Implementation Strategies

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The 5 Stages of Strategic Implementation

- Goal-setting: clarify your vision
  - Define the problem and short- and long-term objectives
  - Identify the process of how to accomplish your objective
  - Customize the process for your staff
- Analysis: gather and analyze baseline data
- Formulate a strategy based on:
  - Existing and needed resources, consider alternative plans
  - Select and combine strategies as needed
- Implement your strategy – role clarity is key!
- Evaluate and control: establish clear metrics
  - Monitor internal and external factors

What are implementation strategies?

- Actions or activities taken to increase the adoption, implementation or sustainability of an evidence-based program, intervention or practice.
- They are the "HOW" of implementation science that gets the evidence-based practice "TO" the people who need it.
- Combinations of implementation strategies – "BUNDLES" – of implementation strategies – as you often must combine them to address barriers across multiple levels of the socio-ecological model.

Types of Implementation Strategies

- **Discrete**: Single action or process (e.g., institute a system or reminders, provide audit and feedback, educational session or workshop)
- **Multi-faceted**: A combination of multiple discrete strategies (e.g., educational training + reminders)
- **Blended**: Multi-faceted strategies that have been protocolized and (often) branded (e.g., *ARC*, *LOI*, *NIATx*)
  - Availability of Response and Continuity Intervention and Leadership of Organization Change Intervention, Network for the Improvement of Addiction Treatment

Multi-faceted Strategies (11 Components or Discrete Strategies)

Can Learning Collaboratives Support Implementation by Rewiring Professional Networks?

Examined how a learning collaborative focusing on trauma-focused CBT (TF-CBT) impacted advice-seeking patterns between clinicians and three key learning sources: (1) training experts who share technical knowledge, (2) peers from other participating organizations who share their implementation experiences, and (3) colleagues from their own agency who provide social and professional support.

- Preparatory work
  - Prepare a change package
  - Making a commitment
- Active learning
  - Learning sessions
  - PDSA cycles
- Supports
  - Conference calls
  - Web support (resources, etc)
  - Quality improvement training
  - Metrics reporting
- Enhanced features
  - Coaching calls
  - Site visits by experts
  - Mentoring

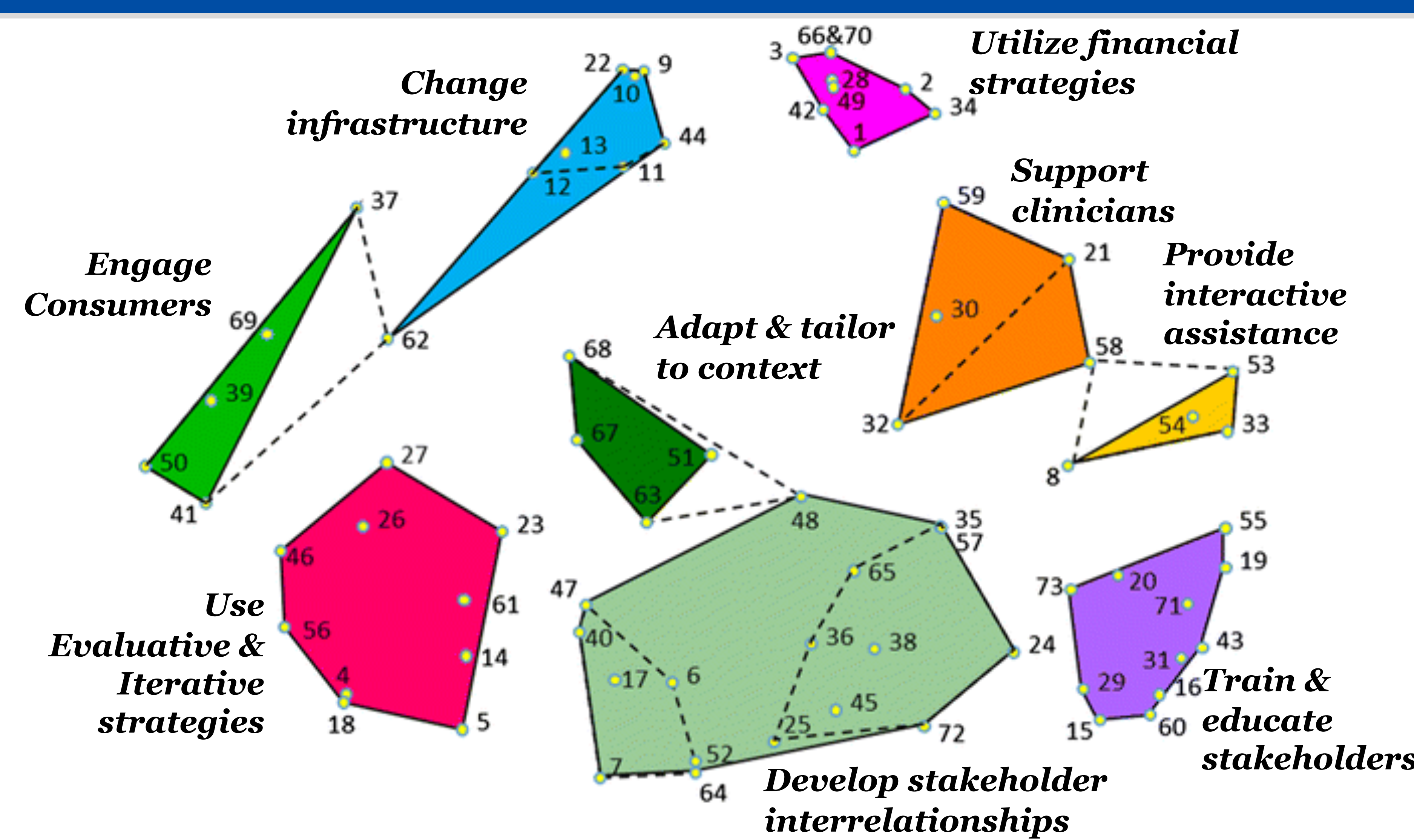
Bunger AC, Adm Policy Mental Health, 2016

