Implementation Research: Using Qualitative Research Methods to Improve Policy and Practice

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Qualitative Methods Group at the VA HSR&D Center for the Study of Healthcare Innovation, Implementation, & Policy

Course Content

- Definitions
- Rationale, goals
- Critical components of implementation research

  Today (Mon)

  - Formulating research questions/specific aims and determining appropriate study designs
  - Selecting and applying conceptual models and implementation strategies
  - Choosing feasible and appropriate methods

  Tomorrow (Tues)

  - Identifying feasible and appropriate analytic strategies
  - Designing and executing varied study products
  - Applying what you’ve learned

Implementation Science: Definitions

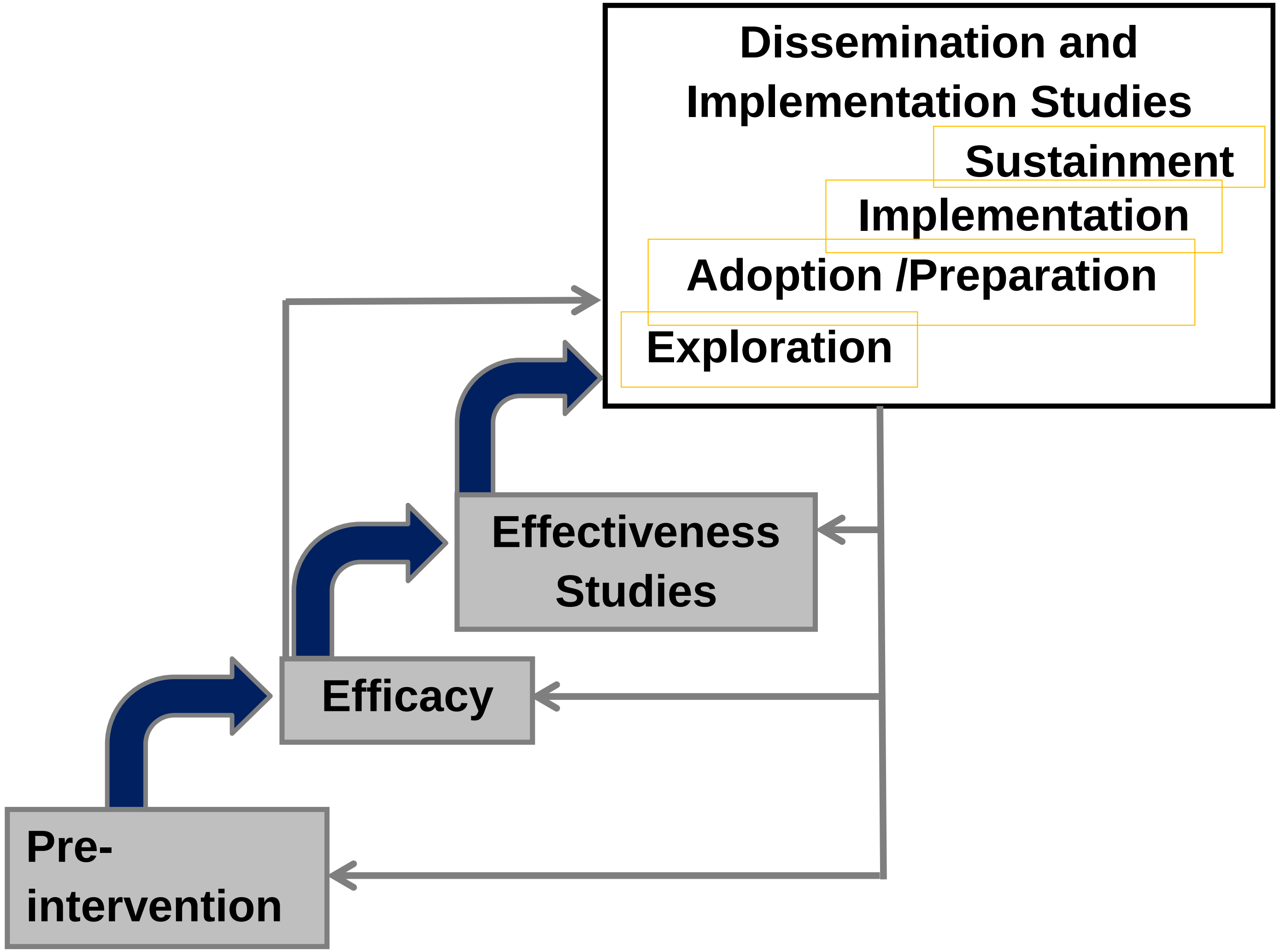
- The study of ways to promote the systematic uptake of research findings and other evidence-based practices into routine practice. This includes the study of influences on healthcare professional and organizational behavior. (Eccles & Mittman, 2006)
- An effort specifically designed to get best practice findings and related products into routine and sustained use via appropriate *uptake interventions* (Curran et al., 2012)
  - *Active* approach, focusing on *stimulating change*
- Scientific investigations that support movement of evidence-based, effective health care approaches (e.g., as embodied in guidelines) from the clinical knowledge base into routine use (Rubenstein & Pugh, 2006)

Implementation Science: Definitions (cont.)

- Research that will identify, develop, and refine effective and efficient methods, systems, infrastructures, and strategies to disseminate and implement:
  - Evidence-based health behavior change interventions
  - Prevention, early detection, diagnostic, treatment, symptom management, and quality of life improvement interventions
  - Clinical guidelines, policies, and data monitoring and surveillance reporting tools

Dissemination and Implementation Research in Health (R01)
http://grants.nih.gov/grants/guide/pa-files/PAR-13-055.html

Health-Related Research Implementation



Brownson, Colditz, Proctor, 2012

Implementation Science: NIH Rationale

- Despite extensive investment in research, little $ spent on how to ensure that research results inform and improve health quality, delivery of services and the utilization and sustainability of evidence-based tools and approaches
- Essential that healthcare providers, patients, families, caregivers, communities and healthcare settings have empirically-supported strategies to integrate scientific knowledge and effective interventions into everyday use

http://grants.nih.gov/grants/guide/pa-files/PAR-13-055.html

Implementation Science: Some Typical Goals

1. Develop reliable strategies for improving processes and outcomes; facilitate widespread adoption of these strategies

2. Produce insights and generalizable knowledge regarding implementation processes, barriers, facilitators, strategies

3. Develop, test and refine implementation theories and hypotheses; methods and measures

Why Focus on Qualitative Methods in Implementation Research?

- Many funding agencies agencies are committed to moving the science of implementation forward
  - Multiple RFAs for implementation research
- Qualitative methods are an essential aspect of implementation science
- Qualitative methods are uniquely shaped by the exigencies of implementation science

Why Are Qualitative Methods Essential to Implementation Research?

Qualitative research "seeks to provide an understanding of *human experience, perceptions, motivations, intentions, and behaviors* based on description and observation..." (Martin, A Dictionary of Nursing, Oxford University Press, 2008)

"Social research is based on the *close-up, on-the-ground observation of people and institutions in real time and space*, in which the investigator embeds herself near (or within) the phenomenon so as to detect how and why agents on the scene act, think, and feel the way they do" (Wacquant L, Ethnography, Vol. 4, No. 1, 2003)

What is Unique about Implementation Research?

- Implementation research is *action-oriented*
  - Qualitative methods needed to support action/practice
- Pragmatic need to describe:
  - The *context(s)* in which implementation occurs
  - The *environment(s)* where implementation occurs
  - The *process* that occurs during the course of implementation
    - Why and how is a particular practice working or not working?
  - The effectiveness of *implementation strategies* in supporting implementation
  - The relationship(s) between the theorized and actual changes
    - Theoretical/conceptual models drive implementation research

What is Unique about Qualitative Methods in Implementation Research?

