# Logic Model for Implementation Research: A Guide

## Determinants

Factors that might prevent or enable improvements (barriers & facilitators). May act as moderators, effect modifiers, or mediators, indicating that they are links in a chain of causal mechanisms.

Intervention Characteristics

Inner

Intervention source; Evidence strength and quality; Relative advantage; Adaptability; Trialability; Complexity; Design quality and packaging; Cost

Structural characteristics; Networks and communication; Culture; Implementation climate; Readiness for implementation

O Patient needs and resources; Cosmopolitanism; Peer pressure; External policies and incentives

Characteristics of Individuals

Process

Knowledge/beliefs about intervention; Individual stage of change; Self-efficacy; Individual identification with the organization; Other attributes

Engaging; Planning; Executing; Reflecting and evaluating

## **Implementation Strategies**

Interventions on the <u>system</u> to increase adoption of evidencebased innovations into usual care. A theory- or logic-driven connection should link an implementation strategy to (a) the barriers it will attempt to overcome and/or (b) the facilitators it will attempt to leverage.

## Types

- Plan; Educate; Finance; Restructure; Quality management; Policy context (Bunger et al., 2017)
- Engage consumers; Evaluate; Change infrastructure; Stakeholder interrelationships; Financial strategies; Clinician support; Interactive assistance; Train and educate; Adapt (ERIC, Powell et al., 2015)

Strategies should be specified by the following characteristics: Actor; Action; Action target; Temporality; Dose; Outcome affected; Justification for use (Proctor et al., 2013)

#### Mechanisms

Outcomes

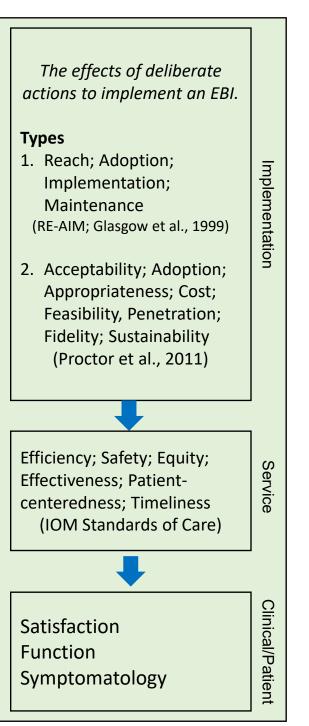
Processes or events through which an implementation strategy operates to affect desired implementation outcomes (Lewis et al. 2018)

Mechanisms explain how an implementation strategy has an effect by describing the actions that lead from the administration of the strategy to the most proximal behavioral (individual, system) and/or implementation outcomes (i.e., mechanisms are the exact series of steps through which the change came about).

Some potential mechanisms: 1. Altering the status of a determinant.

2. Changing the behavior of implementer (could be a proximal outcome preceding an implementation outcome or the implementation outcome itself).

**Note.** Although mediation analysis can be informative, mediators are not necessarily mechanistic.



Advanced note: Same colors indicate a hypothesized causal pathway.



Implementation Science Coordination, Consultation, & Collaboration Initiative

## Logic Model for Implementation Research: Example for PrEP delivery to YMSM in clinics

	Determinants		Implementation Strategies		Mechanisms		Outcomes	
Intervention Characteristics	Highly effective + Insurance coverage +/- Relative advantage +/- HIV/STI testing/refills – Adherence –		<ul> <li>Training Providers/Staff <ul> <li>PrEP efficacy</li> <li>Identify eligible patients</li> <li>Discuss sexual behaviors with patients</li> <li>Stigma surrounding PrEP</li> <li>Addressing patient barriers to adherence</li> </ul> </li> <li>Integration into Routine Care <ul> <li>Workflow evaluation</li> <li>PDSA cycles/CQI</li> </ul> </li> <li>Peer support (champions) Leader engagement</li> </ul>		Providers/Staff <ul> <li>Knowledgeable about</li> </ul>		<ul> <li>Provider Adoption</li> <li>Prescribe PrEP</li> <li>Repeat HIV test</li> <li>Reach</li> <li>% of eligible patients</li> </ul>	Implementation
Inner Setting	Implementation climate + Available workforce + Leadership support +/- HIV/STI testing +/- Workflow disruption –				<ul> <li>PrEP guidelines</li> <li>Destigmatized</li> <li>Comfort inquiring about and discussing sexual behaviors</li> <li>Self-efficacy to prescribe PrEP and follow guidelines</li> <li>Value of providing PrEP</li> </ul>		receive PrEP Rx <ul> <li>% of patients on PrEP with 90-day RX refill</li> <li>% of patients on PrEP with 6 month STI test</li> </ul> Appropriateness Acceptability Fidelity (PrEP Guidelines)	
Outer Setting	CDC Guidelines + PrEP 4 Love Campaign + Ending the HIV Epidemic + Patient need/demand + LHD STI Clinics +/-							
Characteristics of Individuals	Commitment + Provider self-efficacy +/- Stigma – Knowledge/beliefs/attitudes about PrEP –				Accountability Peer and Leadership		Safe Patient-centered Equitable Timely	Service
Process	Planning for PrEP + Opinion leaders + Champions + Evaluation + External impl. Support –				recognition of providers		% Filling first Rx % Adherent to PrEP % Refilling PrEP Rx # new HIV infections # positive STI tests	Clinical/Patient

Advanced note: Same colors indicate a hypothesized causal pathway.

