# Technical Report: Benchmarking the Health Leadership in Canada

# 2020

**Written by Jaason Geerts, PhD**

CHLNet 10 YEARS ANS

Canadian Health Leadership Network

Le Réseau canadien pour le leadership en santé

## Preface

Founded in 2009, Canadian Health Leadership Network (CHLNet) is a value network of 42 partners, which extends coast to coast in Canada. We believe that transformation of our health systems can only be accomplished through a commitment to Better Leadership, Better Health—Together. Our work is centred around three value streams: connecting people through dialogue and engagement; advancing health leadership research, knowledge and evaluation; and accelerating leadership practices and capabilities. In 2013/14, CHLNet did a benchmarking study, CHL-Bench, looking at the nature and extent of the leadership gap in healthcare across Canada. That study, a point-in-time snapshot, confirmed there were both a skills gap and an overall "supply-demand" gap, that concerns varied across different health settings and that Canada was not taking leadership development seriously enough.

Five years later in January 2019 under the auspices of our Research and Evaluation Working Group, an expert steering group comprising decision makers and academics was struck to provide stewardship of a second benchmarking effort. Called Bench II, it tracked progress from CHL-Bench to measure progress over time, to identify emerging health leadership challenges and help inform CHLNet's strategic planning process. It is intended to help our network partners, individually and collectively, better understand the importance of building leadership capacity and competencies for leaders today and in the future.

Note: This is the full technical report that contains more data and tables for stakeholders to delve into. A shorter report with Executive Summary, Future Opportunities and Conclusion can be found on www.chlnet.ca.

# Contents

## Introduction

Change and the need for innovation remain forefront in the Canadian health system. National, provincial, regional, and multi-site health organizations are experiencing or have recently undergone major shifts in their models of governance and organizational structures, which require effective change leadership strategies and interpersonal capabilities to navigate successfully. The inception of Ontario Health Teams (OHT's) and the uncertainty surrounding the details of their governance and financing is one of many recent examples. New medical technologies provide unique opportunities for quality improvement and better care; however, they are often expensive and implementing them department- or system-wide can be challenging[1]. Similarly, tightening organizational budgets and an unsustainable rising costs, combined with an aging population with increasingly complex medical needs, impedes achieving the "Quadruple Aim" (i.e. improving the quality of patient care and experience, access to and affordability of care, population health, and the work life of the health workforce)[23]. Furthermore, despite much promotion of its importance, diversity in its many forms (gender, Indigenous Peoples, visible minorities, and others) is still noticeably under-represented in positional roles in health organizations across the country. This is concerning as evidence that suggests that in some cases diverse teams and organisations outperform homogenous ones[4].

In light of these and other tensions, the health system today is increasingly being characterised by *volatility, uncertainty, complexity,* and *ambiguity (VUCA)*[5]. In this context, many health organizations can be understood as complex adaptive systems, in which specific processes and advanced capabilities are needed to lead effectively[6]. These capabilities include systems thinking, developing formal coalitions with people outside one's organization, and establishing or championing a culture of innovation and leadership.

Essentially, in the VUCA world, the way it has always been done in the past is frankly not going to work; instead, better leadership is required.

Evidence is showing that effective health leadership is key and is linked to a variety of outcomes at the individual, organizational, and benefit to patients levels, including decreased absenteeism, increased job satisfaction, staff well-being, retention, engagement, motivation, commitment, sense of shared purpose, staff performance, organizational performance, clinically and financially, and improved patient outcomes[7]. Similarly, there are numerous examples of the deleterious effects that ineffective leadership and bad leaders can have on people and organizations[8].

Bruce Barraclough, Clinical Lead and Chair of the World Health Organisation (WHO) Patient Safety Curriculum Guide, agrees, writing that effective leadership is the *essential ingredient* necessary to acquire the resources, improve quality, address risks, and provide the safest and best possible care in the complex environment of modern-day healthcare.[9]

Leadership matters and can contribute significantly to achieving the Quadruple Aim; and is not purely an ability or trait with which one is born [10]. There is reliable evidence that leadership development programs can facilitate the improvement of a variety of outcomes at the individual, team and organizational levels[11]. That said, leadership development interventions do not automatically result in improved outcomes and many programs have been shown to underperform or fail[12], with as few as 5% of participants successfully applying their learning to their work[13]. These results are highly concerning for those funding, delivering, and undertaking leadership development programs, especially in times of constrained budgets and increased pressure to demonstrate a return on investment (ROI) for development initiatives. There are additional concerns from staff, patients, and families who may stand to benefit from the positive impact of leadership development and whose well-being and safety can be jeopardized if leadership and leadership development fails. These results indicate that there is both a science and an art to leadership development and that approaching it haphazardly is highly unlikely to result in optimal outcomes.

CHLNet launched this Benchmarking Study with great appreciation for the influence that health leadership can have on staff, organizations, communities, and individual patients and families. The purpose was to audit, from an appreciative inquiry perspective, the state of health leadership in Canadian organizations and ascertain whether there are perceptions of gaps between current leaders and what or who is needed to achieve organizational outcomes and respond effectively to future challenges and opportunities. Another goal of the study was to investigate efforts to develop leaders and leadership capacity in organizations, which could potentially contribute to closing any reported gaps and could prepare leaders in Canadian healthcare organizations for the VUCA future ahead.

**Note: in the interests of keeping this report to a digestible size, many sections have been summarized. Readers interested in the full text can follow the hyperlinks to the corresponding section in the supplementary document. These sections are labeled with an "**(SD)**".

## Background to the study (SD)

A 2007 Conference Board of Canada survey of representatives of 500 CHLNet partner organizations revealed that Canadian healthcare organizations allocated fewer funds to leadership development than the national average across sectors[14]. Results also indicated that the majority of respondents were dissatisfied with the leadership development programs offered. Six years later, CHLNet launched the original Benchmarking Study (called "CHL-Bench") in response to requests by Network Partners. The purpose of the study was to determine whether perceptions of leadership gaps could be identified in Canadian healthcare organizations, along with the perceived importance of any identified gaps and what was being done to close them. CHLNet produced a report in 2014, which highlighted perceived gaps pertaining to inadequate organizational leadership capacity, insufficient leadership skills among senior and mid-level leaders, and a deficient supply of leaders compared to what was needed[15] **(SD)**. Furthermore, it was reported that these gaps had gotten worse since 2009 and that the majority of respondents were dissatisfied with the budget allocated to leadership development programs offered by their organizations and the effectiveness of programs. CHLNet committed to conducting a similar study every five years to determine whether any progress had been made to close the gaps and to build leadership capacity in healthcare organizations, which gave rise to this research project.

