A Health Systems Policy Framework on "How to" Build Cross-Sector Collaboration: Perspectives From Health Administrators and Leaders

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There are many barriers/challenges bringing multiple stakeholders within health and non-health together to collaborate to address population health. This study aims to identify the key components to build successful cross-sector collaboration and develop a policy framework for health systems integration and transformation. We conducted quantitative surveys and qualitative interviews with health administrators and leaders who volunteered to participate on six newly established teams or "Tables" to improve population health locally in Ontario, Canada. Using thematic analysis and methodological triangulation, we identified emergent themes that were confirmed by member checking. The Relational Coordination survey response rate was 62% (n=45). The survey results were correlated with the twelve interviews and member checking. Drawing from the perspectives of the health administrators and leaders of the "Tables", the emergent themes identified for successful cross-sector collaboration were: 1) systems change mindset, 2) inter-dependency, 3) inter-organizational relationships, and 4) self-organizing capacity. A health systems policy framework on "how to" build cross-sector collaboration was developed to support and achieve health systems integration.

Keywords: health systems integration, inter-organizational relationships and capacity, cross-sector collaboration, policy framework, health leaders, relational coordination survey, interviews

INTRODUCTION

Cross-sector collaborations between health and non-health sectors has gained increased attention (Mattessich & Rausch, 2014). There are many benefits of cross-sector collaborations (Public Health Agency of Canada, 2007; The Health Foundation, 2012; Health Quality Ontario, 2015), and cross-sector partnerships (Buffett & Eimicke, 2018), which are deemed essential to achieve health equity (Towe *et al.*, 2016; de Montigny *et al*., 2019; Alderwick *et al*., 2021; Egede *et al*., 2022). Intersectoral or multisectoral approaches are called collaborative approaches, which can span various ministries, government agencies, nongovernmental organizations, relevant stakeholders and other groups, with a common goal in addressing a particular issue (Salunke & Lal, 2017). Cross-sector collaboration enables people from different disciplines to work together to create something better (Slapšinskaite *et al*., 2021).

There are barriers/challenges in building cross-sector collaborations because healthcare and social service sectors comprise different missions, institutions, professional roles, and modes of distributing its

resources (Fleming *et al*., 2023). Unfortunately, agreements for integrating services are rare, so there are seldom cohesive conditions in place to support collaboration between various organizations (Willumsen, 2008). Effective collaboration requires political will and innovative solutions to build communication across sectors to address local population needs (World Health Organization, 2017). Since there are few tools to assess "how to" build integrated care and little guidance to implement integrated health systems (Tsasis *et al*., 2013), further research on health systems integration is required to advance effective health systems transformational efforts for policymakers.

Background

In Ontario (Canada), the Ministry of Health (MOH) introduced the "Patients First Act (2016)" legislation to address local population health needs. By 2017, the MOH mandated the 14 Local Health Integration Networks (LHINs) to create 76 Sub-Regions and associated Sub-Region Collaborative Tables or "Tables". Each "Table" consisted of health administrators and leaders representing diverse stakeholder groups (i.e., health region, hospitals, primary care, community sector, specialty communities, long-term care, mental health, public health) within a defined region. These "Tables" began to meet in 2017, which created a unique opportunity to research the process of intentional cross-sector collaboration among newly formed groups in 2018. In this research, six "Tables" were included with two "Rural Tables", two "Suburban Tables" and two "Urban Tables"

The research goal was to understand the process on "how to" build intentional cross-sector collaboration among diverse stakeholder groups. The study aims to identify the key components necessary to build successful cross-sector collaboration and develop a policy framework for integration of health systems. Identifying key success factors/enablers and challenges/barriers would provide much-needed practical and policy implications for local, state, and federal health administrators, leaders, policymakers, and researchers.

The research questions were:

1. What were the viewpoints among stakeholder groups?
2. What were the common constructs identified by the "Tables"?
3. What were the emergent themes to build successful cross-sector collaboration, including enablers, challenges and barriers?
4. What does a policy framework look like on "how to" build cross-sector collaboration to achieve health systems integration for health administrators, leaders and policymakers?

Theory

Since cross-sector collaboration is a complex relational process, the theoretical frameworks used were complex adaptive systems, in combination with Relational Coordination (RC). Several scholars argue that health systems are complex and adaptive and emphasize that "*the sum of the whole is greater and more complex than the sum of individual parts*" (The Health Foundation, 2010, p. 24). The RC theory offers another insight into organizational change complementary to complexity theory (Logan *et al*., 2016).

The RC theory supports that effective coordination under complex conditions can be improved by frequent, timely, accurate and problem-solving communication and by relationships of shared goals, shared knowledge and mutual respect (Gittell, 2006). The Relational Model of Change (RMOC) demonstrates how structures can support relational coordination and provide guidance on "how to" build and sustain organizational changes (Relational Coordination Collaborative, 2019). Dr. Jody Hoffer Gittell (2006) developed and validated the RC Survey as a network tool to measure relationships in small or large groups and multi-sector ecosystems (Bolton, Logan & Gittell, 2021). Since there are few "tools" for evaluating collaboration, the RC Survey was used in this study.

