



PIRE

Dissemination and Implementation Science
Immersive Training

Why are we here and what are we talking about?



Module 1

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Let's get to know each other

- What is your job title?
- What is your research and evaluation experience?
- What is your experience with D&I research?





T1

BENCH

Can we
invent a
solution to
a health
problem?



T2

BEDSIDE

Could the
invention
work in
humans?



T3

PATIENTS

Does it
benefit
patients?



T4

PRACTICE

Can it be
delivered
reliably in
practice?



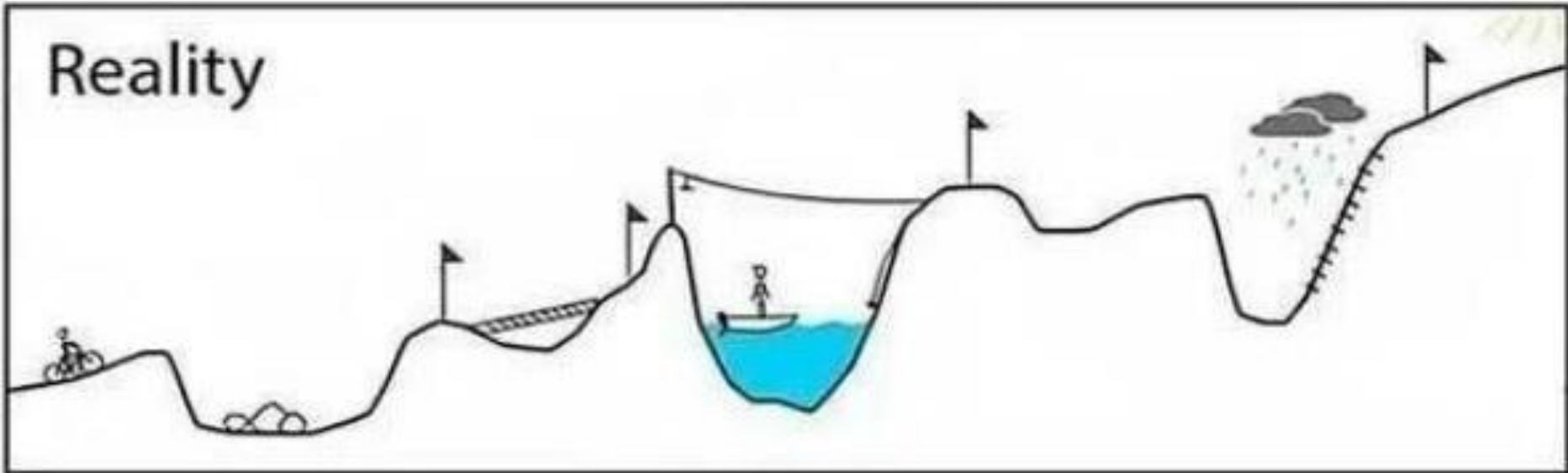
**PUBLIC
HEALTH**

Does it
improve
public health?

Your plan



Reality



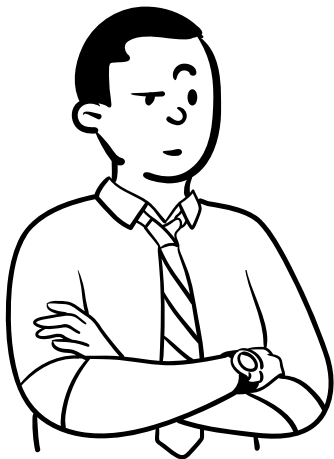
I had this great food rescue program going, but the delivery drivers didn't want to pick up the produce

They asked me to teach this class, but no one showed up.

We used to do that program and I think it worked, but it just cost too much to continue

I've never heard of the physical activity guidelines, so how am I supposed to follow them?

The program's supposed to be 4 weekly classes, but that's too much driving... I just combined it all into a Saturday workshop



Even if 100% effective, impact depends on:

- 1) Adoption
- 2) Training
- 3) Fidelity (Implementation)
- 4) Access (Reach)
- 5) Sustainability (Maintenance)

50% threshold for each step=
 $.5 * .5 * .5 * .5 * .5 =$
3% benefit



Traditional, highly-controlled RCTs versus real-world settings.



