Implementing Collaborative Care for Outpatient Mental Health Teams: The BHIP Enhancement Project

Christopher Miller, PhD[1,2]

Jennifer L. Sullivan, PhD[1,3]

Bo Kim, PhD[1,2]

Center for Healthcare Organization and Implementation Research (CHOIR), VA Boston Healthcare System[1],

Harvard Medical School, Department of Psychiatry[2]

Boston University, Department of Health Law, Policy and Management[3]

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Samantha Connolly, PhD
Robert Lew, PhD
Kelly Stolzmann, MS
Rachel Riendeau, BA
Alicia Williamson, BA
Jeffery Pitcock, MPH
Rani Elwy, PhD
Karen Drummond, PhD
Kendra Weaver, PsyD

Poll Question #1

- What is your primary work role?

1) Non-VA researcher
2) VA researcher
3) Clinician
4) Administrator
5) Other

Poll Question #2

- What is your level of familiarity with implementation facilitation as an implementation strategy?

1) I am a trained implementation facilitator.

2) I have used implementation facilitation in a study or project.

3) I am familiar with the concept of implementation facilitation but have not used it as an implementation strategy.

4) I am unfamiliar with implementation facilitation.

Outline

- The BHIP Enhancement Project: overview & outcomes (recently published in *JAMA Network Open*)
  - Implementation strategy (blended facilitation)
  - Study methods
  - Primary implementation and clinical outcomes
- Next steps
  - Cost analyses
  - Post-implementation qualitative results
  - Case study methodology
- Discussion

The BHIP Initiative

Behavioral Health Interdisciplinary Program (BHIP) teams: VA-based outpatient mental health teams. Meant to be:

- **Collaborative:** Increased provider collaboration and improved work processes
- **Veteran-Centered:** Increased Veteran access to recovery-oriented, evidence-based care
- **Coordinated:** Improved coordination/continuity of care

Yes, but how?

The Collaborative Care Model (CCM)

- Enter the CCM: evidence-based way to structure care for chronic conditions

CCM Goal: Anticipatory, Continuous, Evidence-Based, Collaborative Care via…				
CCM-2: Work Role Redesign	**CCM-3: Veteran Self-Management Support**	**CCM-4: Provider Decision Support**	**CCM-5: Information Management**	**CCM-6: Community Linkages**
• Care management • Need-driven access • Activated follow-up	• Focus on the individual's values and skills • Shared decision-making • Self-mgt skills • Recovery-orientation	• Provider education • Practice guidelines • Specialty consultation	*Population*: • Registry *Provider:* • Feedback *Patient:* • Outcome tracking	• Additional resources • Peer-based support
CCM-1: Organizational Leadership and Support				

Wagner et al., 1996; Woltmann et al., 2012; Miller et al., 2013

The Collaborative Care Model and BHIP

Context:
BHIP rollout in need of guiding clinical model

State of the Science:
Good evidence for CCM to structure care for chronic conditions… but few implementation trials

- **CCM formally adopted** by VA as clinical model for BHIP
- **BHIP Enhancement Project** launched

BHIP Enhancement Project

Key questions:

- Can CCMs be implemented under general clinical practice conditions in outpatient mental health (BHIP)?
- And does it make a difference to health outcomes?

➢ Hybrid II implementation-effectiveness trial

Implementation Strategy: Blended Facilitation

Begin with a site's ongoing BHIP Initiative efforts…

→*Add **blended facilitation** to enhance CCM uptake:*

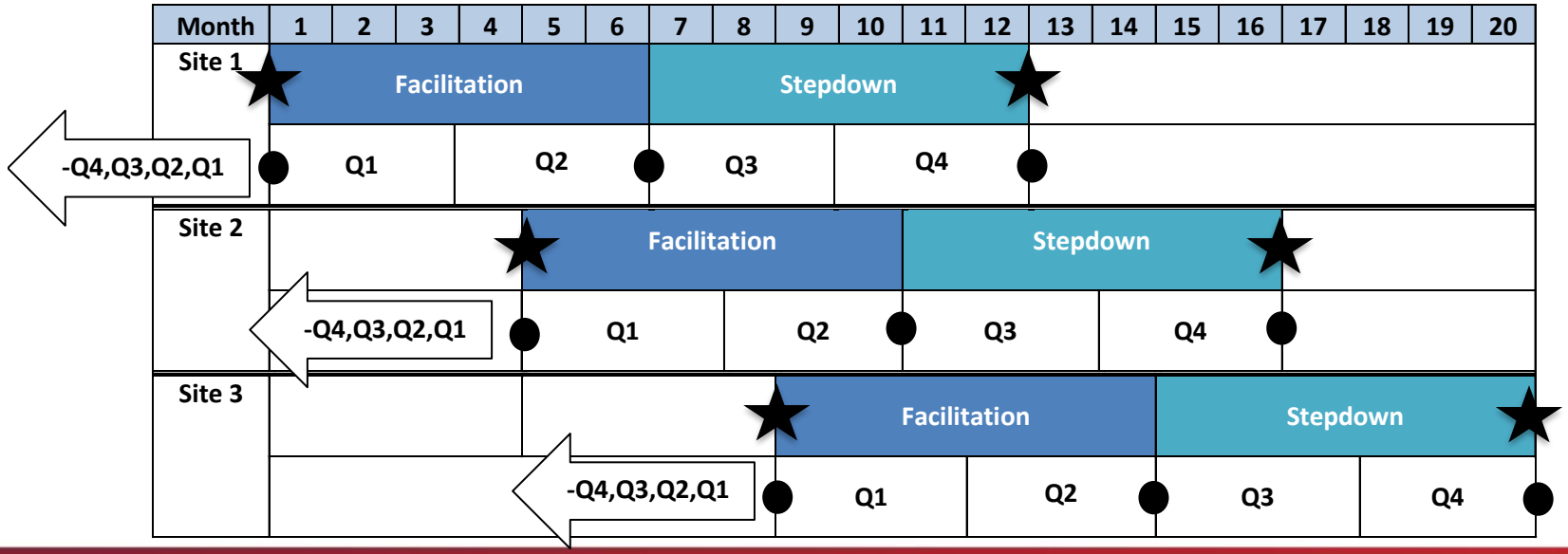
- **External Facilitator** [*centrally funded*] partners with **Internal Facilitator** [*facility-funded*]
  - Extensive pre-site visit assessment
  - 1.5-day site visit
  - Regular phone/video meetings for 12 months: team-building & process redesign

