Using the Organizational Readiness for Change Assessment (ORCA) in planning for implementation

A worked example

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Outline

- Brief review of the ORCA
- Doing ORCA surveys
  - Scales and subscales
  - The stem
  - Process
- Analyzing results
- Now what?
  - Inferring meaning
  - Planning for implementation
    - Linking to frameworks
    - Linking to strategies and behavior change techniques
- Summary

The Organizational Readiness to Change Assessment: ORCA

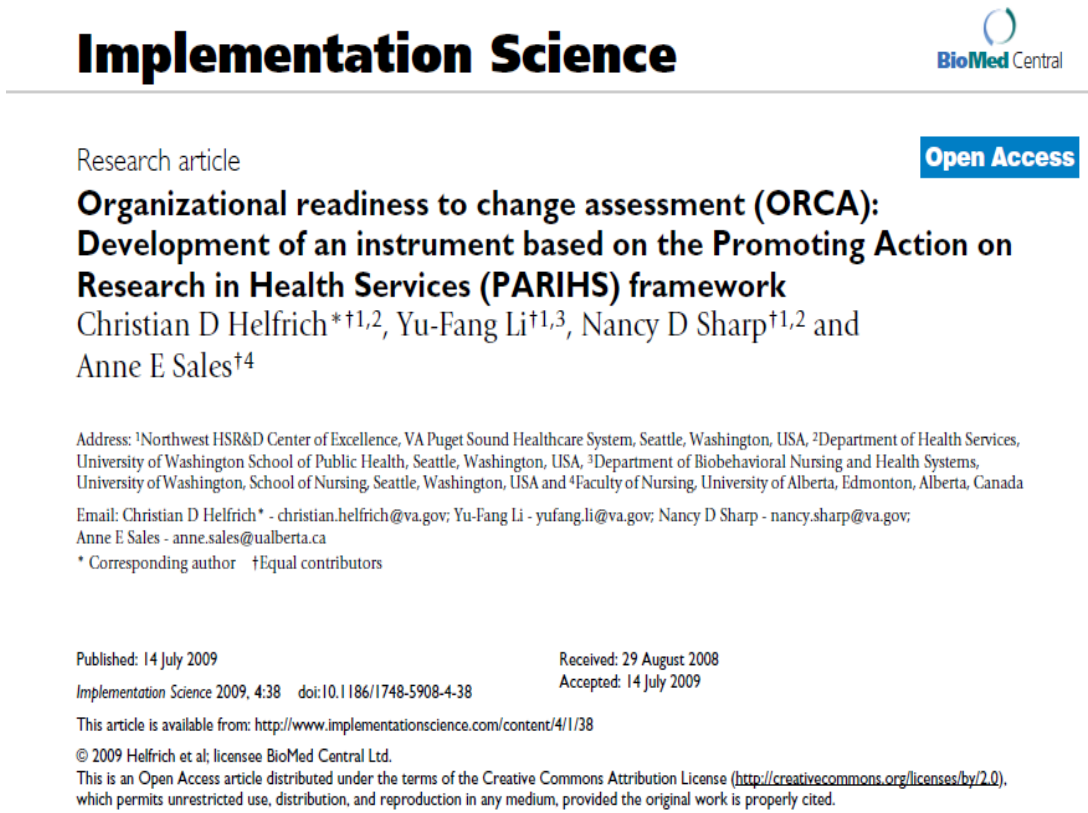
- Developed early in the history of the Ischemic Heart Disease (IHD) QUERI program (https://implementationscience.biomedcentral.com/articles/10.1186/1748-5908-4-38)
  - Purpose: to understand whether or not organizations were, in the perception of the people involved, ready to make changes to conform to new evidence based practices (https://implementationscience.biomedcentral.com/articles/10.1186/1748-5908-4-67)
- Initially based on PARiHS framework
  - Evidence, Context, Facilitation
- Three primary scales (Evidence, Context, Facilitation)
  - Note: no overall score summing across all three scales
  - 19 subscales
  - 77 items

Doing ORCA surveys

- Can be administered by pen and paper
- Increasingly administered using web-based surveys
- Starts with questions about setting and role (operationally/clinically defined)
  - These depend in part on the topic but can be reused across different studies with different foci and different approaches
- In general, depending on how many of the primary scales are used, response time can take from 10 to 20 minutes

Looking at the scales

- Described in the Helfrich et al. 2009 publication in *Implementation Science*
- Scales and subscales are simple and additive
  - Sum scores and divide by the number of respondents



Implementation Science

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Research article

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Organizational readiness to change assessment (ORCA): Development of an instrument based on the Promoting Action on Research in Health Services (PARIHS) framework

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Subscales include

- Evidence (4 subscales)
  - Concordance or discord between team members about strength of evidence
  - Strength of
    - Research evidence
    - Clinical experience
    - Patient preferences
- Context (6 subscales)
  - Dimensions of organizational culture (2)
    - Senior leadership/management
    - Staff
  - Leadership practice (2)
    - Formal leadership
    - Opinion leaders
  - Evaluation
    - Setting goals
    - Tracking and communicating performance
  - Resources

Facilitation (9 subscales)