- Qualitative and quantitative typically mixed in implementation research
  - Your model drives the mixing
  - Sequencing of methods important
- Multiple forms of data are collected and analyzed iteratively
  - e.g., interview transcripts, minutes, emails, fieldnotes
  - Some methods are more amenable than others
- Multiple types of participants are included
  - Patients, providers, team members, administrators, other stakeholders
  - Students, parents, teachers, administrators, community members

CRITICAL COMPONENTS

Developing Research Questions/Specific Aims

Typical progression of questions:

- What needs to be changed [what is the gap/problem]?
- What should be done to address X problem?
- Is an evidence-based practice (EBP) being used?
    - If not, why not?
- What factors influence the EBP being used or potentially being used?
    - What else needs to be done to facilitate the use of the EBP?
- How do you know that what you've done is effective? [Has your research solved the problem?]

Curran et al., 2012

Specific Aims: Example

<u>Primary Implementation Aims</u>

<u>Aim 1</u>. To facilitate implementation of an evidence-based intervention for HIV serodiscordant African American couples (Eban II) in 10 CBOs in California; specifically, to employ a theory-guided strategy to partner with the CBOs to *expose* providers to the intervention, facilitate its *adoption* and delivery with high fidelity, and sustain its use for nine months following the active implementation phase.

<u>Aim 2</u>. Using mixed quantitative and qualitative methods, to document the implementation process and identify barriers and facilitators to adoption, fidelity, and sustainability.

R01 MH093230 (PI: Wyatt)

Study Designs: What Makes Implementation Research Distinct?

- All research designs are possible in implementation research
  - RCTs, comparative effectiveness, quasi-experimental, pilot, etc.
- But, your implementation research will assess several *implementation outcomes*

Glasgow et al., 1999
RE-AIM
- Reach
- Effectiveness*
- Adoption*
- Implementation*
- Maintenance*

Proctor et al., 2011:
- Acceptability*
- Adoption*
- Appropriateness*
- Costs*
- Feasibility*
- Fidelity*
- Penetration
- Sustainability*

- *All of these implementation outcomes can be assessed, at least partially, using qualitative methods
  - *How* and *why* questions

Study Designs: Key Differences (cont.)

And, your units of analysis might be different

- Units of randomization are often much larger (sites/clinics/classrooms/communities vs individuals)
  - May need many sites
- Units beyond individuals are often measured
  - Climate measures
  - Performance of an entire clinic/organization
- Units of analysis may go back and forth between individual and larger units

Hybrid Study Designs:
Blending Implementation and Effectiveness Research

Study Characteristic	Hybrid Type I	Hybrid Type II	Hybrid Type III
Research Questions (examples)	Primary Question: Will a clinical treatment work in this setting/these patients? Secondary Question: What are the potential barriers/facilitators to a treatment's implementation?	Primary Questions: Will a clinical treatment work in this setting/these patients? Does the implementation method show promise?	Primary Question: Which method works better in facilitating implementation of a clinical treatment? Which core components are critical? Secondary Question: Is the treatment effective in this setting/these patients?

Curran et al., 2012

Implementation Strategies

What are they?

- Methods or techniques used to enhance the adoption, implementation, and sustainability of a clinical practice or program (Curran et al. 2012)

Examples of Implementation Strategies

- Education
- Clinical support tools
- Technical Assistance
- Stakeholder engagement
- Performance monitoring/feedback
- Opinion Leaders/champions
- Continuous Quality Improvement/Plan Do Study Act (PDSA) cycles
- Formative Evaluation
- Evidence-based quality improvement
- Training/coaching/supervision
- Facilitation

see Powell et al., 2015

Current Challenges with Implementation Strategies

- Compendium of discreet implementation strategies in mental health (Powell, et al., 2012) found 68; one year later Michie et al. (2013) developed a taxonomy of 93 “behavior change interventions”
- Strategies are frequently poorly defined/specified which limits interpretation and replication (see Proctor et al., 2013)
- When defined, may use inconsistent terminology
- Need greater articulation of what strategies work best
    - within site-specific contextual and cultural environments
    - for specific interventions/practices

Implementation Strategies: Some Considerations

- How did you select your strategy (rationale)
- How complex is the strategy
  - Discrete – involve 1 process or action
  - Multifaceted – use 2 or more discrete strategies
  - Blended – multiple strategies targeting different levels are interwoven/packaged
- Who/what is the target of the strategy
  - Patients, Providers, Administrators, Unit, Clinic, Organization, Community…
- Who will deploy the strategy
  - Top-down, bottom-up
- When will the strategy be used (what phase(s))
- How much of the strategy is needed (dose)
- How often will the strategy be used (frequency)

Theories and Frameworks

- Theory: systematic way of understanding events or behaviors by providing inter-related concepts, definitions, and propositions that explain or predict events by specifying relationships among variables (Tabak et al., 2012)
- Frameworks: strategic or action-planning models that provide a systematic way to develop, manage, and evaluate interventions (Tabak et al., 2012)
- Frameworks often contain theories; theories don’t typically have frameworks
- You may need a theory *and* a framework!
  - Theory of how your intervention will change xyz
  - Framework to guide implementation
  - Your “conceptual model” may contain both

Why Do You Need A Model?

- In implementation research, you are attempting to *change* something(s)
  - Need a theory of how that change will occur
- Your theory of how change will occur drives what you decide to do:
  - What/who to target (may have multiple targets)
  - How to foster change (may have/need multiple strategies)
  - What methods you need to use for your evaluation
- Change is a *process*: a model can help you parse out your process, e.g., into phases
- Models can enhance interpretability of study findings

Frameworks & Phases: A Heuristic

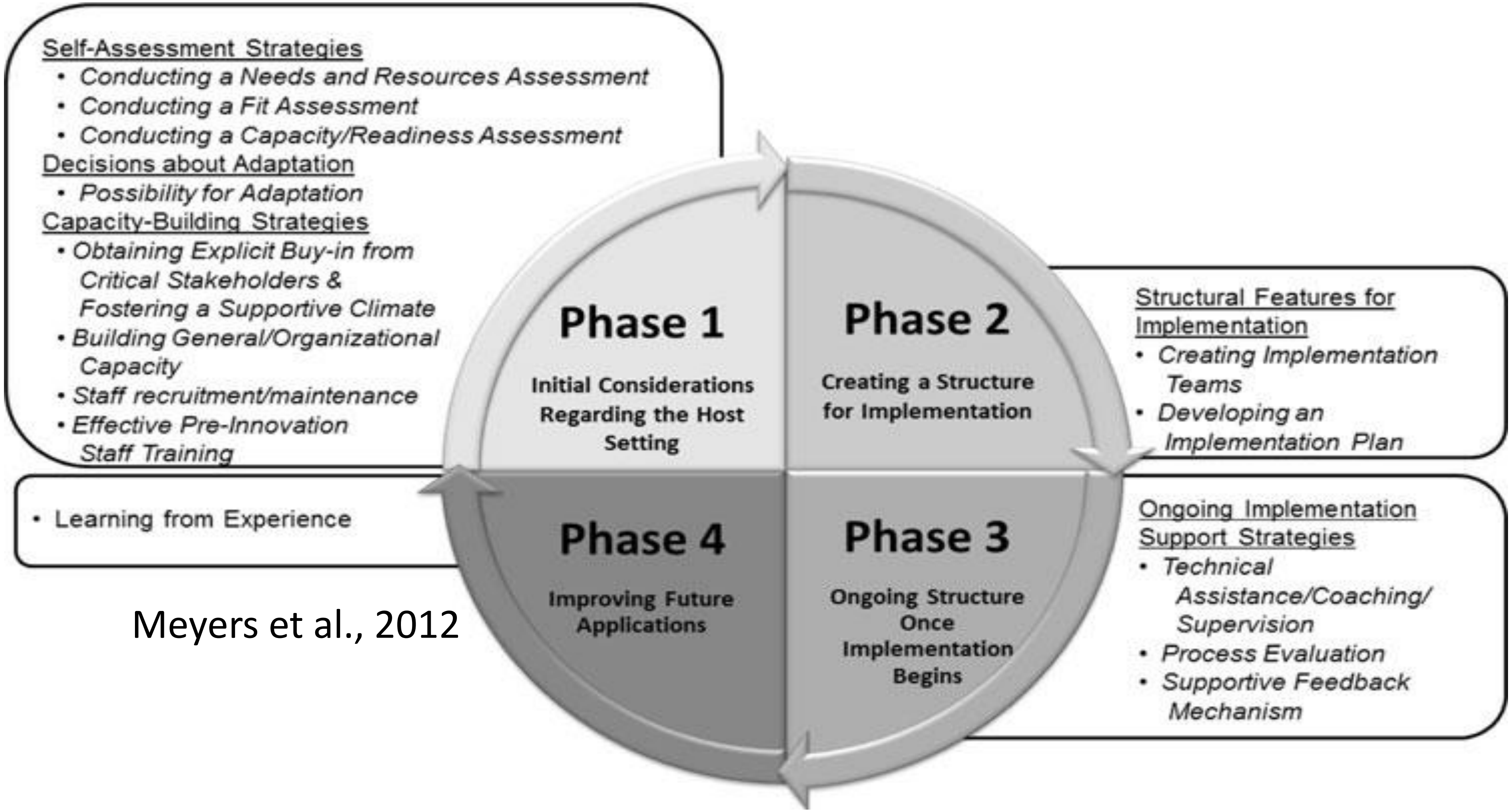
Framework	**Phases of Implementation Research (& Evaluation)**			
	Pre-baseline	***Baseline***	***During***	***After & beyond***
CFIR (Damschroder)	Planning	Engaging	Executing	Reflecting & Evaluating
Program Change Model (Simpson)	Strategic planning	Exposure & Adoption	Implementation	Practice
Ottawa Model (Graham & Logan)		Assess	Monitor	Evaluate
Replicating Effective Practices (Kilbourne)	Pre-conditions	Pre-implementation	Implementation	Maintenance & Evolution
Dynamic Adaptation Process (Aarons)	Preparation	Adaptation	Delivery	Outcome/ feedback
Evidence-based Practice Implementation (Aarons et al.)	Exploration	Adoption Decision/ Preparation	Active Implementation	Sustainment

