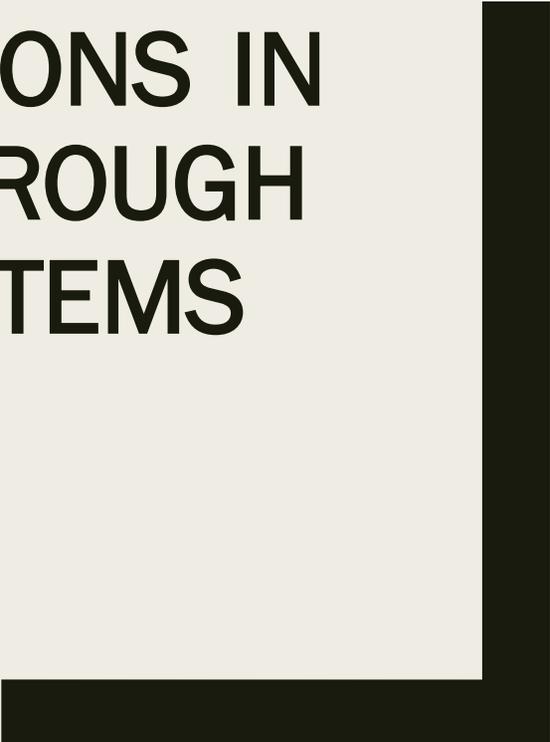




DEVELOPING INNOVATIONS IN HEALTH BEHAVIOR THROUGH AN INTERACTIVE SYSTEMS FRAMEWORK

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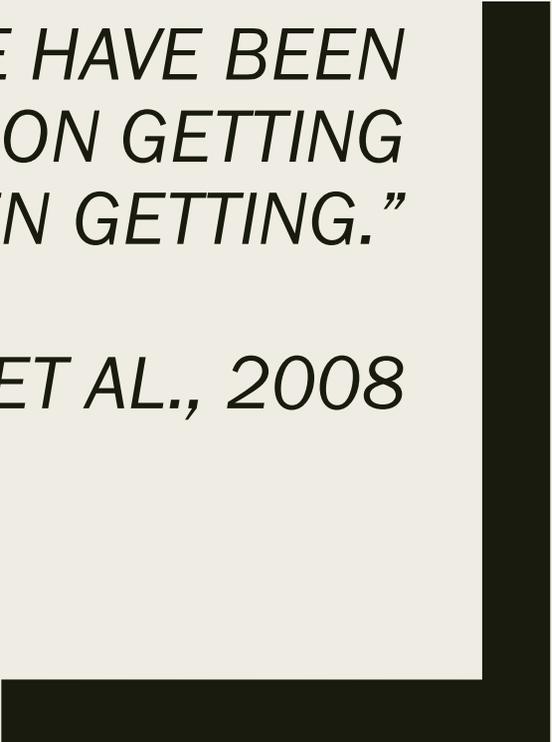
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“IF WE KEEP ON DOING WHAT WE HAVE BEEN DOING, WE ARE GOING TO KEEP ON GETTING WHAT WE HAVE BEEN GETTING.”

-WANDERSMAN ET AL., 2008

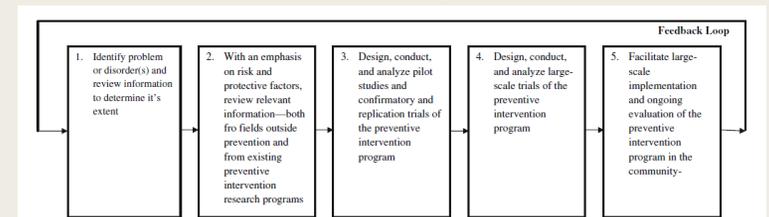


Innovations

- Innovations are new approaches, interventions, or strategies that are informed by scientific theory or empirical evidence (Rogers, 2003; Oldenburg & Glanz, 2008)
 - *Often times innovations are programs, processes, policies or principles*
- The foremost theory on innovation is called Diffusion of Innovations (Rogers, 1962)
 - *Researchers and practitioners have frequently used concepts outlined in the Diffusion of Innovation to disseminate and replicate new practices or procedures (Rogers, 2003; Rogers, 2002)*

