THEORY AND IMPLEMENTATION INTERVENTION PLANNING

Teresa M. Damush, Ph.D.
Implementation Research Coordinator
VA Stroke QUERI Center
HSRD COE, Roudebush VAMC, Indianapolis, IN
Laura Damschroder, MS, MPH, Christian Helfrich, Ph.D., Cheryl Stetler, RN, Ph.D.

Audience Poll Question

- What exposure have you had to the presentation for today?
  - Attended the EIS training last July in Denver
  - Listened to the presentation online
  - Reviewed only the slides online
  - This will be my first time hearing about it

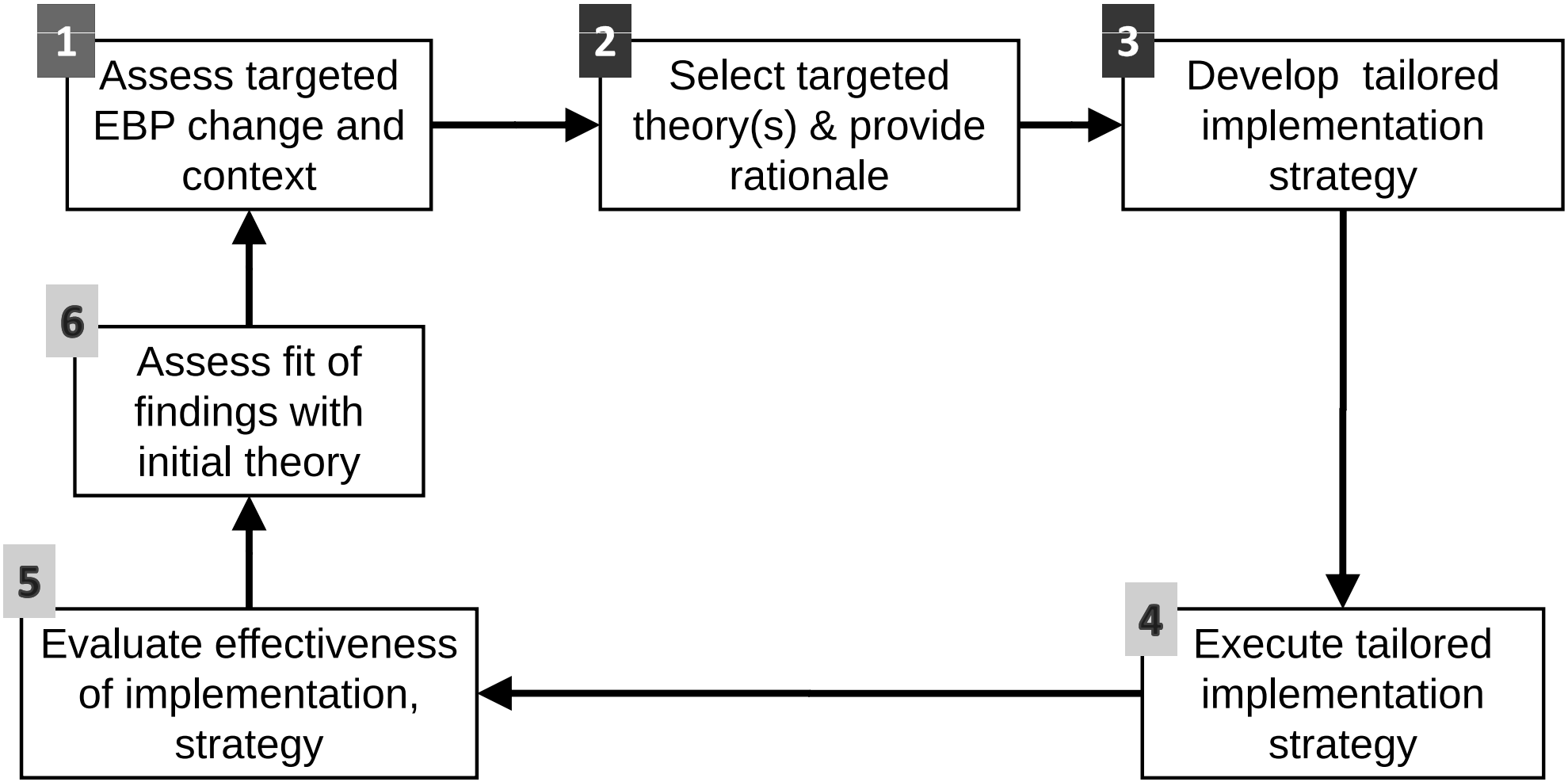
Audience Poll Question

- Have you ever adapted or tailored an intervention?
  - *Yes*
  - *No*

Audience Poll Question

- How confident do you feel about conducting a theory-based implementation study?
  - *Not at all confident*
  - *Somewhat confident*
  - *Moderately Confident*
  - *Very confident*
  - *I'm ready to dive in!*

