Ontario Health Teams Central Evaluation

Formative Evaluation: Findings from the Organizing for OHTs Survey

Ruth E. Hall
Kevin Walker
Walter P. Wodchis

March 2020

HSPN Health System Performance Network

About Us

The Health System Performance Network (HSPN) is a collaborative network of investigators, visiting scholars, post-doctoral fellows, graduate students and research staff working with health system leaders, and policymakers to improve the management and performance of our health system. Building on Ontario's established record of performance measurement created by the 1998 ground-breaking Hospital Report Research Collaborative, the HSPN was established in 2009 and has built a track record in performance measurement, research, evaluation and improvement in Ontario with expertise in multiple domains of health system performance including perspectives of patients, providers, population health, and cost. The HSPN receives funding from the Ontario Ministry of Health.

Contact information

Health System Performance Network
155 College Street, Suite 425
Toronto ON M5T 3M6
Telephone: +1 (416) 946-5023
Email: hspn@utoronto.ca

Authors Affiliations

Ruth E. Hall, PhD – HSPN, University of Toronto; Institute for Better Health, Trillium Health Partners; and ICES
Kevin Walker, MSc – HSPN, University of Toronto
Walter P. Wodchis, PhD – HSPN, University of Toronto; Institute for Better Health, Trillium Health Partners; and ICES

Acknowledgements

The authors thank Amanda Everall of the OHT Central Evaluation Qualitative Team for reviewing the early qualitative data to identify quotes from OHTs involved in the case studies component of HSPN's Formative Evaluation to complement the OOHT survey findings. The authors also thank Nusrat Shabnam Nessa for creating the tables and formatting the report for publication.

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

Hall RE, Walker K, Wodchis WP. Ontario Health Team Central Evaluation – Formative Evaluation: Findings from the Organizing for OHTs Survey. Toronto, ON: Health System Performance Network. 2020.

ISBN 978-0-9810036-3-4 (Online)

This document is available at hspn.ca.

About this Report

This report is part of the Ontario Health Team (OHT) Formative Evaluation which focuses on the results from the Organizing for Ontario Health Teams (OOHT) survey. The OOHT survey was administered to the first cohort of teams that submitted a full application to become an OHT (i.e., applicant OHTs). The results reflect the context and capabilities of the applicant OHTs immediately following 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 development, administration and the analyses used in order to describe and compare organizational and network contexts of Ontario's first co-hort of applicant OHT.

Table of Contents

HSPN

Table of Figures

Executive Summary

This report contains results from the Organizing for Ontario Health Teams (OOHT) leadership survey administered in the first 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.

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 review of over 150 self-assessments by the MOH, 30 OHTs moved forward to submit a full application in October 2019 (i.e., applicant OHTs).

The OOHT leadership survey contained 39 substantive questions capturing 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. The survey was conducted from December 2019 – March 2020. The person most involved in the development of the OHT from each signatory organization was sent a link to the on-line OOHT survey (N=765).

The results are based on 480 respondents (response rate 63%), with an average of 26 respondents per OHT (77% average response rate across OHTs). Most survey respondents (~80%) were in executive leadership or senior/director management roles. Fifteen percent were clinicians, with most of these being physicians.

Results in Brief

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

- *Commitment to Improvement* (mean=4.15);
- *Team Climate* (mean=4.08); and
- *Administration and Management* (mean=3.99).

Furthermore, most individuals 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:

- *Clinical-Functional Integration* (mean=3.26);
- *Financial and Other Capital Resources* (mean=2.64); and
- *Non-financial Resources* (mean=3.60).

Efforts/supports are needed across all OHTs to build capacity for integration and basic structural resources like finances and information technology to allow for information to be shared across OHT members are required.

We also examined the variability within- and between- OHTs for each domain. Despite high ratings on *Commitment to Improvement* (mean= 4.15), *Team Climate* (mean=4.08) and *Administration and Management* (mean=3.99), some OHTs will need more support/efforts given the wide variation in ratings between OHTs relative to within OHTs.

For the *Clinical-Functional Integration* (mean=3.26) and *Readiness for Change* (mean=3.95) 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, no OHT consistently ranked above the 80th percentile across all domains and only five out of the 30 OHTs had ≥80% of the respondents selecting 4 or 5 on six out of the ten domains.
- The first cohort of OHT 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.
- 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.

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 Integrating 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 overall objective of the survey was to describe and compare critical success factors for implementation of integrated care of the first 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 Development

The Organizing for Ontario Health Teams (OOHT) survey is an abridged version of the leader and provider surveys from the CCIC Toolkit.[11] The CCIC leader and provider surveys include survey items from previously validated tools and scales that had either been used or recommended for evaluating integrated care interventions and include over 100 items (questions) each.[10, 11] We sought to reduce the length of the survey, and thereby lessen respondent burden, while maintaining scale validity.

Two authors (KW & RH) independently reviewed the CCIC surveys to identify items that were not relevant to the current OHT context (i.e., formation of the OHT). These included items more germane to later stages of OHT development (e.g., rating the effectiveness of the partnership in evaluating its progress and impact, assessing whether the relevance of the clinical information exchanged between organizations has increased significantly). We also removed items that made reference to regional bodies, namely Local Health Integration Networks (LHINs), because it was not clear what, if any, role LHINs would play in the OHT initiative. The two authors met to discuss their choices and, generally, agreed on items to be removed. The authors also reviewed factor analysis of the scales from the CCIC survey collected as part of two other integrated care initiatives in Ontario (Health Links and iCOACH). These prior analyses were used to identify scales with potentially redundant items where deletion would not dramatically decrease the scale's internal reliability (i.e., Cronbach's Alpha). Additionally, factor loadings were assessed and if choosing between items, the items with the higher loadings were retained.

After the initial review and analyses, 54 items remained. The co-principal investigators for this evaluation (RH & WW) then met to further reduce the number of items on the survey and 42 items were retained. This included one open ended question and two descriptive items asking about the respondent's role and type of organization represented. As best possible, we kept the original item phrasing and response options. The factor analysis was re-run on the 39 substantive items to ensure that the psychometric properties of each scale for each domain remained intact.

This survey was pre-tested by two individuals who were each involved in separate OHT applications. Following the feedback from the pre-testers, minor edits were made to survey items. This included adding response options to the first two items asking for the respondent's role (e.g., executive, other senior management, service provider) and the type of organization (e.g., acute care hospital, home care, primary care) they represent. Also, we employed 5-point Likert scales for all substantive items, except question 30, which asked respondent to describe their organization's attitude toward change (resistant, cautious, open, innovative), and question 42, which was open ended. In addition, the survey was shared with the All Nations Health Partners OHT to respect the principles of OCAP™ and minor wording changes (e.g., pluralized communities) were implemented for surveys sent to members of this OHT.

C.2 Measures

The OOHT survey is composed of 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[ɪ]	Non-Financial Resources[13]	Non-Financial Resources (4)
BASIC STRUCTURES	Resources[ɪ]; Information Technology[ɪ]	Financial and Other Capital Resources[13]	Financial and Other Capital Resources (2)
BASIC STRUCTURES	Organizational/Network Design	Administration and Management[13]	Administration and Management (2)
PEOPLE & VALUES	Leadership Approach[ɪ]	Leadership[13]	Leadership Approach (5)
PEOPLE & VALUES	Commitment to Learning; Network Culture[ɪ]; Delivering Care[ɪ]	Team Climate[14]	Team Climate (6)
PEOPLE & VALUES	Commitment to Learning; Measuring Performance; Improving Quality		Commitment to Improvement (3)
PEOPLE & VALUES	Readiness for Change[ɪ]	Appropriateness, Change Efficacy, Personally Beneficial[15]	Readiness for Change (Suitability (3), Change Efficacy (1), Personally Beneficial (1))
PEOPLE & VALUES: KEY PROCESSES	Partnering[ɪ]; Network Culture[ɪ]	Synergy[13]	Shared Vision (5)
PEOPLE & VALUES; KEY PROCESSES	Partnering[ɪ]; Network Culture[ɪ]	Shared Orientations[16]	Roles and Responsibilities (2)
KEY PROCESSES	Delivering Care[ɪ]	Integration[16]	Clinical-Functional Integration (2)

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

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.[12] 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=30) 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 765 individuals; the mean number of individuals per OHT was 26 with a range of 6 to 142.

C.4 Data Collection

Data collection commenced mid-December 2019 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 mid-March 2020. 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 only available in English. All substantive items were optional, but most items did not have a *Not Applicable* or *Don't know* option. 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.

At the time of writing up this report, some qualitative data from the applicant OHTs selected for case studies were available and reviewed by the qualitative research team to identify participant quotes reflecting the OOHT survey domains. One member of the qualitative team reviewed the results and discussion of the survey to assist in identifying relevant quotes. Two authors of this report (RH & KW) reviewed the quotes and selected seven quotes relevant to our summarized survey findings.

C.5 Statistical Analyses

Likert response options were scored from 1-5, where a higher score indicated a more favourable response. Confirmatory factor analysis was performed on each scale to ensure that items comprising each pre-defined scale continued to load together in the sample of representatives from OHT signatory organizations. Each question was identified with one domain even though there may be conceptual and statistical overlap in some cases. Due to missing values, we used the expectation-maximization algorithm to estimate the covariance matrix for the items comprising each scale. For each scale separately, we extracted a single factor and kept all items with an absolute value of the factor loading greater than 0.4. Cronbach's alpha was then calculated using the remaining items in each scale to test for internal reliability. Internal reliability dropping one item at a time was also assessed, but if reliability of the original scale was sufficient ($\alpha>0.7$), maintaining the integrity of the scale by retaining survey items took precedence over small improvements in reliability.

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 within their organizations and the types of organizations they represent. The majority of survey respondents (53.5%) were in executive leadership roles (e.g., Chief Executive Officers, Presidents and Executive Directors). Approximately 26% of respondents were in senior management (e.g., Vice President) or director or managerial roles. Fifteen percent were clinicians with most being physicians. There was a small number of patients and caregivers and other roles noted (e.g., board member, municipal councillor, community representative). Most survey respondents were from community support organizations (36.7%) followed by primary care practices (31.0%). Home care and long-term care organizations comprised 15.0% and 11.3% of the survey respondents respectively.

Table 2. Respondent Roles and Type of Organization(s) Represented (N=475)

Characteristic	Frequency	% of Respondents
Current Role		
Chief Executive Officer, President or Executive Director	257	53.5
Other Senior Management (COO, CFO, Vice President, Chief of Staff)	68	14.2
Administrator, General Manager, Director of Care	58	12.1
Physician or Other Clinical Role	71	14.8
Patient/Caregiver	15	3.1
Other	11	2.3
Type of Organization Represented		
Primary Health Care Practice	149	31.0
Acute Care Inpatient Hospital	39	8.1
Mental Health Inpatient Hospital	6	1.3
Rehabilitation or Complex Continuing Care Hospital	14	2.9
Long-Term Care	54	11.3
Home Care	72	15.0
Public Health	13	2.7
Community Support Services (Including Community Mental Health and Addictions)	176	36.7
Patient and Family Advisory Council	16	3.3
Other[ɪ]	77	16.0

[ɪ] Examples of other types of organizations represented include municipalities, paramedic services, hospices, shared (digital) services organizations.

D.2 OOHT Survey Response and Completion Rates

Of the 765 individuals emailed an invitation to the OOHT survey, 480 submitted their survey for an overall response rate of 63%. At the OHT-level, the mean response rate was 77% ranging from 27% to 100%. Half of all OHTs achieved an 80% response rate and 9 achieved response rates above 90%. Response rates may be found in Table 3.

The mean completion rate across the 480 respondents was 98.1%. The mean percentage of missing values across survey items was 1.7% with a range of 0% to 10.7%. The highest number of missing values was for question 29, which asked about the sufficiency of financial (money) resources available to the OHT.