The rationale for using both complexity adaptive systems and RC theories was that they overlap to support the concepts of 1) inter-organizational relationship, 2) self-organizing and relational capacity, 3) inter-dependency, and 4) systems change mindset or RMOC. While complexity looks at how systems act, RC theory explains "complexity" by describing the nature and quality of human interactions conducive to high functioning self-organizing systems (Logan, *et al*., 2016). Focusing on RC theory's contributions,

Complexity leadership helps to understand how leaders can create the right conditions to allow for adaptive capacity in complex adaptive organizations (Gittell *et al*., 2017).

METHODOLOGY

Study Design

York University's Research Ethics Board approved this mixed methods study, which included: 1) quantitative surveys, 2) qualitative interviews and 3) member checking.

- *Phase 1*: *Survey* - The RC Survey assessed the communication patterns and relationships among the various stakeholders and "Tables".
- *Phase 2*: *Individual Interviews* - An interview guide was used to ask key informants (KI) their experience participating on the "Tables" and views on health systems integration by telephone.
- *Phase 3: Member Checking (MC)* was done to validate the research findings.

The RC Survey includes seven questions in which four are on communication patterns (frequency, timeliness, accuracy, and problem-solving) and three are about stakeholder relationships (shared goals, shared knowledge, and mutual respect). The RC Survey responses are based on a five-point ordinal Likert–scale, with ratings of "one" as the worst response and "five" as the best for each RC dimension (Gittell, 2000). "Zero" indicates the response is "not required". The RC Index is an average of the seven dimensions used to determine the strength of the RC. In this study, the strength of RC was "Strong" if the RC Index was ≥4, "Moderate" if the RC Index was 3 to 3.99, and "Weak" if the RC Index was <3.

Sample Selection

A purposive sampling method was used where health administrators and leaders on the "Tables" were invited through an email to complete the online survey (SurveyMonkey®). Respondents who voluntarily completed the survey were asked if they wished to participate in a telephone interview. The principal investigator then scheduled a 30-minute-interview with key informants using an interview guide, which included semi-structured and open-ended questions.

RESULTS

Data collection was from January 2018 to December 2019. For Phase 1, the survey response rate was 62% (n=45). The RC Survey analysis included mean and variance to compare between stakeholders and "Tables". For Phase 2, twelve telephone interviews were conducted in which the responses were recorded, transcribed and organized into emergent themes. Health administrators and leaders informed the research results. Table 1 describes the participants for the surveys and interviews.

TABLE 1
PARTICIPANTS FOR THE SURVEY AND INTERVIEWS

Stakeholder Groups	**Survey**	**Interview**
Health Region	2	1
Hospital Sector	5	1
Primary Care	10	1
Community Sector	14	5
Specialty Communities	2	0
Long-Term Care	2	0
Mental Health	8	4
Public Health	2	0
Total	**45**	**12**
Sub-Region Tables	**Survey**	**Interview**
Suburban 1	10	3
Suburban 2	10	3
Urban 1	5	0
Urban 2	11	1
Rural 1	6	3
Rural 2	3	2
Total	**45**	**12**

For Phase 3, member checking was done with five health region leaders at the LHIN. Methodological triangulation was used to identify common constructs from Phase 1, Phase 2, and Phase 3.

The key findings were:

1) Variability in the viewpoints among stakeholder groups;
2) Common constructs were identified by the "Rural Tables" and "Suburban Tables";
3) Emergent themes to build successful cross-sector collaboration were identified; and
4) Development of a policy framework on "how to" build cross-sector collaboration to achieve health systems integration for health administrators, leaders and policymakers

Finding 1: Variability in the Viewpoints Among the Stakeholder Groups

The RC Survey results showed variability in the communication pattern and collaboration among the stakeholder groups. The results are presented in Table 2: Relational Coordination Index by Stakeholder Groups (Mean and Standard Deviation). Based on the survey results, the RC Index was "weak" rated by the Hospital Sector and Long-Term Care, and "moderate" rated by Health Region, Primary Care, Community Sector, Specialty Communities, Mental Health, and Public Health.

TABLE 2
RELATIONAL COORDINATION INDEX BY STAKEHOLDER GROUPS
(MEAN AND STANDARD DEVIATION)

Relational Coordination Index (Ratings by Stakeholders)															
Health Region (n=2)		Hospital Sector (n=5)		Primary Care (n=10)		Community Sector (n=14)		Specialty Communities (n=2)		Long-Term Care (n=2)		Mental Health (n=8)		Public Health (n=2)	
$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
3.54	.33	2.92	.37	3.06	.74	3.03	.79	*	*	2.76	.29	3.41	1.03	3.18	.88

Legend
Weak RC Strength (RC Index = ≥4)
Moderate RC Strength (RC Index = 3-3.99)
Strong RC Strength (RC Index = <3)

***missing data**

Note: There were small samples (n=2) for the Stakeholder groups, including Specialty Communities, Health Region, Long-Term Care and Public Health

In addition to the surveys, the interviews illustrate the viewpoints of the stakeholder groups**:**

Viewpoint of the Health Region

Based on the survey results, the RC Index strength was "moderate" rated by the Health Region. A Health Region Leader's perspective follows: "*Right now, the LHIN approach is to call the agencies and participants with the expression of interest. As you work together, you get to know each other and then probably identify issues you would like to tackle. It's getting to know each other*." (KI 10)

Viewpoint of the Hospital Sector

Based on the survey results, the RC Index strength was "weak" rated by the Hospital Sector. A Hospital Leader stated, "*We want to connect with community partners already doing the work. We're an acute care facility and don't do community work. There has to be an element of community work, or the community has to bring the patient back to the hospital.*" (KI 5)