- Workbook-guided: ***BHIP-CCM Enhancement Guide***

Study Methods – Stepped Wedge

Hybrid II stepped wedge:

- All participants receive facilitation support
- Start-time is randomized
- Control = technical assistance resources during wait for facilitation

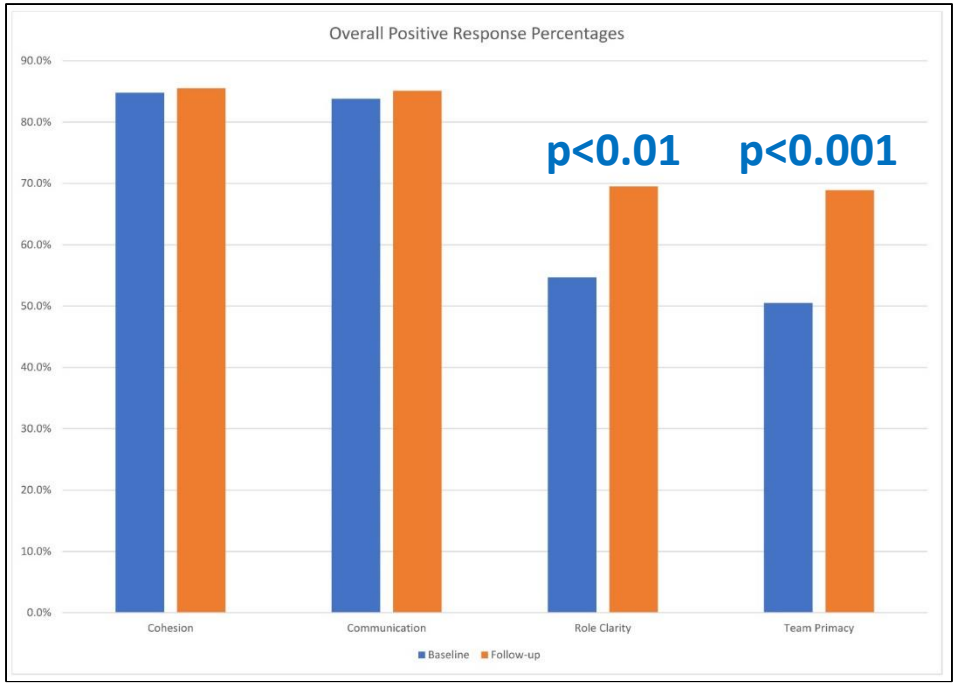


Study Results – Participants

- Provider perceptions of CCM implementation: TDM (Team Development Measure)
  - 83 providers across T0, stepdown (T6-T12)
- Veteran health status: VR-12
  - 1,050 Veteran interviews across T0, T6, T12
- Veteran health status: hospitalizations
  - 5,596 team-treated Veterans
  - Comparison sample of non-team Veterans drawn from the same medical centers

Study Results – CCM implementation

- No significant change in TDM scores…
- … but significant improvement in role clarity and team primacy.



