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Using Rapid-Cycle Research to Reach Goals: Awareness, Assessment, Adaptation, Acceleration-A Guidance Document

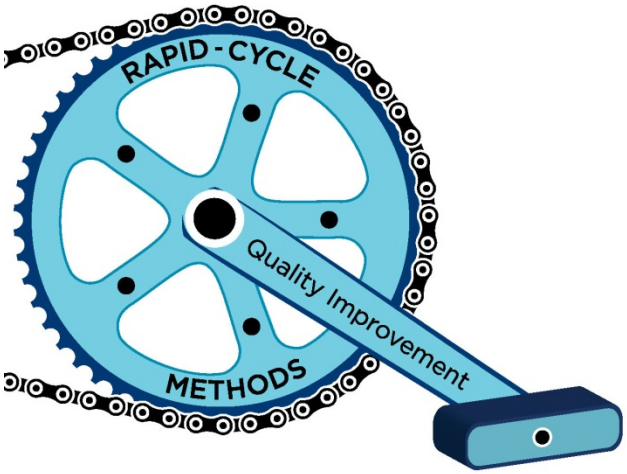
Presented By:
David Gustafson, PhD
Kim Johnson, PhD
Center for Health Enhancement Systems Studies (CHESS)
University of Wisconsin – Madison

Moderated By:
Rebecca Roper, MS, MPH, Director, Practice-Based Research Network Initiative,
Agency for Healthcare Research and Quality

Sponsored by the AHRQ PBRN Resource Center
September 9, 2015

Agenda

1. Welcome and Introductions
   - Webinar aims: to describe the process of rapid-cycle research
   - AHRQ-developed guidance document
2. Problem Identification (picking problems that matter)
3. Solution Ingredients
4. Testing Solutions
5. Implementing Solutions



Disclosures

- Drs. Gustafson and Johnson are both consultants of Abt Associates, funded by AHRQ contract number HHSA290-2010-00004I, prism order number HHSA29032006T, task order 6 and consultants of the NIATx Foundation.
- Dr. Johnson and Dr. Gustafson have stock in CHESS Mobile Health.
- Today's presenters will not discuss off label use and/or investigational use of medications in the presentation.

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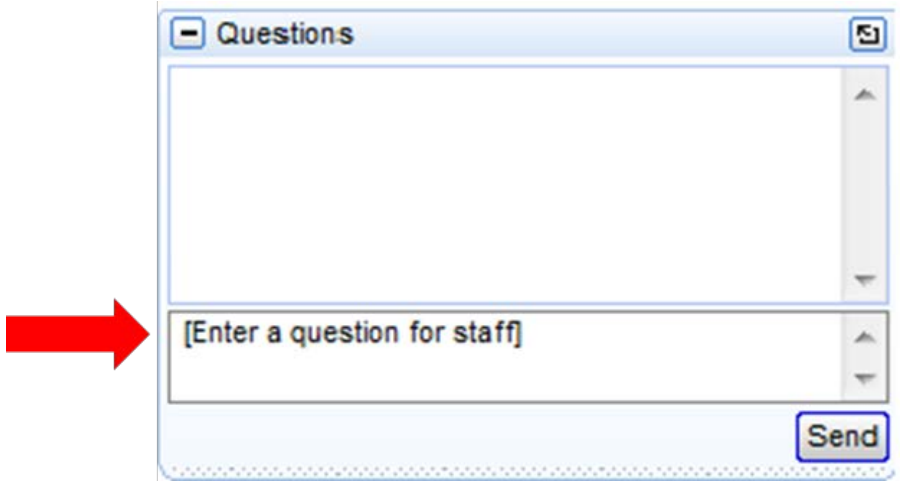


Today's Presenters

David Gustafson, PhD

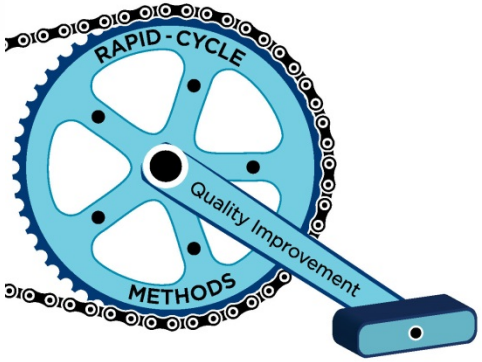
Research Professor
CHESS
University of Wisconsin – Madison

