Journal of Hospital and Healthcare Administration

GAVIN PUBLISHERS

A Case Study of Engagement within Strategic Clinical Networks: An Unexplored, Yet Vital Ingredient for Success

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Abstract

Purpose: System-wide changes in healthcare require the engagement of multiple clinicians, organizations, and patient and families. However, health care systems struggle to effectively engage these stakeholders in large-scale transformation. This study described stakeholder engagement within the context of quality improvement.

Design/methodology/approach: Some mixed methods, multiple case study approach was utilized. Nine strategic clinical networks and their stakeholders were purposively sampled for maximum variation. Policy makers and regulatory members, leaders, health care providers, patient and family advisors, and researchers participated in individual interviews (n = 117). Other data sources included documents (n = 71) and meeting observations (n = 15). The integrated cross-case analysis utilized a thematic approach and triangulation of the data.

Findings: Three robust and common themes were identified: [1] the central role of engagement to implementing initiatives; [2] layers and levels of engagement; and [3] conditions impacting engagement. Successfully implementing and sustaining initiatives was closely tied to the intensity of stakeholder buy in and participation throughout the change process.

Research limitations/implications: The study data does not provide a solution to the challenges of stakeholder engagement, but does outline several factors that impact engagement, notably timing of engagement efforts messaging across the system, aligning priorities of stakeholder groups, and contextual factors.

Originality/value: This study provided and in-depth description of the process of engagement in a large-scale health care system. Evolving organization and health care climates will require strategic planning with partners to stay responsive, anticipatory, and agile to develop and sustain stakeholder engagement.

Background

Engaging stakeholders from varied organizational levels and beyond the boundaries of health systems is essential for healthcare transformation [1-3]. Healthcare organizations have achieved improvements in quality, patient safety, and financial performance when healthcare professionals have been engaged in providing bottom-up clinical input on evidence-based practice changes [4-9]. Successfully implementing and sustaining change also involves clinicians who cooperate as a team and believe in the importance of the initiative on their clinical practice and the microsystem climate [10]. As noted in the NHS Institute for

Innovation and Improvement [11] Sustainability Model, change is more sustainable when health systems attend to process- (i.e., credible change), staff- (i.e., involvement, commitment of leaders), and organization-related factors (i.e., change is compatible with organizational culture, strategic aims, and infrastructure) [12].

To date, research and recommendations about engagement in large system transformation have primarily focused on three essential groups: physicians [5,13,14], patients [15-17], and knowledge brokers [18]. Despite this progress, health systems still struggle with how to successfully engage individuals at all levels and across professional groups to plan, implement, and sustain organizational change [19-23]. Individual healthcare professionals can work in different networks and hierarchies that are not well interconnected, and can have varied power and status, views about quality, settings, and attitudes [24,25]. A recent cross-sectional study within a large health system identified that governance level had a significant effect on perceptions of engagement [26]. Specifically, those closer to the frontline were significantly less engaged in QI projects (not at all to slightly engaged) than those higher up in the governance hierarchy (very or extremely engaged). In their large UK-based review, Wilkinson, Powell [25] highlighted that clinician engagement in Quality Improvement (QI) remains a long-standing issue influenced by clinicians' attitudes about political and local contexts, organizational turbulence, and further involvement of patients. Together, these results suggest that there may be substantial work to be done by health systems to engage stakeholders in change.

