

Mixed Methods in Health Sciences



The Problem

Acute myocardial infarction (AMI) is a common and life-threatening illness.

Each year, over 700,000 people will have a heart attack... and about 125,000 will die.

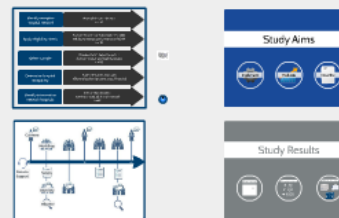
Organizational Culture



Evidence Base



Leadership Saves Lives



Questions & Contact

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Yale Global Health Leadership Institute

Leadership Saves Lives

Intervention Improving Organizational Culture

Mixed Methods in Health Sciences

Overview



Challenges

1. Securing adequate resources
2. Writing competitive grant applications
3. Building & managing mixed methods teams

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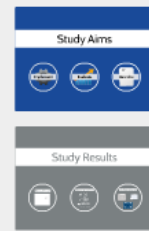
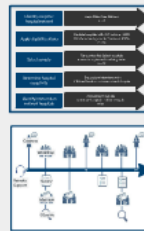
A Positive Deviance Approach



Findings from First Three Phases



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Health Sciences

Mixed Methods are Useful to...

- ↳ understand through multiple lenses
- ↳ understand what for practitioners
- ↳ examine processes/relationships and outcomes
- ↳ more adequate research outcomes

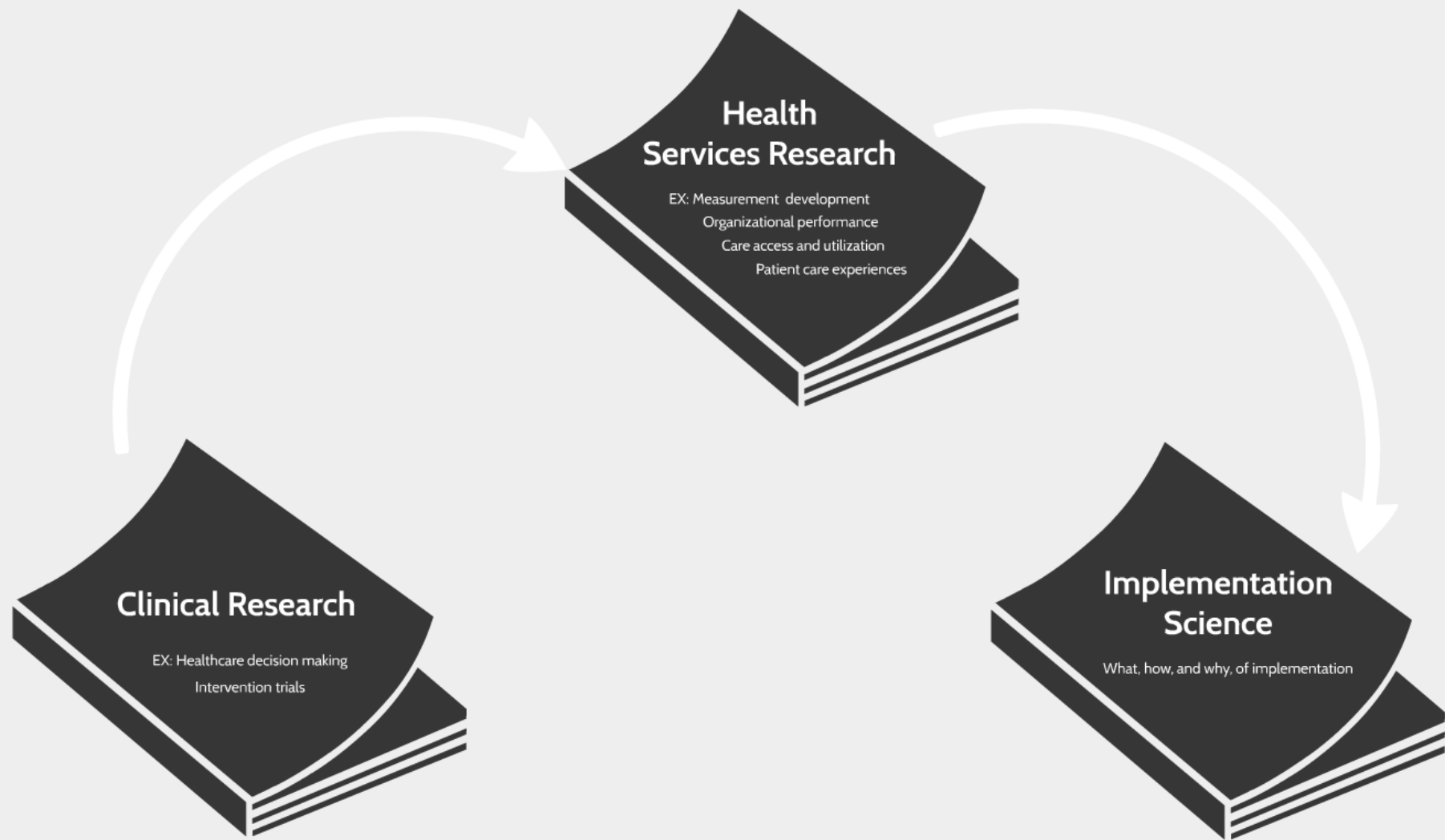
Qualitative Component	Topic	Quantitative Component
Interviews	Qualitative	Surveys
Focus groups	Qualitative	Surveys
Case studies	Qualitative	Surveys
Content analysis	Qualitative	Surveys
Discourse analysis	Qualitative	Surveys
Grounded theory	Qualitative	Surveys
Ethnography	Qualitative	Surveys
Phenomenology	Qualitative	Surveys
Discourse analysis	Qualitative	Surveys
Case studies	Qualitative	Surveys
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Health Sciences





Clinical Research

EX: Healthcare decision making

Intervention trials



Health Services Research

EX: Measurement development
Organizational performance
Care access and utilization
Patient care experiences



Implementation Science

What, how, and why, of implementation

Mixed Methods are Useful to...



