# Ontario Health Teams Central Evaluation

Formative Evaluation

## Findings from the Organizing for OHTs Survey: Results from the Second Cohort of OHTs

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**April 2021**

HSPN Health System Performance Network

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### Acknowledgements

We thank Kevin Walker for creating the analytical plan and reporting template that allowed us to efficiently report Cohort 2 results.

### Financial Support

This research was supported by a grant from the Ontario MOH to the HSPN. The funders had no role in data analysis, decision to publish, or preparation of the report.

### Suggested Citation

Nessa NS, Hall RE, & Wodchis WP. *Findings from the Organizing for OHTs Survey: Results from the Second Cohort of OHTs*. Toronto, ON: Health System Performance Network. 2021.

ISBN 978-1-7774610-6-5 (Online)

This document is available at hspn.ca.

# About this Report

This report is a part of the Ontario Health Team (OHT) Formative Evaluation and focuses on the results from the Organizing for Ontario Health Teams (OOHT) survey for the OHTs that submitted full applications in Cohort 2. The results reflect the context and capabilities of the Cohort 2 applicant OHTs soon after submission of the full application and, therefore, early on in their development.

The Context and Capabilities for Integrating Care (CCIC) Framework and Toolkit was used to guide the development of the OOHT survey to measure and describe the applicant OHTs context and capability for delivering integrated care. This report describes the OOHT survey, administration, organization and network contexts of Cohort 2 OHTs and compares them to Cohort 1 OHTs.

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# Executive Summary

This report contains results from the Organizing for Ontario Health Teams (OOHT) leadership survey administered to the second cohort of Ontario Health Team (OHT) applicants. The report describes the extent to which critical success factors for the implementation of integrated care are present to help OHTs and government act on the results and compares the results to the first cohort of applicant OHTs.

## Background

In April 2019, following the enactment of *The People's Health Care Act*, *2019*, the Ontario Ministry of Health (MOH) introduced OHTs as a new way of organizing and delivering care that is more connected to patients in their local communities. Organizations interested in partnering to form an OHT were invited to submit a self-assessment. Following a review of over 150 self-assessments by the MOH, 30 OHTs moved forward to submit full applications in December 2019 (Cohort 1). In September 2020, 17 applicant OHTs were invited to submit full applications of which 15 submitted a full application (i.e., Cohort 2 applicant OHTs).

The OOHT leadership survey captures ten domains measuring critical success factors/capabilities for integrated care, with Likert response options scored from 1-5, where a higher score indicated a high degree of a success factor. Cohort 2 was surveyed between December 2020 and February 2021. The person most involved in the development of the OHT from each signatory organization was sent a link to the online OOHT survey (N=402).

The results are based on 249 respondents (response rate 63%), with an average of 26 respondents per OHT (70% average response rate across OHTs). Most survey respondents (~74%) were in executive leadership or senior/director management roles. Approximately 10% were clinicians, with physicians being the majority.

## Results in Brief

The three domains with the ***highest*** ratings across OHTs were:

- *Commitment to Improvement* (mean=3.96);
- *Readiness for Change - Suitability* (mean=3.94); and
- *Team Climate* (mean=3.89).

Furthermore, as was found in Cohort 1, most individuals in Cohort 2 believe they have the skills and ability to implement integrated care through partnerships with hospitals, primary care and community-based services (mean=4.5) and encouragingly, half of the OHTs had ≥80% of respondents selecting 4 (very good) or 5 (excellent) on a question about trust within their OHT.

The three domains with the ***lowest*** ratings were:

- *Financial and Other Capital Resources* (mean=2.69);
- *Clinical-Functional Integration* (mean=3.15); and
- *Non-financial Resources* (mean=3.54).

As was observed in Cohort 1, efforts/supports are needed across all OHTs to build capacity for integration and basic structural resources like finances and information technology are required to allow for information to be shared across OHT members.

We also examined the variability within- and between- OHTs for each domain. The high ratings on *Commitment to Improvement* (mean=3.96), *Readiness for Change - Suitability* (mean=3.94), and *Team Climate* (mean=3.89) had the greatest variation across OHTs relative to the variation within OHTs suggesting some OHTs in Cohort 2 will need more support/efforts.

Similar to Cohort 1, *Commitment to Improvement* and *Team Climate* were ranked among the top three highest ranked domains although Cohort 2 had slightly lower mean scores. Compared to Cohort 1, the variation across OHTs in Cohort 2 OHTs was much lower but the variation within OHTs was much higher.

For the *Clinical-Functional Integration* (mean=3.15) and *Financial and Other Capital Resources* (mean=2.69) domains, the variability among respondents within OHTs was relatively high indicating differences of opinion within the OHT membership while low variance between OHTs in these domains suggests most OHTs are at very similar levels of achievement.

## What have we learned?

- All OHTs have room to improve, as no OHT consistently ranked above the 80$^{th}$ percentile across all domains. However, one OHT had ≥80% of the respondents selecting 4 or 5 in eight out of the 10 domains.
- Similar to Cohort 1, Cohort 2 applicants have a high level of trust, have a strong commitment to improving integration of care and responsibility for achieving improved patient outcomes with a “we are in it together attitude” and feel this change will be beneficial.
- As was seen in Cohort 1, if these attitudes, beliefs and commitment to improving care are to be sustained during implementation, all OHTs will need financial resources to develop expertise in using data and the ability to share clinical information and tools for clinical coordination.
- It will be important to re-assess the teams on many of these domains, to determine whether beliefs, attitudes and commitments are sustained as teams begin to implement their year one target population integrated care plans and to determine whether recent government financial and non-financial support has enabled implementation.

# A. Background

In April 2019, the Ontario Ministry of Health (MOH) launched Ontario Health Teams (OHTs) as a new way of organizing and delivering care that is more connected to patients in their local communities. The OHTs are expected to bring together partners, including health and non-health sectors, patients and caregivers, in their design and work as one coordinated team to provide integrated care for their local population. They will share clinical data, use data to support and monitor outcomes and, at maturity, will be accountable for a set of outcomes within a defined budget.

The integrated care literature indicates there are several organizational and network characteristics (e.g., governance, leadership style, organizational culture, resources, information technology, history of change and innovation, partnering, organizational bureaucracy, commitment to quality improvement, and patient-centeredness), that influence the success of integrated care interventions.[1-8] Without understanding the organizational and network factors that support integrated care, leaders and care providers can encounter unanticipated barriers to achieving integrated care and evaluators can face challenges in generalizing findings and best practices across settings.[9]

The Context and Capabilities for Integrated Care (CCIC) Framework[9] was developed in the Ontario context to identify the factors, termed contexts and capabilities, that are most important to integrated care and to explore the mechanisms by which they influence the realization of integrated care. Through a review of the integrated care literature and interviews with leaders and providers engaged in integrated care networks, Evans *et al.* identified 17 organizational or network capabilities and organized them into three constructs: 1) *Basic Structures*; 2) *People and Values*; and 3) *Key Processes*.

In interviewing leaders and providers engaged in integrated care models in Ontario (Health Links), nine of the 17 organizational and network capabilities emerged as priorities.[9] Under the *Basic Structures* construct there are two capabilities: i) Resources, and ii) Information Technology; under *People and Values*, five priority capabilities emerged: i) Leadership Approach, ii) Clinician Engagement and Leadership, iii) Patient-Centeredness and Engagement, iv) Organizational/Network Culture, and v) Readiness for Change; and under *Key Processes*, two capabilities emerged: i) Partnering and ii) Delivering Care.[9] Of these nine capabilities, three (*Leadership Approach*, *Clinician Engagement & Leadership*, and *Readiness for Change*) were deemed most important.[9]

The CCIC Toolkit[10, 11] includes interview guides, surveys and document review methodologies to measure the organization/network context and capabilities described in the CCIC framework. The CCIC Toolkit may be used at various points within the change process; during the planning stages as a means of determining readiness to integrate or predicting success, during the implementation stage to guide change management efforts, or following implementation to enhance our understanding of the factors most important to influencing success.

# B. Objectives

The objective of the survey is to describe and compare critical success factors for implementation of integrated care of the OHTs approved to submit a full application in order to guide OHTs and the MOH to identify strengths and opportunities to build important capabilities for integrating care.

# C. Methods

## C.1 Survey Instrument

The Organizing for Ontario Health Teams (OOHT) survey development has been described in our first report of the survey results of Cohort 1 OHTs.[12] The OOHT survey includes 42 items, measuring ten previously validated domains. Eight of these domains align with seven of nine organizational and network capabilities which emerged as priorities in the CCIC Framework, including two (*Leadership Approach* and *Readiness for Change*) of the three deemed most important for successful implementation of integrated care.[9] A number of the OOHT domains measure aspects of multiple CCIC capabilities, similarly a number of CCIC capabilities are measured by multiple OOHT domains. For example, two OOHT domains, *Shared Vision* and *Roles and Responsibilities*, which we report on separately due to their conceptual independence, both measure the CCIC capabilities *Partnering and Network Culture*. Table 1 maps the priority CCIC contexts and capabilities to the corresponding domains measured by the OOHT survey. The remaining two OOHT domains which did not map to one of the nine CCIC priority capabilities were included to measure *Commitment to Improvement* and *Administration and Management*; the first is essential to rapid change and a core building block of OHTs and the second is important for facilitating the development of other capabilities. The term “domain” is used in this report to capture a concept while we use the term “scale” to refer to the measurement of the domain using a set of questionnaire items.

**Table 1. Organizing for Ontario Health Teams Survey Domains and Mapping to CCIC Framework**

| CCIC Constructs | CCIC Capabilities | Original Domains from CCIC Toolkit | OOHT Domains (number of items) |
|---|---|---|---|
| BASIC STRUCTURES | Resources[ǂ] | Non-Financial Resources[14] | Non-Financial Resources (4) |
| BASIC STRUCTURES | Resources[ǂ]; Information Technology[ǂ] | Financial and Other Capital Resources[14] | Financial and Other Capital Resources (2) |
| BASIC STRUCTURES | Organizational/Network Design | Administration and Management[14] | Administration and Management (2) |
| PEOPLE & VALUES | Leadership Approach[ǂ] | Leadership[14] | Leadership Approach (5) |
| PEOPLE & VALUES | Commitment to Learning; Network Culture[ǂ]; Delivering Care[ǂ] | Team Climate[15] | Team Climate (6) |
| PEOPLE & VALUES | Commitment to Learning; Measuring Performance; Improving Quality | | Commitment to Improvement (3) |
| PEOPLE & VALUES | Readiness for Change[ǂ] | Appropriateness, Change Efficacy, Personally Beneficial[16] | Readiness for Change (Suitability (3), Change Efficacy (1), Personally Beneficial (1)) |
| PEOPLE & VALUES: KEY PROCESSES | Partnering[ǂ]; Network Culture[ǂ] | Synergy[14] | Shared Vision (5) |
| PEOPLE & VALUES; KEY PROCESSES | Partnering[ǂ]; Network Culture[ǂ] | Shared Orientations[17] | Roles and Responsibilities (2) |
| KEY PROCESSES | Delivering Care[ǂ] | Integration[17] | Clinical-Functional Integration (2) |

ǂ Indicates the seven out of nine capabilities deemed most important to implementation of integrated care in the Ontario context measured on the OOHT survey.

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Although questions related to trust were included in the *Leadership Approach* scale, we report the two trust items separately because it is foundational for successful partnering to deliver integrated care in the context of complex multi-organizational systems.[13] The survey also included five items not included in any of the scales and are reported separately. Two items were related to subdomains of *Readiness for Change*. While the three other items asked about organization or practice setting's attitude toward change, whether the respondent's organization or practice setting's shared values were compatible with those of other members of the OHT and whether the respondents organizations or practice setting's professionals/staff had a strong sense of belonging to the OHT. The latter three questions were not included in any of the original scales in the CCIC Toolkit.

## C.3 Survey Sample

Each full applicant OHT (n=15) was asked to provide the name and email address for the person from each "signatory" organization who was most involved in the development of the OHT (signatory being defined by representatives who included their signature on the OHT application form). The evaluation team received contact details for 402 individuals; the mean number of individuals per OHT was 26, with a range of 4 to 81.

## C.4 Data Collection

Data collection commenced mid-December 2020 with all individuals receiving an email inviting them to participate in the OOHT survey. The invitation included an information letter detailing their rights as participants and a unique link to the online survey, as well as a separate link to opt-out of the survey. A second opportunity to opt-out was offered on the introduction page of the survey. Up to four reminders were sent via email to non-responders over a six-week period. However, due to delays with some teams, data collection continued with these teams until the end of February 2021. Additionally, OHT points of contact were asked to encourage their members' participation if their OHT's response rate was <50% or if there were fewer than six responses after three reminders. The survey was available in both English and French. All substantive items were optional, but *Not Applicable* or *Don't know* option was not an option for most items. If respondents left a question blank, they were alerted before moving to the next page, but were not required to respond in order to continue completing the survey.

## C.5 Statistical Analyses

Likert response options were scored from 1-5, where a higher score indicated a more favourable response. At the individual level, each scale was scored as the mean of all items. Individual mean scale scores were then aggregated to the OHT-level and then again aggregated to the overall or other higher (by lead organization and geography)-levels. In addition to the mean scale scores, to examine the response distribution across response options within a domain, the mean percentage response to each response option across items was calculated. We report on the number of OHTs with at least 50% and ≥80% of respondents selecting the top two boxes (4 (e.g., moderately agree) or 5 (e.g., strongly agree)).

To assess the similarity of responses within OHTs, the intraclass correlation coefficient (ICC) was calculated. The ICC measures the proportion of variability between OHTs as a proportion of the total variance. A low ICC indicates that a smaller proportion of the total variation in domain scores is due to between-OHT differences. If there is a high similarity in responses amongst OHT members, the ICC will be closer to the maximum score of 1.0. Within- and between- OHT variance were also calculated. Multi-level models with respondents nested within OHTs were fit for each domain on lead organization and geography. All pairwise comparisons of lead organization and geography were tested with Bonferroni correction to account for the fact that we were making multiple comparisons, and some may be statistically significant by chance.

# D. Results

## D.1 OOHT Survey Respondents

Table 2 illustrates the survey respondent roles and the types of organizations they represent. Almost three-quarters of Cohort 2 respondents (73.9%) were in executive leadership or senior management and similar to Cohort 1, this group comprised the majority of survey respondents. Clinicians represented ten percent of respondents with all, but two, being physicians in Cohort 2 compared to 14.8% in Cohort 1. Similar to Cohort 1, there was a small number of patients and caregivers and other roles (e.g., board member, community representative, university faculty, etc.) All surveys were completed in English.

Over half of survey respondents in Cohort 2 were from community support organizations (52.2%) and 27.3% were from primary care practices. Respondents from home care and long-term care organizations represented only 7.6% and 6.4% of the survey respondents, respectively. Representation of respondents from hospitals, public health and Patient and Family Advisory Councils (PFACs) were also among the lowest.

Compared to Cohort 1, the proportion of respondents from community support organizations in Cohort 2 was almost double (52.2% vs. 36.7%) while respondents from home care and long-term care organizations were close to half (7.6% and 6.4% vs. 15.0% and 11.3%). Among the smaller represented sectors, mental health inpatient hospitals and rehabilitation or complex continuing care hospitals the proportion of respondents from these organizations was higher in Cohort 2 compared to Cohort 1. There were minimal differences between the two cohorts in the proportion of respondents from acute care inpatient hospitals, public health and PFACs. Fewer respondents from other types of organizations were observed in Cohort 2 compared to Cohort 1.