Another Way of Conceptualizing Phases

<u>Quality Implementation Framework</u> (QIF; Meyers et al., 2012)

- Phase One: Initial considerations regarding the host setting
- Phase Two: Creating a structure for implementation
  - Structural features for implementation
- Phase Three: Ongoing structure once implementation begins
  - Ongoing implementation support strategies
- Phase Four: Improving future applications

Quality Implementation Framework



Meyers et al., 2012

How Do You Choose a Model?

Main considerations (see Tabak et al., 2012):

1. Construct flexibility
    - Broad or operational (detailed, step-by-step)?
2. Dissemination and/or implementation
    - Which type of research are you doing?
3. Socioecologic framework
    - What level(s) are you interested in: individual, organization, community, system?
4. Also consider whether you want to use an existing model or develop a new model
5. Examine whether the model you’re interested in has *measures/instruments* associated with it

What Models Can You Choose From?

- 61 models in Tabak et al. (2012) review
- 25 implementation frameworks in Meyers et al. (2012) review

= many models from which to choose!

- Some commonly used models:
  - PARiHS, CFIR, ISF, RE-AIM, PRECEDE/PROCEED, PRISM, GTO, PCM, ARC, PRISM, REP, etc!

What Do You Do With a Model?

- Identify model EARLY in process of developing project/writing grant
- Discuss each component of the model and how you will go about addressing it
  - Activities
  - Measures
  - Analysis
- Refer back to your model throughout the course of implementation
- Draw on your model for interpretation and presentation of study findings
- Compare and contrast your results with others who have used the same model (if applicable)

Choosing Your Methods: Some Considerations

- How did you select your methods (rationale)
- How complex are your methods
  - Qualitative
  - Quantitative
  - Team, expertise, timing, resource, IRB considerations
- From whom and where will you collect data
  - Patients, Family Members, Providers, Staff, Administrators, Stakeholders…
  - What settings/what methods
- When will which methods be used and why (what phase(s))
- How much data do you need
- How often will you collect data
- How and when will you use the data
  - How and when will you analyze the data
  - How and when will you "mix" your data

Choosing Your *Qualitative* Methods

- How did you select your methods (rationale)
  - Semi-structured interviews, focus groups, participant observation, ethnography, archival analysis, case studies, ETC.
- How complex are your methods
  - Team, expertise, timing, resource, IRB considerations
- From whom and where will you collect data
  - Patients, Family Members, Providers, Staff, Administrators, Stakeholders…
  - What settings/what methods
- When will which methods be used and why (what phase(s))
- How much data do you need
- How often will you collect data
- How and when will you use the data
  - How and when will you analyze the data

Design + Evaluation Considerations: How and When Evaluation Data Will Be Used

- Process Evaluation:
  - Identify influences on process of implementation or clinical intervention prior to, during, and/or after study
  - *No data fed back during study*
  - Typical of Hybrid Type 1 designs
- Formative Evaluation:
  - Identify influences on process of implementation or clinical intervention prior to, during, and after study
  - *Data used to optimize implementation or clinical intervention processes during study*
    - Implementation-focused
    - Progress-focused
  - Typical of Hybrid Types 2 & 3 designs

Implementation-Focused Formative Evaluation

- Occurs <u>during</u> implementation of project plan
- Focuses on assessing discrepancies between implementation plan and actual execution
- Enables researchers to…
  - Understand nature and implications of local adaptation
  - Describe and understand major barriers to implementation and what it takes to achieve desired change
  - Identify and implement new intervention components or refine original strategy to maximize potential for success

Progress-Focused Formative Evaluation

- Occurs <u>during</u> implementation of project plan (concurrent with implementation-focused FE)
- Focuses on monitoring impacts and indicators of progress toward implementation or quality improvement goals
  - audit/feedback of performance data
  - progress in relation to pre-determined timelines for implementing individual intervention components
- Can be used to inform need for modifying or refining original implementation strategy
- Can also be used as positive reinforcement for high performing sites; negative reinforcement for low performers

Characteristics to consider evaluating

*Your model will help you select characteristics to evaluate (what do you need to know?)

Practice/intervention-related characteristics:

- Nature of the evidence
- Complexity
- Adaptability
- Relative advantage
- Cost

Characteristics to consider evaluating (cont.)

Context:

- Culture/Climate
    - Readiness for change
- Leadership
- Structure and infrastructure
    - Space, resources, etc.

Characteristics to consider evaluating (cont.)

People

- Knowledge, attitudes, and beliefs about practice
- Self-efficacy
- Individual readiness
- Commitment to organizational mission
- Degree of burnout

An Example:
Enhancing Quality of Care in Psychosis (EQUIP-2)

Enhancing Quality of Care in Psychosis (EQUIP-2)

- VA HSR&D QUERI-funded study (MNT 03-213; PI: Alexander S. Young, MD; Co-PI: Amy N. Cohen, PhD)

- Study rationale: Need to improve quality of care for patients with serious mental illness in usual mental health care
  - VHA Uniform Mental Health Services Package stipulated that recovery and rehabilitation-oriented programs must be available for all seriously mentally ill (SMI) patients [POLICY EXISTS]
  - Evidence-based practices exist, but uptake is poor [EBPs EXIST]