Dissemination and Implementation Models

- Research to Practice Models
 - *Based on the perspective of the innovation developer (researcher/source)*
 - *Process goes from creation to marketing*
- Community Centered Models
 - *Based on practice*
 - *Process starts with awareness of the need to change to the incorporation of the innovation into practice/behavior*
- Most models are linear processes that assume that interventions will be adopted



5 step process developed by IOM in 1994 for prevention research in mental health

Gap between Science and Practice

- Dissemination and Implementation Models mostly focus on functions related only to dissemination and implementation, not on:
 - *Infrastructure*
 - *Systems to support and carry out innovations*
- Existing models focus on “what” needs to be done, not “how” innovations will happen
- Existing models are linear in nature and do not represent the feedback loops that occur throughout diffusion and implementation

Interactive Systems Framework (ISF)

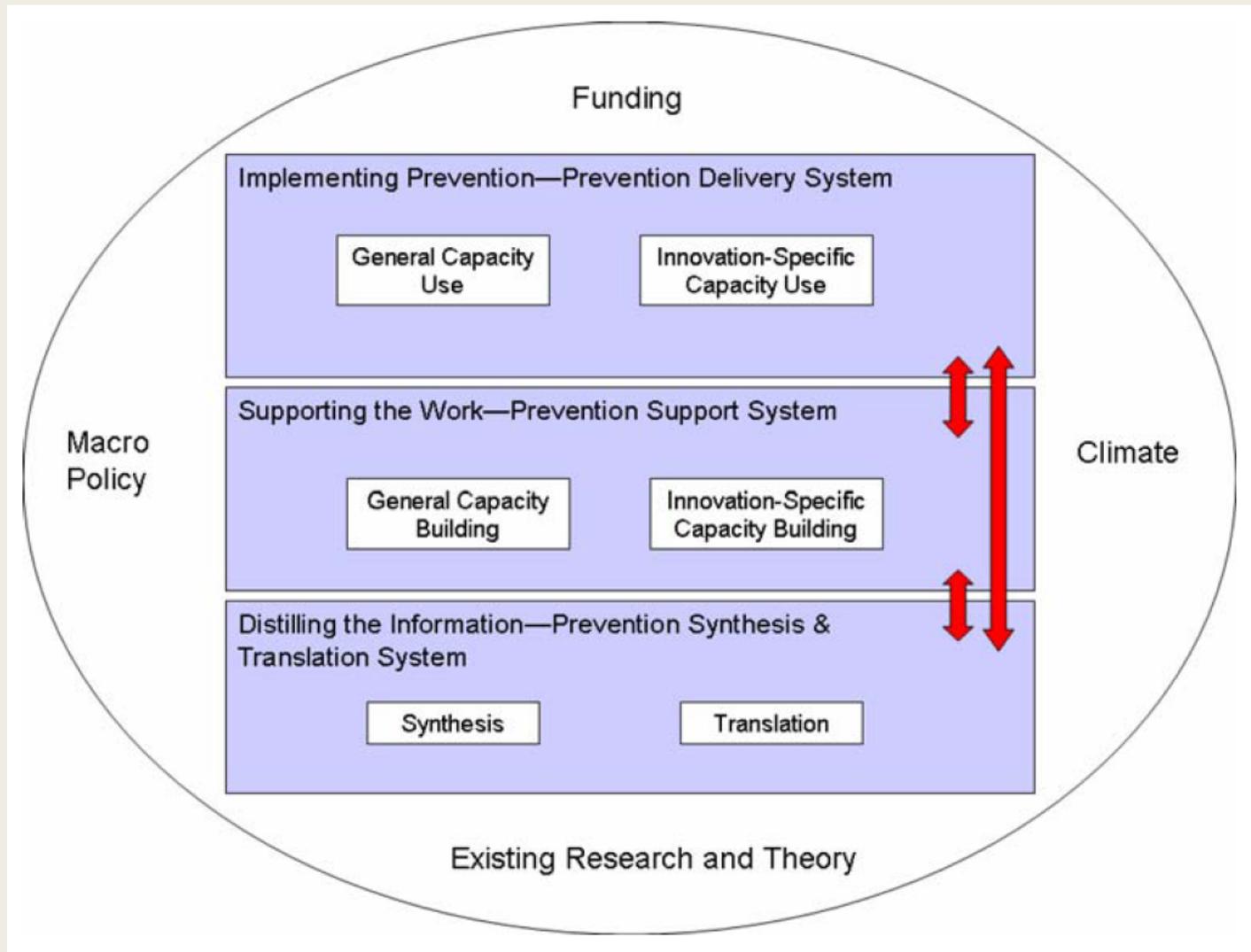
- ISF was developed by Abraham Wandersman and colleagues to disseminate innovations into new settings. Its purpose is to:
 - *Move the development and testing of interventions into widespread use of innovations*
 - *Highlight how building local capacity specific to organizational functioning and innovations are necessary to support, deliver, and disseminate innovations within new settings*
 - *Use aspects of research to practice models and community-centered models*