Table 3. Organizing for Ontario Health Teams Survey Distribution and Response Statistics, By OHT

OHT (Random Number)[i]	Response Rate	OHT (Random Number)[i]	Response Rate
OHT 01	58%	**OHT 16**	92%
OHT 02	27%	**OHT 17**	100%
OHT 03	100%	**OHT 18**	83%
OHT 04	76%	**OHT 19**	55%
OHT 05	39%	**OHT 20**	94%
OHT 06	88%	**OHT 21**	92%
OHT 07	83%	**OHT 22**	76%
OHT 08	69%	**OHT 23**	63%
OHT 09	76%	**OHT 24**	60%
OHT 10	86%	**OHT 25**	77%
OHT 11	89%	**OHT 26**	86%
OHT 12	92%	**OHT 27**	93%
OHT 13	79%	**OHT 28**	70%
OHT 14	72%	**OHT 29**	55%
OHT 15	93%	**OHT 30**	100%
Overall (All responses / Average Across OHTs)			**63% / 77%**

[i] OHTs were assigned a random number between 1 and 30 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=4.15 out of 5), *Team Climate* (mean=4.08 out of 5) and *Administration and Management* (mean=3.99 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 2.64 and 3.26, 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=0.04); *Readiness for Change - Suitability* (ICC=0.03); *Financial and Other Capital Resources* (ICC=0.05); and *Non-Financial Resources* (ICC=0.03). The highest between-OHT variance relative to the total variance were observed for the *Administration and Management* (ICC=0.27), *Leadership Approach* (ICC=0.25), *Commitment to Improvement* (ICC=0.23) and *Team Climate* (ICC=0.21) domains. Please see Table 4 for summary statistics for all domains.

Hospital-led OHTs had statistically significantly higher ratings of *Non-Financial Resources* ($p<0.01$) compared with non-Hospital-led 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 C for full regression and contrast estimates.

Figure 1. The First Cohort of Applicant OHTs' Overall Mean, 90th Percentile Scores and Mean Scores by Geography and Lead Organization Type by OOHT Survey Domain

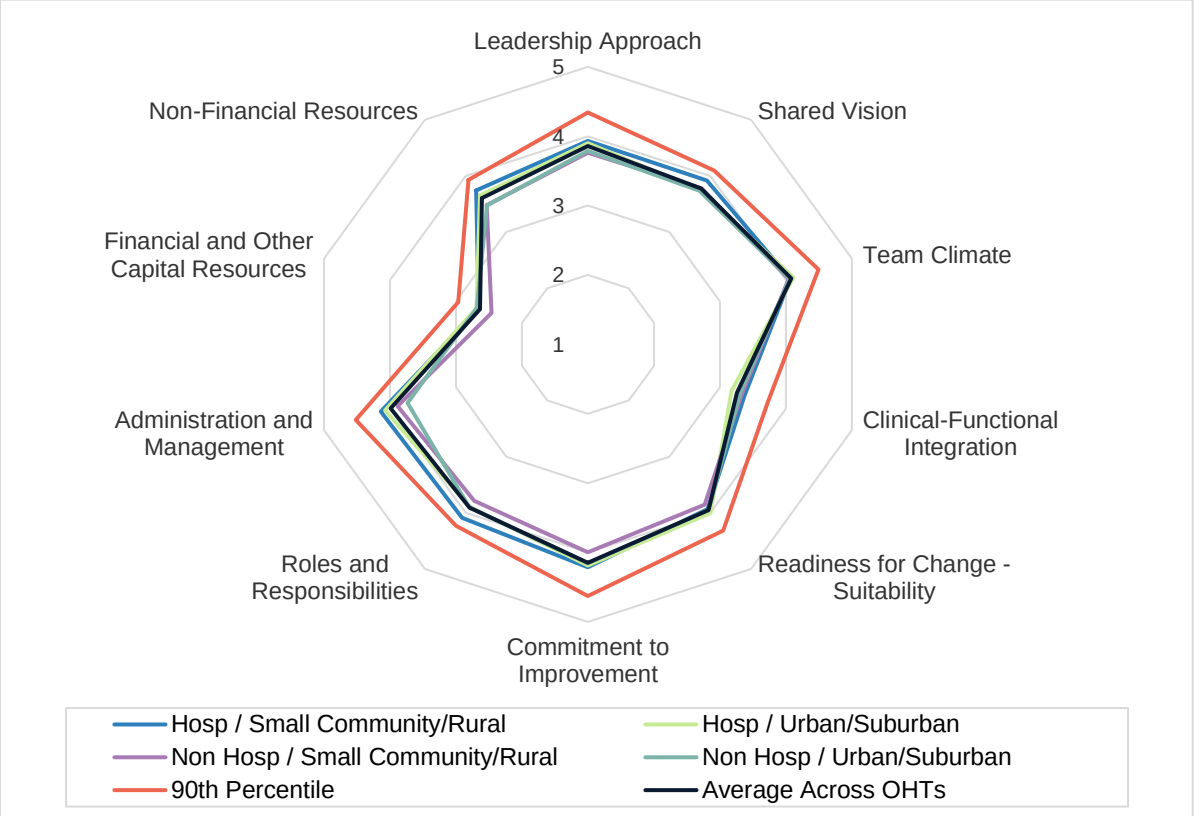


Table 4. Summary Statistics of OOHT Survey Domains Across the Ontario Health Teams

Domain	Mean Across OHTs (SD)	% 4 or 5[ɪ] Response Across OHTs (Range)	# of OHTs with ≥50% selecting 4 or 5[ɪ]	# of OHTs with ≥80% selecting 4 or 5[ɪ]	Between OHT Variance	Within OHT Variance	Total Variance	ICC
Leadership Approach	3.86 (0.54)	67.4% (10.6% - 100%)	26	10	0.24	0.71	0.95	0.25
Shared Vision	3.78 (0.33)	67.3% (21.3% - 96.7%)	27	6	0.08	0.39	0.47	0.17
Team Climate	4.08 (0.40)	75.2% (32.2% - 95.2%)	27	14	0.13	0.46	0.59	0.21
Clinical-Functional Integration	3.26 (0.31)	40.9% (14.9% - 75%)	8	0	0.03	0.80	0.83	0.04
Readiness for Change - Suitability	3.95 (0.30)	70.2% (44.6% - 93.3%)	29	4	0.02	0.64	0.67	0.03
Commitment to Improvement	4.15 (0.41)	79.0% (35.6% - 100%)	27	19	0.13	0.44	0.57	0.23
Roles and Responsibilities	3.91 (0.36)	70.7% (17.6% - 100%)	27	7	0.09	0.67	0.76	0.12
Administration and Management	3.99 (0.56)	73.3% (13.3% - 100%)	26	14	0.25	0.70	0.95	0.27
Financial and Other Capital Resources	2.64 (0.26)	11.7% (0% - 35.7%)	0	0	0.02	0.52	0.54	0.05
Non-Financial Resources	3.60 (0.21)	54.2% (29.2% - 78.4%)	17	0	0.01	0.35	0.36	0.03

[ɪ] 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)).

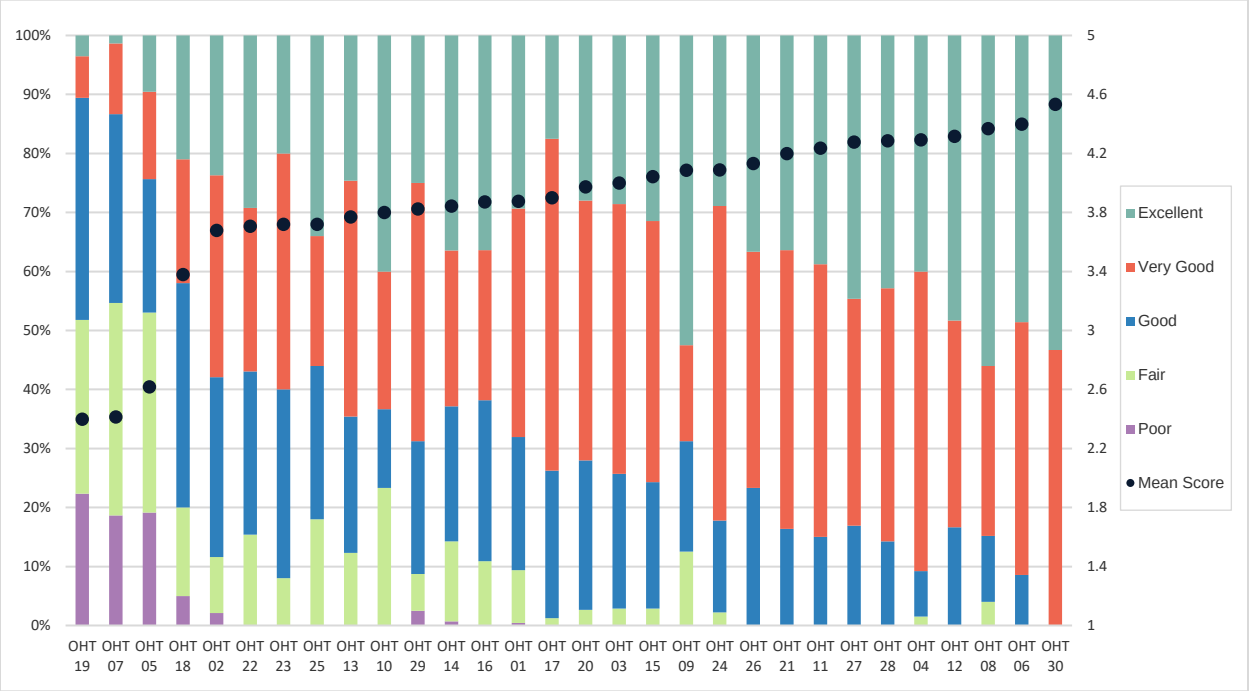
For each of the 10 domains in the OOHT survey, we present the results across all OHTs. OHTs were assigned a random number between one and 30 to anonymize results.

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 3.86 (out of 5) with a standard deviation of 0.54. However, among the ten domains, *Leadership Approach* had relatively high within-OHT and between-OHT variance (0.71 and 0.24, respectively) relative to the other domains (see Table 4).

Across the OHTs, the proportion of respondents selecting 4 (very good) or 5 (excellent) was 67.4% and varied from 10.5% to 100% with most OHTs (26/30) having at least 50% of respondents selecting the top two boxes (see Table 4). A third of OHTs (10/30) had ≥80% of respondents selecting the top two boxes across the items included this domain (Figure 2).

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



[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.[12] We highlight two items from the *Leadership Approach* domain related to establishing trust among partners, *Fostering respect, trust and inclusiveness* and *Creating an environment where differences of opinion can be voiced*, below. Across the OHTs, the mean scores for these items were 3.98 with a standard deviation of 0.63 and 3.88 with a standard deviation of 0.54, respectively. The proportion of respondents selecting 4 (very good) or 5 (excellent) on *Fostering respect, trust and inclusiveness* (Figure 3) and *Creating an environment where differences of opinion can be voiced* (Figure 4), varied from 11.8% to 100% across OHTs with most (25/30) having at least 50% of respondents selecting the top two boxes. Half (15/30) and approximately one-third (9/30) of OHTs had ≥80% of respondents selecting the top two boxes on the two items, respectively. Two OHTs had 100% of respondents rating 4 or 5 on both items.