Expert Recommendations for Implementing Change (ERIC): Taxonomy of Implementation Strategies

Modified Delphi Method

Powell BJ et al, Implement Sci, 2015

Concept Mapping: 9 clusters and 79 strategies



Waltz T et al, Implement Sci, 2015

A Selection of Implementation Strategies

Strategy	Examples
Use evaluative and iterative strategies	· Assess for readiness and identify barriers and facilitators · Audit and provide feedback · Purposefully reexamine the implementation
Adapt and tailor to context	· Tailor strategies · Promote adaptability · Use data experts
Train and educate stakeholders	· Conduct ongoing training · Distribute educational materials · Use train-the trainer techniques
Engage consumers	· Increase demand · Use mass media · Involve patients/consumers and family members
Change infrastructure	· Mandate change · Change record systems · Change physical structure and equipment

Waltz T et al, Implement Sci, 2015

A Selection of Implementation Strategies

Provide interactive assistance
- Facilitation
- Provide local technical assistance
- Provide clinical supervision

Develop stakeholder interrelationships
- Identify and prepare champions
- Or Examples-of-implementation-strategies[66] etings
- Identify early adopters

Support clinicians
- Remind clinicians
- Revise professional roles
- Facilitate relay of clinical data to providers

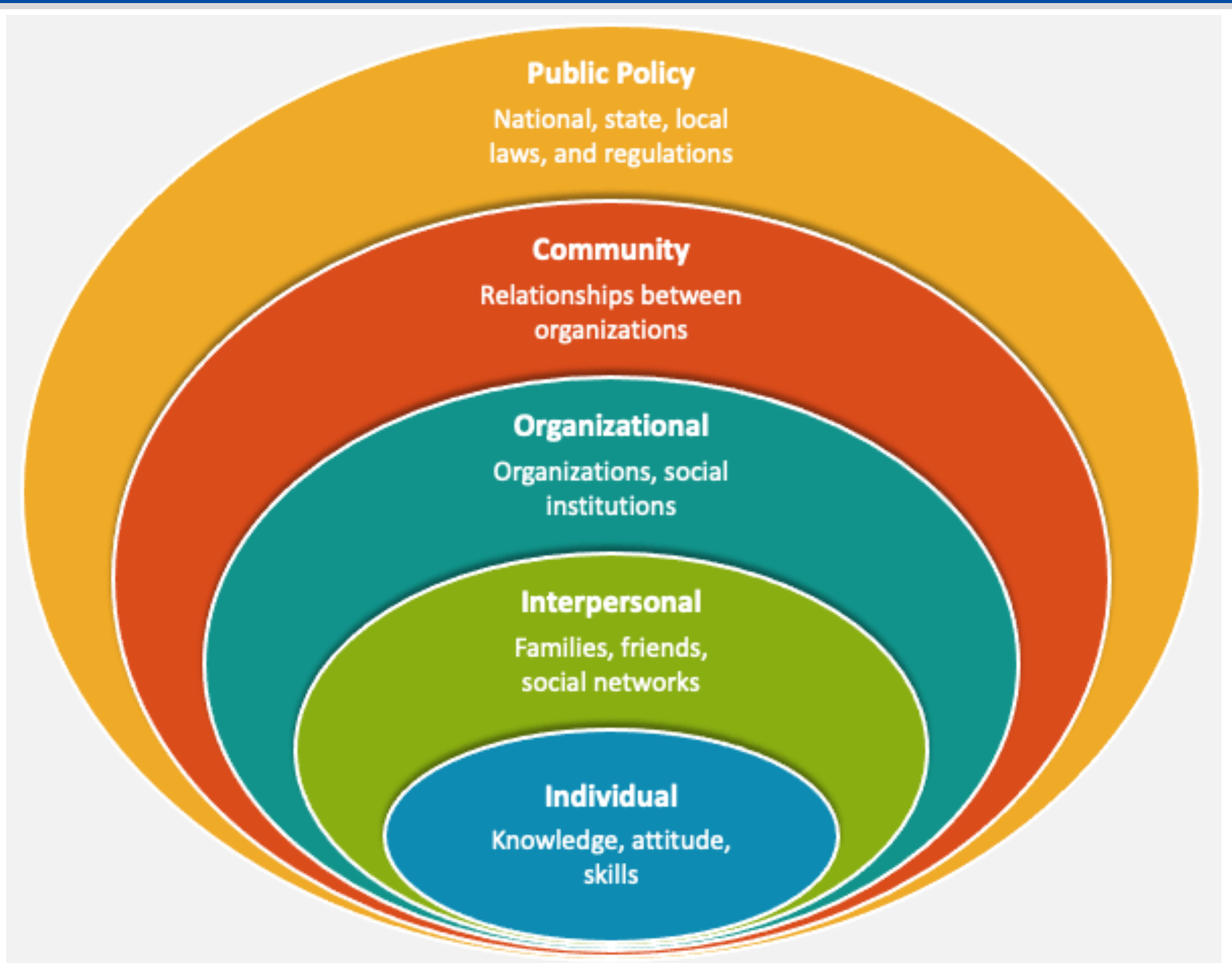
Utilize financial strategies
- Alter incentive/allowance structures
- Access new funding
- Fund and contract for the clinical innovation