One barrier to advancing this work is that engagement has not been well defined or described in healthcare improvement. Engagement within an organizational employee context refers to a multidimensional construct of psychological states, dispositions/traits, and behaviors-both internal and observable characteristics of individuals [27-30]. In contrast, public participation models depict engagement as a process where stakeholders are involved in shared decision making through activities that are progressively more participatory, transformative, and democratic [31-34]. Multiple implementation and QI models include engagement as a key construct [35-39] but do not provide clear definitions of engagement and vary in their conceptualizations, from engagement as a process or a mechanism to an outcome of implementation [40].
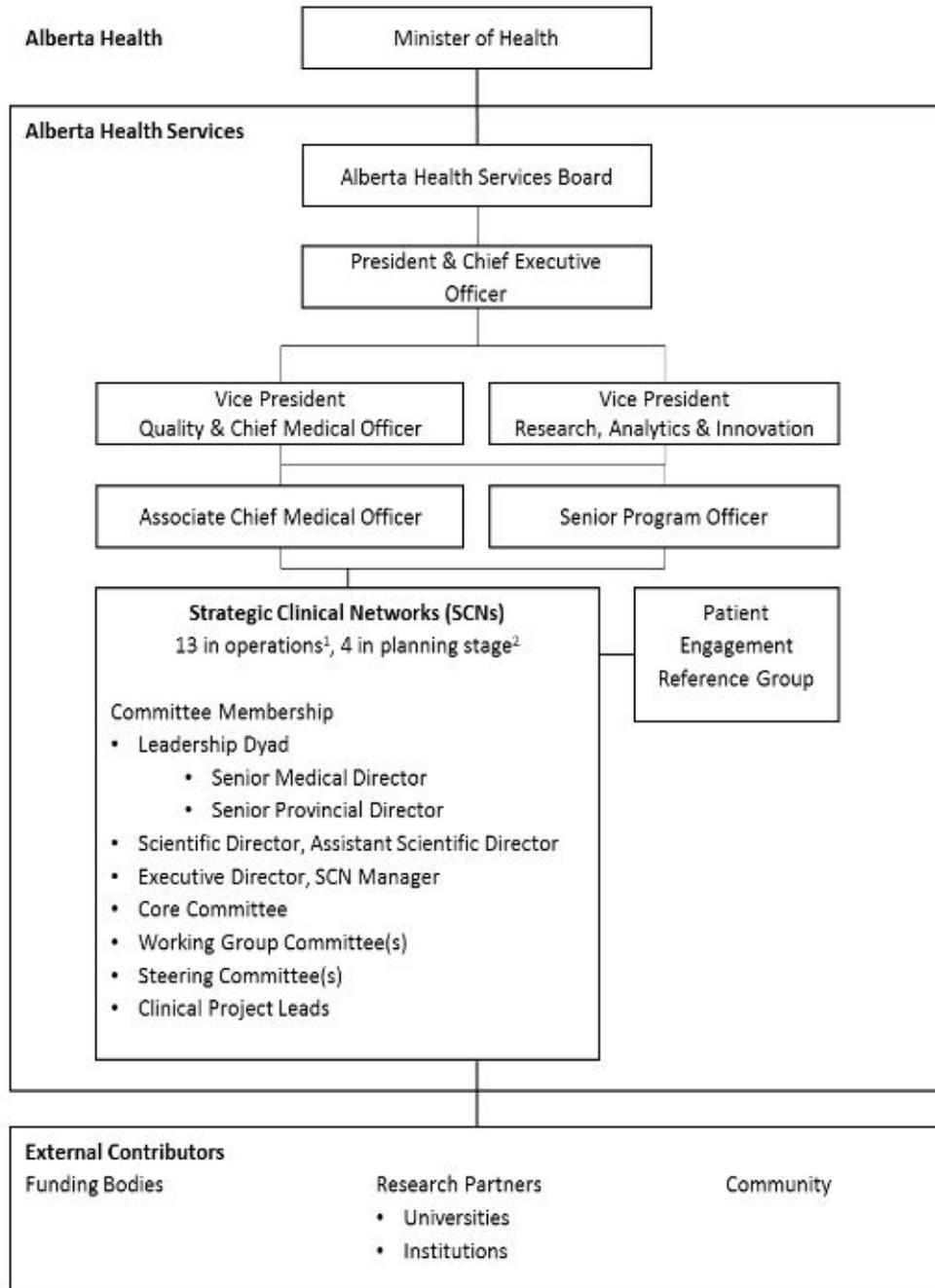
The process of engaging, for example, entails using a "combined strategy" to "attracting and involving appropriate individuals (p. 11) in the Consolidated Framework for Implementation Research [35] and "Obtaining explicit buy-in from critical stakeholders and fostering a supportive community/organizational climate" (p. 468) in the Quality Implementation Framework [37]; neither model clearly details effective strategies or how to achieve buy-in and a supportive climate. To further explicate engagement in healthcare improvement, we recently conducted a large qualitative study of stakeholders' definitions of engagement [40]. Regardless of governance level, stakeholders defined engagement as [1] varying levels of active participation from willing and committed stakeholders; [2] shared focus and decision-making around relevant change; and [3] respectful and sincere two-way interactions initiated early in the change process.

Building on this definition, the purpose of this study was to understand how the engagement process happens within a healthcare implementation context and the factors that influence engagement-a critical first step before understanding how engagement impacts QI outcomes and organizational performance. This longitudinal integrated knowledge translation [41,42] study took advantage of the reorganization of the healthcare system and the development of a new governance strategy to engage multiple stakeholders to advance the quality Agenda-Strategic Clinical Networks (SCNs)-in the Province of Alberta, Canada.

Methods

Context

Similar to mandated networks described by Cunningham, Ranmuthugala [43] and Braithwaite and Westbrook [44], SCNs in Alberta were established and stewarded by the provincial health system, Alberta Health Services (AHS) in 2012. AHS serves 4.2 million residents across 5 geographically defined operational zones. SCNs were envisioned with a formal mandate to [1] improve outcomes for patients; [2] become engines of innovation to test, spread, and scale improvements; [3] engage all partners across the health eco-system (patients and families, policy makers, managers, clinicians, and physicians) in solving clinical issues; and [4] align with operational zone and strategic/business planning processes (Figure 1).

Alberta Health — Minister of Health

Alberta Health Services
- Alberta Health Services Board
- President & Chief Executive Officer
- Vice President Quality & Chief Medical Officer
- Vice President Research, Analytics & Innovation
- Associate Chief Medical Officer
- Senior Program Officer

Strategic Clinical Networks (SCNs)
13 in operations[1], 4 in planning stage[2]

Committee Membership
- Leadership Dyad
  - Senior Medical Director
  - Senior Provincial Director
- Scientific Director, Assistant Scientific Director
- Executive Director, SCN Manager
- Core Committee
- Working Group Committee(s)
- Steering Committee(s)
- Clinical Project Leads

Patient Engagement Reference Group

External Contributors

Funding Bodies	Research Partners	Community
	• Universities	
	• Institutions	

[1]Addiction & Mental Health; Bone & Joint Health; Cancer; Critical Care; Cardiovascular Health & Stroke; Diabetes Obesity & Nutrition; Emergency; Kidney Care; Senior's Health; Surgery; Maternal; Newborn, Child & Youth; Respiratory
[2]Aboriginal Health & Public Population Health; Gastrointestinal Health; Neuroscience; & Primary Health Care

Figure 1: The governance structure for Alberta strategic clinical networks.

