting to support implementation and/or delivery of the innovation	Not able to ascertain through systematic review
	C. Local Conditions Economic, environmental, political, and/or technological conditions enable the Outer Setting to support implementation and/or delivery of the innovation	Variable - 'Postcode lottery' / geographic variation in policy determines whether patients can access ambulatory oxygen - Availability of devices determined by local policies (e.g. POCs not available in all jurisdictions)
	D. Partnerships & Connections The Inner Setting is networked with external entities, including referral networks, academic affiliations, and professional organization networks	Yes - Hospitals generally well networked for oxygen referrals to either internally or externally service departments
	E. Policies & Laws Legislation, regulations, professional group guidelines and recommendations, or accreditation standards support implementation and/or delivery of the innovation	Partial - Professional guidelines provide recommendations on oxygen therapy as a treatment option for ILD - Heterogenous definition for eligibility of oxygen therapy
	F. Financing Funding from external entities (e.g., grants, reimbursement) is available to implement and/or deliver the innovation	Variable - Differences in funding services and organisational structures across jurisdictions; no funding for ambulatory oxygen in some jurisdictions; differences in insurance coverage and reimbursement; large out of pocket expenses for some; some types of oxygen not available due to cost (e.g. liquid oxygen) - Access and supply issues - High cost associated with use—tanks, electricity
	G. External Pressure External pressures drive implementation and/or delivery of the innovation <i>Use this construct to capture themes related to External Pressures that are not included in the subconstructs below</i>	

	1. Societal Pressure Mass media campaigns, advocacy groups, or social movements or protests drive implementation and/or delivery of the innovation	Yes - Stigmatization
	2. Market Pressure Competing with and/or imitating peer entities drives implementation and/or delivery of the innovation	No - No market pressure to develop devices with better performance to meet user needs
	3. Performance Measurement Pressure Quality or benchmarking metrics or established service goals drive implementation and/or delivery of the innovation	No - No benchmarking or quality metrics in most jurisdictions
III. Inner Setting <i>The setting in which the innovation is implemented, e.g., hospital, school, city. - Home</i>		
A. Structural Characteristics		
	1. Physical Infrastructure Layout and configuration of space and other tangible material features support functional performance of the Inner Setting	Yes - Entanglement of tubes around home – becomes potential hazard - Challenges of negotiating physical environment with ambulatory devices (e.g. pulling devices over rough surfaces and up stairs; lack of access to charging)
	2. Information Technology Infrastructure Technological systems for telecommunication, electronic documentation, and data storage, management, reporting, and analysis support functional performance of the Inner Setting	Not applicable
	3. Work Infrastructure Organization of tasks and responsibilities within and between individuals and teams, and general staffing levels, support functional performance of the Inner Setting	Partial - Caregivers assume role of ensuring oxygen used as prescribed yet often are not supported in any way or provided with financial assistance - Greater preparation and planning required by carers and people using oxygen to ensure sufficient supply - Unclear as to who (healthcare professional, oxygen company, other) should be responsible for providing information and knowledge about procedural aspects, rationale for use, possible benefits and overall management in daily life.

	B. Relational Connections There are high quality formal and informal relationships, networks, and teams within and across Inner Setting boundaries (e.g., structural, professional)	Partial - Unclear as to who (healthcare professional, oxygen company, other) should be responsible for providing both procedural and disease-specific information and how the information is delivered.
	C. Communications There are high quality formal and informal information sharing practices within and across Inner Setting boundaries (e.g., structural, professional)	Partial - Unclear as to who (healthcare professional, oxygen company, other) should be responsible for providing both procedural and disease-specific information and how the information is delivered.
	D. Culture There are shared values, beliefs, and norms across the Inner Setting	Partial - Physicians have differing views about efficacy of treatment and indications for treatment - Patients have unmet expectations
	<i>1. Human Equality-Centeredness</i> There are shared values, beliefs, and norms about the inherent equal worth and value of all human beings	
	<i>2. Recipient-Centeredness</i> There are shared values, beliefs, and norms around caring, supporting, and addressing the needs and welfare of recipients	
	<i>3. Deliverer-Centeredness</i> There are shared values, beliefs, and norms around caring, supporting, and addressing the needs and welfare of <u>deliverers</u>	
	<i>4. Learning-Centeredness</i> There are shared values, beliefs, and norms around psychological safety, continual improvement, and using data to inform practice	
	E. Tension for Change The current situation is intolerable and needs to change	Partial - Clear calls for change from patients and health professionals - Limited engagement from designers, manufacturers and policy makers
	F. Compatibility The innovation fits with workflows, systems, and processes	Not applicable
	G. Relative Priority Implementing and delivering the innovation is important compared to other initiatives	Yes - Oxygen therapy is one of few therapies available for people with ILD that may provide some benefit - Important in providing some relief to symptom burden - May have a survival benefit (LTOT)