- Senior leadership management characteristics
- Clinical champion characteristics
- Senior leadership or opinion leader roles
- Implementation team member roles
- Implementation plan
- Communication
- Implementation progress
- Implementation resources
- Implementation evaluation

An important facet: the stem

- After cursory information about the individual completing the ORCA, all remaining questions refer to a common stem
  - Statement that describes the evidence based practice or practices being implemented
- For the LTC QUERI, the stem is:
  - For all of the following questions, please refer to this statement as the topic being discussed:
  - **Findings: Conducting and documenting goals of care conversations with Veterans or their surrogate decision-makers in CLC and HBPC will contribute to improved care planning, greater congruence between Veteran preferences and care, and improve quality of life for seriously ill Veterans in CLC and HBPC.**

Exemplar questions in Evidence and Context scales– all refer back to the stem

- Evidence

1. Based on your assessment of the evidence basis for this statement, please rate the strength of the evidence in your opinion, on a scale of 1 to 5 where 1 is very weak evidence and 5 is very strong evidence:

Very weak	Weak	Neither weak nor strong	Strong	Very strong	Don't know/Not applicable
1	2	3	4	5	99

3. The proposed practice changes or guideline implementation:

A. Are (is) supported by RCTs or other scientific evidence from the VA	Strongly disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly agree 5	Don't know/Not applicable 99
B. Are (is) supported by RCTs or other scientific evidence from other health care systems	Strongly disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly agree 5	Don't know/Not applicable 99
C. Should be effective, based on current scientific knowledge	Strongly disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly agree 5	Don't know/Not applicable 99

- Context

8. Senior leadership/clinical management in your organization:

A. Provide effective management for continuous improvement of patient care	Strongly disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly agree 5	Don't know/Not applicable 99
B. Clearly define areas of responsibility and authority for clinical managers and staff	Strongly disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly agree 5	Don't know/Not applicable 99
C. Promote team building to solve clinical care problems	Strongly disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly agree 5	Don't know/Not applicable 99
D. Promote communication among clinical services and units	Strongly disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly agree 5	Don't know/Not applicable 99

Example questions from the Facilitation scale

12. Senior leadership/clinical management have:

A. Proposed a project that is appropriate and feasible	Strongly disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly agree 5	Don't know/Not applicable 99
B. Provided clear goals for improvement in patient care	Strongly disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly agree 5	Don't know/Not applicable 99
C. Established a project schedule and deliverables	Strongly disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly agree 5	Don't know/Not applicable 99
D. Designated a clinical champion(s) for the project	Strongly disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly agree 5	Don't know/Not applicable 99

13. The Project Clinical Champion:

A. Accepts responsibility for the success of this project	Strongly disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly agree 5	Don't know/Not applicable 99
B. Has the authority to carry out the implementation	Strongly disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly agree 5	Don't know/Not applicable 99
C. Is considered a clinical opinion leader	Strongly disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly agree 5	Don't know/Not applicable 99
D. Works well with the intervention team and providers	Strongly disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly agree 5	Don't know/Not applicable 99

Some additional things to consider

- The Evidence, Context and Facilitation scales are not all equal or equivalent
- Evidence and Context are important throughout the life of an implementation project
  - Perceptions of these may change as the project rolls out, but there will be perceptions from the outset
- Facilitation is only really meaningful once a project begins and is underway
  - Until implementation is underway, respondents don’t have enough information to be able to respond to these questions

Timing of the primary scales

- At project beginning, middle and end
  - Evidence scale is appropriate, although the focus may change
  - Context scale is appropriate, even though it's reasonable to expect changes (may go either direction– improving or worsening) through the life cycle of the project
- During the project, and probably at the end
  - Facilitation scale
    - Assess perceived adequacy of facilitation
    - Assess the degree to which facilitation may be helping or possibly hindering progress

So you’ve fielded the ORCA

Now what?

Descriptive analysis

- Response rate provides some information
  - Although it's very difficult to interpret without additional data (interviews, ongoing contact with site champions)
  - Issues of who actually received the survey; understanding of the reason for the survey; linkage to ongoing work within the facility
- Univariate analysis of each item
  - Mean, standard deviation, median, and mode
- Potential bivariate item analysis
  - Do descriptive statistics change with different roles?
  - What does it mean if different groups of respondents respond differently about the same facility?