## The 2020 Benchmarking Study (SD)

Conducted in 2019, this benchmarking study included benchmarking questions to compare to the 2014 data, as well as new questions added based on recent scholarship and current issues related to healthcare leadership. One addition was extending the sample to include individual healthcare practitioners (physicians, nurses, and others) and academics, along with organizational representatives (Chief Executive Officers (CEO's), Chief Operating Officers (COO's), and human resources (HR) and organizational development (OD) directors). This allowed for triangulation of data among the respondent groups. There was also a focus on diversity of perspectives, specifically gender, Indigenous identity, and visible minorities[1] and questions were added regarding staff engagement, organizational culture (as supportive of innovation), and incentives and disincentives for physicians and nurses taking on a leadership position. Finally, statistical analysis was added of the quantitative data to analyze correlations among variables.

---

[1] This was worded as "visible minorities", rather than "ethnicity", which could expose the question to bias

## Methodology (SD)

### Research questions

The first step in the research process was identifying central research questions, along with additional questions of interest. The central research questions guiding this study were:

1. ***Are there perceived leadership gaps in Canadian healthcare organizations?***[2]
2. ***If there are leadership gaps, what is their nature? That is, do the gaps pertain to skills, capabilities, or competence of positional leaders, to an insufficient number of competent leaders, to diversity of perspectives that are not reflected in positional leaders, to others, or to all four?***

In addition, this study sought to answer the following questions:

- Does it appear that the nature and size of the gaps have changed since the 2014 study?
- What is the perceived impact of these gaps on organizational performance?
- What perceived priority is given to a selection of common human resources (HR), organizational development (OD), and leadership development (LD) practices?
- How effective are efforts to close the leadership gaps perceived to be?
- What more could be done to close the gaps?

### Two levels of leadership

Many of the survey questions referred to leaders in healthcare organizations at two levels of leadership: senior/executive and mid-level[3].

### Data collection (SD)

To answer the research questions, a series of online questionnaires were circulated and focus groups were conducted. Respondents were assured that information would remain confidential and that only aggregated data would be shared publicly. Several iterations of each survey were prepared until consensus was reached among Steering Group members and each was pilot-tested for content and length.

---

[2] "**Gap**" was defined in this study as "a divide between current leaders and what or who is needed to achieve organizational goals and to anticipate/meet future challenges and reforms".

[3] **Senior** or **executive** leaders/managers were defined as the most senior leaders/managers in an organization who manage people and/or processes at the organizational or departmental level, such as chiefs, vice presidents, senior officers, directors, deans, and departmental chairs. **Middle** leaders/managers were defined as leaders/managers who report to senior leaders and who manage people and/or processes, often at the sub-departmental levels.

There were two types of questionnaires. The first, "Survey A", was sent in English and French by HealthCare*CAN* and CHLNet to 85 CEO's, COO's, and HR/OD professionals who answered from an *organizational* perspective. The second set, collectively called "Survey B's", was circulated in English to 566 individual physicians by the Canadian Society of Physician Leadership (CSPL)[4], and in both languages to 1115 nurses by the Canadian Nurses Association (CNA) and 3481 "other" healthcare practitioners and academics through the Canadian College of Health Leaders (CCHL) and CHLNet.

Data were collected from 263 practitioners and academics through focus groups at three events in the Spring of 2019: the Canadian Association for Health Services and Policy Research (CAHSPR) conference, the National Health Leadership Conference (NHLC), and the LEADS Exchange Day.

Finally, a literature review was conducted to discuss the key findings of this study in the context of the most recent scholarly literature.

## Sample (respondents) (SD)

Stratified sampling was used in this study to triangulate and compare the views of key healthcare leaders, professionals, and academics. Respondents work at the following types of organizations: Academic Health Science Centres or Networks, community hospitals, community health centres, province- or territory-wide healthcare organizations, nation-wide healthcare organizations, public health units, and others.

## Structure of the questionnaires (SD)

In terms of structure, Survey A and Survey B "other" were divided into five sections: 1) Leadership and leadership gaps (specifically concerning capabilities, supply-demand/need, diversity of perspectives, other, and impact), 2) HR/OD practices and priorities, 3) Leadership development approaches, 4) Demographic information of respondents, and 5) Final thoughts. The physician and nurse Survey B's included a section on incentives and disincentives for taking on a leadership role, given the evidence of the impact effective clinician leaders can have on organizations[16].

[4] The physician survey was circulated only in English because of the CSPL membership profile

## Data analysis (SD)

The data were analyzed in the following steps: 1) The highlights of the aggregated 2019 findings (i.e. Survey A responses together with all five Survey B's), 2) Comparisons between the 2014 and the aggregated 2019 data to assess how the perceptions of key aspects of leadership in healthcare in Canada have changed over time (or not). Added to this stage of the analysis were questions in the 2019 surveys that asked for participants' perceptions on the changes in the past five years, 3) Notable differences between 2019 Survey A responses and those of the aggregated Survey B responses, 4) Outlying responses among any of the Survey B respondent groups, 5) Focus group and qualitative data were compared for relevant questions, and 6) Primary data collected (2019) were compared to key themes in recent scholarly literature.

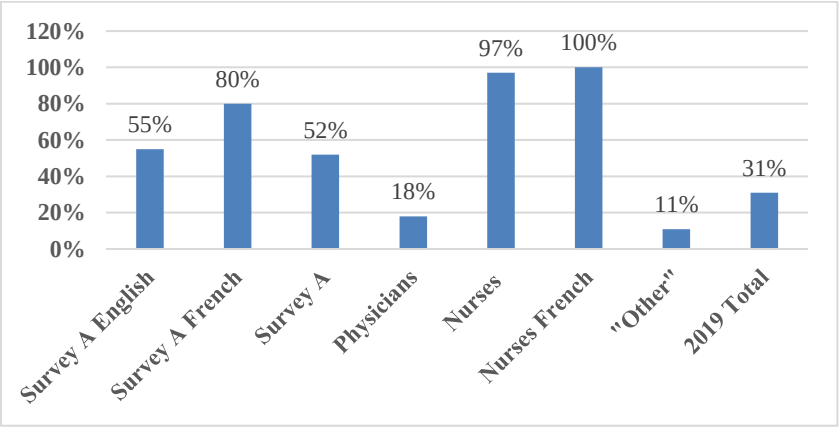
# Findings

## Response rates and respondents

The overall response rate for the 2019 Study was 31% (
Figure 1), which is common in social science research[17]. There was a total of 1,909 respondents (**Error! Reference source not found.** and **Error! Reference source not found.**). The response rate for Survey A was 52% and for the Survey B's, they were: physicians: 18%, nurses: 97%, and "other": 11%.