Waltz T et al, Implement Sci, 2015

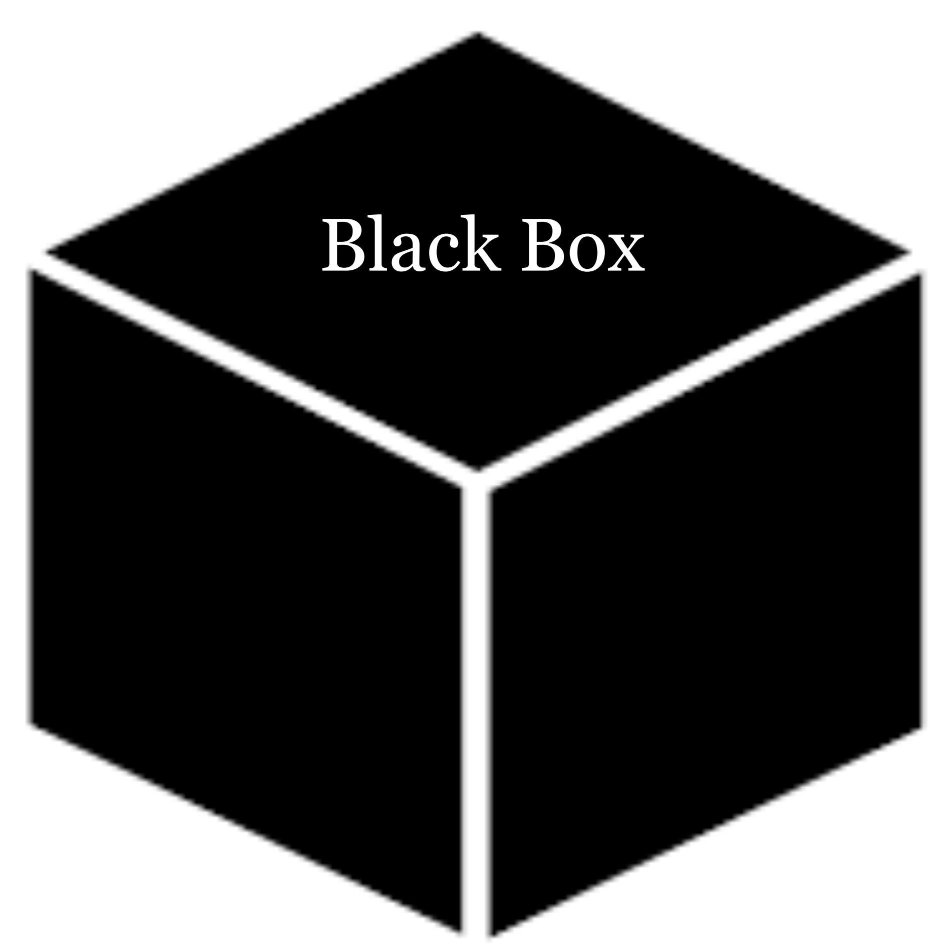
Understand the Barriers and Facilitators to Guide Selection and Tailoring of Implementation Strategies

- Essential to understand the implementation barriers and facilitator in order to guide implementation strategy(ies) to select
- Crucial to examine multi-level barriers and facilitators
- When strategies don't work as planned, it is critical to either re-assess barriers and/or tailor implementation strategy
- The Socioecological Model is an excellent framework to examine facilitators and barriers

Socio-Ecological Model – Multi-level



Selecting Your Intervention Strategy (or Strategies)



Selecting Your Intervention Strategy (or Strategies)

Concept Mapping

Group Model Building

Conjoint Analysis

Intervention Mapping

BUNDLE A | BUNDLE B | BUNDLE C

Buy | Buy | Buy

Require advanced methodological skills – not always easy!