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

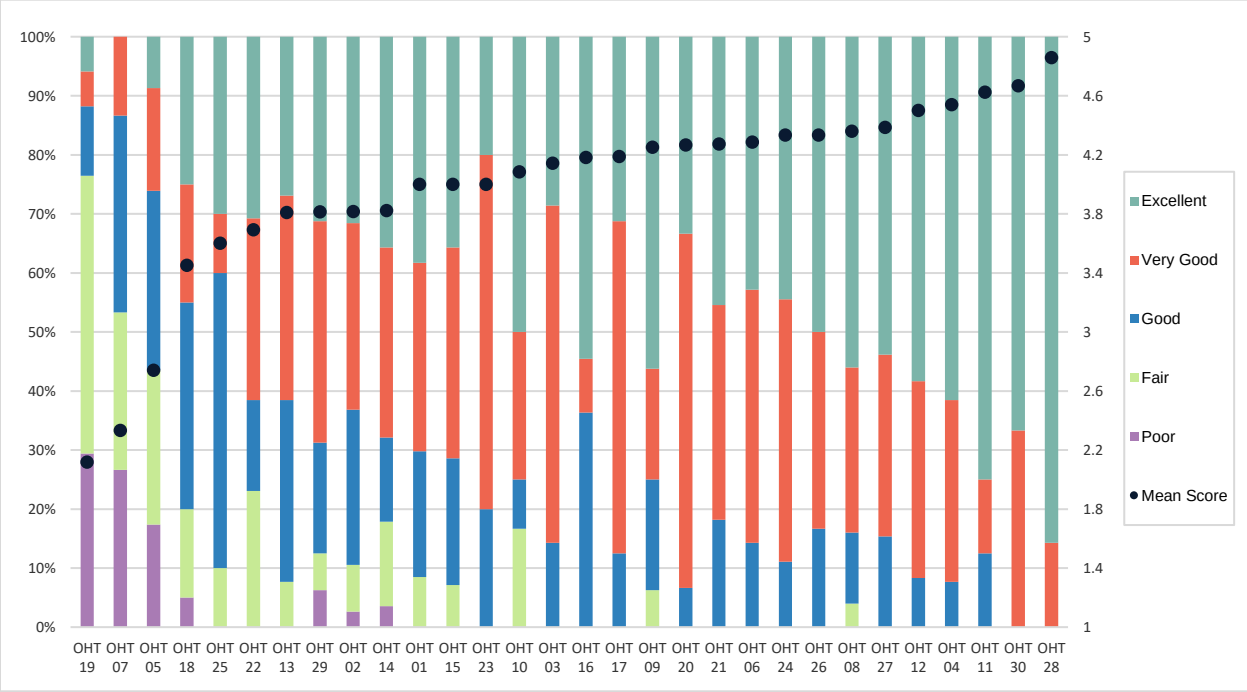
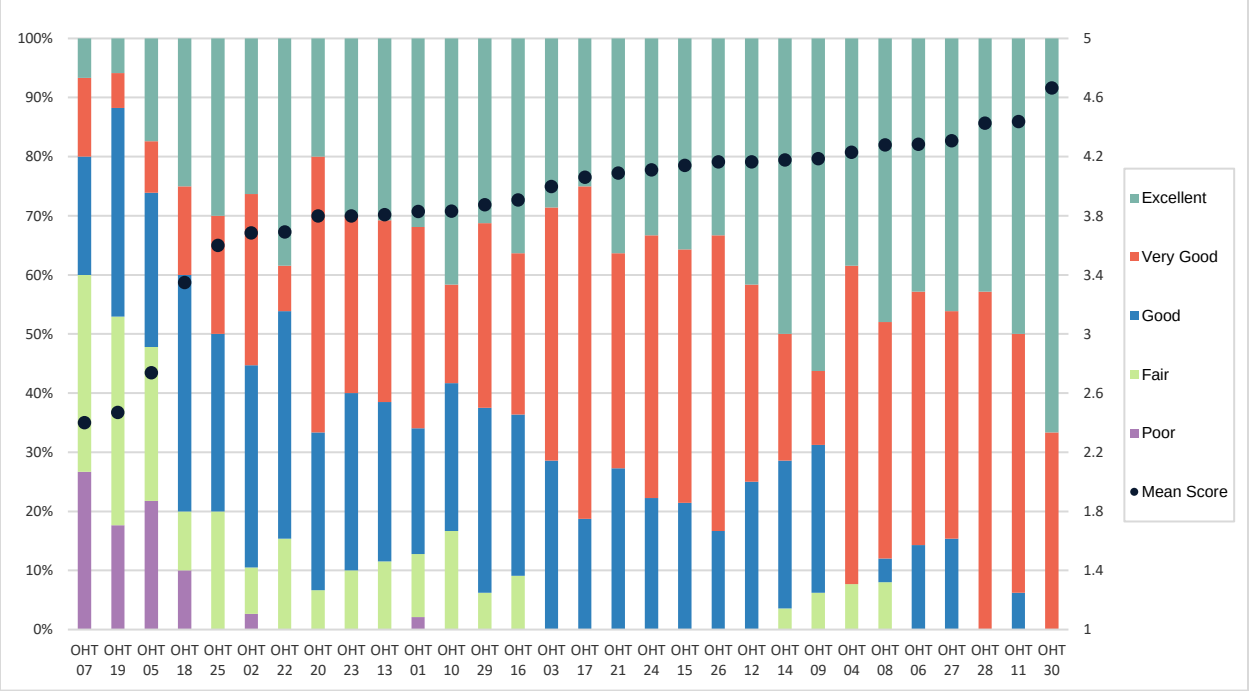


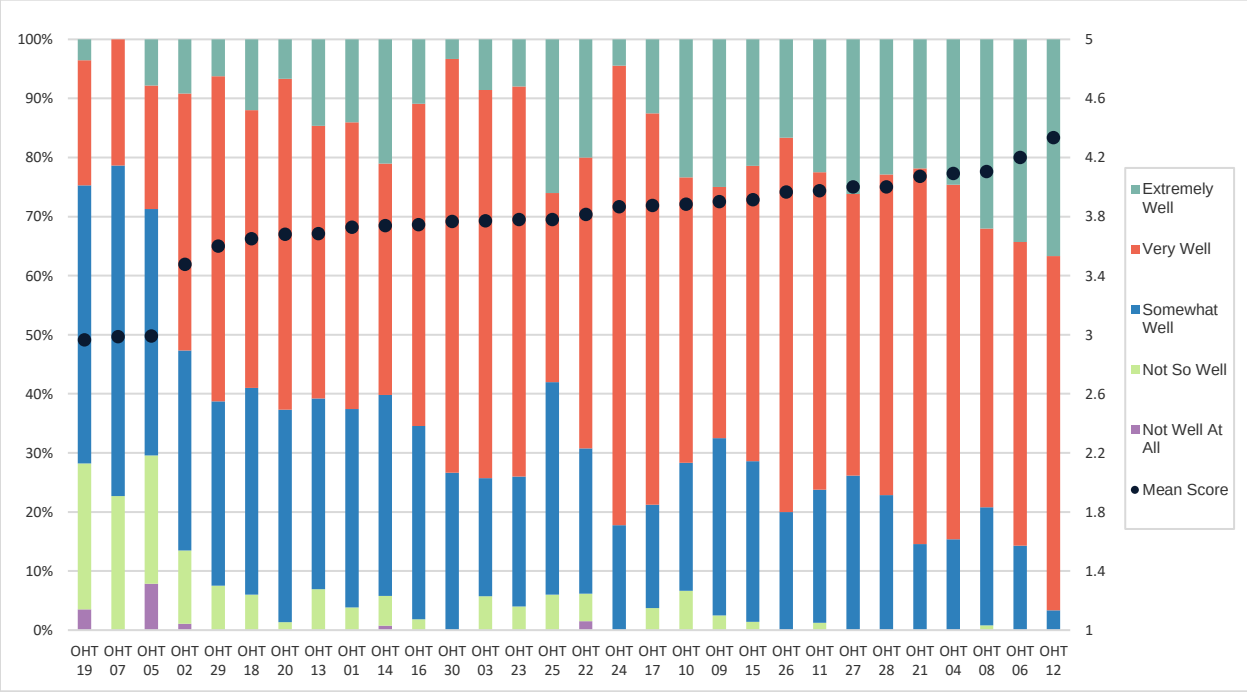
Figure 4. Distribution of OOHT Survey Responses to the Item *Creating an environment where differences of opinion can be voiced*, by OHT



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".[17] 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 3.78 (out of 5) with a standard deviation of 0.33. Across the OHTs, the proportion of respondents selecting 4 (very well) or 5 (extremely well) across the 5 items included this domain was 67.3% and varied from 21.3% to 96.7% with most OHTs (27/30) having at least 50% of respondents selecting the top two boxes, but only six out of 30 OHTs had ≥80% of respondents selecting 4 or 5.

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



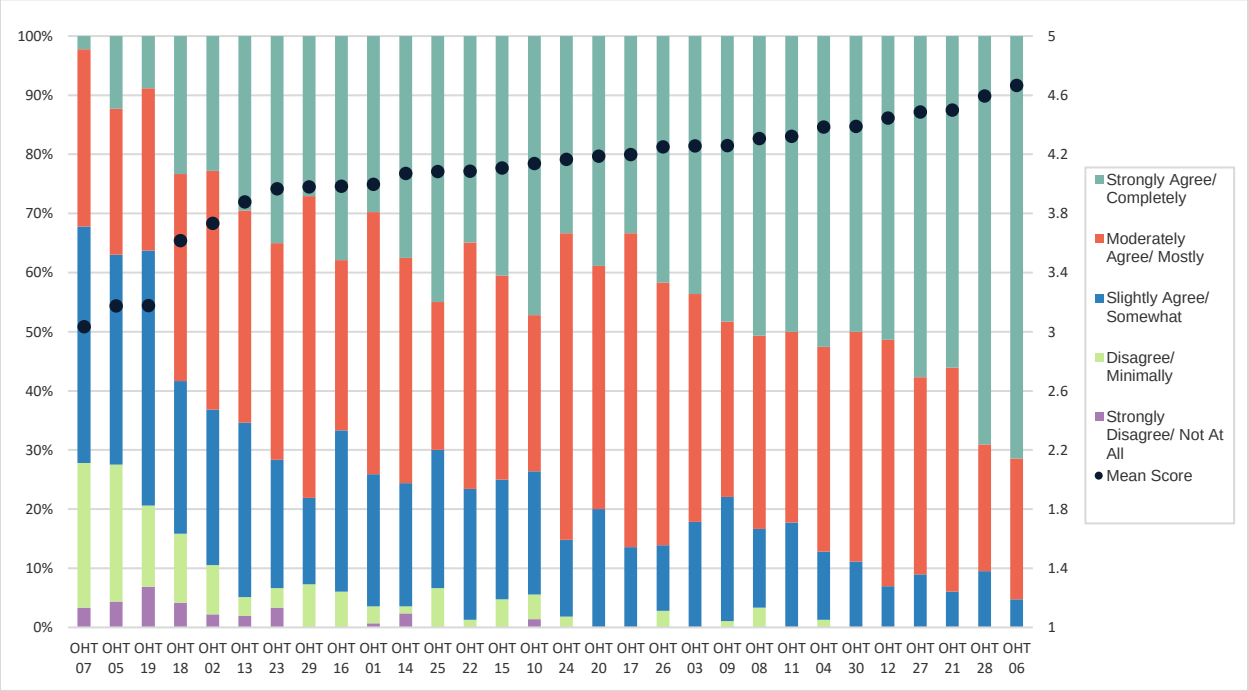
[ii] Survey Items - By working together, how well, at present, are the members of your OHT able to:

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).[14] 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 4.08 (out of 5) with a standard deviation 0.40. Across the OHTs, the proportion of respondents selecting 4 (moderately agree/ mostly) or 5 (strongly agree/completely) across the 6 items included this domain varied from 32.2% to 95.2% with most OHTs (27/30) having at least 50% of respondents selecting 4 or 5. Half of the OHTs (15/30) had ≥80% of respondents selected the top two boxes.

