Methodological Issues and Data Decisions in the Implementation of a Substance Use Disorders Intervention in VA's Homeless Programs

Presenters

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Disclaimer

The opinions expressed in this presentation are those of the authors and do not necessarily reflect the views of the Department of Veterans Affairs.

No financial disclosures or other disclaimers to report.

Poll Question #1

What is your role in research and/or quality improvement?

A. Principal investigator/Co-PI

B. Research staff (Project Coordinator, Data Manager, Statistician, Programmer)

C. Clinical staff

D. Operations staff

E. Other—Please describe via the Q & A function

Presentation Overview

1. An Overview of Homelessness and Impact of Co-Occurring Disorders
2. MISSION Model as an Evidence-Based Treatment Solution
3. Overview of the Study
4. Data Decision in a Formative Evaluation
5. Revision of Implementation Strategies Based on Data
6. Lessons Learned

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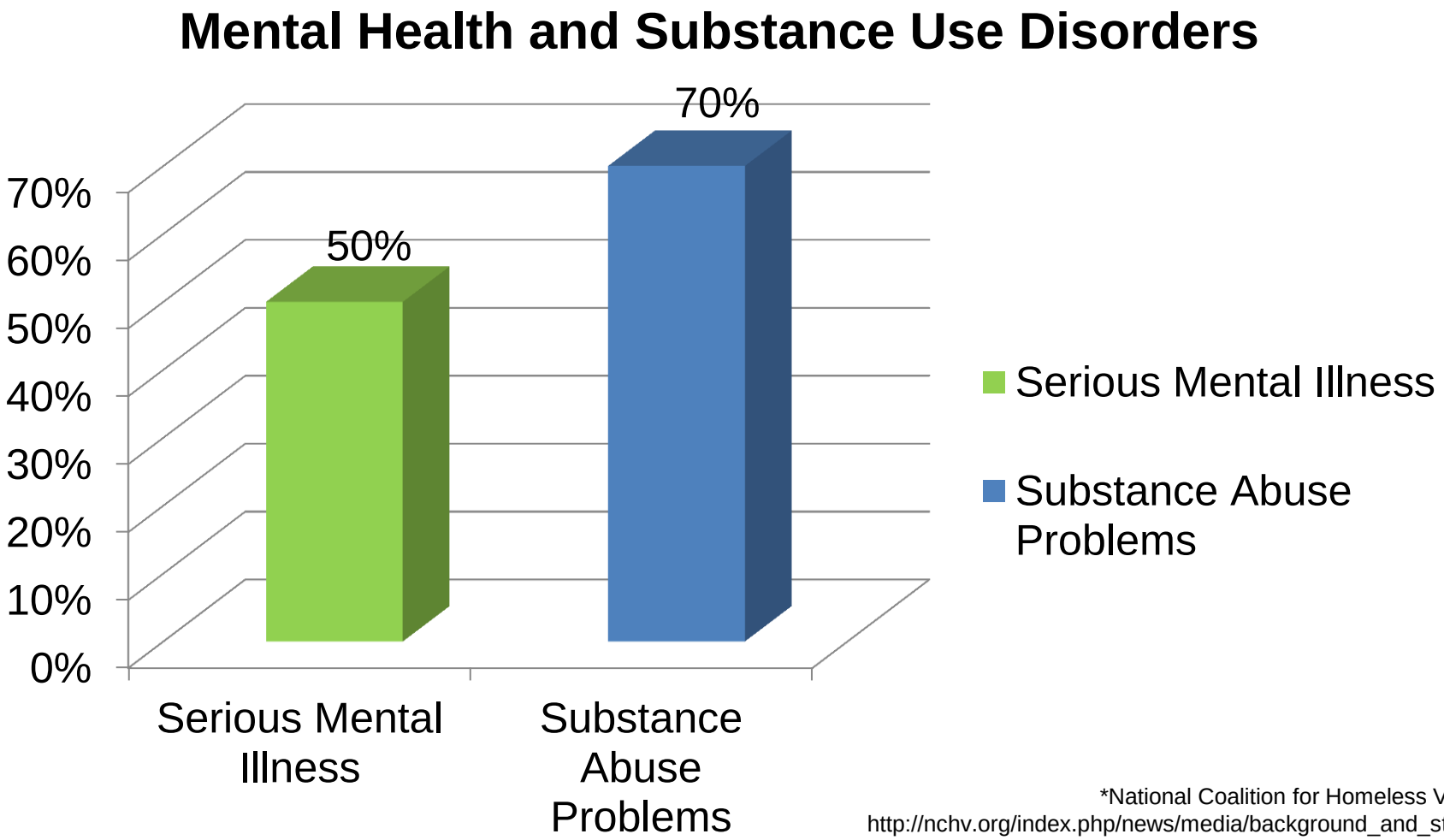
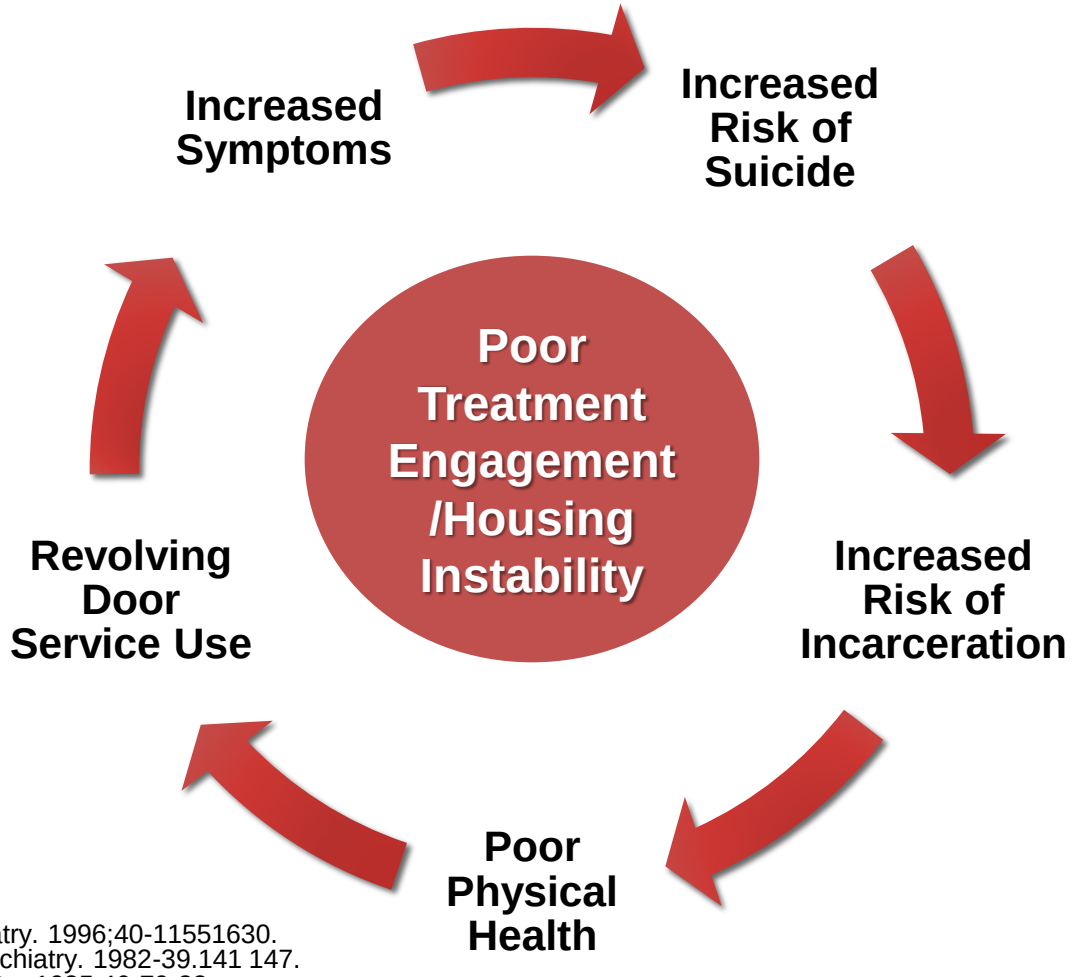
Incidence of Mental Health and Substance Use Disorder Among Homeless Veterans