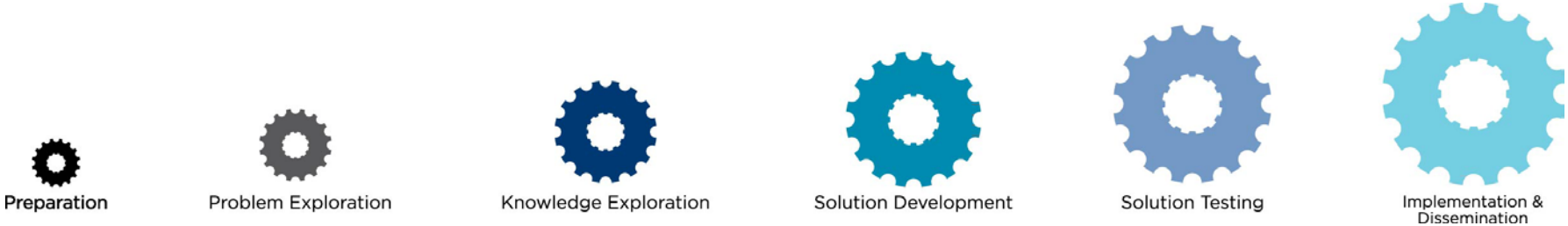
Kim Johnson, PhD

Principal Investigator
CHESS
University of Wisconsin – Madison

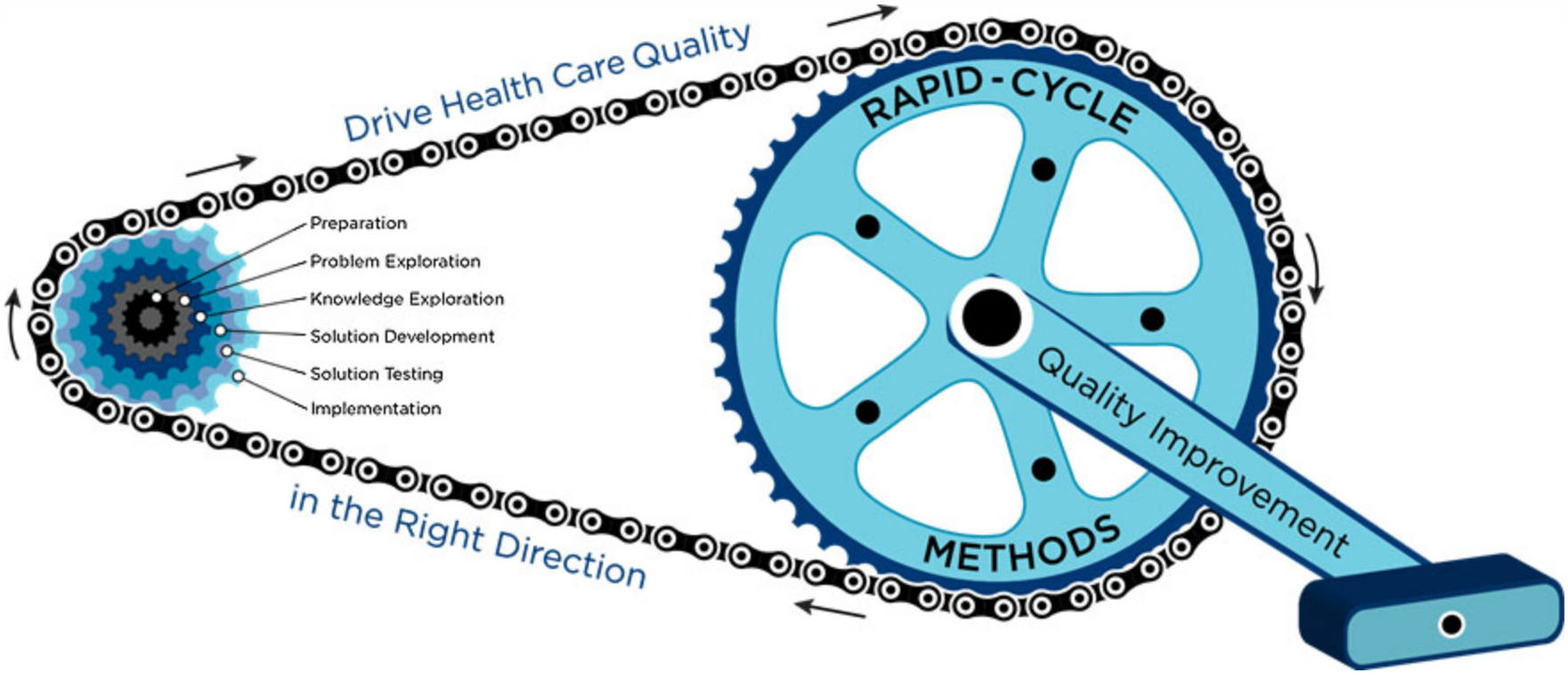
Guidance Document on Rapid-Cycle Research

- *Using Rapid-Cycle Research to Reach Goals: Awareness, Assessment, Adaptation, Acceleration*
  - This guide was funded by the Agency for Healthcare Research and Quality (AHRQ) under contact number HHSA290-2010-00004I, Prism Order No. HHSA29032006T, Task Order 6.
  - The authors include: Kim Johnson, PhD, MBA; David Gustafson, PhD; Bernard Ewigman, MD, MSPH, FAAFP; Lloyd Provost, MS; and Rebecca Roper, MS, MPH, with input from a number of researchers and staff associated with Practice-Based Research Networks (PBRNs).
  - Download the document here: (PDF - 1.96 MB)
  - A recording of today's webinar will be available (in the coming weeks) here: https://pbrn.ahrq.gov/events/using-rapid-cycle-research-reach-goals-awareness-assessment-adaptation-acceleration-guidance





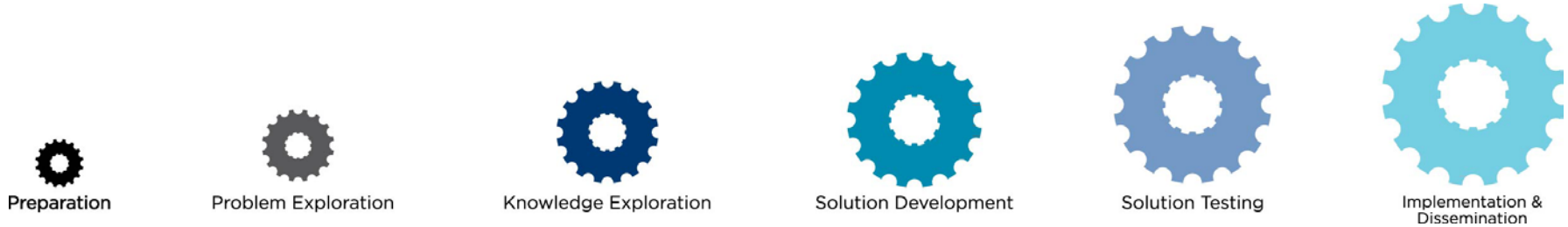
Graphic Depiction of the Framework for Rapid-Cycle Research



Guidance Document Citation:
Johnson K, Gustafson D, Ewigman B, et al. Using Rapid-Cycle Research to Reach Goals: Awareness, Assessment, Adaptation, Acceleration. AHRQ Publication No. 15-0036. Rockville (MD): Agency for Healthcare Research and Quality; 2015.