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



[iii] Survey Items - In this OHT:

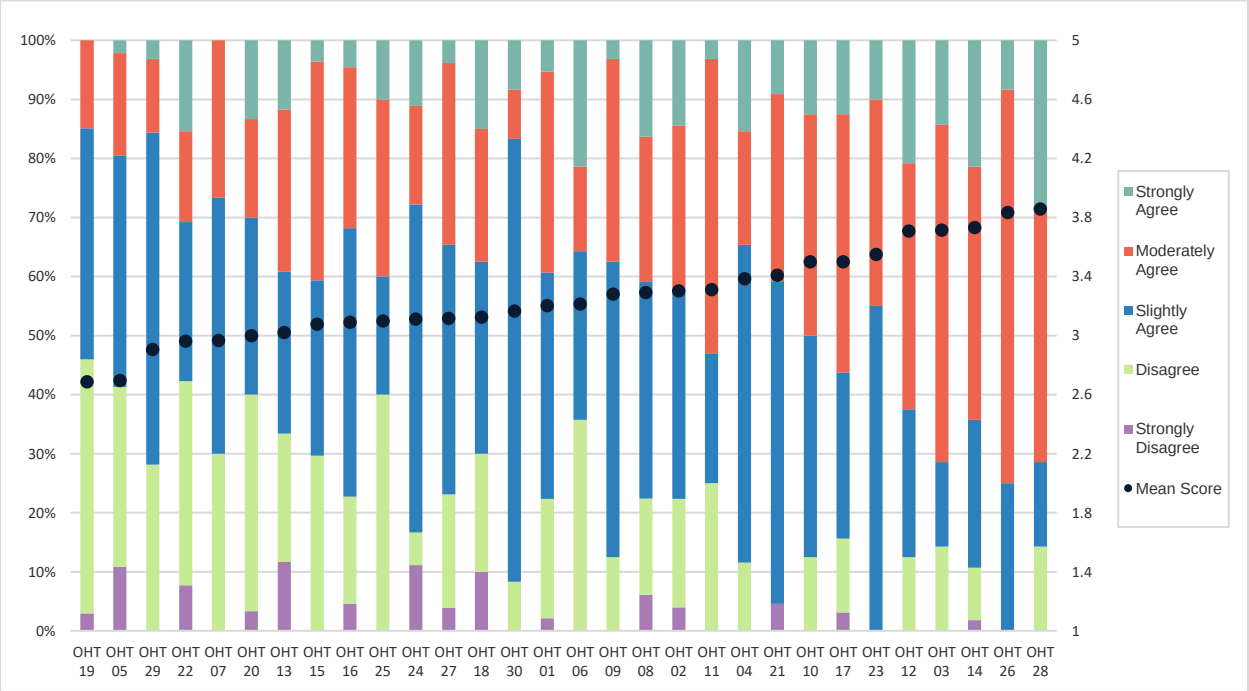
15 We are prepared to question the basis of what the team is doing
16 We critically appraise potential weaknesses in what our OHT is planning in order to achieve the best possible outcome
17 The members of the OHT build on each other's ideas in order to achieve the best possible outcome
39 We have a '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.[16] *Clinical-Functional Integration*[iv] was the second lowest rated domain in terms of mean score 3.26 (out of 5) with a standard deviation of 0.31, and had the highest within OHT variation in scoring (0.80) (see Table 4).

Across the OHTs (Figure 7), the proportion of respondents selecting 4 (moderately agree) or 5 (strongly agree) was 40.9% and varied from 14.9% to 75.0% with less than a third of OHTs (8/30) having at least 50% of respondents selecting the top two boxes and no OHTs with ≥80% of respondents selecting 4 or 5 for the two items included this domain.

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



[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

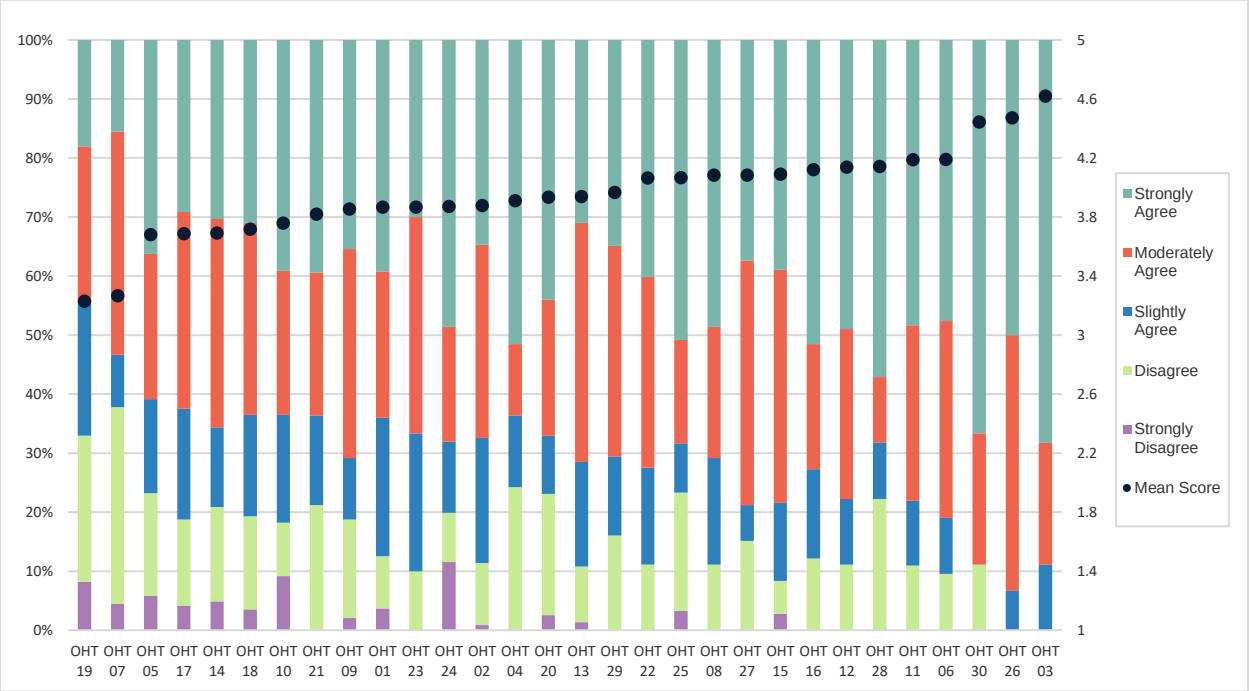
The Readiness for Organizational Change survey[15] includes three subdomains: 1) *Suitability* (original scale termed Appropriateness); 2) *Change Efficacy*; and 3) *Personally Beneficial*.

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). The mean *Suitability* score across applicant OHTs was 3.95 (out of 5) with a standard deviation of 0.30. 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=4.28) and the change will be worthwhile for them (mean=4.44), but the change will not make their role easier (mean=3.08).

Across the OHTs, the proportion of respondents selecting 4 (moderately agree) or 5 (strongly agree) was 70.2% and varied from 44.6% to 93.3%, with all but one OHT having at least 50% of respondents selecting the top two boxes (see Table 4). Only four out of 30 OHTs had ≥80% of respondents selecting 4 or 5 for the three items[v] included this subdomain.

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



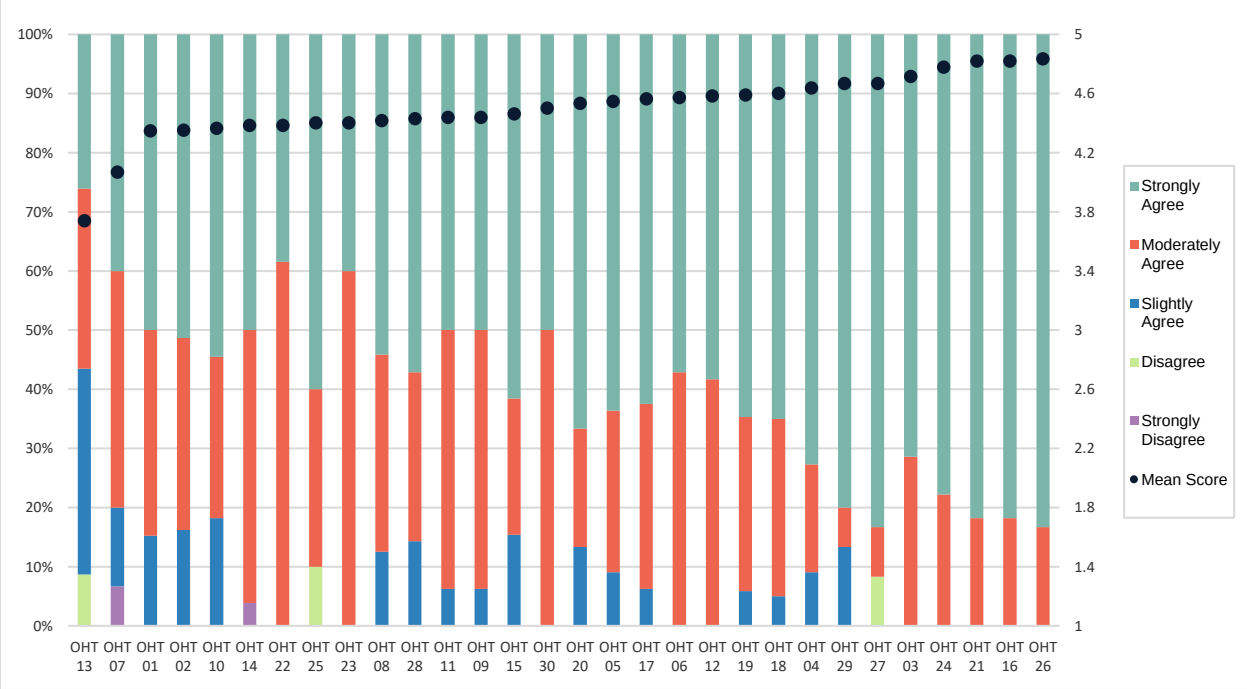
[v] Survey Items – Please think about the changes involved in creating your OHT. To what extent do you agree with the following statements:

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*. The mean score was very high, 4.50 (out of 5) with a standard deviation of 0.22. *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, a majority (>60%) 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 26.0% to 83.3%.

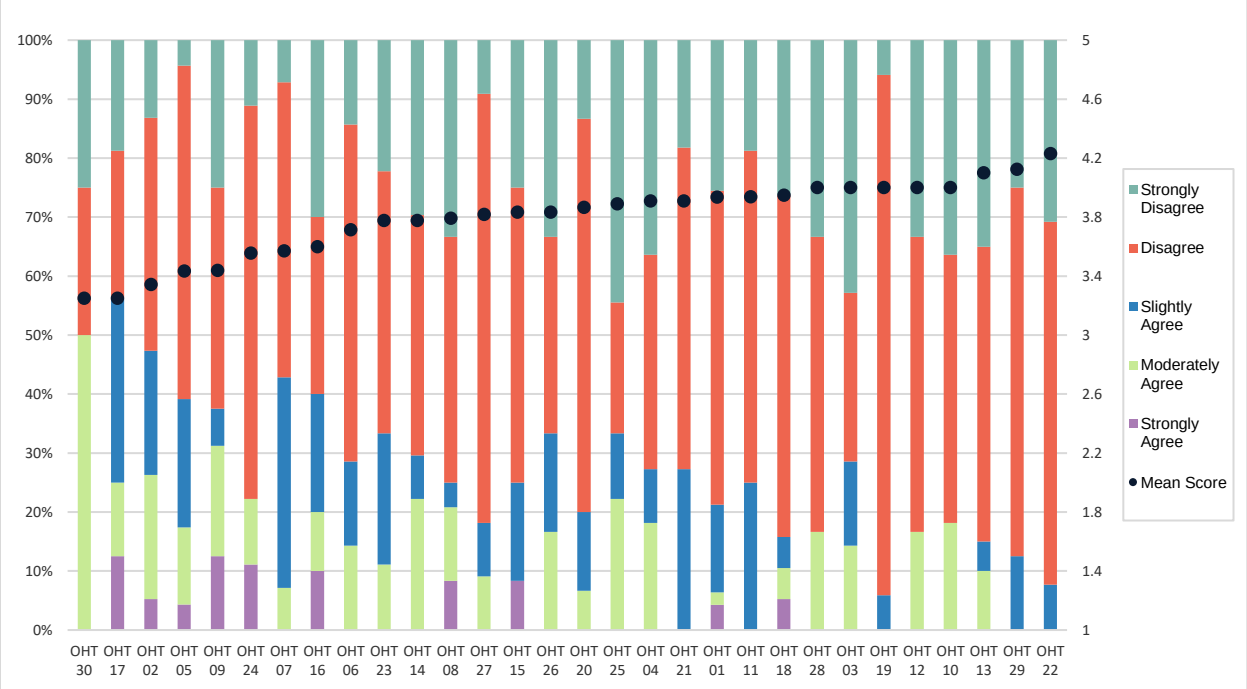
Figure 9. Distribution of OOHT Survey Responses to the Item *I have the skills that are needed to make this change work*, by OHT



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 that they have developed. The mean score across OHTs was 3.79 with a standard deviation of 0.26. On average across OHTs, 73% of respondents disagreed or strongly disagreed that the change would disrupt their working relationships, and this varied from 50.0% to 94.1% across OHTs (Figure 10).