*National Coalition for Homeless Veterans
http://nchv.org/index.php/news/media/background_and_statistics/

Consequences of Mental Health and Substance Abuse



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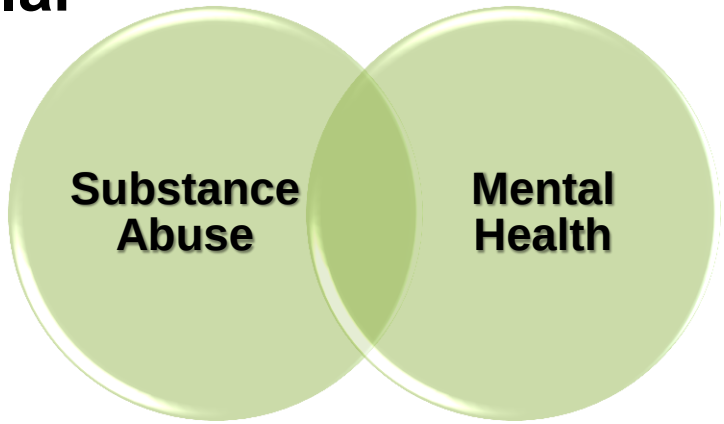
Psychosocial Treatments for Co-Occurring Disorders

- **Integrated treatment is the standard**
  - Treat both problems simultaneously
- **Psychosocial Treatments "similar"**
  - *Key Interventions*
    - Motivational Enhancement Therapy
    - Cognitive-Behavioral Therapy
    - Relapse Prevention
    - Skills Training
    - 12-Step Therapy



- **Assertive Case Management Added**

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The MISSION Model

Combining Evidence-Based Services into a Comprehensive System of Care

MISSION

Core Services	Support Services	Philosophy
Critical Time Intervention (CTI)	Vocational and Educational Support	Housing First
Dual Recovery Therapy (DRT)	Trauma-Informed Care	Harm Reduction
Peer Support		

SAMHSA's National Registry of Evidence-based Programs and Practices

Find Help | Topics | Programs & Campaigns | Grants | Data

Programs & Campaigns » NREPP » Program Profile

NREPP SAMHSA's National Registry of Evidence-based Programs and Practices

Maintaining Independence and Sobriety through Systems Integration, Outreach, and Networking (MISSION)

Program Description

Maintaining Independence and Sobriety through Systems Integration, Outreach, and Networking (MISSION) is a 12-month, integrated treatment program designed to help formerly homeless veterans with co-occurring addictive disorders and mental illness transition to independent living in the community. Its purpose is to facilitate rapid community engagement and achievement of personal goals by helping clients engage in a comprehensive array of outpatient mental health and substance abuse treatment services. Our implementation materials include manuals for both Veteran and non-veterans. The program also helps participants engage in vocational and educational rehabilitation programs to sustain community tenure. MISSION staff consists of one case manager and one peer specialist. These staff partner with the residential program staff of a treatment center to begin delivering the MISSION program during the client's initial 14-week, temporary housing stay. On average, clients receive 2.5 hours of individual and group sessions once a week for 10 months, which is reduced to twice per month during months 11–12.

The therapeutic components of the program include 1) integrated mental health and substance use disorder treatment delivered via Dual Recovery Therapy, 2) assertive community treatment using Critical Time Intervention (CTI) case management, 3) peer support, 4) vocational support and 5) Trauma Informed Care. The program provides an initial comprehensive assessment of all service needs, specialized co-occurring mental health and substance abuse disorders treatment, and post-discharge treatment planning. MISSION emphasizes a recovery-oriented approach through relationship building and active engagement with the client's care coordination during the residential program.

Following discharge, MISSION case managers and peer support specialists continue supporting the client in transitioning to the community and navigating access to needed supports and services (e.g., vocational, employment, and education support; housing assistance; outpatient mental health services; peer supports; and emotional and practical support). It also provides ongoing care coordination and psychoeducation, and encourages sustainability.

Since 2004, the program has been implemented with veterans and other clients in a variety of settings, including veterans' medical centers around the country, public health and mental health agencies, and community foundations and organizations across Massachusetts.

http://nrepp.samhsa.gov/ProgramProfile.aspx?id=38

MISSION Implementation Materials

- The Treatment Manual
- The Consumer Workbook
- Fidelity Measure

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GLA MISSION Implementation Study

Why LA?