**Table 2. Number of Respondent Roles and Type of Organization(s) Represented in Cohort 2 (N=249) and Cohort 1 (N=480)**

| Characteristic | Frequency (%) | |
|---|---|---|
| **Current Role** | **C2** | **C1** |
| **Chief Executive Officer, President or Executive Director** | 157 (63.1) | 257 (53.5) |
| **Other Senior Management (COO, CFO, Vice President, Chief of Staff)** | 27 (10.8) | 68 (14.2) |
| **Administrator, General Manager, Director of Care** | 22 (8.8) | 58 (12.1) |
| **Physician or Other Clinical Role** | 25 (10.0) | 71 (14.8) |
| **Patient/Caregiver** | 8 (3.2) | 15 (3.1) |
| **Other** | 10 (4.0) | 11 (2.3) |
| **Type of Organization Represented** | | |
| **Primary Health Care Practice** | 68 (27.3) | 149 (31.0) |
| **Acute Care Inpatient Hospital** | 18 (7.2) | 39 (8.1) |
| **Mental Health Inpatient Hospital** | 10 (4.0) | 6 (1.3) |
| **Rehabilitation or Complex Continuing Care Hospital** | 11 (4.4) | 14 (2.9) |
| **Long-Term Care** | 16 (6.4) | 54 (11.3) |
| **Home Care** | 19 (7.6) | 72 (15.0) |
| **Public Health** | 6 (2.4) | 13 (2.7) |
| **Community Support Services (including Community Mental Health and Addictions)** | 130 (52.2) | 176 (36.7) |
| **Patient and Family Advisory Council** | 10 (4.0) | 16 (3.3) |
| **Other[ǂ]** | 21 (8.4) | 77 (16.0) |

[ǂ] Examples of other types of organizations represented include municipalities, paramedic services, hospices, shared (digital) services organizations.
Note: C1=Cohort 1; C2=Cohort 2.

### D.2 OOHT Survey Response and Completion Rates

Of the 402 individuals from Cohort 2 that were emailed an invitation to the OOHT survey, 249 submitted their survey for an overall response rate of 63%. At the OHT-level, the mean response rate was 70%, ranging from 40% to 100%. Nearly a quarter of all Cohort 2 OHTs achieved an 80% response rate. Three of the 15 OHTs in Cohort 2 achieved response rates above 90% (see Table 3).

The response rate for Cohort 2 was identical to Cohort 1 (63%), but had less variation in response rate across OHTs compared to Cohort 1 (40% to 100% vs. 27% to 100%). Compared to Cohort 1, the average OHT response rate for Cohort 2 was lower (70% vs. 77%), and only 4/15 OHTs had a response rate over an 80% response rate. Cohort 1 saw nearly a half (14/30) achieve an 80% response rate.

The mean completion rate of all survey items across the 249 respondents was 97.5%, ranging from 72.7% to 100%. Across survey items, the mean percentage of off-scale responses (i.e., Not Applicable / Don't know) was 2.3% (range: 0% to 18.9%) and for missing values, 0.5% (range: 0% to 2.4%). The highest number of non-responses was for question 29, which asked about the sufficiency of financial (money) resources available to the OHT while question 13, asking about information sharing, had the highest number of missing values.

**Table 3. Organizing for Ontario Health Teams Survey Distribution and Response Statistics**

| OHT ᴵ | Response Rate | OHT ᴵ | Response Rate |
|---|---|---|---|
| **OHT 31** | **69%** | **OHT 39** | **45%** |
| **OHT 32** | **100%** | **OHT 40** | **94%** |
| **OHT 33** | **40%** | **OHT 41** | **61%** |
| **OHT 34** | **59%** | **OHT 42** | **65%** |
| **OHT 35** | **73%** | **OHT 43** | **89%** |
| **OHT 36** | **67%** | **OHT 44** | **68%** |
| **OHT 37** | **52%** | **OHT 45** | **100%** |
| **OHT 38** | **73%** | **Overall** (Among respondents / Average Across OHTs) | **63% / 70%** |

ᴵ OHTs were assigned a random number between 31 and 45 to anonymize results.

### D.3 OOHT Survey Findings

Measuring the key contexts and capabilities supporting integrated care delivery early in the OHT development allows for an assessment of "readiness to integrate" and the development of targeted change management strategies that address problem areas or leverage strengths. The radar chart below (Figure 1) and Table 4 illustrate that across OHTs, the three domains with the highest ratings were *Commitment to Improvement* (mean=3.96 out of 5), *Readiness for Change – Suitability* (mean=3.94 out of 5) and Team Climate (mean=3.89 out of 5). There were two domains, measuring *Financial and Other Capital Resources* and *Clinical-Functional Integration*, with noticeably lower ratings across OHTs (means of 2.69 and 3.54, respectively).

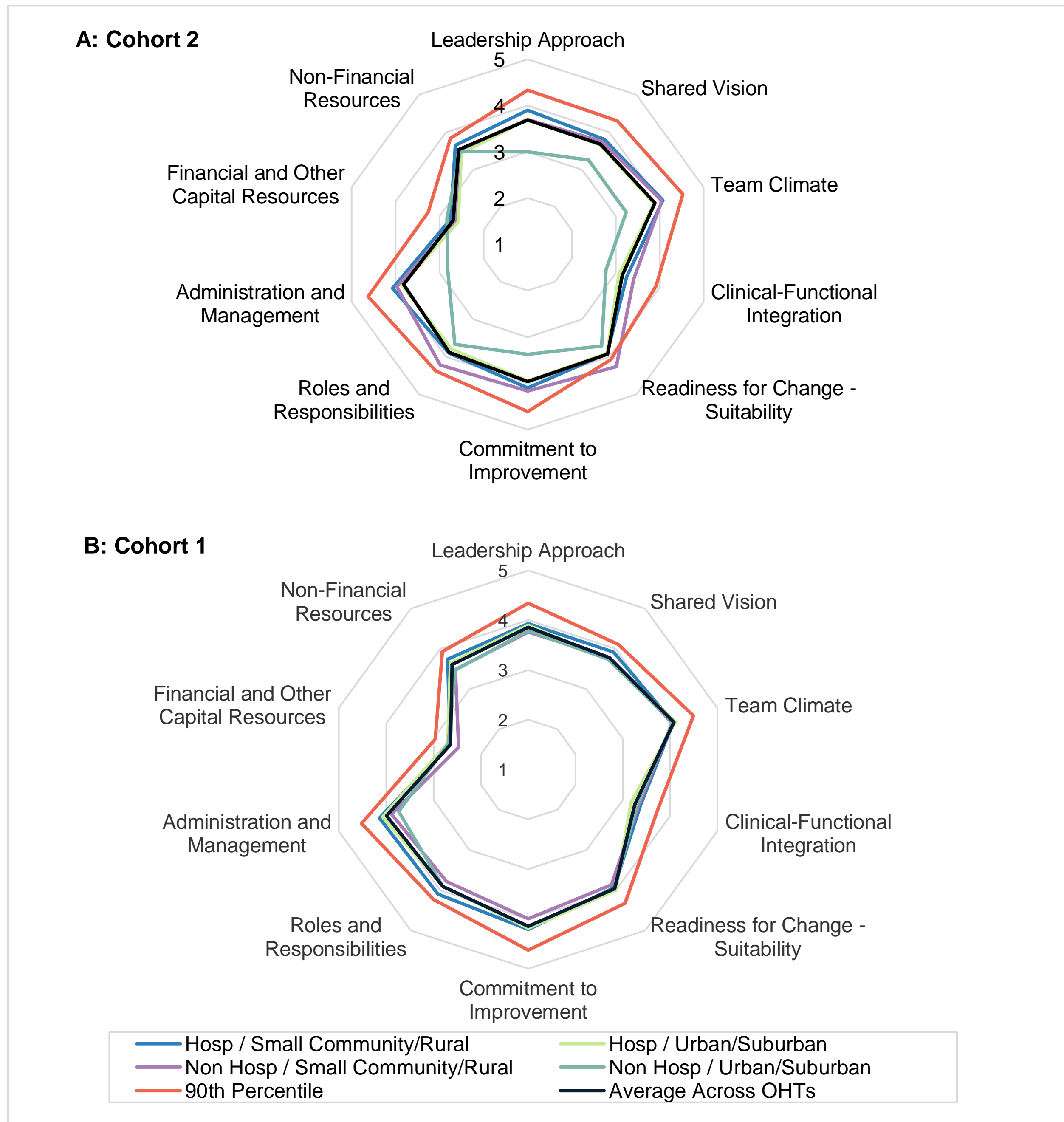
A number of domains had very low between OHT variance relative to total variance and, as a result, small ICCs and they include: *Clinical-Functional Integration* (ICC=0.00); *Readiness for Change - Suitability* (ICC=0.00); *Roles and Responsibilities* (ICC=0.00) and *Commitment to Improvement* (ICC=0.02). The highest between-OHT variance relative to the total variance were observed for the *Administration and Management* (ICC=0.18), *Financial and Other Capital Resources* (ICC=0.14), and *Leadership Approach* (ICC=0.11). Please see Table 4 for summary statistics for all domains.

Urban based OHTs had statistically significantly lower ratings of Administration and Management (i.e., communication) ($p<0.05$) compared with rural/small community based OHTs. No other statistically significant differences were found when testing for differences between lead organization type (hospital vs. non-hospital) or geography (urban/suburban vs. small community/rural). All pairwise comparisons of the combinations of lead organization and geography (e.g., hospital and urban/suburban vs. non-hospital and

small community/rural) were also not statistically significant different. See Appendix B for full regression and contrast estimates.

Figures 1a and b reveal, compared to Cohort 1 OHTs, Cohort 2 OHTs located in urban/suburban areas with non-hospital lead organizations have the lowest means scores in all domains except *Financial and Other Capital Resources* and *Non-Financial Resources*. Otherwise, the overall mean, 90$^{th}$ percentile and mean scores of other OHT archetypes were similar between the two cohorts.

**Figure 1. Applicant OHTs' Overall Mean, 90$^{th}$ Percentile Scores and Mean Scores by Geography and Lead Organization Type by OOHT Survey Domain**



## Table 4. Comparing the Summary Statistics of Cohort 2 OHTs (N=15) to Cohort 1 OHTs (N=30) OOHT across Survey Domains

| Domain | Mean Across OHTs (SD) | | % 4 or 5[ǂ] Response Across OHTs (Range) | | % of OHTs with ≥50% selecting 4 or 5[ǂ] | | % of OHTs with ≥80% selecting 4 or 5[ǂ] | | Between OHT Variance | | Within OHT Variance | | Total Variance | | ICC | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C2 | C1 | C2 | C1 | C2 | C1 | C2 | C1 | C2 | C1 | C2 | C1 | C2 | C1 | C2 | C1 |
| Leadership Approach | 3.69 (0.59) | 3.86 (0.54) | 61.4% (16.0% - 90.0%) | 67.4% (10.6% - 100%) | 73.3% | 86.7% | 13.3% | 33.3% | 0.11 | 0.24 | 0.92 | 0.71 | 1.03 | 0.95 | 0.11 | 0.25 |
| Shared Vision | 3.68 (0.39) | 3.78 (0.33) | 59.8% (8.0% - 90.0%) | 67.3% (21.3% - 96.7%) | 80.0% | 90.0% | 6.7% | 20.0% | 0.04 | 0.08 | 0.47 | 0.39 | 0.51 | 0.47 | 0.08 | 0.17 |
| Team Climate | 3.89 (0.48) | 4.08 (0.40) | 68.7% (16.7% - 95.8%) | 75.2% (32.2% - 95.2%) | 93.3% | 90.0% | 20.0% | 46.7% | 0.06 | 0.13 | 0.59 | 0.46 | 0.64 | 0.59 | 0.09 | 0.21 |
| Clinical-Functional Integration | 3.15 (0.44) | 3.26 (0.31) | 37.1% (6.3% - 81.3%) | 40.9% (14.9% - 75%) | 13.3% | 26.7% | 6.7% | 0% | 0.00 | 0.03 | 0.94 | 0.80 | 0.94 | 0.83 | 0.00 | 0.04 |
| Readiness for Change - Suitability | 3.94 (0.23) | 3.95 (0.30) | 68.9% (53.3% - 91.1%) | 70.2% (44.6% - 93.3%) | 100.0% | 96.7% | 6.7% | 13.3% | 0.00 | 0.02 | 0.57 | 0.64 | 0.57 | 0.67 | 0.00 | 0.03 |
| Commitment to Improvement | 3.96 (0.43) | 4.15 (0.41) | 71.6% (20.0% - 100%) | 79.0% (35.6% - 100%) | 93.3% | 90.0% | 20.0% | 63.3% | 0.01 | 0.13 | 0.61 | 0.44 | 0.62 | 0.57 | 0.02 | 0.23 |
| Roles and Responsibilities | 3.88 (0.27) | 3.91 (0.36) | 68.6% (54.3% - 93.8%) | 70.7% (17.6% - 100%) | 100.0% | 90.0% | 6.7% | 23.3% | 0.00 | 0.09 | 0.79 | 0.67 | 0.79 | 0.76 | 0.00 | 0.12 |
| Administration and Management | 3.82 (0.67) | 3.99 (0.56) | 66.4% (0% - 100%) | 73.3% (13.3% - 100%) | 80.0% | 86.7% | 26.7% | 46.7% | 0.18 | 0.25 | 0.79 | 0.70 | 0.97 | 0.95 | 0.18 | 0.27 |
| Financial and Other Capital Resources | 2.69 (0.38) | 2.64 (0.26) | 16.1% (0% - 42.8%) | 11.7% (0% - 35.7%) | 0% | 0% | 0% | 0% | 0.08 | 0.02 | 0.52 | 0.52 | 0.61 | 0.54 | 0.14 | 0.05 |
| Non-Financial Resources | 3.54 (0.26) | 3.60 (0.21) | 52.7% (22.5% - 74.9%) | 54.2% (29.2% - 78.4%) | 66.7% | 56.7% | 0% | 0% | 0.03 | 0.01 | 0.36 | 0.35 | 0.39 | 0.36 | 0.08 | 0.03 |

[ǂ] Likert response options were scored from 1 to 5, where a higher score indicated a more favourable response. We report on the number of respondents selecting the top two boxes (4 (e.g., moderately agree) or 5 (e.g., strongly agree)).
Note: C1=Cohort 1; C2=Cohort 2.

HSPN

For each of the 10 domains in the OOHT survey, we present the results across all OHTs. OHTs were assigned a random number between 31 and 45 to anonymize results.