Problem Exploration

(Patient/Family Engagement)



Problem Exploration

- Why Patient and Family Engagement
- Three tools to engage
  - Walk through
  - Nominal group technique
  - Critical incident technique

Some Aha's of Change

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Preparation	Simple aim Committed team	Very few simple measures Influential change leader	Simplicity in general Help the senior leaders
Problem Exploration	Walk-Through	Nominal Group Technique	Critical Incident
Solution Exploration	Reach outside	Essential Ingredients ⇓⇓⇓	What makes you so good?
Solution Development	Improve customer lives	Ideal systems	Make staff lives better
Solution Testing	Seek/celebrate criticism Get reactions early on	Strengths/modifications Identify & work w/ opinion leaders	Rapid cycle testing Outside experts endorse
Implementation	Sustainability leader	Monitor and Alert	Market, Market, Market

Why Patient/Family Engagement?

- It is NOT to get them to buy into my solution
- Its to help me to buy in to their needs
  - Understand customer needs
  - Decide what to focus on to make a difference
  - Obtain stories
  - Gain allies
  - Keep focused
- **“You’re gonna have to serve somebody”**

Walk Through

- Tell them you are coming (no mystery shops)
- Personally experience & get staff input
- Bring your “wife or daughter”, etc.
- Do exactly what patients/families have to do
- At each encounter ask
  - “What can we do to make this process better for you and our patients/families?”
- Summarize findings; return to staff for review

Nominal Group Technique (Group in name only)

- Great for prioritizing problems, solutions, etc.
- Very structured
- Tables of 5-9 of customers
- One scribe per table
- Create a task statement
  - "What are the most important personal and organizational barriers you face to . . . . ."

Nominal Group Technique (cont'd)

- Steps
  - Silent Generation of Ideas (5-15 minutes)
  - Round Robin listing of ideas
  - Discussion
  - Voting (20% of items = number of votes)
    - e.g., If 34 items, give 7 stickies to put on their 7 most important items

Critical Incident Technique

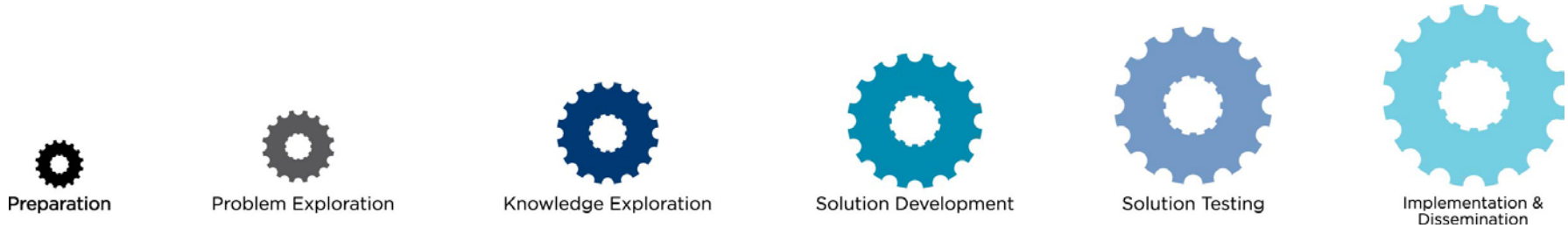
- Don’t ask, “What do you need?” We don’t know.
- Start by asking, “What’s it like to be a ‘woman with breast cancer’?”
- Then ask for examples
  - Talk about a time when that feeling was really poignant?
- Convert the results into potential needs
- Maybe construct a survey to prioritize needs

Problem Exploration Tools

- Walk Through (Personally Experience)
- Nominal Group Technique
- Critical Incident Technique (What is it like?)

Knowledge Exploration

(Essential ingredients)



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Why Knowledge Exploration

- Forces us to learn from external experts
- Learning how other industries solve the problem:
  - Improves innovativeness
  - Adds legitimacy to your results
  - Provides guidelines for solution development
    - "Any successful solution to this problem must possess the following characteristics."

Steps in Knowledge Exploration

- Characterize problem in a general way
- Identify other industries with a similar problem
- Identify the best of the best in that industry in solving that problem
- Find what sets them apart from their competition in how they address this problem

Characterize in a general way

- Problem
  - Patients don’t follow directions
- What is this problem an example of?
  - Failed handoffs
    - It is tangible
    - Many fields have handoff problems

Which industries & who is best?

- Other industries
  - Football
  - **NASCAR**
  - Cell phone towers
- Who is best of the best?
  - Matt Kenseth had a great pit crew
  - Paul Cryst was considered an offensive genius

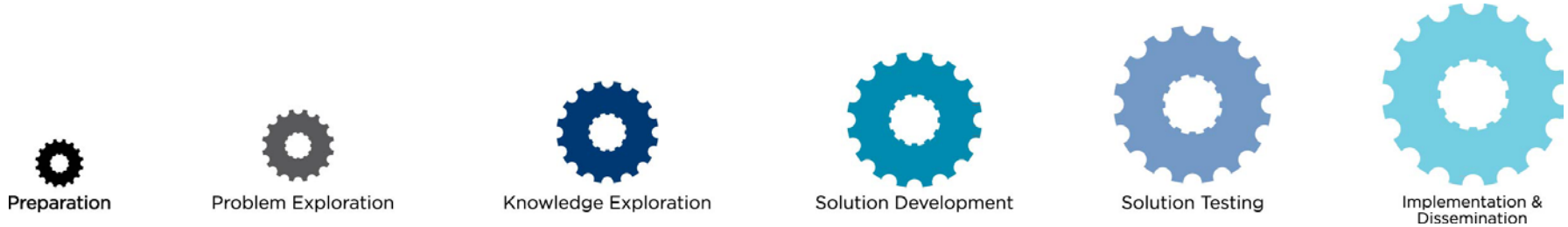
What makes them so good

- It is never the patient's fault
- Commitment (take handoffs seriously)
- Giver & Receiver must be a team
- Handoff process is Standardized & Practiced, Practiced
- Processes & outcomes are measured & fed back