1. One of the largest homeless populations in the US
2. Homeless clients have high rates of co-occurring disorders
3. Multiple sites to test the uptakes of the intervention

Study Compares Implementation as Usual (IU) to IU + Facilitation in LA HPACT/HUD-VASH

MISSION IU

(Standard Training)
2 Hour Webinar on the model/ overview of the Materials

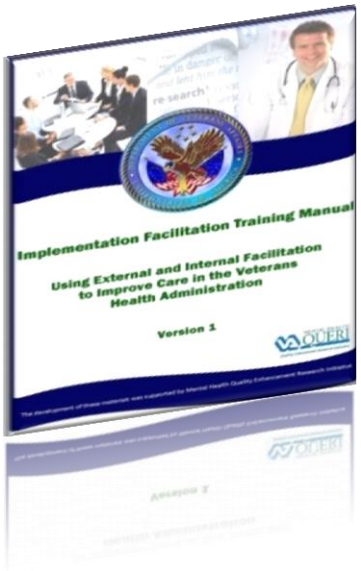
VS.

MISSION IU + Facilitation

(Implementation Support)

- **Design**: Stepped Wedge/Hybrid
- **Groups**: HPACT/HUD-VASH GLA Sites
- **Site 1**: Sepulveda (HUD-VASH, HPACT, and Addictions)

Implementation Strategy: Blended Facilitation



Facilitation (like Technical Assistance)

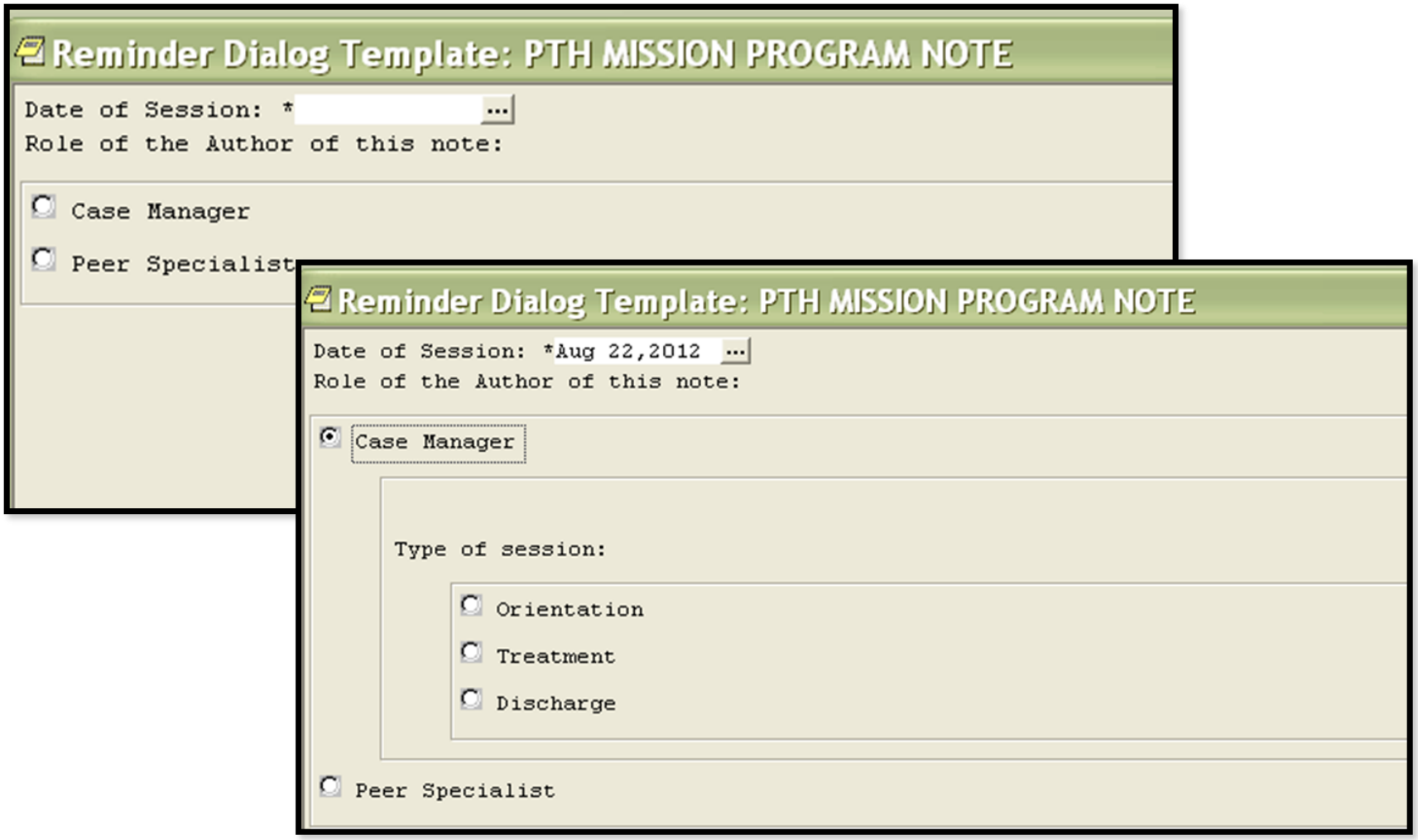
External Facilitators (EF):

- Outside the implementation site and have expertise in the intervention (in this case MISSION-Vet), implementation strategies

Internal Facilitators (IF):

