



Adaptation of Together, We Inspire Smart Eating (WISE) for Rural Home Visiting: An Implementation Science Example

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What to Expect



Brief overview of Implementation Science (IS)



Introduction to WISE



Application of IS for WISE delivery in rural home visiting

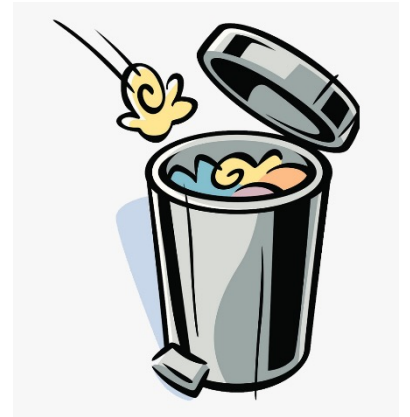


What is Implementation Science?

Advancing Science into Routine

The Problem with Science

- Research Waste = Science Failure
 - Takes 14-17 years to get 14-50% of research into actual practice.
 - Often, the evidence reaches those with the greatest need even less.



Lorenc, T., Petticrew, M., Welch, V., & Tugwell, P. (2013). *J Epidemiol Community Health*, 67(2), 190-193.

The 7 Ps of Innovation

- Research generates a lot of ideas!
 - Products
 - Policies
 - Pills
 - Programs
 - Procedures
 - Principles
 - Practices



Key Implementation Science Terms



Innovation

The evidence-based “**thing**” you are trying to get people/systems to do



Implementation Strategies

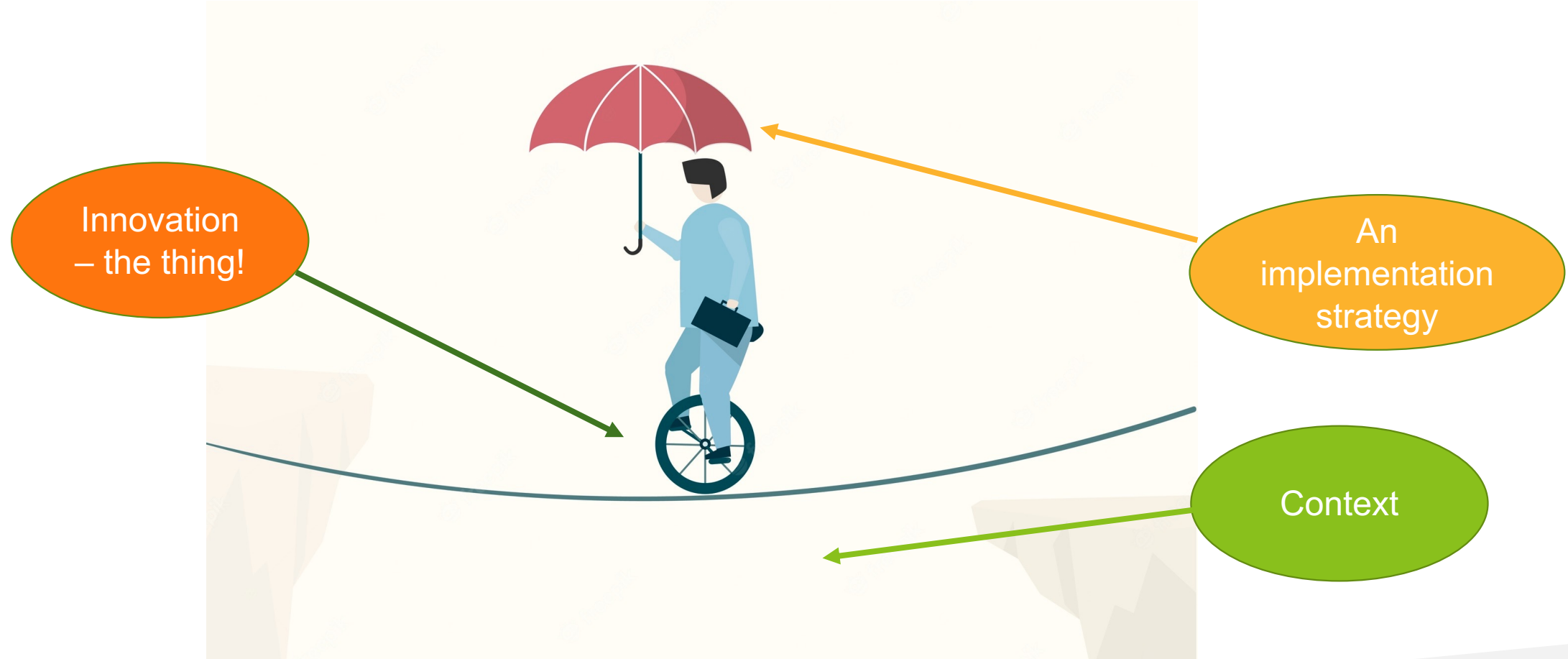
Action taken to get people/systems to do the innovation