Viewpoint of Primary Care

Based on the survey results, the RC Index strength was "moderate" rated by Primary Care. A Primary Care Leader mentioned, *"The next level is how does [Primary Care] integrate or collaborate with a hospital and other service providers. That's the part we haven't done yet. I mean we as a system."* (KI 1)

Viewpoint of the Community Sector

Based on the survey results, the RC Index strength was "moderate" rated by the Community Sector. A Community Leader shared, *"At the beginning, the expression of interest emphasizes that you don't represent your organization and you represent your own expertise or as a stakeholder in the sector. People are people when you work in the organization; you're bound to have this kind of self interest."* (KI 9)

Viewpoint of Specialty Communities

Based on the survey results, Specialty Communities did not rate the RC Index strength. No interviews from the Speciality Communities (e.g., French or Indigenous Communities) existed.

Viewpoint of Long-Term Care

Based on the survey results, the RC Index strength was "weak". There were no interviews from Long-Term Care.

Viewpoint of Mental Health

Based on the survey results, the RC Index strength was "moderate" rated by Mental Health. A Mental Health Leader said, *"There's a distance between hospitals and community health service providers and others. If you brand it from primary, acute and community-based providers, it's three broad categories, there's divisions and silos within each of those three categories."* (KI 6)

Viewpoint of Public Health

Based on the survey results, the RC Index strength was "moderate" rated by Public Health. There were no interviews from Public Health.

Finding 2: Common Constructs Were Identified by the "Rural" and "Suburban" Tables

Based on the survey results, the RC Index was "weak" rated by Suburban 1, Suburban 2 and Urban 1, and "moderate" rated by Urban 2, Rural 1 and Rural 2. The results are presented in Table 3: Relational Coordination Index by Tables (Mean and Standard Deviation).

TABLE 3
RELATIONAL COORDINATION INDEX BY TABLES
(MEAN AND STANDARD DEVIATION)

Relational Coordination Index (Ratings by Tables)											
Suburban 1 (n=10)		**Suburban 2 (n=10)**		**Urban 1 (n=5)**		**Urban 2 (n=11)**		**Rural 1 (n=6)**		**Rural 2 (n=3)**	
$\bar{X}$	**SD**	$\bar{X}$	**SD**	$\bar{X}$	**SD**	$\bar{X}$	**SD**	$\bar{X}$	**SD**	$\bar{X}$	**SD**
2.66	.81	2.88	.60	2.82	.81	3.38	.70	3.68	.22	3.73	.15

Legend

Weak RC Strength (RC Index = ≥4)
Moderate RC Strength (RC Index = 3-3.99)
Strong RC Strength (RC Index = <3)

Note: There were small samples (n=3) for Rural 2

In addition to the surveys, the interviews illustrate the viewpoints of the Tables**:**

Viewpoints of Suburban Tables

Based on the interview responses from two Suburban Leaders, there was a lack of communication and shared knowledge, *"When a patient is receiving care from various health care providers and the providers have no idea who their patient is drawing support from, it's just creating duplication and silos."* (Subregion 1, KI 6) and *"To name another issue people are wrestling with is there's some anxiety about the changes that will happen around rupture of different programs and service providers."* (Subregion 2, KI 1)

Based on the interview responses from two Suburban Leaders, there was a lack of shared goals and mutual respect, *"We're not even quite there from a planning perspective, we don't have goals that were all identified and signing onto addressing."* (Subregion 1, KI 6) and *"Those attending those planning tables still partly have self-interests in planning services for their organization."* (Subregion 2, KI 9)

Viewpoints of Rural Tables

Based on the interview responses from two Rural Leaders, there was openness to communication and shared knowledge, *"As the tables came together, we started talking about [it]. Everyone brought their part*

to better understand the profile of particular people that we want to serve in those areas." (Rural 1, KI 10) and *"There's a lot of resource and information sharing happening. There's been an increase in education and awareness circulated around events/services that's already naturally started."* (Rural 2, KI 11)

Based on the interview responses from two Rural Leaders, there was a willingness to develop shared goals and mutual respect, *"Because of the level of maturity of these groups, because they've worked together closely before, it lends itself to being able to forge ahead and not have disruptive stage other groups might be brand new."* (Rural 1, KI 10) and *"Based on the group's diversity of backgrounds, there's been a lot of respect and consideration to other viewpoints. Everybody has felt, seen, heard, and understood."* (Rural 2, KI 11)

Common Constructs Were Identified by the "Suburban Tables" and "Rural Tables"

We used methodological triangulation from the RC survey, interviews, and member checking to identify the common constructs. As a proxy for each "Table", we calculated the RC Index, an average of seven dimensions. When comparing the RC Index, the "Rural Tables" had "higher" scores compared to the "Suburban Tables". Based on the interviews and member checking, the common construct identified from the "Rural Tables" was "inter-dependency". However, the common construct identified from the "Suburban Tables" was "inter-organizational challenges".