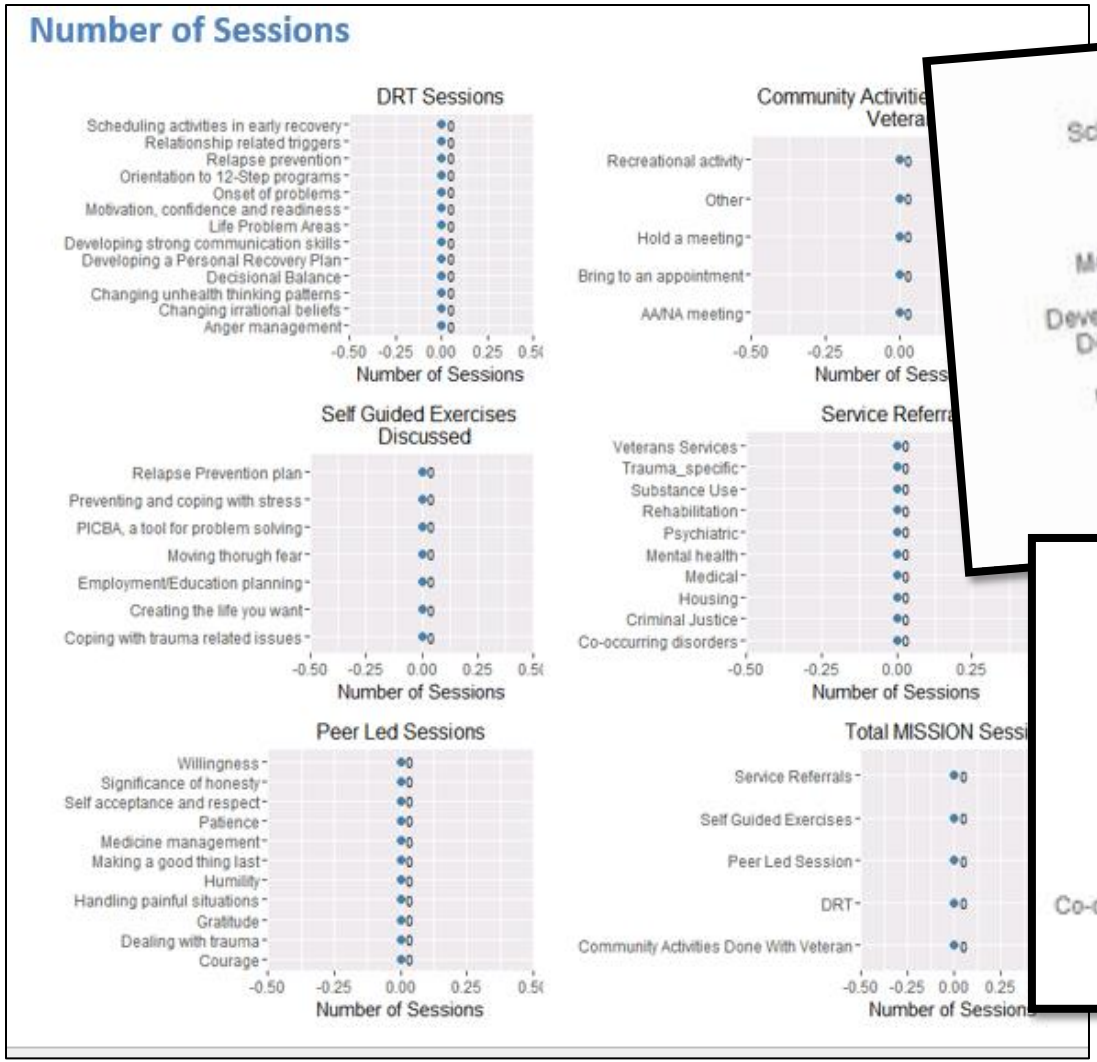
- Are located at the implementation site and familiar with facility-level organizational structures, procedures, culture.

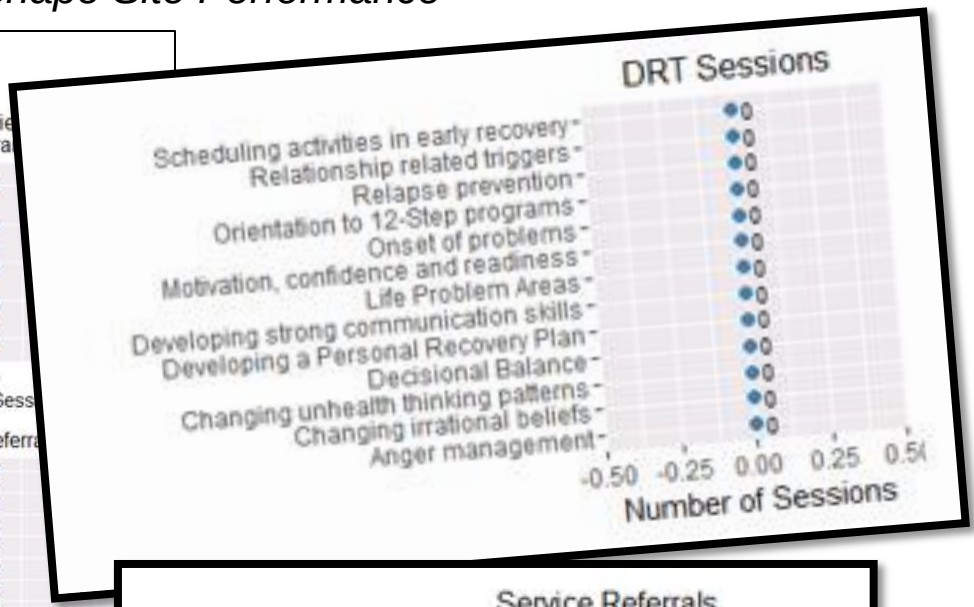
CPRS MISSION Program Fidelity Note in GLA VA

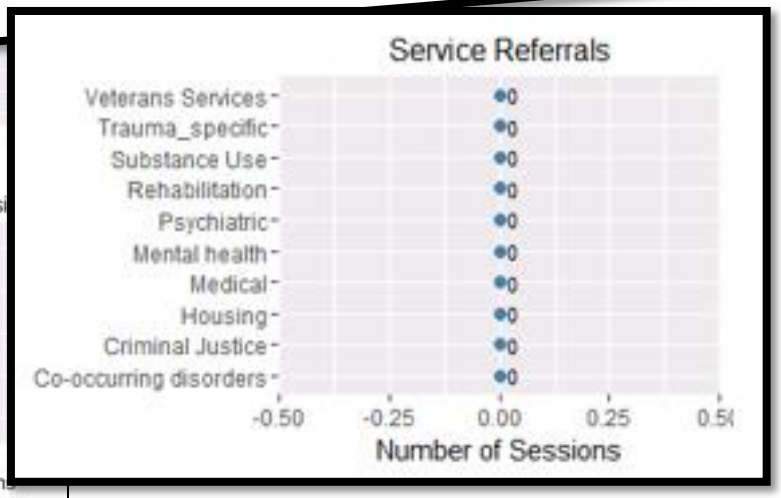


Data Driven Site Feeding on MISSION Use

Progress Reports to Shape Site Performance







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Poll Question #2

How many years of experience do you have working with qualitative and/or mixed-methods data?

A. One year or less

B. More than 1, less than 3 years

C. At least 3, less than 7 years

D. At least 7, less than 10 years

E. 10 years or more

Poll Question #3

Have you ever conducted mixed-methods rapid, iterative data collection and analysis for implementation work?

A. Frequently

B. Sometimes

C. Rarely

D. Never

Learning Objectives for this Session

1. Describe our rapid, mixed-methods approach to identifying perceived barriers to the implementation of a comprehensive evidence-based intervention for homeless Veterans.

2. Provide an overview and insight into how methodological issues, VA data sources, and data driven decision-makings were used in the formative evaluation.

3. Share lessons learned about adapting implementation strategies to address barriers in the implementation of complex interventions.