"Voltage drop" of effectiveness.



What is most relevant to the stakeholders?



What is your
working
definition of
D&I?

Dissemination and implementation science is defined as a growing research field that seeks to inform how evidence-based interventions can be successfully adopted, implemented, and maintained in their intended settings.

Terminology challenges for D&I



Dissemination

- The targeted distribution of information and intervention materials to a specific audience. The intent is to spread knowledge and the associated evidence-based interventions.

Implementation

- The use of strategies to adopt and integrate evidence-based interventions and change practice patterns within specific settings.

Pragmatic

- Under “usual” conditions – relevant to community partners AND rigorous.

Terminology challenges for D&I



D&I in health emerged as a relatively new field

Non-health fields informed the development of D&I in the health context

Contribution from various health-related areas

Differences in terminology across countries

Inconsistency and variation in terminology and classification

Terminology challenges for D&I



Dissemination and
implementation
research and
practice

Implementation
science

Translational
research

Knowledge
translation and
integration

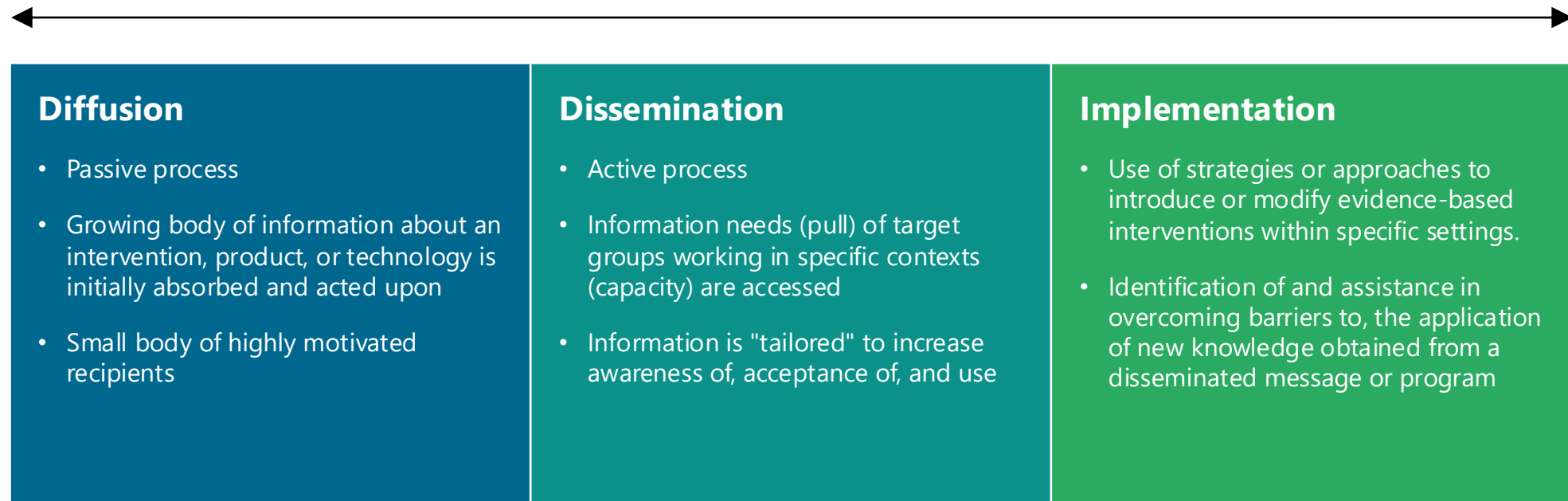
Population health
intervention
research

Scaling up

Diffusion-Dissemination-Implementation Continuum

Discovery/ Development

Delivery



Non-scientific implementation science language

The intervention/practice/innovation is **THE THING**

Effectiveness research looks at whether **THE THING** works

Implementation research looks at how best to help people/places
DO THE THING

Implementation strategies are the stuff we do to try to help
people/places **DO THE THING**