Implementation Context

Setting for implementing the innovation;
Inner and outer environmental factors influencing implementation

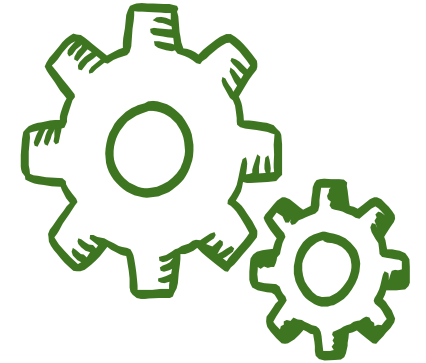
In this Picture...



1. Determine the gap in use of the innovation.
Why does the gap exist and for whom?

2. Select strategies to test with partners!

3. Determine if strategies have equitable impact.



In a nutshell....



What is WISE?

Together, We Inspire Smart Eating



WISE

- 8 Fruit and Vegetable Units
 - Simple, low-cost recipes
- Implemented by Early Care and Education Teachers
 - Weekly lessons



WISE: Evidence-Based Practices

Component	Behaviors
Use of Mascot	<ul style="list-style-type: none">- Uses mascot during activity.- Leads chant with mascot.
Role Modeling	<ul style="list-style-type: none">- Eats food with the children.- Makes positive comments about the target food.
Hands-On Exposure	<ul style="list-style-type: none">- Completes lesson in prescribed group size.- Involves children in lesson.
Positive Feeding Practices	<ul style="list-style-type: none">- Cues hunger and satiety.- Encourages food exploration.- Supports without pressure.





WISE Results

- Improvements in educator knowledge which are sustained
 - Whiteside-Mansell L., Swindle, T., 2017
- Outperforms standard of care for improving child dietary intake; 8% increase in targeted carotenoid levels
 - Whiteside-Mansell L., Swindle, T., 2018
- Parent-reported increases supported by biomarker improvements
 - Whiteside-Mansell L., Swindle, T., 2019
- Children that “pester” their parents more have higher intake of WISE foods and more improvement in related parenting practices.
 - Swindle et al., 2020