Conducting Theory-based Implementation



Adapted from: Sales A, Smith J, Curran G, Kochevar L: **Models, strategies, and tools. Theory in implementing evidence-based findings into health care practice.** *J Gen Intern Med 2006, 21 Suppl 2:S43-49.*

Using Theory to Plan Implementation Intervention

- There are no right or wrong theories
- There are **better fitting theories/models** that explain why a specific strategy or mechanism causes the intended change
- The implementation strategy(s) may be operationalized from the theoretical concepts.
- To apply the better fitting theory, you'll need to specify several key issues.

Note: Operational definition= a clear, concise detailed definition of a construct's measure and actionable components so that all have the same understanding of how to put it into practice and collect it or determine whether its correct or not.

What are the change objectives?

- (1. Assess targeted EBP change and context)
- Implementation strategies attempt to address the cause of the performance gap or system failures
- What is expected to change in the organization as a result of the intervention?
- What are the persons in the organization expected to learn or do as a result of this intervention?

Who are the targets?

(1. Assess targeted EBP change and context)

Subgroups may require different implementation strategies

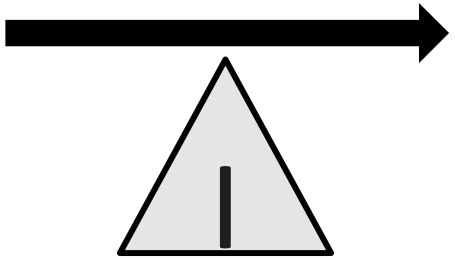
- Front line clinicians engaged in specific task
  - One group
  - Interdisciplinary group – does strategy need to differ by discipline?
- Multiple Targets
  - System
  - Clinical Providers
  - Patients
    - Sublevels
      - Groups of patients with specific characteristics

What is the Context/Nature of the Evidence Based Practice (EBP)?

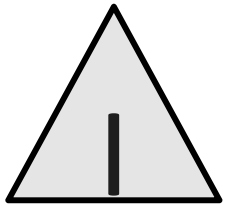
- (1. Assess targeted EBP change and context)
- tPA (tissue Plasminogen Activator) is a therapy given to a stroke patient within 3 hours of the acute stroke event. A VA facility's ability to administer may depend on its infrastructure.
- Hospital service infrastructure varies by
  - ED capabilities
  - Access to neurologist 24/7
  - Knowledgeable and Prepared staff
  - Organization policy – treat or transfer
  - Stroke Service unit/Certified Stroke Center
  - General medicine service

What is the mechanism/strategy for which you expect the change to occur?

How do you expect to get from

CURRENT PRACTICE  EBP

- Where are you now?
- Where do you want to be?
- Potential Barriers to change?
- Possible facilitators to Change?



=HOW to get to desired outcomes, EBP

LITERATURE REVIEW

- What do you know from the literature about this change mechanism?
- What if any theories have been employed for this type of change?
- Consider the strength of this evidence
- What have others interested in this mechanism/strategy previously used?
- How well has this mechanism/strategy produced change?

(2) Select Targeted Theory

- Pre-Implementation work may be part of a planning theory (e.g. PRECEDE/PROCEED model)
- From our pre-implementation work, we may identify actionable factors to target in the intervention to evoke the planned change
- Review the possible theories and their core components
- What theory(s) best represents this mechanism for change?

(2) Select targeted theory

- Theory is applied to the components of the implementation intervention
- Identify potential determinants of behavior or resistance – Why do people behave as observed in this setting?
- What intervention could effect desirable change?

Sales et al Models, Strategies, Tools, JGIM 2006 21:S43-46

Providing **Rationale** for Selection of Theory

- RATIONALE = Justification for selection and operational definition of the concept as applied to your specific implementation program.