Finding 3: Emergent Themes to Build Successful Cross-Sector Collaboration

Based on the thematic analysis of the qualitative interviews, emergent themes for key success/enablers, and challenges/barriers were identified from the interview respondents (n=12)**:**

Key Primers for Success:

100% of the respondents reported the importance of systems change mindset and interdependency, 92% emphasized positive inter-organizational relationships, and 83% valued self-organizing capacity. The following respondent statements support this:

- Systems Change Mindset - *"The sense where everybody operates in their own vacuum are gone."* (KI 3)
- Inter-dependency - *"There's been a lot of ah-ha moments at the table where I think every single one of us has kind of went, oh, we didn't know that about us." (KI* 2)
- Positive Inter-organizational Relationships - "*Because of the evolution of the maturity of the group working together over the last couple of years, bringing the sub-region into the new collaborative table has been fairly easy at bringing people together."* (KI 10)
- Self-organizing Capacity - *"If we can figure it out, small bits at a time, for really complex clients and trial things and then learn from those trials and then make changes as we see the need to make changes, I think that's how we build integration."* (KI 12)

Enablers

100% of the respondents reported the need to include collaboration in policies and 83% the need for further integration. The following respondent statements support this:

- Need to Include Collaboration in Policies - "*We're actually talking to each other, which hasn't happened before. I'm hopeful we will come up with some good solutions through these conversations. But without that dialogue occurring we're never going to get there*." (KI 1)
- Need for Further Integration - "*We've done group work at the table to look at the major issues in the neighborhoods. We did a voting and there was a fair bit of consensus*." (KI 3)

Challenges

Challenges were noted with inter-organizational relationships (92%) and Relational Coordination (58%). The following respondent statements support this:

- Challenges with Inter-organizational Relationships - *"We need to be moving in the direction of more collaboration between organizations because there is clearly a lot of fragmentation and silos that have been inadvertently setup within the system."* (KI 1)
- Challenges with Relational Coordination - *"Even there's information shared, I don't think it's leading change."* (KI 1) and *"That is, part of the trust issue, it's not even an issue of trust it's an issue of protecting turf."* (KI 6)

Barriers

Barriers were specified by 92% of the respondents. Example quotes are provided.

- System Barriers - *"We don't always find the system is ready and lots of folks who are not. That's the challenge."* (KI 2) and *"The high vast majority of people in my agency are frontline service providers and they're not really talking about integrated care."* (KI 6)

Finding 4: Development of a Policy Framework on "How to" Build Cross-Sector Collaboration to Achieve Health Systems Integration for Health Administrators, Leaders & Policymakers

Due to challenges in building cross-sector collaboration for health systems integration, a policy framework is needed. As identified from the interviews, *"Let's be mindful around governance, structures, accountabilities and responsibilities."* and *"At the end of the day, the big policy piece is around structure and agreements. Like if you were to map future state model against what that service agreement as it ties to funding and service targets."* (KI 6) A policy framework on "how to" build cross-sector collaboration to achieve health systems integration was developed. The five recommendations for health administrators, leaders, and policymakers are: 1) Need structures to support inter-organizational capacity, 2) Address healthcare as a complex adaptive system, 3) No one-size-fits-all model for successful integration, 4) Consider the context among the "Tables", and 5) Evaluate collaboration and performance.

1) *Need Structures to Support Inter-Organizational Capacity*

   There is a need for structures to support inter-organizational capacity. As reported by the interviews and member checking, *"There needs to be more structure applied including what the decision-making process should look like."* (KI 1), and *"The mandate was unclear, with little governance structure or accountability for performance, which resulted in challenges among the "Tables", including ambiguity of goals, protection of turf, and motivation to engage"*. (MC)

2) *Address Healthcare as a Complex Adaptive System*

   There is a need to address healthcare as a complex adaptive system, particularly "systems change mindset", "inter-dependency", "inter-organizational relationships", and "self-organizing capacity". See sample respondent statements reported by the interviews and member checking:

   - Systems Change Mindset - *"It's about time that we look at the health care sector as a whole. We want to talk about primary, acute and community-based health service providers."* (KI 6)
   - Inter-dependency - *"It's been collaborative with good engagement. As things roll, you have people doing what you need them to do, even when you're not looking."* (KI 12)
   - Inter-organizational Relationships - *"The group is in its infancy. We're more comfortable with each other sharing our thoughts, making sure there were opportunities for dialogue."* (KI 4)
   - Self-organizing Capacity – "*Some participants had prior history and experience working together, which have made it easier to build on collaboration."* (MC).

3) *No One-Size-Fits-All Model for Successful Integration*

There is no 'one size-fits-all' approach for successful integration. During the interviews, the health administrators and leaders were asked regarding their preferred approach for systems integration: Sixty-seven percent of the respondents preferred a "Top-Down" approach, 67% a "Bottom-up" approach, and 50% believed in both approaches of "Top-down and Bottom-up". Sample respondent statements follow:

- "Top-Down" - *"To start integration from top down is easier because you need leadership to have the mission to look at integration. If the organization or some stakeholders have that kind of mission, they're determined to start new integrated initiatives."* (KI 9)
- "Bottom-up" - *"I think the grassroots or more dynamic approach is more effective that people are participating. I don't know if that's from a greater sense of ownership, rather than a top-down approach, which I think people become a bit more passive with."* (KI 4)
- "Top-down and Bottom-up" - *"The ministry's going to provide some directives in terms of approach and probably consistency across the province. We're doing this integration, but it's the steering committees that are going to make it happen and come up with the ideas on how it's going to work. It's grassroots and bottom-up, but also top-down too."* (KI 10)

4) *Consider the Context Among the "Tables"*

It is important to consider the context among the "Tables". Differences among the "Tables" were explained by key informants and from member checking:

- Suburban Tables – A key informant reported, *"People are relatively nice to each other. But that doesn't mean they trust each other though."* (Suburban 1, KI 6). As per member checking, "*The 'Suburban 1 Table' worked hard on communication, knowledge sharing, and goal setting. There was no formal intervention in the 'Suburban 2 Table'."* (MC)
- Urban Tables – In these quotes, it was explained that *"Urban is a totally different ball game. Every table will have its different nuances and flavors and other social determinants of health."* (Health Region, KI 10) and "*The Urban Tables were challenging because there were distinct diverse populations, and three working groups were formed."* (MC)
- Rural Tables – These quotes described the Rural Tables, "*It's a smaller table and is a well-knit group. It is a long journey, but the group was able to make decisions, and everyone's participating well."* (Rural 2, KI 11), and "*The Rural Tables in smaller communities are accustomed to collaboration due to necessity and limited resources."* (MC)

5) *Evaluate Collaboration and Performance*

As identified from the interviews and member checking, there is a need to i) Address challenges in collaboration, ii) Create opportunities for collaboration, and iii) Evaluate performance and outcome measures. Sample respondent statements follow:

i. Address Challenges in Collaboration - "*To share good practice with others and collaborate is not easy for people to buy in or give up what they're doing*." (KI 9) and "*Some of the members did not continue their participation or only attended when needed. As a result, this made it very difficult for continuing the work planning and building collaboration at these Tables*." (MC)

ii. Create Opportunities for Collaboration - *"We're driven by our performance requirements that don't recognize integrated care or networking."* (KI 3) and *"It's not easy to do and it takes a lot of time and impact on other things. It's finding that balance - time, people, and money."* (KI 8)

iii. Evaluate Performance and Outcome Measures - *"There needs to be a joint agreement about integration, like a code of integration everybody signs on for. To me that would be a start and because if you signed up then you've got a little bit more skin in the game, you know?"* (KI 2)