**Figure 1.**

**2019 response rates**




## Demographics

The demographics of 2019 respondents were that the majority were women (80%) (Figure 2,

Appendix L), who tended to be nurses (Figure 3, **Error! Reference source not found.**). Most Survey A respondents were CEO's (51%) (

Figure 4, Appendix N), who tended to work at community hospitals (21%) or Academic Health Science Centres or Networks (16%) (Figure 5, **Error! Reference source not found.**). The details of the demographics data are presented in Appendix L, Appendix M, Appendix N, and Appendix O.

**Figure 2.**

**Respondent demographics: gender**

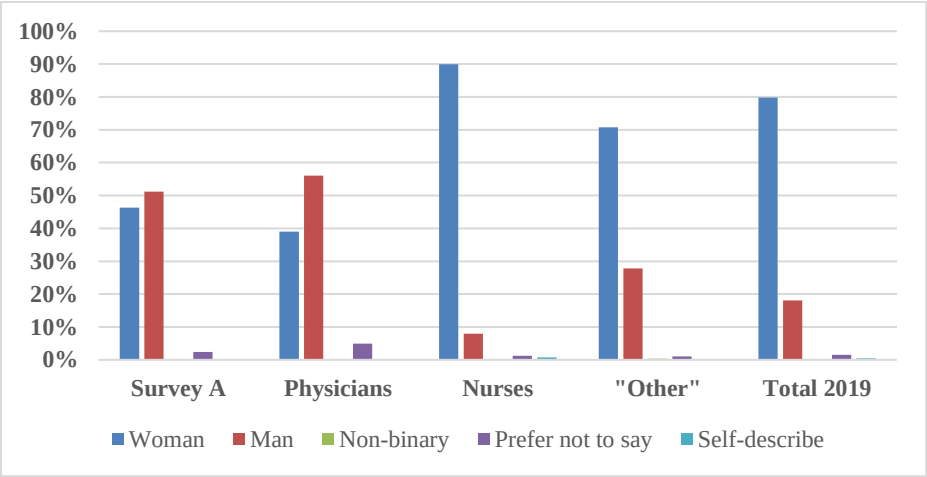



**Figure 3.**

**Respondent demographics: profession**

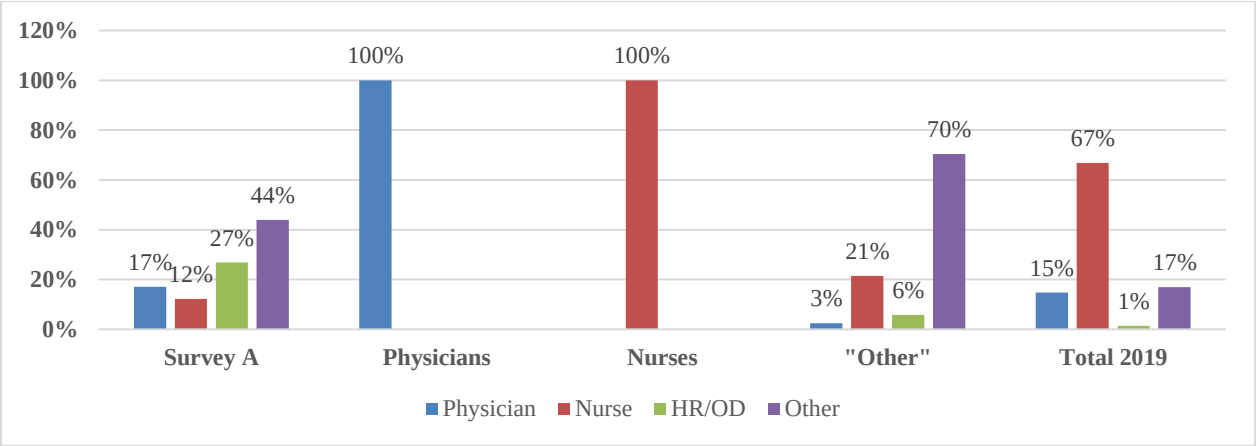


**Figure 4.**

**Respondent demographics: role (Survey A only)**

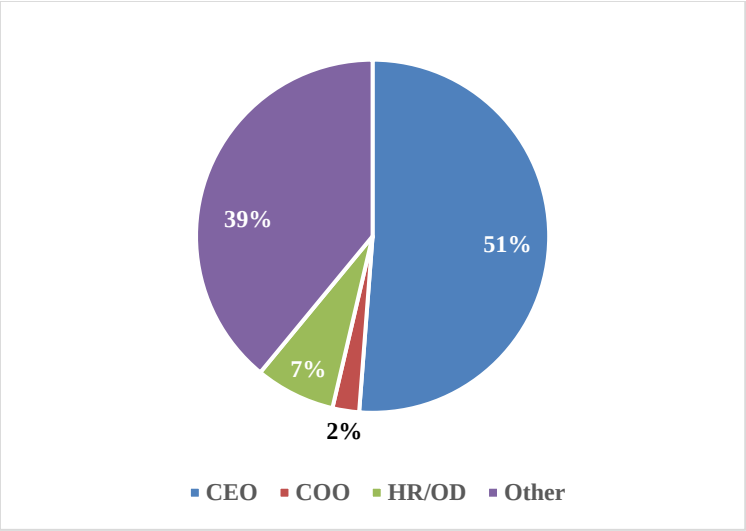
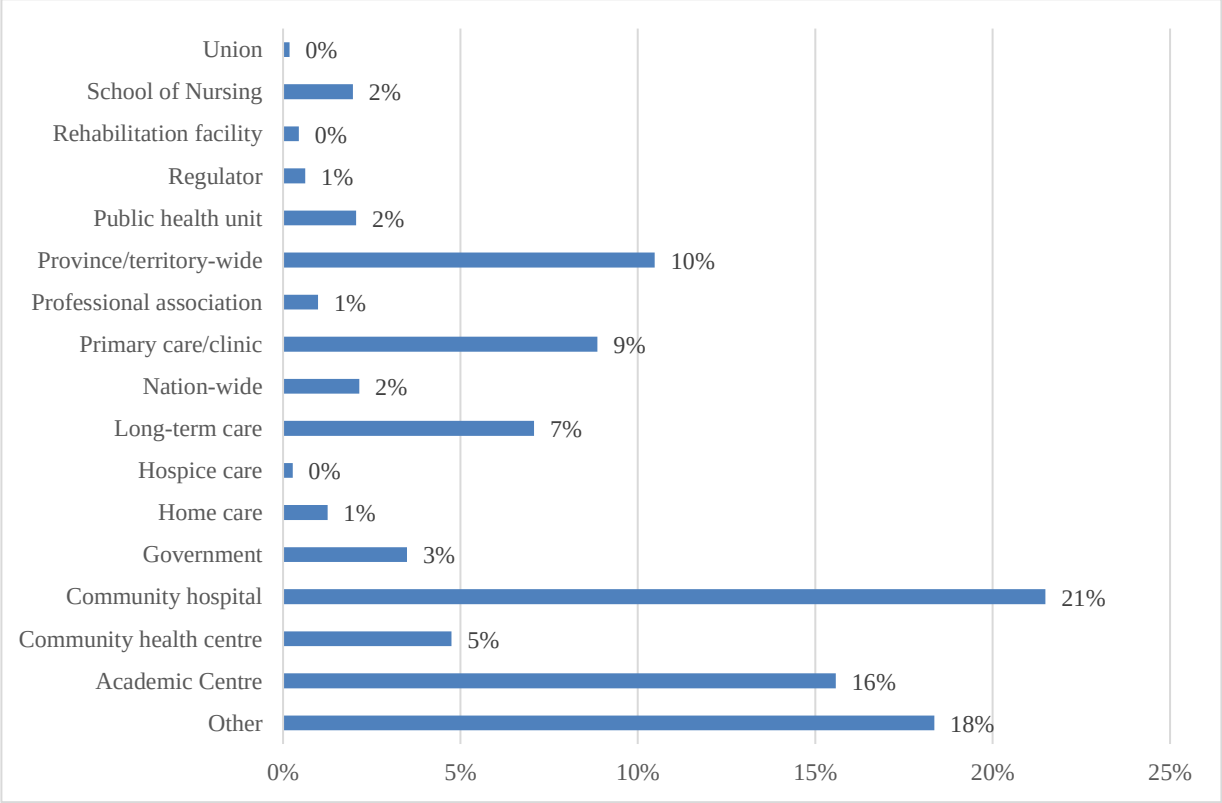



**Figure 5.**

**Respondent demographics: type of organization**



## Report descriptors

### *Surveys*

To clarify the mapping between the surveys and the research questions and sub-questions, a series of symbols is used:

**Table 1**

**Survey symbols**

| Survey | Symbol |
|---|---|
| All surveys (2014 benchmarking, 2019 Survey A's, all 2019 Survey B's) | All |
| 2014 Benchmarking | 2014 |
| All 2019 surveys (A and all B's (physicians, nurses, and "other")) | 2019 |
| 2019 organizational A (English and French) | A |
| All 2019 Survey B's (physicians, nurses, and "other") | B's |
| B physicians (English only) | P |
| B nurses (English and French) | N |
| B "other" (English and French) | O |
| Focus groups | FG |

### *Respondents*

To describe the respondent groups, "organizational respondents" refers to those who completed Survey A on behalf of their organizations (regardless of whether they are physicians or nurses); "nurse respondents" or "nurses" refers to nurses who completed Survey B distributed by the CNA; "physician respondents" or "physicians" refers to physicians who completed Survey B circulated by CSPL; "other respondents" refers to anyone (regardless of profession) who completed the Survey B "other" circulated by the CCHL; and "individual respondents" refers to the collective results from all the Survey B's.