Overview of the ISF Model

- The ISF has three main components:
 1. *Support System*
 2. *Delivery System*
 3. *Synthesis and Translation System*

Bidirectional arrows connect the three components, which allows for feedback among the systems and culminates in innovations being expanded into different settings

The framework is intended to be used by practitioners, researchers, and other stakeholders to translate promising innovations into new settings using a multidisciplinary perspective
(Lewis, 2012)

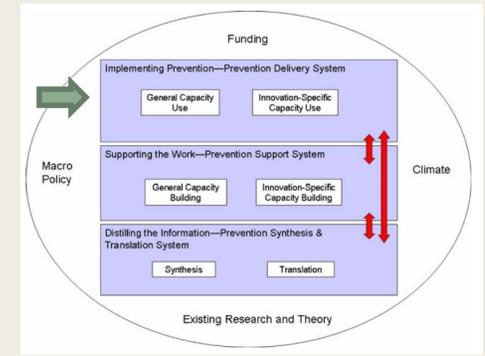


(Wandersman et al., 2008)

ISF Delivery System

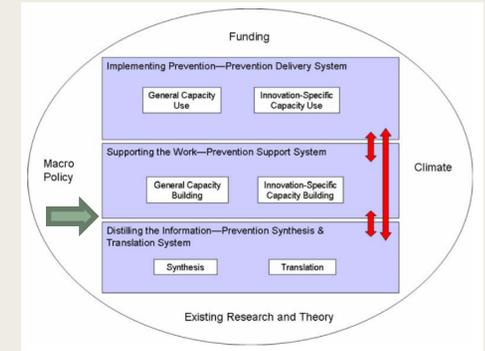
The purpose of the ISF Delivery System is to help *carry out activities* necessary to replicate and adopt innovations

- *Stimulates an environment of innovation for program staff that will enhance organizational functioning (Rogers, 1962)*
- *Promotes a shared culture of innovation including common values and behaviors that support creativity and novel thinking*
- *Assists in developing partnerships with stakeholders relevant to the innovative project*
 - Including the intended target population and community supporters
 - Partnerships inform potential program modifications and add to the potential for dissemination and successful adoption



ISF Support System

The purpose of the ISF Support System is to build **capacity to carry out program activities** (within the Delivery System)



- *Includes general capacity (specifically related to organizational functioning) and innovation-specific capacity (specifically related to program innovation)*
- *Requires supportive functions like training and technical assistance (Wandersman, Chien & Katz, 2012)*
- *Innovators operationalize the general and innovation-specific capacity that they develop to accentuate their programs, leverage resources, and enhance other programmatic aspects of activities*

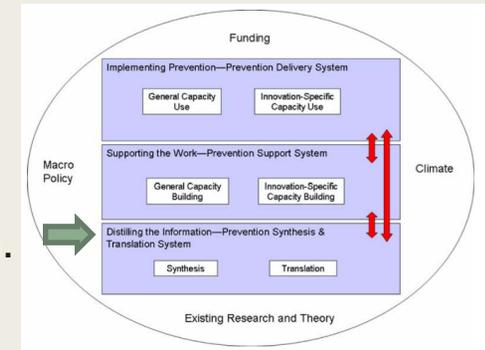
Capacity Building

- **General capacity** necessary to adapt an innovation is developed through capacity building assistance (CBA) focused on organizational functioning.
 - *CBA enhances organizational infrastructure and support, as well as skills in planning, monitoring, dissemination, and sustainability (Lewis, 2012)*
 - *CBA activities are generally provided by a third party, who has experience in the innovation and can help the new adapters implement the program*