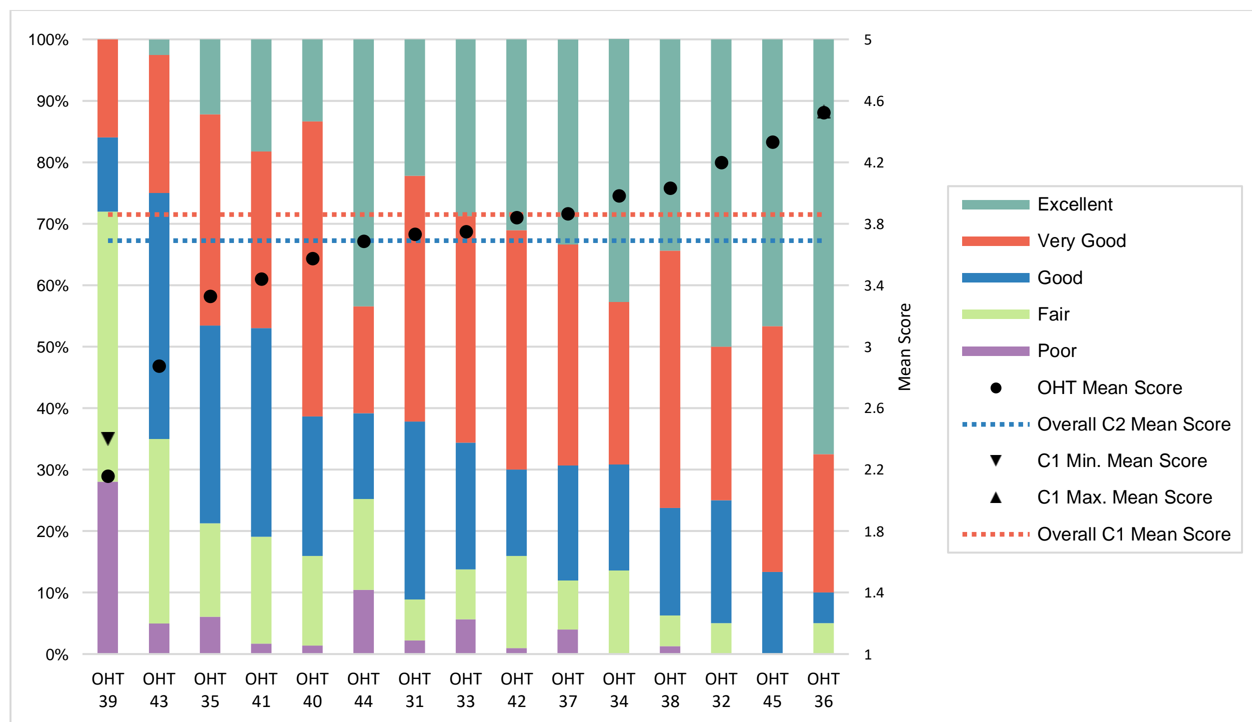
## Leadership Approach

Five items[i] from the OOHT survey comprise the *Leadership Approach* domain. Respondents were asked to rate the effectiveness of their OHT's formal and informal leadership at empowering members, fostering respect and trust, creating an environment where differences of opinion could be voiced, promoting creativity and different ways at looking at things, and communicating the vision of their OHT. For most OHTs, the scores for *Leadership Approach* were quite high, mean score across applicant OHTs was 3.69 (out of 5) with a standard deviation of 0.59. However, among the ten domains, *Leadership Approach* had relatively high within-OHT and between-OHT variance (0.92 and 0.11, respectively) relative to the other domains (see Table 4). A similar pattern was observed in Cohort 1.

Across the OHTs, the proportion of respondents selecting 4 (very good) or 5 (excellent) was 61.4% and varied from 16% to 90% with most OHTs (11/15) having at least 50% of respondents selecting the top two boxes (see Table 4). Two of the 15 OHTs had ≥80% of respondents selecting the top two boxes across the items included this domain (Figure 2).

Compared to Cohort 1, the overall mean score and the lowest mean score for Cohort 2 were lower (3.69 vs. 3.86 and 2.16 vs. 2.40, respectively) and the highest mean scores were identical (4.53 vs. 4.53).

**Figure 2. Distribution of Cohort 2 OOHT Survey Responses to the *Leadership Approach* Domain (5 items[i]), by OHT and comparison to Cohort 1**




Note: C1=Cohort 1; C2=Cohort 2. All OHT Mean Scores are those of Cohort 2 OHTs.

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[i] Survey Items - Please rate the total effectiveness of your OHT's leadership in each of the following areas:
18 Empowering people/members involved in the OHT
19 Communicating the vision of the OHT
20 Creating an environment where differences of opinion can be voiced
21 Helping the OHT to be creative and look at things differently
22 Fostering respect, trust and inclusiveness amongst OHT members

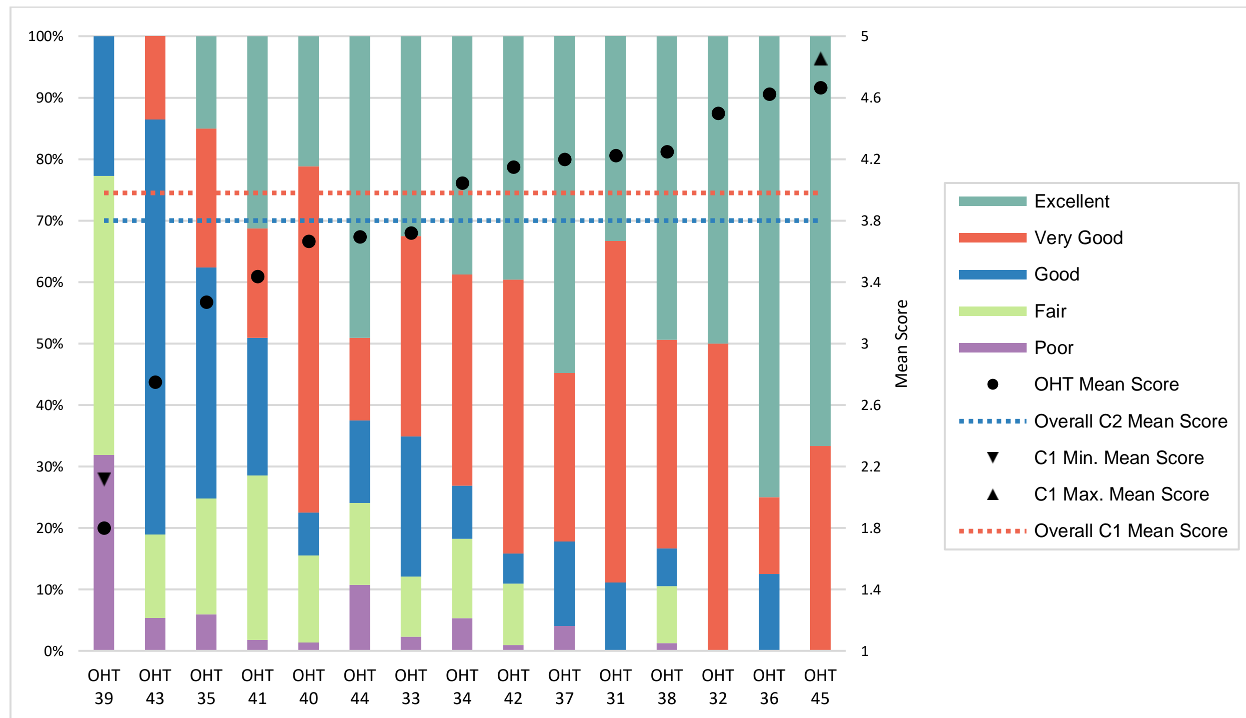
## Leadership Approach – Building Trust

Trust is an essential underpinning element of successful partnering to deliver better and more integrated care in the context of complex multi-organizational systems.[13] We highlight two items from the *Leadership Approach* domain related to establishing trust among partners, *Fostering respect, trust and inclusiveness* (question 22) and *Creating an environment where differences of opinion can be voiced* (question 20), below. Across the Cohort 2 OHTs, the mean scores for these items were 3.80 with a standard deviation of 0.77, and 3.71 with a standard deviation of 0.67, respectively.

The proportion of respondents selecting 4 (very good) or 5 (excellent) on *Fostering respect, trust and inclusiveness* (Figure 3) varied from 0% to 100%, with most (11/15) having at least 50% of respondents selecting the top two boxes, and nearly half (7/15) of C2 OHTs had ≥80% of respondents selecting the top two boxes on the two items. For question 20 - *Creating and environment where differences of opinion can be voiced* the proportion of respondents selecting 4 (very good) or 5 (excellent) ranged from 20% to 100%, with most (12/15) OHTs having at least 50% of respondents selecting the top two boxes but only two out of the 15 OHTs had ≥80% of respondents selecting the top two boxes. Only one OHT had 100% of respondents rating 4 or 5 on both items.

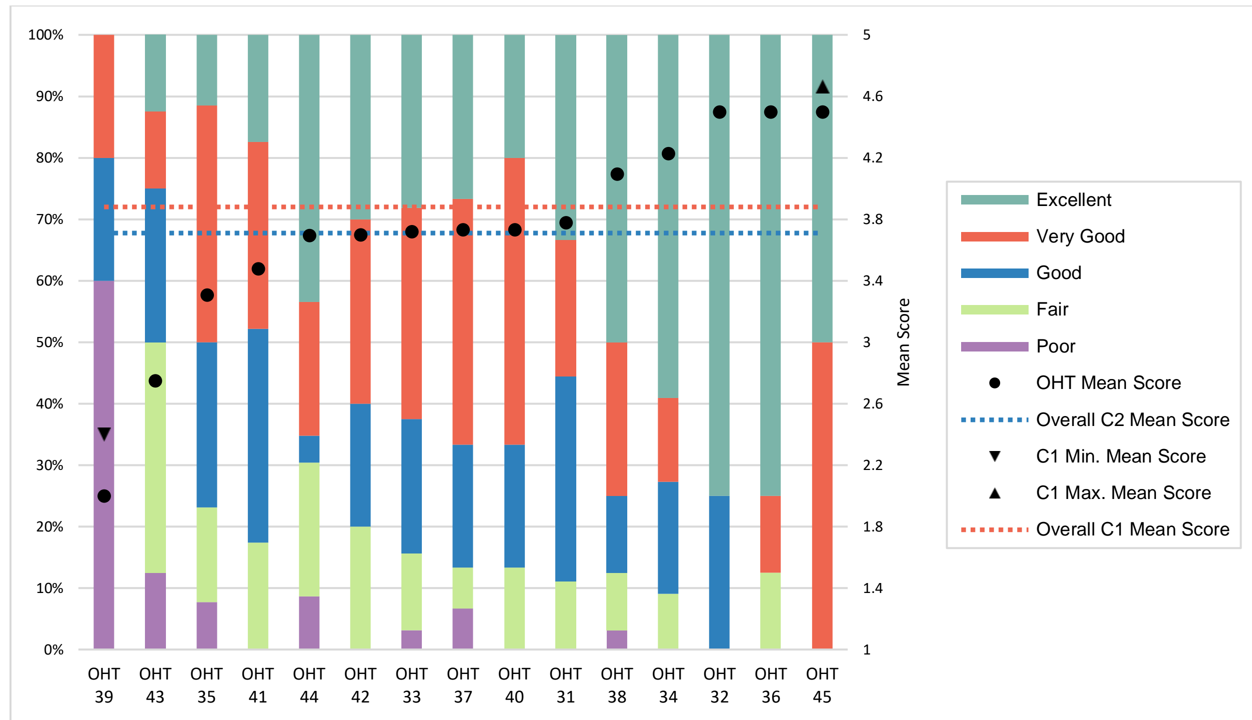
For *fostering respect, trust and inclusiveness*, compared to Cohort 1, the overall mean score in Cohort 2 was slightly lower (3.80 vs. 3.98) as was the lowest and highest mean scores across the OHTs (1.80 vs. 2.12 and 4.67 vs. 4.86, respectively). The same pattern was observed for *Creating and environment where differences of opinion can be voiced* (Cohort 2, 3.71 vs. Cohort 1, 3.88) along with the lowest (2.00 vs 2.40) and highest mean scores (4.50 vs. 4.67) as well.

**Figure 3. Distribution of Cohort 2 OOHT Survey Responses to the Item *Fostering respect, trust, and inclusiveness amongst OHT members*, by OHT and comparison to Cohort 1**




Note: C1=Cohort 1; C2=Cohort 2. All OHT Mean Scores are those of Cohort 2 OHTs.

**Figure 4. Distribution of Cohort 2 OOHT Survey Responses to the Item *Creating an environment where differences of opinion can be voiced*, by OHT and comparison to Cohort 1**



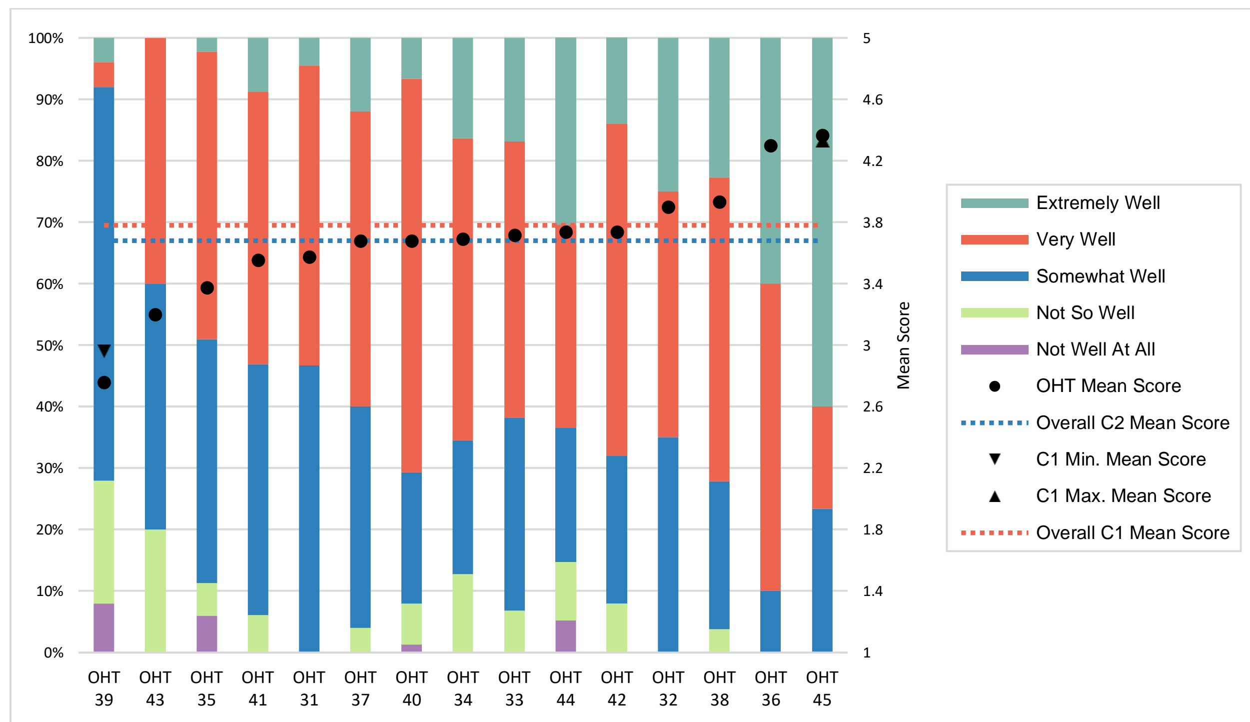

Note: C1=Cohort 1; C2=Cohort 2. All OHT Mean Scores are those of Cohort 2 OHTs.