## Leadership gaps and their nature: summary

1. *Are there perceived leadership gaps in Canadian healthcare organizations?*

Yes, though perspectives among respondents are divided. To summarize:

- Half of all 2019 respondents reported that their organizations were only "somewhat capable" of achieving organizational goals and of effectively meeting future challenges and reforms
- Very few respondents reported that there is "no gap" between the number of competent current leaders in their organization and the number needed
- Diversity of perspectives in terms of gender, Indigenous identity, and visible minorities was seldom identified as "highly reflective" among leaders in their healthcare organizations
- Ratings of leaders' key leadership capabilities were consistently low and the lowest-rated were encourages and supports innovation and demonstrates systems/critical thinking
- There were 450 suggestions of additional leadership gaps in their organizations
- Organizational representatives (Survey A) tended to report smaller gaps (or no gap), that the gaps are shrinking, and that the impact of gaps is lower than individual respondents.[5]

## Leadership gaps and their nature: full details

The gaps identified in healthcare organizations relate to Organizational leadership capacity [All] Leadership capabilities gaps [All] Supply-demand/need gaps [All], Diversity of perspectives gaps [2019], Specific leadership capabilities gaps [2014, A] and Additional leadership gaps [All].

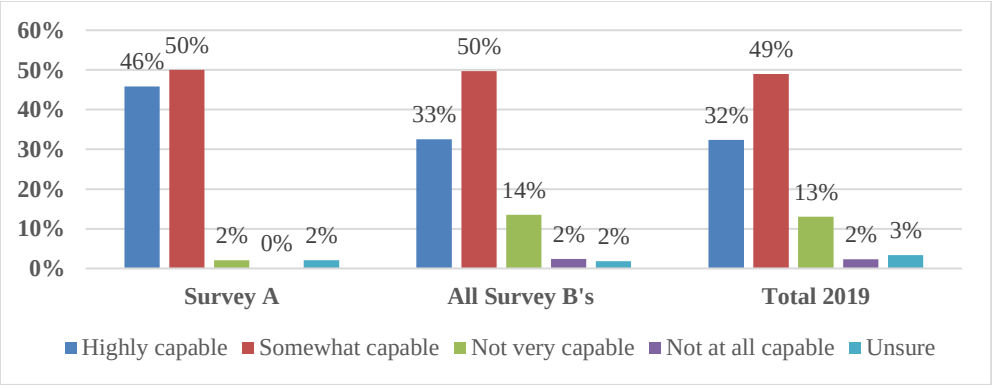
### *Organizational leadership capacity [All]*

Only a third of respondents rated leaders in their organizations as being "highly capable" of achieving organizational goals and effectively anticipating/meeting future challenges and reforms and nearly half of respondents rated their leaders as being only "somewhat capable" (Figure 6).