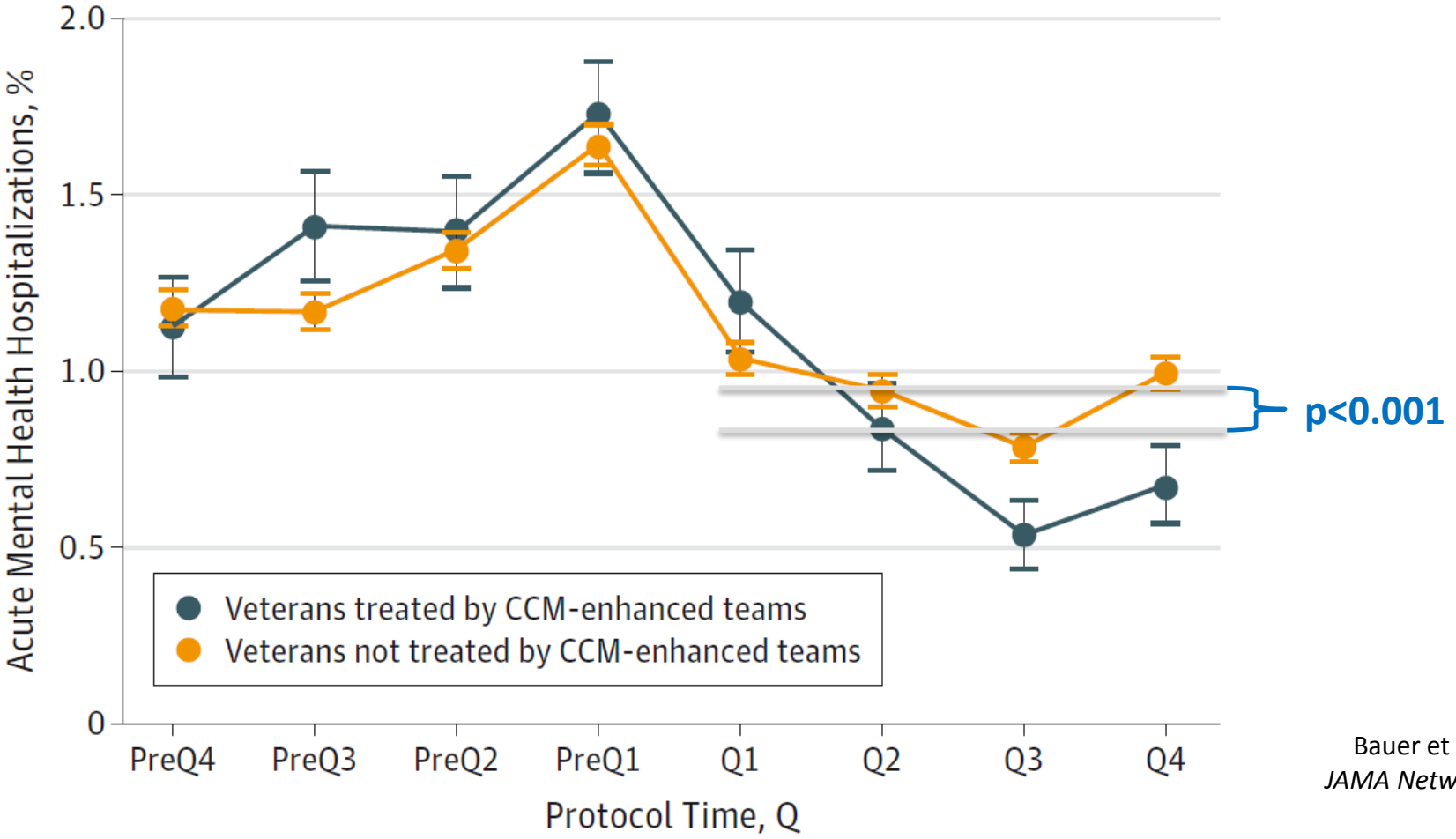
Study Results – VR-12

- No significant change in VR-12 MCS for treated sample…
- … but significant improvement for Veterans with 3+ mental health diagnoses.

*VR-12 MCS	t_0	t_{12}	Change
≥ 3 diagnoses treated in past year	21.2	24.3	+ 3.1 (95%CI 1.0 to 5.3) p=0.004
<3 diagnoses	33.9	32.0	- 1.9 (95%CI -3.7 to -0.1) p=0.04

p<0.001

Study Results – Mental Health Hospitalization



Bauer et al., 2019:
JAMA Network Open

Study Conclusions

Blended facilitation of CCM in outpatient MH care is associated with:

- Improved team functioning (role clarity, team primacy)
- No change in Veteran self-rated health outcomes at the population level
  - Except for those with 3+ MH diagnoses
- Robust reduction of MH hospitalization rate
  - More so than non-team-treated Veterans at same medical centers

Next Steps: Additional Analyses

In the works:

- Cost-benefit analyses from the health system perspective
  - Do reduced hospitalizations counterbalance facilitation costs?
- Post-implementation qualitative analyses from provider interviews (Dr. Sullivan)
- Case study methodology to explore site-to-site variability (Dr. Kim)

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BHIP Enhancement Project

Key qualitative questions:

- Does BHIP implementation using blended facilitation influence CCM elements?
  - Are these changes attributed to the BHIP enhancement project?
- What are the key factors affecting implementation?

Qualitative Methods

Data collection:

- Conducted semi-structured interviews with BHIP team members at 9 sites pre- and post-intervention
- Interview guide focused on 6 CCM elements
- Interviews were transcribed

Qualitative Methods

Data analysis:

- *A priori* CCM elements coded using direct content analysis
- CCM evidence at each time point rated on 1-5 scale where
  - 1 not at all present
  - 5 stably and broadly established
- Consensus process used to come to agreement on all ratings
- Cross-site matrices used to assess changes

Qualitative Results

Sample:

- 39 unique respondents
- Respondent roles on team:
  - 28% Social workers
  - 24% Psychologists
  - 14% Registered nurses
  - 10% Psychiatrists
  - 10% Vocational rehabilitation
  - 14% Other staff

Qualitative Results

- 3 CCM elements most frequently present pre- and post-trial:
  - Work role redesign
  - Patient self-management support
  - Provider decision support

Qualitative Results

- CCM elements with greatest change pre- versus post-implementation
  - Positive direction
    - Work role redesign
    - Patient self-management support
    - Clinical information systems
  - Negative direction
    - Leadership support

Qualitative Results

Changes attributed to BHIP Enhancement Project:

"We have very experienced competent people on our team who know how [team-based care] should be delivered. This was a golden opportunity to start doing some of the things we accumulatively knew needed to happen"

Qualitative Results

Changes attributed to BHIP Enhancement Project:

"What this project did was address longstanding problems and issues that we've had in the clinic that have gone unaddressed…the CCM forced us to address some issues … like how to make referrals, what our discharge criteria are, when to refer to specialty programs… just a lot of very subjective things that we have made more objective and made processes more efficient"

Qualitative Results

Changes attributed to BHIP Enhancement Project:

- Work role redesign
  - More structure
    - Regular meetings and huddles
    - Identification of more shared patients
    - Addition of new team members

Qualitative Results

Changes attributed to BHIP Enhancement Project:

- Patient self-management
  - Patients attend team meetings
  - Creation of informational materials and orientations
- Provider decision support
  - Better team communication and cohesion
  - More structured ways to consult outside the team
- Clinical information systems
  - Identification and tracking of shared patients

Qualitative Conclusions

- Sites made progress on implementing several CCM elements during the trial
- Most progress made in elements high pre-trial
  - Future need for facilitators to focus on CCM elements with less implementation at baseline
- To improve CCM within BHIPs,
  - leadership support and
  - resources and training are needed

Qualitative Next Steps

- Identify factors affecting implementation using the integrated Promoting Action on Research Implementation in Health Services (iPARIHS) framework
- Use Qualitative Component Analysis to identify patterns in data (e.g., CCM scores, factors affecting implementation, TDM, implementation success, etc.)

Next Steps: Additional Analyses

In the works:

- Cost-benefit analyses from the health system perspective (Dr. Miller)
  - Do reduced hospitalizations counterbalance facilitation costs?
- Post-implementation qualitative analyses from provider interviews (Dr. Sullivan)
- **Case study methodology to explore site-to-site variability (Dr. Kim)**

Case Study Research Questions

- **How were the nine sites similar or different** in their implementation of the CCM?

- For CCM implementation, **what are the factors and mechanisms that matter**, in what ways, and under which circumstances?