Main implementation outcomes are **HOW MUCH** and
HOW WELL they **DO THE THING**

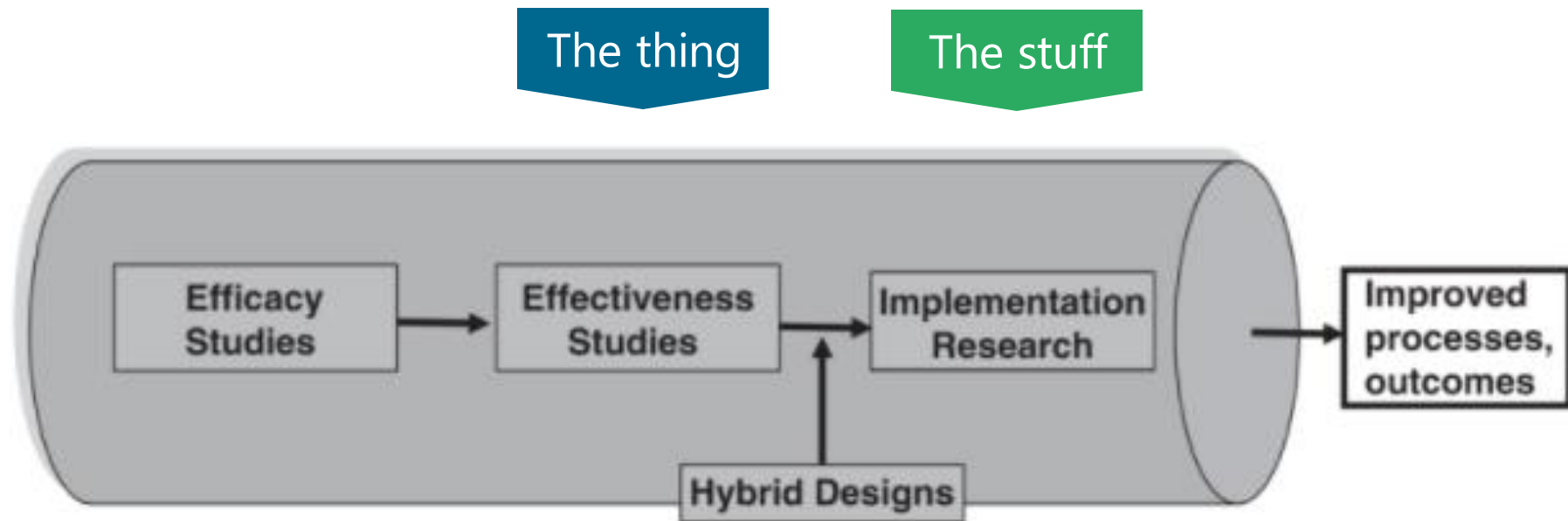


FIGURE 1.
Research pipeline.

Key Issues in Implementation Science

Contextual

Complex

Multi-component programs and policies

Non-linear

Transdisciplinary

Multi-level

Addresses messy, important problems

Breakout Room Prompts



Create a team name

What do you know about dissemination and implementation science (D&I)? How did you learn about it?

What do you want to learn about D&I?