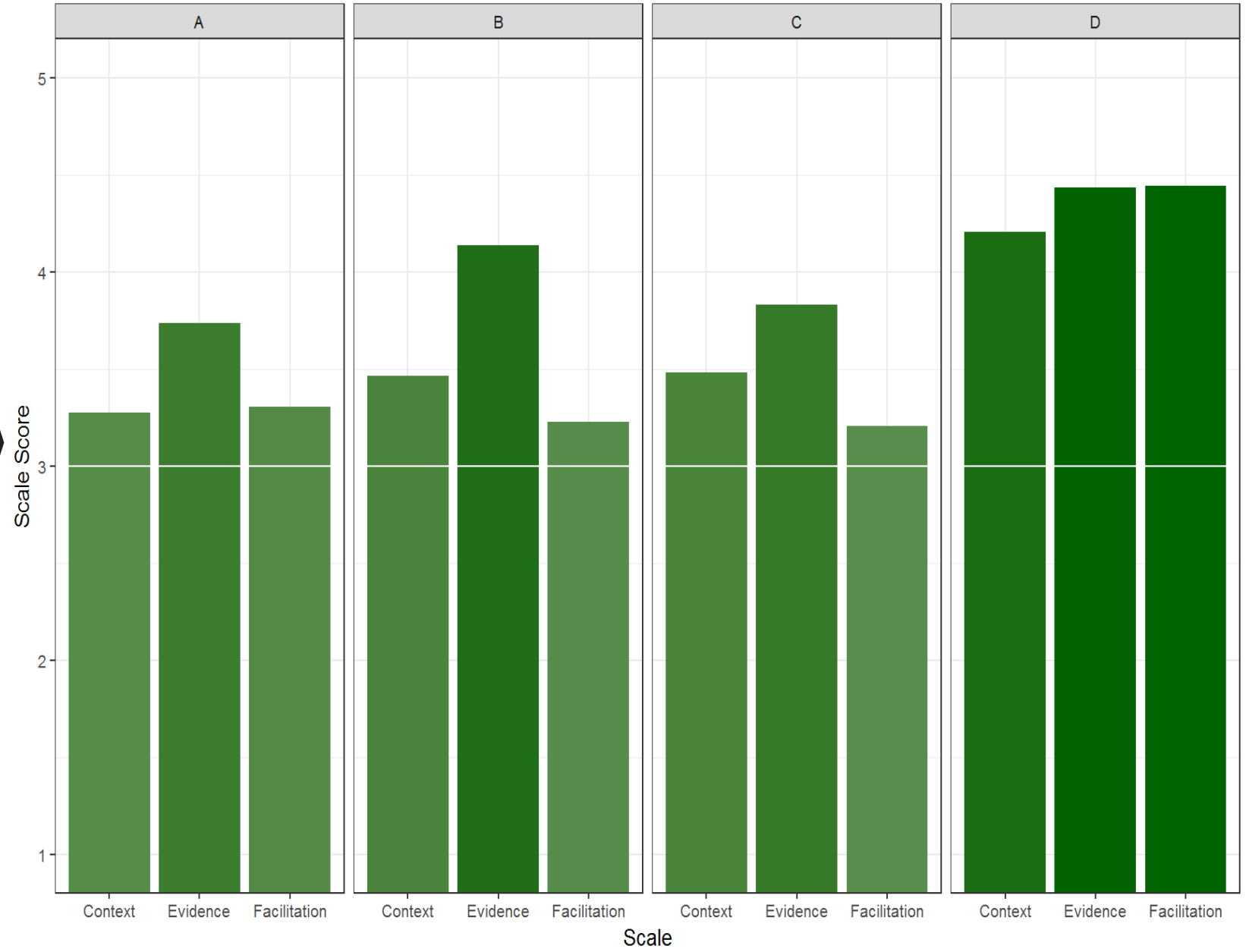
A worked example

Using the ORCA to plan for implementation

Data describe four facilities

- Focus of this talk is not on the four facilities for their own characteristics
  - Learn from looking at data from these different facilities
  - Number of respondents varied by site
    - 18
    - 26
    - 8
    - 6
  - Varied by number and types of roles of respondents
- Focus on the Evidence and Context scales

