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](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](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
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:

<table>
<thead>
<tr>
<th>Very weak</th>
<th>Weak</th>
<th>Neither weak nor strong</th>
<th>Strong</th>
<th>Very strong</th>
<th>Don’t know/Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>99</td>
</tr>
</tbody>
</table>

3. The proposed practice changes or guideline implementation:

<table>
<thead>
<tr>
<th>A. Are (is) supported by RCTs or other scientific evidence from the VA</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Don’t know/Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
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<table>
<thead>
<tr>
<th>B. Are (is) supported by RCTs or other scientific evidence from other health care systems</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
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</tbody>
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<tr>
<th>C. Should be effective, based on current scientific knowledge</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
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**Context**

8. Senior leadership/clinical management in your organization:

<table>
<thead>
<tr>
<th>A. Provide effective management for continuous improvement of patient care</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Don’t know/Not applicable</th>
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<table>
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<tr>
<th>B. Clearly define areas of responsibility and authority for clinical managers and staff</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Don’t know/Not applicable</th>
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<tr>
<th>C. Promote team building to solve clinical care problems</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
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<tr>
<th>D. Promote communication among clinical services and units</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Don’t know/Not applicable</th>
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### Example questions from the Facilitation scale

<table>
<thead>
<tr>
<th>12. Senior leadership/clinical management have:</th>
<th>13. The Project Clinical Champion:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Proposed a project that is appropriate and feasible</strong></td>
<td><strong>A. Accepts responsibility for the success of this project</strong></td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>Strongly disagree</td>
</tr>
<tr>
<td>Disagree</td>
<td>Disagree</td>
</tr>
<tr>
<td>Neither agree nor disagree</td>
<td>Neither agree nor disagree</td>
</tr>
<tr>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>Don’t know/Not applicable</td>
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</tr>
</tbody>
</table>

| **B. Provided clear goals for improvement in patient care** | **B. Has the authority to carry out the implementation** |
| Strongly disagree | Strongly disagree |
| Disagree | Disagree |
| Neither agree nor disagree | Neither agree nor disagree |
| Agree | Agree |
| Strongly agree | Strongly agree |
| Don’t know/Not applicable | Don’t know/Not applicable |
| 1 | 1 |
| 2 | 2 |
| 3 | 3 |
| 4 | 4 |
| 5 | 5 |
| 99 | 99 |

| **C. Established a project schedule and deliverables** | **C. Is considered a clinical opinion leader** |
| Strongly disagree | Strongly disagree |
| Disagree | Disagree |
| Neither agree nor disagree | Neither agree nor disagree |
| Agree | Agree |
| Strongly agree | Strongly agree |
| Don’t know/Not applicable | Don’t know/Not applicable |
| 1 | 1 |
| 2 | 2 |
| 3 | 3 |
| 4 | 4 |
| 5 | 5 |
| 99 | 99 |

| **D. Designated a clinical champion(s) for the project** | **D. Works well with the intervention team and providers** |
| Strongly disagree | Strongly disagree |
| Disagree | Disagree |
| Neither agree nor disagree | Neither agree nor disagree |
| Agree | Agree |
| Strongly agree | Strongly agree |
| Don’t know/Not applicable | Don’t know/Not applicable |
| 1 | 1 |
| 2 | 2 |
| 3 | 3 |
| 4 | 4 |
| 5 | 5 |
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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 statement:

- A: An (expected) PCI or other acute interventional therapy
- B: An (expected) PCI or other acute interventional therapy
- C: An (expected) PCI or other acute interventional therapy

The proposed practice changes or guideline implementation:

- A: An (expected) PCI or other acute interventional therapy
- B: An (expected) PCI or other acute interventional therapy
- C: An (expected) PCI or other acute interventional therapy

The proposed practice changes or guideline implementation:

- A: An (expected) PCI or other acute interventional therapy
- B: An (expected) PCI or other acute interventional therapy
- C: An (expected) PCI or other acute interventional therapy
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
Opinion leaders in your organization:

- **a.** Believe that the current practice patterns can be improved
- **b.** Encourage and support changes in practice patterns to improve patient care
- **c.** Are willing to try new clinical protocols
- **d.** Work cooperatively with senior leadership/clinical management to make appropriate changes

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
In general in my organization, when there is agreement that change needs to happen:

- a. We have the necessary support in terms of budget or financial resources
- b. We have the necessary support in terms of training
- c. We have necessary support in terms of facilities
- d. We have the necessary support in terms of staffing

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

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