How to do this fast

- How to get ideas
  - Google them
  - Interview if you have time
- Don’t get into specific applications of the ideas yet

Developing an Ideal System



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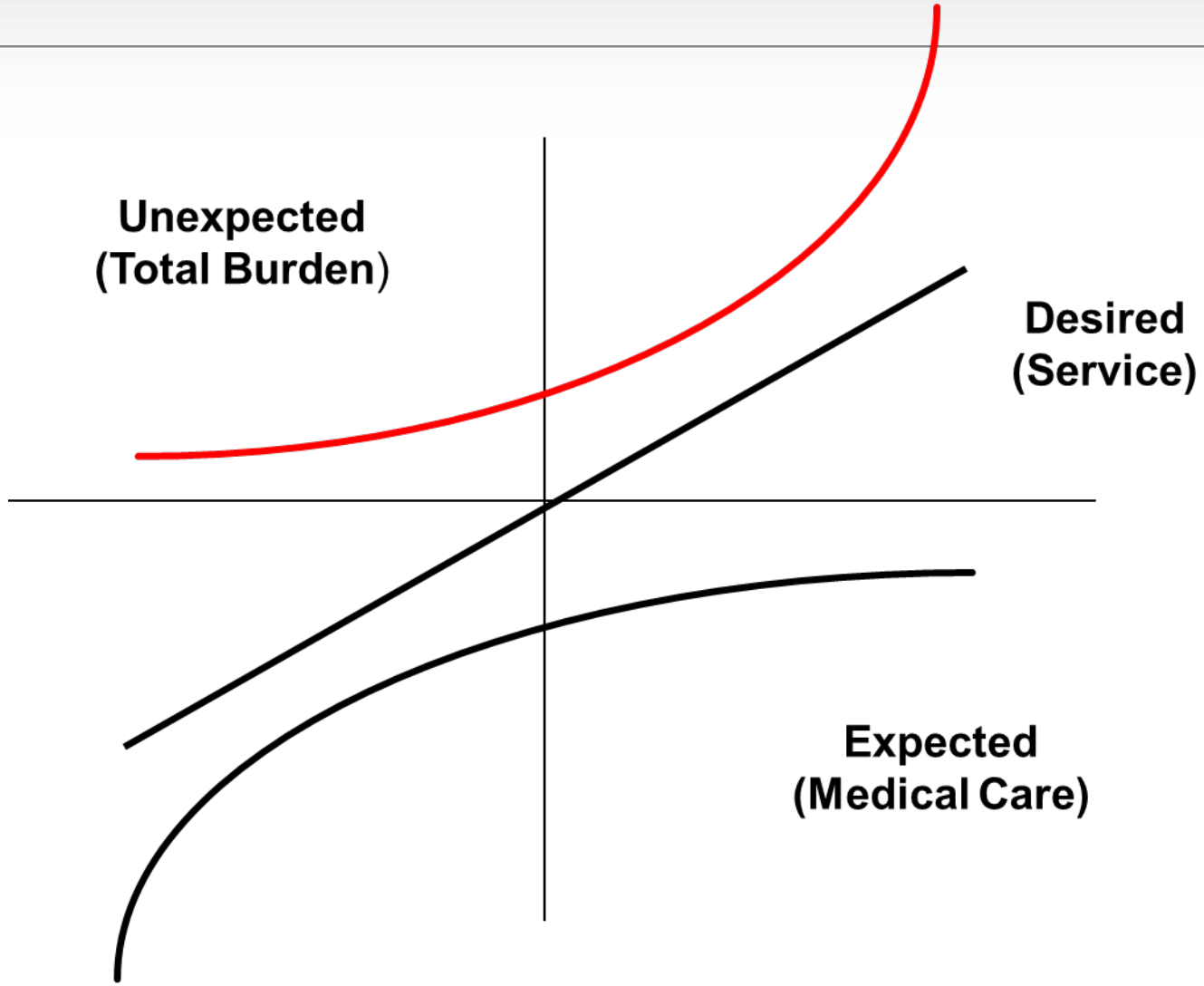
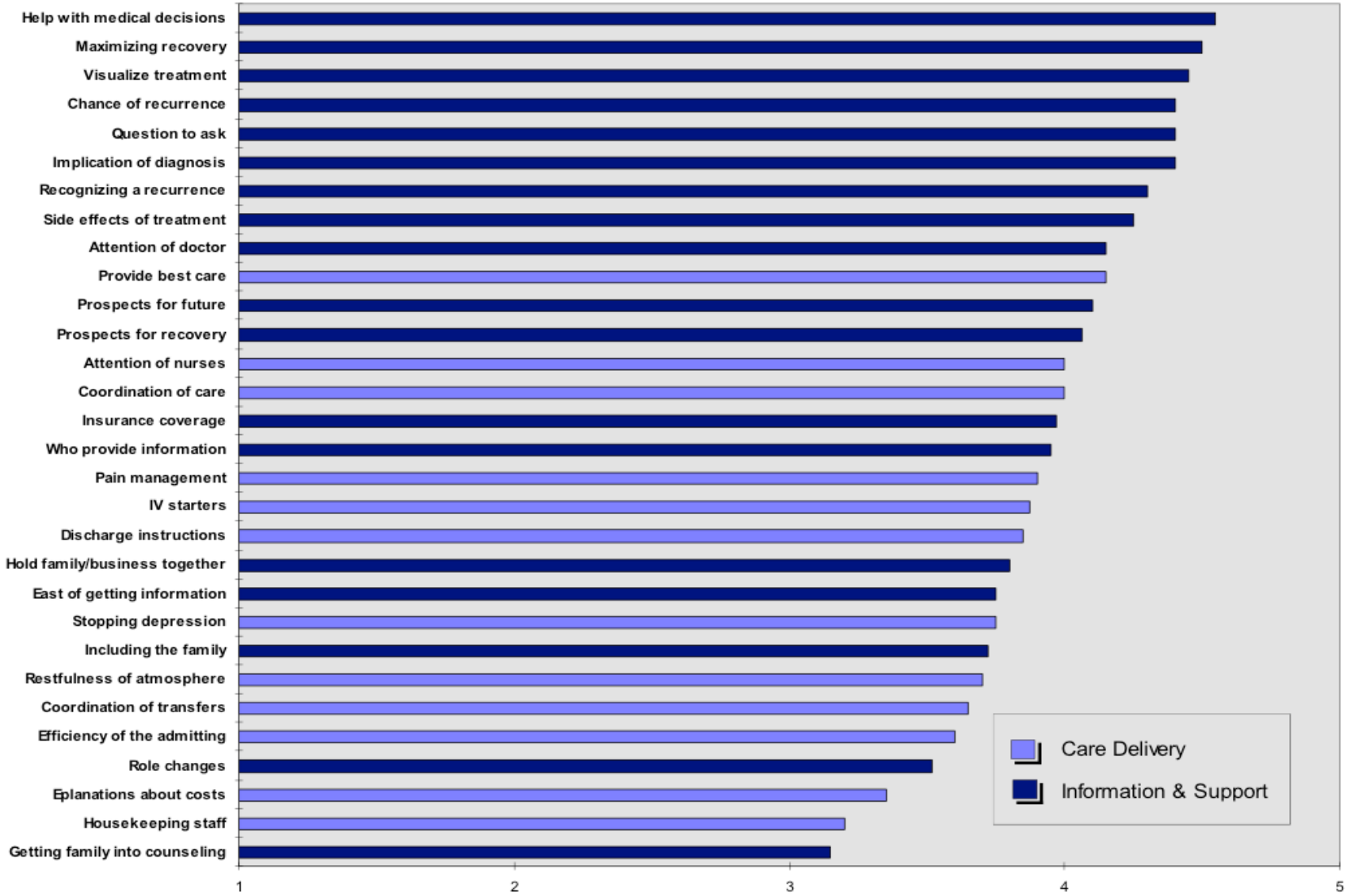
Three Types of Quality