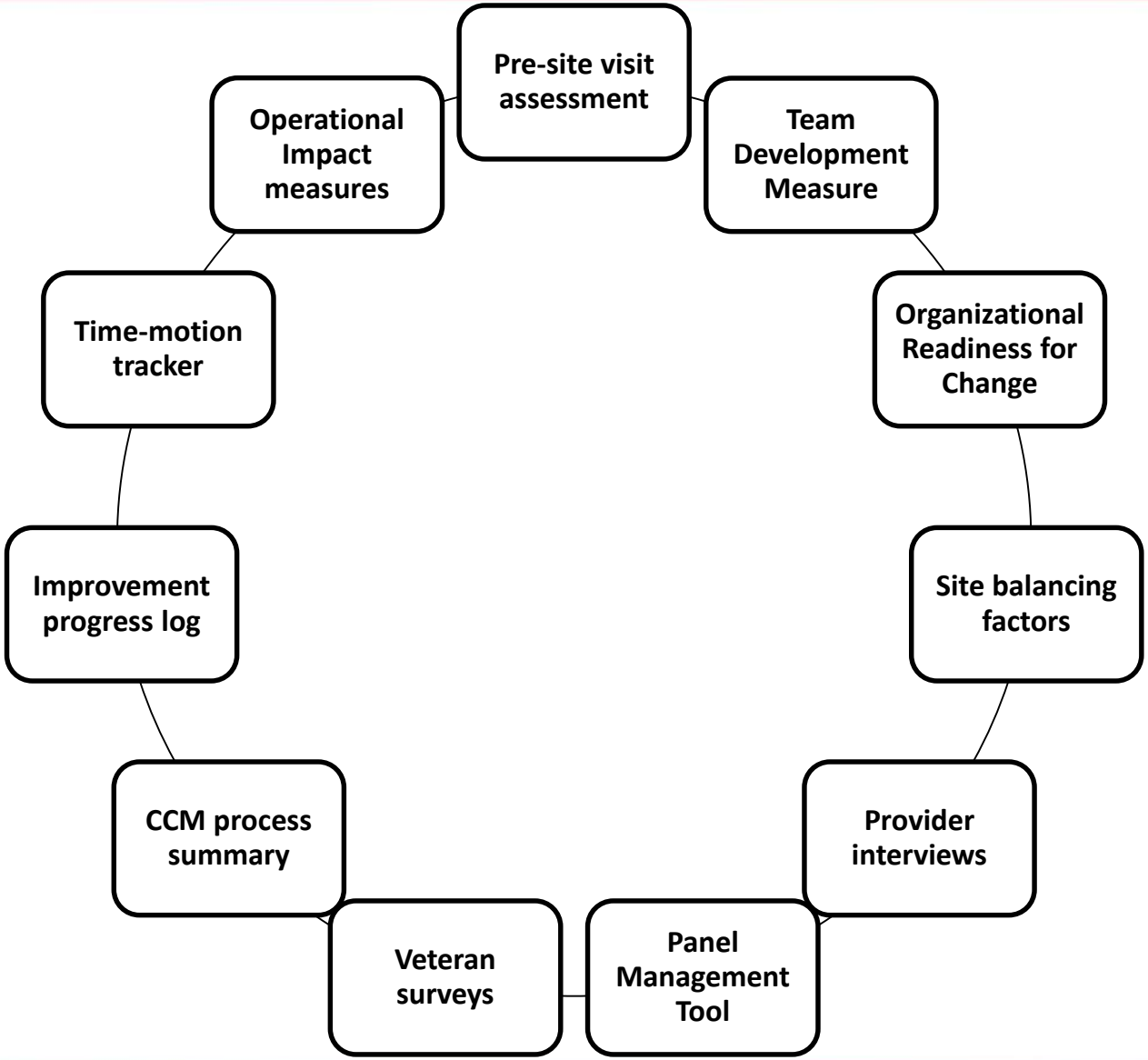
Why Case Study Research?

- **Implementation of health care innovations**
  - Often complex and tailored to local contexts
  - Limited control over contemporary events

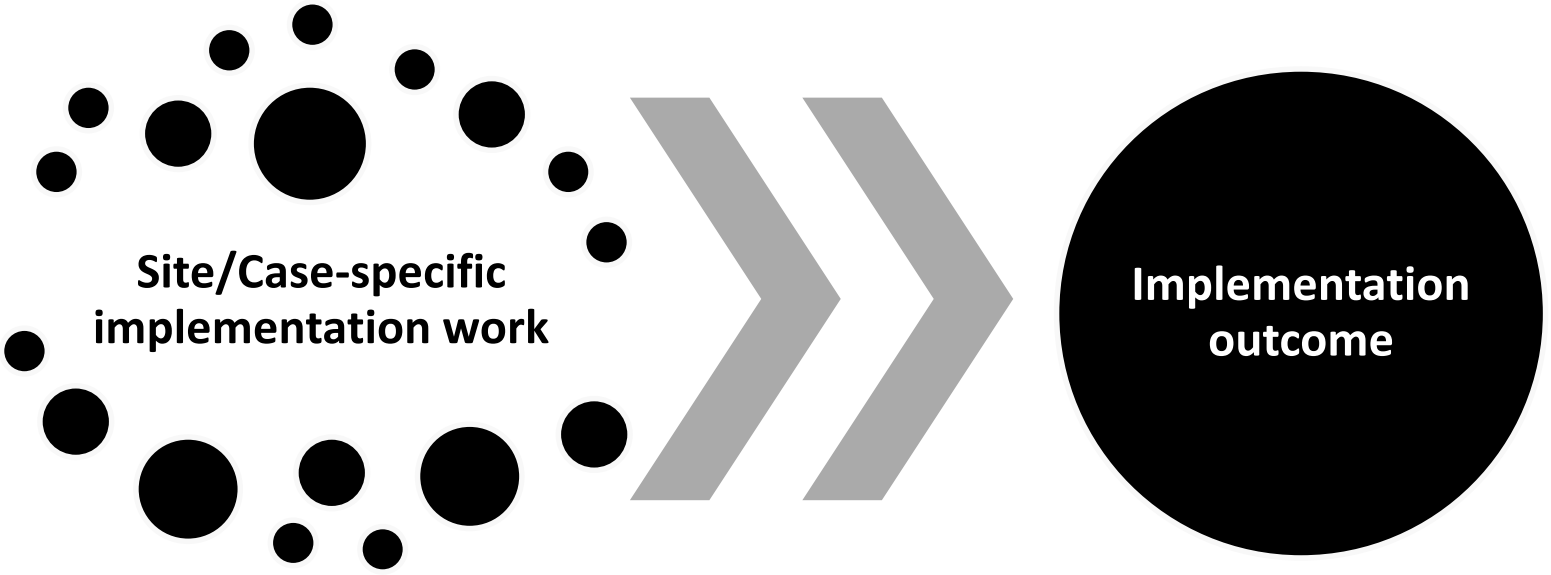
- **Insights/Guidance sought by field from research**
  - Less: Is it effective? Does it work?
  - More: How / Why / When / For whom does it work?