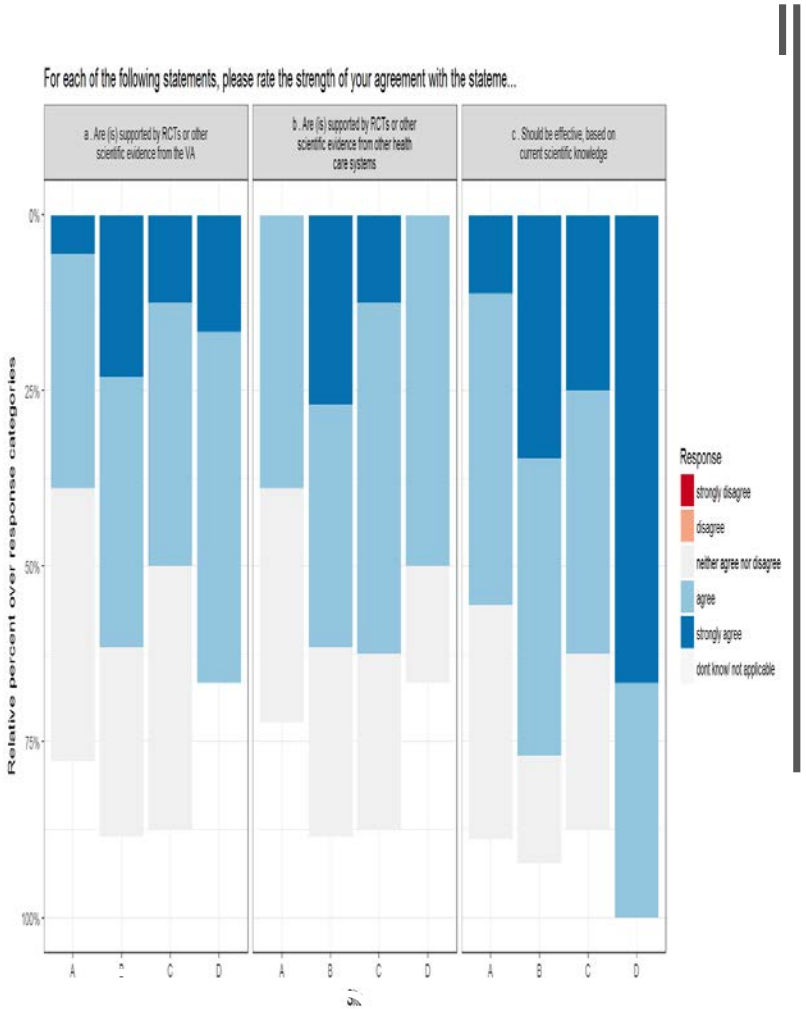
Wide variation across all three scales

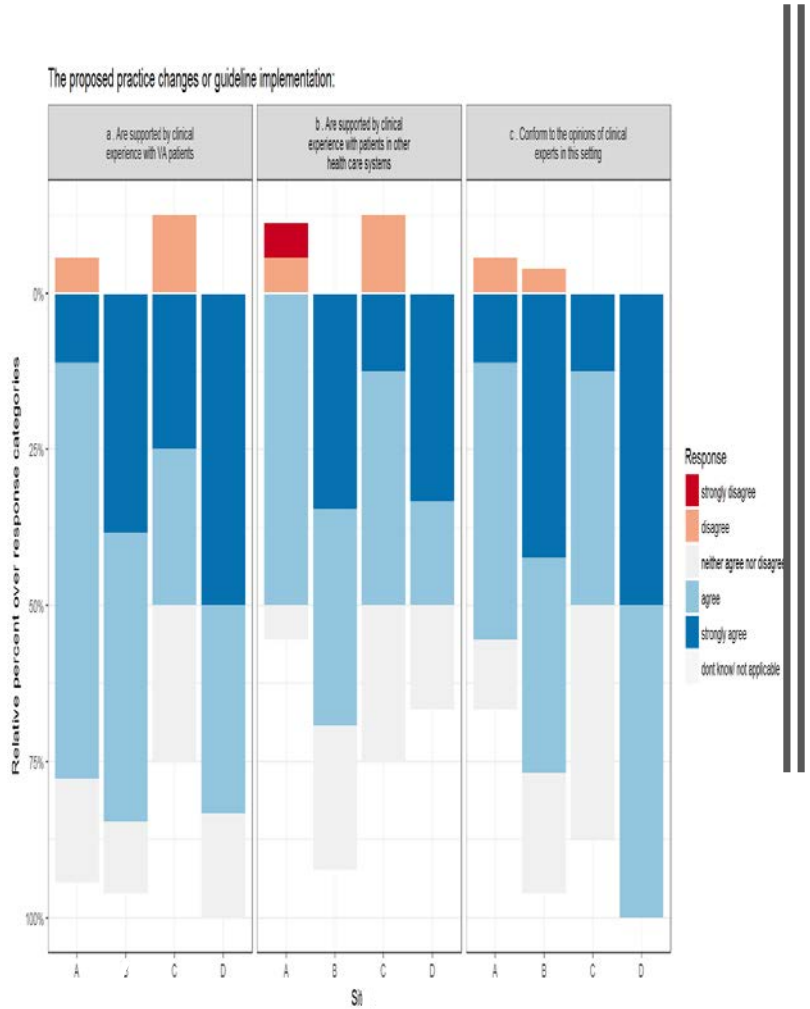


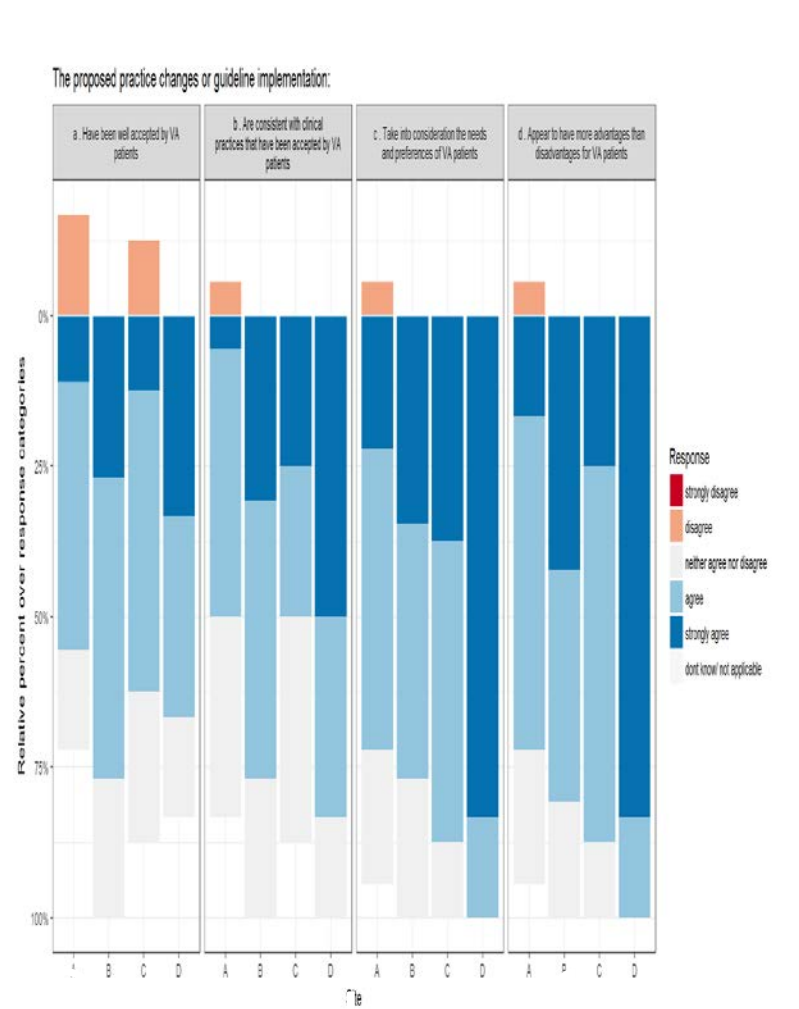
These three scales alone aren’t very informative