## Shared Vision

A shared vision is created "by combining the perspectives, knowledge, and skills of diverse partners in a way that enables the partnership to (1) think in new and better ways about how it can achieve its goals; (2) plan more comprehensive, integrated programs; and (3) strengthen its relationship to the broader community".[18] The *Shared Vision* domain (Figure 5) was composed of 5-items[ii] and respondents were asked to rate how well the organizations and people partnering in the OHT have been able to develop widely understood and supported goals; identify how organizations and programs could help; respond to the needs of their community; include views and priorities of those impacted; and obtain support from individuals in the community. Overall, responses to *Shared Vision* were middling. The mean score across applicant OHTs for *Shared Vision* was 3.68 (out of 5) with a standard deviation of 0.39. Across the OHTs, the proportion of respondents selecting 4 (very well) or 5 (extremely well) across the five items was 59.8% and varied from 8% to 90% with over three quarters of OHTs (12/15) having at least 50% of respondents selecting the top two boxes. Only one OHT had ≥80% of respondents selecting 4 or 5.

Compared to Cohort 1, the overall and lowest mean score for Cohort 2 were slightly lower (3.68 vs. 3.78 and 2.75 vs. 2.96, respectively) and highest mean scores were similar (4.37 vs. 4.33).

**Figure 5. Distribution of Cohort 2 OOHT Survey Responses to the *Shared Vision* Domain (5 items[ii]), by OHT and comparison to Cohort 1**




Note: C1=Cohort 1; C2=Cohort 2. All OHT Mean Scores are those of Cohort 2 OHTs.

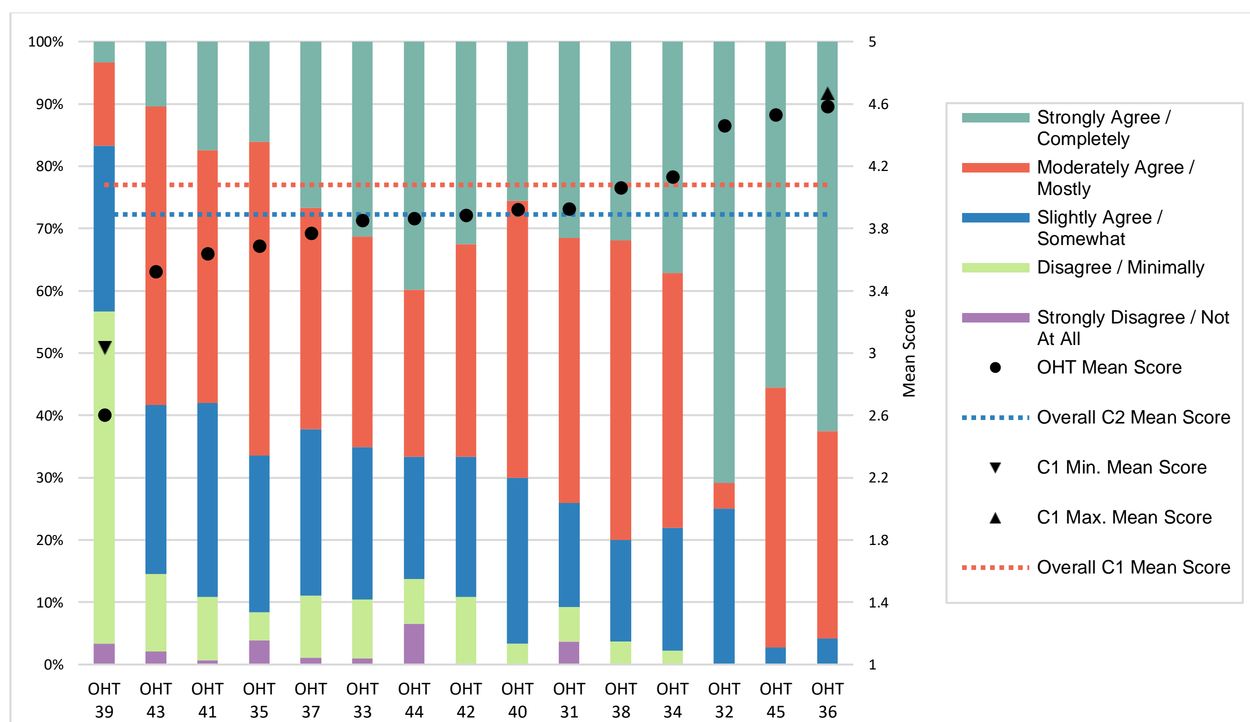
[ii] Survey Items - By working together, how well, at present, are the members of your OHT able to:
3 Develop goals that are widely understood and supported among members
4 Identify how different organizations/programs in the community could help to solve the issues the OHT is trying to address in their year one population
5 Respond to the needs and problems of the community
6 Include the views and priorities of the people affected by the OHT's work
7 Obtain support from individuals and organizations in the community that can either block the OHT's plans or help move them forward

### Team Climate

There are four factors associated with successful group innovations; 1) vision is clear and realistic, 2) participatory safety or climate of interpersonal interactions (e.g., “we are in it together” attitude), 3) task orientation is committed to a high standard and improving and 4) support for innovation (e.g., take the time needed to develop new ideas).[15] These factors are often measured separately, but we created a *Team Climate* domain (Figure 6) based on 6 items.[iii] *Team Climate* was among the highest rated domains with an across OHT applicant mean score of 3.89 (out of 5) and a standard deviation 0.48. Across the OHTs, the proportion of respondents selecting 4 (moderately agree/mostly) or 5 (strongly agree/completely) across the 6 items varied from 16.7% to 97.2% with all but one OHTs (14/15) having at least 50% of respondents selecting 4 or 5. Only, three OHTs had ≥80% of respondents selected the top two boxes.

Compared to Cohort 1, the overall mean score for Cohort 2 was slightly lower (3.89 vs. 4.08), the lowest mean score was nearly half a unit score lower (2.60 vs. 3.03) and the highest mean scores were similar (4.58 vs. 4.67).

**Figure 6. Distribution of Cohort 2 OOHT Survey Responses to the *Team Climate* Domain (6 items[iii]), by OHT and comparison to Cohort 1**




Note: C1=Cohort 1; C2=Cohort 2. All OHT Mean Scores are those of Cohort 2 OHTs.

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[iii] Survey Items - In this OHT:

| | |
|---|---|
| 15 | We are prepared to question the basis of what the team is doing |
| 16 | We critically appraise potential weaknesses in what our OHT is planning in order to achieve the best possible outcome |
| 17 | The members of the OHT build on each other’s ideas in order to achieve the best possible outcome |
| 39 | We have a ‘we are in it together’ attitude |
| 40 | We take the time needed to develop new ideas |
| 41 | To what extent do you think your OHT’s objectives can actually be achieved |

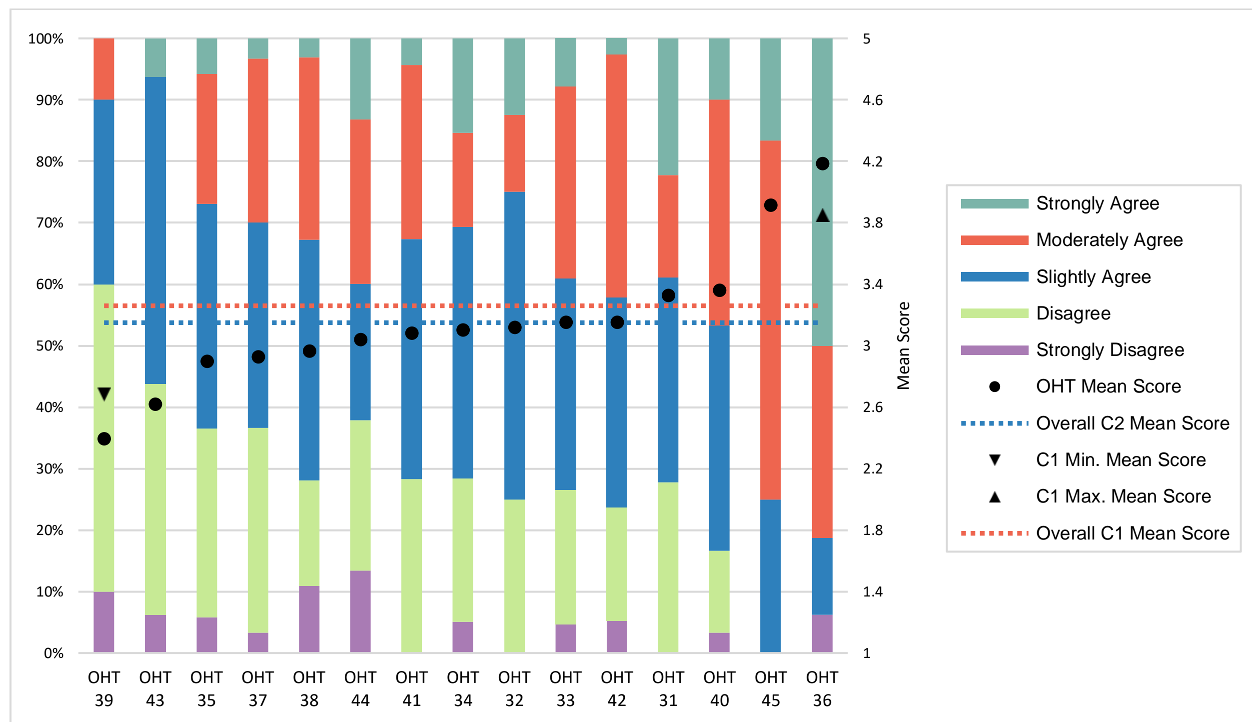
## Clinical-Functional Integration

Clinical integration refers to the degree to which tools for clinical coordination are shared across organizations in the partnership and functional integration refers to the degree to which information is shared across organizations in the partnership.[17] *Clinical-Functional Integration*[iv] was the second lowest rated domain in terms of mean score 3.15 (out of 5) with a standard deviation of 0.44, and had the highest within OHT variation in scoring (0.94) (see Table 4).

Across the OHTs (Figure 7), the proportion of respondents selecting 4 (moderately agree) or 5 (strongly agree) was 37.1% (range: 6.3% to 81.3%), with two OHTs having at least 50% of respondents selecting the top two boxes, and one OHT with ≥80% of respondents selecting 4 or 5 for the two items included this domain.

Compared to Cohort 1, the overall mean score and the lowest mean score for Cohort 2 was slightly lower (3.15 vs. 3.26 and 2.40 vs. 2.69, respectively) and the highest mean score higher (4.18 vs. 3.86).

**Figure 7. Distribution of Cohort 2 OOHT Survey Responses to the *Clinical-Functional Integration* Domain (2 items[iv]), by OHT and comparison to Cohort 1**




Note: C1=Cohort 1; C2=Cohort 2. All OHT Mean Scores are those of Cohort 2 OHTs.

[iv] Survey Items - At present in this OHT:
12 We share tools for clinical coordination
13 We share clinical information across partners

## Readiness for Change

The Readiness for Organizational Change survey[16] includes three subdomains: 1) *Suitability* (original scale termed "Appropriateness"); 2) *Change Efficacy*; and 3) *Personally Beneficial*.

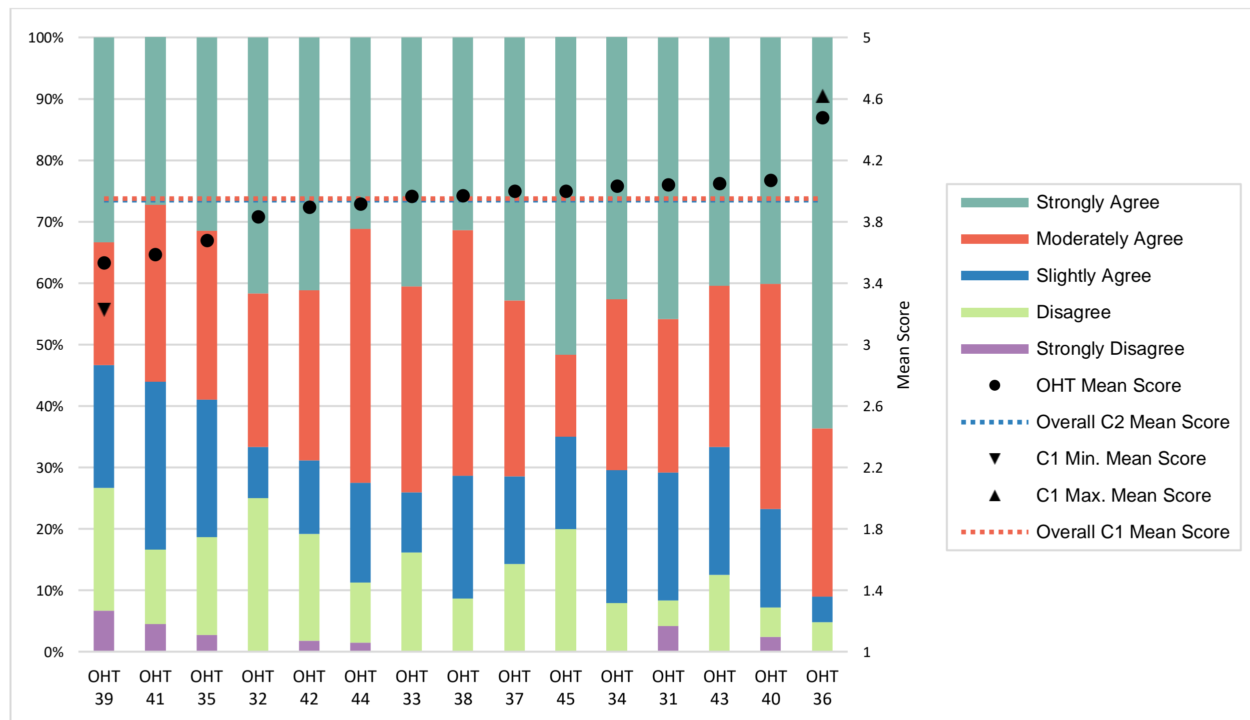
### Suitability

*Suitability* measures whether respondents felt the change is appropriate or needed and if it will benefit the organization. Ratings of the *Suitability* subdomain were reasonably high (Figure 8). In fact, it was ranked second highest among the ten domains with a mean score across applicant OHTs of 3.94 (out of 5) with a standard deviation of 0.22. Notably, there were substantial differences in the scores for the items in this domain; respondents felt their organization will likely benefit from the change (mean=4.30) and the change will be worthwhile for them (mean=4.45), but the change will not make their role easier (mean=3.05).

Across the OHTs, the proportion of respondents selecting 4 (moderately agree) or 5 (strongly agree) was 68.9% (range: 53.3% to 91.1%), with all OHTs having ≥50% of respondents selecting the top two boxes (see Table 4). However, only one out of the 15 OHTs had ≥80% of respondents selecting 4 or 5 for the three items[v] included this subdomain.

Compared to Cohort 1, Cohort 2's overall mean score was nearly identical (3.94 vs. 3.95), the lowest mean score, was higher (3.53 vs. 3.23), and the highest mean score slightly lower (4.48 vs. 4.62).

**Figure 8. Distribution of Cohort 2 OOHT Survey Responses to the *Readiness for Change - Suitability* Domain (3 items[v]), by OHT and comparison to Cohort 1**




Note: C1=Cohort 1; C2=Cohort 2. All OHT Mean Scores are those of Cohort 2 OHTs.