Powell BJ et al, J Behav Health Svs Res, 2015

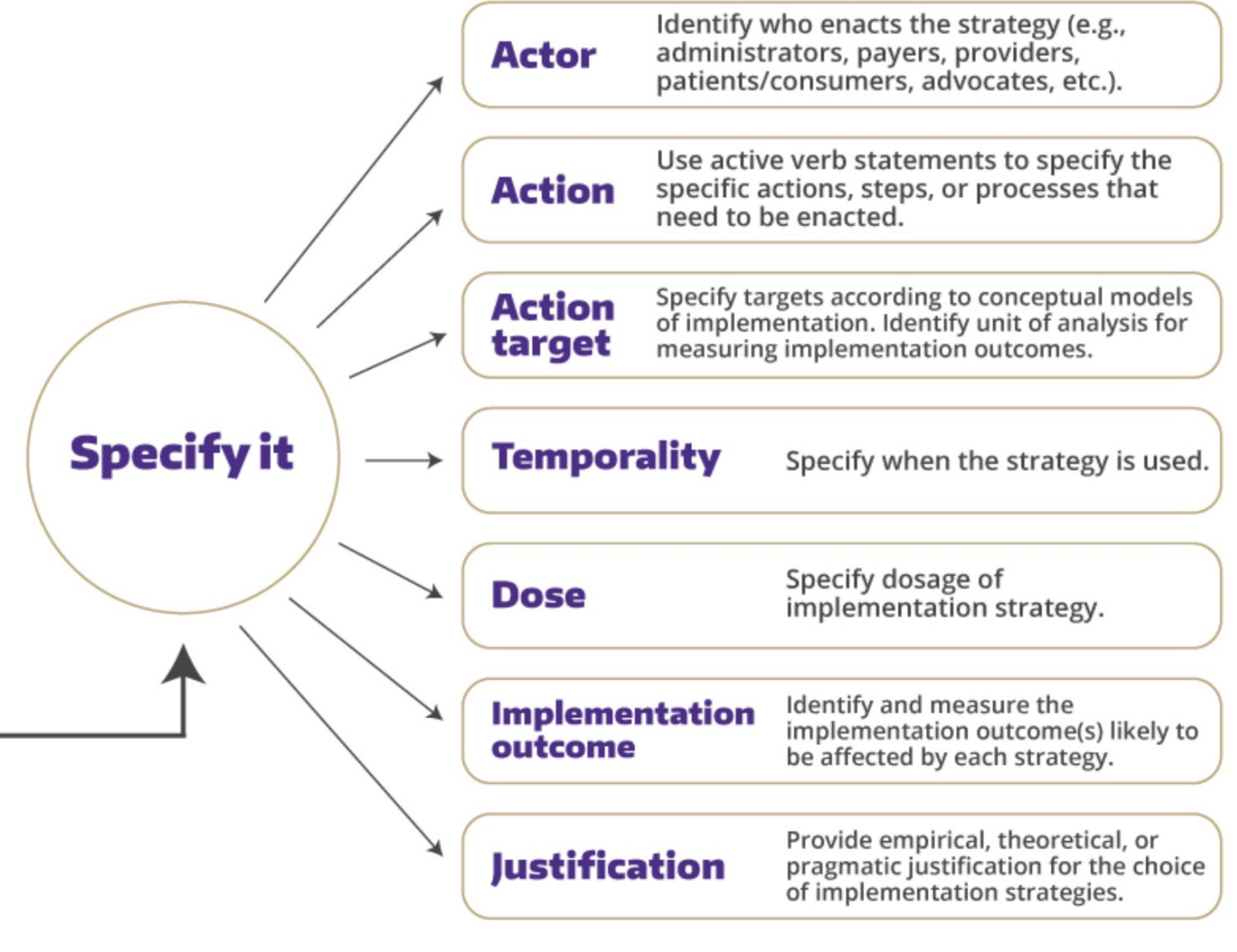
Specifying and Reporting Implementation Strategies for Reporting

Name it

Name the strategy, preferably using language that is consistent with existing literature

Define it

Define the implementation strategy and any discrete components operationally



Proctor EK et al, Implement Sci, 2013

Use of the Consolidated Framework for Implementation Research (CFIR) to Guide Selection

Strategy Design

Although the prospective use of the CFIR has been relatively infrequent, the CFIR can be used to inform design of implementation strategies. After completing a context assessment and identifying barriers and facilitators to implementing an innovation, strategies to mitigate barriers and leverage facilitators can be identified. This process can also be used to refine implementation processes through the course of implementation.

If you are using the CFIR to identify potential barriers to implementation, this knowledge can be used to help guide choice of implementation strategies to mitigate those barriers.

We have developed a tool that helps you "match" strategies to address barriers that were identified using the CFIR. Our published article describes how this tool was developed and its limitations. This article is also highlighted in our Blog section.

Implementation strategies were drawn from the Expert Recommendations for Implementing Change (ERIC) list of strategies. These strategies are described within the following articles:

- Powell et al 2015: **This article lists all 73 ERIC strategies with short descriptions. Longer rationale and descriptions are documented in Additional File 6 published with this article.**

CFIR x ERIC Matching Tool

Consolidated Framework for Implementation Research

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Updated CFIR x ERIC Matching File

Please provide your contact information to download the updated CFIR x ERIC Matching File.