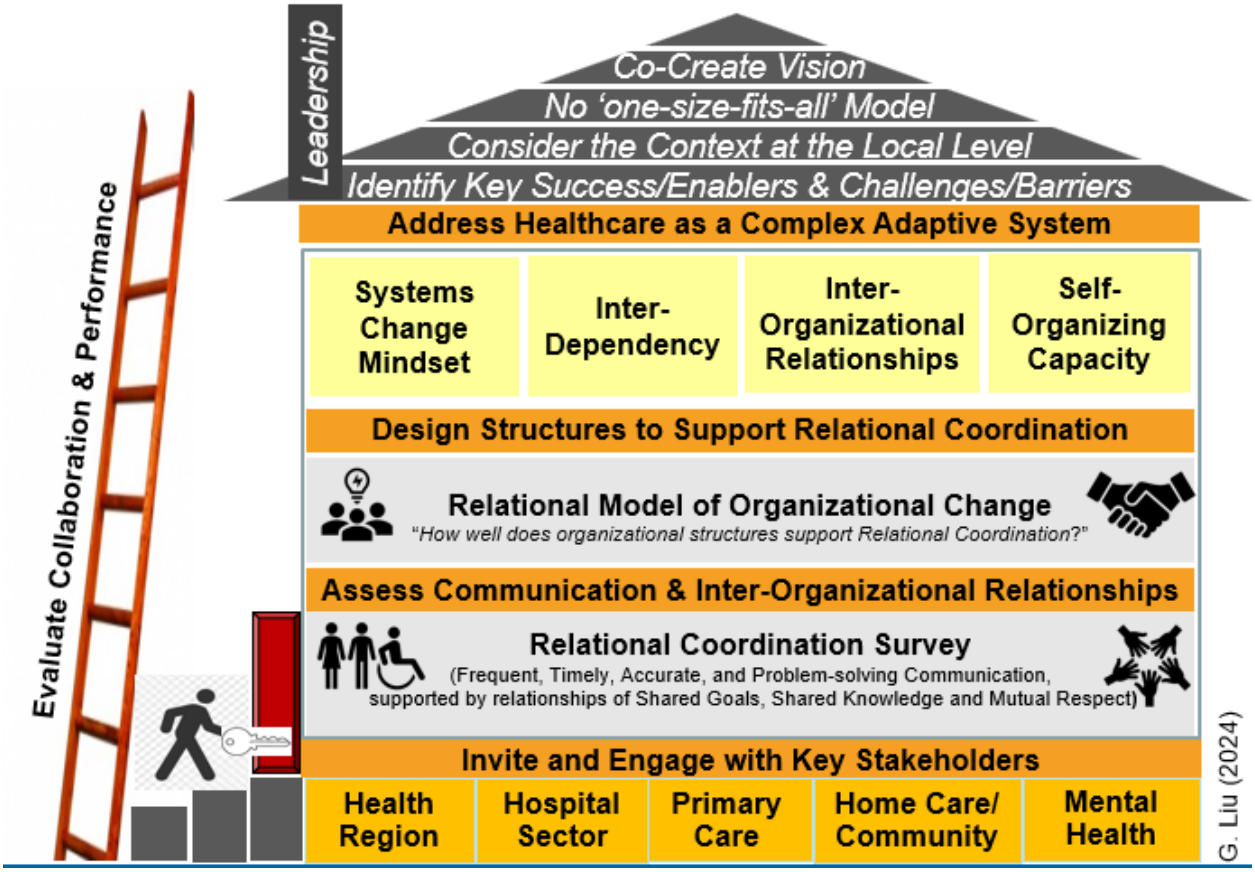
DISCUSSION

This research validates that there is no 'one-size-fits-all' model for successful integration, which is similar to the findings identified by Suter *et al.,* (2009); whereby there is no firm empirical foundation for specific integration strategies and processes. In the current literature, there is a lack of detailed information on "how to" enable successful integration (Suter *et al*., 2009) and explanation on "how" the process of collaboration unfolded (Chircop *et al*., 2014). In this research, we conducted surveys and interviews among health administrators and leaders to understand the collaborative process. We recommend that leaders view healthcare as a complex adaptive system; to allow the system to transform, change, and develop inter-dependencies, inter-organizational relationships and self-organizing capacities (Liu & Tsasis, 2022). These findings align with the recent literature, in which the leadership choice and inter-organizational relations largely influence the success of cross-sector collaborations (van Vooren et al., 2020), and trusting relationships among its leaders (Martsolf et al., 2018; Grant, 2022). In this study, from the insights provided by the health administrators and leaders of these newly established "Tables", we have a better understanding of the collaborative processes involved.

Since there is a lack of evidence on "how to" achieve cross-sector collaboration, we developed a policy framework for health systems integration and transformation for health administrators, leaders and policymakers. A policy framework on "how to" build cross-sector collaboration was developed using the metaphor of a "house" to depict the key components, including patients (entering the door), stakeholders (foundation), structures (frame), strategy (windows), leadership (chimney), vision (roof) and evaluation (ladder) to achieve health systems integration. While this policy framework was proposed in the health systems integration context, this framework may be useful in other contexts where the work is highly inter-dependent and complex**,** involving multiple stakeholders.

As shown in Figure 1: Policy framework "how to" build cross-sector collaboration for health systems integration, the framework focuses on involving patients in the community (door and key). The foundation represents the need to invite and engage with key stakeholders. The frame includes assessing communication and inter-organizational relationships and designing structures to support RC. The windows emphasize the strategy to address healthcare as a complex adaptive system. The chimney and roof represent leadership and vision. The ladder supports evaluation and performance.

FIGURE 1
POLICY FRAMEWORK "HOW TO" BUILD CROSS-SECTOR COLLABORATION FOR HEALTH SYSTEMS INTEGRATION



Door and Key

In using the house as an analogy, as the "patient" enters the "door", (which represents access to services), patients should receive timely services, with the right provider at the right place. The "key" depicts the patients' experience, which should be the premise for building cross-sector collaboration. It is important to focus on the consumers (Winters et al., 2016), and include the voice of patients and local communities in these planning "Tables".

Foundation

The foundation of the "house" represents stakeholders (e.g., Health Region, Hospital Sector, Primary Care, Home Care/Community, Mental Health). It is essential to invite and engage with key stakeholders and work collaboratively across organizations or sectors to promote clinical engagement and cross-sectors collaboration (Reed *et al*, 2014). There are factors which enable or hinder inter-organizational collaboration, including selecting partners with complementary skills and expertise, identifying common objectives, clarifying roles and guidelines, monitoring activities, communicating frequently, building trust and personal bonds, retaining separate identities, and formalizing structures and processes (Tsasis *et al.*, 2015).

Frame

The frame provides structural support, emphasizing the importance of assessing communication and inter-organizational relationships, and designing structures to support RC. To assess communication and

inter-organizational relationships, the RC Survey can be used and then the survey scores can be shared among the stakeholders to provide a visual mapping for health administrators and leaders to identify the areas of strength and opportunities for improvement (Gittell, 2016).

There were no formal structural changes implemented in this research. However, as per RMOC, shared accountability and rewards are important to connect across the roles to support the development of shared goals, shared knowledge, and mutual respect across roles (Gittell, 2016). Since structures alone cannot create high-quality communication and relating patterns, the RC Survey offers a tool to assess and inform the design of structures that support and impact the new patterns of coordination and collaborating (Gittell *et al.,* 2016).

Windows

The windows represent the strategy needed to address healthcare as a complex adaptive system by having a "systems change mindset", "inter-dependency", "inter-organizational relationships", and "self-organizing capacity". These four emergent themes for successful cross-sector collaboration were identified from the interviews are related to complex adaptive systems and RC lens conceptually. It is important to address healthcare as a complex adaptive system since healthcare is inherently complex and constantly changing; hence, the use of complex adaptive systems theory is appropriate (Tsasis *et al.*, 2012).

From the interviews, all of the participants appeared to be interested in networking, building partnerships and participating in cross-sector work. This study recognized a "systems change mindset" as a key successful factor for cross-sector collaboration. However, building collaborative networks with individuals, organizations and systems is challenging and requires team learning and systems thinking (Senge, 1990). Thus, policies and management practices should focus on system awareness and information-sharing to identify and understand the roles and activities of others (Tsasis *et al*., 2012).

Interdependency and inter-organizational relationships were featured as important constructs in this study. Unfortunately, healthcare policies fail to recognize the importance of relationship-building, trust, and alignment across organizations and professional groups (Tsasis *et al*, 2012). Particularly in settings with high degrees of task interdependence, uncertainty, and time constraints, RC offers a solution (Gittell, 2000). Stakeholders can better manage their interdependencies through relational capacity and adaptive work (Gittell, 2016). This research has-illuminated the benefits of the use of complex adaptive systems and RC theories and its related constructs of interdependency and inter-organizational relationships.