- **Innovation-specific** capacity focuses on the program-related aspects of innovations and aims to build capacity necessary to carry out new activities
 - *Activities range from developing protocols and procedures to help staff implement a new program to developing technological expertise to carry out various aspects of the innovation*

ISF Synthesis and Translation System

While an innovation is implemented, new information is generated. This information can be internal and related to how well the innovation fits within the organization or external in terms of an outside evaluation.



- The purpose of the ISF Synthesis and Translation System is to **take information and prepare it for dissemination.**
 - *Synthesis and translation activities are typically carried out by project staff, and then disseminated to stakeholders*
 - *Activities include project reports, presentations, publications, and newsletters*

Examples of ways the ISF is used in Health-Related Research

- School-based settings:
 - *Promoted adoption of the Good Behavior Game intervention to foster supportive behavioral management and positive youth behavior (Halgunseth et al., 2012)*
 - *Implemented a kindergarten transition project using parent environment (Smythe-Leistico, 2012)*
- Community-Based Organizations (CBOs):
 - *Infused a process called Getting To Outcomes to help CBOs introduce science-based approaches into prevention work (Duffy, 2012)*
 - *Built capacity to implement Promoting Science-Based Approaches to Teen Pregnancy Prevention at the community level (Lesene et al., 2012)*
- Grassroots efforts:
 - *Promoted the adoption of evidence-based substance abuse prevention practices (Firesheets, Francis, Barnum & Rolf, 2012)*
- Federal funding entities:
 - *Implemented public health recommendations via CDC Division for Heart Disease and Stroke Prevention and funded state partners (Lane, 2012)*



THE INNOVATIVE TEEN
PREGNANCY
PREVENTION (ITP₃)
PROJECT

Overview of the iTP₃ Project

- The Center for Community Health Development at the Texas A&M School of Public Health was funded by the Office of Adolescent Health (OAH) in July 2015
- Project Purpose: facilitate the creation of innovative programs for teen pregnancy prevention
- Innovation according to OAH is, *“new or promising approaches, interventions, curricula, or strategies informed by scientific theory or empirical evidence that may lead to or have the potential to result in a substantial reduction in teen pregnancy rates, sexually transmitted infection (STIs) rates, and associated sexual risk behaviors.”*