Behavior Determinant	Theory/ Model	Implementation Program Component	Rationale
Physician Behavior Change	Theory of Planned Behavior	Clinical Opinion Leader	Use of influential local clinician to use verbal persuasion through academic detailing to inform other clinical staff about administering tPA to acute stroke patients in ED.

Identified Actionable Factors for Implementation Intervention

- Map out the tasks of the current state of the ebp
- Map out the tasks of the ideal state of the ebp
- What are the differences between current and ideal?
- What needs to happen to transition from current to ideal state? Actionable Factors
  - Does the strategy need to differ by setting/organization/group?

VA Implementation Guide

Map out the Current State of Tasks: Post Stroke Depression(PSD) screening and treatment

- **Neurology Outpatient Clinic Visit**
  - Patient checks into clinic w/nurse
  - Patient sees Neurologist
  - Neurologist may or may not screen for PSD, refer to MH or prescribe RX
  - Pt accepts or refuses Rx/referral

IDEAL STATE of TASKS
Post Stroke Depression Screening & Treatment

- **<u>NEUROLOGY OUTPATIENT CLINICS</u>**
- PT CHECKS IN
- PT SCREENED FOR STROKE DURING PAST 6 months
- If yes, screened for depression.
- Positive screen is flagged to neurologist
- Neurologist confirms dx, treats or refers to MH
- PT accepts or refuses RX

Differences Between Current and Ideal States

ACTIONABLE FACTORS	RATIONALE	SUPPORTING THEORY
Clinical Informatics Support –check in screener for stroke during past 6 months – nurse		
Neurology knowledge and acceptance of depression screening in post stroke care		

Select Theory and Provide Rationale

ACTIONABLE FACTORS	RATIONALE	SUPPORTING THEORY
Clinical Informatics Support –check in screener for stroke during past 6 months – PC/Neurology and clinical reminder	Use of built in electronic prompt as a cue to action; Establish as a perceived social norm with local clinical champion modeling and promoting practice	
Neurology knowledge and acceptance of depression screening in post stroke care	Include in competency evaluations ; use of local clinical champions to promote the need and value, establish as a perceived social norm; model the behavior	

Select Theory and Provide Rationale

ACTIONABLE FACTORS	RATIONALE	SUPPORTING THEORY
Clinical Informatics Support – check in screener for stroke during past 6 months – Neurology and clinical reminder	Use of built in electronic prompt as a cue to action; Establish as a perceived social norm with local clinical champion modeling and promoting practice	Health Belief Model Theory of Planned Behavior Social cognitive theory
Neurology knowledge and acceptance of depression screening in post stroke care	Include in competency evaluations ; use of local clinical champions to promote the need and value, establish as a perceived social norm; model the behavior; peer support/vicarious learning	Theory of Planned Behavior Social cognitive theory

Implementation Mapping

Bartholomew L, Parcel G, Kok G, Gottlieb N.

Planning health promotion programs. Jossey-Bass 2006.

Bartholomew LK, Parcel G, Kok G. Intervention mapping: A process for developing theory and evidence-based health education programs.

Health Education and Behavior, 1998; 25:545-563.

Intervention Mapping Protocol

0. Needs Assessment
1. Matrices
2. Theory-based Methods and Practical Strategies
3. Design Program
4. Adoption and Implementation Plan
5. Evaluation Plan

Please see handout on Intervention Mapping TOOLS Secondary Stroke Prevention (Damush et al) as an example.

Prior to Mapping/Needs Assessment

- Assess current or usual care state
- Assess capacity
- Assess baseline outcomes
- Establish program outcomes
- Review the literature
- Diagnose performance gap
- Assess barriers/facilitators to change

Step 1: Matrices

- Specify performance objectives
- Specify determinants of the target behavior of the targeted group
- State expected changes in behavior and environment
- Create matrices of change objectives

Step 2 Theory based methods and practical strategies

- Generate a list of intervention methods that are matched to the program objectives from step 1
  - Theoretical components
  - Practical strategies from literature
  - Input from the targeted group

Step 3 Program Design

- Operationalize and specify the strategies both for the clinical intervention and the implementation intervention
- Incorporate input from the targeted users
- Review by expert panel
- Design program materials