Satisfaction

Needs of women with breast cancer



Essential Ingredients

- Regardless of what solution you develop if it is to be really successful it will need to improve:
  - Social relatedness
  - Coping competence
  - Intrinsic motivation

Find 5-9 very creative customers

- Task for a 2-hour nominal group meeting
  - Woman just diagnosed with breast cancer
  - Here are her needs
  - You have all the resources you need
  - What would the ideal solution look like?
  - Must build in: social relatedness, intrinsic motivation and coping competence
  - ! No constraints – blue sky – be creative !
  - You have 20 minutes – no talking

What the women said

- Clinicians know how I am
- 10 women just like me
  - All stages of recovery
  - Similar demographics
  - Similar personality, etc.
- Semi with all BCa knowledge
- Personal oncologist
- Relaxation guru

So how do we do that???

What the women said

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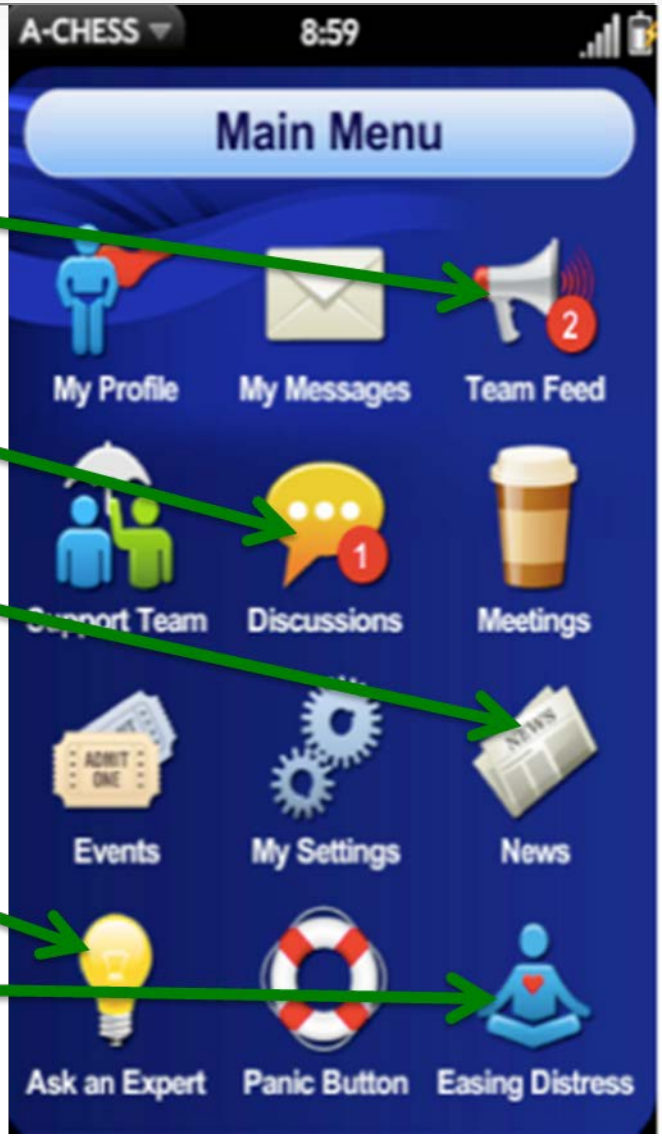
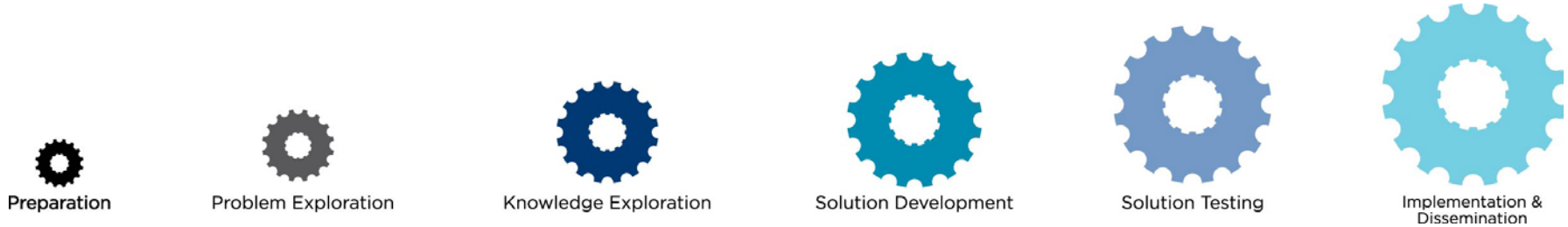