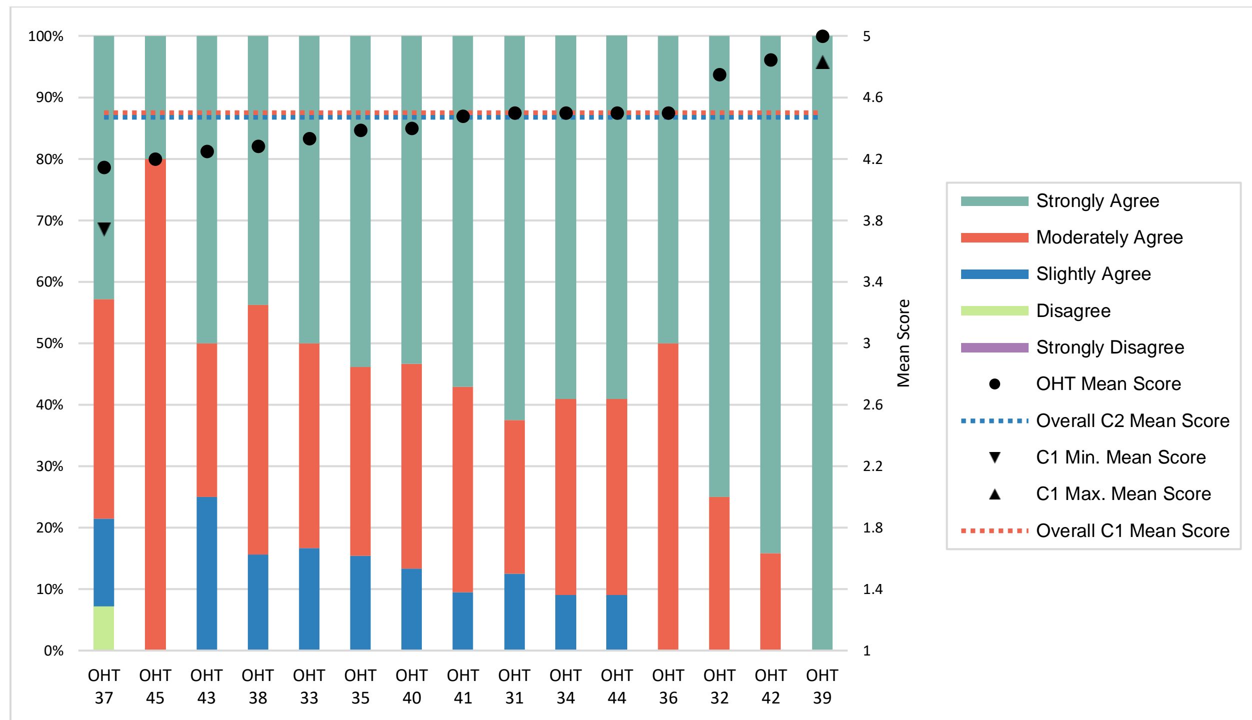
[v] Survey Items – Please think about the changes involved in creating your OHT. To what extent do you agree with the following statements:
34 I think that my organization/practice setting will benefit from this change
35 This change will make my role easier
36 In the long run, I feel it is worthwhile for me that the organization adopted this change

## Change Efficacy

The OOHT survey included one item from the *Change Efficacy* subdomain of *Readiness for Change*[16]. The mean score was very high, 4.47 (out of 5) with a standard deviation of 0.24. *Change Efficacy* is having a belief in one's ability to successfully implement change. Ratings for this item were extremely high; respondents felt they had the skills necessary to implement this change. On average, just over half a (53%) of respondents across OHTs strongly agreed that they had the skills necessary to make this change work (Figure 9). Across the OHTs the proportion strongly agreeing varied from 20% to 100%.

The overall mean scores for both cohorts were nearly identical (4.47 vs. 4.50) and the lowest and highest mean score, was higher for Cohort 2 (4.14 vs. 3.74 and 5.0 vs. 4.83 respectively).

**Figure 9. Distribution of Cohort 2 OOHT Survey Responses to the Item *I have the skills that are needed to make this change work*, by OHT and comparison to Cohort 1**



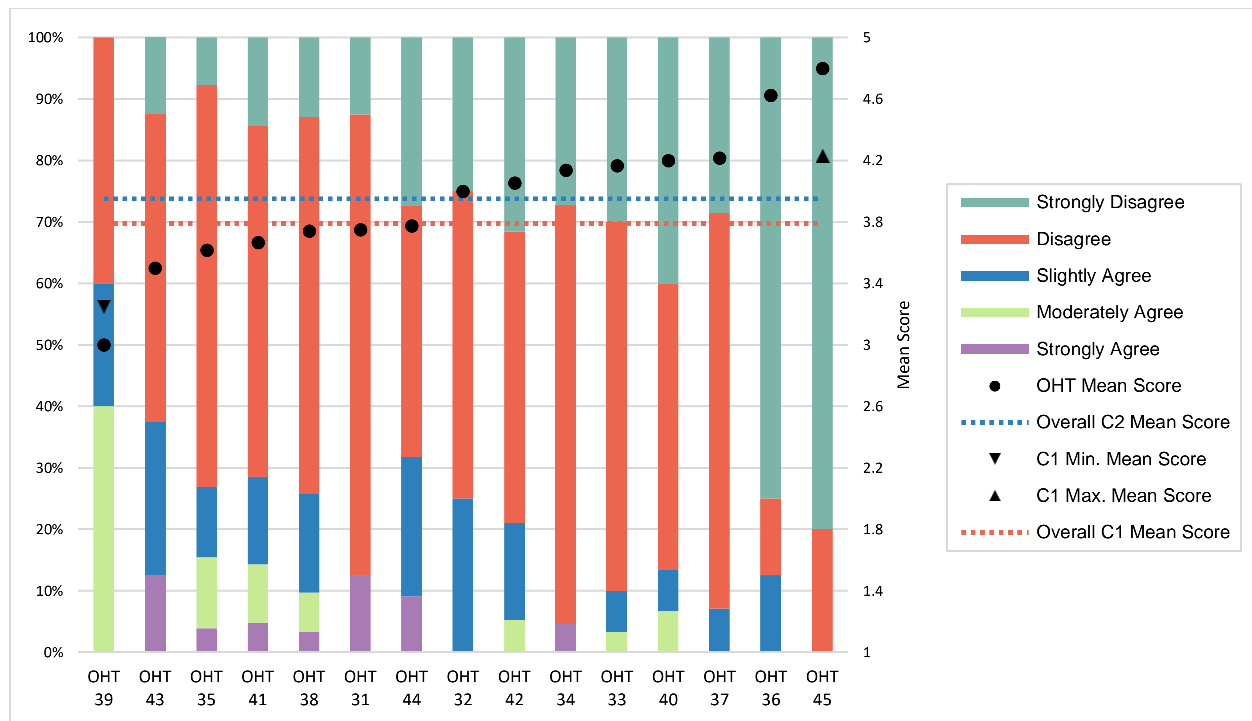

Note: C1=Cohort 1; C2=Cohort 2. All OHT Mean Scores are those of Cohort 2 OHTs.

## Personally Beneficial

From the *Readiness for Change* domain, the OOHT survey included one item from the *Personally Beneficial* subdomain which measured whether the change will disrupt the working relationships they have developed.[16] The mean score across OHTs was 3.95 with a standard deviation of 0.45. On average across OHTs, 78.9% of respondents disagreed or strongly disagreed that the change would disrupt their working relationships, and this varied from 40% to 100% across OHTs (Figure 10).

Compared to Cohort 1, the overall mean score for Cohort 2 was slightly higher (3.95 vs. 3.79), the lowest mean score slightly lower (3.00 vs. 3.25) and the highest mean score much higher (4.80 vs. 4.23).

**Figure 10. Distribution of Cohort 2 OOHT Survey Responses to the Item *This change will disrupt many of the working relationships I have developed*, by OHT and comparison to Cohort 1**




Note: C1=Cohort 1; C2=Cohort 2. All OHT Mean Scores are those of Cohort 2 OHTs.

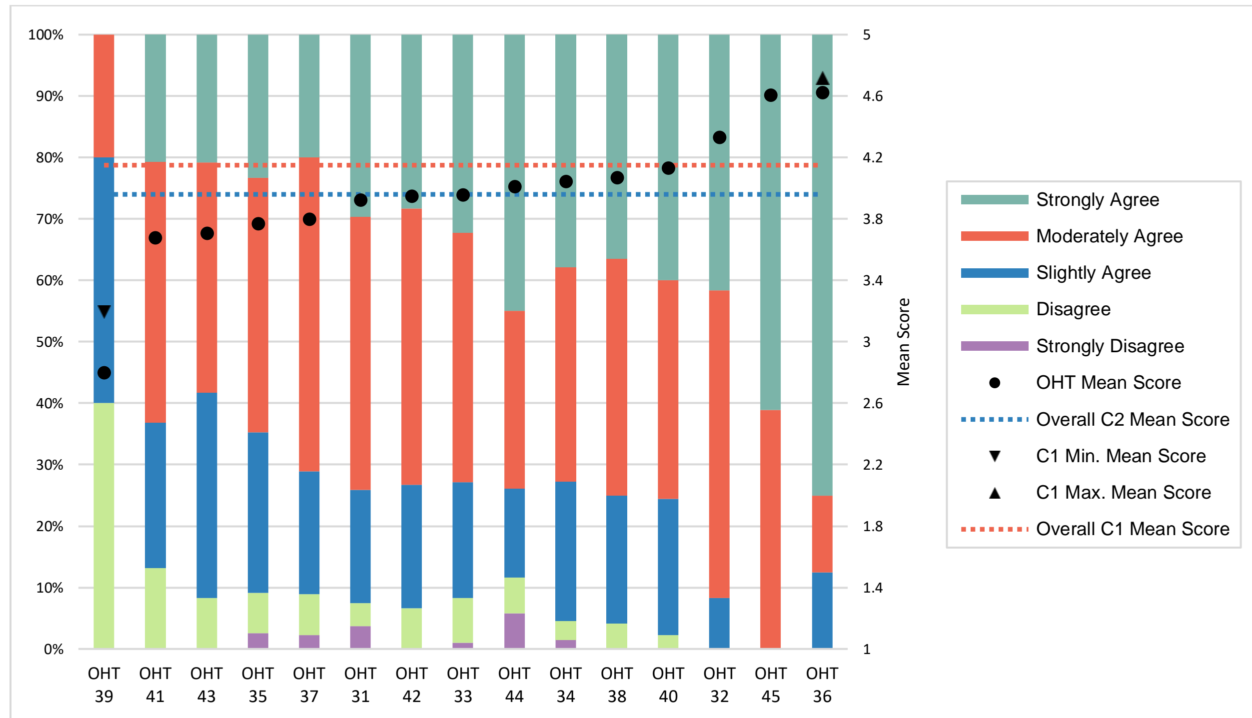
## Commitment to Improvement

This is a new scale developed from three items.[vi] The first asked about a common vision for improved integration of care. The second asked about a shared responsibility for achieving improved patient outcomes. And the third item asked if they had used data to identify potential improvements in their target populations. Ratings of this domain were generally very high and OHTs were committed to improvement (Figure 11); the mean score across applicant OHTs was 3.96 (out of 5) with a standard deviation of 0.43; the highest mean score among the 10 domains.

Across the OHTs, the proportion of respondents selecting 4 (moderately agree) or 5 (strongly agree) was 71.6% (range: 20% to 100%), with only one OHT without at least 50% of respondents selecting the top two boxes. Only three OHTs had ≥80% of respondents selecting the top two boxes in the *Commitment to Improvement* domain and one OHT had 100% of respondents selecting 4 or 5 for the three items included this domain.

Compared to Cohort 1, the overall mean score for Cohort 2 was lower (3.96 vs. 4.15) as were the lowest and highest mean scores (2.80 vs. 3.20 and 4.63 vs. 4.72, respectively).

**Figure 11. Distribution of Cohort 2 OOHT Survey Responses to the *Commitment to Improvement* Domain (3 items[vi]), by OHT and comparison to Cohort 1**




Note: C1=Cohort 1; C2=Cohort 2. All OHT Mean Scores are those of Cohort 2 OHTs.

[vi] Survey Items – At present in this OHT:
8 We have a common vision of how to improve the integration of care
11 We have agreed to share responsibility for achieving improved patient outcomes
14 We have used data to identify the improvements for our target populations

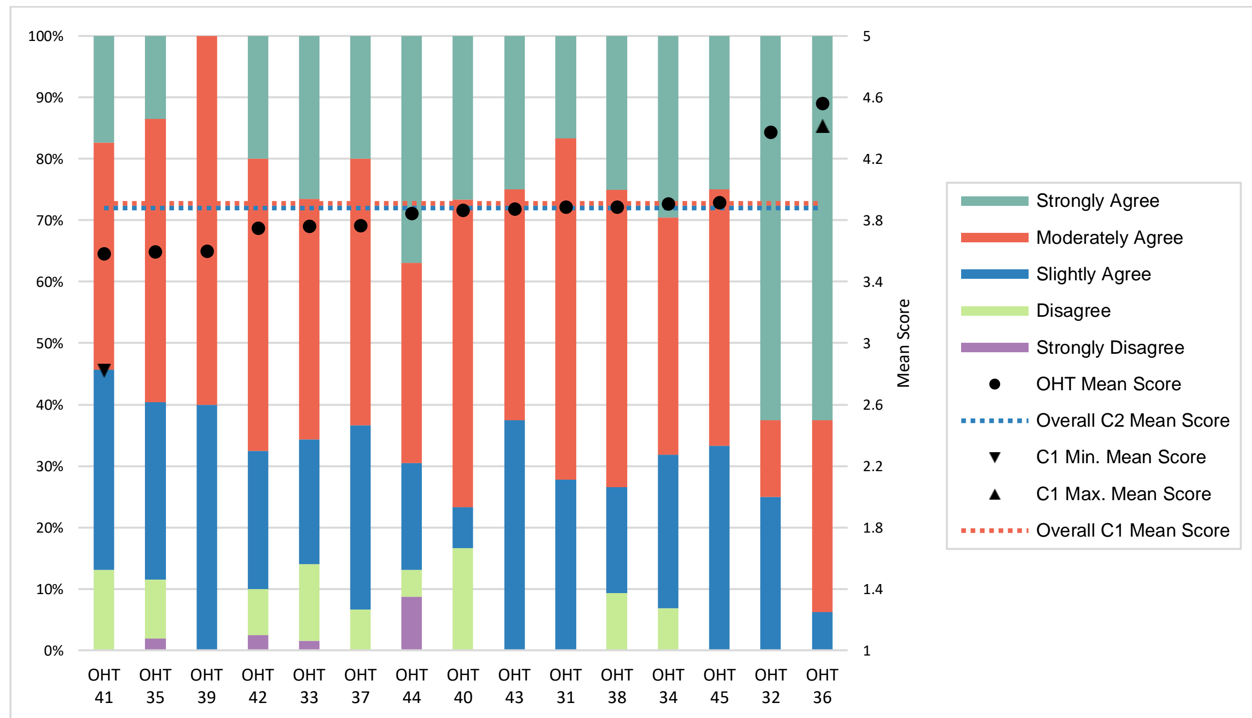
## Roles and Responsibilities

The *Roles and Responsibilities* domain is based on two items[vii] from Haggerty's Measure of Network Integration survey.[17] The items ask if all partners understood the role they will play in taking responsibility for the local population and in coordinating care. *Roles and Responsibilities* describes a shared value system which "allows governance to adapt to the requirements of collaboration in the network and makes professionals and organizations aware of their interdependence in providing coordinated care and services."[19] Across most OHTs, respondents understood their role in coordinating care and taking responsibility for the population. The mean score for the *Roles and Responsibilities* domain across applicant OHTs was 3.88 (out of 5) with a standard deviation of 0.27 (Figure 12).