Understand through multiple lenses



Provide context for phenomena



Examine processes/experiences and outcomes



Inform subsequent research development

Qualitative Component

Topic

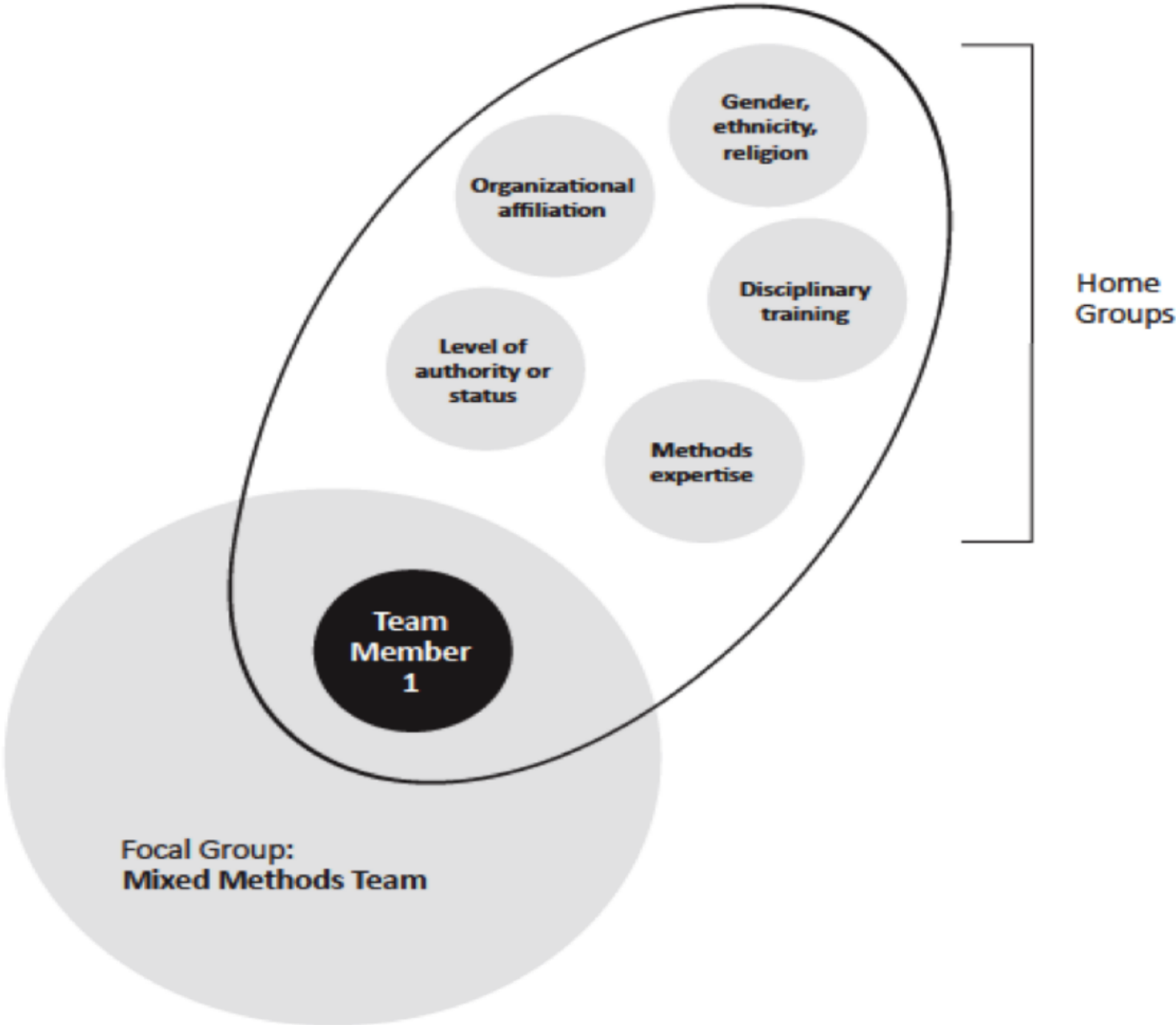
Quantitative Component

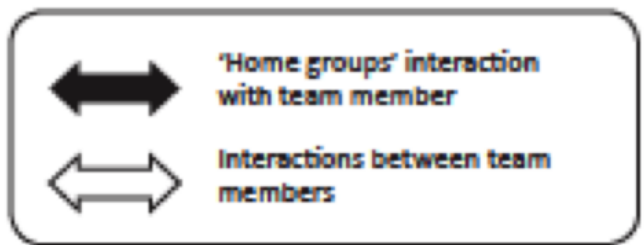
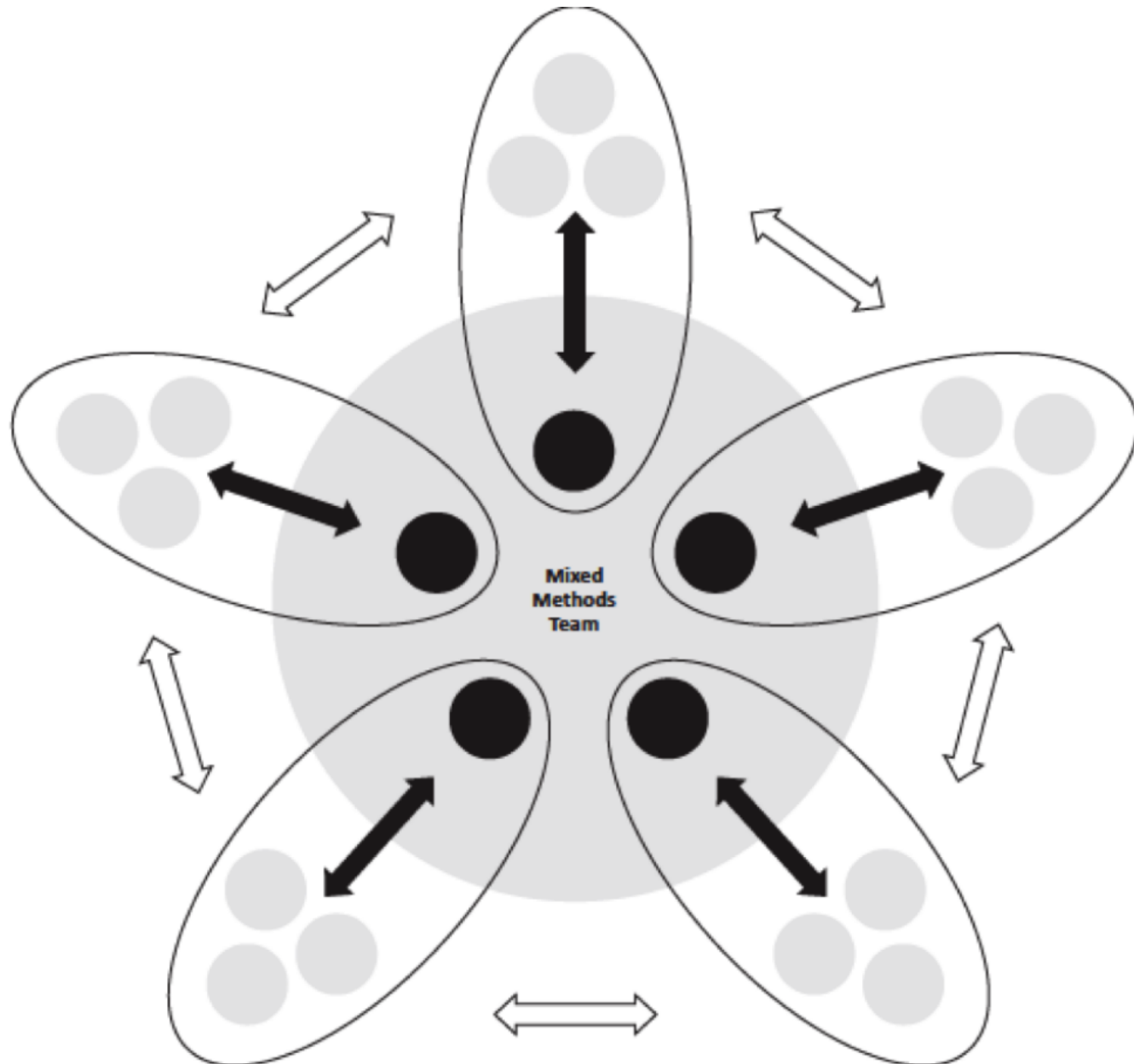


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Multiple Home Groups Represented by Each Mixed Methods Team Member





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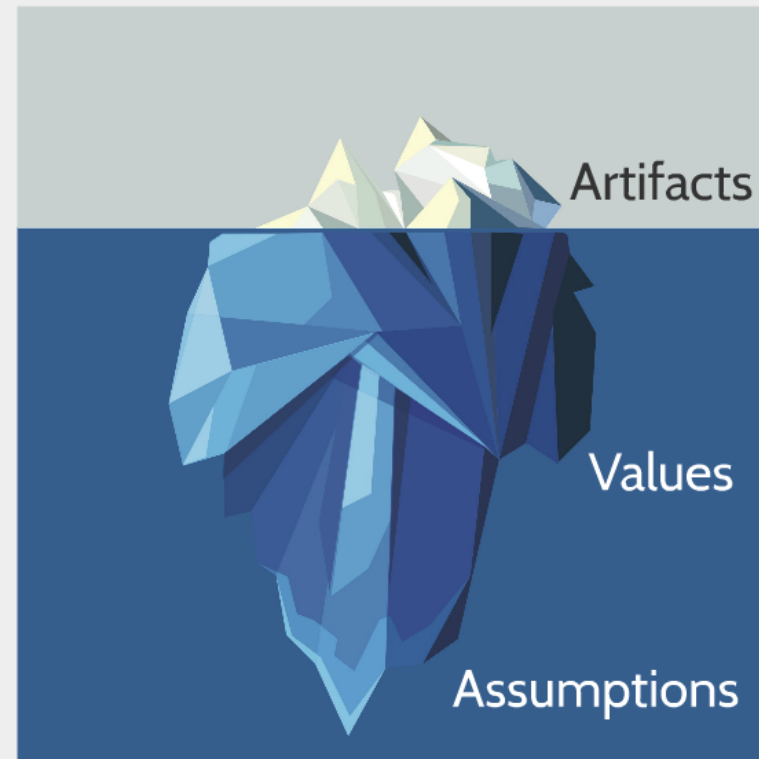
and about **125,000** will die.

Organizational Culture

What is organizational culture?

A pattern of basic assumptions invented or developed by a given group as it learns to cope with its problems of external adaptation and internal integration.

"The way we do things around here."



What is
organizational culture?

A pattern of basic assumptions invented or developed by a given group as it learns to cope with its problems of external adaptation and internal integration.

"The way we do things around here."

An iceberg diagram illustrating the relationship between Artifacts, Values, and Assumptions. The top part of the iceberg, which is visible above the water line, is labeled 'Artifacts' and is colored in shades of yellow and light blue. The larger, submerged part of the iceberg is labeled 'Values' and 'Assumptions' and is colored in various shades of blue. The water line is a horizontal line that separates the visible artifacts from the hidden values and assumptions.