Summary of Solution Development

- Focus on the key needs of customers
  - Decision making
- Identify the essential ingredients
  - Social relatedness
- Get a panel of creative customers
- Design the ideal system
  - Live-in oncologist
- Convene a panel of technologists
- Find ways to make the ideal system practical
  - Personal computer with Ask an Expert

Solution Testing



Testing

- Rapid-cycle TESTS, not rapid-cycle change
  - Your current goal is to test an idea
  - Not necessarily to bring about a change
  - IF idea can be made to work, we might change
  - But first, let’s test

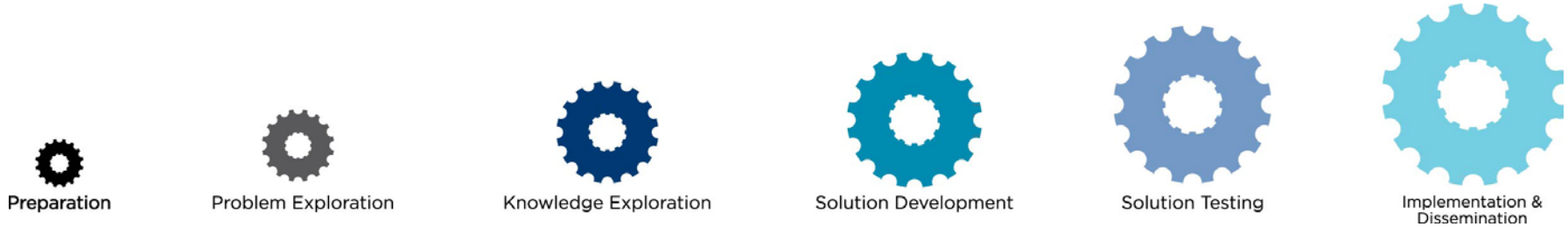
Rapid-cycle = Fast with several cycles

- Easy to forget the “cycle” part
- Anything worth doing is worth doing poorly the first time
  - Test
  - Find what is wrong
  - Revise
  - Test again
  - etc. (PDCA)
- And finish **all** cycles within X (30?) days

Measurement

- Be clear about how you will know when a test worked or did not
- Few measures- don’t get lost in data
- What could possibly go wrong? The nature of your question and the possible negative effects of being wrong in different ways (type one versus type two error, for example) determine the measurement method.

Solution Implementation



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Sustainability Model

Sustainability Model (Cont'd)

SELECT FACTOR LEVEL THAT IS CLOSEST TO YOUR SITUATION		
Factor	**Score**	**Factor Level**
1) Benefits beyond helping patients	8.7	Improves efficiency and makes jobs easier
	4.7	Improves efficiency but does not make jobs easier
	4.0	Makes jobs easier but does not improve efficiency
	0	Neither improves efficiency nor makes jobs easier
2) Credibility (to affected staff) of benefits from improved process	9.1	Benefits are immediately obvious, supported by evidence & believed to be true
	6.3	Benefits are supported by evidence, believed but are not immediately obvious
	3.1	Benefits are supported by evidence but not believed by stakeholders
	0	Benefits are neither supported by evidence nor believed by stakeholders
3) Adaptability of improved process	7.0	The process can be adapted to organisational changes and there is a system for continually improving the process
	3.4	Process can be adapted to organisational changes but there is no system for continually improving the process
	2.4	There is a system for continually improving the process but it cannot adapt to organisational changes
	0	Process cannot adapt to organisational changes and there is no system for continually improving the process
4) Staff involvement and training to sustain the process	11.5	Staff were involved from the beginning and trained to sustain the process
	4.9	Staff were involved from the beginning but not adequately trained to sustain
	6.3	Staff were adequately trained to sustain the process but have not been involved
	0	Staff were neither involved from the beginning nor adequately trained to sustain
5) Staff attitudes toward sustaining the improved process	11	Staff feel empowered and believe the improvement will be sustained.
	5.1	Staff feel empowered, but don't believe the improvement will be sustained.
	5.1	Staff believe the improvement will be sustained but don't feel empowered
	0	Staff don't believe the improvement will be sustained and don't feel empowered