Illustrates the governance model of Alberta's SCNs. Central to each SCN's governance is a core committee (approximately 35 individuals) designed to facilitate an active interface between patients, clinicians, researchers, policy makers, departmental expertise, and operational zone and clinical leads. These individuals are instrumental in planning SCNs initiatives, designing, and providing guidance to operational units about implementation of initiatives, and supporting evaluation of the impact of initiatives. While the SCNs leadership dyads (Senior Provincial Director and a Senior Medical Director) are accountable to the AHS Senior Executive leadership for the oversight of SCNs and their initiatives, the SCNs do not have operational authority for implementation of initiatives.

Each SCN typically has 3-5 signature projects based on key priorities (e.g., development and implementation of a post-surgical clinical pathway in elderly patients), initiatives that support signature projects or specific needs within the province (e.g., development of provincial standards for the use of diagnostic tests in the emergency department), and internally and externally funded research and innovation projects. Some of the projects are conducted in partnership with other SCNs and organizations, and each SCN may have upwards of 15 projects/initiatives at any given time.

SCNs were developed as a provincial knowledge translation strategy that required engaging stakeholders in synthesizing evidence and translating this evidence into innovations (e.g., clinical pathways). Hence, the simultaneous implementation of multiple SCNs provided an opportunity to describe important similarities and differences in engagement strategies and challenges experienced by distinct organizational units within the same healthcare system.

Design

The research presented here is part of a larger longitudinal, pragmatic evaluation of the effectiveness of 9 SCNs. This study employed some mixed methods, comparative case study approach [45]. Case study research provides the opportunity to create a comprehensive description of cases through multiple data sources that are interpreted collectively. Data were collected for this sub-study (Phase 1) between September 2013 and November 2014 using document review, interviews, and observations. Following individual analysis of cases (i.e., each SCN), cross-case analysis was conducted to explore cross-cutting themes and variations between SCNs to help extend transferability of findings to other contexts [46]. A conceptual framework guided the larger program of research, developed from pilot study findings and a comprehensive literature review, which were merged into a modified input-process-output model of team effectiveness [47] with knowledge translation [48] and engagement (Figure 2).
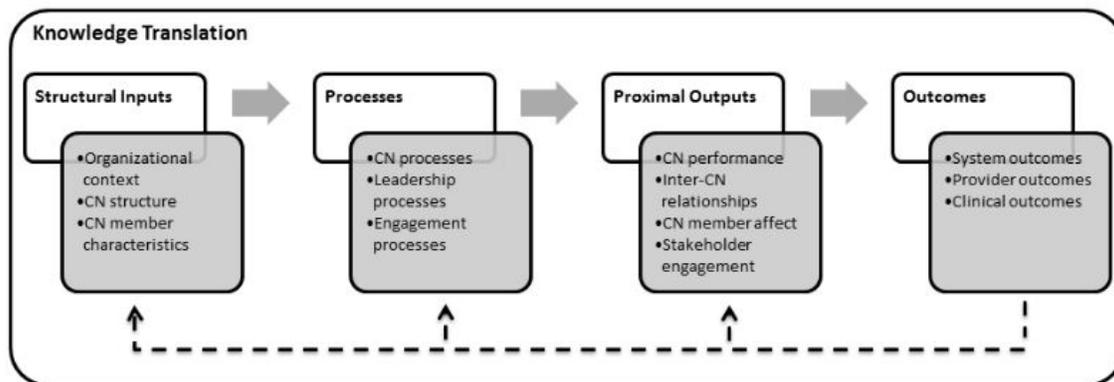

Figure 2: Conceptual Framework.

This paper presents cross-case themes arising from the qualitative data pertaining to the process of engagement.

Procedures

In consultation with executive leaders and network leaders, 9 of 13 SCNs were purposively sampled: Addictions and Mental Health, Bone and Joint, Cancer, Critical Care, Cardiovascular and Stroke, Diabetes, Obesity, and Nutrition, Emergency, Seniors Health, and Surgery.

Participants within these networks (e.g., leaders, project managers, clinicians, business planners, scientists, representatives of other health organizations, patients or family members, patient researchers) were purposively sampled for maximum variation to ensure that interviewees were linked to each of the 9 SCNs,

had varied roles within the SCNs, were from multiple geographic regions, and varied in their professional roles see Table 1.

Characteristics	N	%
Gender		
Female	84	71.8
Male	33	28.2
Age		
18-29 years	1	0.8
30-39 years	11	9.4
40-49 years	20	17.1
50-59 years	29	24.8
60+ years	10	8.5
Professional experience		
<1 year	1	0.8
1-4 years	1	0.8
5-9 years	5	4.3
10-14 years	9	7.7
15-19 years	9	7.7
20-24 years	9	7.7
25+ years	36	30.8
Professional designation		
Registered nurse	20	17.1
Other non-clinician	12	10.6
Physician	11	9.4
Researcher or analyst	7	6.0
Occupational therapist	4	3.4
Executive	3	2.6
Nurse practitioner	3	2.6
Manager, health services administration	3	2.6
Social worker	2	1.7
Pharmacist	2	1.7
Project manager	2	1.7
Physiotherapist	1	0.8
Paramedic	1	0.8

Role within the SCN		
Leader, project manager	23	19.7
Core or working group member	43	36.8
Support	11	9.4
Zone leader	8	6.8
Frontline	23	19.7
Policy maker	9	7.7

Table 1: Participant Demographics (n = 117).