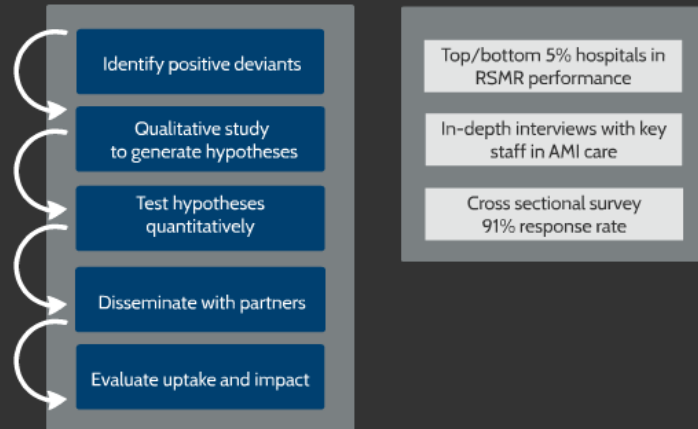
Artifacts

Values

Assumptions

Evidence Base

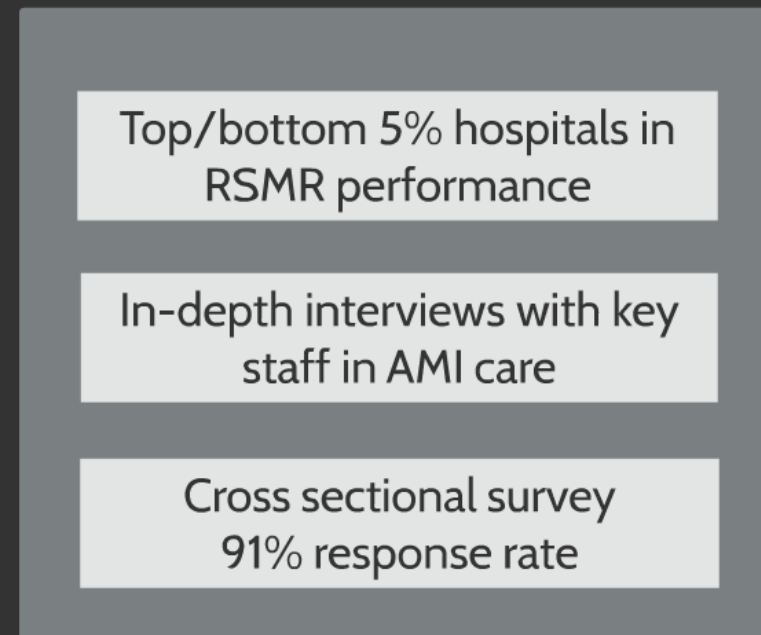
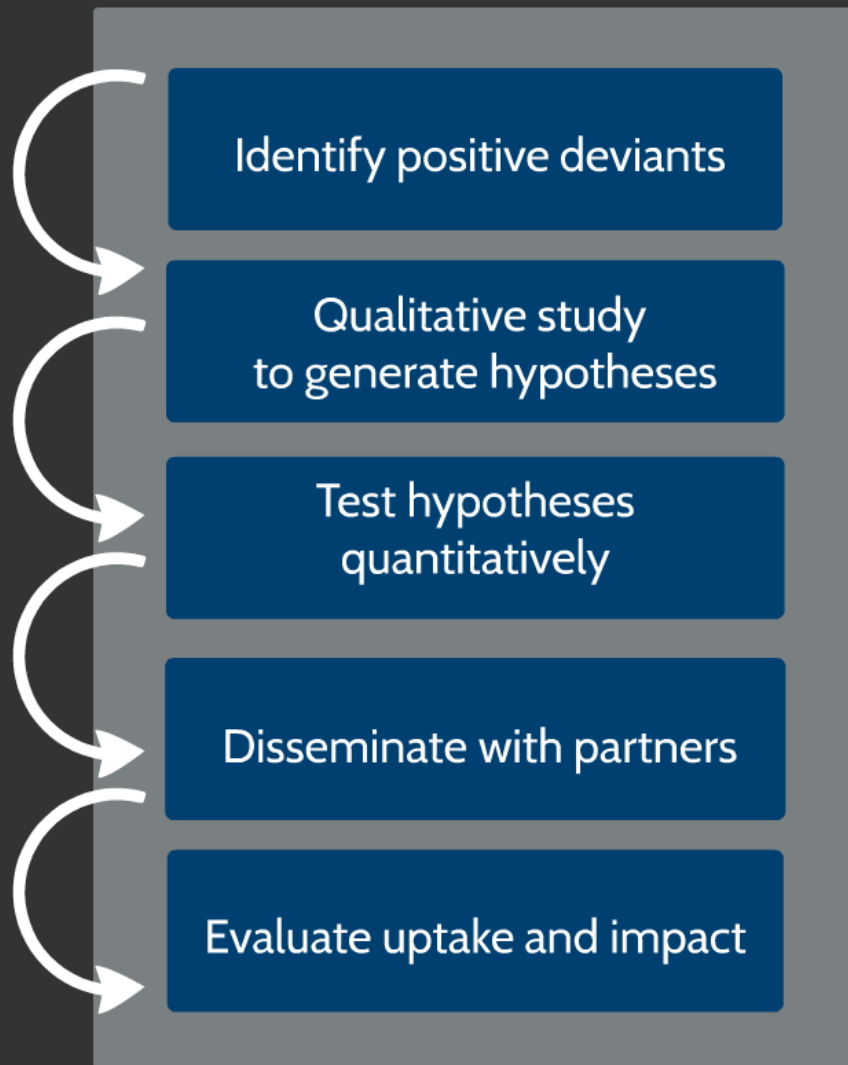
A Positive Deviance Approach



Findings from First Three Phases

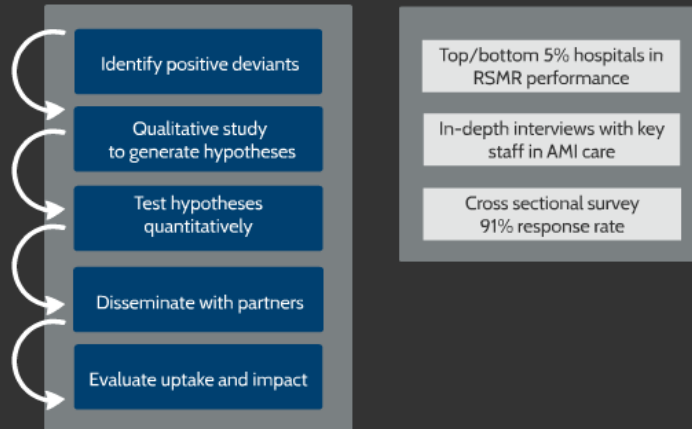


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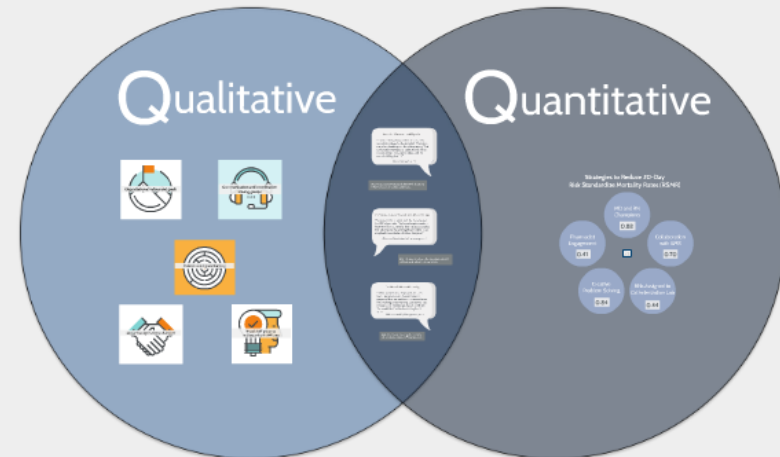