- **Case study research** [Yin, 2013]
  - Methodology to address how/why questions
  - Takes into account uncontrollable events

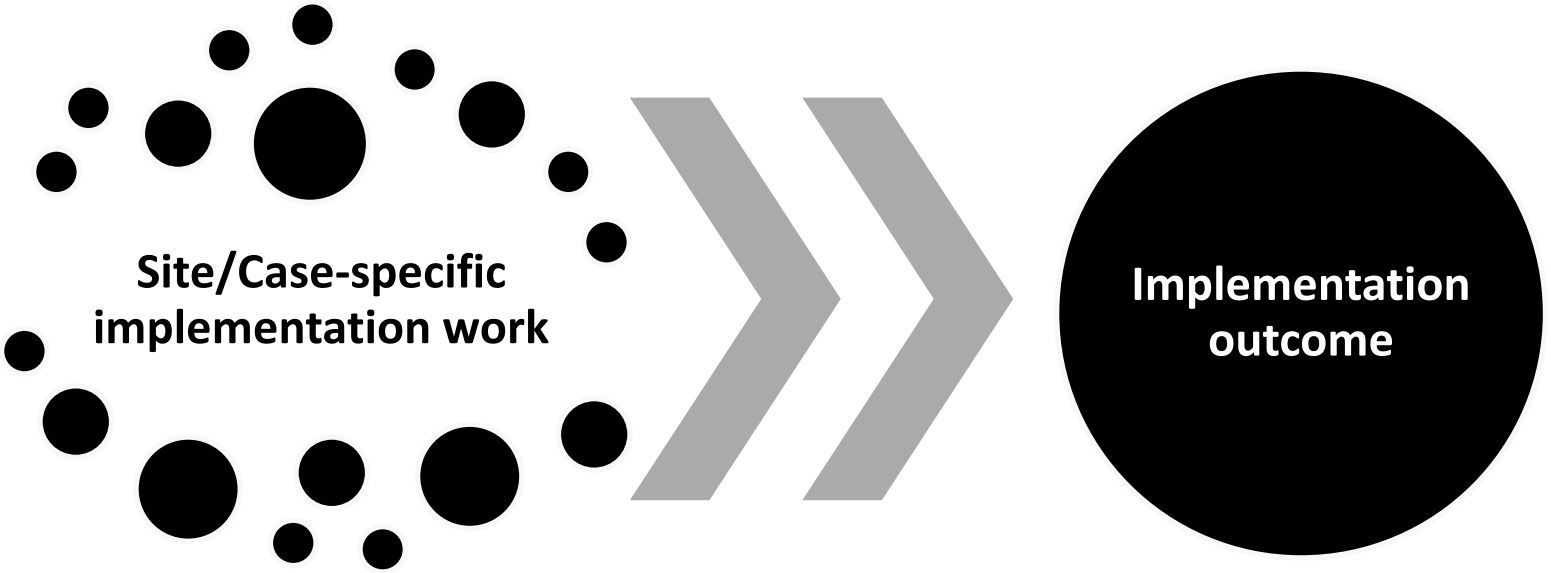
Multiple Data Sources