Note: Not all participants completed a demographic survey; therefore, the proportions of some characteristics do not add up to 100% due to missing data for participant characteristics). Participants were recruited from formalized network membership lists and invited to participate in interviews via email. The extended community of AHS frontline clinicians and managers, as well as other key stakeholders outside of the immediate healthcare system (e.g., government policy makers, professional organizations) were recruited using a snowball sampling approach, whereby interviewees were asked to identify other key individuals. Once a participant confirmed interest and provided their contact information, the study coordinator contacted the participant, emailed a consent form, and scheduled a telephone interview. Sampling continued until data saturation was achieved across SCNs; that is, when no new data emerged from the interviews. The point of saturation was assessed using an auditable, structured codebook that detailed changes and further refinement of the coding framework, and the point at which no new themes emerged [49].

Prior to study commencement, ethical approval was granted by the University of Calgary Conjoint Health Research Ethics Board REB13-0783/0781. All participants gave written informed consent, which was reconfirmed at the time of individual interviews. Each participant was assigned a unique identifier and descriptive data were aggregated to maintain participant anonymity.

Data collection

Data were collected iteratively through document review, interviews, and observations. Documents describing the structure, purpose, projects, and progress of SCNs (e.g., project charters, status reports) were obtained electronically through SCN administrative staff (n = 71 documents; 1,500 pages). Document analysis preceded other data collection to provide the research team with a strong contextual foundation about SCNs. This data served to inform the observation template and interview guides (particularly cues) by highlighting aspects of the SCNs that required further exploration and areas where views about current state might vary and require triangulation (e.g., the intended processes as proposed

in SCN project charters compared to the actual or perceived processes that were occurring on the ground). Observations (n = 15) occurred during meetings of SCN core committees (n = 3) and the senior SCN leadership team (n = 9), in addition to operational engagement events (n = 3). A trained observer noted the context and interactions at each meeting using an observation template and produced additional field notes with a Live Scribe Smart pen (Oakland, CA) that facilitated the transfer handwritten notes to a PDF file for analysis. Individual telephone interviews (n = 117; 1,991 transcribed pages) were conducted by trained interviewers using semi-structured interview guides (supplementary file 1). The interview guides were developed from a comprehensive literature review, our conceptual framework, a small pilot study, and from analysis of the document data. Participants were asked about their roles on the SCN, how the SCNs engaged stakeholders, the barriers and facilitators to engagement, and implementing their QI initiatives. Interviews lasted 30-60 minutes, were digitally recorded, and transcribed verbatim.

Data analysis

All documents, observation notes, and transcripts were assigned a unique identifier and imported into NVivo v10 for qualitative data management, indexing, and theorizing. An initial structured codebook, including definitions and exemplar data, was designed based on the conceptual framework and represented the initial hierarchical coding framework. Documents were analysed prior to interview and observations data. Teams of two coders independently examined the entire dataset and assigned sections of text to deductive codes. These broad, higher-order codes served to organize the data and facilitate triangulation across methods and cases. All data that did not appear to fit within the coding framework were retained for further analysis. Once data were deductively coded to the framework, all data (including that that did not fit within the initial coding framework) were then further analysed using a thematic approach [50] that included the inductive process to transform data from individual sources to common, themes involving coding, categorizing, and conceptualizing [46]. The research team subsequently sorted and collated relevant coded data extracts into emerging themes and subthemes. Digital memos provided a record of the analytic process. Bi-weekly analysis meetings with the research team facilitated a negotiated and refined coding framework, and referential adequacy of themes was confirmed by revisiting original data. All changes to the framework and the attending rationale were documented to establish an audit trail.

Results

Three robust, common themes across the SCNs were identified: [1] the central role of engagement to implementing initiatives; [2] layers and levels of engagement; and, [3] conditions that impacted engagement. Themes, subthemes, and representative data are summarized in Table 2.

Themes and subthemes	Exemplar data
1. Engagement is central to successful initiatives	[Engagement] has been a struggle for AHS for a lot of years I think; where there's been all kinds of projects and pilots with difficulty actually fully operationalizing them. And I think we'll have more success when we can involve people earlier on in the actual planning stages and what is the vision of this organization two, three, five, ten years down the road. (P93) Participants want more direction on building relationships within SCNs (Observation note)
2. Layers and levels of engagement-	I've experienced a tremendous amount of progress and success when researchers, physicians, clinicians, and patients or families or the people we serve are included equally in planning and how to make things better and how to improve the quality of service. (P89) Speaker acknowledging that there are different roles and views within different zones; purpose of presentation is to show how SCN and zone partnership could take learnings from one area and create change in other areas (Observation note)