	H. Incentive Systems Tangible and/or intangible incentives and rewards and/or disincentives and punishments support implementation and delivery of the innovation	No - Few incentives available to support use of oxygen - No incentives for technology companies to develop a better system
	I. Mission Alignment Implementing and delivering the innovation is in line with the overarching commitment, purpose, or goals in the Inner Setting	Yes – Mission statement and goals of international respiratory bodies and researchers committed to offering oxygen therapy for people with ILD
	J. Available Resources Resources are available to implement and deliver the innovation	Partial - Oxygen suppliers available but in some populations limited - Dealing with suppliers at times challenging and difficult for people with ILD - Health professional resources – little ongoing support for oxygen users post prescription
	<i>1. Funding</i> Funding is available to implement and deliver the innovation	Partial - Limited resources available to fund oxygen use for people with ILD - High out-of-pocket costs for many
	<i>2. Space</i> Physical space is available to implement and deliver the innovation	Equipment rather than space is the issue
	<i>3. Materials & Equipment</i> Supplies are available to implement and deliver the innovation	Partial - Some users reported issues with location of suppliers - Lack of adequate oxygen delivery system (tank/POC) to deliver required flow for longer periods of time
	K. Access to Knowledge & Information Guidance and/or training is accessible to implement and deliver the innovation	No - Insufficient information and support provided to people with ILD when starting on oxygen and when facing issues
IV. Individuals domain - <i>Individuals – the roles and characteristics of individuals</i>		
Project Roles:	A. High-level Leaders Individuals with a high level of authority, including key decision-makers, executive leaders, or directors	Not the focus of this systematic review
	B. Mid-level Leaders Individuals with a moderate level of authority, including leaders	

	supervised by a high-level leader and who supervise others	
	C. Opinion Leaders Individuals with informal influence on the attitudes and behaviours of others	
	D. Implementation Facilitators Individuals with subject matter expertise who assist, coach, or support implementation	
	E. Implementation Leads Individuals who lead efforts to implement the innovation	
	F. Implementation Team Members Individuals who collaborate with and support the Implementation Leads to implement the innovation, ideally including Innovation Deliverers and Recipients	
	G. Other Implementation Support Individuals who support the Implementation Leads and/or Implementation Team Members to implement the innovation	
	H. Innovation Deliverers Individuals who are directly or indirectly <u>delivering</u> the innovation	
	I. Innovation Recipients Individuals who are directly or indirectly <u>receiving</u> the innovation	
Characteristics subdomain:		
Project characteristics		
	A. Need The individual(s) has deficits related to survival, well-being, or personal fulfillment, which will be addressed by implementation and/or delivery of the innovation	Partial - Oxygen therapy provides some relief from symptoms such as breathlessness, allows greater mobility and independence, improves self confidence in ability to perform everyday tasks - Others found no benefit but a burden that reduced their independence, mobility and caused anxiety and depression
	B. Capability The individual(s) has interpersonal competence, knowledge, and skills to fulfill Role	No Lack of information and practical support prior to commencement - Need better understanding of why oxygen prescribed and possible benefits and tribulations
	C. Opportunity The individual(s) has availability,	Partial - Some able to manage oxygen

	scope, and power to fulfil role	- Many felt they had insufficient knowledge about how to use it, when and why they should use it.
	D. Motivation The individual(s) is committed to fulfilling Role	Partial - Some people with ILD found oxygen beneficial and reported it provided some hope - Lack of experience, benefit and challenges with equipment led others to abandon use - Unmet expectations
V. Implementation Process <i>The activities and strategies used to implement the innovation</i>		
	A. Teaming Join together, intentionally coordinating and collaborating on interdependent tasks, to implement the innovation	Partial - Interaction between patients and HCPs/ oxygen suppliers needs improving
	B. Assessing Needs Collect information about priorities, preferences, and needs of people	Partial - Some studies have examined needs, preferences but there has been little change over time
	<i>1. Innovation Deliverers</i> Collect information about the priorities, preferences, and needs of <u>deliverers</u> to guide implementation and delivery of the innovation	Partial - No study has examined barriers from a suppliers' perspective - Few studies have examined the physicians' perspective
	<i>2. Innovation Recipients</i> Collect information about the priorities, preferences, and needs of <u>recipients</u> to guide implementation and delivery of the innovation	Partial - Some information on barriers and facilitators but most not acted on
	C. Assessing Context Collect information to identify and appraise barriers and facilitators to implementation and delivery of the innovation	Yes - Aim of this systematic review of qualitative literature
	D. Planning Identify roles and responsibilities, outline specific steps and milestones, and define goals and measures for implementation success in advance	Yes - Findings from this systematic review will help guide pragmatic and effective changes in implementation
	E. Tailoring Strategies Choose and operationalize implementation strategies to address barriers, leverage facilitators, and fit context	Possible next steps
	F. Engaging Attract and encourage participation in implementation and/or the innovation	Possible next steps

●	G. Doing Implement in small steps, tests, or cycles of change to trial and cumulatively optimize delivery of the innovation	Possible next steps
●	H. Reflecting & Evaluating Collect and discuss quantitative and qualitative information about the success of implementation and/or the innovation	Possible next steps
●	I. Adapting Modify the innovation and/or the Inner Setting for optimal fit and integration into work processes	Possible next steps

- Construct acts as facilitator

- Construct acts as facilitator and barrier

- Construct acts as barrier

- Construct not applicable /not the focus of current systematic review