Sustainability Model (Cont'd)

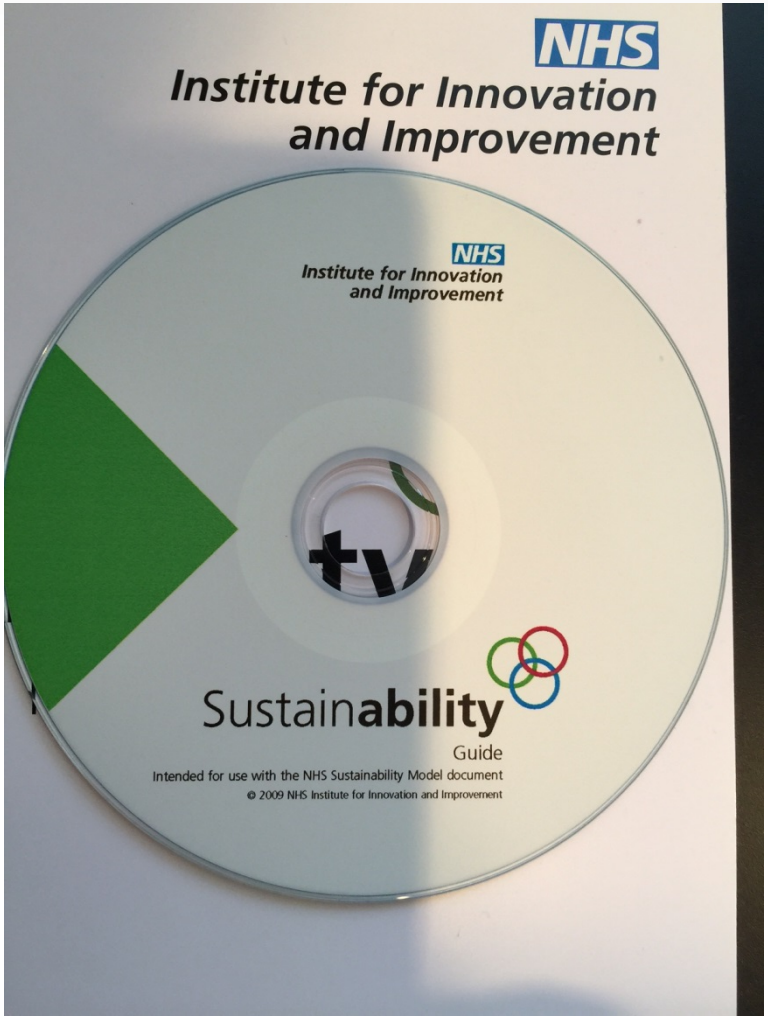
6) Senior leaders responsibility taking and staff action toward the leader	15	Organisational leaders take responsibility for efforts to sustain the process, and staff generally share information with and actively seek advice from the leader.
	6.2	Organisational leaders don't take responsibility for efforts to sustain this process but staff generally share information with and seek advice from the leader.
	5.7	Organisational leaders take responsibility for efforts to sustain this process but staff typically don't share information with or seek advice from the leader.
	0	Organisational leaders don't take responsibility for efforts to sustain this process and staff typically do not share information with or seek advice from the leader..
7) Clinical leaders responsibility taking and staff action toward the leader	15	Clinical leaders take responsibility for efforts to sustain the process, and staff generally share information with and actively seek advice from the leader.
	6.7	Clinical leaders don't take responsibility for efforts to sustain this process but staff generally share information with and actively seek advice from the leader.
	5.5	Clinical leaders take responsibility for the efforts to sustain this process but staff typically do not share information with or actively seek advice from the leader.
	0	Clinical leaders don't take responsibility for efforts to sustain the process & staff typically do not share information with or actively seek advice from the leader..
8) Effectiveness of the system to monitor progress of the improvement	6.7	A system monitors progress using evidence, acts on it and communicates results
	3.3	System monitors progress with evidence, acts on it, but doesn't communicate
	2.4	A system monitors progress and communicates results but does not act on it.
	0	There is no system to monitor progress and act on it
9) Fit with organization goals and culture	7.2	There is a history of successful sustainability; improvement's goals are consistent with organisation goals.
	3.3	There is a history of successful sustainability, but the improvement and organisation goals are inconsistent.
	3.5	The improvement's goals are consistent with organisation goals but there is no history of successful sustainability
	0	There is no history of successful sustainability, and the improvement and organisation goals are inconsistent
10) Infrastructure to sustain (staff, facilities, equipment, etc)	9.7	Staff, facilities and equipment, job descriptions, policies, procedures and communication systems are appropriate to sustaining the improved process.
	4.4	There is enough staff, facilities and equipment, but inadequate job descriptions, policies and procedures and communication systems for sustaining the change.
	3.3	Job descriptions, policies, procedures & communication systems are adequate for sustaining the changebut staff, facilities and equipment are not.
	0	The staff, facilities and equipment, job descriptions, policies and procedures and communication systems are all insufficient for sustaining the change