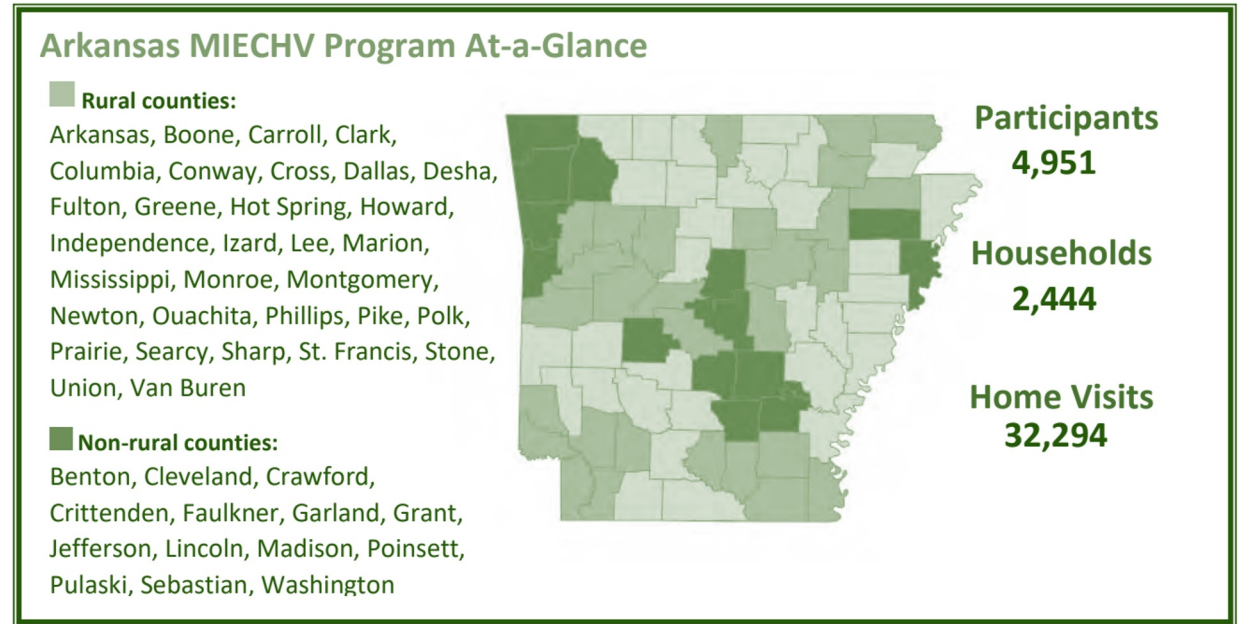


Will WISE work in Home Visiting?

Let's use Implementation Science to find out.

Home Visiting in Arkansas

- 2018 Snapshot:
 - Over 80% of families served affected by low-income
- 8 models
 - Parents as Teachers = initial target
- No standardized nutrition promotion/education program embedded to date