- Show variation
- Suggest that different approaches may be needed for each facility
- Suggest that one facility (D) may be “better off” in terms of implementation/readiness to change than others

- But digging a little deeper…

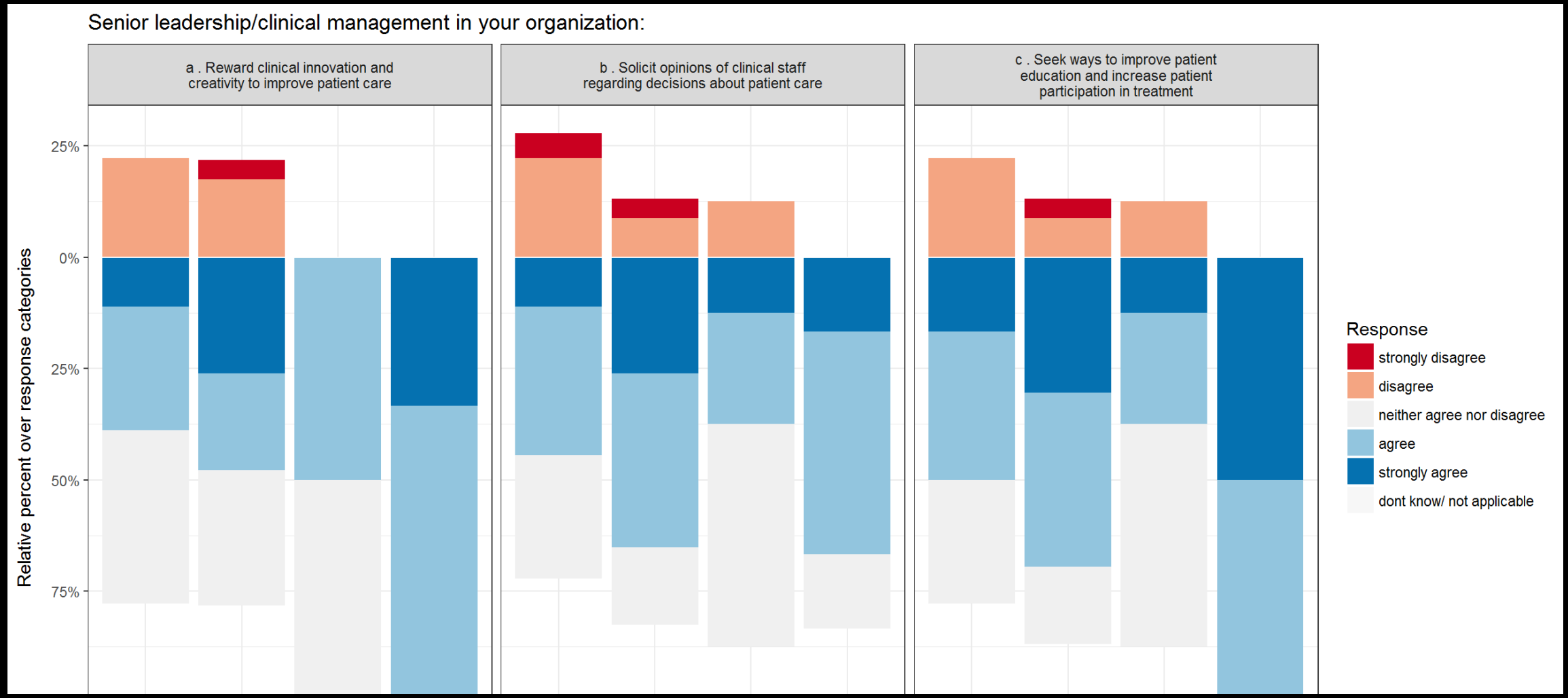

For each of the following statements, please rate the strength of your agreement with the stateme...
a. Are (is) supported by RCTs or other scientific evidence from the VA
b. Are (is) supported by RCTs or other scientific evidence from other health care systems
c. Should be effective, based on current scientific knowledge
Relative percent over response categories
0%
25%
50%
75%
100%
A
B
C
D
Response
strongly disagree
disagree
neither agree nor disagree
agree
strongly agree
dont know/ not applicable