Methodological Issues and Data Decisions in the Implementation of MISSION-Vet

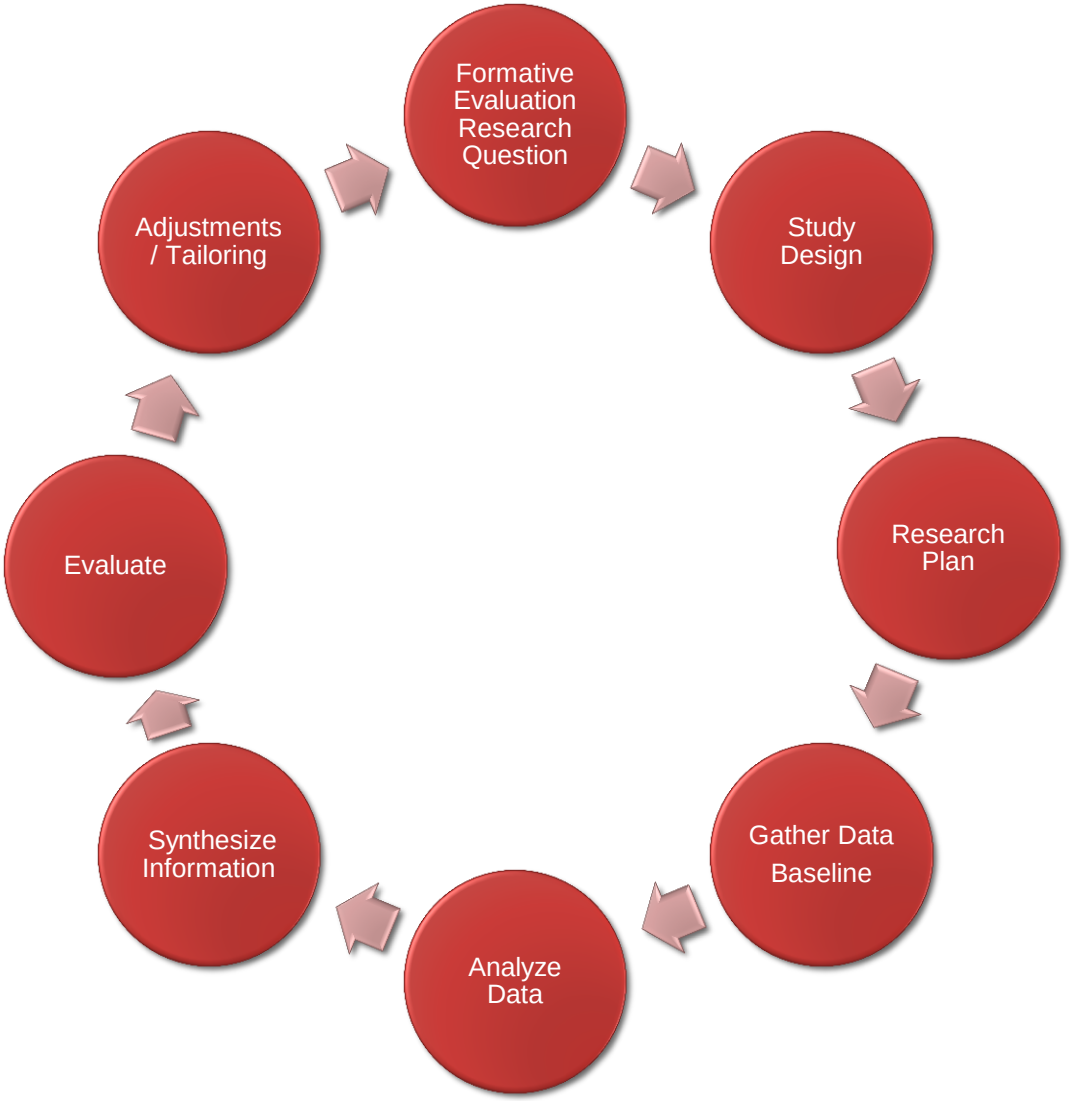
Factors that influence research methods and data decisions:

- Research Question
- Study Design
  - Aims and objectives
- Resources
- Available Data

MISSION-Vet Formative Evaluation Objectives

- A mixed-methods, rapid evaluation to examine the *context* in which MISSION-Vet will be implemented
- Identification of barriers and facilitators facing MISSION-Vet implementation
- Identify and then execute adaptations for implementing *Facilitation* as a strategy to get MISSION-Vet into practice in the GLA VA

Formative Evaluation Process in MISSION-Vet



Context, Context, Context…

- What is context?
- Why is context so crucial in the adoption of evidence-based practice?
- How should you gather data about context?

Overview: Formative Evaluation Methods

Mixed-methods design

- **Quantitative**
  - Organizational readiness to change (ORCA) survey
  - Implementation climate surveys
  - N=42
- **Qualitative**
  - Semi-structured interviews with a purposive sample (N=17) of MISSION-Vet trained staff
  - Consolidated Framework for Implementation Research (CFIR)
  - Use of Nvivo11

Analysis

- Deductive content analysis of qualitative interview data. Qualitative and survey data triangulated.

Study Participants

Survey Respondents	(n)
Sex	
Male	22
Female	20
Role	
Peer Support	18
VASH - SW	16
HPACT - SW	8
Total	42

Qualitative Respondents	(n)
HPACT Social Worker	5
VASH Social Worker	1
Peer Support	8
Providers	1
Homeless Program Leadership	2
Total	17