Table 1-2 The 17 Characteristics of Effective Programs*

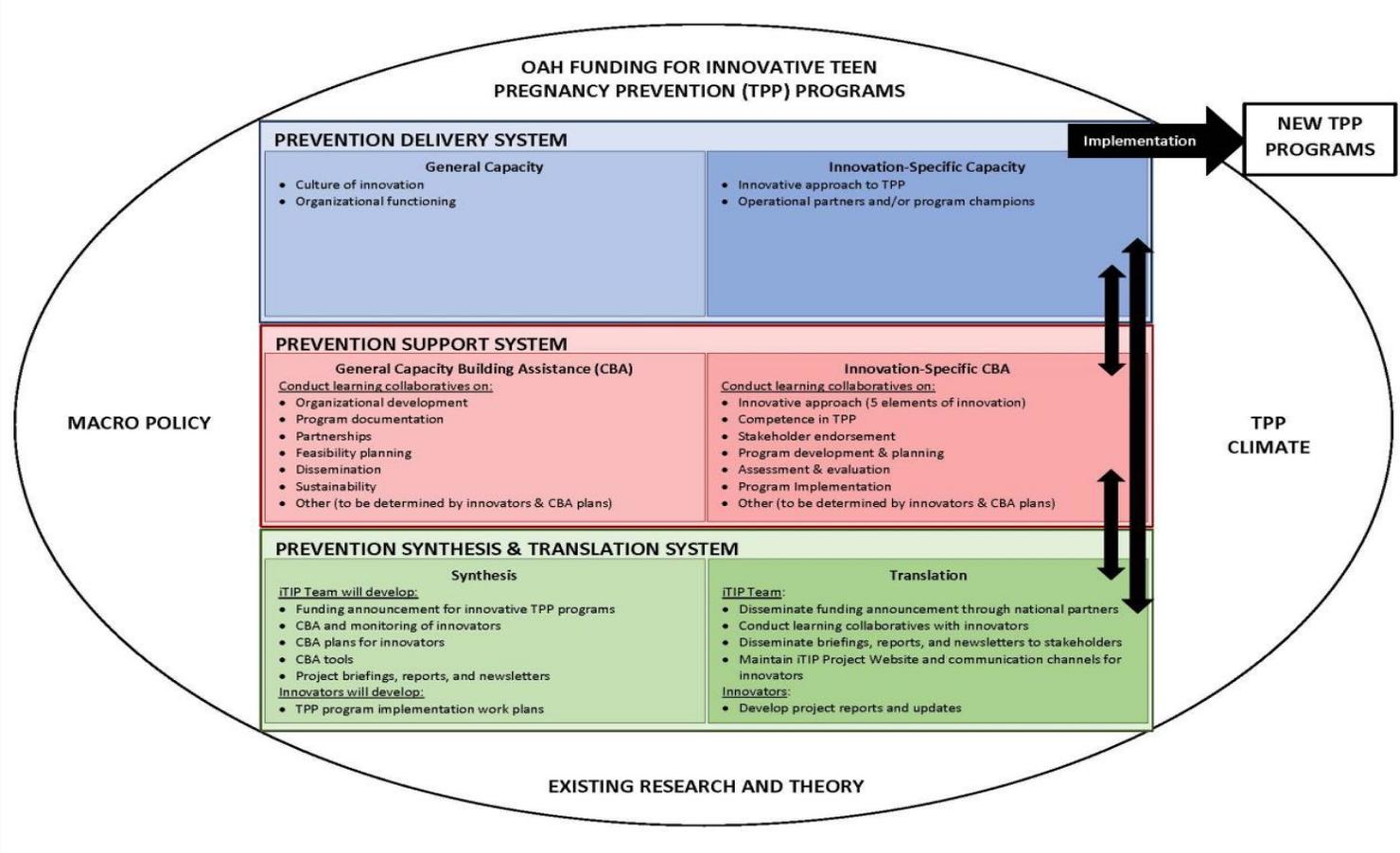
The Process of Developing the Curriculum	The Contents of the Curriculum Itself	The Process of Implementing the Curriculum
<ol style="list-style-type: none"> 1. Involved multiple people with different backgrounds in theory, research and sex and STD/HIV education to develop the curriculum 2. Assessed relevant needs and assets of target group 3. Used a logic model approach to develop the curriculum that specified the health goals, the behaviors affecting those health goals, the risk and protective factors affecting those behaviors and the activities addressing those risk and protective factors 4. Designed activities consistent with community values and available resources (e.g., staff time, staff skills, facility space and supplies) 5. Pilot-tested the program 	<p>Curriculum Goals and Objectives</p> <ol style="list-style-type: none"> 6. Focused on clear health goals—the prevention of pregnancy and/or STD/HIV 7. Focused narrowly on specific behaviors leading to these health goals (e.g., abstaining from sex or using condoms or other contraceptives), gave clear messages about these behaviors and addressed situations that might lead to them and how to avoid them 8. Addressed multiple sexual psychosocial risk and protective factors affecting sexual behavior (e.g., knowledge, perceived risks, values, attitudes, perceived norms and self-efficacy) <p>Activities and Teaching Methodologies</p> <ol style="list-style-type: none"> 9. Created a safe social environment for youth to participate 10. Included multiple activities to change each of the targeted risk and protective factors 11. Employed instructionally sound teaching methods that actively involved the participants, that helped participants personalize the information and that were designed to change each group of risk and protective factors 12. Employed activities, instructional methods and behavioral messages that were appropriate to the youths' culture, developmental age and sexual experience 13. Covered topics in a logical sequence 	<ol style="list-style-type: none"> 14. Secured at least minimal support from appropriate authorities such as departments of health, school districts or community organizations 15. Selected educators with desired characteristics (whenever possible), trained them and provided monitoring, supervision and support 16. If needed, implemented activities to recruit and retain youth and overcome barriers to their involvement, e.g., publicized the program, offered food or obtained consent 17. Implemented virtually all activities with reasonable fidelity