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Balancing the Selection of Strategies

Examples of Tailoring Strategies to Determinants (i.e., Barriers)

Identified Determinant*	Implementation Strategy
Lack of knowledge	Interactive educational sessions
Perception/reality mismatch	Audit and feedback
Lack of motivation	Incentives and sanctions
Beliefs and attitudes	Peer influence / opinion leaders
Systems of Care	Process redesign

* Often there is a mismatch between the perceived barrier and the strategy selected (level) or that the dose of the strategy is insufficient to overcome the barrier.

Tailoring of Strategies to the Local Context

"… strategies to improve professional practice that are planned, taking account of prospectively identified determinants of practice. *Determinants* of practice are factors that could influence the effectiveness of an intervention … and have been … referred to [as] barriers, obstacles, enablers, and facilitators [within the context in which the intervention occurs]."

"… can be effective, but the effect is variable and tends to be small to moderate. The number of studies remains small and more research is needed, including … studies to develop and investigate the components of tailoring (identification of the most important determinants, selecting interventions to address the determinants)."

Baker R et al, Cochrane Database Sys Rev, 2015

Tailoring Implementation Strategies Involves Several Steps

- Assess and understand determinants within the local context
- Identify change methods (theoretically and empirically based techniques that influence identified determinants) to address those determinants
- Develop or choose strategies that use those methods to address the determinants (i.e., barriers.

Kok G, Health Psych Rev, 2016
Bartholomew ELK, 2016 [book]

Most Important Factors Influencing the Selection of Implementation Strategies

Factor	Somewhat %	Extremely %
Relevance *Does the strategy have direct relevance to the barrier?*	14.8	85.2
Improvement opportunity *Will this strategy make a big impact?*	34.4	63.9
Feasibility *Can the strategy realistically be applied to the barrier?*	38.5	53.3
Validity *Is the evidence base for the strategy compelling?*	62.3	24.6
Level of difficulty What are the work and resource requirements for the strategy?	51.6	20.5

* Factors incorporated into the CFIR-ERIC tool

Waltz TK et al, Implement Sci, 2019

Effectiveness of Clinical Practice Guidelines for Implementing Strategies in Public Health (Meta-Analysis)

Outcome / Strategy	Process				Patient	
	Single strategy		Multifaceted strategy		Multifaceted strategy	
	Significant positive result	No statistically significant difference	Significant positive result	No statistically significant difference	Significant positive result	No statistically significant difference
Audit and feedback ✗	–	–	–	– Adherence outcome/long-term (6 studies) [29] – Adherence outcome (4 studies)[a] [29] – Adherence outcome (4 studies)[a] [29] – Physician adherence (12 studies) [30]	–	– Disease target results in the long term (3 studies) [29]
Organizational culture ✓	– Physician adherence (14 studies) [30]	–	– Physician adherence (17 studies) [30]	–	–	–
Educational interventions ✓/✗	– Physician adherence (15 studies) [30]	–	– Physician adherence (26 studies) [30]	– Adherence outcome/short-term (6 studies) [29] – Adherence outcome/long-term (8 studies) [29] – Adherence outcome (4 studies) [29]	– Disease target results in the short term (6 studies) [29] – Disease target results in the long term (5 studies) [29]	– Mortality in the short term (3 studies) [29] – Mortality in the long term (4 studies) [29] – Hospitalizations in the long term (4 studies) [29]

Perreira VC et al, Health Res Pol Sys, 2022

Effectiveness of Guideline-Concordant Implementation Strategies in Public Health (Meta-Analysis)

	Single		Multifaceted		Patient - Multifaceted	
Patient-directed interventions ✓/✗	– Physician adherence (5 studies)[a] [30]	– Physician adherence (5 studies)[a] [30]	–	– Physician adherence(14 studies)[a] [30] – Physician adherence (15 studies)[a] [30]	–	–
Reminders ✓	– Physician adherence (15 studies) [30]	–	– ✗	– Physician adherence (22 studies) [30] – Adherence outcome/long-term (6 studies) [29] – Adherence outcome (4 studies) [29]	– ✗	– Disease target results in the long term (3 studies) [29]
Educational meetings ✗	–	–	–	– Adherence outcome/long-term (6 studies) [29] – Adherence outcome (4 studies) [29]	–	– Disease target results in the long term (3 studies) [29]
Information and communication technology ✗	–	–	–	– Adherence outcome/long-term (6 studies) [29] – Adherence outcome (4 studies) [29]	–	– Disease target results in the long term (3 studies) [29]
Academic detailing ✗	–	–	–	Adherence outcome/long-term (6 studies) [29] Adherence outcome (4 studies) [29]	–	– Disease target results in the long term (3 studies) [29]