The proposed practice changes or guideline implementation:
a. Are supported by clinical experience with VA patients
b. Are supported by clinical experience with patients in other health care systems
c. Conform to the opinions of clinical experts in this setting
Relative percent over response categories
0%
25%
50%
75%
100%
A
B
C
D
Response
strongly disagree
disagree
neither agree nor disagree
agree
strongly agree
dont know/ not applicable


The proposed practice changes or guideline implementation:
a. Have been well accepted by VA patients
b. Are consistent with clinical practices that have been accepted by VA patients
c. Take into consideration the needs and preferences of VA patients
d. Appear to have more advantages than disadvantages for VA patients
Relative percent over response categories
0%
25%
50%
75%
100%
A
B
C
D
Response
strongly disagree
disagree
neither agree nor disagree
agree
strongly agree
dont know/ not applicable

Evidence is not perceived uniformly across all four facilities

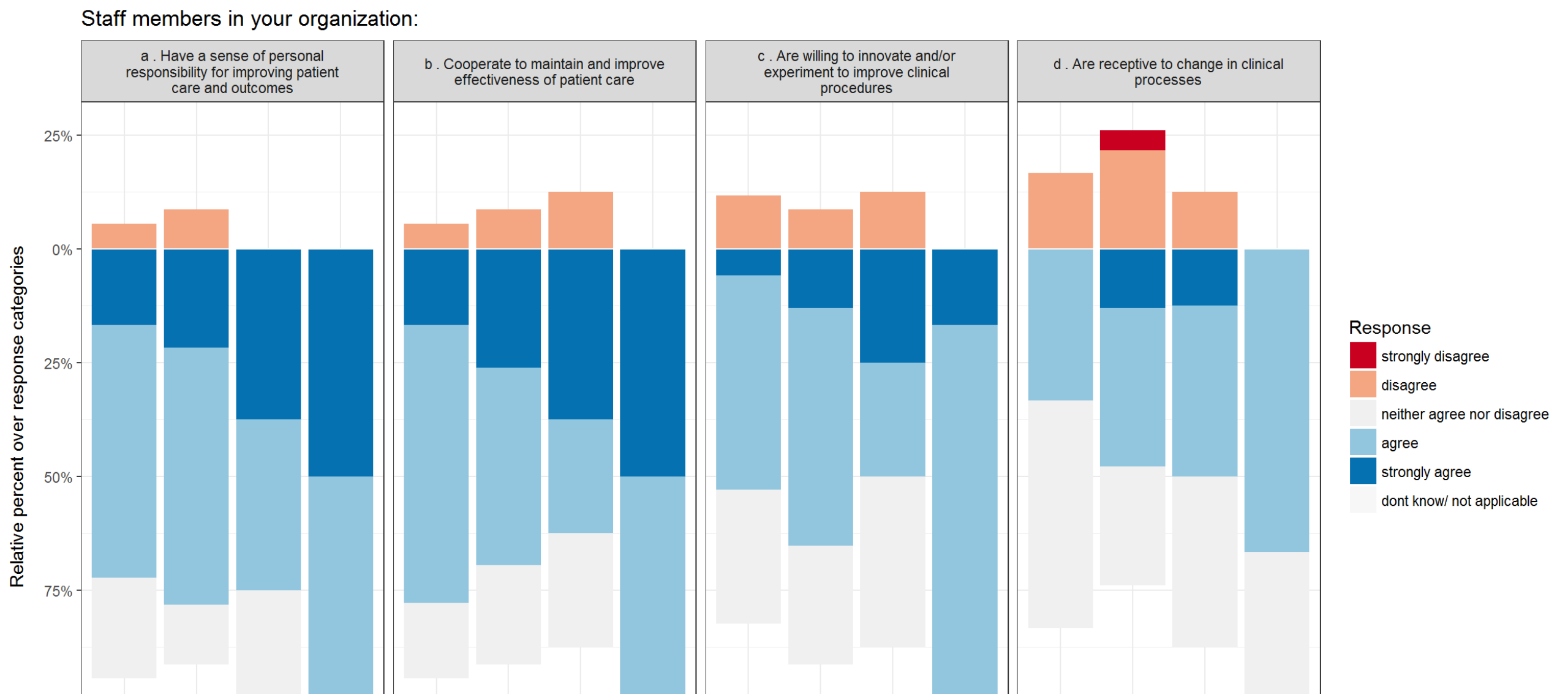
- Staff in all four facilities agree that research evidence (first group) is reasonably strong
  - Assessment of research strength differs
- Perception of clinical experience differs considerably across facilities (middle group)
  - In Facility A and C, there is significant disagreement about the support for the stem statement in their own facilities
  - But even more disagreement about how this is perceived elsewhere in these two facilities
  - General agreement about perceptions by clinical experts
- Perception of patient experience also varies by facility (last group)