Applying D&I to PIRE research and evaluation



Methods



Models



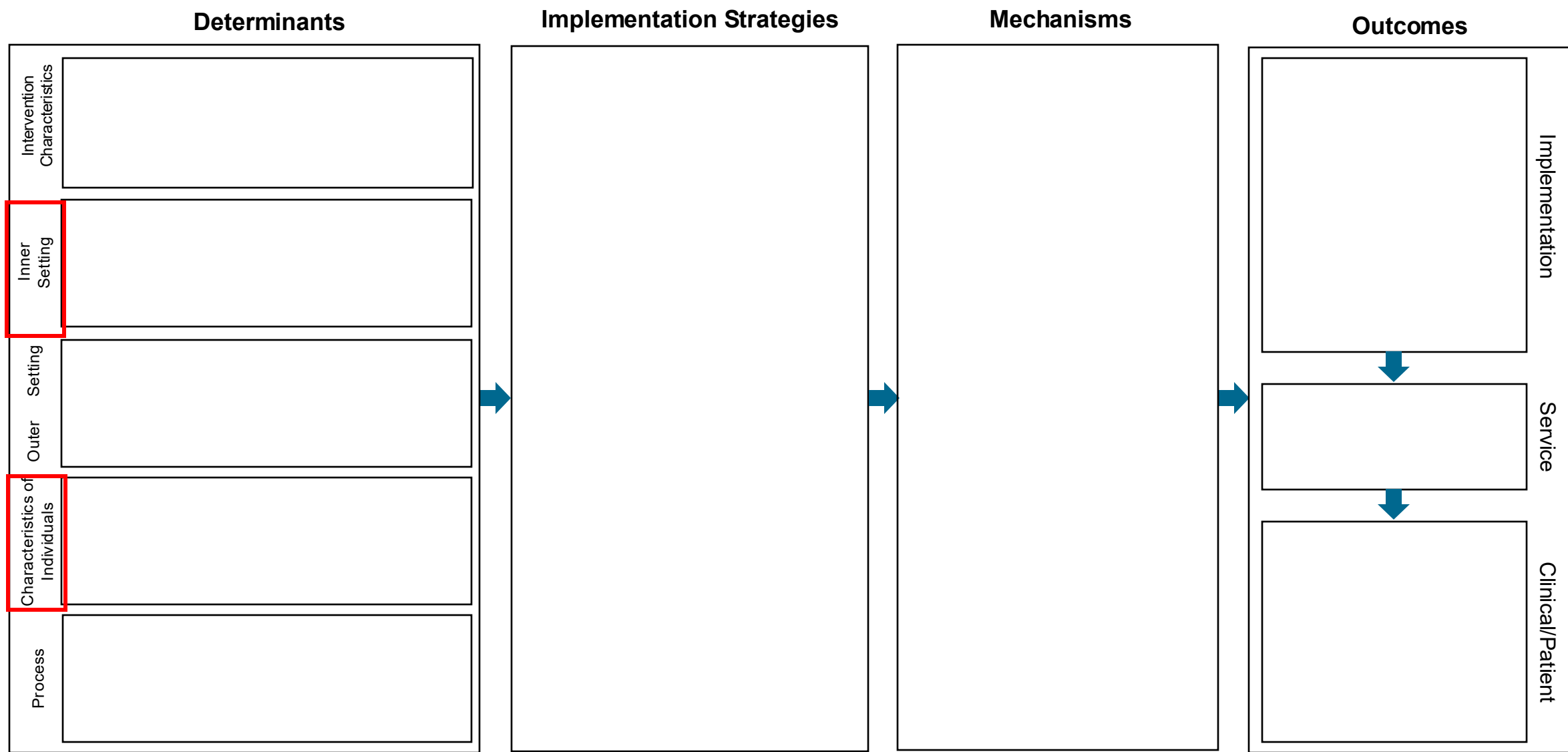
Measures

Methods

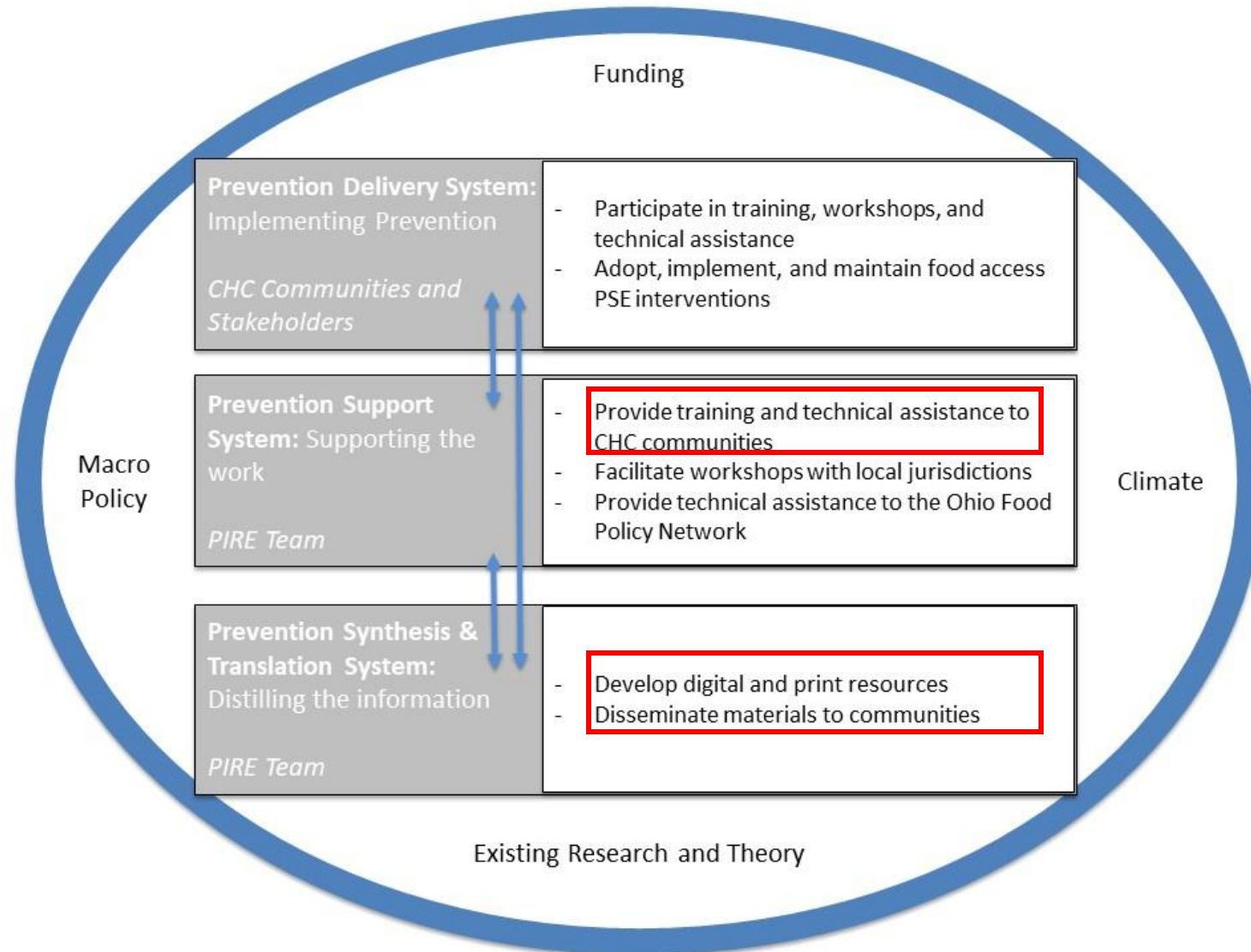
Implementation strategies included in technical assistance		
Implementation Strategy	Description	Rationale
Develop an action plan (during training); Review action plan	Create a plan with goals and strategies for implementing food access PSE interventions. Share with all involved staff and stakeholders (e.g., assistants, volunteers). Modify as needed over time.	Without documentation on the purpose of the intervention, core components, and priority population to reach, program drift may occur. ²⁴
Conduct local needs assessments	Encourage CHC communities to use results of stakeholder input processes to justify the need for adopting and implementing specific food access PSE interventions. Conduct additional needs assessments as needed.	Systematic needs assessments lead to implementation of interventions that reflect community needs rather than individual “wants”. ^{25,26}
Conduct ongoing training	Technical assistance is provided after training and is offered over seven months, giving participants time to integrate increased general and innovation-specific capacity with what happens “on the job”.	One-time trainings often do not lead to sustained changes in practice. ^{27,28} Follow-up technical assistance builds innovation-specific capacity to adopt and implement evidence-based interventions.