Engagement of geographical and operational zones	We've got representatives from all of the zones…each zone presenting their current state of where their issues and challenges are, and who they are and what kind of services they offer. What their current pressures are and their challenges…what are their barriers, what are their strengths? (P96)
	[Engagement] is starting, but it's not a quick fix…so the first step is the willingness…there is a willingness between the zones and the SCNs to do this…there are some specific things that [the zones] actually see where there's some value add to the SCNs. (P16)
	SCNs were "seeking direction for the operational piece" of how to engage zones and primary care…It was acknowledged that SCNs need to be involved with zones and embedded into zones quality measurements and that supporting systems (IT) needs to come together. (Observation data memo)
	Anticipated barrier: Organizational complexity: Inter-group connection and coordination; Zone and site engagement (Project Charter_8, SCN_6).
	Mitigation plan: Detailed, site-specific coordination and planning; Appoint credible zone and site champions that can provide leadership for implementation (Project Charter_8, SCN_6).
Engagement of frontline providers	Even though [physicians-as-independent-contractors is] a challenge, the only way any of it is actually going to work is if their involved. Because it's the role of any kind of process improvement is involve the end users at the beginning, because then they'll buy into it…And if you don't have the buy-in and someone to voice it from their point of view, then you're very likely not going to end up in being successful. (P24)
	Through discussion it was identified that more appropriate physicians need to be on board with initiatives, more nursing champions and clinical reviewers (Observation notes, zone meeting 2013)
	Clarity of core members required…Ensuring right people sitting at core committee, how is this done?? (Observation note, zone meeting 2013)
	Anticipated barrier: Engagement of primary care physicians; Insufficient depth and breadth of communication and engagement with key stakeholders at the zone and site level. (Project Charter_2, SCN_2)
	Mitigation plan: Engage primary care networks in early planning; Conduct a stakeholder analysis. (Project Charter_2, SCN_2)
Engagement of patient and families	There are patients on each of the SCNs, but I think that that patient engagement may need to be strengthened over time…this is not just an SCN issue; it's an issue that we're grappling with across the health system. How to ensure that the patient voice is heard, and we understand their perspective as we go forward, and really, my assessment is we still have a way to go and SCNs have a way to go to really bring that to bear. (P69)
	Patient engagement lead is involved in recruitment of patient advisors. (Observation note)
	Anticipated barrier: Inability to engage community partners and patients (Project Charter_7, SCN_6)
	Mitigation plan: Partner with other SCNs (Project Charter_7, SCN_6)
3. Conditions impacting engagement	
Timing	We really should have been working with them from the very beginning in defining exactly what their needs were, what their budget requirements, what their staffing requirements and everything were, so that we could be---when we hit the go button we could really get started… having the engagement as early as possible would be certainly one of the key strategies. (P41)
	Anticipated barriers: Engagement and support of families, AHS and contracted LTC sites, community pharmacies and primary care physicians and psychiatrists will add complexity to the project. (Project Charter_9, SCN_8)
	Mitigation plans: Will work through Zones, operators to implement communication plan. Each stakeholder group will be engaged from the beginning of the project. (Project Charter_9, SCN_8)

Priorities	There's the other sites that are less enthusiastic because…perhaps it's not aligning with what their priorities are right now…And that there are too many initiatives happening that they don't have the time and the bandwidth to actually be able to participate in all that's going on. (P41) [The SCN] made really good traction in [one] zone, but then we go out to a different zone and I'm alarmed to hear that, "well, you're not even a priority." Then I see the zone operational plan where they list priorities… we are splattered all over the operational plan…that's nothing to do with what we are doing (P22) Clarity of decision making needs to be actualized (Observation note) Anticipated barriers: Competing organizational priorities, parallel or competing organizational projects (Project Charter_3, SCN_2) Mitigation plan: Leadership to identify and resolve competing interests (Project Charter_3, SCN_2)
Resources	Sometimes we have to creative in how we do it, so we might have to look for alternative sources of revenue or alternative supports or narrow the scope of the project or initiative in order to be able to do it within what we have available to us. So, we really try to work with our stakeholders to see what in fact is doable and feasible. (P41) This is a historical challenge, is the project gets established, the project has staffing, the project staff goes out and does the project and it looks good. The project ends; the project staffing and funding go away. The people doing the work have never owned it. And so, they hold out for as long as their workload and support for it is, but overtime that dwindles and we habitually roll back to what we know best. (P80) This project is highly feasible…The greatest risk is certainty of permanent funding to sustain the enhanced services. (Scope Statement_6, SCN_5)
Targeting messaging	A lot of people are frustrated with the limitations that are currently existing in regard to communications and use of the technology…we need to have current interactive, meaningful information to all of our stakeholders and what we kind of get stuck in working within is very limiting and frustrating. (P3) Need to improve Communications with Staff, Zones, and External Partners for all SCN work (Maturity Framework_6, SCN_9) Anticipated barrier: Resistance to change (Project Charter_8, SCN_6) Mitigation plans: Strong messaging and robust evaluation in place to start demonstrating benefits (Project Charter_8, SCN_6)
Evolving political and health-system climate	The organization itself is a barrier. It's very difficult working in an organization and trying to do long-term strategic things that are to improve the quality of care when you know we have a different CEO almost every month it feels like some days. And you know, who is really running this organization? Is it actually the Minister of Health or is it the CEO? And it's hard to take the politics out of the health care. (P96) What happened for [this SCN] in terms of the projects is that they were so…politically driven. And by that, I mean one was more led by Alberta Health…I'm not sure that people even thought that there could be patient or family perspectives brought into it or they may have thought that they were doing it. (P51) Facilitator describing short-term issue of lack of decision making resting with executive, the current changes, and stall on approval. (Observation notes) Anticipated barrier: Impact on timeline based on implementation uncertainties (Project Charter_2, SCN_2) Mitigation plan: Detailed, site-specific coordination and planning (Project Charter_2, SCN_2)

Table 2: Themes, subthemes and exemplar data from interviews, observations, and documents.