[5] Two exceptions are that perceptions of diversity of perspective gaps in terms of Indigenous People and visible minorities were rated as less reflective by Survey A respondents than by Survey B respondents

**Figure 6.**

**Ratings of organizational leadership capacity**




## *Leadership capabilities gaps* [All]

Gaps between the leadership capabilities that current leaders have compared to those needed to perform their jobs well and anticipate/meet future challenges and reforms were reported as "large" or "very large" by nearly a third of all 2019 respondents (Figure 7, Figure 8). Very few respondents suggested that there is "no gap" among senior and mid-level leaders (10% and 6% respectively). Nurses reported a "very large" gap among senior leaders nearly twice as often as physicians and "other" respondents and physicians rated "no gap" the least frequently.

**Figure 7.**

**Ratings of capabilities gap: senior/executive**

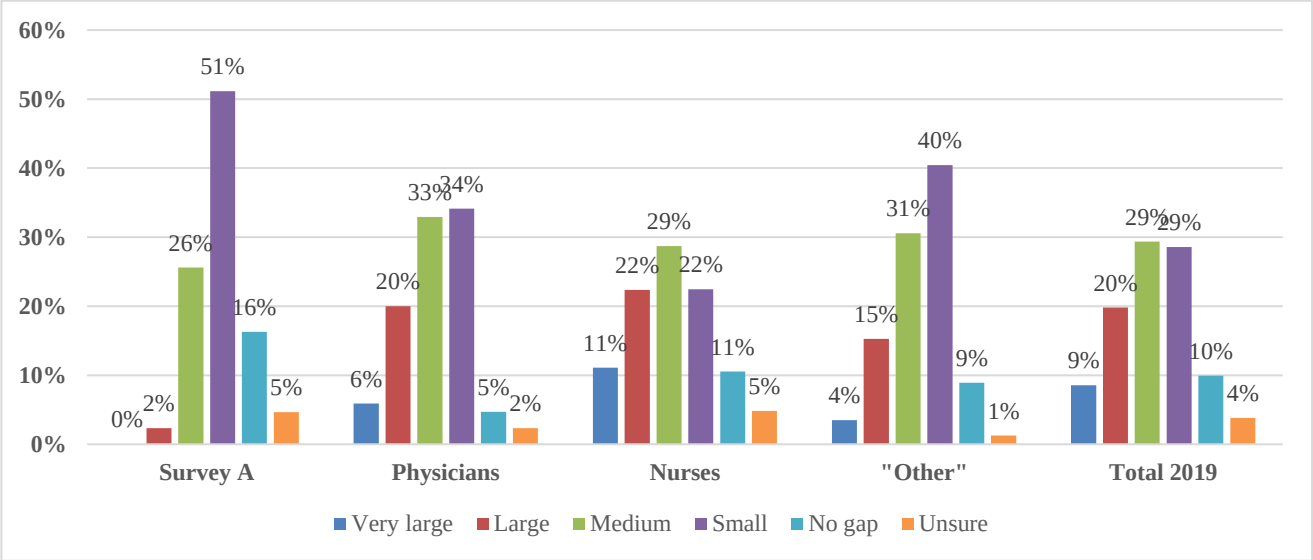
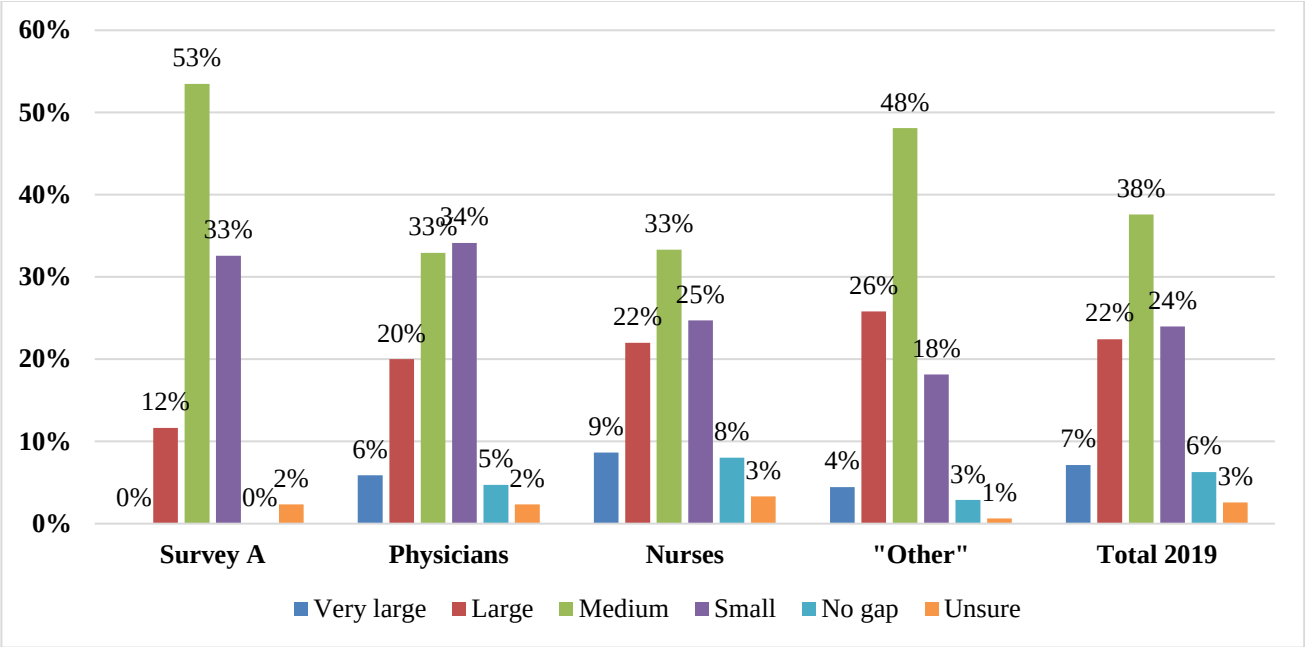


**Figure 8.**

**Ratings of capabilities gap: mid-level**




### *Supply-demand/need gaps* [All]

Gaps between the number of competent current leaders (supply) and the number needed to achieve organizational goals and anticipate/meet future challenges and reforms (demand/need) were reported as being "large" or "very large" by a quarter of respondents for senior leaders and nearly a third for mid-level leaders (Figure 9, Figure 10). Very few respondents indicated that there is "no gap" or a surplus of competent leaders. The ratings of organizational respondents were more favourable than individual respondents. Nurses reported large gaps among senior leaders most frequently and physicians rated "no gap" the least frequently.