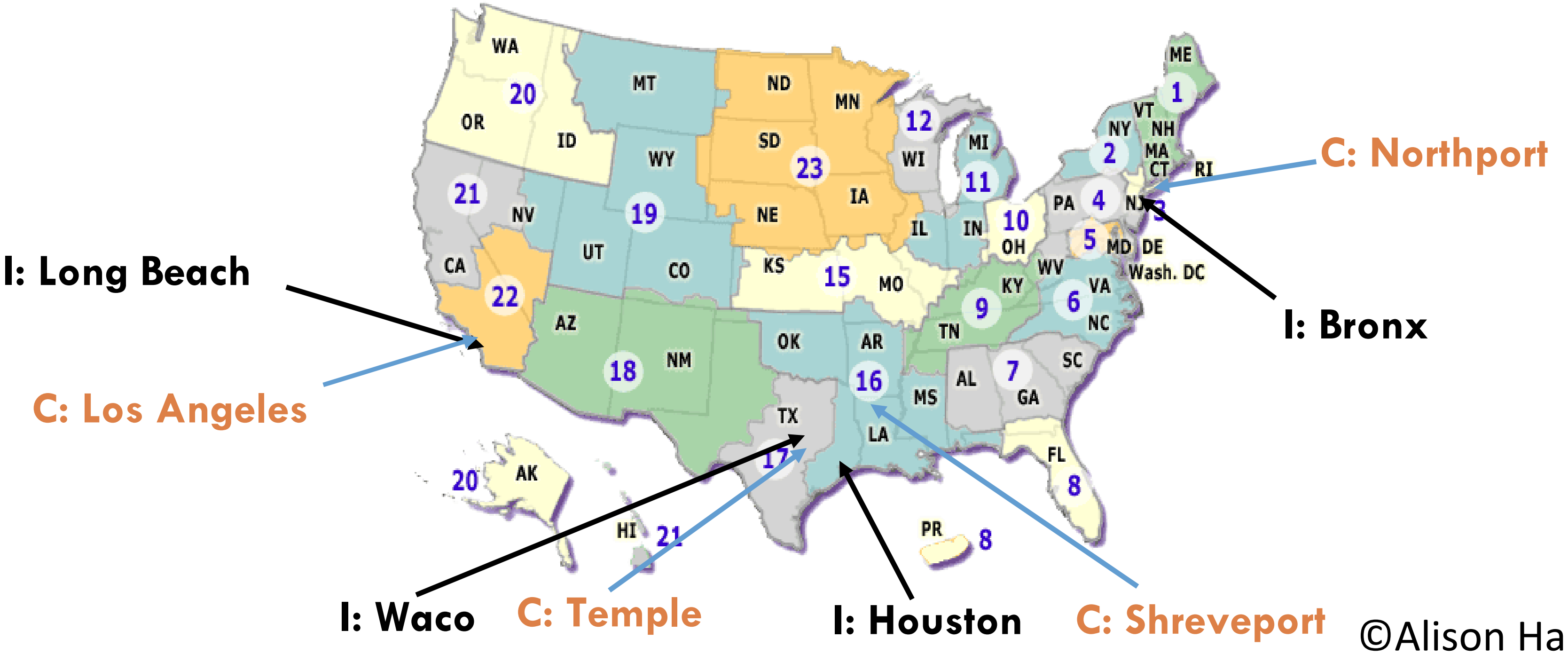
EQUIP Design Overview

Clinic-level controlled trial

- 801 patients with schizophrenia; 201 clinicians

Research-Network partnership in 4 VA regions

- 1 intervention, 1 control site in each region (total of 8 medical centers)
- Strategic planning for evidence-based care targets



EQUIP Specific Aim (Implementation)

Using mixed methods, evaluate processes of and variations in care model implementation and effectiveness to strengthen the intervention and to:

a. assess acceptability of the care model, and barriers and facilitators to its implementation

b. understand how the project's strategies and tools affect care model implementation

c. analyze the impact of individual care model components on treatment appropriateness

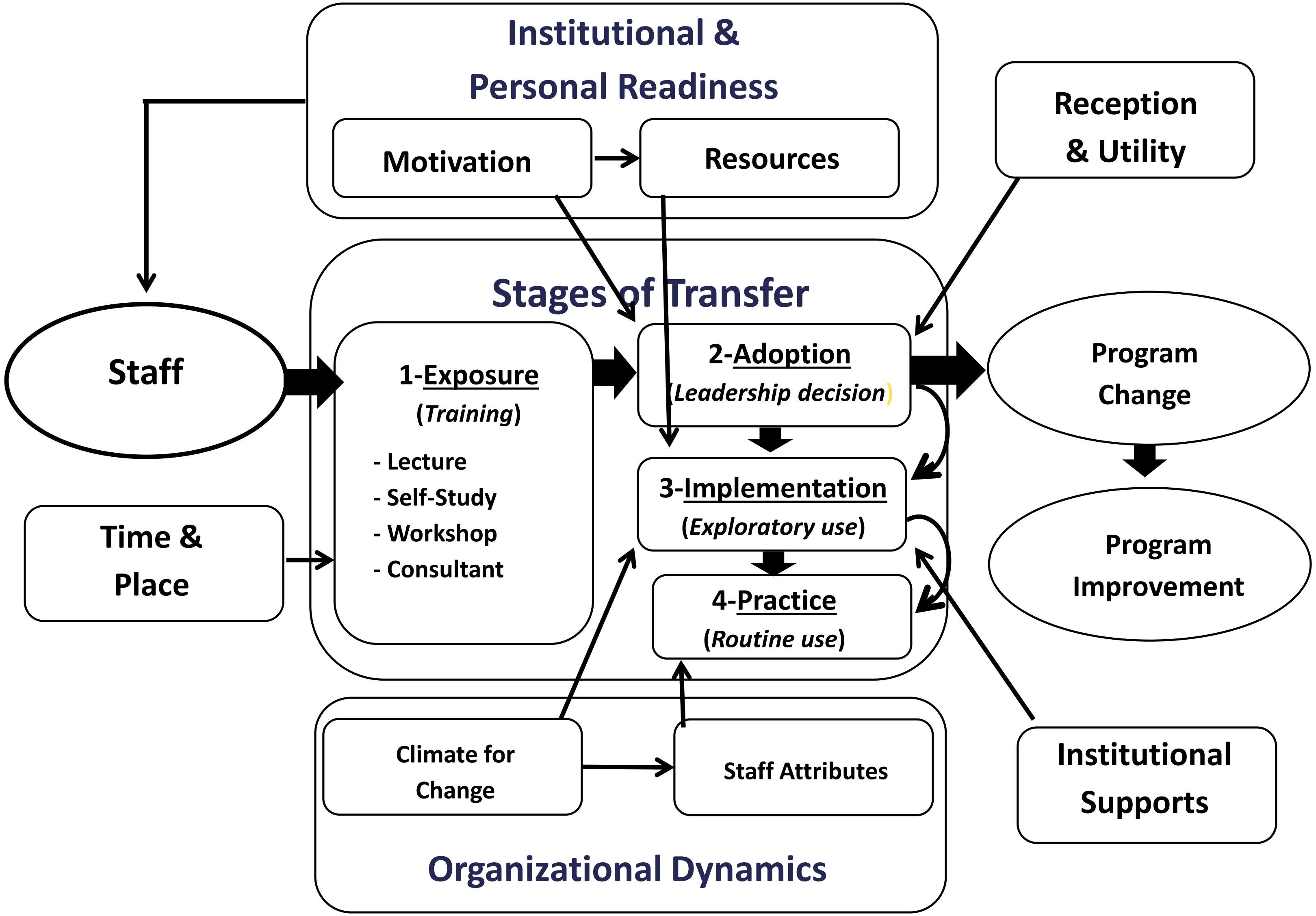
EQUIP Hybrid Type II Design

- Hybrid Type II: effectiveness/implementation design
- Why Type II?
  - Evidence-based practices exist
  - We already knew barriers and facilitators to uptake, based on earlier work (EQUIP-1)
  - We needed to study our implementation approach to increase uptake of EBPs
    - Our implementation strategy: evidence-based quality improvement (EBQI) with external facilitation
- *Effectiveness* of clinical intervention
  - Patient-level data to assess patient outcomes (n=801)
- *Implementation*
  - Evaluate effectiveness of implementation strategy
  - Patient-, provider-, and organizational-level data to assess implementation process and outcomes
    - 201 staff (clinicians + administrators)
- Evaluation data WAS used to optimize implementation

EQUIP: Conceptual Framework

- Important to have a theory of organizational change driving the design of implementation research
- We used the Simpson Transfer Model (STM; Simpson 2002)
  - Stages of organizational change [theory]
  - Phased approach to change [framework]
  - Validated instruments available [operationalized model]
- We supplemented STM with PRECEDE (Predisposing, reinforcing, and enabling factors in diagnosis and evaluation model; Green et al., 1980)
  - Needed specific behavior change concepts
  - Needed model that emphasizes active participation of target audience

Simpson Transfer Model (STM)