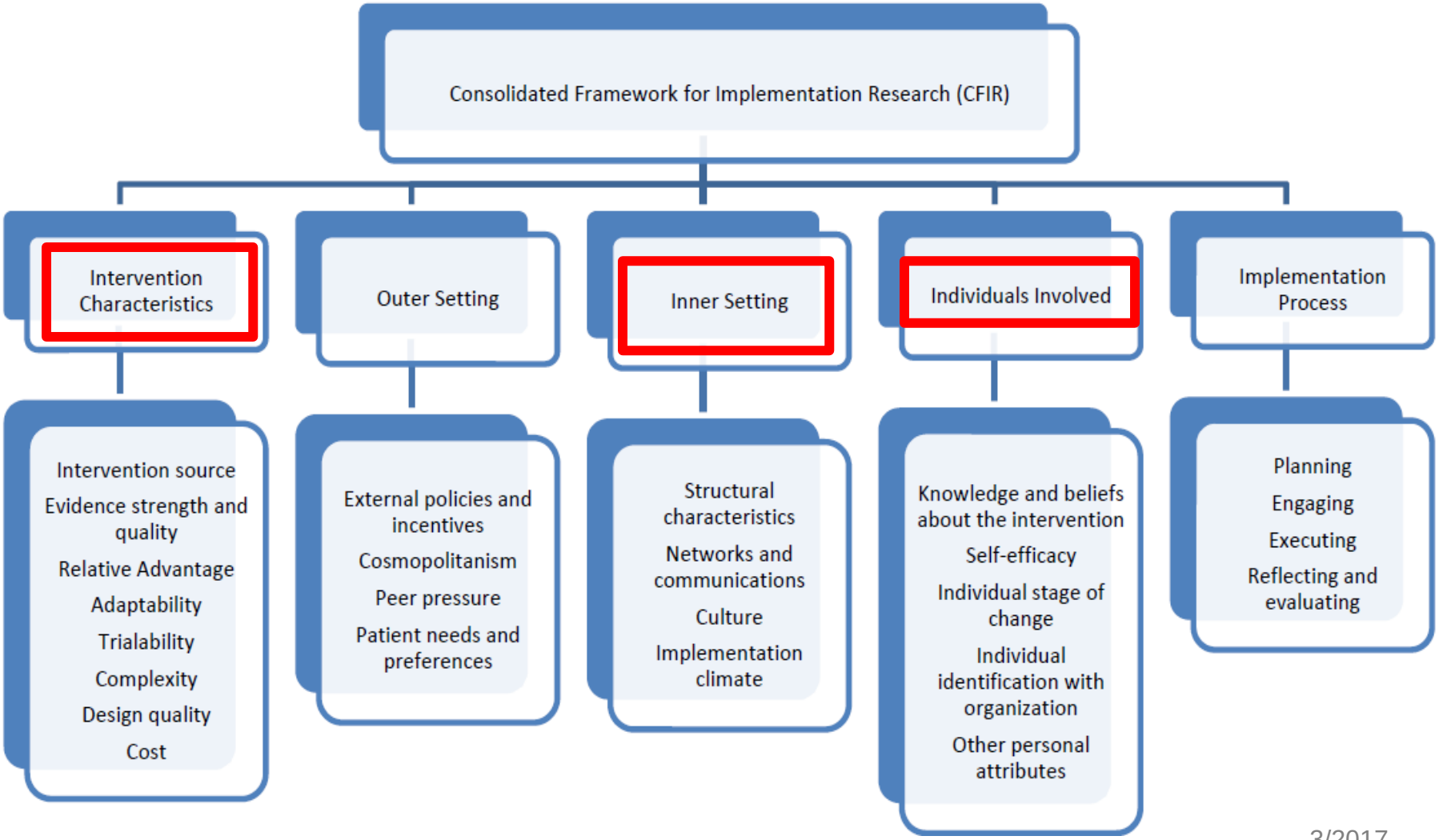
VASH=VA Supported Housing; SW=Social Worker;
HPACT=VA version of the patient-centered medical home (PCMH) tailored for homeless veterans

Research Plan: The Application of Frameworks

Consolidated Framework for Implementation Research (CFIR)

- Use by the overall Bridging the Continuum of Care QUERI
- Application to MISSION
  - Interview guide
  - Organizational survey
  - Guided coding of qualitative data
  - Data analysis
  - Data synthesis of qualitative and quantitative data
  - Guided adaptations to implementation strategy

Frameworks and Data: CFIR



Interview Guide Development

Review Formative Evaluation Goals

↓

Review CFIR suggested questions (see http://cfirguide.org)

↓

Draft the Interview Guide

↓

Larger Bridge QUERI implementation science core reviews the interview guide

↓

PI and site PI review the interview guide

↓

Rewrite Interview Guide

↓

Review and Finalize Interview Guide

What Happens *In Situ*?

- Challenges of recruiting
- Challenges of phone interviews
- Challenges of staff with little time
- How interview guide prep assisted in dealing with challenges

Bridge QUERI Organizational Surveys

- Bridge QUERI developed the organizational survey based on
  - Context items (encompassing six subscales) from the Organizational Readiness to Change Assessment (ORCA) (Helfrich 2009)
  - A section of a Implementation Climate survey (Jacobs et al 2014)
- Bridge QUERI plans to have all projects use this survey tool across all projects.
- Two data points
  - Baseline
  - Completion of MISSION-Vet implementation.
- Bridge will add the Facilitation component of ORCA at the conclusion of the implementation.

Organizational Readiness to Change Assessment (ORCA)

(From Christian Helfrich HSR&D Cyberseminar on Validation of the ORCA)

- Survey designed to be fielded among clinicians/staff implementing an evidence-based clinical practice (Helfrich et al 2009); based on qualitative evaluation of implementation study (Sharp et al 2004)
  - 77 items organized into 3 scales, corresponding to PARIHS framework: Evidence, Context, and Facilitation.
  - Survey scored at the level of the operational unit making the change.
  - Preliminary validation promising (Helfrich et al 2009; Hagedorn et Heideman 2010)

ORCA and Implementation Climate Survey

- Organizational Questionnaire (Helfrich et al 2009)
  - Tailored for MISSION-Vet
  - Likert Scale
  - Implementation Climate (6 items)
  - CULTURE – Leadership (3 items)
  - CULTURE – Staff (4 items)
  - LEADERSHIP (4 items)
  - MEASUREMENT (4 items)
- Implementation Climate (Jacobs et al 2014)
  - Tailored for MISSION-Vet
  - Likert Scale
  - First 6 questions
  - Covered use of MISSION-Vet, support for staff and appreciation of staff efforts.

Data Analysis

ORCA and Climate Measure:

- Mean and median scores were calculated for the scales and subscales.
- Non-parametric analyses were performed with SAS software, version 9.3 (SAS Institute Inc., Cary, North Carolina).
- 60 staff received MISSION-VET training and 42 total survey respondents.

Data Analysis, Cont.