Engagement is central to implementation

Overall, engagement was inextricably linked to implementation of SCN initiatives. Participants when asked about how engagement happens, they often spoke to why engagement was necessary. Most participants described a vital link between engagement for setting priorities and the shared accountability:

One of our main spots for succeeding is going to be having strong linkages of engagement and making people understand what we're doing…being a part of designing what we're doing. So, when we're taking action, it's not going to surprise people and they're going to understand the pluses and the minuses, but they're going to be willing to walk with us down the road because they've helped design where they think we need to go…it will make the implementation of things so much easier (P93).

Given the diversity of SCN projects, there were varied expectations about the intensity and frequency of involvement and input asked of stakeholders as well as the activities that stakeholders participated in, such as planning, prioritizing, and championing across the phases of implementation. Although there was a concerted effort to get stakeholders engaged to create stable and sustained initiatives, participants acknowledged that SCN initiatives were difficult to sustain in conjunction with day-to-day work as SCN activities often occurred in addition to daily care provision, and ongoing organizational initiatives.

Layers and levels of engagement

Multilayer engagement-that is, engagement throughout multiple organizational layers-was a key goal of SCNs given the organizational complexity of the health system. SCNs and their stakeholders supported the idea of a "broad stakeholder SCN engagement plan," suggesting that all professions needed to be represented, as well as rural and regional delegates, as they brought differing perspectives. Implementing and sustaining changes were supported through multilayer engagement because "if you keep [the information] to a small group of people who are really engaged and you don't spread it, then you can't sustain it" (P13).

Engagement of operations

SCN and operational leaders provided an important interface for brokering relationships between SCNs (conceptual health system-wide focus) and operational areas (local logistical-operational focus). Many participants acknowledged that there had been tremendous effort by the SCNs to improve operational engagement, such as having full-day meetings that brought all SCNs to each geographic zone. In particular, the SCNs had become more intentional in working together and were "more in a listening mode…one-on-one" (P53). Several participants noted that having adequate representation from operational zones was a success. As one participant noted, "there's a real value in the synergy that comes from having all the [operational] zones sitting at the table" (P79). Despite improvements, operational engagement remained very challenging:

If the [operational] zones would play ball, great. The zones that don't, (a) you have no levers to pull and (b) you have no incentives to give them and (c) you have no influence over how they're being evaluated and how they're being judged. It makes it really tough (P18).

A key issue for engaging operational areas was implementing projects with time-limited funding, such as research grants. For example, one frontline provider noted that the operational managers and directors above her rejected participating in a project as they were unclear that the funding was going to be operationalized: "it was a 1-year project and all of a sudden then you're asked to sort of continue the program without any funding" (P46).

Engagement of frontline providers

Frontline providers helped establish the critical link between health system-wide strategies and their daily work with patients. Without demonstrating that SCN initiatives were clinically relevant to those who were going to implement it, initiatives were difficult to implement and sustain:

You ask [the frontline], "what's your pain?" Right? Because I think if you do more of a top-down, you're dead in the water (P50).

While physicians were seen as significant influencers and contributors, their engagement was challenging, particularly because they were independent contractors and not employees of the health system. There was a deep desire to figure out how to get physicians more engaged in SCN work and to sit at the decision-making table given their influence on the whole healthcare team:

You're asking busy people with multiple commitments-the university, clinical, administrative-to do extra things…but having said that, people have recognized that the SCN is an opportunity to (a) become re-engaged, and (b) to actually do something that's going to make a difference (P76).

Engagement of patient and families

All SCNs had at least one patient engagement researcher and patient advisory member who sat on the core committee (i.e., the oversight committee for each SCN). Patient and family engagement was described as "the way of the future…a credible kind of a ground level approach...that we need to continue to expand on" (P65). Others highlighted that patients should be integrated throughout SCN activities, beyond the core committee, to help steer research agendas and provide a patient-oriented view of the healthcare system. Challenges to patient engagement were the lack of funding to support capturing more patient experience

(many of the involved patients were volunteers), as well as finding patient and family representatives who were willing to share or speak up. Factors such as the skills, knowledge, interests, and relationships to others in the group contributed to patients having an equal voice and the confidence to share their perspectives. When utilized, the patient and family centered committees linked to the SCNs provided "insight along the patient journey that others wouldn't have…to keep that patient at the forefront of everything they're doing." (P91).

Conditions impacting engagement

Timing

Participants perceived that SCN initiatives had more success when people were involved early in the planning stages to help identify the issues and the potential solutions. Early engagement, particularly by the leadership, helped align SCN and operational priorities, and allowed the SCNs to ask, "What do you need done and how can we help you with that?" (P40). Although early engagement and input from stakeholders was valued, it did not always happen and this resulted in delays and disengagement.