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

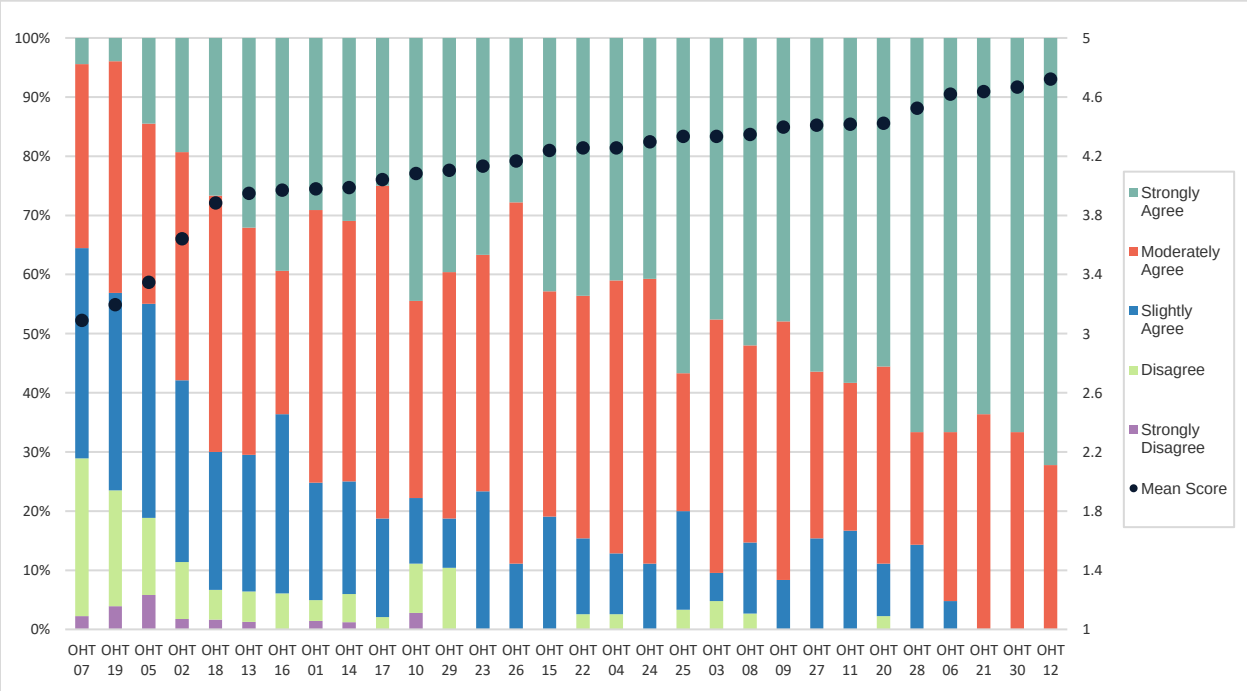


Commitment to Improvement

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 4.15 (out of 5) with a standard deviation of 0.41; the highest mean score among the 10 domains.

Across the OHTs, the proportion of respondents selecting 4 (moderately agree) or 5 (strongly agree) was 79.0% and varied from 35.5% to 100% with only three OHTs without at least 50% of respondents selecting the top two boxes (see Table 4). The *Commitment to Improvement* domain had the most OHTs (19/30) with ≥80% of respondents selecting the top two boxes and three OHTs had 100% of respondents selecting 4 or 5 for the three items included this domain.

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



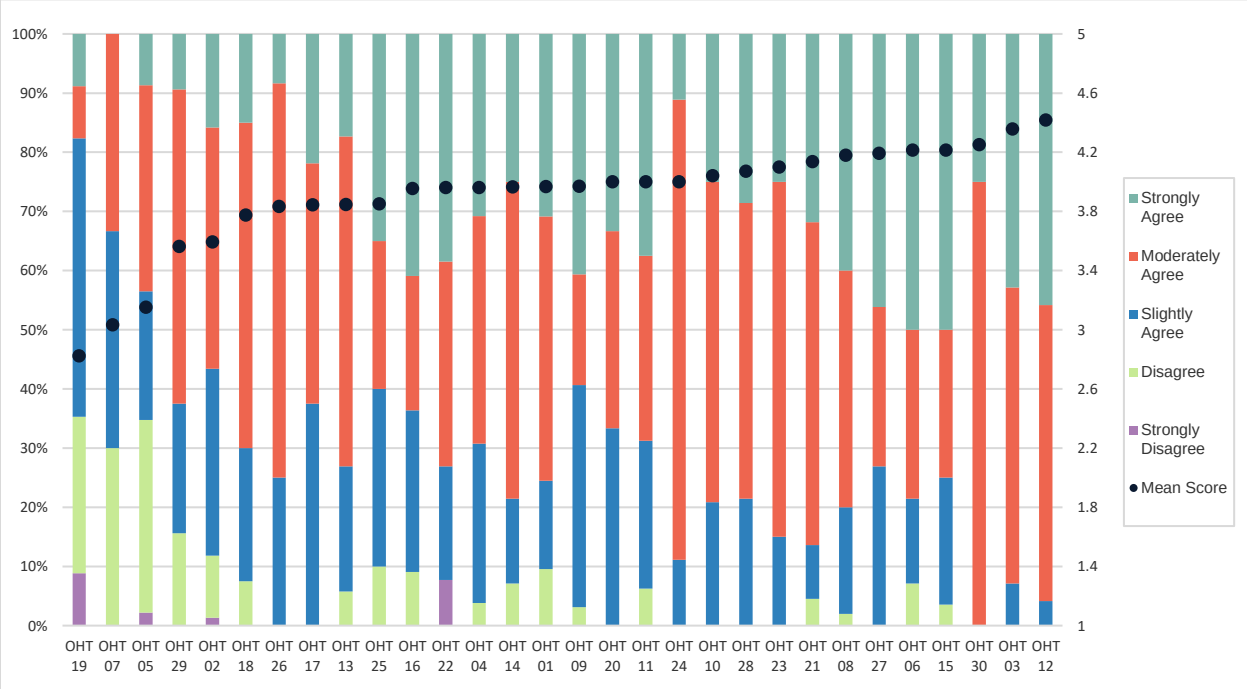
[vi] Survey Items – At present in this OHT:
8 We have a common vision of how to improve the integration of care
11 We have agreed to share responsibility for achieving improved patient outcomes
14 We have used data to identify the improvements for our target populations

Roles and Responsibilities

The *Roles and Responsibilities* domain is based on two items[vii] from Haggerty's Measure of Network Integration survey.[16] 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."[18] 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 3.91 (out of 5) with a standard deviation of 0.36 (Figure 12).

Across the OHTs the proportion of OHT respondents selecting 4 (moderately agree) or 5 (strongly agree) was 70.7% and varied from 17.6% to 100%, most OHTs (27/30) had at least 50% of respondents selecting 4 or 5 but only seven OHTs with ≥80% of respondents selecting 4 (moderately agree) or 5 (strongly agree) for the two items included this domain.

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



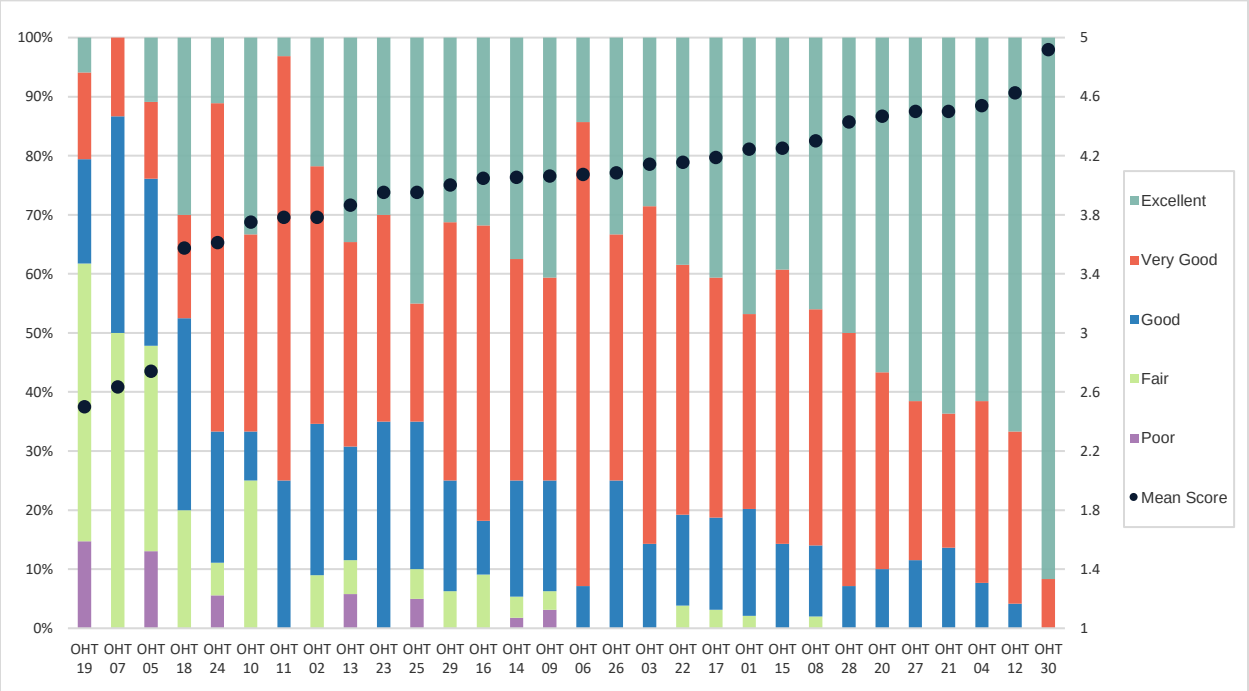
[vii] Survey Items – At present in this OHT:
9 We understand the role we will play in taking responsibility for the local population
10 We understand the role we will play in coordinating care

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.[13] 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 3.99 (out of 5) with a standard deviation of 0.56 (Figure 13). However, the highest intraclass correlation of the ten domains, reflecting the high variation between OHTs relative to the total variation (ICC=0.27) (see Table 4).

Across the OHTs, the proportion of OHT respondents selecting 4 (very good) or 5 (excellent) was 73.3% and varied from 13.3% to 100% with most OHTs (26/30) having at least 50% of respondents selecting 4 or 5. Half of the OHTs (15/30) had ≥80% of respondents selecting 4 or 5 for the two items included this domain.