- Rapid coding and analysis of qualitative data with a priori codes (CFIR) with an emergent thematic analysis
- Synthesizing data on organizational strengths/weaknesses
- Identify key targets for MISSION-Vet Facilitation using CFIR and qualitative and survey data

(sources: Sobo 2003; Utarini 2001)

Tri-Level Transcription and Preliminary Coding

- A team member listened to the interview and performed a tri-level transcript analysis (Sobo 2003)
  - Transcribe key parts of the interview verbatim
  - Provide detailed paraphrasing when not transcribing verbatim
  - Make preliminary notes about what was being said and link these pieces of speech back to objectives of the formative evaluation
  - All work checked by qualitative lead
- Met and drafted preliminary codebook
- Coded transcripts independently 2-3 transcripts based on preliminary codebook, review transcript coding as a team, and revised codebook as necessary
- Lead qualitative researcher completed coding on all interviews

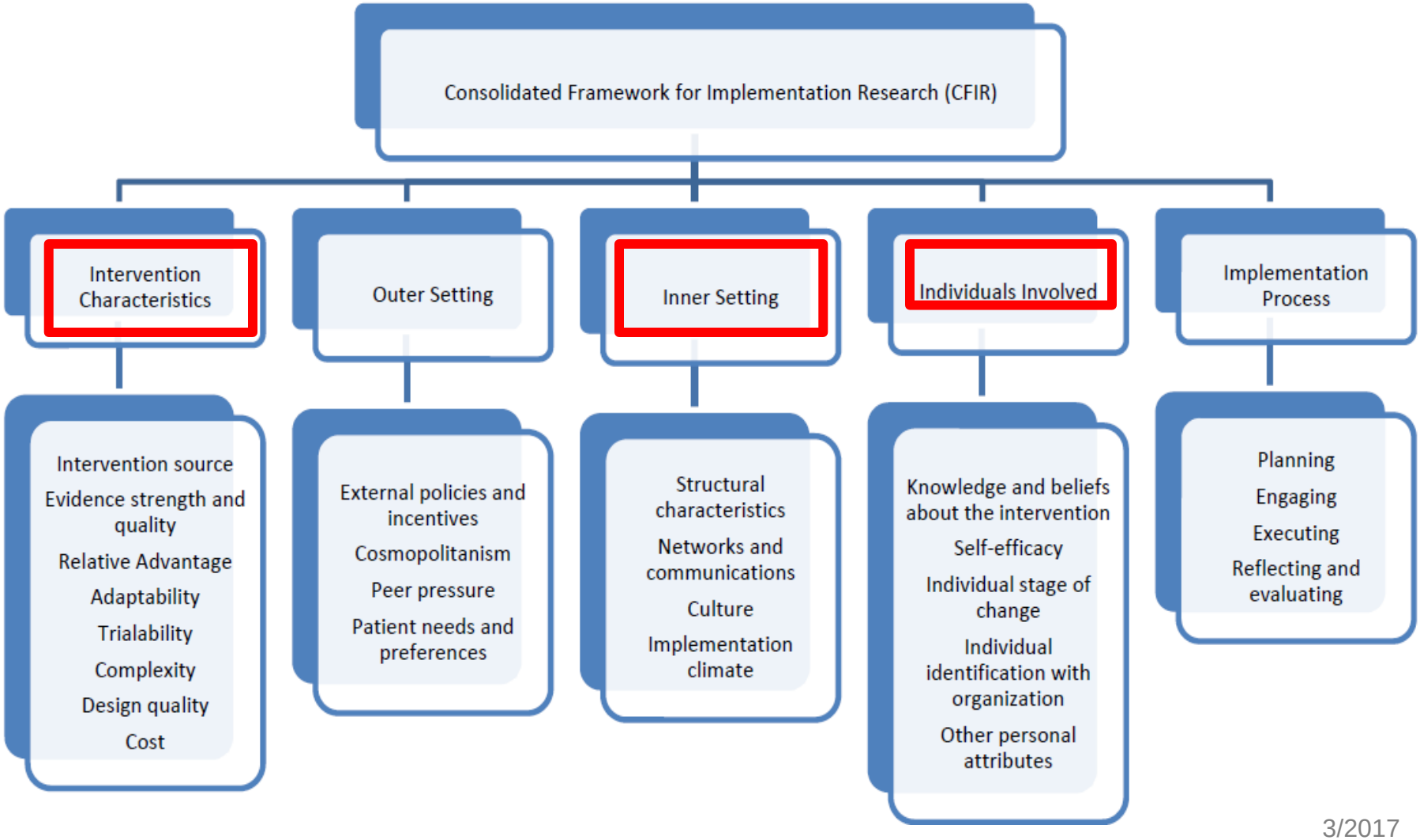
Bridging Qualitative and Quantitative

- We assessed the context subscale of the ORCA and the climate survey pieces using concurrent qualitative interview data to demonstrate construct validity

- Qualitative data analyzed using CFIR and thematic analysis. We mapped with survey and qualitative results to themes and CFIR constructs (using Nvivo11)

- Quantitative data had high degree of concordance with qualitative data

Frameworks and Data: CFIR



Cross-Cutting Themes Across Data (CFIR)

Strengths of Intervention Characteristics:

- Staff accepted the evidence basis for MISSION
- Staff felt that MISSION was a good match for their patient population

Weaknesses of Intervention Characteristics:

- Staff felt the MISSION was complex and hard to implement
- Staff felt overwhelmed by a busy, complex context

Cross-Cutting Themes Across Data (CFIR)

Strengths of Inner Setting (Context):

- Deep engagement in Veteran care, Interest in MISSION,
- Leadership support for MISSION

Weaknesses of Inner Setting (Context):

- No peers in HPACT
- HPACT social workers: No capacity for individual therapy
- All Staff : Change fatigue
- Staff feel efforts are under-recognized

What Did We Learn in Formative Evaluation?

1. Evidence (Intervention Characteristics)

- Staff believed in the evidence supporting MISSION
- Staff thought MISSION was appropriate for the population targeted: *"It (MISSION-Vet) knows this population of Veterans"*
- Staff felt that peer support provided fellow Veterans an invaluable service
- Staff wanted a second workshop on how to do MISSION

What Did We Learn in Formative Evaluation?

2. Staff Culture and Teams (Inner Setting & Characteristics of Individuals)

- Staff culture indicated that people felt very strongly supported in their teams with the exception of HPACT staff who felt overloaded.
- In comparison to Outreach and VASH staff, HPACT team members were least likely to report:
  - a sense of personal responsibility for improving patient care ($p<0.05$)
  - cooperation to maintain and improve patient care ($p<0.04$)
  - perceptions of a culture of leadership ($p<0.03$)
- HPACT Teams were least likely to report organizational support for the use of MISSION-Vet than Outreach and VASH staff (2.86 vs. 4.22 and 4.30 respectively, $p<0.01$

What Did We Learn in Formative Evaluation? Context: Leadership

3. Leadership (Inner Setting)

- Staff believed there was leadership support for MISSION
- However they were not confident that they would get recognition for their work in MISSION. This was more pronounced at GLA than at CBOCs
- GLA staff scored lowest on items related to feeling they would receive recognition for their MISSION-Vet implementation efforts (3.99, p=0.01)

What Did We Learn in Formative Evaluation?

4. Organizational Silos, Context Complexity (Inner Setting)

- Limited access to peer specialist staff
  - Participant said, *"…there is no protocol or official relationship…"*
- Limited Capacity
- Complex, multi-layered changing and challenging environment

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Where Does the Data Leave Us?