In this study, self-organizing capacity was identified as a key success factor. In complex systems, order, innovation, and progress can emerge naturally from the interactions within a complex system through inherent self-organization (Plsek & Greenhalgh, 2001). Health system reform should be modified to create the right context and conditions to support self-organization and that future studies be anchored using a complex adaptive systems lens (Tsasis *et al*., 2012).

Chimney

In this analogy depicted as a house, the chimney represents leadership. Uhl-Bien *et al.* (2007) frames leadership as "complexity leadership". Complexity leadership posits that high-quality relationships are needed to manage interdependence among participants in complex conditions, where emergent and adaptive work are needed (Gittell *et al*., 2017). Further research is recommended to understand how leaders can create the right conditions to allow for adaptive capacity when working across organizations.

Roof

Using the house as an analogy, the roof is necessary, which represents the vision. For mapping a vision, we recommend: 1) Co-create the vision, 2) Recognize that there is no 'one-size-fits-all' model, 3) Consider the context at the local level, and 4) Identify key success/enablers & challenges/barriers.

1) *Co-Create the Vision*

First, it is important to co-create the vision by focusing on relationships and building a sense of mutuality and trust (Senge, 1990). Relationships can be further strengthened by a shared vision or sense of purpose, visionary leadership, relationships among partners, and appropriate structures, processes and resources (Danaher, 2011). Developing shared visions, involving leaders across the boundaries, allocating adequate resources, developing novel arrangements or aligning existing relationships, and strengthening connections between sectors is important (Winters *et al*., 2016).

2) *Recognize that There is No 'One-Size-Fits-All' Model*

The research findings in this study align with the literature, where "there is no 'one-size-fits-all' model or process for successful integration, nor is there a firm empirical foundation for integration strategies (Suter *et al*., 2009, p. 16)". Based on this conundrum on whether policy directives be "bottom-up", or "top-down", it has been argued both "bottom-up" and "top-down" approaches are required (Dolan *et al*., 2000). It is recommended that leaders need to adapt and change from a "command and control" to a "negotiate and steer" approach (Leung *et al*., 2016).

3) *Consider the Context at the Local Level*

This study showed contextual differences among the "Suburban Tables" and "Rural Tables" reflected from the interviews and member checking. In our study, it was surprising that the RC Index strength rated by the "Rural Tables" was "moderate", as rural communities usually tend to have more challenges (Zhu *et al*., 2019; Lo & Lockwood, 2022). It is important to consider the local context since there are differences in policy, governance, funding, history, and patient populations in each organization or sector (Tsasis *et al*., 2012). Context affects each part of the system, including political, economic, culture, social and organizational climate, and impacts the mission, funding, and relationships (Corbin *et al*., 2018).

4) *Identify Key Success/Enablers & Challenges/Barriers*

Key success/enablers & challenges/barriers from the perspectives of health administrators and leaders were identified. In a systematic review by National Collaborating Centre for Determinants of Health (NCCDH, 2012), the authors attempted to assess the effectiveness of inter-sector action. However, they concluded that the relationships between sectors and how these relationships contributed to outcomes were not clearly articulated in the interventions; hence, successes and failures may be due to policies or other contextual factors (NCCDH, 2012).

Ladder

Metaphorically, a "ladder" is essential for building a house and can represent the need to evaluate collaboration and performance. To demonstrate improvements in collaboration, health administrators and leaders can use the RC Survey to determine the baseline RC strength and implement strategies to improve the RC dimensions which are "weak" or "moderate". In settings with high degrees of task interdependence, uncertainty, and time constraints, RC can be used to identify improvement areas to achieve high performance (Gittell, 2000).

At the time of the study, the MOH or LHINs did not impose any process-focused or outcome-focused measures to evaluate collaboration and partnership functioning. However, organizational experts suggested innovative methods are needed to align relational work with organizational norms in measurable ways by creating measures and rewards for relational work and including relational work in regulatory or reimbursement systems (Gittell, 2016). As suggested by Liu & Tsasis (2017), all stakeholders need to be accountable on agreed upon outcomes, which may include monitoring performance indicators and measuring outcomes.

Policy Framework on "How to" Build Cross-Sector Collaboration for Health Systems Integration for Health Administrators, Leaders and Policymakers

Despite much literature on health systems integration strategies; however, as per systematic review done by Suter *et al*. (2009), there is no 'one-size-fits-all' model or process for successful integration (Suter *et al*., 2009, p. 16). Similarly, Chircop *et al.* (2014) noticed that most policy-focused publications described collaboration as a strategy to address inter-sector public policy issues; however, the articles failed to report how the collaboration process unfolded. Further research is recommended to better understand how partnership functioning can be strengthened for implementing new programs and policies (Leung *et al*., 2016) and cross-sector cooperation (Vroblevska et al., 2022).

In the current literature, there are no specific methods or tools on "how to" build systems integration, other than the need for cultural change, open communication, and distributed leadership (Ling *et al*., 2012). Due to a lack of substantial evidence to support cross-sector collaboration for achieving successful health integration, a policy framework on "how to" build cross-sector collaboration for health systems integration was developed to fill this gap. This research adds knowledge on cross-sector collaboration, including practice implications and considerations for future research for health administrators, leaders and policymakers.