Context: Perception of senior leadership culture

Perceptions of context/senior leadership culture differ widely

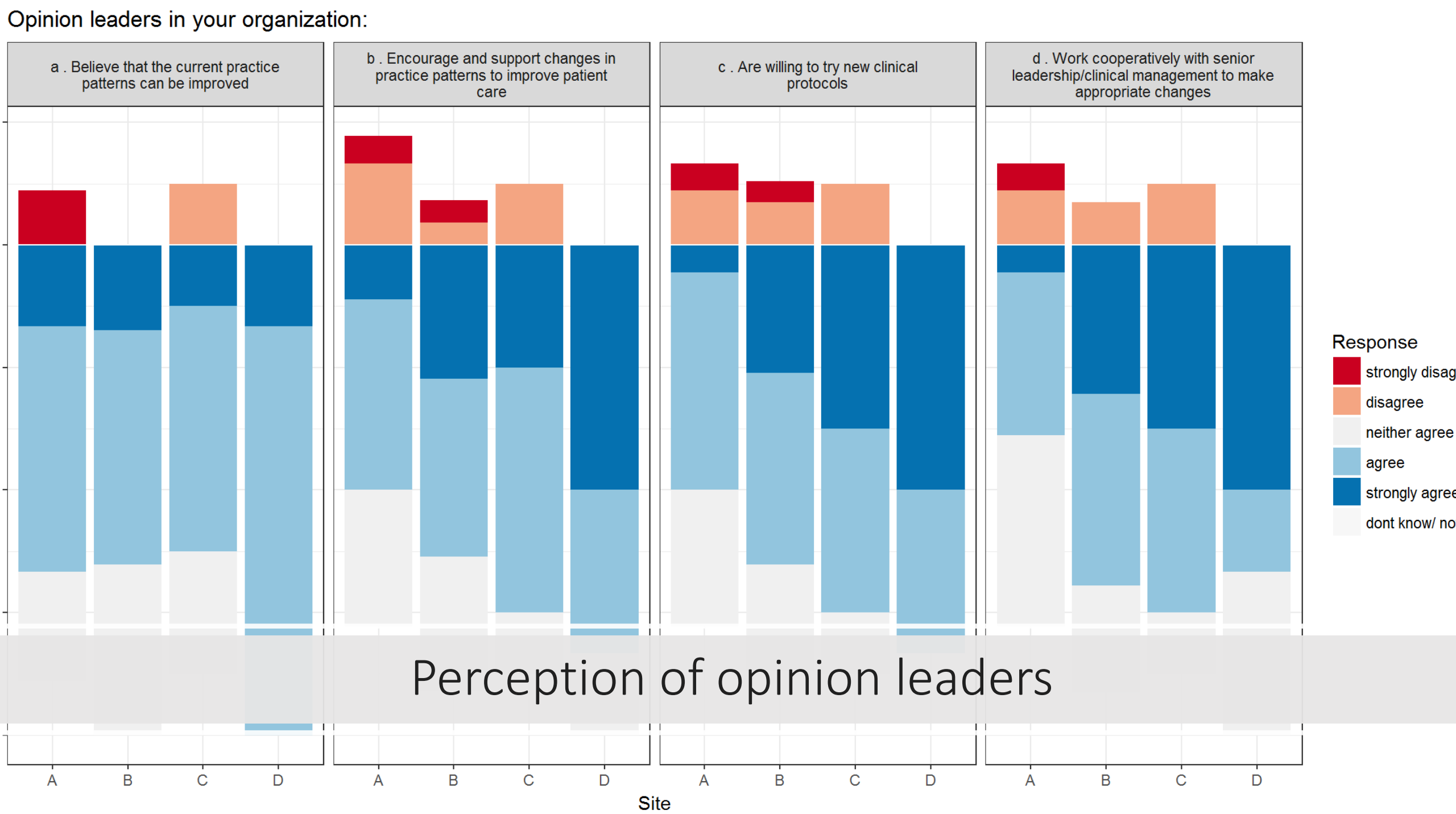
- Perceptions that senior management/clinical leadership rewards creative ways to improve patient care
  - Facilities A and B both register disagreement, and Facility B registers strong disagreement
- Perceptions that clinical staff opinions are solicited show wide variation
  - From strong disagreement in Facilities A and B to agreement in Facility D
- Perceptions that improvements in patient education and patient participation in treatment are supported
  - Also wide variation across facilities, with only one facility registering strong disagreement