Step 4 Adoption and Implementation

- Specifies Implementation Strategy and Adoption of the Clinical EBP
  - For each targeted group, specify what needs to be done to ensure implementation of the program at acceptable levels of fidelity

Step 5 Evaluation

- Specify the evaluation of processes and outcomes

Other Approaches to Applying Theory to Implementation Interventions

- Consolidated Framework for Implementation Research (CFIR) (Damschroeder et al 2009)
- PARIHS (Rycroft-Malone, 2004)
- Climate for Implementation Theory (Klein and Sorra, 1996)

Consolidated Framework for Implementation Research (CFIR)

- Refer to CFIR Constructs with Short Definitions handout
- Consult with knowledgeable stakeholders
  - Determine high-priority constructs
  - Adapt the list of constructs for overall context
- Diagnostic evaluation of intervention, setting, individuals, and process as appropriate
- Use results to develop tailored implementation strategy

Damschroder et al, Imp Sci 2009.

PARIHS framework

- PARIHS: SI=f(E,C,F)

  VA QUERI IMPLEMENTATION GUIDE/
  CIPRS Sharepoint: A basic “to do” list:

  - A. Do diagnostic analysis of Evidence and Context
    - See Guide Appendices and described tools [ORCA, ACT, CAI]
  - B. Use results to plan implementation within the Facilitation element

Rycroft-Malone et al 2004.

Climate for Implementation Theory

- Use of diagnostics
  - Evaluate the implementation climate
  - Assess organizational priority
- Use results to tailor implementation policies and practices
- Strong climate for implementation is a shared perception that innovation use is supported by the organization and peers

Klein & Sorra, 1996. The challenge of innovation implementation. Academy of Management Review, 21(4): 1055-1080.

Tailoring Vs. Adapting

- Locally Tailor
  - Utilize results from context evaluation to tailor to the site
  - Any combination of information or change strategies intended to reach a group based on group/organization characteristics
- Adapt a Program
  - Essential Core components
  - Adaptable components
  - Adapting a program is when you preserve necessary elements while adding new or changing modifiable elements to make the program relevant for (or fit) the context

Intervention Tailoring

- Tailoring is when you specify the intervention to match the needs of a group based on a characteristic(s) of the targeted group/organization*
  - Examples
    - Tailoring written reminders for women to receive a mammogram based on race/ethnicity. The reminder featured a woman who matched the race/ethnicity of the patient.
    - Tailoring intervention based on stage of change (smoking cessation).
    - Tailoring implementation intervention based on organizational structure of care (General medicine service vs a stroke unit)

Leeman et al. Tailoring a diabetes self-care intervention for use with older, African-American women. Diabetes Educator, 2008;34:310-17.

Adapting an Intervention

- Adapting a program is when you preserve the necessary elements deemed necessary to change behaviors while adding new elements that make the program relevant to the new group.
- Examples:
  - Adapted Chronic Disease Self Management Program for Stroke Self Management
  - “Get With The Guidelines Stroke” in VA – data reporting

Identify Implementation Tools to Support Implementation Strategy

- Computerized clinical reminder
- Toolkits – Cancer, Stroke
- Program materials
  - TOOLS – Localized Prescription Pad for MD referrals to local VA programs addressing specific stroke risk factors

Theoretical Issues/Constraints

- Failure in choice of theory/theories
- Failure to adequately identify potential mechanisms of change
- Failure to adequately identify factors related to change given the nature of the EBP
  - Lack of leadership support or waning support
  - Did not get adequate buy in from operational partners
  - Clinical intervention (EBP) becomes irrelevant as new evidence emerges

Pragmatic Operations Issues/Constraints

- Things/People Change – need to plan for replacements
- Making corrections in the middle of your intervention to improve fidelity – impact on theoretical components?
- Dissemination and Initial Adoption to users of the EBP were inadequate – Training, reinforcement, support (coaches)
- Measurement can be difficult in a real live healthcare organization
- IRB requirements