* Kirby, D. B. (2007). *Emerging Answers 2007: Research Findings on Programs to Reduce Teen Pregnancy and Sexually Transmitted Diseases*. Washington, DC: National Campaign to Prevent Teen and Unwanted Pregnancy.

iTP₃ Framework for Creating Innovations

- Interactive Systems Framework, adapted to:
 - *Create innovations in TPP (rather than disseminate into practice)*
 - *Build capacity among organizations, developers and the target populations*
 - General capacity building related to organization and infrastructure
 - Innovation-specific capacity building related to TPP
 - *Build partnerships necessary to refine, translate and disseminate programs*
 - Among the developer and target population, potential implementing organizations and funders, and other innovators
 - *Infuse diffusion principles into innovations as they are developed*
 - Assure that innovations are prepared in a way they can be easily translated into practice and scalable
 - *Disseminate information about innovative programs*

iTP₃ Interactive Systems Framework



Capacity Building Assistance (CBA)

1. General CBA related to:
 - *Innovator's organizational infrastructure and support*
 - *Program planning*
 - *Monitoring*
 - *Dissemination*
 - *Sustainability*

2. Innovation Specific CBA related to:
 - *Principles of innovation and diffusion*
 - *TPP competence*
 - *Stakeholder endorsement*
 - *Program development*
 - *Implementation*
 - *Assessment*

Program Innovations

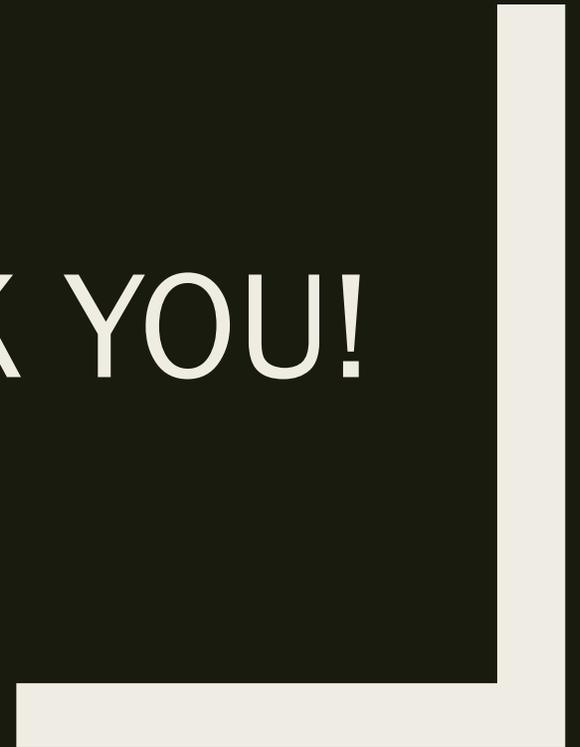
- TPP Innovations will be created over the next 4 years through the ISF
 - *Innovative TPP programs will be developed and pilot tested, so they can be translated into larger settings and undergo a more rigorous evaluation necessary to become part of the evidence base*
 - *We are accepting applications for multiple rounds of funding for potential innovations!*

- Programs will be in different stages of development, including:
 - *Transitioning promising ideas into a programs*
 - *Becoming ready for implementation*
 - *Collecting pilot data*
 - *Preparing for rigorous evaluation (RCT etc.)*

In Summary

- Diffusion of innovations are needed to translate health behavior research into practice
- The Interactive Systems Framework is one way to help translate and replicate research into practice-based settings by focusing on:
 - *Capacity building*
 - *Using a systems approach*
- Principles within the Interactive Systems Framework can be used to develop innovations by focusing on capacity building and contextual considerations

THANK YOU!



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