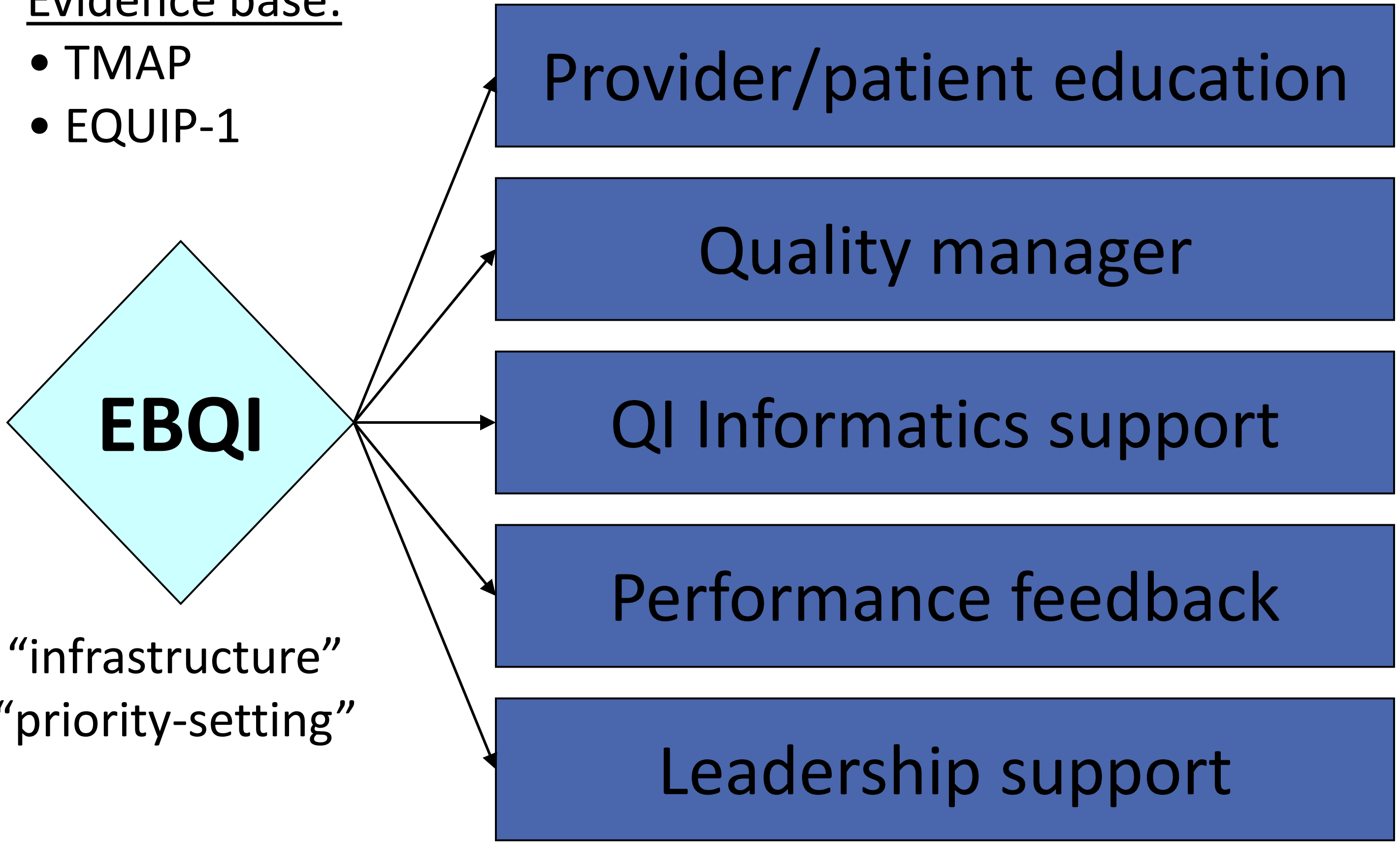
Simpson DD. A conceptual framework for transferring research to practice. J Subst Abuse Treat. 2002 Jun;22(4):171-82.

EQUIP: Implementation Strategy

Implementation interventions	Description
Patient level	
Routine self-assessment data collection via kiosks	Patients completed self-reports of symptoms, side effects, interest in work; entered weight
Education on care targets	Distributed patient "Fast Facts" sheets via kiosk regarding care targets; providers educated patients regarding work and weight
Provider level	
Feedback of patient self-assessment data ("kiosk printout")	Providers received patient self-report data at the time of clinic visits
Education	PI and co-PI conducted in-person and virtual presentations; provider "Fast Facts" sheets distributed regarding care targets; Pushed treatment recommendations to providers through kiosk printouts
Social marketing	PI and co-PI conducted in-person and virtual presentations; research team sent site-specific "e-quip" emails with brief facts about care targets, updates on local resources & activities; posted flyers in clinics about care targets
External facilitation	Conducted monthly meetings with site coordinators and PIs to address implementation issues; held regular meetings with EBQI team leads (see below)
Organizational level	
Project kick-off	PI and co-PI visited each site to launch project; generated enthusiasm and fostered collaboration
Clinical champions	Distributed quality reports and discussed performance with providers; fostered positive attitudes toward care targets in day-to-day interactions and clinic meetings; engaged in implementation trouble-shooting on behalf of research team
Multidisciplinary evidence-based quality improvement (EBQI) teams	Local Recovery Coordinators trained in EBQI and then facilitated regular meetings of EBQI teams to address local improvement issues using plan-do-study-act cycles

EQUIP Effective Schizophrenia Care

Evidence base:
- TMAP
- EQUIP-1



“infrastructure”
“priority-setting”

Implementation Strategy: Strengths and Weaknesses

Strengths
- Focus on raising awareness & knowledge among patients and providers
- Continual interactions between research team and sites
- Ability to tailor 'dose' of strategy components to site needs & wishes

Weaknesses/challenges
- Balancing 'top down' and 'bottom up'
    - Project priorities and local priorities don't always line up
- Leadership critical, but not always stable
- Different educational needs at each site
    - Local adaptations required detailed attention

EQUIP Evaluation: Mixed Methods

Data types	Data source	Sample content
Patient kiosk self-assessments and research assessments	Patients	Demographics, service need and utilization, psychiatric symptoms
Administrative data	Electronic medical record	Visits, treatments
Semi-structured interviews	Clinicians, administrators, patients	Participation, level of implementation, satisfaction
Field notes	VISN coordinators	Group-level dynamics, implementation details
Organizational readiness surveys administrators & staff	Administrators & staff	Organizational climate, readiness for change, burnout
Activity logs	Quality coordinators (RNs)	Time spent by staff on clinical interventions

Multiple Data Sources: Strengths and Challenges

Data Source	Strengths	Challenges
Administrative data	readily available, historical value	Indicators not always specific to outcomes, local coding differences
Patient surveys	validate experience, exposure, outcomes	expensive, highly sensitive to sample
Semi-structured interviews: leaders, clinicians, managers	rich data, diverse perspectives	expensive, time-consuming
Organizational site surveys: Admin & staff	site profiles, faster, easier to analyze	limited discovery, key informant view
Field journals	detailed contextual data	variation between observers
Activity logs	clinical implementation, dose of effort/time	global measure—no detailed dose info.