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



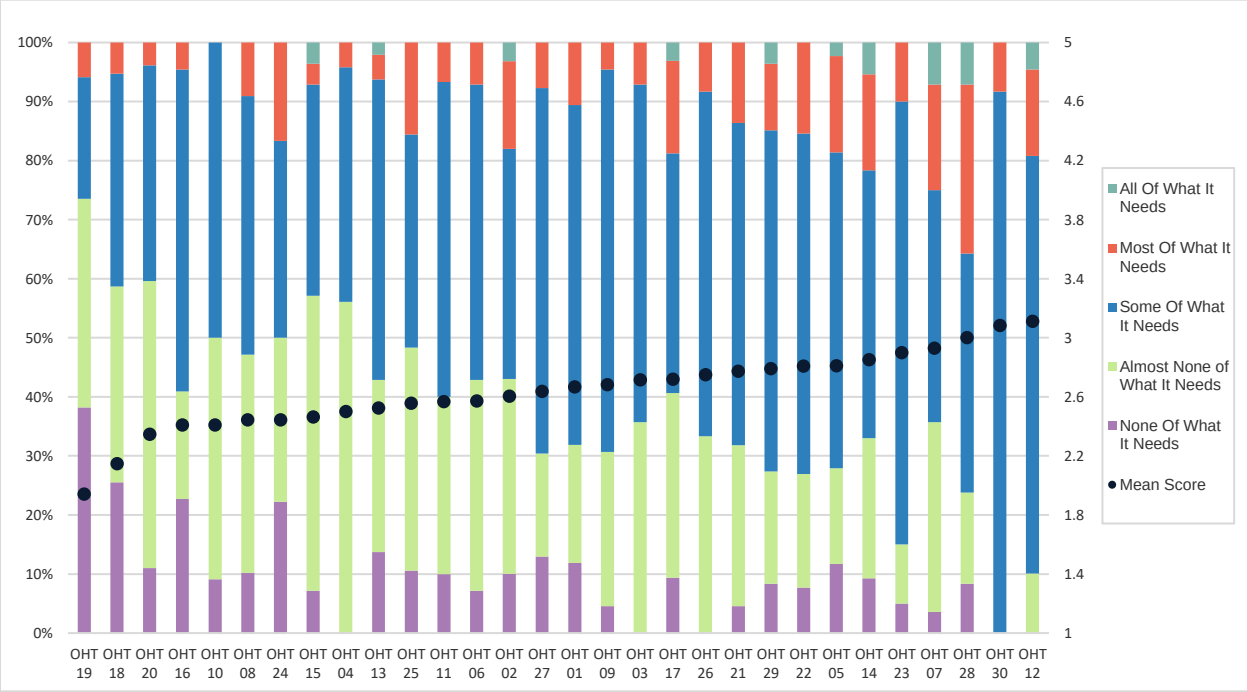
[viii] Survey Items – Please rate the effectiveness of your OHT in carrying out the following activities:
23 Communicating among members
24 Organizing OHT member activities, including meetings and projects

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.[13] 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 2.64 (out of 5) with a standard deviation of 0.26. This was the lowest rated domain and was among the lowest ICCs, reflecting a very low variation between OHTs relative to the total variation.

Across the OHTs the proportion of OHT respondents selecting 4 (most of what it needs) or 5 (all of what it needs) was 11.7% and varied from 3.8% to 35.7% (see Table 4). No OHT had at least 50% of respondents selecting 4 or 5 for the two items included this domain.

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



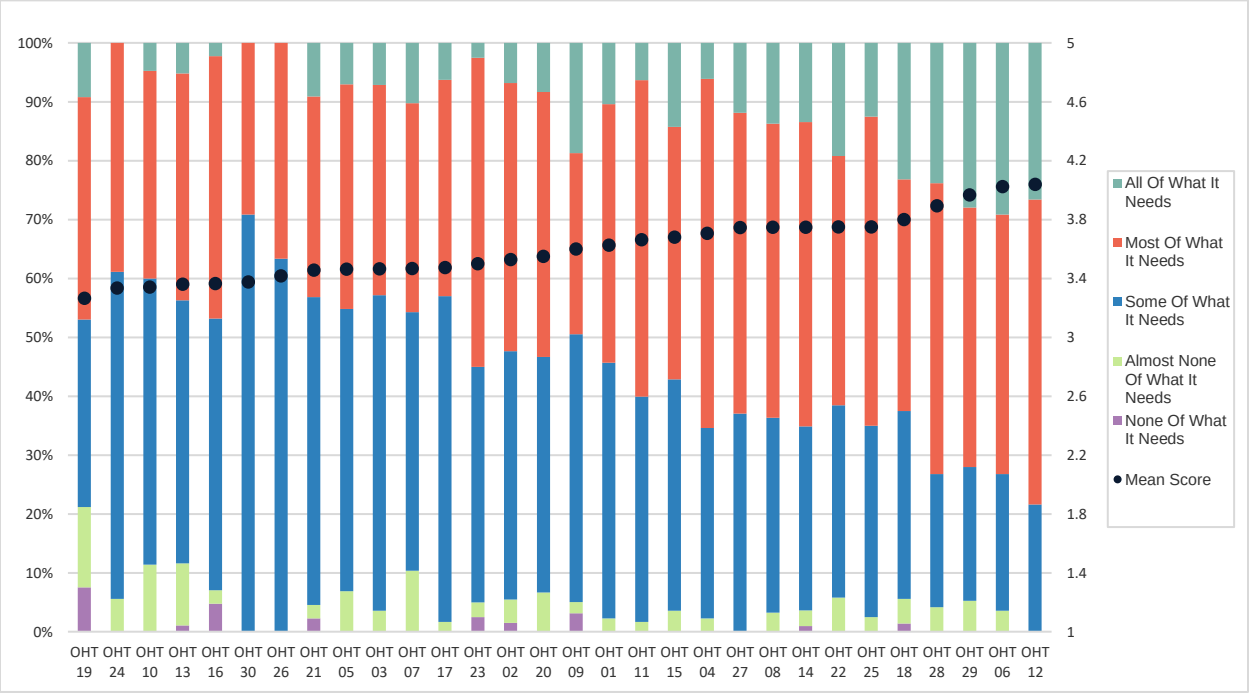
[ix] Survey Items – For each of the following types of resources, to what extent does your OHT have what it needs to work effectively:
29 Money
30 Tools and technologies

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.[13] 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 3.60 (out of 5) with a standard deviation of 0.22 (Figure 15). The *Non-Financial Resources* domain had the lowest variation in responses across OHTs (between variance=0.01) resulting in one of the lowest ICCs (0.03) (see Table 4).

Across the OHTs, the mean proportion of OHT respondents selecting 4 (most of what it needs) or 5 (all of what it needs) was 54.2% and varied from 29.2% to 78.4% (see Table 4). Just over half (17/30) of all OHTs had at least 50% of respondents selecting 4 or 5 and only four OHTs had ≥70% of respondents selecting 4 or 5 (Figure 15). No OHT had ≥80% of respondents selecting 4 or 5 for the four items included this domain.

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

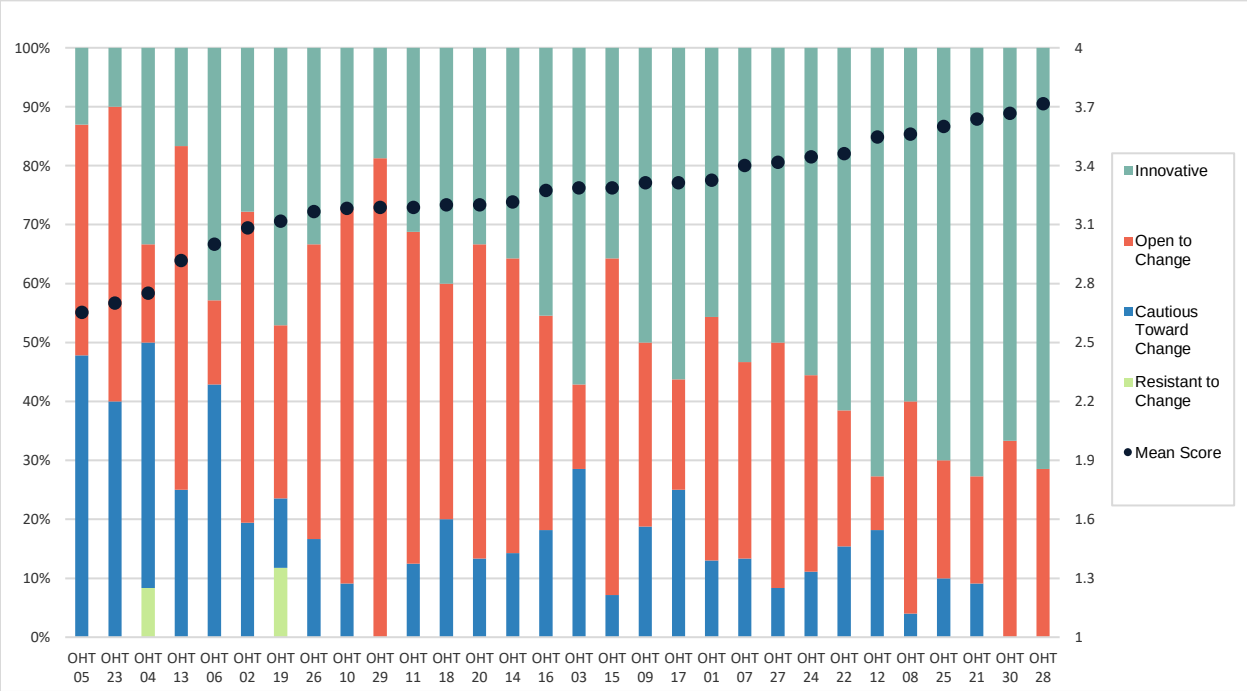


[x] Survey Items – For each of the following types of resources, to what extent does your OHT have what it needs to work effectively:
25 Skills and expertise
26 Data and information
27 Ability to identify target population criteria and deliver interventions
28 Connections to political decision-makers, 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. The majority of OHTs (78%) can be considered as either innovative or open to change (Figure 16). In particular, across OHTs, 44% of respondents described their organization as innovative, 38% as open to change, 17% cautious toward change and 1% as resistant to change. Only two OHTs had respondents reporting that their organizations were resistant to change.

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



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 4.60 (out of 5) and a standard deviation of 0.30 (Figure 17). Across the OHTs, the proportion of OHT respondents selecting 4 (moderately agree) or 5 (strongly agree) varied from 30.8% to 100%, most OHTs (25/30) had at least 50% of respondents selecting 4 or 5. Eleven OHTs had ≥80% of respondents selecting the top two boxes and three 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).

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 3.49 (out of 5) with a standard deviation of 0.42. Across the OHTs the proportion of OHT respondents selecting 4 (moderately agree) or 5 (strongly agree) varied from 18.8% to 85.7% with most OHTs (20/30) having at least 50% of respondents selecting the top two boxes and only one OHT had ≥80% selecting 4 or 5.