Perceptions of staff culture

Context: Perceptions of staff culture

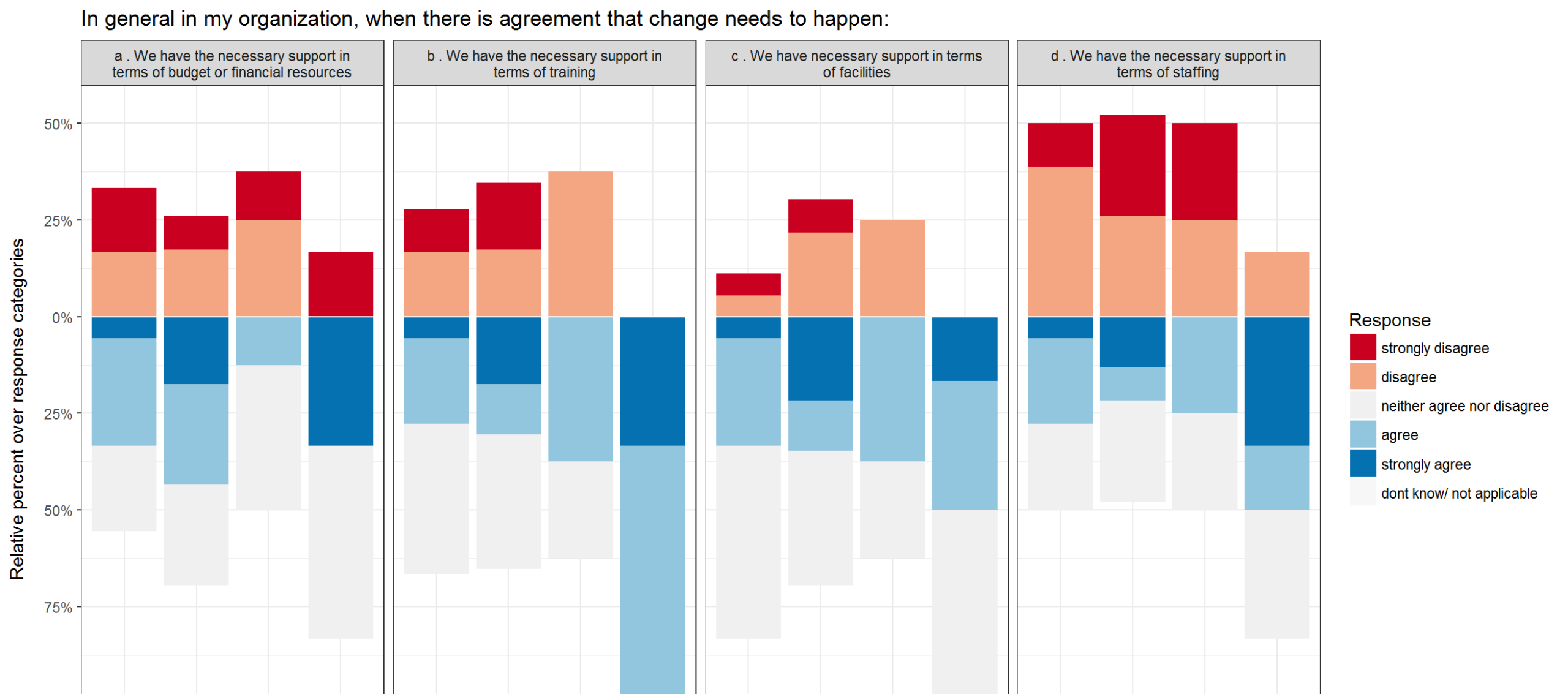
- Less variation
- Facility B registers strong disagreement about staff receptivity to change in clinical processes
- Mix of disagreement and agreement across the four facilities



Perception of opinion leaders

Context: Mixed perceptions about opinion leaders in the organization

- Facilities A and B register strong disagreement about most of the items in this subscale:
  - Opinion leaders' belief that current practice patterns can be improved
  - Opinion leaders encouraging and supporting changes in practice patterns
  - Opinion leaders being willing to try new clinical protocols
  - Opinion leaders working cooperatively with senior leadership/management to make appropriate changes
- Facility D is much more positive on all of these items



Perception of resources

And then there are resources…

- On most items there is strong disagreement from at least three of the four facilities
  - Budget
  - Training
  - Facilities
  - Staffing

What to do with this?

- Mapping to frameworks like the CFIR– Consolidated Framework for Implementation Research (www.cfirguide.org)
  - Evidence components from the ORCA mostly map to Intervention Characteristics in the CFIR
    - Evidence strength and quality
  - Other aspects map primarily to Inner Setting
    - Networks and Communication
    - Culture
    - Implementation Climate
    - Organizational Incentives and Rewards
    - Goals and Feedback
    - Learning Climate
    - Readiness for Implementation
    - Leadership Engagement
    - Available Resources
  - Some may map to Implementation Process
    - Planning
    - Engaging
    - Opinion Leaders
    - Champions
    - Executing
    - Reflecting and Evaluating

Consider implementation strategies to deal with identified problems (barriers)

- Concern
  - Lack of resources for training
  - Opinion leaders not supportive of change in clinical practice
  - Disagreement about patient perception of evidence for change
- Possible implementation strategy
  - Create a learning collaborative
  - Identify early adopters
  - Intervene with patients/consumers to enhance uptake and adherence

https://implementationscience.biomedcentral.com/articles/10.1186/s13012-015-0209-1

Summary

- There is no obvious mapping from findings on the ORCA to what to do about areas identified as problems
- Connections can be drawn between existing frameworks such as CFIR and findings from the ORCA
- Connections can also be drawn between findings from the ORCA and implementation strategies
- There is value in understanding the barriers that may exist based on perceptions of the evidence and context at each site