We [the SCNs] don't engage them first. No, no; we just say, "here it is, use it," and they don't like it and they don't want to use it. And then they just say no. (P88).

Operational leaders also emphasized that SCNs needed to synchronize the roll out of initiatives to match the readiness, priorities, and business planning: "it's both timing, sequencing, and then the ability to move the agenda forward." (P104).

Priorities

Competing priorities hindered the engagement of external stakeholders and operations. Participants described how competing priorities resulted in disengagement of stakeholders:

There's all these initiatives that come from every little corner of the province…all of them are important in their own right…We need to be really mindful of how many initiatives we are putting out there because, if you want to talk about disengagement…that is absolutely the first thing that happens to me. (P75).

Some participants acknowledged that there was misalignment between the priorities of SCNs and operations, resulting in "no return back to helping us with our problems" (P102). Initially, projects were pushed out to operations, resulting in a perceived misalignment between the day-to-day work and the SCN change initiatives. Many described the importance of a common focus: "ideas for the projects have to come from the [operational] zones… and then you'd have buy-in from the beginning…because they've identified that that's an issue that they need to fix" (P40).

Resources

Human and financial resources influenced the capacity and capability required to collaborate, create, implement, and sustain achievable initiatives. There was significant investment in SCNs during their initial implementation. However, resources were described by some participants as "bare-bone," unequally distributed throughout the organization with limited or no capacity to draw from elsewhere, and a number of SCN project charters noted the uncertainty of continued funding as a risk to sustaining projects. At the local sites, resources for coordinating or implementing the projects were viewed as insufficient, and sometimes absent. Frontline participants noted that the time and energy required to commit to projects needed to be dedicated, instead of being added to existing responsibilities, especially when multiple initiatives were being implemented:

We're having to interface on multiple initiatives with multiple different people at different levels of the organization. We literally don't have the people or bandwidth to do this. We have more requirement then we ever have had to try and influence strategic direction with fewer resources than we've ever had (P102).

Targeting messaging

Current messaging to encourage engagement did not work for everyone, and the knowledge being shared was "just not sticking" (P116). Developing key messages for each stakeholder group was resource intensive, and some network members suggested that their SCN needed to consult with communication experts:

We know there are limitations on what [SCN members] can do…You can't do one newsletter for everybody and have the same effect…That's very resource intensive (P2).

While SCNs were making efforts to develop better communication systems, network members described how the lack of real-time data and innovative technology, and challenges to accessing SCN project information decreased the ability to effectively target messages, which negatively impacted engagement. SharePoint, the current knowledge-sharing platform, was "not a good enough formalized structure for that [operational zone] dissemination…moving the information out at an individual practitioner level, nurses and physicians" (P49). Many participants identified the need for a clinical portal as an engagement platform; a platform that permitted access to documents for all stakeholders. Some network members perceived that monthly newsletters and reports were a robust way to share knowledge, while others would have preferred an executive summary with bullet points. Frontline providers called for more face-to-face meetings at their sites.

Evolving political and health-system climate

During this study, there were two changes in government,

five CEOs, dissolution and reinstatement of the organizational governance board, among other changes to the organizational chart. Continual changes to both organizational and governmental structure and leadership overtime resulted in perceived instability and uncertainty about expectations, demands, and direction, stalling momentum.

Everyone working at AHS is sort of aching for some stability and so that you can sort of get somewhere…the changes that keep happening obviously cause uncertainty (P24).

SCNs were seen to be making every effort to support transformational change, and participants recognized that change required clear direction, leadership and some degree of stability in order for engagement to occur. Regardless of the changing climate, SCNs appeared to continue moving forward.

Discussion

This study found that engagement was foundational to accomplishing organizational change and successfully moving the goals of QI initiatives forward, particularly when engagement crossed multiple layers of the organization. Without engagement of appropriate stakeholders-and clear expectations and a perceived desire to be engaged-implementation of initiatives was hindered. Engagement of the various operational groups showed improvement over time; the ways SCNs and operations worked together became more intentional. Several factors impacted engagement and subsequent implementation efforts: timing of engagement, messaging across the system, aligning the varied priorities of stakeholder groups, and contextual factors (resources, political and health system climate).

These study findings are concordant with existing evidence that suggests engagement is essential in supporting the advancement and achievement of QI initiatives and clinical networks [51-53], which underscores the validity of the current findings. Several authors have highlighted the importance of engagement to support implementation of both local and system-wide initiatives [3,35]. Curran et al. (2008) suggested that while strategies linking transformation efforts to business-planning infrastructure may initially result in slower progress, they may be more enduring. Furthermore, while involving multiple stakeholders can be costly, broad engagement is essential if the organization is to achieve high quality care and involvement in QI initiatives [51,52].

The study findings also highlight the persistent challenges of establishing and maintaining engagement of various stakeholders in QI initiatives. The lack of detail about specific engagement strategies and their level of success arising in this study could either reflect the state of development/maturity of SCN projects and/or may relate to the nature of the QI initiative. While McInnes, Haines [53] similarly reported the importance of engaging stakeholders

for clinical network success, a detailed description of engagement of various stakeholders and the conditions that impact it are absent in the literature.