Lining up the Model (STM) with the Methods

Pre-Implementation

(STM: Exposure & Adoption)

Implementation

(STM: Implementation)

Post-Implementation

(STM: Practice)

Developmental

- Field notes
- Documents (minutes, etc.)
- ORC & Burnout Inventory
- Key stakeholder interviews

Implementation-Focused

- Field notes
- Quality Coordinator logs
- Documents
- Key stakeholder interviews

Progress-Focused

- QI tools

Interpretive

- Field notes
- Key stakeholder interviews
- ORC & Burnout Inventory

Another Way of Lining Up the Model

STM stages	Intervention Components & Tools	Formative Evaluation
Exposure	• Secure commitment • Training • Identify and prioritize needs and treatment targets • Kick-off meetings	Developmental evaluation
Adoption	Predisposing activities • Implementation teams • Opinion leaders	Developmental evaluation
Implementation	Enabling activities • Patient self-assessment • Treatment-specific implementation activities	Progress-focused evaluation Implementation-focused evaluation
Practice	Reinforcing activities • Quality reports, etc.	Interpretive evaluation

STM Strengths and Weaknesses

Strengths
- Guided grant proposal
- Operationalized in validated measures for staff and administrators
- Provided a phased approach for conceptualizing implementation
- Model developer was available to us
- Informed publications due to established evidence base

Weaknesses/challenges
- Doesn’t recommend specific behavior change tools to be used in a knowledge transfer intervention (needed PRECEDE also)
- Wasn’t specific to VA or to specialty mental health
- Wasn’t specific to our implementation strategy
- We weren’t able to examine sustainability (4th phase)
- Results of readiness measures weren’t easy to interpret

Results: Evaluating organizational contexts

- Organizational Readiness for Change (ORC) measure completed by providers at baseline in intervention & control sites
- Semi-structured interviews conducted with subsample of key stakeholders in intervention sites
  - Administrators in specialty mental health
  - Clinicians who primarily treat patients with schizophrenia
  - Other providers (e.g., Supported Employment workers)
  - Local Recovery Coordinators (also facilitated local QI efforts)

EQUIP Semi-Structured Interviews

- Conducted pre-, mid-, and post-implementation; focus today on pre-implementation (baseline) interviews
  - Baseline interview conducted with 38 clinical staff across 4 intervention sites (8-10 per site)
  - In-person, digitally recorded interviews
- Social cognitive theory: focus on knowledge, attitudes, and beliefs about caring for patients with schizophrenia
  - Beliefs about top three needs of patients with schizophrenia
  - Knowledge of and attitudes toward care targets (Wellness & Supported Employment)
  - Beliefs about QI needs within clinic and across VA
  - Experience with quality improvement efforts

Data Analysis

- Professional transcription of interviews
- Use of Atlas.ti
- Constant comparative method to analyze data within and across sites
- Triangulated interview data with fieldnotes maintained by local VISN Coordinators
  - Member-checking with site PIs, VISN Coordinators, local opinion leaders
- *Targeted analysis* of KAB regarding the needs of and services for patients with schizophrenia
- Direct utilization of baseline findings to tailor implementation efforts
- Iterative analysis with each new round of data collection

Baseline Findings: <u>Beliefs</u> about patients' needs

- VISN-identified priorities of Wellness and Supported Employment were not identified as core needs of patients with schizophrenia
- Instead, core needs were perceived to be:
    - Medication management
    - Social engagement in patients' communities
    - Ongoing social support
    - Stable living situations
    - Work opportunities

Knowledge about evidence-based care targets

- Regarding work:
  - Referrals sometimes made to vocational rehab specialists
  - Some participants were not aware of local Supported Employment services
- Regarding wellness:
  - Referrals sometimes made to the nutrition specialist if warranted
  - Referrals sometimes made to MOVE! [not SMI-specific]
  - Some physicians change to prescribing antipsychotics with lower weight-gain potential, but it’s not routine

Attitudes about patients' needs for evidence-based care

- Most patients with severe mental illness (SMI) who want to work and/or who can work are already working.
- Patients with SMI don't or cannot work because they'll lose their benefits.
- Patients with SMI might not have the skills to match the jobs they want.
- Patients with SMI don't want to hear about exercise and eating right.
- It's too hard for patients with SMI to lose weight; other issues (i.e., symptom management) are more pressing.

Conclusions

- Consistent with the Uniform Mental Health Services Package, mental health leadership at the VISN and medical center levels identified recovery-oriented services as their highest priorities for implementation
- Only a minority of clinicians believed that recovery-oriented services were a top priority for patients
  - Medical model still seems to predominate
- KAB of many clinicians appear to differ substantially from those required to meet policy objectives nationally and regionally.

Implications

- When adjustments/enhancements in services are being made per VHA mandates, *staff need to be educated about existing services* and *referral procedures and KAB should be evaluated*

- *Adjustments can be made* to the roll-out of an intervention such that *education and marketing efforts can be targeted effectively* and *priorities can potentially be shifted* when warranted.

Products

EQUIP: Implementing chronic care principles and applying formative evaluation methods to improve care for schizophrenia: QUERI Series

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Using Patient-facing Kiosks to Support Quality Improvement at Mental Health Clinics

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Objectives: Evidence-based services improve outcomes in schizophrenia, but most patients at mental health clinics do not receive such services. This gap in care has been perpetuated by a lack of routinely collected data on patients' clinical status and the treatments they receive. However, routine data collection can be completed by patients themselves, especially when aided by health

and evaluate automated collection of data from patients at these clinics. Patient-facing kiosks are feasible in routine care and provide data that can be used to substantially improve the quality of care.

Key Words: health information technology, quality improvement, mental health

(*Med Care* 2013;51: S13–S20)

Organizational Readiness in Specialty Mental Health Care

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BACKGROUND: Implementing quality improvement efforts in clinics is challenging. Assessment of organizational "readiness" for change can set the stage for implementation by providing information regarding existing strengths and deficiencies, thereby increasing

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INTEGRATING MIXED METHODS IN HEALTH SERVICES AND DELIVERY SYSTEM RESEARCH

Implementation of Evidence-Based Employment Services in Specialty Mental Health

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EQUIP Lessons Learned

We learned that the following were critical for our multi-site hybrid type II study:

- Multidisciplinary research team, strong project director
- Early relationship-building with relevant leaders (regional, local)
- Identification of local priorities and readiness for implementation
- Conceptual framework to guide conceptualization of project
- Flexible implementation strategy with clear components
- Analysis techniques needed to be honed (e.g., more rapid qualitative approach)
- Regular communication with sites

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Qualitative Methods in Rapid Turn-Around Research

Thank you

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Dr. Susan Zickmund

My VA qualitative research teams

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What do we mean by "rapid"?

Rapid Assessment Process (RAP)

- "intensive, team-based *qualitative inquiry* using triangulation, iterative data analysis and additional data collection to quickly develop a *preliminary understanding* of a situation from the insider's perspective" (Beebe 2001)
  - Rapid = "minimum of four days…maximum of six weeks"
- Rapid projects in HSR = projects of one year or less
- Rapid ≠ rushed!

Beebe, J. *Rapid Assessment Process: An Introduction*. AltaMira Press, 2001

Why rapid qualitative methods?

- Most common critique of qualitative research is that it “takes too much time”
- Health services research and implementation research increasingly rely on qualitative methods
  - Constricted timeframe
  - Frequent demand for products
  - High expectation of rigor

When might you need a rapid approach?

- Use of qualitative data for other aspects of study/project
  - Inform each phase of data collection
  - Need to make real-time modifications to an implementation strategy
  - Need qualitative data to inform quantitative measures/instruments
  - Need to understand unexpected discoveries/findings
- Specific timeframe
  - Funding is for a year
  - Deliverables are due on a certain date
- Need for products/progress, e.g.
  - Competition/pressure to publish
  - Need data for preliminary studies section of a proposal
  - Need to provide partners (operations, community, etc.) with rapid feedback
- Striking while iron is hot (time-sensitive issues/developments)

Traditional (not so rapid) vs. rapid qualitative methods

Traditional	Rapid
May be more constructivist --More exploratory, inductive	May be more positivist --More explanatory, deductive
Continuous data collection	Multiple time point or punctuated data collection: analyses inform each other
Long-term engagement in setting, with participants	Rapid, often minimal and time-limited engagement
Descriptive, broad-based, and interpretive	Initially specific/targeted and often explanatory; interpretive later
Data analysis occurs after data collection	Data analysis occurs during data collection
May not be compatible with a mixed methods study (time constraints)	May be well-suited for a mixed methods study

What is unique about rapid qualitative research?

- Approach is “telescoped” and action-oriented
- A pragmatic need for qualitative data exists, e.g., to describe:
  - The environment where an intervention will be implemented
  - The process that occurs while the intervention is underway
  - “Usual” care, services, practices
- Typically and preferably conducted by teams
- Typically need to draw data quickly from multiple sources; often triangulate with quantitative data
- Potentially less time to critique, reflect, synthesize

Designing a rapid qualitative study

- Why rapid?
- What are key research questions/specific aims?
- What guides your rapid study (theoretical/conceptual framework)?
- What will be your sources of data (i.e., what data will you collect, from whom)?
- When will you collect data (when in project, how often, logic behind timing)?
- Who will collect data (training of team, size of team)?
- How will you analyze the data (team-based approach, approach to data, timeframe for analysis)?
- Who will receive your results, when, and how?
- How will you tell the story/stories of your data?