Source: <https://nationalhomevisitingcoalition.org/wp-content/uploads/ar.pdf>

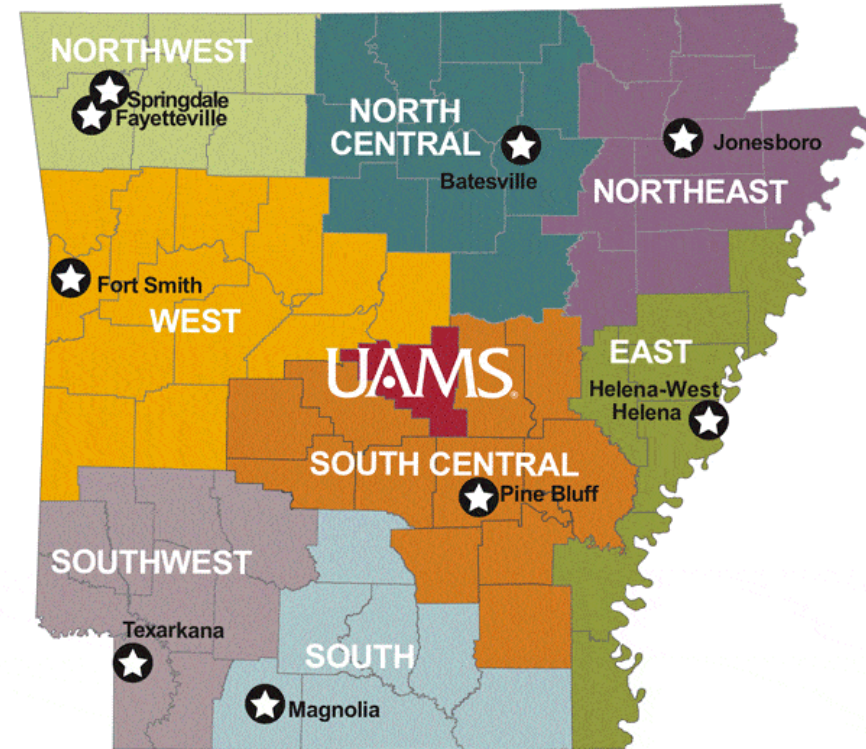


Project Overview

Aim 1		Aim 2	
Pre-Conditions Development	Pre-Implementation Development	Pilot Implementation	Evolution
<ul style="list-style-type: none">• Assess potential barriers.• Adapt intervention to fit HV setting.• Package intervention for HV settings (e.g., core elements).• Package implementation strategies, training, promotional materials, & assessment forms.	<ul style="list-style-type: none">• Collect input from stakeholders (e.g., review draft package, advise on training, plan implementation logistics, refine core elements).• Pre-test & further refine package (5 parent-child dyads).• Interview participants & home visitors on feasibility, acceptance, and barriers.	<ul style="list-style-type: none">• Train Rural Network Center and Home Visitors.• Begin recruitment.• Continue stakeholder meetings.• Collect effectiveness, adoption, and implementation data.	<ul style="list-style-type: none">• Present pilot outcome data to & collect stakeholders' feedback to inform final revisions.• Prepare refined package for external funding application (intervention, training, materials, & assessments).

UAMS AR Rural Research Network

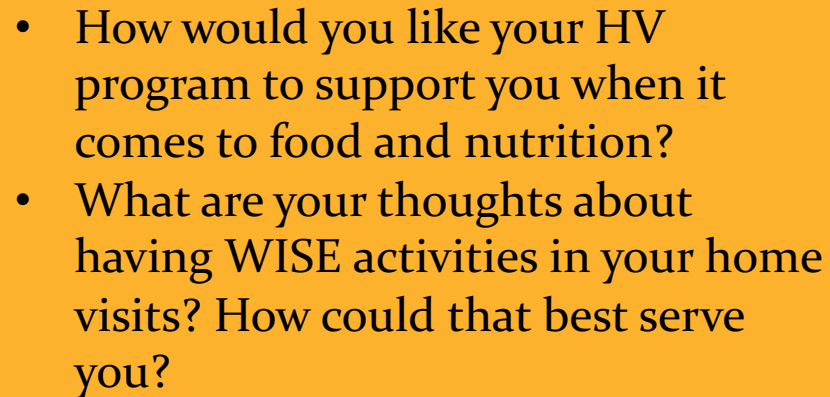
- Research coordinators embedded in clinical programs across the state
- Initial target = north central AR
 - Highest need
 - Interested partners
 - 2 PAT programs

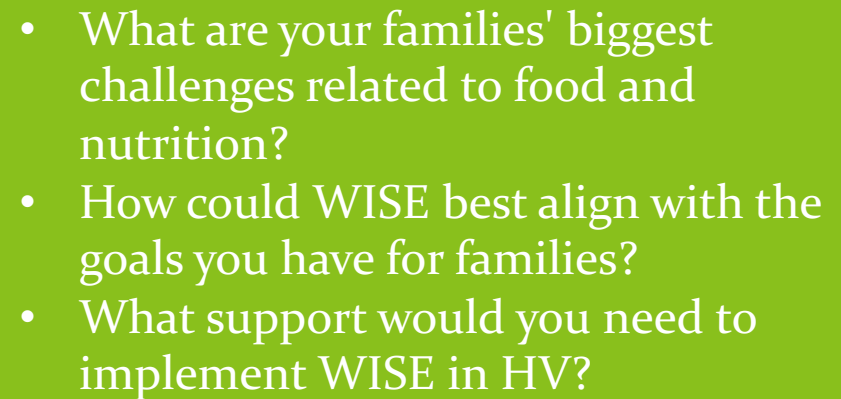




Formative Evaluation to Guide Adaptation

- Parents
 - N = 8 groups with 29 parents
 - 6 English, 2 Spanish
- Interviews with home visitors & administrators
 - N = 11 home visitors
 - N = 4 administrators

- 
- How would you like your HV program to support you when it comes to food and nutrition?
 - What are your thoughts about having WISE activities in your home visits? How could that best serve you?

- 
- What are your families' biggest challenges related to food and nutrition?
 - How could WISE best align with the goals you have for families?
 - What support would you need to implement WISE in HV?