Practice and Policy Implications

In this research, there was no 'one-size-fits-all' strategy for health systems integration or clear consensus whether policy directives be "bottom-up", "top-down", or "both". For implications for practice and policy, leaders need to address healthcare as a complex adaptive system, due to complex system challenges in multi-sector partnerships (Willis *et al*., 2017). When working with diverse sectors in solving complex problems, leaders must adapt and focus on facilitation, empowerment and a shared vision (Willis *et al*., 2017) and change approaches from a "command and control" to "negotiate and steer" (Leung *et al*., 2016).

Complexity leadership is contrary to top-down perspectives grounded in bureaucratic and control, which posits that high-quality relationships are needed to manage interdependence among participants in complex conditions, where emergent and adaptive work can be achieved without formal leaders to control and provide direct responses (Gittell et al., 2017). Complexity leadership may help to understand how leaders can create the right conditions for adaptive capacity in complex organizations (Gittell *et al*., 2017). Since complexity leadership is a new and developing paradigm, further exploration is suggested for future research.

Considerations for Future Research

Since there was variability among the "Tables", it is recommended that future research should include documentation on the process, context, successes, and challenges. In future studies, it is important to determine if the observed outcomes are related due to policies or other contextual factors. Future research and policies should be directed towards innovative integrated-care models of care, and include measurement of the collaboration while improving health systems performance. Regional studies can allow for policies to be developed in the "middle policy space", create innovative solutions through collaboration, and demonstrate the critical role of regulation and mandates (Leung *et al.,* 2016).

In numerous studies, Gittell *et al*. (2010) used the RC survey to demonstrate that high-performance work systems contribute to improved performance outcomes (i.e., quality of care, length of stay, efficiency). The stakeholders can better manage their interdependencies through relational capacity and adaptive work and improve outcomes (Gittell, 2016). In a blog by Suchman (2013), he concluded that "interdependence is the secret ingredient for peak team performance" (p. 2). Future research should include the RC survey to identify areas of strength and improvement to provide directions for health administrators, leaders and policymakers.

Strength of Research

The findings in this study characterized the process of developing and managing relationships with six newly established "Tables". In this research, we were able to capture how "leaders" from different sectors and various "Tables" work together using the RC Survey. This study was innovative as it used complex adaptive system and RC theories in combination in the context health systems integration for improving collaboration across sectors, rather than in a single organization. The information gathered from this study helps to better understand the patterns of communication and collaboration, key success factors, enablers, challenges and barriers that impact intentional cross-sector collaborative work to achieve health systems integration.

Since it is not easy to determine a "best" strategy for systems integration due to the complex nature of cross-collaborative work in different contexts and settings with various structures and governance, a policy framework was developed to guide health administrators, leaders and policymakers. Emergent themes identified in this research were "systems change mindset", "interdependency", "inter-organizational relationships", and "self-organizing capacity", which aligns with the complex adaptive system and RC theoretical lens.

Limitations in Research

Although the health administrators and leaders who participated in the survey and interviews represented a diverse range of organizations and sectors (i.e., Health Region, Hospital Sector, Primary Care, Community Sector, Specialty Communities, Long-Term Care, Mental Health, and Public Health); some stakeholder groups were not well represented in this study. The survey had lower representation of certain groups (i.e., Specialty Communities, Long-Term Care, Public Health,). There were no interviewees from Specialty Communities, Long-Term Care, Public Health and from the "Urban 1 Table". Since participation was not mandatory; not all the stakeholder groups or "Tables" participated in the survey. Another limitation was that the patient perspective was not represented in this study.

This study had no policy directives, mandate, additional funding, or incentives for collaborating. One Health Region member reported that *"Tables are a nebulous test."* (MC) Additionally, there were no formal structural changes, interventions, accountabilities or performance indicators. It would have been beneficial to link the level of collaboration with standardized outcome measures (i.e., population health); however, as discussed with the LHIN, no formalized outcome measures were used. Another challenge was that each "Table" focused on different population and targets based on the local health needs.

CONCLUSION

This mixed methods research included surveys and interviews, validated using member checking and methodological triangulation. In addition to the RC Survey, we conducted interviews with health administrators and leaders who provided rich details and accounts from their perspectives regarding their lived experience being on the "Tables". Using the emergent themes from the interviews, we identified key success factors, enablers, challenges and barriers to support cross-sector collaboration for health systems integration.

This study developed a policy framework on "how to" build cross-sector collaboration using a "house" as an analogy. This proposed policy framework is unique, as it combines the use of the complex adaptive systems and RC theoretical lens. This policy framework can help health administrators, leaders and policymakers build the relational capacity necessary for cross-sector collaboration to achieve health systems integration.

Next Steps

- For Health Administrators and Leaders, it is recommended that leaders view healthcare as a complex adaptive system. Leaders should have the right mindset to create the right conditions**,** allowing the system to adapt, transform and change by developing interdependencies, inter-organizational relationships and self-organizing and collaborative capacities across sectors.

Leaders may consider using the RC survey to assess and address gaps in communication and build positive relationships.

- Policymakers must include collaboration in policy development and evaluation to drive positive systems changes and related performance outcomes. Successful collaborations at the local levels and broad policy changes are needed at a systems level to enable collaborations across sectors. Also, through relational capacity and adaptive work, the stakeholders can better manage their inter-dependencies and improve their outcomes (Gittell, 2016).
- Future research should be grounded in both complex adaptive systems and RC theoretical perspectives. Complexity leadership can be further explored to inform how leaders can best support relational capacity and demonstrate performance outcomes. Further evidence is required to test this policy framework for improving collaboration in various contexts.

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