**Figure 9.**

**Ratings of supply-demand/need gap: senior/executive**

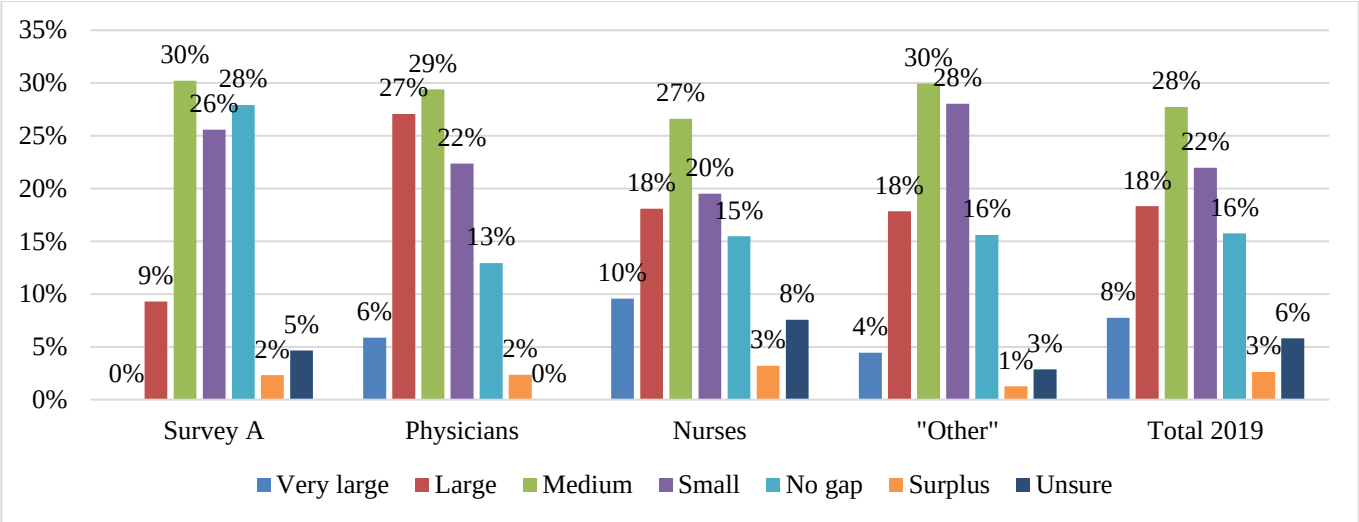
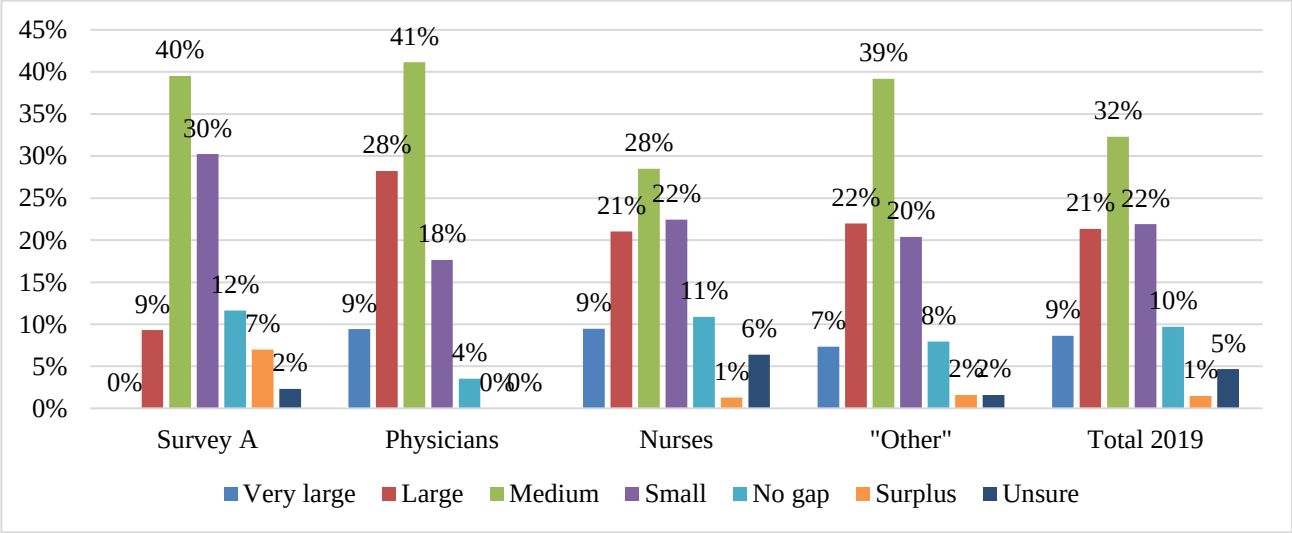



**Figure 10.**

**Ratings of supply-demand/need gap: mid-level**




### *Diversity of perspectives gaps* [2019]

Diversity of perspectives pertaining to gender, Indigenous identity, visible minorities, and other demographics was a key consideration for the 2019 study. The extent to which they are perceived to be reflected among organizational leaders was investigated.

### *Diversity of perspectives gaps – gender* [2019]

Fewer than a third of respondents considered their leaders to be highly reflective in terms of gender diversity and 25% described the senior leaders as "not very" or "not at all" reflective (Figure 11, Figure 12). Organizational respondents indicated that their leaders are highly reflective at both levels of leadership twice as frequently as individual respondents.