Evidence Base

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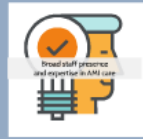


Findings from First Three Phases



Findings from First Three Phases

Qualitative



Quantitative

Broad Staff Presence in 30 Days
 "I would agree that we have seen the staff for a lot of the time. There was a lot of the staff present and working. The knowledge that we have about the staff is the most useful. It was a lot of the staff in the room in the first 30 days."

MDs Drive the Lead in the First 30 Days
 "The MDs were the lead in the first 30 days. They were the most active in the first 30 days."

Communication and Coordination among Groups
 "The communication and coordination among groups was good. The staff were able to work together and coordinate their efforts. The communication was clear and the coordination was effective."

MDs Drive the Lead in the First 30 Days
 "The MDs were the lead in the first 30 days. They were the most active in the first 30 days."

Problem Solving and Learning
 "The problem solving and learning was good. The staff were able to work together and coordinate their efforts. The problem solving was effective and the learning was a good experience."


Broad Staff Presence and Expertise in AMI Care
 "The broad staff presence and expertise in AMI care was good. The staff were able to work together and coordinate their efforts. The broad staff presence was effective and the expertise was a good experience."

Strategies to Reduce 30-Day Risk Standardize Mortality Rates (RSMR)





Organizational values and goals



**Communication and coordination
among groups**



Problem solving and learning



Senior management involvement



**Broad staff presence
and expertise in AMI care**

Broad Staff Presence and Expertise

"I started writing my consult notes...over the years it's just become the standard...That was a way of my breaking into the culture saying, 'This is my note; I want you to read it. It's not in the nurse's section. I have some ideas...and I'm open to talking about it.'"

Nurse Manager, no. 5

#65: Nurses are comfortable checking with physicians if they have concerns about patient care.

Communication and Coordination Among Groups

"Everyone in this hospital from the housekeeper to the CEO plays a role...The housekeeping needs to know why it's important for them to go out and do their job...No one has an insignificant role in it...So everybody needs to be educated. Everyone."

Director, Catheterization Laboratory, no. 2

#58: Clinicians involved in the care of patients with AMI value each others' skills and talents.

Problem Solving and Learning

"...[T]he performance improvement team... identifies action steps, the plan is put in place, and then we continue to measure to see if it's working or not working...you identify, you improve, you monitor, you tweak, and that's the model that they've been using for 10 years."

Director, Quality Management, no.4

#60: Clinicians are encouraged to creatively solve problems related to AMI care processes.

Strategies to Reduce 30-Day Risk Standardize Mortality Rates (RSMR)



However...

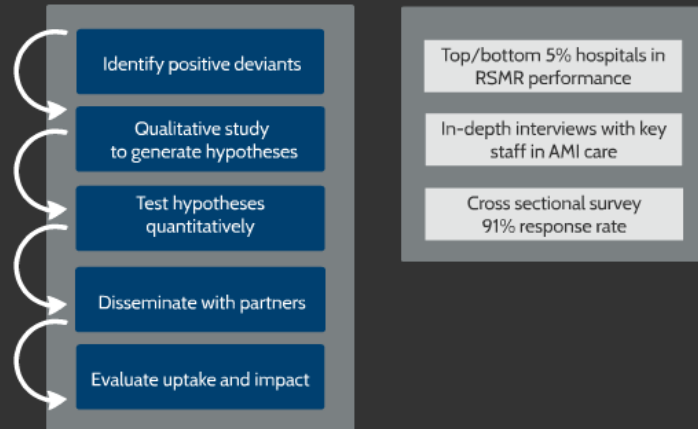
Most hospitals use one strategy.

1% of hospitals use all five strategies.

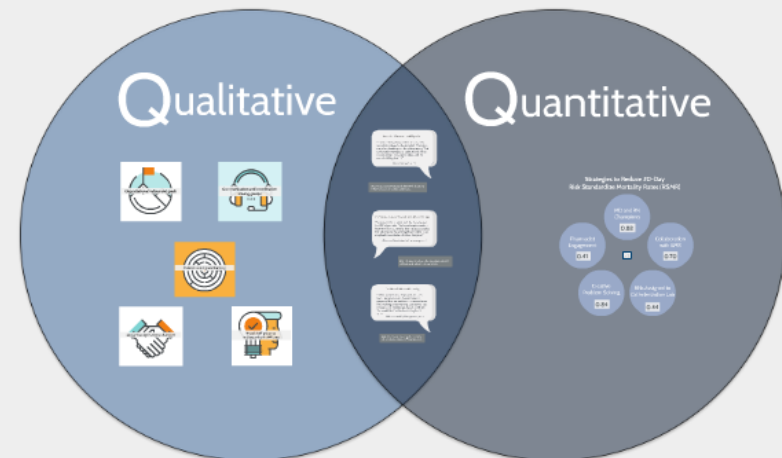
30-Day RSMR is 2% lower for those using all five strategies.