Designing a rapid (or rapid-phased) qualitative study: matching up the pieces

TIME

TIME

Specific, targeted questions/aims

+

Prepared team

+

Feasible, consistent data collection & analysis

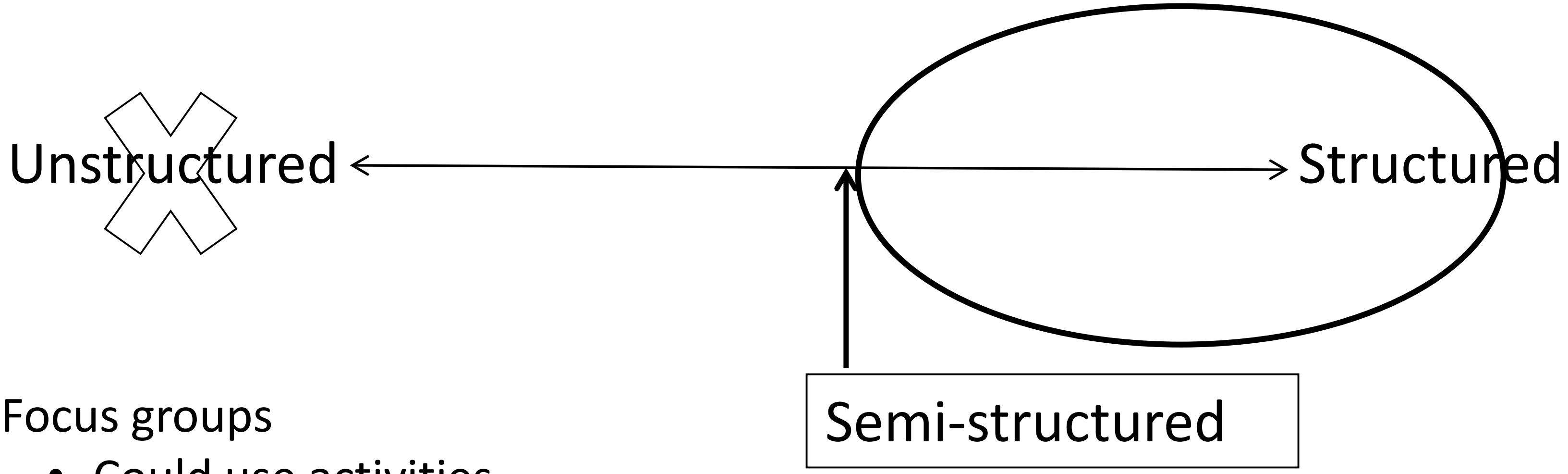
+

Specific, targeted products

TIME

TIME

Choosing your qualitative methods



- Focus groups
  - Could use activities
- Semi-structured interviews
  - Could contain rating/ranking questions
  - Could limit sample to key informants, key stakeholders (e.g., purposeful sampling)
- Observations
  - Could use templates

Example: VA Women's Health Services (WHS) Telehealth Project (Fiscal Year 2012)

<u>Timeframe</u>: <<u>One year</u> total, including IRB submissions, formation of team, site visits, analysis

<u>Aim</u>: To investigate VA women's health telehealth efforts in order to inform next steps with these services

<u>Team</u>: Nine individuals with varying levels of qualitative methods experience (some with none)

--Interview leads + observers

<u>Data collection</u>: In-person or telephone semi-structured interviews with key stakeholders at selected Women's Health Practice-Based Research Network (PBRN) sites across the US

<u>Priority products</u>: Final report for WHS; presentations to inform Women's Health CREATE

VA WHS Telehealth Project: interview guide

- Semi-structured, brief, prioritized, targeted, flexible
- *Example question*: What kinds of services are available to women Veterans at this clinic?
  - Is PACT in place in the women's clinic? If so, can you describe how or whether PACT differs from how primary care was delivered prior to PACT? Have any adjustments been made to meet women's needs within the PACT model? If so, can you describe those adjustments?
  - Are any services integrated, such as primary care and mental health? Can you describe how that works?
  - Are you aware of any services that are available via telehealth? There is interest at Central Office in developing more telehealth-delivered services, such as tele-gynecology. Do you have any thoughts on that idea?

How can we analyze qualitative data rapidly?

Rapid data analysis: some considerations

- Rapid analysis may need to be supported by individuals with limited/no qualitative methods background
- Data analysis NOT limited to coding
  - Rapid data analysis necessitates systematic approaches *other than* coding
- Data reduction is needed to turn *preliminary* analyses around quickly
- Rapid data analysis *does not preclude* future, more time-intensive, “formal” analysis (e.g., inductive coding)

Rapid data analysis: reducing the data

- “Data reduction is not something separate from analysis. It is *part of analysis.* The researcher’s decisions—which data chunks to code and which to pull out, which evolving story to tell—*are all analytic choices. Data reduction* is a form of analysis that sharpens, sorts, focuses, discards, and organizes data in such a way that “final” conclusions can be drawn and verified.” (Miles & Huberman, *Qualitative Data Analysis: An Expanded Sourcebook*, 1994, p. 11)
  - Remember to “keep the words,” don’t strip the data from the context in which they occurred
  - This is about “taking stock” of what you have available to you in the data

Rapid analysis steps at a glance

Step 1: Create a neutral domain name that corresponds with each interview question
Step 2: Create a summary template for use by the team
Step 3: Take the summary template for a "test drive" and assess its usability, relevance, etc.
Step 4: After consistency has been established across the team of summarizers, divide up the transcripts across the team and summarize
Step 5 : Transfer summaries into a matrix (respondent x domain)

****Tailor this process to meet your team's needs/styles and the goals of your project****

How to reduce the data: templated summaries

- Initially develop a templated summary of each data collection episode, according to a relatively small set of pre-determined domains (with space for the unexpected)
  - Domains should mostly line up with interview guide

Steps for creating a templated summary

Step 1: Create a *neutral* domain name that corresponds with each interview question

Sample Interview Question	Domain
Are you aware of any services that are available to women via telehealth?	Telehealth services/telegynecology
Is PACT in place in the women's clinic? Have any adjustments been made to meet women's needs within the PACT model? If so, can you describe those adjustments?	PACT
Are any services integrated, such as primary care and mental health? Can you describe how that works?	Integrated services, e.g., PC-MHI

Steps for creating a templated summary (cont.)

Step 2: Draft a summary template

TRANSCRIPT SUMMARY

PREPARED BY: Alison

SITE: abc

RESPONDENT ROLE: PCP

TELEHEALTH/TELE-GYN

PACT/WH-PACT

INTEGRATED SERVICES, e.g., PRIMARY CARE-MENTAL HEALTH

- Include “Other observations” at the end, for material that doesn’t fit into the domain
- Include space at end for important quotations

Steps for creating a templated summary (cont.)

Step 3: Take the summary template for a "test drive"

- Have team members use the template for the same subset of transcripts
- Assess template:
  - Are the domains intuitive/ "findable" in the data?
  - Are any domains missing, incorrectly labeled, etc.?
  - Is it easy to use?
  - How long does it take to complete it?
    - Should take about an hour to complete

Steps for creating a templated summary (cont.)

Step 3 continued:

- Compare summarizing “styles” across the team
- Assess for:
  - Similarities/differences in volume of information per domain
  - Use of direct quotes (should be minimal)
  - Notes regarding absence of content
    - Recommend noting “question wasn’t asked” or “question was asked but not answered”
  - Notes regarding depth on a particular domain
    - Recommend noting “this interview has a lot of data on this topic,” “great quotes in this transcript,” etc.

Steps for creating a templated summary (cont.)

Step 4: After consistency has been established across the team of summarizers, divide up the transcripts/data across the team and summarize; could divide up by site, by role, etc.