Across the OHTs the proportion of OHT respondents selecting 4 (moderately agree) or 5 (strongly agree) was 68.6% (range: 54.3% to 93.8%). All OHTs had over 50% of respondents selecting 4 or 5. However, only one OHT with ≥80% of respondents selecting 4 (moderately agree) or 5 (strongly agree).

Compared to Cohort 1, the overall mean score for Cohort 2 was similar (3.88 vs. 3.91), the lowest and highest mean scores, were higher (3.59 vs. 2.82 and 4.56 vs. 4.42, respectively).

**Figure 12. Distribution of Cohort 2 OOHT Survey Responses to the *Roles and Responsibilities* Domain (2 items[vii]), by OHT and comparison to Cohort 1**




Note: C1=Cohort 1; C2=Cohort 2. All OHT Mean Scores are those of Cohort 2 OHTs.

[vii] Survey Items – At present in this OHT:
9 We understand the role we will play in taking responsibility for the local population
10 We understand the role we will play in coordinating care

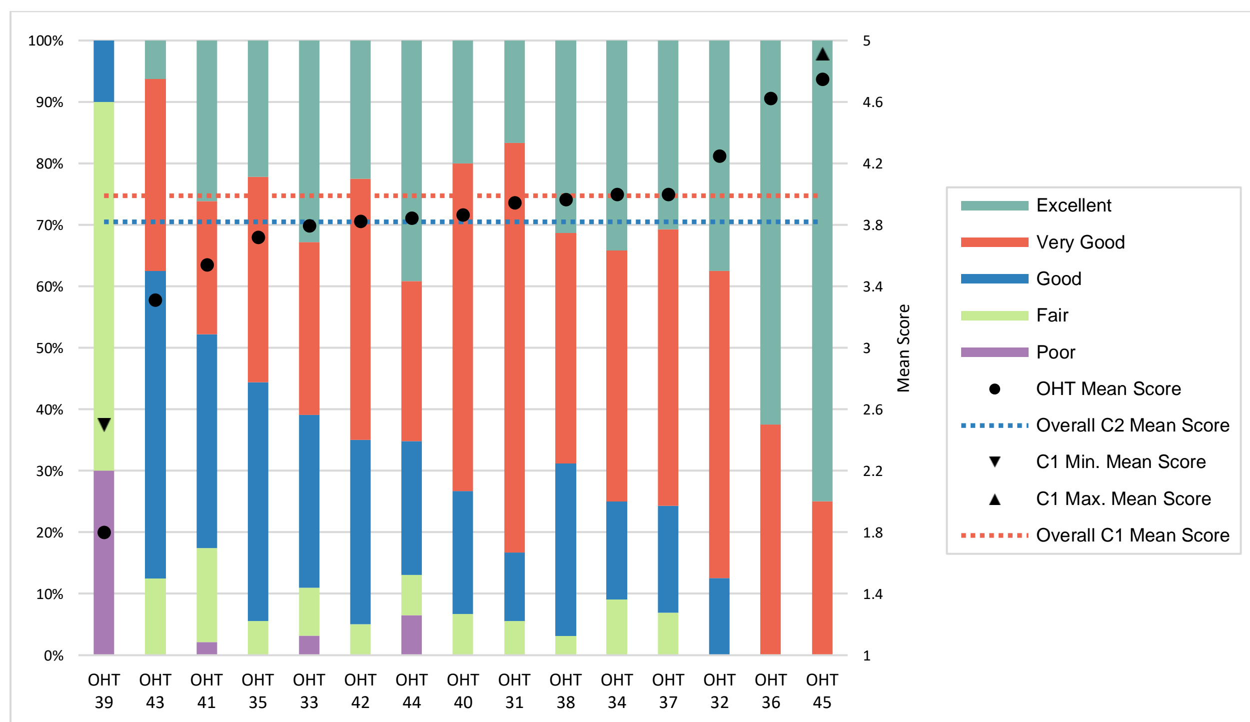
## Administration and Management

*Administration and Management* describes functions, such as communication strategies and mechanisms for coordinating partnership activities, that allow for meaningful engagement of multiple, independent organizations within the partnership.[14] The *Administration and Management* domain was composed of 2 items[viii] asking respondents to rate their OHT's effectiveness in communicating among members and organizing activities such as meetings and projects. Ratings of the *Administration and Management* domain were high, mean score across applicant OHTs was 3.82 (out of 5) with a standard deviation of 0.67 (Figure 13). However, the domain had the highest intraclass correlation of the ten domains, reflecting the high variation between OHTs relative to the total variation (ICC=0.18) (see Table 4). This was also true in Cohort 1.

Across the OHTs, the proportion of OHT respondents selecting 4 (very good) or 5 (excellent) was 66.4% (range: 0% to 100%), with most OHTs (12/15) having at least 50% of respondents selecting 4 or 5. Over a quarter of OHTs (4/15) had ≥80% of respondents selecting 4 or 5 for the two items included this domain.

Compared to Cohort 1, the overall mean score, lowest and highest mean scores for Cohort 2 were lower (3.82 vs. 3.99, 1.80 vs. 2.50 and 4.75 vs. 4.92, respectively).

**Figure 13. Distribution of Cohort 2 OOHT Survey Responses to the *Administration and Management* Domain (2 items[viii]), by OHT and comparison to Cohort 1**




Note: C1=Cohort 1; C2=Cohort 2. All OHT Mean Scores are those of Cohort 2 OHTs.

[viii] Survey Items – Please rate the effectiveness of your OHT in carrying out the following activities:
23 Communicating among members
24 Organizing OHT member activities, including meetings and projects

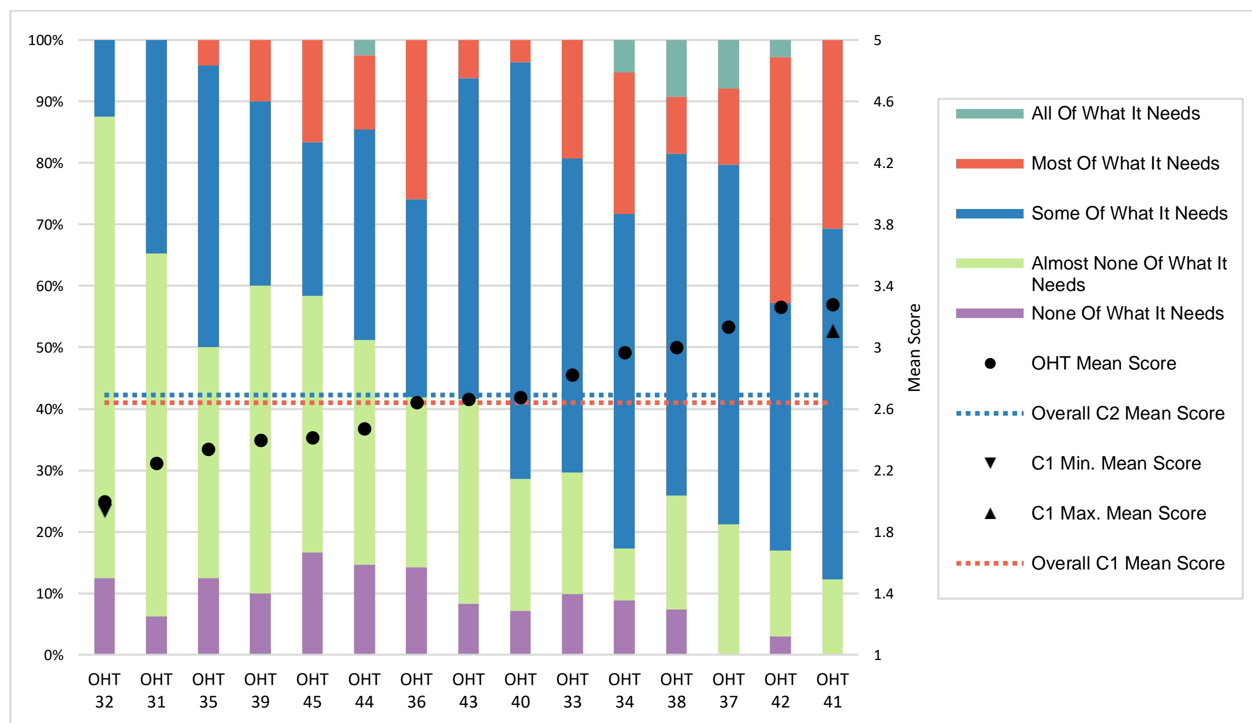
## Financial and Other Capital Resources

Financial and in-kind resources have been described as the “basic building blocks” for successful partnerships and the importance of having sufficient money and other resources (e.g., equipment such as computers) has been emphasized by multiple partnerships.[14] The *Financial and Other Capital Resources*[ix] domain was created from two questions; 1) does the OHT have sufficient money, and 2) tools and technology such as digital health solutions and information portals. The ratings on this domain were particularly low (Figure 14). The mean score across applicant OHTs was 2.69 (out of 5) with a standard deviation of 0.38. This was the lowest rated domain.

Across the OHTs the proportion of OHT respondents selecting 4 (most of what it needs) or 5 (all of what it needs) was 16.1% and varied from 0% to 42.8% (see Table 4). No OHT had at least 50% of respondents selecting 4 or 5 for the two items included this domain. This was also the case for Cohort 1.

Compared to Cohort 1, the overall mean score, the lowest and highest mean score for Cohort 2 were minimally higher (2.69 vs. 2.64, 2.00 vs. 1.94 and 3.28 vs. 3.11, respectively).

**Figure 14. Distribution of Cohort 2 OOHT Survey Responses to the *Financial and Other Capital Resources* Domain (2 items[ix]), by OHT and comparison to Cohort 1**




Note: C1=Cohort 1; C2=Cohort 2. All OHT Mean Scores are those of Cohort 2 OHTs.

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[ix] Survey Items – For each of the following types of resources, to what extent does your OHT have what it needs to work effectively:
29 Money
30 Tools and technologies

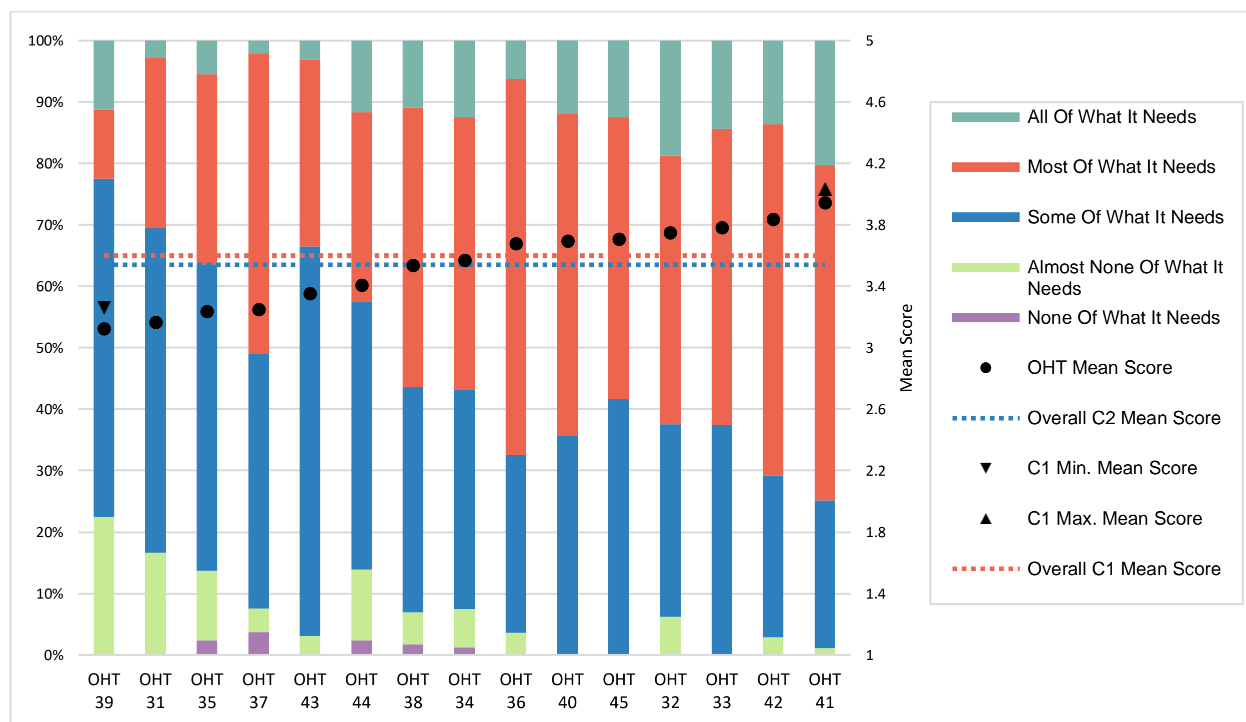
## Non-Financial Resources

In addition to the basic financial resources required for a successful partnership, OHTs will require a broad array of skills and expertise, access to information and connections to political decision makers and other to support the legitimacy of the partnership.[14] There were four questions[x] about sufficiency of these non-financial resources. Ratings for the *Non-Financial Resources* domain were low, with a mean score across applicant OHTs of 3.54 (out of 5) with a standard deviation of 0.26 (Figure 15). The *Non-Financial Resources* domain had the lowest variation in responses across OHTs (between variance=0.03) resulting in one of the lowest ICCs (0.08) (see Table 4). This was also the case for Cohort 1.

Across the OHTs, the mean proportion of OHT respondents selecting 4 (most of what it needs) or 5 (all of what it needs) was 52.7% and varied from 22.5% to 74.9% (see Table 4). Two-thirds (10/15) of the OHTs had at least 50% of respondents selecting 4 or 5. No OHT had ≥80% of respondents selecting 4 or 5 for the four items included this domain (Figure 15).

Compared to Cohort 1, the overall mean score, the lowest and the highest mean scores for Cohort 2 were minimally lower (3.54 vs. 3.60, 3.13 vs. 3.26 and 3.95 vs. 4.04, respectively).

**Figure 15. Distribution of Cohort 2 OOHT Survey Responses to the *Non-Financial Resources* Domain (4 items[x]), by OHT and comparison to Cohort 1**




Note: C1=Cohort 1; C2=Cohort 2. All OHT Mean Scores are those of Cohort 2 OHTs.