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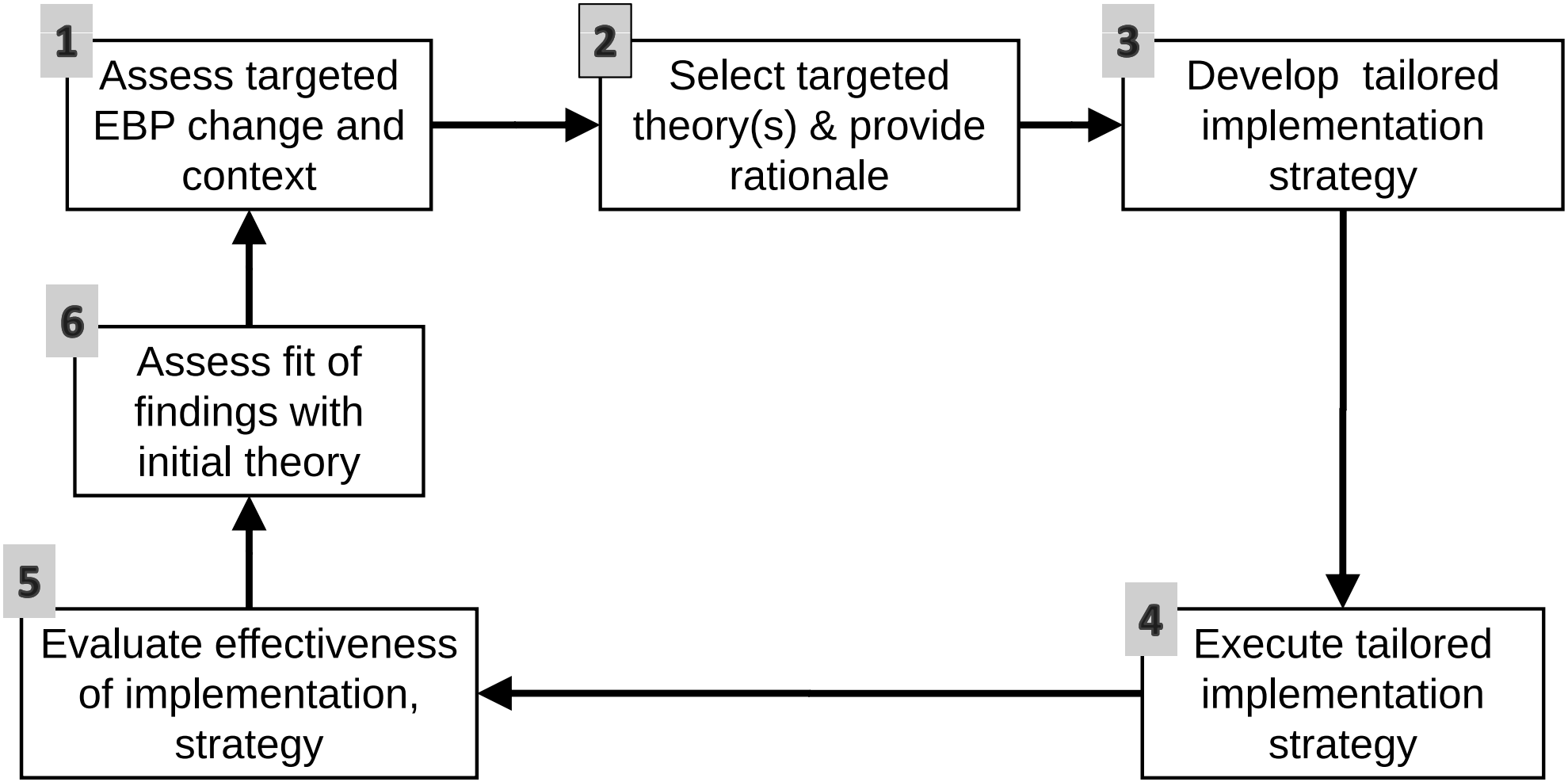

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Key Points

- Use pre-implementation work to target your implementation critical factors
- Provide rationale for selection of theory
- Clearly define your strategies so that others may replicate to generalize beyond your specific efforts
- Balance theoretical components with pragmatic factors identified from the targeted users of EBP

Thank you!

- Contact info: Teresa.Damush@va.gov
- Questions?

Audience – Poll question (after Q&A)

- Think back to the level of confidence you indicated at the beginning of this presentation. Now, how confident do you feel about conducting a theory-based implementation study?
  - *Less confident than before hearing this presentation*
  - *I'm feeling about the same*
  - *Slightly more confident*
  - *Much more confident*