Formative Evaluation to Guide Adaptation

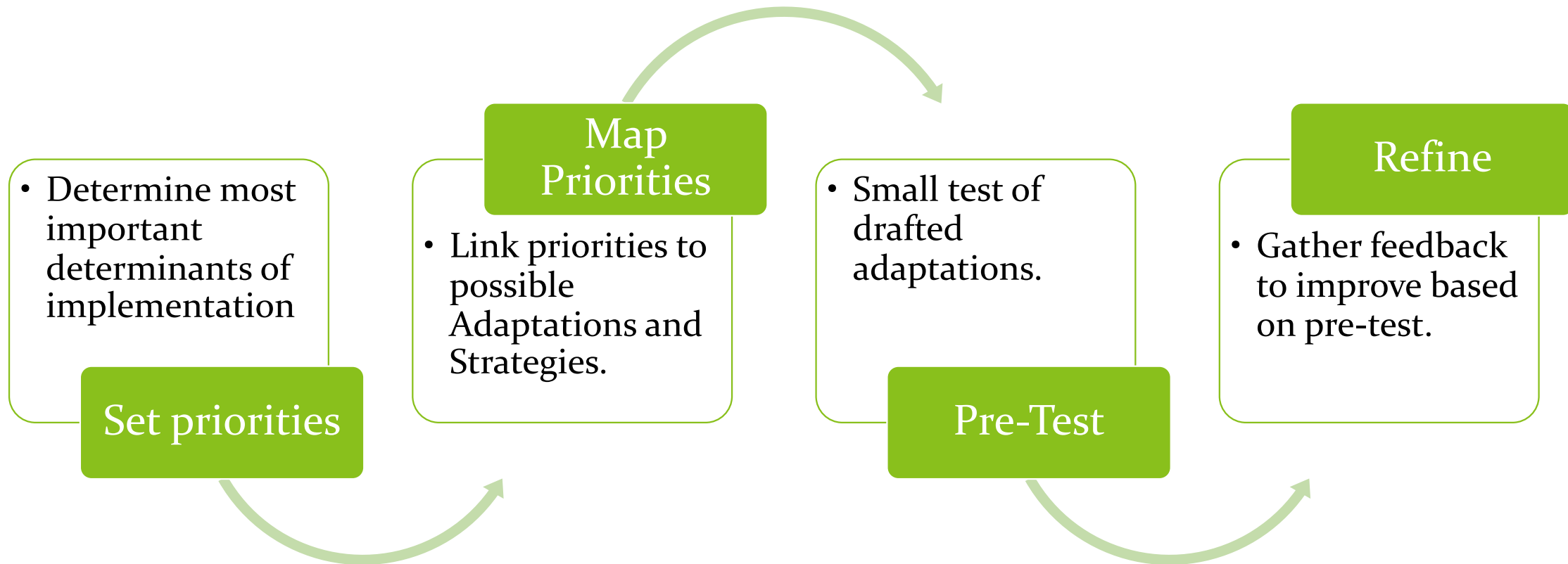
- Parents

- Incentivize engagement.
- Help with picking eating, adding FV to family meals, grocery shopping on a budget.
- Don't extend visits