For Each Site



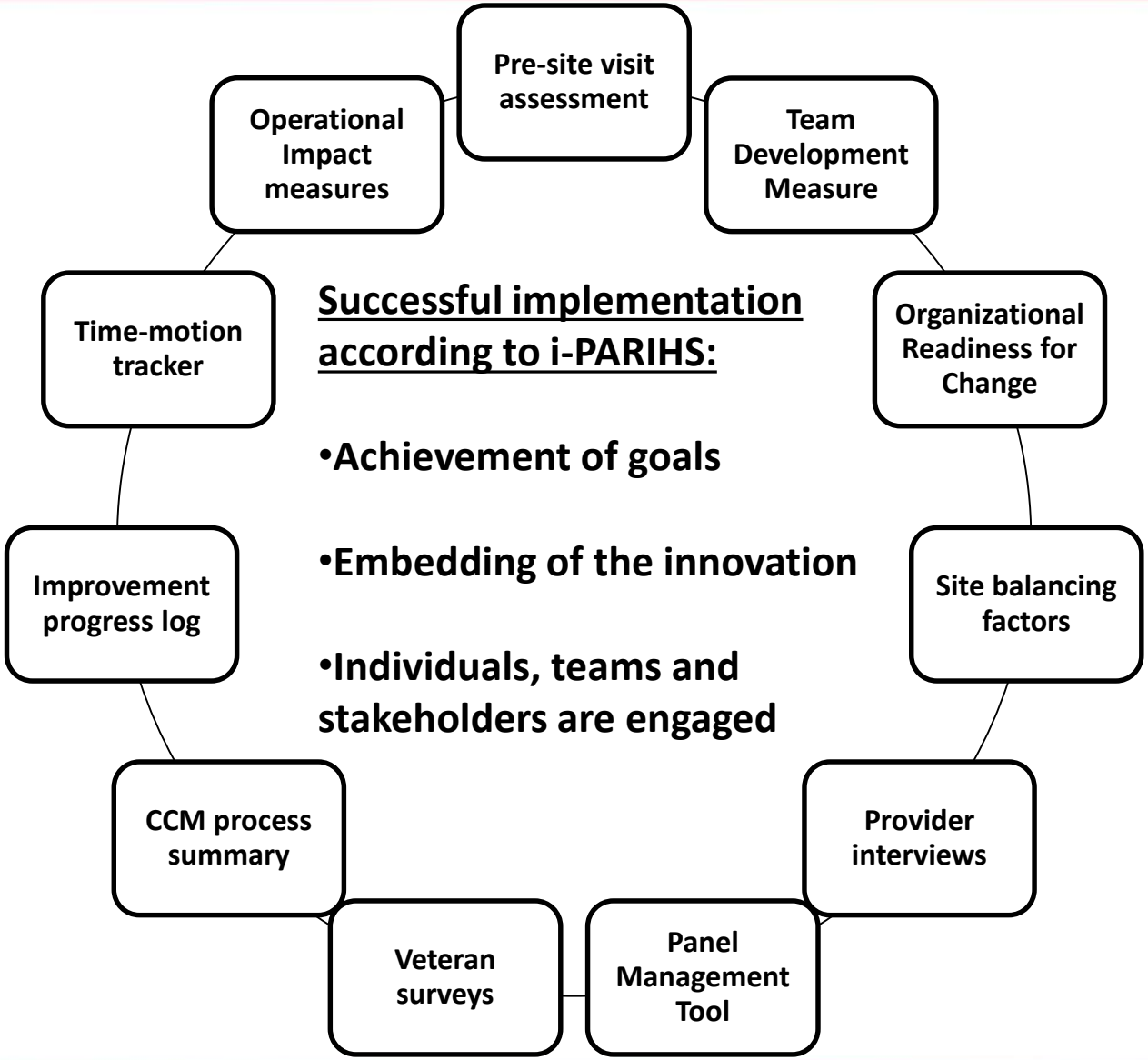
Data from Implementation Trial



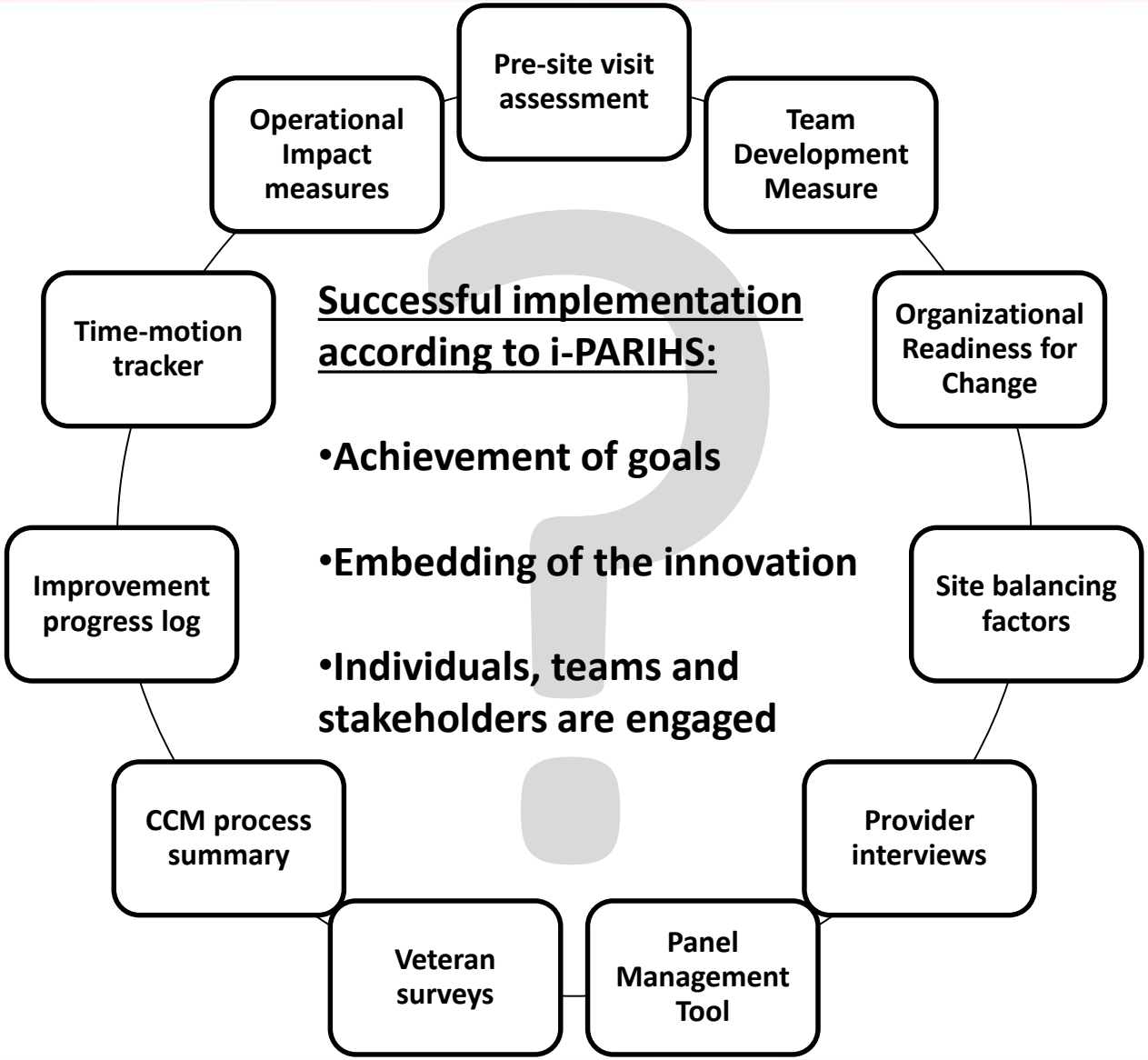
I. Analyze data that provide looks into the site's implementation experience