Methods (continued)

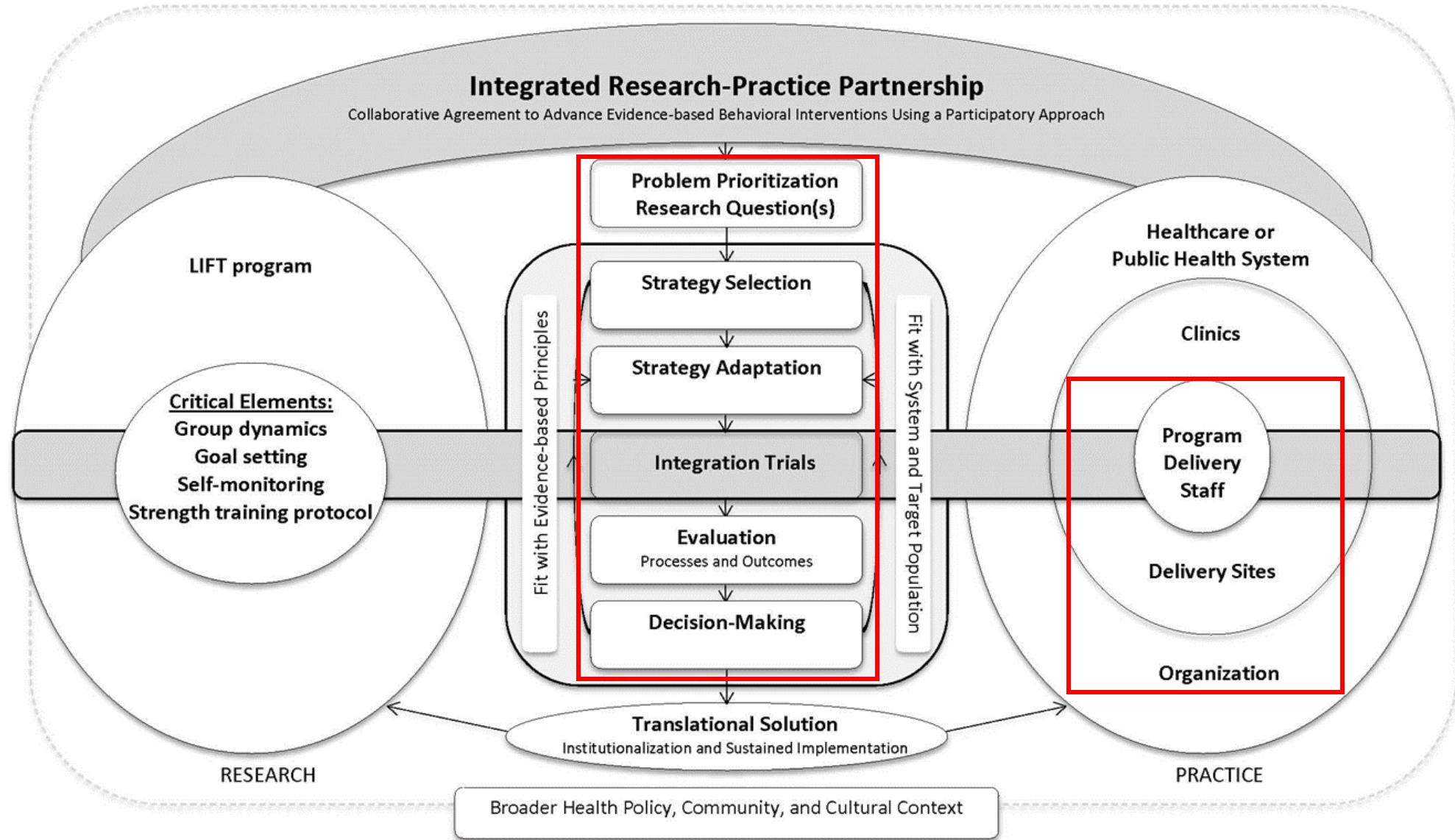
Implementation strategies included in technical assistance		
Implementation Strategy	Description	Rationale
Obtain commitments	Clarify community partners' roles and responsibilities. For example, coalitions may include task forces for different components of PSE implementation, such as seeking sponsorship and funding or hosting a kick-off event. Consider formalized agreement documents if needed.	A formalized commitment has been shown to increase intervention uptake and trust between stakeholders (i.e., each representative holding up their end of the arrangement). ²⁹
Provide local technical assistance	Focus on local implementation issues affecting CHC communities and address barriers.	Localized assistance allows us to address the infrastructure issues communities may face when implementing food access PSE interventions. ³⁰
Provide ongoing consultation	Provide feedback on CHC communities' implementation of food access PSE interventions, based on county-specific barriers and discussions on fidelity to core components.	Adaptations to core components of interventions are common, especially in response to contextual factors. ^{24,31} Ongoing discussions are one method of overcoming barriers and improving fidelity. ³²
Shadow other experts	Pair newer delivery agents with those who have implemented food access PSE interventions previously. Facilitate 1-1 meetings between pairs so newer delivery agents partners can "observe" implementation.	Delivery agents who have adopted evidence-based programs (attended training) but not delivered them post-training have shared that shadowing others who have more experience would increase their confidence in implementation. ²⁸