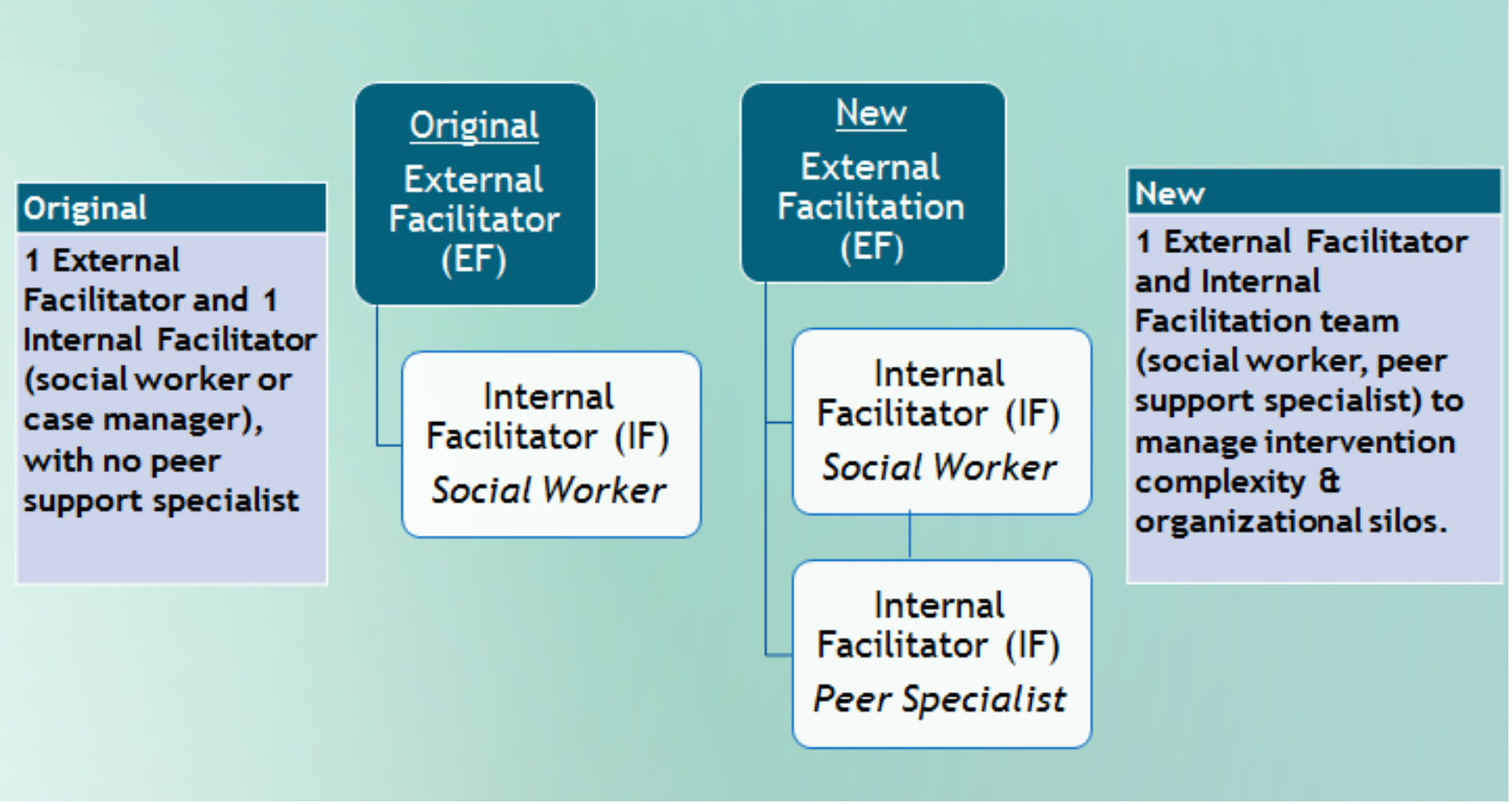
- Back to the objectives:
  - A mixed-methods rapid evaluation to examine the context in which MISSION-Vet will be implemented
  - Identification of barriers and facilitators facing MISSION-Vet implementation
  - Applying context findings to adapting the implementation strategy for more effective roll-out of MISSION-Vet with facilitation

Where Does the Data Leave Us?

- Identify and then execute adaptations for implementing Facilitation as a strategy to get MISSION-Vet into practice in the GLA VA.
  - Original Facilitation Strategy: *Blended Facilitation*
    - Collaboratively, the external and internal facilitators work to implement an intervention and problem solve challenges to implementation (Kirchner et al 2014)
    - This is often done in a 1:1 relationship between an external and internal facilitator
    - It should be noted that external facilitators often work 1:1 with other internal facilitators

We re-conceptualized our facilitation implementation strategy by developing an internal facilitation team to bridge workflow and organizational/disciplinary silos.

Adaptations to Implementation Strategies: Facilitation



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Data Decisions
Lessons Learned

- Integrate Formative Evaluation objectives/research questions with a framework
- Integrate framework into research plan and the deployment of research plan
- Be flexible
- Mixed-methods formative evaluations on a small scale, done rapidly take serious effort in the planning and executing but are worth the investment.

Lessons Learned

- Pre-Implementation work suggested modifications were necessary in roll-out of Facilitation
- Re-conceptualized because Facilitation need to accommodate:
  - Complex needs of the homeless Veterans
  - Complex organizational structure of VA Greater Los Angeles
  - Complex delivery structure of MISSION
- Modifications include having more than one IF or having IFs from key stakeholders such as social work and peer support

Conclusion

- Facilitation is a flexible, strong strategy that can be used to help overcome serious implementation complexities that are often found at the intervention, organizational and population levels.
- The Formative Evaluation phase of this study project highlighted important implementation considerations that influenced changes to the original Facilitation strategy. Formative evaluation was worth the upfront investment in time and resources.
- Operationalizing Facilitation in the form of an Internal Facilitation team was necessary to bridge workflow and organizational and disciplinary silos.
- Methods and data decisions need to be flexible, rigorous, and rapid in certain projects

MISSION Study Team

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Tom Taylor, Ph.D., Co-I Quantitative/Informatics

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Allen Gifford, M.D., Co-I/Corresponding PI of Bridge QUERI

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Next QUERI Presentation

Tuesday, April 18 12pm ET

Conducting a Needs Assessment for Infection Prevention in VA

Nasia Safdar, MD, PhD
Madison VA Hospital