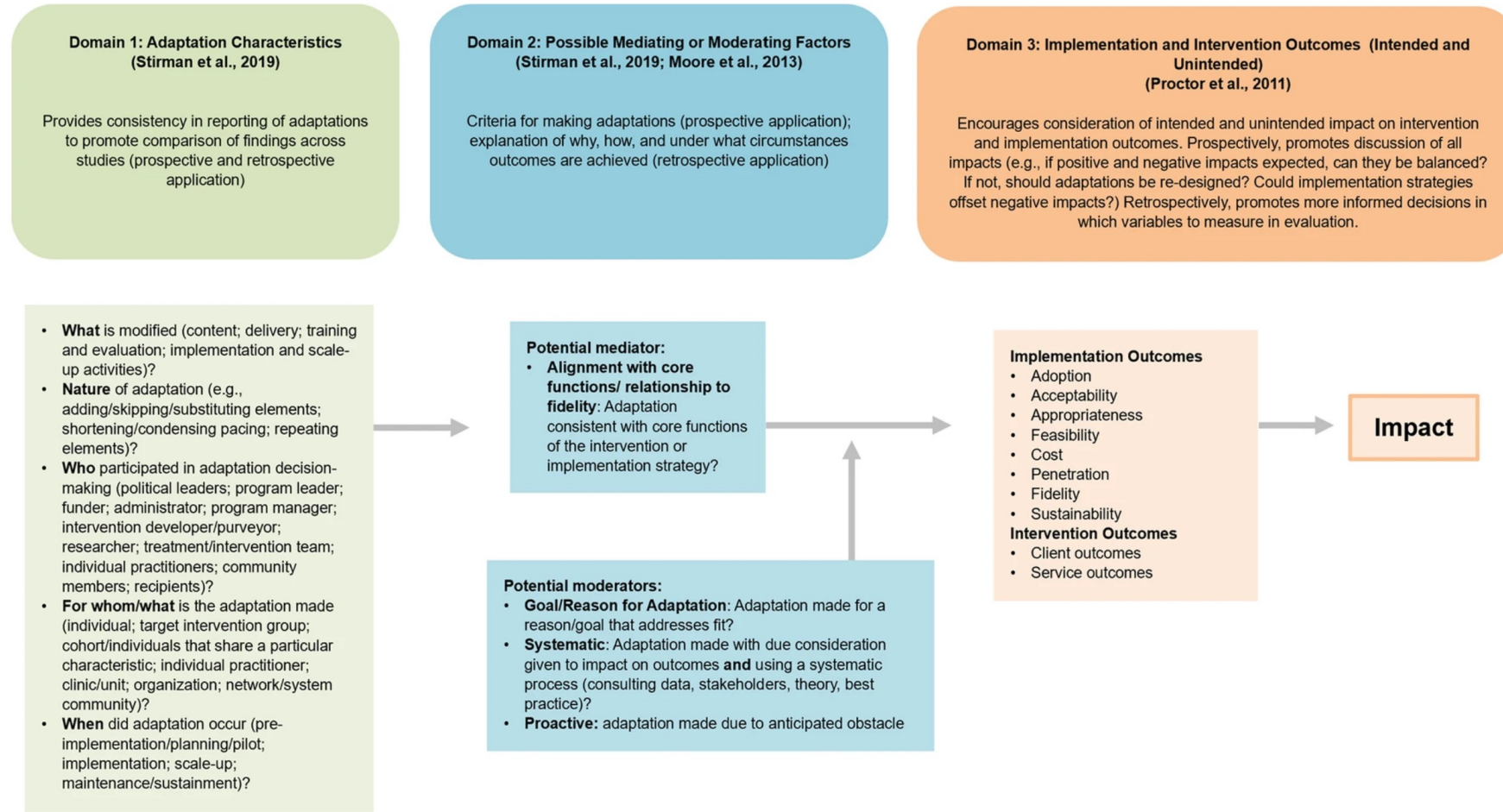
- Home visitors & administrators

- Don't repeat lessons without 2 years.
- Limit lessons 10 20 min, once per month.
- Contact HVs quarterly to extend support.
- Emphasize developmentally-centered parenting

Selecting Adaptations and Strategies



Analysis: Model for Adaptation Design and Impact





Key Suggested Adaptations

Adaptation	What is modified?	Nature of Adaptation	For Whom/What?	Goal/Reason
Integrate with PAT curriculum/milestones	Content of lesson to address PAT milestones	Tailoring lessons to match PAT	Home Visitors	Make it clear how WISE meets PAT objectives to drive use. Avoid creating “extra” for home visitors.
Offer options for lesson delivery	Delivery model	Condensing and providing flexible lesson plan options – 1 parent night, 1 sensory lesson, 3-4 options for other lessons	Home Visitors, Families	Increase HV buy-in by having simple options they can tailor to family interests/needs
Focus on simple recipes	Content of lessons	Reduce lesson set to focus on simplest recipes with shelf-stable options	Agencies	Maximize likelihood that agencies with diverse budget and storing capacities could adopt. Make recipes most accessible to parents
Create simple parent engagement materials/messages.	Content of WISE curriculum	Addition of parent engagement hand-outs	Home Visitors, Families	Increase buy-in from parents with simple, concrete messages and key actions emphasized.