II. Define the extent of implementation success for the site given available data

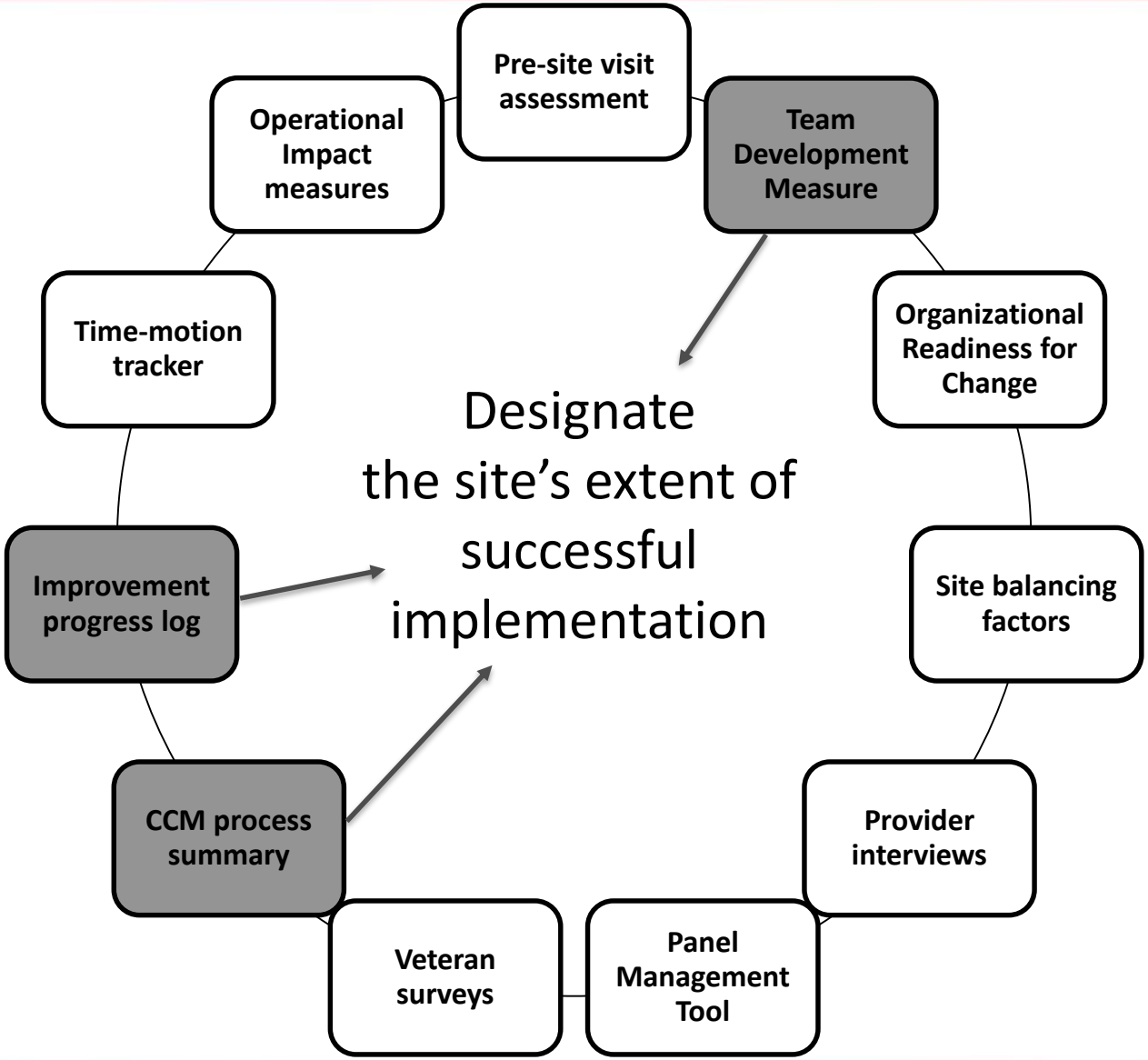
Defining Implementation Success



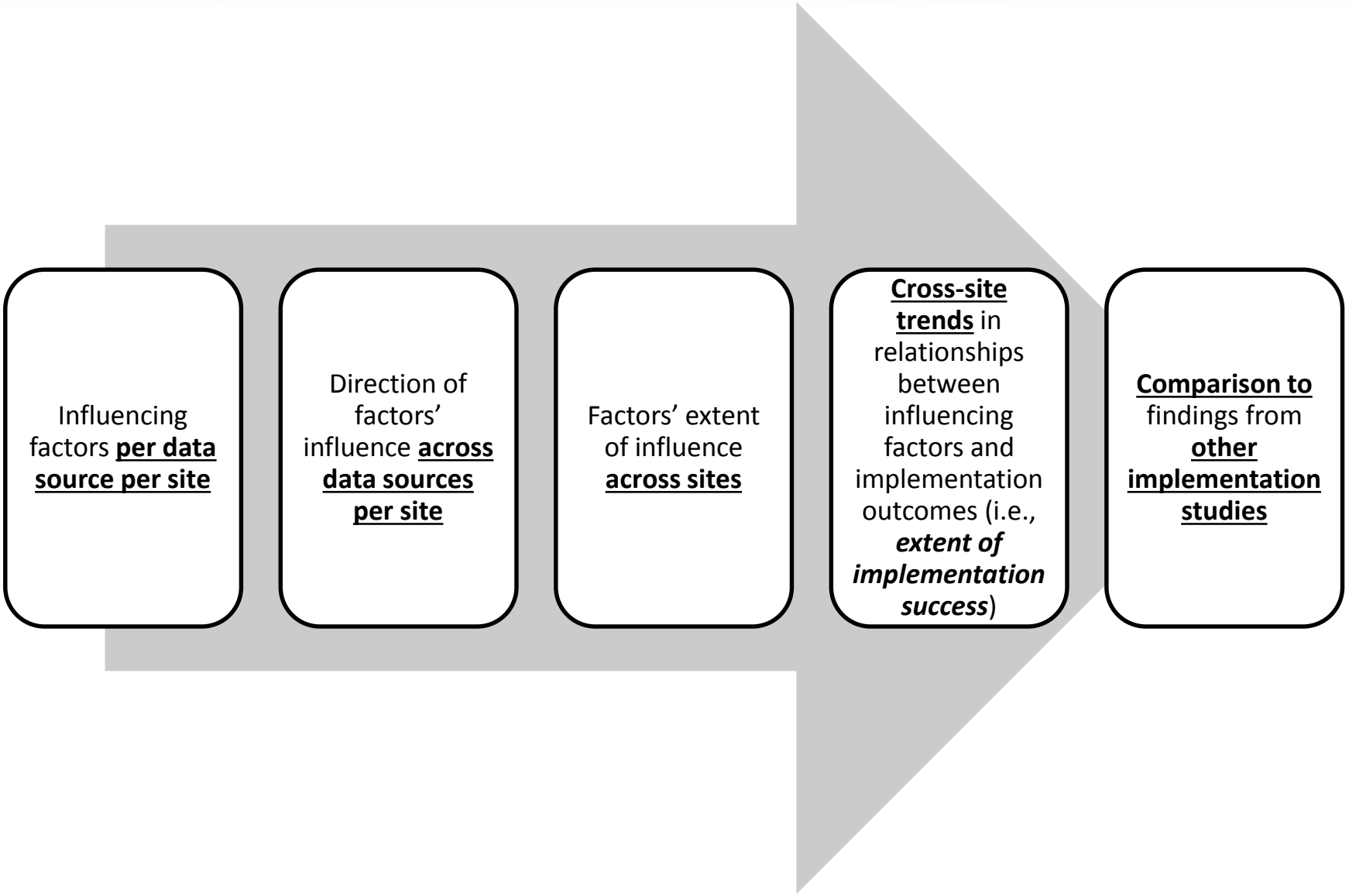
Defining Implementation Success



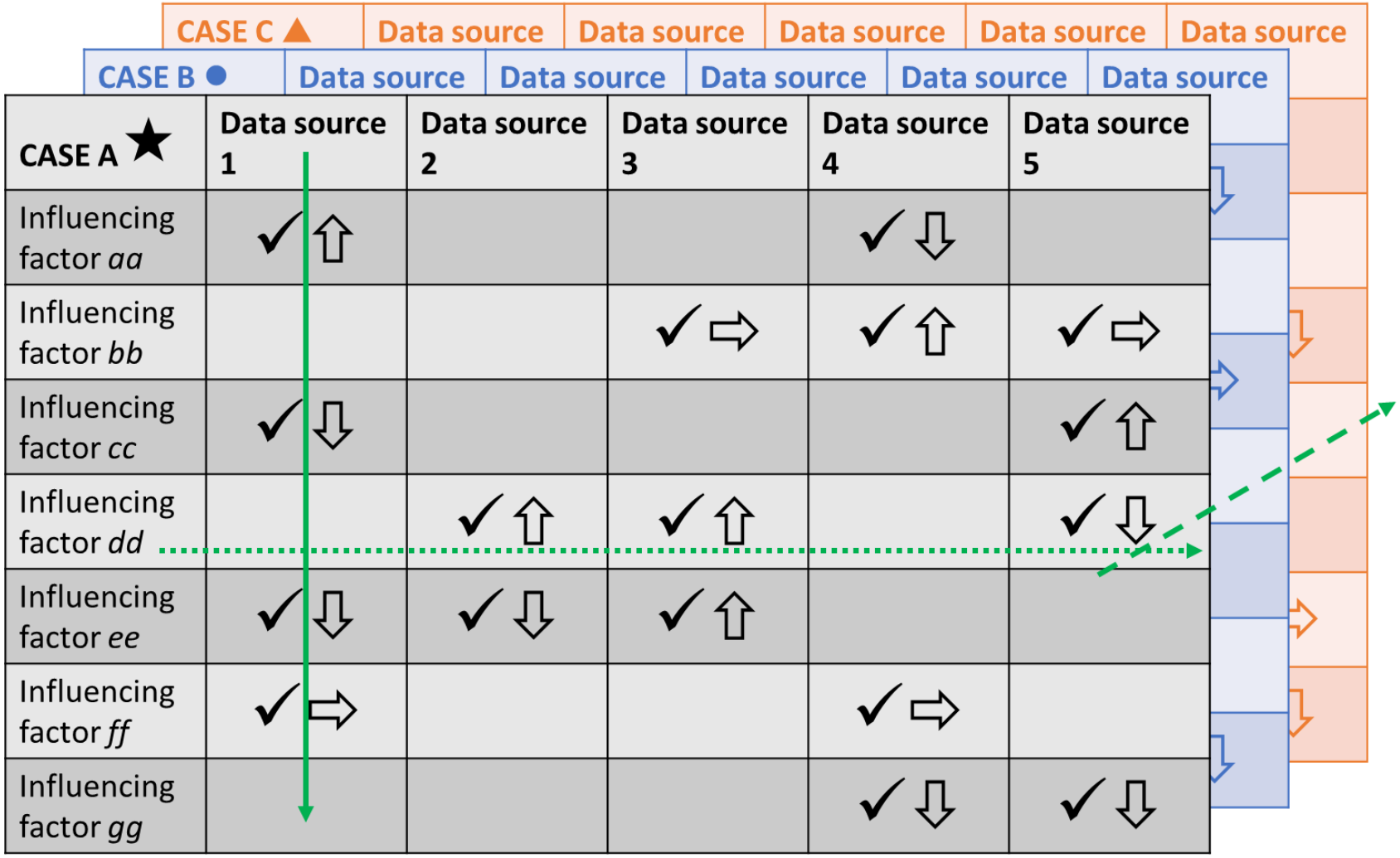
Implementation Success – Panel-Driven Definition



Data Analytic Approach



Matrixed Multiple Case Study Approach



CASE A ★	Data source 1	Data source 2	Data source 3	Data source 4	Data source 5
Influencing factor *aa*	✓ ⇧			✓ ⇩	
Influencing factor *bb*			✓ ⇨	✓ ⇧	✓ ⇨
Influencing factor *cc*	✓ ⇩				✓ ⇧
Influencing factor *dd*		✓ ⇧	✓ ⇧		✓ ⇩
Influencing factor *ee*	✓ ⇩	✓ ⇩	✓ ⇧		
Influencing factor *ff*	✓ ⇨			✓ ⇨	
Influencing factor *gg*				✓ ⇩	✓ ⇩

Preliminary Cross-Site Trends

- **Influencing factor across most sites**
  - e.g., innovation's difference from current practice is clear
- **Demonstrated alignment to expected influences**
  - e.g., local leadership has allocated resources toward implementation
- **Specific mechanism for successful implementation**
  - e.g., recipients have appreciation for and willingness to handle detailed tasks

Case Study Next Steps

- Effectiveness of the matrixed multiple case study approach in **comparison to other evaluation approaches** for understanding influential factors and mechanisms

- Opportunity to conduct **cross-project analyses** through VA Behavioral Health QUERI Program's suite of projects sharing common frameworks, measures, and strategies

- Applicability of the matrixed multiple case study approach
  - **Outside the realms of behavioral health and VA**
  - **Other efforts with wide-ranging data types / sources**

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christopher.miller8@va.gov

jennifer.sullivan@va.gov

bo.kim@va.gov