Model



Model



Measures

Implementation Outcome	Level of Analysis	Measurement
Acceptability	Delivery agent	Instructor Post-Program Semi-Structured Interviews
	Participant	Participant Post-Program Survey
Adoption	Delivery agent	Administrative Data
Appropriateness	Delivery agent	Instructor Post-Program Semi-Structured Interviews
	Participant	Participant Post-Program Survey
	Organization	Extension Educator Post-Program Survey
Feasibility	Delivery agent	Instructor Post-Program Semi-Structured Interviews
Fidelity	Delivery agent	Instructor Weekly Process Evaluations
Implementation Cost	Delivery agent	Instructor Pre-Program Cost Analysis Survey
Penetration	Organization	Number, proportion, and representativeness of participants
Sustainability	Organization	Extension Educator Post-Program Survey: Program Sustainability Assessment Tool

Measures

Dimension	Aims and Outcome Measures
Reach: Number, proportion, and representativeness of participants	<u>Aim:</u> To monitor and evaluate 4-H youth participation rate and representativeness <u>Outcome Measure:</u> Pre-program survey (club demographic items)
Effectiveness: Impact on primary outcomes	<u>Aim:</u> To confirm the effectiveness of the 4th H for Health Challenge at increasing proportion of meetings with fruits or vegetables served, water served, and physical activity implemented <u>Outcome Measure:</u> Post-program survey (OST-SBPA questionnaire)
Adoption: Number, proportion, and representativeness of settings and agents who deliver the intervention	<u>Aim:</u> To monitor and evaluate 4-H volunteer adoption rate and representativeness <u>Outcome Measure:</u> Pre-program survey (volunteer demographic items)
Implementation: Degree to which intervention was delivered as intended and the costs associated with continued delivery	<u>Aim:</u> To determine the degree of fidelity to which 4-H Educators deliver the 4th H for Health Challenge and the costs of delivering the Challenge <u>Outcome Measure:</u> Fidelity checklist, including cost of healthy snacks
Maintenance: Long-term change in individual primary outcomes; extent to which implementation is sustained over time	<u>Aim:</u> To determine the degree to which increased proportion of meetings with fruits or vegetables served, water served, and physical activity implemented was sustained at least 6 months following the intervention <u>Outcome Measure:</u> Six-month follow-up survey (OST-SBPA questionnaire) <u>Aim:</u> To compare the proportion of 4-H volunteers who sustain the 4th H for Health Challenge after six months. <u>Outcome Measure:</u> Six-month follow-up survey

Where are we going?



Theories, models, and frameworks



Implementation strategies and how to measure them



Real-world examples: RE-AIM planning and evaluation



Practice-based considerations

A stylized, light blue hand icon with five fingers, positioned on the left side of the image. The background consists of several overlapping, semi-transparent geometric shapes in various shades of blue and green, creating a layered effect.

Questions?