Perreira VC et al, Health Res Pol Sys, 2022

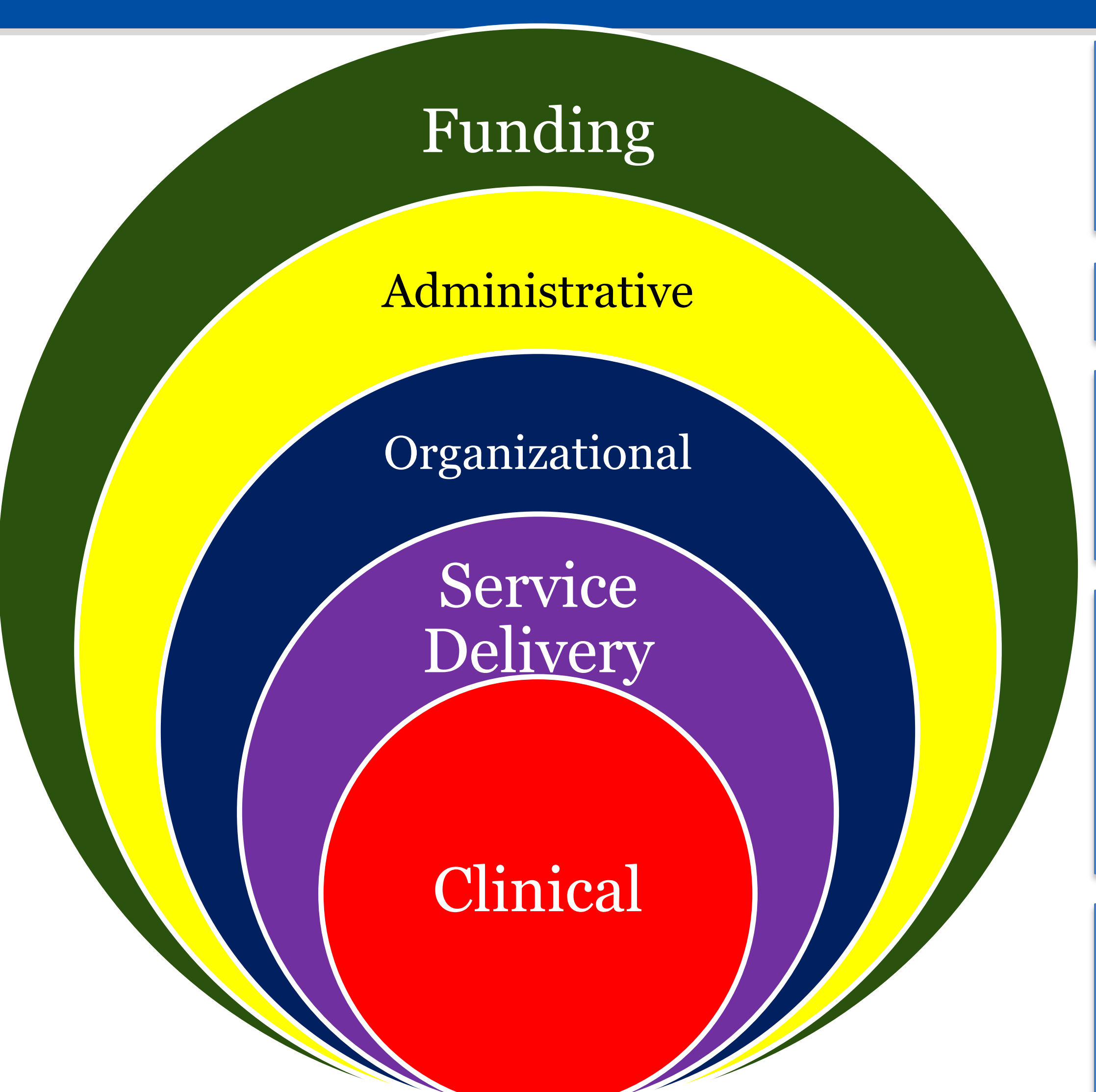
Case Examples: Integrated Care

Facilitation Strategies for Integrated Care: Systematic Review of Integrating Alcohol and Other Drug Services