Key Suggested Implementation Strategies

Implementation Strategy	Actor(s)	Action	Temporality	Dose	Justification
Make Training Dynamic	Research staff train home visitors	Provide 6-hour training using hands-on opportunities to practice lessons with feedback.	At beginning of school year	One-time	Make vision of success transparent.
Technical Assistance	Research staff available for scheduled consult	Provide email, text, phone, or zoom consult to home visitors upon request	Ongoing	Upon request	Offer on-demand support for addressing barriers.
Educational resources	Research staff share videos of key concepts	Provide videos role modeling key fidelity concepts.	Beginning after first fidelity observation	Monthly	Validate what is going well. Support improvement in practice.
External Facilitation	External facilitators (i.e., WISE Coaches)	Provide direct support to home visitors.	1 weeks after training for 1 year	Quarterly or more upon request	Support environment to embed change; improving skills/knowledge and/or challenge beliefs.

Adapted Delivery Plan

1 WISE Lesson During the Home Visit



Letter from the farmer



Target food arrives—Hands-on explore the food!

1 WISE Parent/Family “Leave Behind” hands-on food Activity.
*Incentive chart for doing these.



1 WISE Activity for Parent Night



Group Activity and Additional Parenting Education (e.g., shopping on a budget, meal planning)

Parent-Led Activities

Kid-friendly Fruit & Veggie Habits



SERVE FRUITS & VEGGIES AGAIN...AND AGAIN

Let children see
the same foods
in various
forms over time

Be patient.

It may take up to
15x
for kids to be
ready to try
foods you eat

Focus on
trying

new foods without
pressuring kids to "like"
new foods. Get excited
about tasting new foods

from another **WiSE** parent

"I'm even re-learning myself on vegetables and fruits, and trying to incorporate them more in the family."

Try one of Windy's Farm Adventures....



Do a tasting of tomatoes in different forms

1

Wash your
hands

2

Gather 1-2 things
with  from your
pantry



3

Dip & taste:
Use a spoon or whole
wheat crackers



4

Compare to small bites
of the fresh tomato



Talk about it

- Are any of these foods sweet, salty, sour or spicy?
- Do they taste the same or different?
- Are the textures chunky or smooth?
- Ask your child to think of other foods that have tomato in them.
- Look for a tomato picture on the product label.



Label Search



Nutrition Facts

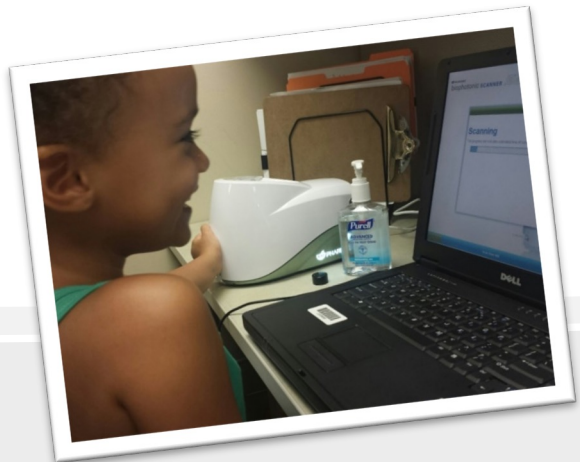
Serving Size	
Servings Per Container	
Amount Per Serving	
Calories	
Calories From Fat	
Total Fat	4.5g
Saturated Fat	1.5g

- Tell your child that all fruits and vegetables, like tomatoes, are "anytime" foods. We can eat these from the garden as much as we want.
- Some products we eat have added sugar, salt, and syrup.
- Read the label ingredients out loud and have your child listen for "tomato". Have them also listen for the words, "sugar", "salt", and "syrup". Remind them that foods with these ingredients are "sometimes" foods that we don't eat very much of.

WISE in HV Pilot

What will we test?

- 6 full units
 - 1 in-home lesson
 - 1 leave behind
 - 1 parent night
 - Parent incentives



What will we measure?

- Parent and child
 - BMI
 - Veggie Meter Score
- Lesson fidelity (SWIVL)
- HV perceived acceptability, appropriateness and feasibility
- Parent perceptions of implementation
- Parenting food practices



Expected Knowledge Gained

Feasibility and acceptability of WISE in HV

Fidelity data to inform strategies iterations

Preliminary effects of WISE in HV

Refined protocol/data collection procedures

 Thanks!



Questions?



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