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

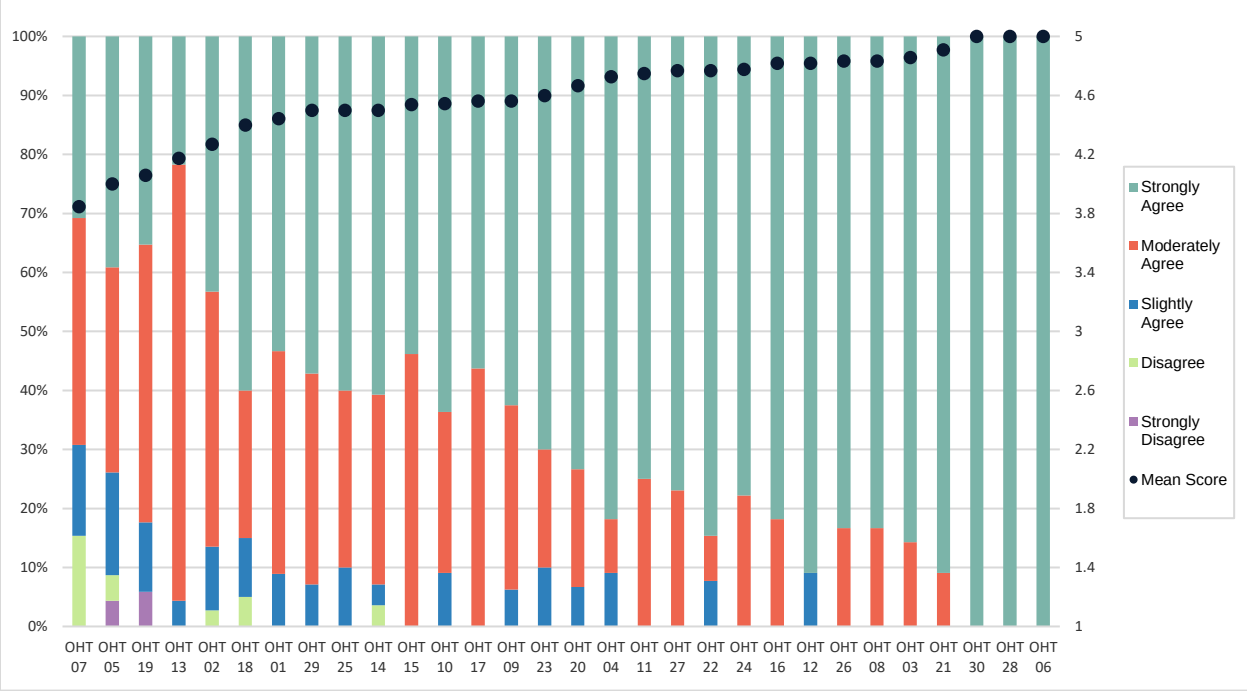
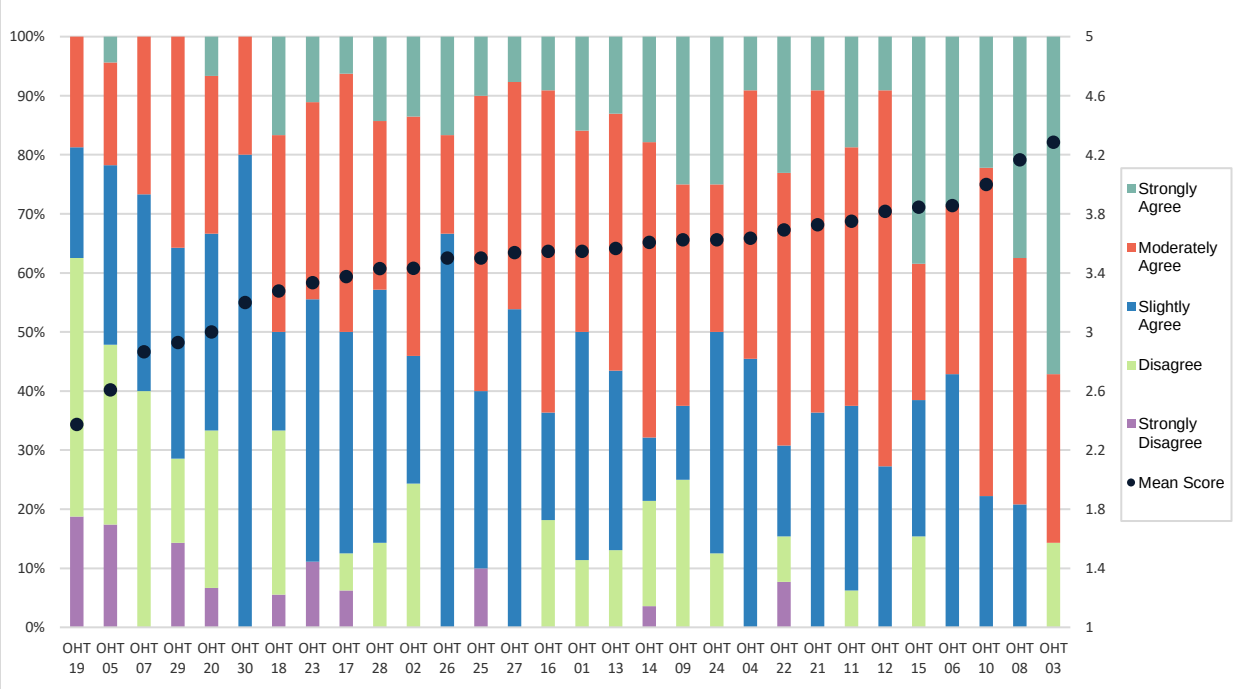


Figure 18. Distribution of OOHT Survey Responses to the Item *Your organization's staff have a strong sense of belonging to your OHT*, by OHT



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 first cohort of OHT applicants the critical success factors for integrated care with the highest degree of capability were:

1) **Commitment to Improvement** (mean=4.15 out of 5), which had the highest number of OHTs (19/30) where ≥80% of responses moderately agreed or strongly agreed (4 or 5). Many successful integrated care initiatives have found quality improvement expertise to be a critical factor to the development of integrated care.[8] This should hold hope as OHTs proceed into their implementation phase. For example, below are two quotes reflecting on the importance of quality improvement and patient-focus of the OHT initiative. Both quotes were made by participants from OHTs who scored highly in this domain:

> "*I think both from commitment to quality improvement and an active learning system, which is one of the commitments that come from the ministry and we certainly believe in, you need data that's operationally available to you so you need to be able to manipulate it and you need it quickly…*"
>
> *"…people really have one goal, one vision and it's really patient driven."*

2) **Team Climate** (mean=4.08 out of 5), with just under half of OHTs (14/30) having ≥80% of responses moderately agree/mostly or strongly agree/completely (4 or 5) the OHT vision is clear and realistic, have a "we are in it together" attitude, committed to a high standard and improving and support for innovation.[14] As a participant from an OHT with high scores on team climate explained:

> "*I think that the collaboration with people that we have not normally collaborated with has been wonderful […] just the commitment and the willingness to come together and do the work has been amazing, just amazing.*"

3) **Administration and Management** (mean=3.99 out of 5), also with nearly half of OHTs (14/30) where ≥80% of responses were very good or excellent (4 or 5). The OOHT survey captures the perceived effectiveness in communicating and organizing activities among OHT members. Lasker *et al.* suggest communication strategies and mechanisms for coordinating partnership activities allow for meaningful engagement of multiple, independent organizations within the partnership.[13] Participants from some OHTs discussed how important it was to ensure clear and open communication channels and to provide structure and organization to the team. In some cases, this was facilitated by a specific team member:

> "*[…] He's made sure the train's run on time. And he's made it really easy for us to step up […] he's really good at moving information amongst the partners, convening meetings. He's a great listener and he really tries to support people and gives the airtime […].*"

4) **Readiness for Change - Suitability** (mean=3.95 out of 5), all but one OHT had at least 50% of respondents selecting 4 or 5, but, somewhat worryingly, only four out of 30 OHTs had ≥80% of respondents selecting 4 (moderately agree) or 5 (strongly agree). Many respondents felt that while their organization will benefit and that it will be worthwhile in the long run, this change will not make their job easier. Encouragingly, the mean score on *Change Efficacy* (i.e., a belief in one's ability to successfully implement change) was very high, 4.50 (out of 5) with a standard deviation of 0.22. Furthermore, when asked to describe their organization or practice setting's attitude toward change, 78% of survey respondents described themselves as innovative or open to change. OHT members described being committed to the OHT and ready to make necessary changes to improve care for patients:

> "*I'm absolutely committed to this project and this is how I plan to spend my time for as long as I can. I want to speed this through, I want to see the results, I want this to be successful, I want providers to be better supported and able to do their jobs. We have so much talent. And I want patients to get the care they deserve, so I'm in it.*"

It is worth noting that while *Commitment to Improvement*, *Team Climate* and *Administration and Management* had high domain scores, they also had relatively high between-OHT variation indicating that some OHTs had substantially better results than others and that copying practices from these higher performing OHTs could contribute to small improvements in these domains. Conversely, although *Readiness for Change* had high a mean score, it had low between-OHT variance indicating generally similar levels of readiness across most OHTs. However, a particular focus will need to be placed on engaging the professionals/staff within organizations moving forward; a low rating (mean=3.49 and relatively high standard deviation of 0.42) 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. Some participants described pushback from frontline staff around changing job descriptions and a perceived increased workload:

> "*So, there's pushback from our staff because they don't understand what's happening out there, they're more concerned with their day-to-day caseloads and day-to-day ability to manage their work […] looking at changing the structure, we are met with a lot of pushback from that team.*"

Evans *et al.* found that the three most important capabilities for successful implementation of the Health Links integrated care initiatives were: *Leadership Approach*; *Readiness for Change*; and *Clinician Engagement & Leadership*.[9] As described above, mean *Readiness for Change* domain scores were quite high across most OHTs.

Leadership Approach did not rate quite as highly; the overall average score ranked 6th out of the ten domains capturing critical success factors for integrated care, with a mean score of 3.86. 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,[13] but our survey reveals only one third of OHTs have ≥80% of their member respondents indicating effective OHT leadership (scores of 4 (moderately agree) or 5 (strongly agree) on items comprising the *Leadership Approach* domain). However, some leaders were able to create safe spaces and trust, as exemplified by this quote:

> "*But I think there is enough respect, around the table, and there has been, that people are being heard – there's a very healthy environment to share.*"

For the two items from the *Leadership Approach* domain specifically addressing trust among OHT members, the mean scores were 3.98 and 3.88 and only half (15/30) and close to one-third (9/30) of OHTs had ≥80% of respondents selecting 4 (very good) or 5 (excellent) on the two items, respectively. Two OHTs 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 and found to not yet have a critical mass of primary care participation.[19] Further exploration into this domain will be assessed in qualitative interviews with OHT representatives.

Of the ten domains measuring critical factors for integrated care, seven had at least one OHT with ≥80% of the respondents selecting 4 or 5. The *Clinical-Functional Integration*, *Financial* and *Non-Financial Resources* were the three domains which did not have any OHT where ≥80% of the respondents selected 4 or 5 (moderately, strongly agree they share clinical information/coordination tools; had most or all of what it needs in terms of resources, respectively). These domains had noticeably lower means and lower variance across OHTs relative to the other domains (3.26 and 0.03, 2.64 and 0.02 and 3.60 and 0.01, 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).

All OHTs have room to improve. Ranked by mean score, no OHT was consistently above the 80th percentile (top 6) across all domains. Only five OHTs had ≥80% of the respondents selecting 4 or 5 on six out of the ten domains measured by the OOHT survey, while nine OHTs did not achieve this standard on any of the domains. There are supports, such as practice guides, webinars/podcasts, 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. Government investments will be needed to support OHTs in such capabilities as these have been shown to be essential foundations for improved 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.[20] Our survey results capture the first phase of Ontario's journey to transforming siloed to integrated care.

Generally, the first cohort of OHT applicants rated very strongly across *Commitment to Improvement*, *Team Climate,* and *Administration and Management*. However, the considerable variation in the scores across/between OHTs relative to the within-OHT scores suggest supports to address these domains can be targeted to OHT's with mean scores at the lower end of the scale. Conversely, although the *Readiness for Change* had a reasonably high mean score, it had one of the lower between-OHT variability suggesting widespread belief across the first cohort of applicant OHTs that this change will be beneficial.

Although, *Leadership Approach* did not rate quite as highly, the two items specifically addressing trust among OHT members had mean scores similar to the top domains (3.98 and 3.88). This is encouraging given trust is considered an essential underpinning element of successful partnering to deliver integrated care in the context of complex multi-organizational systems. However, given only one third of OHTs have ≥80% of their member respondents indicating effective OHT leadership efforts are needed across the majority of OHTs to develop *boundary-spanning* leaders, able to bridge diverse interests, establish trusting relationships and find common ground to manage conflict.[13]

Additional *Financial* and *Non-Financial Resources* and improved *Clinical and 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 government funding, are needed and supports, such as practice guides, webinars/podcasts, 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 first cohort of applicant OHT members are given such a short time to respond and generate energy for this initiative. 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.

References

1. Cash-Gibson L, Rosenmoller M. Project INTEGRATE - a common methodological approach to understand integrated health care in Europe. International journal of integrated care 2014;14:e035-e35. doi: 10.5334/ijic.1980

2. Kassianos AP, Ignatowicz A, Greenfield G, et al. "Partners rather than just providers…": A qualitative study on health care professionals' views on implementation of multidisciplinary group meetings in the North West London Integrated Care Pilot. International journal of integrated care 2015;15:e032-e32. doi: 10.5334/ijic.2019

3. Ling T, Brereton L, Conklin A, et al. Barriers and facilitators to integrating care: experiences from the English Integrated Care Pilots. International journal of integrated care 2012;12:e129-e29. doi: 10.5334/ijic.982

4. Lyngsø AM, Godtfredsen NS, Høst D, et al. Instruments to assess integrated care: a systematic review. International journal of integrated care 2014;14:e027-e27.

5. Curry N, Ham C. Clinical and service integration: the route to improved outcomes. In: Fund TKs, ed. London, 2010.

6. Friedman L, Goes J. Why integrated health networks have failed. Frontiers of Health Services Management 2001;17(4):3-28.