This study found that engagement of frontline providers was critical to ensuring initiatives were grounded in established clinical needs and for frontline buy-in. In their commentary about these same networks, Noseworthy, Wasylak [54] remarked that clinicians, physicians in particular, must be positioned in key strategic roles within the service delivery system to create a high-performing health system. This strategic role for physicians and other clinicians is consistent with other scholars who suggest that quality and safety improve when physicians are engaged in their health system [55]. Not unlike physicians, patient care managers occupy a strategic position at the interface between the frontline and other layers of the organization [56]. Managers can play a key role in promoting the uptake of initiatives and support the engagement of frontline providers [57-59]. Frontline staff must be involved in implementation efforts to ensure buy in and to fit the initiative to local circumstances [35,59]. To enhance uptake and buy in from frontline clinicians, initiatives needs to be clinically relevant and based in evidence. Finally, organizational stability is imperative as leadership instability can detract from engagement efforts.

Patient and family engagement was viewed as important to inform the direction of initiatives and provide a patient view of the healthcare system. While patient engagement is advancing at the individual treatment level, and the SCNs and stakeholders perceived that patients are informing more SCN initiatives, however, there is considerable progress yet to be made at program and organizational levels globally [60]. Literature suggests that involving patients and families in QI activities results in improvements in care processes, advances in health literacy, and more effective priority setting [61-65]. Strategies to foster inclusion and expression of voice is needed to facilitate the presence of patient voice [66]. Patients involved in QI activities are positioned at the intersection between the public and healthcare professionals, offering an excellent entry point to document patient/family contributions and to generate a shared understanding of QI from a public rather than solely professional perspective [67].

The findings from this study also indicate that existing technology for sharing, communicating, and collaborating were ineffective and inefficient. Engagement within SCNs would benefit from further development of knowledge sharing pathways and tools, within and across SCNs, and across the organization and community. A simple, accessible platform tool would provide an excellent conduit for continued sharing of implementation resources, knowledge and stories including learning that address the challenges and enablers of SCN. We live in a world characterized by rapid advanced in technologically based communication (with

many people almost entirely linked through technology), yet healthcare stakeholders felt this was a major limitation.

This study identified early engagement, competing and alignment of priorities, resources, targeted key messaging, and a change in political and health system climate as conditions impacting engagement. While some of these strategies have been linked to the broader health services QI and large systems transformation literature, we are unaware of empirical evidence that specifically links these concepts to engagement. A rigorous, evidence-based, and systematic approach to implementation that includes readiness, barrier-facilitator and context assessment should be considered a necessary element of all QI initiatives. While models, frameworks [13] and recommendations [68-70] highlight engagement, they lack evaluative evidence. To date, several models of physician engagement [13,71] and strategies to engage providers in QI have been developed [68-70]. However, there has been little evaluation of these models and strategies using rigorous methods including quantitative measures of engagement [72], and most of the literature pertains to physicians and not to the multidisciplinary healthcare professionals who participate in QI.

The paucity of evaluative evidence for engagement strategies is a recognized gap and requires their rigorous and systematic evaluation, including engagement strategy quality and thick contextual descriptions to understand how and why engagement is (or is not) successful. While the need for multiple stakeholder involvement and potential mechanisms for engagement strategies have been identified [3], the engagement strategies themselves have not been empirically tested. Evaluation of engagement strategies will help bring clarity to the mechanisms by which these strategies work and their relative effectiveness.

Limitations

This study provided an in-depth, cross-case illustration of the process of engagement within multiple SCNs in a provincial health care organization. The study data does not provide a solution to the challenges of stakeholder engagement, but does outline several factors that impact engagement, notably timing of engagement efforts messaging across the system, aligning priorities of stakeholder groups, and contextual factors (i.e., resources, political and health system climate). This study was conducted in a large single payer health system and may not be transferable to other jurisdictions. However, the challenges of stakeholder engagement are likely to be similar across complex health care organizations/systems. Comparison with clinical networks in other health care organizations would strengthen the research. This study was limited by the scope of the documents provided to us and had difficulties accessing frontline professionals, which may have prevented us from achieving full data saturation.

Furthermore, participants were self-selected potentially limiting the representation of all stakeholder perspectives. It is important to note this is a cross-sectional view of engagement, situated within a 5-year longitudinal study, and we recommend comparative case studies to capture the evolving nature of engagement in healthcare initiatives.

Conclusion

This study provided and in-depth description why stakeholders believe engagement is important, who needs to be engaged, and the conditions that impact engagement within in a large-scale health care system. Strategies for engagement should include starting early, ensuring alignment of priorities and that resources are aligned to priorities, as well as organizational agility to help address changing environments. It is important for organizations to put deliberate effort towards discovering the engagement drivers for stakeholders with their local context. Furthermore, governments and health organizations need to provide stable funding to support initiatives that have demonstrated evidence of improvement. The creation of realistic change timelines would allow for awareness, uptake and use, and adequate time to rigorously assess the implementation, process, and clinical outcomes. Evolving organization and health care climates will require strategic planning with partners to stay responsive, anticipatory, and agile to develop and sustain stakeholder engagement.

Competing Interests

Acknowledgements

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