**Figure 11.**

**Ratings of diversity of perspectives - gender: senior/executive**

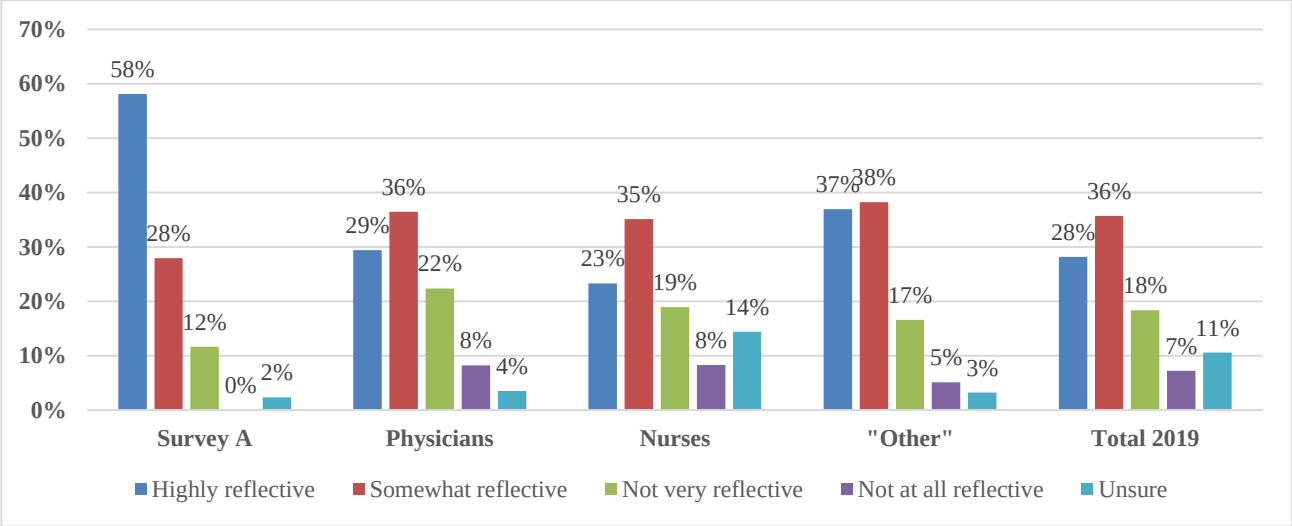
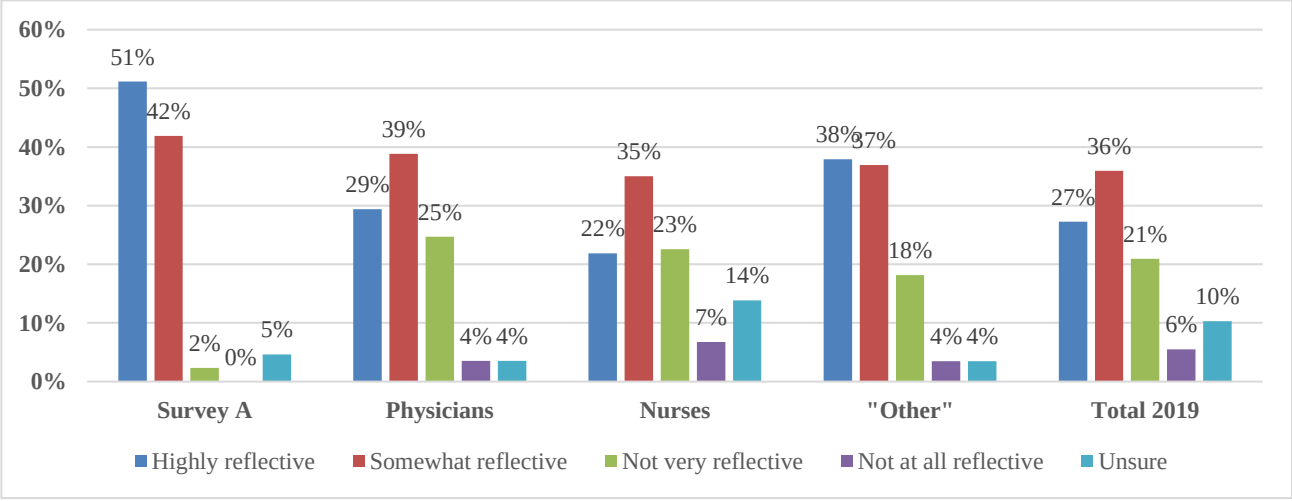



**Figure 12.**

**Ratings of diversity of perspectives - gender: mid-level**



### *Diversity of perspectives gaps – Indigenous Identity* [2019]

Diversity of perspectives in terms of Indigenous Identity was the lowest-rated of the three, with more than half of respondents indicating that Indigenous perspectives were "not very" or "not at all" reflective (Figure 13, Figure 14). Physicians had the least frequent ratings of Indigenous perspectives being "highly reflective" among senior leaders (2%), compared to 10% for total respondents.

**Figure 13.**

**Ratings of diversity of perspectives – Indigenous Peoples: senior/executive**

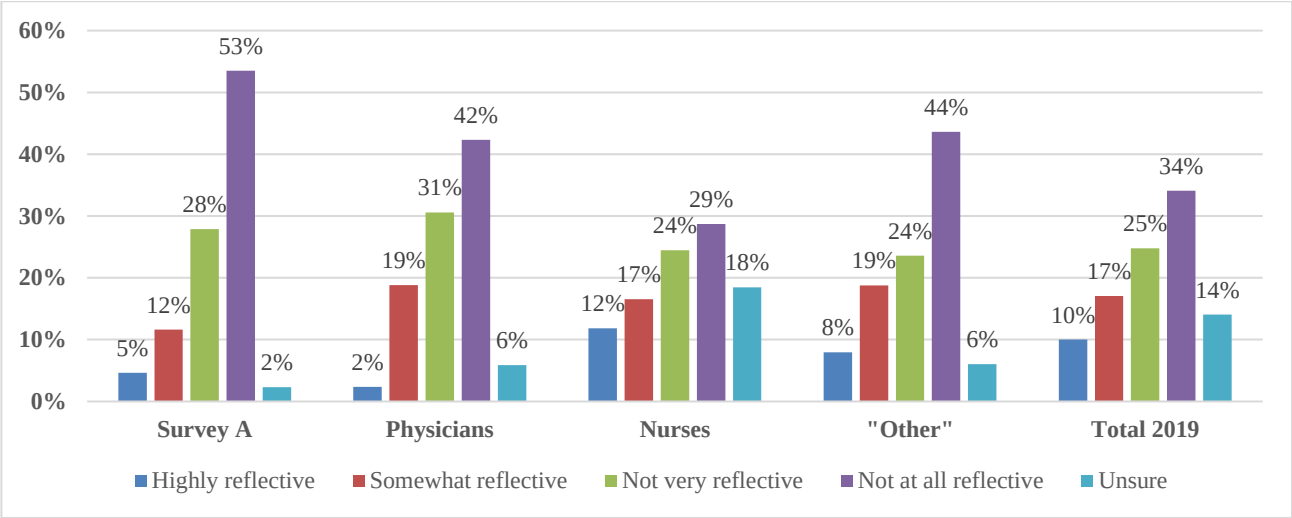
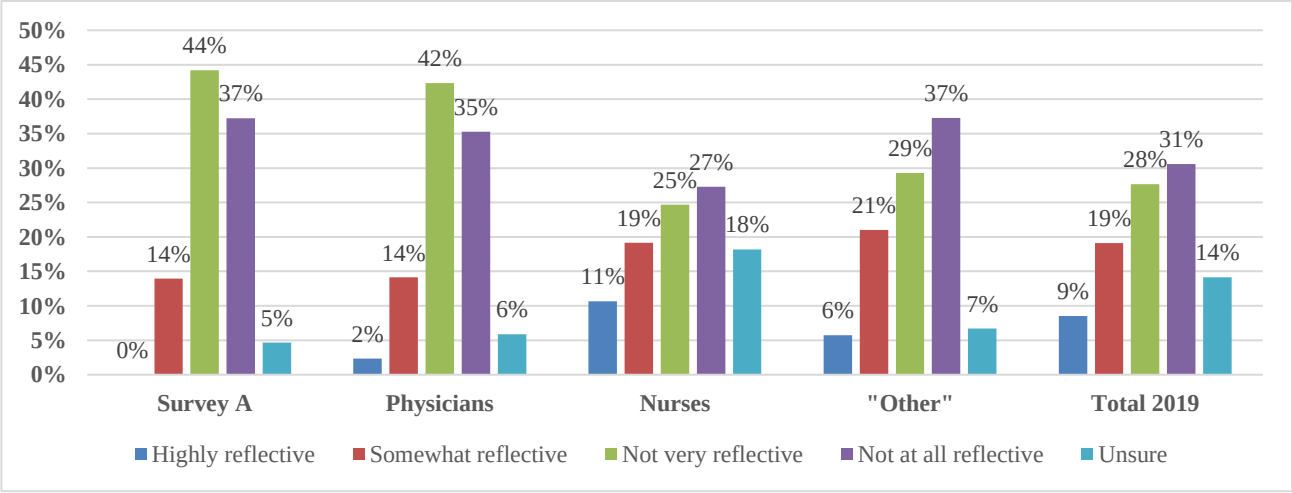