Evidence Base

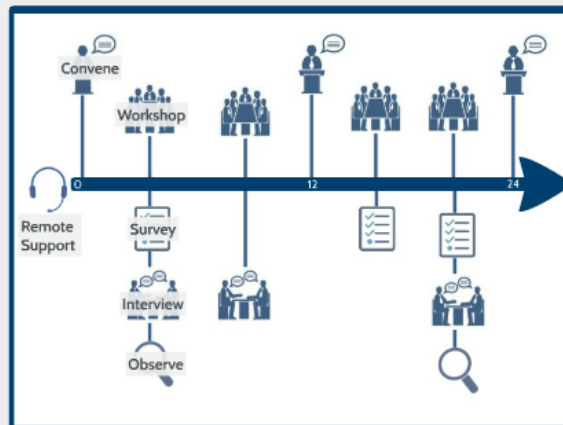
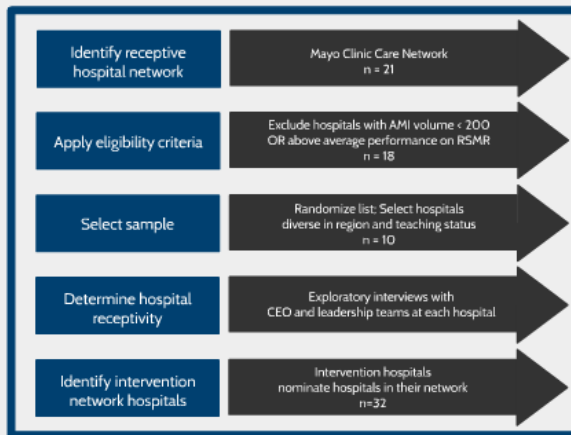
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Leadership Saves Lives



Study Aims



Study Results



Study Aims



Identify receptive
hospital network

Mayo Clinic Care Network
n = 21

Apply eligibility criteria

Exclude hospitals with AMI volume < 200
OR above average performance on RSMR
n = 18

Select sample

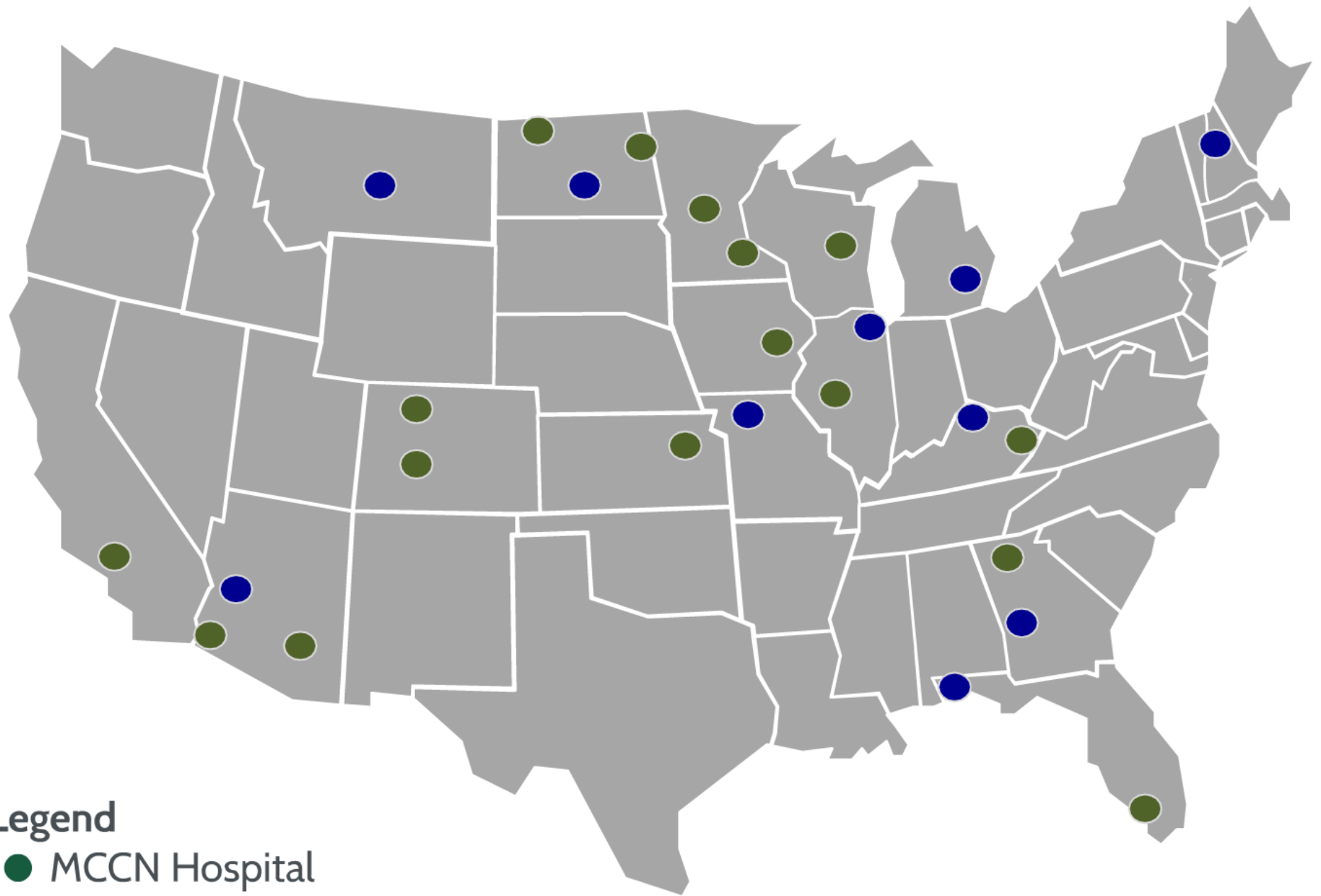
Randomize list; Select hospitals
diverse in region and teaching status
n = 10