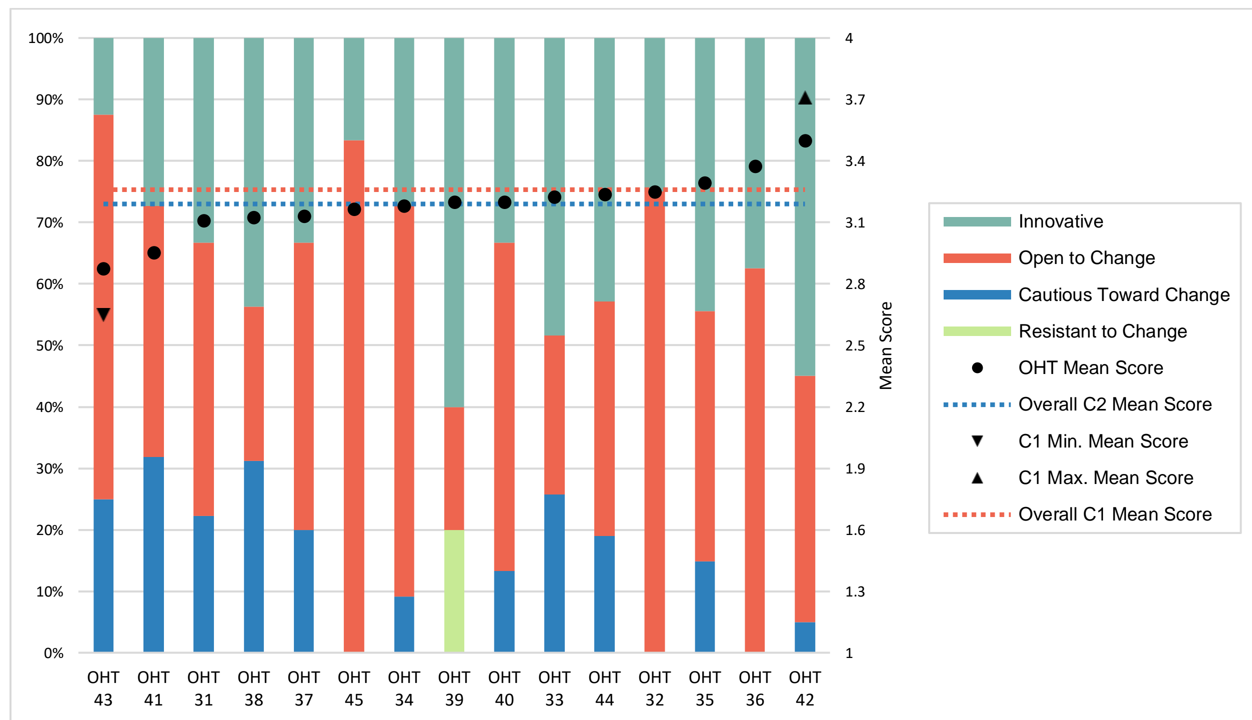
[x] Survey Items – For each of the following types of resources, to what extent does your OHT have what it needs to work effectively:
25 Skills and expertise
26 Data and information
27 Ability to identify target population criteria and deliver interventions
28 Connections to political decision-makers, government agencies

## Other OOHT Survey Items

There were three additional items that were not part of the ten domains. Question 31 asked respondents to select the response that described their organization or practice setting's attitude toward change. Two-thirds of Cohort 2 OHTs can be considered as either innovative or open to change as 10/15 OHTs had at least 80% of respondents selecting 3 or 4 (Figure 16). In particular, across Cohort 2, 38% of respondents described their organization as innovative, 42% as open to change, 18% cautious toward change and <1% as resistant to change (see Appendix A). Only one OHT had respondents reporting that their organizations were resistant to change. A similar distribution was observed in Cohort 1, but with a greater proportion describing their organizations as innovative (44% vs. 38%) and lower proportion described as open to change (38% vs. 42%).

Compared to Cohort 1, the overall mean score for Cohort 2 was minimally lower (3.19 vs. 3.26 out of 4) and a slightly lower proportion described their organization as either innovative or open to change (80% vs. 82%) (see Appendix A).

**Figure 16. Distribution of Cohort 2 OOHT Survey Responses to the Item *Organization or practice setting's attitude toward change*, by OHT and comparison to Cohort 1**

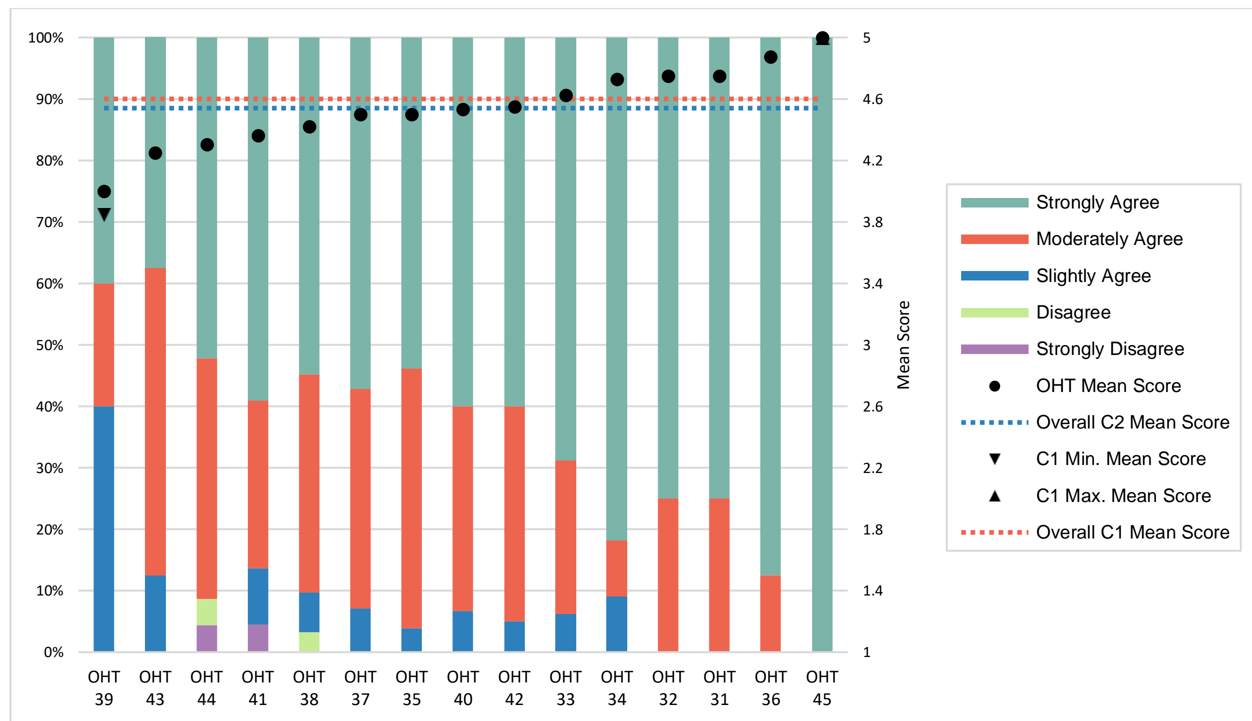



Note: C1=Cohort 1; C2=Cohort 2. All OHT Mean Scores are those of Cohort 2 OHTs.

Question 32 asked if the respondent's organization or practice setting's shared values were compatible with those of other members of the OHT. Ratings on this question were, generally, very high with a mean score across OHTs of 4.54 (out of 5) and a standard deviation of 0.26 (Figure 17). Across the OHTs, the proportion of OHT respondents selecting 4 (moderately agree) or 5 (strongly agree) varied from 60% to 100%. Fourteen OHTs had ≥80% of respondents selecting the top two boxes and one OHTs had 100% of their respondents in strong agreement their organization or practice setting's shared values were compatible with those of other OHT members (selected 5).

Compared to Cohort 1, the overall mean score for Cohort 2 was minimally lower (4.54 vs. 4.60), the lowest mean score, was slightly higher (4.00 vs. 3.85), and the highest mean score was identical (5.00 vs. 5.00).

**Figure 17. Distribution of Cohort 2 OOHT Survey Responses to the Item *Your organization's shared values are compatible with those of other OHT members*, by OHT and comparison to Cohort 1**

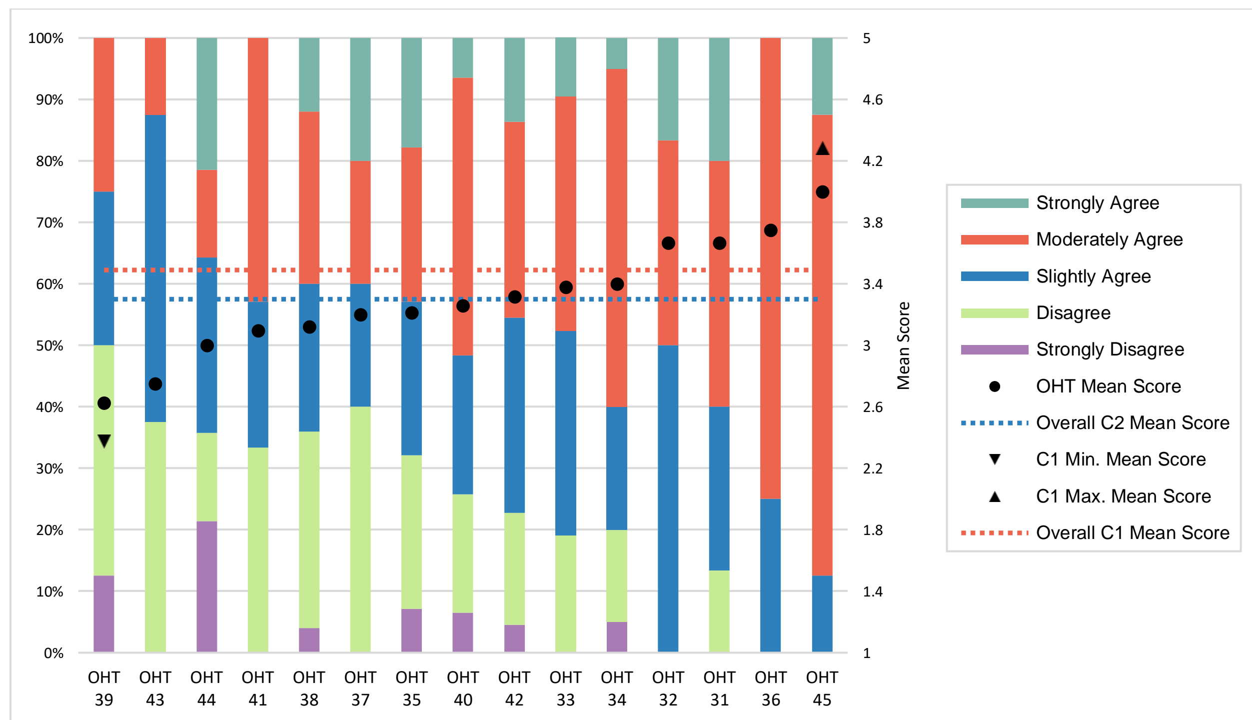



Note: C1=Cohort 1; C2=Cohort 2. All OHT Mean Scores are those of Cohort 2 OHTs.

When asked, in question 33, if the professionals/staff in the respondent's organization or practice setting had a strong sense of belonging to the OHT, ratings were relatively low (Figure 18); the mean score across OHTs was 3.30 (out of 5) with a standard deviation of 0.37. Across the OHTs, the proportion of OHT respondents selecting 4 (moderately agree) or 5 (strongly agree) varied from 12.5% to 87.5%, with six OHTs having at least 50% of respondents selecting the top two boxes. Only one OHT had ≥80% selecting 4 or 5.

Compared to Cohort 1, the overall mean score for Cohort 2 was lower (3.30 vs. 3.49), the lowest mean score was higher (2.63 vs. 2.38) and the highest mean score was slightly lower (4.00 vs. 4.29).

**Figure 18. Distribution of Cohort 2 OOHT Survey Responses to the Item *Your organization's staff have a strong sense of belonging to your OHT*, by OHT and comparison to Cohort 1**




Note: C1=Cohort 1; C2=Cohort 2. All OHT Mean Scores are those of Cohort 2 OHTs.

# E. Discussion

Measuring the contexts and capabilities critical to successful implementation of integrated care early in the OHT development allows for an assessment of "readiness to integrate" and the development of targeted change management strategies to address problem areas and leverage strengths. Among the second cohort of OHT applicants, the critical success factors for integrated care with the highest degree of capability were:

1) *Commitment to Improvement* (mean=3.96 out of 5), which had the second highest number of OHTs (3/15) where ≥80% of responses moderately agreed or strongly agreed (4 or 5).
2) *Readiness for Change - Suitability* (mean=3.94 out of 5), with only one out of the 15 OHTs had ≥80% of respondents selecting responses moderately agreed or strongly agreed (4 or 5).
3) *Team Climate* (mean=3.89 out of 5), also had the second highest number of OHTs (3/15) where ≥80% of responses moderately agreed or strongly agreed (4 or 5).
4) *Roles and Responsibilities* (mean=3.88 out of 5), with only one out of 15 OHTs had ≥80% of respondents selecting responses moderately agreed or strongly agreed (4 or 5).

It is worth noting that while *Administration and Management* had a high domain score (mean=3.88) and was the domain with the highest number of OHTs (4/15) where ≥80% of responses moderately agreed or strongly agreed (4 or 5), it also had a the highest between-OHT variation indicating that some OHTs had substantially better results than others and that sharing practices from these higher performing OHTs could contribute to improvements amongst lower-scoring OHTs in this domain. Conversely, although *Readiness for Change* had high a mean score, it had the lowest between-OHT variance indicating generally similar levels of readiness across most OHTs. However, a low rating (mean=3.30) was observed when respondents were asked if the professionals/staff in the respondent's organization or practice setting had a strong sense of belonging to the OHT; a particular focus will need to be placed on engaging the professionals/staff within organizations moving forward.

*Leadership Approach* did not rate highly; the overall average score ranked 6th out of the ten domains capturing critical success factors for integrated care, with a mean score of 3.69 and relatively high standard deviation (0.59). Successful partnerships require *boundary-spanning* leaders, formal and informal, who are able to bridge diverse interests, establish trusting relationships and find common ground to manage conflict,[14] but our survey reveals only two OHTs had ≥80% of their member respondents indicating effective OHT leadership (scores of 4 (moderately agree) or 5 (strongly agree)).

For the two items from the *Leadership Approach* domain specifically addressing trust among OHT members, the mean scores were 3.80 (SD=0.77) and 3.71 (SD=0.67), with only around half (7/15) and two OHTs had ≥80% of respondents selecting 4 (very good) or 5 (excellent) on the two items, respectively. One OHT had 100% of respondents selecting 4 or 5 on both items. For the other OHTs, supports and opportunities are needed to build trust among all members and will be critical to successfully bring together partners, including health and non-health sectors, patients and caregivers, in their design and work as one coordinated team.

Clinician Engagement, the third of the most important critical success factor highlighted by Evans *et al.*, was assessed through our document review of the Cohort 2 applications and found to not yet have a critical mass of primary care participation given most have partnered primary care enrollment model teams/practices (e.g., FHOs, FHTs and FHGs).[20]

Of the ten domains measuring critical factors for integrated care, eight had at least one OHT with ≥80% of the respondents selecting 4 or 5. The *Financial* and *Non-Financial Resources* were the two domains which did not have any OHT where ≥80% of the respondents selected 4 or 5 (had most or all of what it needs in terms of resources). The *Financial and Other Capital Resources* domain had a noticeably lower mean and among the higher degree of variance across OHTs relative to the other domains (2.69 and 0.08). The *Non-Financial Resources* domain was among the lowest means and among the lower degree of variation across OHTs relative to other domains (3.54 and 0.03, respectively). *Financial* and *Non-Financial*

*Resources* also had relatively low within OHT variance suggesting that across the board, survey respondents felt that *Financial* and *Non-Financial Resources* were lacking.