TRANSCRIPT SUMMARY

PREPARED BY: Alison

SITE: abc

RESPONDENT ROLE: PCP

TELEHEALTH/TELE-GYN

- Strong telehealth bcs large rural pt pop
- Telegyn is "feasible" bcs peripheral devices can be attached to global media carts

PACT/WH-PACT

- Happy with PACT, but "stressful for my RN"
- Understaffed (LVNs)
- Need to start implem 10% panel size reduction for WVs
- 60 mins for WV appts will be a "tough one"

Steps for creating a templated summary (cont.)

What makes for a good summary?

- Brief (no more than 2 pages)
- Organized
- Thorough (major points captured)
- Readable
  - Anyone reading the summary should get a sense of what the respondent said
- Useful (e.g., provides pointers for what's in the transcript)

Instructions for preparing transcript summaries (handout)

Preparing Transcript Summaries

1. The summary heading should have the name of the lead interviewer and any other interviewers in the room, if possible. The date of the data collection episode should also be included. Please record the name of the person preparing the summary.
2. It is most useful to stick to keep the domains in order to easily move the information into a matrix (i.e., don't change the structure of the template).
3. Information not relevant to the pre-set domains should be included under "Other," or you can create your own domain if something is coming up consistently. The latter should be communicated to the team.
4. Quotes are often times better *if they are concise*. Or, you can paraphrase and include key quotes at the bottom of the summary (and put "see quotation below" next to paraphrase).
5. Paraphrasing should be used for complicated/long answers.
6. This is a minimally interpretive process; remember you are trying to generate bullet points about the key domains such that *anyone reading a summary would get a general sense of what was discussed*.
7. If there is no information for a given domain, indicate why: was the question asked but not answered? Was the question asked and the person responded something along the lines of, "I don't know." Or was the question not asked? Documenting the absence of data is important for the assessment of data collection consistency.
8. This should only take about an hour for a 45-60 minute interview transcript. If you are spending hours on one summary, you are probably thinking too much, interpreting, OR the template is not working as planned. Please let the team know if summarizing is taking a long time.

Displaying your data using the summaries

Step 5: Transfer (copy & paste) summary points into a matrix (e.g., respondent x domain)

"Matrices streamline the process of noting simultaneously and systematically similarities, differences, and trends in responses across groups of informants" (Averill 2002, p. 856)

- They make the "synthesis and summary of important findings accessible to audiences who might otherwise never take the time to examine the voluminous data generated by the interview process, domain analysis, and thematic analysis" (p. 864)

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Data display (cont.)

- Displays are "designed to assemble organized information into an immediately accessible compact form so that the analyst can see what is happening and either draw justified conclusions or move on to the next step of analysis…"
- "…the creation and use of displays is not separate from analysis, it is a *part* of analysis."

(Miles & Huberman, *Qualitative Data Analysis: An Expanded Sourcebook*, 1994, p. 11)

- Set up matrix in format that makes sense for purpose of analysis (e.g., by site, by role, by wave of data collection, etc.)

	TELEHEALTH/TELEGYN	PACT/WH PACT	INTEGRATED SERVICES
SITE 1	*[Could summarize this domain here]*		
Interview 1	•Strong telehealth bcs large rural pt pop •Telegyn is "feasible" bcs peripheral devices can be attached to global media carts	•Happy with PACT, but "stressful for my RN" •Understaffed (LVNs) •Need to start implem 10% panel size reduction for WVs •60 mins for WV appts will be a "tough one"	•Made space in WH for MH providers •Looking forward to psychol coming on board in WH soon
Interview 2	•Telegyn "could be done" and could be a "meaningful thing," but it would still require review of pt chart to make sure it's appropriate for the pt	•MH should be "seen as inextricably part of that PACT" •"Having a gender-specific PACT is certainly a good idea"	•Have care management and co-located care •PC-MHI "still needs to ramp up"

Matrix analysis: what can the matrix do for you?

- With the matrix, you can:
- Quickly peruse content of any given domain
  - Get a sense of variation
- Assess gaps in information
  - Assess why those gaps exist: Question not asked? Question didn't work well?
- Develop memos (e.g., what themes are you noticing?)
- Develop summaries of domains, sites, types of respondents, etc.

What can you do with your rapid analysis?

- Divide up the labor of reviewing transcripts
  - Can be done by individuals who don’t have qualitative training
- Assess quality of data collection across team
- Obtain a quick understanding of the major findings
  - Especially important if you did not collect all of the data
- Use summaries to inform subsequent waves of data collection
- Prepare reports/presentations
- Develop codebook that is informed by depth and breadth of data related to each domain

What happens *after* your rapid analysis?

- GO BACK TO THE DATA!
- Consensus-based analytic approach
  - Give each team member same subset of transcripts
  - Each person develops a code list
  - Compare code lists (color code)
  - Come to consensus about initial code list
  - [Lead analyst: Examine extent to which code list maps onto matrix analysis; examine correspondence between codes and originating conceptual model]
  - Each person uses code list with same subset
  - Come to consensus about code list and application of codes
  - If consistency is achieved, divide up remaining transcripts across team, with each transcript assigned a primary and secondary coder
    - If codes are added, use initials and give full explanation for origin and rationale of new code; bring to team via email or conference call
  - Meet regularly to review code content, memos
    - Each team member prepares slides with key insights, directions, shifts
  - As paper/presentation ideas are developed, write abstracts, key messages, select target journal/conference

Hallmarks of credible (rapid) QDA

- ~~Prolonged~~ SYSTEMATIC engagement with the data
- Presentation of clear evidence grounded in the data
- Cross-cutting themes
  - or when theme is rare, clear rationale for inclusion as critical
- Team-based approach with discussion and consensus on themes and preliminary conclusions

Some helpful references

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Policy Implementation Research

Allen ST, Ruiz MS, O'Rourke A. The evidence does not speak for itself: The role of research evidence in shaping policy change for the implementation of publicly funded syringe exchange programs in three US cities. Int J Drug Policy. 2015 Jul;26(7):688-95.

- Applications of research evidence were less successful in DC because policymakers had differing ideas about the implications of syringe exchange program implementation and because opponents of policy change used evidence incorrectly or not at all in policy change discussions.
- Typological applications of research evidence are useful for understanding policy change processes, but their efficacy falls short when sociopolitical factors complicate legislative processes. *Advocates for harm reduction may benefit from understanding how to effectively integrate research evidence into policy change processes* in ways that confront the myriad of factors that influence policy change.

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Nilsen P, Ståhl C, Roback K, Cairney P. Never the twain shall meet?--a comparison of implementation science and policy implementation research. Implement Sci. 2013 Jun 10;8:63.

- Policy implementation research=How governments put policies into effect

Panisset U, Koehlmoos TP, Alkhatib AH, Pantoja T, Singh P, Kengey-Kayondo J, McCutchen B. Implementation research evidence uptake and use for policy-making. Health Res Policy Syst. 2012 Jul 2;10:20.

- how implementation research can be used along the entire continuum of the use of evidence to inform policy
- a number of tested strategies to support the transfer of implementation research results into policy-making are provided to help meet the standards that are increasingly expected from evidence-informed policy-making practices

Some Parting Thoughts

- Implementation research is messy, unpredictable, nonlinear
- Implementation research is a team sport
  - Interdisciplinary team is a must
- Implementation research will make you question many things you thought you knew
- Your conceptual model is your friend, and it might evolve
- Publish early and often
- The field is still young: define your terms and concepts
- Seek guidance from experienced implementation scientists

Implementation Science: Selected Resources

Information

- VA Quality Enhancement Research Initiative (QUERI): www.queri.research.va.gov
  - QUERI Implementation Guide: http://www.queri.research.va.gov/implementation/default.cfm
- Implementation Network e-Newsletter
- National Implementation Research Network: http://nirn.fpg.unc.edu/

Trainings

- NIH/VA Implementation Research Institute
- Training Institute for Dissemination and Implementation Research in Health (TIDIRH)
- Archived Enhancing Implementation Science (EIS) and other HSR&D cyberseminars: http://www.hsrd.research.va.gov/cyberseminars/catalog-archive.cfm

Conferences

- NIH Conference on the Science of Dissemination & Implementation
- Seattle Implementation Research Conference
- Global Implementation Conference