NHS Institute for Innovation and Improvement

- Or you can use an NHS app to guide you through using the sustainability model

Available at:

nop.chess.wisc.edu/sustainability



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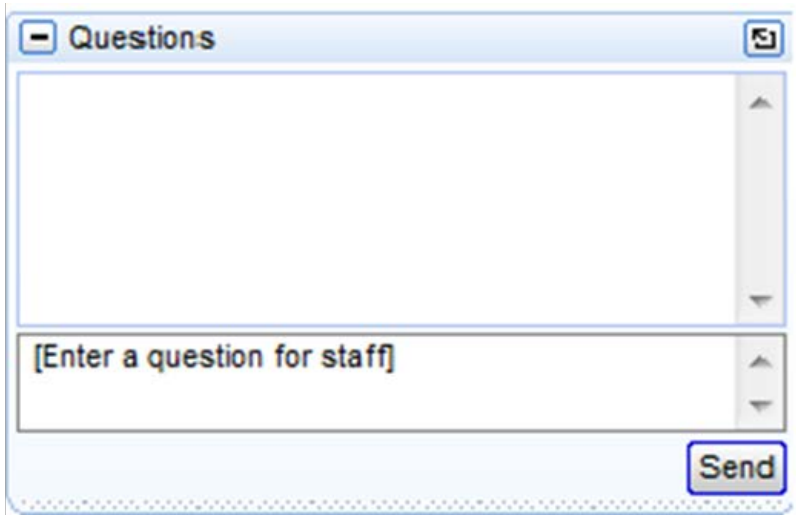

Obtaining CME Credit

Application for CME credit has been filed with the American Academy of Family Physicians. Determination of credit is pending.

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- **How pragmatic is it? Lessons learned using PRECIS and RE-AIM for determining pragmatic characteristics of research**
  - https://pbrn.ahrq.gov/events/how-pragmatic-it-lessons-learned-using-precis-and-re-aim-determining-pragmatic
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- **Adaptive Trial Design and Learning Evaluation: Methods for PCOR and Quality Improvement Assessment** *(coming soon!)*
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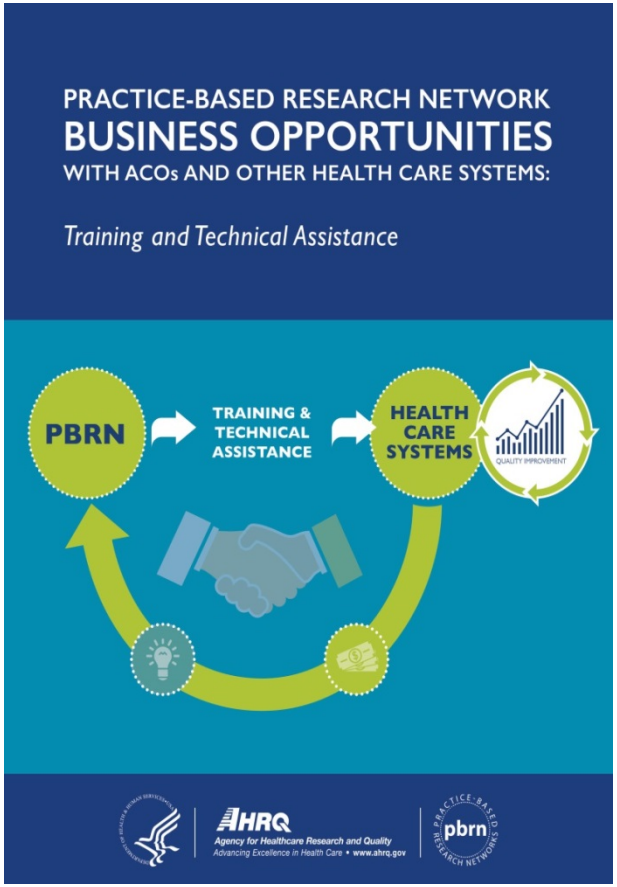
Upcoming Resource– Guide on PBRN-ACO Business Opportunities

- Practice-based Research Network Business Opportunities with ACOs and Other Health Care Systems: Training and Technical Assistance
- Guide objectives:
  - Acknowledge the capacity and experience of PBRNs to provide QI *training and services* to other entities
  - Encourage PBRNs to consider the *mix of research and QI expertise and services* offered to strengthen self-sustainability
  - Promote ACOs and other QI entities to *partner with PBRNs* to meet increasing expectations for QI capabilities



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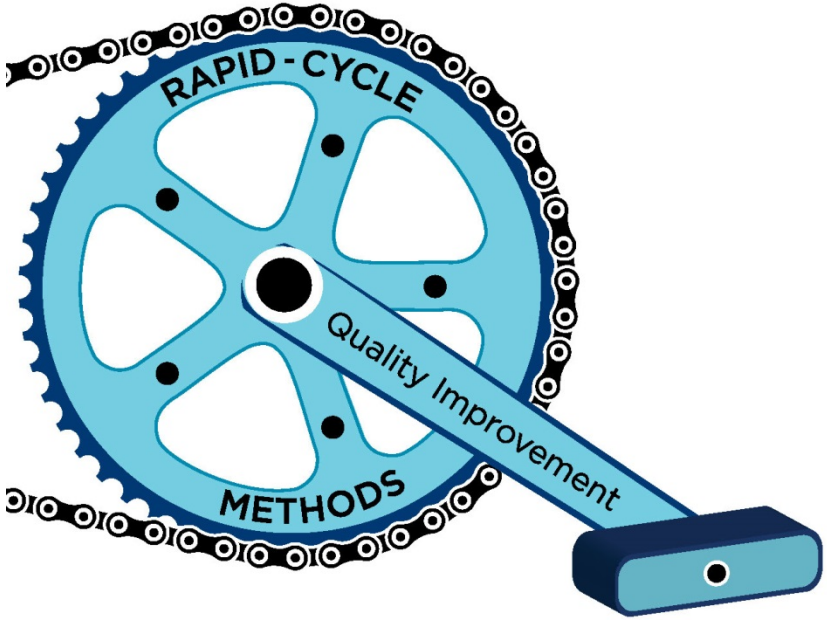
Thank you for attending today's PBRN webinar!



Thank you for listening!