*Clinical-Functional Integration*, while also having very little variance across OHTs, had the highest within OHT variance of any of the ten domains. All OHTs will need to expand partners' clinical and functional integration capabilities across all members to be successful. Within OHTs, some partners share tools for clinical coordination, as well as clinical information, but these capabilities do not appear to be consistent across all partners (i.e., wide variation within an OHT).

These findings for Cohort 2 parallel what was observed in Cohort 1. Cohort 2 had minimally lower mean scores across all 10 domains. However, compared to Cohort 1, the proportion of OHTs in Cohort 2 with responses in the top two boxes was much lower across all domains with the exception, of *Clinical-Functional Integration*.

All OHTs have room to improve. Ranked by mean score, no OHT was consistently above the $80^{th}$ percentile across all domains. However, if we exclude the *Financial* and *Non-Financial Resource* domains which had the lowest mean scores, one OHT ranked above the $80^{th}$ percentile in each the remaining eight domains. There were 10 OHTs where not a single domain had ≥80% of the respondents selecting 4 or 5. There are supports, such as practice guides, webinars/podcasts, communities of practice, workshops and coaching, available to help all OHTs in their development. OHTs also lack financial resources to make necessary investments in digital health solutions, information portals and technology to efficiently share information across OHT members. Recent government funding to support OHTs advance OHT implementation and the investments being made to support digital and data sharing capacity as well as modernizing the home and community care legislation are essential enablers for improving integrated care (such as for OHT target populations) and ultimately, population health management.

# F. Conclusions and Implications

Integrated care initiatives develop over time. Minkman argues integrated care initiatives begin with an initiation and design phase, proceed to the execution and experimentation phase, followed by expansion and monitoring, and finally, at maturity where there is consolidation and transformation.[21] Our survey results capture the first phase of Ontario's journey to transforming siloed to integrated care.

Generally, the second cohort of OHT applicants rated very strongly across *Commitment to Improvement*, *Readiness for Change - Suitability* and *Team Climate.* There was minimal variation in the scores across/between OHTs relative to the within-OHT scores for *Commitment to Improvement* and *Readiness for Change - Suitability* suggesting widespread commitment to the OHT model and belief across the second cohort of applicant OHTs that this change will be beneficial. The greater extent of variation for *Team Climate* suggests supports to address *Team Climate* can be targeted to OHT's with mean scores at the lower end of the scale. These findings mirror Cohort 1.

*Leadership Approach* did not rank highly (6$^{th}$ out of 10) as was the case in Cohort 1 but, the two items specifically addressing trust among OHT members had lower mean scores in Cohort 2 (3.80 vs. 3.98 and 3.71 vs. 3.88). This is concerning given trust is considered an essential underpinning element of successful partnering to deliver integrated care in the context of complex multi-organizational systems. Furthermore, given only two OHTs had ≥80% of their member respondents indicating effective OHT leadership suggests efforts are needed across the majority of Cohort 2 OHTs to develop *boundary-spanning* leaders, able to bridge diverse interests, establish trusting relationships and find common ground to manage conflict.[14]

Additional *Financial* and *Non-Financial Resources* and improved *Clinical-Functional Integration* are required for all OHTs to be best positioned to succeed as a partnership in integrating care. All OHTs have room to grow as they continue to progress and start implementing their initiative. Resources, including the recent government funding, are needed and supports, such as practice guides, webinars/podcasts, communities of practice, workshops and coaching, are available to help in their development.

At this point, early in the initiative, it is encouraging to see how committed and positive the second cohort of applicant OHT members are given the time to respond and generate energy for this initiative in the context of COVID-19. However, it will be important re-assess the teams on many of these domains to determine whether beliefs, attitudes and commitments are sustained as teams begin to implement their year one target population integrated care plans.

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# Appendix A – OOHT Survey Item-Level Response Distributions

| Item | Item Text | 1 (%) | | 2 (%) | | 3 (%) | | 4 (%) | | 5 (%) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | C2 | C1 | C2 | C1 | C2 | C1 | C2 | C1 | C2 | C1 |
| 3 | Develop goals that are widely understood and supported among members | 1.2 | 0.5 | 2.8 | 2.7 | 20.9 | 21.6 | 56.2 | 51.5 | 18.5 | 23.7 |
| 4 | Identify how different organizations/programs in the community could help | 1.6 | 0.5 | 6.8 | 4 | 32.9 | 30 | 44.2 | 49.9 | 14.5 | 15.6 |
| 5 | Respond to the needs and problems of the community | 1.2 | 0.1 | 6.4 | 4.8 | 33.7 | 30.6 | 43.8 | 51 | 14.9 | 13.4 |
| 6 | Include the views and priorities of the people affected by the OHT's work | 1.6 | 0.7 | 10.4 | 7.6 | 30.5 | 26 | 40.2 | 50.2 | 17.3 | 15.5 |
| 7 | Obtain support from individuals and organizations in the community | 1.2 | 0.6 | 7.6 | 6 | 32.5 | 27.9 | 42.6 | 51.1 | 14.9 | 14.4 |
| 8 | We have a common vision of how to improve the integration of care. | 1.6 | 0.6 | 4.4 | 3 | 16.1 | 12.3 | 43.8 | 36.7 | 33.7 | 47.4 |
| 9 | We understand the role we will play in taking responsibility for the local population | 0.8 | 0.7 | 6.4 | 5.4 | 20.9 | 18.1 | 41.4 | 44.2 | 30.1 | 31.6 |
| 10 | We understand the role we will play in coordinating care | 2.0 | 0.6 | 9.6 | 7.6 | 25.3 | 26 | 42.6 | 41.4 | 20.1 | 24.4 |
| 11 | We have agreed to share responsibility for achieving improved patient outcomes | 0.4 | 1 | 4.8 | 2.7 | 16.9 | 14.3 | 34.5 | 34.9 | 43.0 | 47 |
| 12 | We share tools for clinical coordination | 3.2 | 2.9 | 24.5 | 18.1 | 34.5 | 37.2 | 25.3 | 30.5 | 10.8 | 11.3 |
| 13 | We share clinical information across partners | 8.0 | 3 | 20.9 | 20.6 | 33.7 | 36.5 | 27.7 | 29.9 | 7.2 | 9.9 |
| 14 | We have used data to identify the improvements for our target populations | 2.0 | 0.6 | 10.0 | 7.5 | 28.5 | 21.1 | 36.5 | 40 | 21.7 | 30.8 |
| 15 | We are prepared to question the basis of what the team is doing | 1.6 | 1.3 | 8.4 | 4.7 | 22.5 | 21.3 | 38.2 | 34.4 | 28.5 | 38.3 |
| 16 | We critically appraise potential weaknesses in what our OHT is planning | 2.4 | 1.1 | 9.2 | 7.8 | 32.1 | 22.4 | 35.7 | 39.8 | 19.7 | 28.8 |
| 17 | The members of the OHT build on each other's ideas | 1.2 | 0.8 | 5.2 | 3.2 | 18.9 | 16.1 | 34.9 | 31.4 | 39.4 | 48.6 |
| 18 | Empowering people/members involved in the OHT | 2.4 | 2 | 13.3 | 7.1 | 22.9 | 21.1 | 34.5 | 41.6 | 26.9 | 28.3 |
| 19 | Communicating the vision of the OHT | 2.8 | 1.9 | 9.2 | 10.5 | 21.3 | 22.9 | 38.6 | 33.1 | 27.7 | 31.6 |
| 20 | Creating an environment where differences of opinion can be voiced | 4.4 | 2.7 | 13.7 | 8.1 | 19.3 | 22.1 | 28.5 | 32.2 | 33.7 | 34.9 |
| 21 | Helping the OHT to be creative and look at things differently | 4.8 | 2.2 | 13.7 | 11.8 | 26.1 | 22.1 | 34.1 | 38.1 | 20.9 | 25.9 |
| 22 | Fostering respect, trust and inclusiveness amongst OHT members | 4.8 | 3 | 12.0 | 7.6 | 16.5 | 18.1 | 29.7 | 30.9 | 36.5 | 40.5 |
| 23 | Communicating among members | 1.6 | 1.6 | 10.4 | 9 | 26.1 | 20.3 | 35.7 | 37.4 | 25.7 | 31.6 |
| 24 | Organizing OHT member activities, including meetings and projects | 2.0 | 1.7 | 5.2 | 6.7 | 24.1 | 14.2 | 34.9 | 35.4 | 33.7 | 42.1 |
| 25 | Skills and expertise | 0.4 | 0.6 | 2.8 | 2 | 28.9 | 31.9 | 55.4 | 56.7 | 9.2 | 8.8 |
| 26 | Data and information | 0.8 | 0.8 | 6.0 | 5.9 | 45.4 | 55.5 | 33.7 | 32.5 | 6.0 | 5.4 |
| 27 | Ability to identify target population criteria and deliver interventions | 1.2 | 0.6 | 4.8 | 3.4 | 34.1 | 37 | 36.5 | 45.4 | 12.9 | 13.5 |
| 28 | Connections to political decision-makers, government agencies | 1.2 | 1.3 | 6.0 | 5.3 | 31.7 | 38.8 | 35.3 | 37.5 | 12.0 | 17.1 |
| 29 | Money | 8.4 | 14.4 | 21.7 | 31.7 | 37.8 | 47.3 | 10.4 | 6.1 | 2.0 | 0.6 |
| 30 | Tools and technologies | 5.2 | 5.3 | 22.9 | 25 | 42.6 | 53.1 | 16.1 | 14.5 | 2.4 | 2.2 |
| 31 | Organization or practice setting's attitude toward change | 0.4 | 0.7 | 18.1 | 17.2 | 41.8 | 37.7 | 38.2 | 44.5 | -- | 0 |
| 32 | Your organization's shared VALUES are compatible with those of other OHT members | 0.8 | 0.3 | 0.8 | 1 | 6.0 | 5.2 | 29.3 | 24.9 | 61.0 | 68.4 |

| Item | Item Text | 1 (%) | | 2 (%) | | 3 (%) | | 4 (%) | | 5 (%) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | C2 | C1 | C2 | C1 | C2 | C1 | C2 | C1 | C2 | C1 |
| 33 | Your organization’s STAFF have a strong sense of belonging to your OHT | 4.4 | 3.4 | 20.5 | 12.3 | 25.3 | 31.9 | 34.5 | 36.8 | 10.0 | 15.5 |
| 34 | I think that my organization/practice setting will benefit from this change | 0.4 | 1.9 | 3.6 | 3.6 | 16.1 | 10.7 | 30.5 | 31.8 | 47.0 | 51.9 |
| 35 | This change will make my role easier | 2.4 | 3.6 | 29.3 | 36 | 22.5 | 21.6 | 30.9 | 27 | 7.6 | 11.9 |
| 36 | I feel it is worthwhile for me that the organization adopted this change | 1.2 | 1.3 | 1.2 | 2.1 | 11.2 | 8.7 | 28.1 | 27.4 | 54.2 | 60.5 |
| 37 | I have the skills that are needed to make this change work | 0.0 | 0.4 | 0.4 | 0.9 | 10.8 | 7.1 | 31.3 | 31.5 | 53.4 | 60.1 |
| 38 | This change will disrupt many of the working relationships I have developed | 23.7 | 24.2 | 52.6 | 48.5 | 11.2 | 12.6 | 4.8 | 12 | 3.2 | 2.7 |
| 39 | We have a ‘we are in it together’ attitude | 2.0 | 1.5 | 4.8 | 3.1 | 14.9 | 11.7 | 34.9 | 25.6 | 43.0 | 58.2 |
| 40 | We take the time needed to develop new ideas | 1.2 | 1.4 | 10.4 | 4.1 | 19.3 | 21.4 | 34.1 | 36.8 | 34.5 | 36.3 |
| 41 | To what extent do you think your OHT’s objectives can actually be achieved? | 0.8 | 0 | 5.6 | 3.7 | 23.7 | 23.1 | 53.8 | 47.1 | 15.7 | 26.1 |

Note: C1=Cohort 1; C2=Cohort 2.

# Appendix B – Multi-Level Regression Estimates and Pairwise Comparisons of Lead Organization and Geography

| | Leadership Approach | Shared Vision | Team Climate | Clinical-Functional Integration | Readiness for Change - Suitability | Commitment to Improvement | Roles and Responsibilities | Administration and Management | Financial and Other Material Resources | Non-Financial Resources |
|---|---|---|---|---|---|---|---|---|---|---|
| **Regression Estimates** | | | | | | | | | | |
| Intercept | 3.70*** | 3.75*** | 4.05*** | 3.41*** | 4.26*** | 4.17*** | 4.22*** | 3.97*** | 2.65*** | 3.52 *** |
| Hospital Led (1=Yes, 0=No) | 0.13 | 0.00 | -0.06 | -0.23 | -0.36 | -0.17 | -0.41 | 0.03 | 0.19 | 0.15 |
| Geography (1=Urban, 0=Rural) | -0.44 | -0.33 | -0.58 | -0.41 | -0.44 | -0.51 | -0.50 | -0.88 | 0.31 | 0.11 |
| Hospital * Geography | 0.32 | 0.26 | 0.47 | 0.27 | 0.44 | 0.47 | 0.47 | 0.73 | -0.54 | -0.32 |
| **Random Effects Parameters** | | | | | | | | | | |
| OHT | | | | | | | | | | |
| Variance (Intercept) | -1.11** | -1.59*** | -1.52*** | -20.17*** | -24.00 | -2.01* | -29.85*** | -1.07** | -1.43*** | -1.93*** |
| Variance (Residual) | -0.05 | -0.38*** | -0.27*** | -0.04 | -0.29*** | -0.26*** | -0.12** | -0.12* | -0.32*** | -0.51*** |
| **Comparisons (Differences) between Lead Organization Types and Geographies** | | | | | | | | | | |
| Hospital vs Community | 0.29 | 0.13 | 0.17 | -0.09 | -0.14 | 0.07 | -0.17 | 0.40 | -0.09 | -0.01 |
| Urban vs Rural | -0.28 | -0.20 | -0.35 | -0.27 | -0.22 | -0.28 | -0.26 | -0.51* | 0.03 | -0.05 |
| **Comparisons (Differences) between All Combinations of Lead Organization Type and Geography** | | | | | | | | | | |
| Community Urban vs Community Rural | -0.44 | -0.33 | -0.58 | -0.41 | -0.44 | -0.51 | -0.50 | -0.88 | 0.31 | 0.11 |
| Hospital Rural vs Community Rural | 0.13 | 0.00 | -0.06 | -0.23 | -0.36 | -0.17 | -0.41 | 0.03 | 0.19 | 0.15 |
| Hospital Urban vs Community Rural | 0.01 | -0.07 | -0.18 | -0.36 | -0.36 | -0.21 | -0.43 | -0.12 | -0.05 | -0.07 |
| Hospital Rural vs Community Urban | 0.57 | 0.33 | 0.51 | 0.18 | 0.08 | 0.35 | 0.09 | 0.91 | -0.12 | 0.04 |
| Hospital Urban vs Community Urban | 0.45 | 0.26 | 0.40 | 0.05 | 0.08 | 0.30 | 0.07 | 0.76 | -0.36 | -0.18 |
| Hospital Urban vs Hospital Rural | -0.13 | -0.07 | -0.11 | -0.13 | 0.00 | -0.04 | -0.02 | -0.15 | -0.24 | -0.21 |

Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. P-values adjusted for multiple comparisons using Bonferroni's method.