7. Gillies RR, Shortell SM, Anderson DA, et al. Conceptualizing and measuring integration: Findings from the health systems integration study. Hospital & Health Services Administration 1993;38(4):467.

8. GR B, WP W, J S, et al. How can organizations implement integrated care? A practice guide. Toronto: Health System Performance Research Network, 2019.

9. Evans JM, Grudniewicz A, Baker GR, et al. Organizational Context and Capabilities for Integrating Care: A Framework for Improvement. International journal of integrated care 2016;16(3):15-15. doi: 10.5334/ijic.2416

10. Evans JM, Grudniewicz A, Baker GR, et al. Organizational Capabilities for Integrating Care: A Review of Measurement Tools. Evaluation & the Health Professions 2016;39(4):391-420. doi: 10.1177/0163278716665882

11. Evans JM, Grudniewicz A, Gray CS, et al. Organizational Context Matters: A Research Toolkit for Conducting Standardized Case Studies of Integrated Care Initiatives. Int J Integr Care 2017;17(2):9. doi: 10.5334/ijic.2502 [published Online First: 2017/10/04]

12. Riggs E, Block K, Warr D, et al. Working better together: new approaches for understanding the value and challenges of organizational partnerships. Health Promotion International 2013;29(4):780-93. doi: 10.1093/heapro/dat022

13. Lasker RD, Weiss ES, Miller R. Partnership Synergy: A Practical Framework for Studying and Strengthening the Collaborative Advantage. The Milbank Quarterly 2001;79(2):179-205. doi: 10.1111/1468-0009.00203

14. Kivimaki M, Elovainio M. A short version of the Team Climate Inventory: Development and psychometric properties. Journal of Occupational and Organizational Psychology 1999;72(2):241-46. doi: 10.1348/096317999166644

15. Holt DT, Armenakis AA, Feild HS, et al. Readiness for Organizational Change:The Systematic Development of a Scale. The Journal of Applied Behavioral Science 2007;43(2):232-55. doi: 10.1177/0021886306295295

16. Development of a measure of network integration and its application to evaluate the success of mandated local health networks in Quebec. Canadian Association of Health Services Policy and Research (CAHSPR); 2002.

17. Weiss ES, Anderson RM, Lasker RD. Making the Most of Collaboration: Exploring the Relationship Between Partnership Synergy and Partnership Functioning. Health Education & Behavior 2002;29(6):683-98. doi: 10.1177/109019802237938

18. Tremblay D, Touati N, Roberge D, et al. Understanding cancer networks better to implement them more effectively: a mixed methods multi-case study. Implementation Science 2016;11(1):39. doi: 10.1186/s13012-016-0404-8

19. S.L. S, R.E. H, G.E. E, et al. Ontario Health Team Central Evaluation – Formative Evaluation: Document Analysis. In: Network HSP, ed. Toronto, ON, 2020.

20. Minkman M. The Development Model for Integrated Care: a validated tool for evaluation and development. Journal of Integrated Care 2016;24(1):38-52. doi: 10.1108/JICA-01-2016-0005

Appendix A – Factor Analysis of the OOHT Survey

Domain	Item	Text	Factor Loading	Cronbach's Alpha with Item Removed
Leadership Approach	18	Empowering people/members involved in the OHT	0.905	0.927
	19	Communicating the vision of the OHT	0.816	0.942
	20	Creating an environment where differences of opinion can be voiced	0.901	0.929
	21	Helping the OHT to be creative and look at things differently	0.89	0.93
	22	Fostering respect, trust and inclusiveness amongst OHT members	0.891	0.931
			Overall Cronbach's Alpha	0.945
Shared Vision	3	Develop goals that are widely understood and supported among members	0.816	0.865
	4	Identify how different organizations/programs in the community could help	0.792	0.87
	5	Respond to the needs and problems of the community	0.807	0.867
	6	Include the views and priorities of the people affected by the OHT's work	0.783	0.871
	7	Obtain support from individuals and organizations in the community	0.759	0.875
			Overall Cronbach's Alpha	0.893
Team Climate	15	We are prepared to question the basis of what the team is doing	0.772	0.887
	16	We critically appraise potential weaknesses in what our OHT is planning	0.825	0.879
	17	The members of the OHT build on each other's ideas	0.895	0.868
	39	We have a 'we are in it together' attitude	0.77	0.883
	40	We take the time needed to develop new ideas	0.754	0.885
	41	To what extent do you think your OHT's objectives can actually be achieved	0.645	0.9
			Overall Cronbach's Alpha	0.902
Clinical-Functional Integration	12	We share tools for clinical coordination	0.752	
	13	We share clinical information across partners	0.752	
			Overall Cronbach's Alpha	0.805
Readiness for Change - Suitability	34	I think that my organization/practice setting will benefit from this change	0.871	0.586
	35	This change will make my role easier	0.521	0.825
	36	I feel it is worthwhile for me that the organization adopted this change	0.812	0.62
			Overall Cronbach's Alpha	0.758

Domain	Item	Text	Factor Loading	Cronbach's Alpha with Item Removed
Commitment to Improvement	8	We have a common vision of how to improve the integration of care	0.722	0.677
	11	We have agreed to share responsibility for achieving improved patient outcomes	0.868	0.595
	14	We have used data to identify the improvements for our target populations	0.591	0.77
			Overall Cronbach's Alpha	0.764
Roles and Responsibilities	9	We understand the role we will play in taking responsibility for the local population	0.839	
	10	We understand the role we will play in coordinating care	0.839	
			Overall Cronbach's Alpha	0.881
Administration and Management	23	Communicating among members	0.86	
	24	Organizing OHT member activities, including meetings and projects	0.86	
			Overall Cronbach's Alpha	0.898
Financial and Other Material Resources	29	Money	0.627	
	30	Tools and technologies	0.627	
			Overall Cronbach's Alpha	0.683
Non-Financial Resources	25	Skills and expertise	0.705	0.755
	26	Data and information	0.773	0.735
	27	Ability to identify target population criteria and deliver interventions	0.725	0.745
	28	Connections to political decision-makers, government agencies	0.629	0.782
			Overall Cronbach's Alpha	0.803

Appendix B – OOHT Survey Item-Level Response Distributions

Item	Item Text	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
3	Develop goals that are widely understood and supported among members	0.5	2.7	21.6	51.5	23.7
4	Identify how different organizations/programs in the community could help	0.5	4	30	49.9	15.6
5	Respond to the needs and problems of the community	0.1	4.8	30.6	51	13.4
6	Include the views and priorities of the people affected by the OHT's work	0.7	7.6	26	50.2	15.5
7	Obtain support from individuals and organizations in the community	0.6	6	27.9	51.1	14.4
8	We have a common vision of how to improve the integration of care.	0.6	3	12.3	36.7	47.4
9	We understand the role we will play in taking responsibility for the local population	0.7	5.4	18.1	44.2	31.6
10	We understand the role we will play in coordinating care	0.6	7.6	26	41.4	24.4
11	We have agreed to share responsibility for achieving improved patient outcomes	1	2.7	14.3	34.9	47
12	We share tools for clinical coordination	2.9	18.1	37.2	30.5	11.3
13	We share clinical information across partners	3	20.6	36.5	29.9	9.9
14	We have used data to identify the improvements for our target populations	0.6	7.5	21.1	40	30.8
15	We are prepared to question the basis of what the team is doing	1.3	4.7	21.3	34.4	38.3
16	We critically appraise potential weaknesses in what our OHT is planning	1.1	7.8	22.4	39.8	28.8
17	The members of the OHT build on each other’s ideas	0.8	3.2	16.1	31.4	48.6
18	Empowering people/members involved in the OHT	2	7.1	21.1	41.6	28.3
19	Communicating the vision of the OHT	1.9	10.5	22.9	33.1	31.6
20	Creating an environment where differences of opinion can be voiced	2.7	8.1	22.1	32.2	34.9
21	Helping the OHT to be creative and look at things differently	2.2	11.8	22.1	38.1	25.9
22	Fostering respect, trust and inclusiveness amongst OHT members	3	7.6	18.1	30.9	40.5
23	Communicating among members	1.6	9	20.3	37.4	31.6
24	Organizing OHT member activities, including meetings and projects	1.7	6.7	14.2	35.4	42.1
25	Skills and expertise	0.6	2	31.9	56.7	8.8
26	Data and information	0.8	5.9	55.5	32.5	5.4
27	Ability to identify target population criteria and deliver interventions	0.6	3.4	37	45.4	13.5
28	Connections to political decision-makers, government agencies	1.3	5.3	38.8	37.5	17.1
29	Money	14.4	31.7	47.3	6.1	0.6
30	Tools and technologies	5.3	25	53.1	14.5	2.2
31	Organization or practice setting’s attitude toward change	0.7	17.2	37.7	44.5	0

Item	Item Text	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
32	Your organization's shared VALUES are compatible with those of other OHT members	0.3	1	5.2	24.9	68.4
33	Your organization's STAFF have a strong sense of belonging to your OHT	3.4	12.3	31.9	36.8	15.5
34	I think that my organization/practice setting will benefit from this change	1.9	3.6	10.7	31.8	51.9
35	This change will make my role easier	3.6	36	21.6	27	11.9
36	I feel it is worthwhile for me that the organization adopted this change	1.3	2.1	8.7	27.4	60.5
37	I have the skills that are needed to make this change work	0.4	0.9	7.1	31.5	60.1
38	This change will disrupt many of the working relationships I have developed	24.2	48.5	12.6	12	2.7
39	We have a 'we are in it together' attitude	1.5	3.1	11.7	25.6	58.2
40	We take the time needed to develop new ideas	1.4	4.1	21.4	36.8	36.3
41	To what extent do you think your OHT's objectives can actually be achieved?	0	3.7	23.1	47.1	26.1

Appendix C – 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	3.74***	3.77***	4.03***	3.28***	3.79***	3.99***	3.77***	3.87***	2.43***	3.48***
Hospital Led (1=Yes, 0=No)	0.19	0.14	0.03	0.05	0.14	0.22	0.30	0.27	0.17	0.243*
Geography (1=Urban, 0=Rural)	0.03	-0.04	0.01	-0.01	0.11	0.15	0.10	-0.16	0.26	0.01
Hospital * Geography	-0.09	-0.15	0.01	-0.15	-0.10	-0.20	-0.31	0.07	-0.19	-0.11
Random Effects Parameters										
OHT										
Variance (Intercept)	-0.73***	-1.29***	-1.04***	-1.75***	-2.04***	-1.03***	-1.27***	-0.73***	-2.13***	-2.56***
Variance (Residual)	-0.17***	-0.47***	-0.39***	-0.11***	-0.22***	-0.41***	-0.20***	-0.18***	-0.33***	-0.53***
Comparisons (Differences) between Lead Organization Types and Geographies										
Hospital vs Community	0.15	0.07	0.04	-0.03	0.09	0.12	0.15	0.30	0.08	0.19**
Urban vs Rural	-0.02	-0.12	0.02	-0.09	0.06	0.05	-0.06	-0.12	0.17	-0.04
Comparisons (Differences) between All Combinations of Lead Organization Type and Geography										
Community Urban vs Community Rural	0.03	-0.04	0.01	-0.01	0.11	0.15	0.10	-0.16	0.26	0.01
Hospital Rural vs Community Rural	0.19	0.14	0.03	0.05	0.14	0.22	0.30	0.27	0.17	0.24
Hospital Urban vs Community Rural	0.13	-0.05	0.06	-0.11	0.15	0.17	0.09	0.18	0.25	0.14
Hospital Rural vs Community Urban	0.16	0.19	0.02	0.06	0.03	0.06	0.21	0.42	-0.09	0.23
Hospital Urban vs Community Urban	0.10	0.00	0.04	-0.10	0.04	0.02	0.00	0.33	-0.02	0.13
Hospital Urban vs Hospital Rural	-0.06	-0.19	0.02	-0.16	0.01	-0.04	-0.21	-0.09	0.07	-0.10

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