- A systematic review of 14 studies:
  - *What factors/strategies contribute to or improve integration between AOD services?*
  - *What factors/strategies contribute to or improve integration between AOD and non-AOD services, such as mental health, primary care, housing and other services?*
- The major problems (barriers):
  - Serial treatment: provided before or after treatment of other conditions
  - Siloed healthcare delivery system – lack of coordination
  - Lack of training and support for specialty treatment conditions
- Strategies often targeted several levels, sometimes in combination

Slavic M et al, Sub Abuse Treat Prevent Policy, 2017

Facilitation Strategies Used for Each Level of Service Delivery Integration



System investment (funding)
Inter-departmental collaboration
Co-funding of service delivery

None: Executive sponsorship

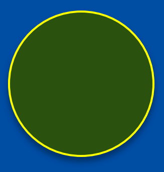
Inter-agency agreements (MOA)
Common agency goal-setting
Co-location of services

Staff training
Information sharing
Case management
Referral services
Professional networks

Screening practices
Joint care planning – teams
Staff supervision

Slavic M et al, Sub Abuse Treat Prevent Policy, 2017

Funding: System Investment



- **Barriers**
  - Reimbursement did not allow clinicians to bill for both physical health (i.e., primary care) and behavioral health (i.e., addiction treatment) on the same day
  - Same-day billing was not allowed for both physicians and counselors or therapists
  - Lack of AOD support services (i.e., supervised detox or residential treatment programs or counseling) in the community, reducing access to referral services (mostly due to insufficient behavioral health funding)
- **Suggested strategies**
  - Change in reimbursement to allow for same-day billing for individuals with ICD-10 codes for both physical and behavioral health diagnoses
  - State bloc grants to support supplemental community services (e.g., counseling for both psychiatric and substance use disorders)

 Urada D et al, Sub Abuse Treat Prevent Policy, 2014

Organizational: Co-Location of Services

- **Barriers**
  - FQHCs had behavioral health counselors (SWs) either within or nearly in the FQHCs – they provided audit and feedback to clinicians to screen for AODs (↑ number of patients referred to behavioral health) ***but*** …. ↑ SW caseload with "urgent" referrals decreased ability to care for chronic patients.
  - Primary care providers did not have confidence to screen and treat AODs
- **Suggested strategies**
  - *Support Clinician* time by assigning one SW each day to handle urgent referrals (role clarity)
  - Training and education (single training vs sustained telementoring)
  - Audit and feedback

Gurewich D et al, JSAT, 2014
Haddad M, Drug Alcohol Depend, 2015

Service Delivery: Information Sharing

- **Barriers**
  - Primary care clinicians were unaware of how patient is doing with behavioral health
  - Behavioral health unaware of medical problems

- **Suggested strategies**
  - Case coordination conferences → collaborative learning
  - Shared notes (either through EMR or consultation notes)

Lee SJet al, Austral NZ J Psych, 2013
Roberts B, Mental Health Sub Use, 2012

Clinical: Screening and Treatment

- **Barriers**
  - Clinicians did not feel comfortable screening and/or treating AODs
  - Screening activities took too long for their limited clinic time
  - Screening involved too many conditions (alcohol, tobacco, other drugs, depression)
- **Suggested Strategies**
  - Train and educate clinicians – initial vs continuous
  - Use QR code to have patients self-screen in waiting room
  - Train and task-shift screening to others
  - Use simplified and/or broad-based screening instruments (tools)
  - Audit and feedback

Sterling S, Current Psych Rep, 2012
Lubman DI, Mental Health Sub Use, 2008

Summary

- We need implementation strategies!
- There are still "black boxes" related to implementation strategies!
- We need better tools to identify and select the right ones – including combinations across multi-level barriers!

Questions?