Determine hospital
receptivity

Exploratory interviews with
CEO and leadership teams at each hospital

Identify intervention
network hospitals

Intervention hospitals
nominate hospitals in their network
n=32



Legend

- MCCN Hospital
- Intervention Hospital

Identify receptive
hospital network

Mayo Clinic Care Network
n = 21

Apply eligibility criteria

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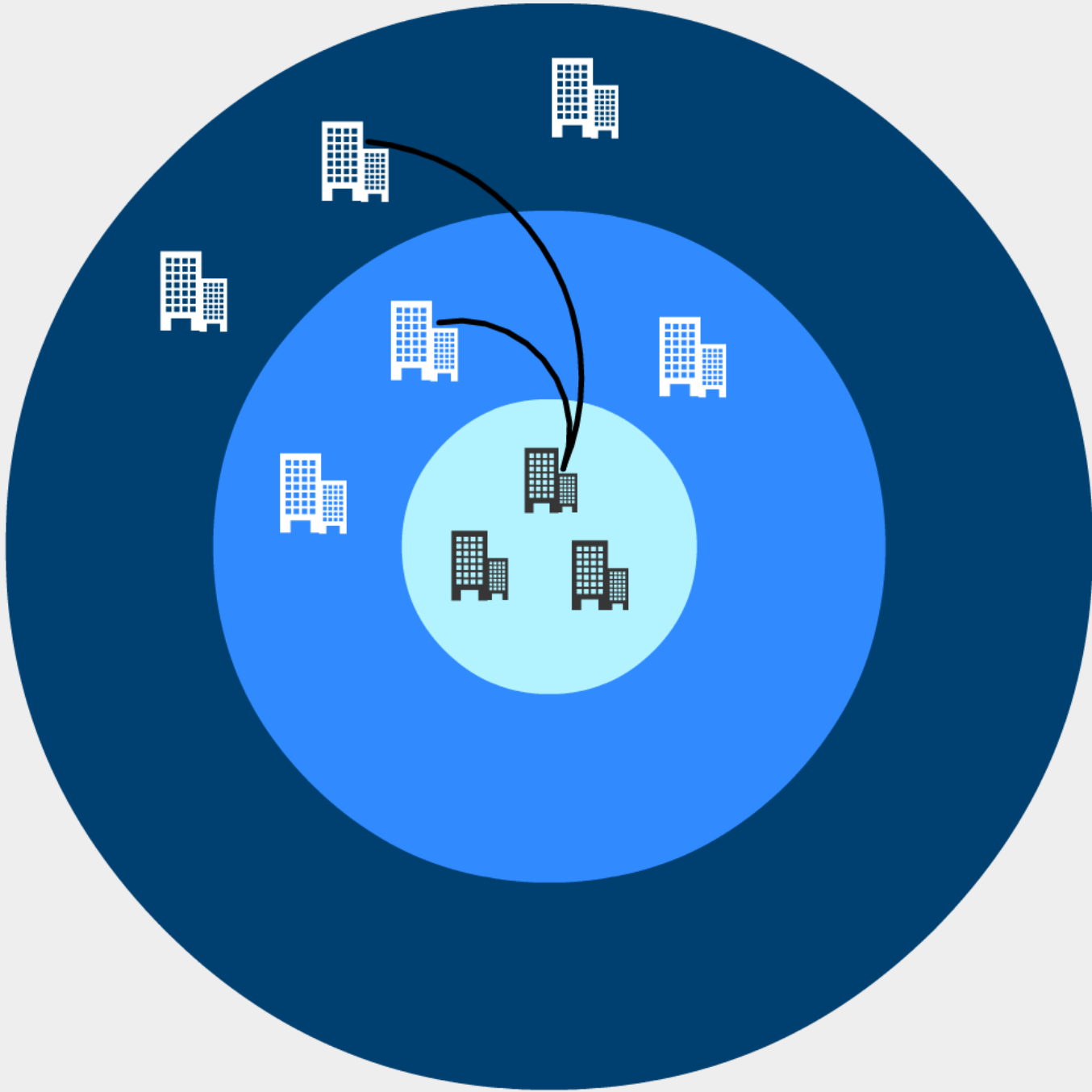
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Convene



Workshop



12



24

0



Remote Support

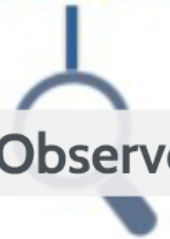
Survey



Interview

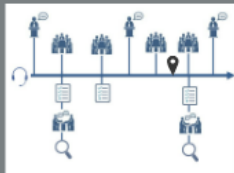


Observe



Study Results

Where are we now?



What have we been doing?

 20
site visits

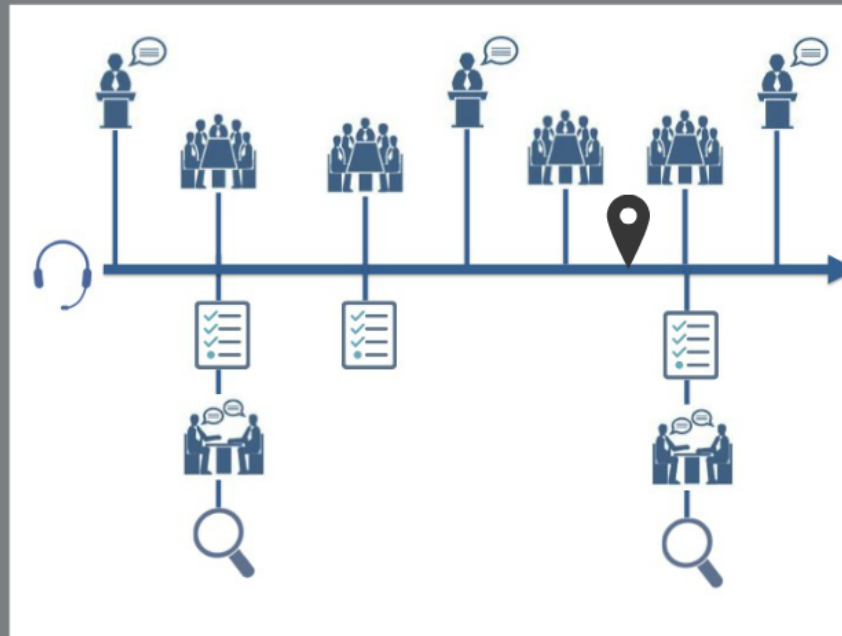
 350
surveys

 4000
pages of transcripts

What have we been seeing?



Where are we now?



What have we been doing?



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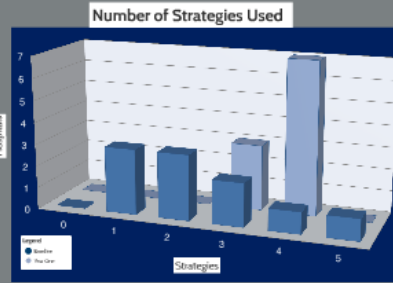
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What have we been seeing?



Uptake of Five Strategies

Pharmacist Engagement



Creative Problem Solving



MD and RN Champions



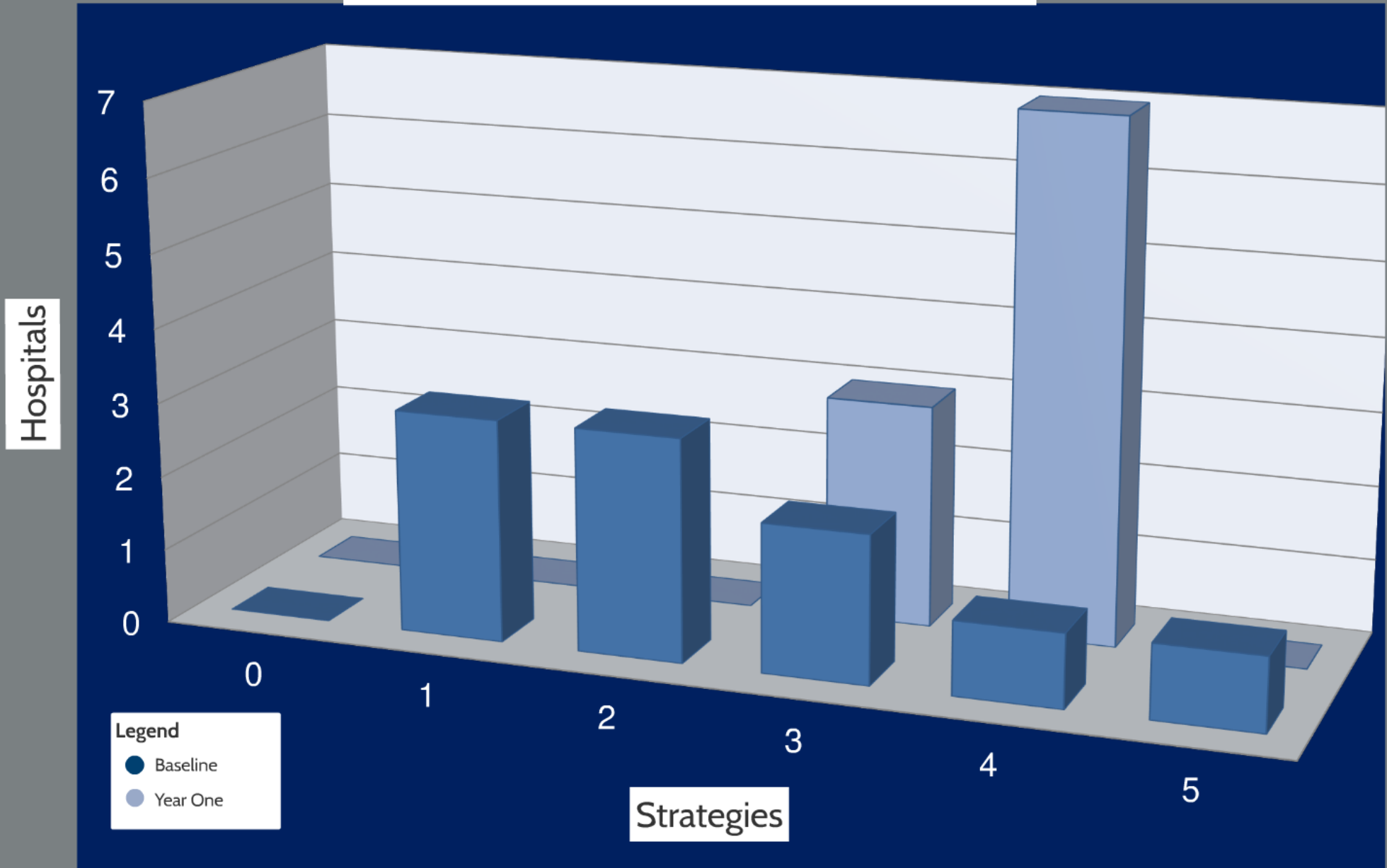
Collaboration with EMS



RNs Specifically Assigned to Catheterization Lab



Number of Strategies Used



Emerging Themes

Open versus
Closed
Boundaries

Response to
Stress

Group
Dynamics
& Leadership

Clinician &
Administrator
Engagement

Authenticity of
Commitment
to Change

Name	Created	Modified	Families
100a. Market forces~	02/22/20...	02/04/20...	EC
100b. Population/local culture~	02/22/20...	02/04/20...	EC
100c. Geography~		02/04/20...	EC
Interorganizational relationshi			EC
ure~			EC
inition~			0
urses~			145
physicians~			183
utes~			227
on of staff~			211
tering and engagin			219
or and staff developme			186
ertical distance~			136
200k. Silo thinking~		02/05/20...	EC
200l. Teamwork~	02/22/20...	02/06/20...	EC
200m. Relationships	02/22/20...	02/06/20...	EC
200n. Co...	02/22/20...	02/06/20...	EC
200o...	02/22/20...	02/06/20...	EC
200p...	02/22/20...	02/06/20...	EC
200q...	02/22/20...	02/06/20...	EC
200r...	02/22/20...	02/06/20...	EC
200s...	02/22/20...	02/06/20...	EC
200t...	02/22/20...	02/06/20...	EC
200u...	02/22/20...	02/06/20...	EC
200v...	02/22/20...	02/06/20...	EC
200w...	02/22/20...	02/06/20...	EC
200x...	02/22/20...	02/06/20...	EC
200y...	02/22/20...	02/06/20...	EC
200z...	02/22/20...	02/06/20...	EC
300...	02/22/20...	02/06/20...	EC
300c...	02/22/20...	02/06/20...	EC

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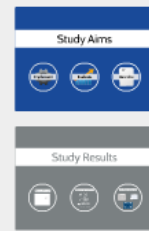
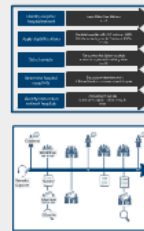
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