**Figure 14.**

**Ratings of diversity of perspectives – Indigenous Peoples: mid-level**



### *Diversity of perspectives gaps – visible minorities* [2019]

The representation of perspectives of visible minorities was reported as nearly as low as for Indigenous Peoples, with only 11% of respondents indicating that senior leaders were "highly reflective" (Figure 15, Figure 16). Organizational respondents rated leaders at both levels as being much less reflective of visible minorities than individual respondents.

**Figure 15.**

**Ratings of diversity of perspectives – visible minorities: senior/executive**

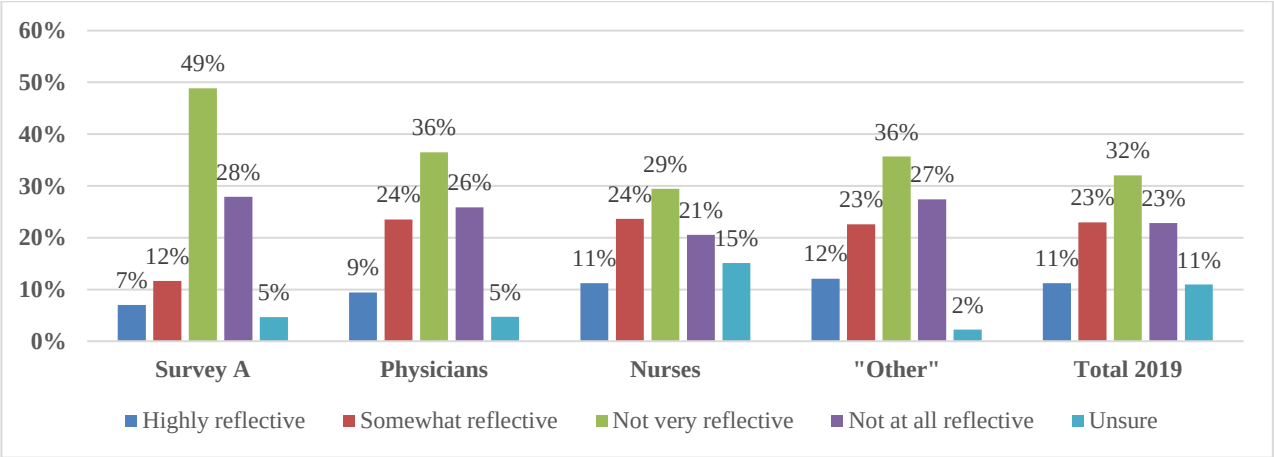
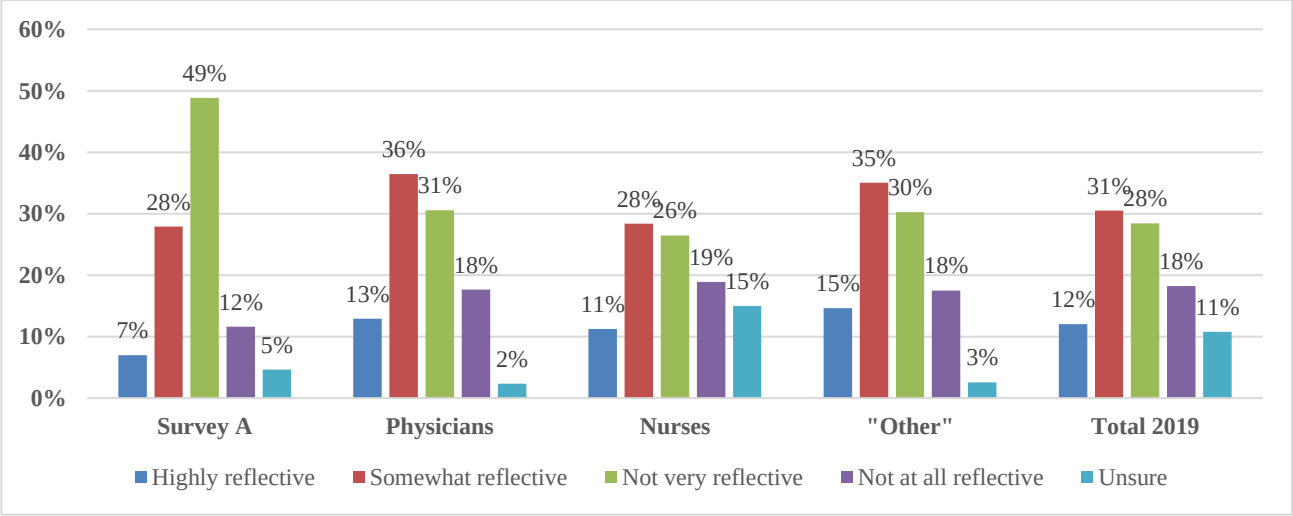



**Figure 16.**

**Ratings of diversity of perspectives – visible minorities: mid-level**



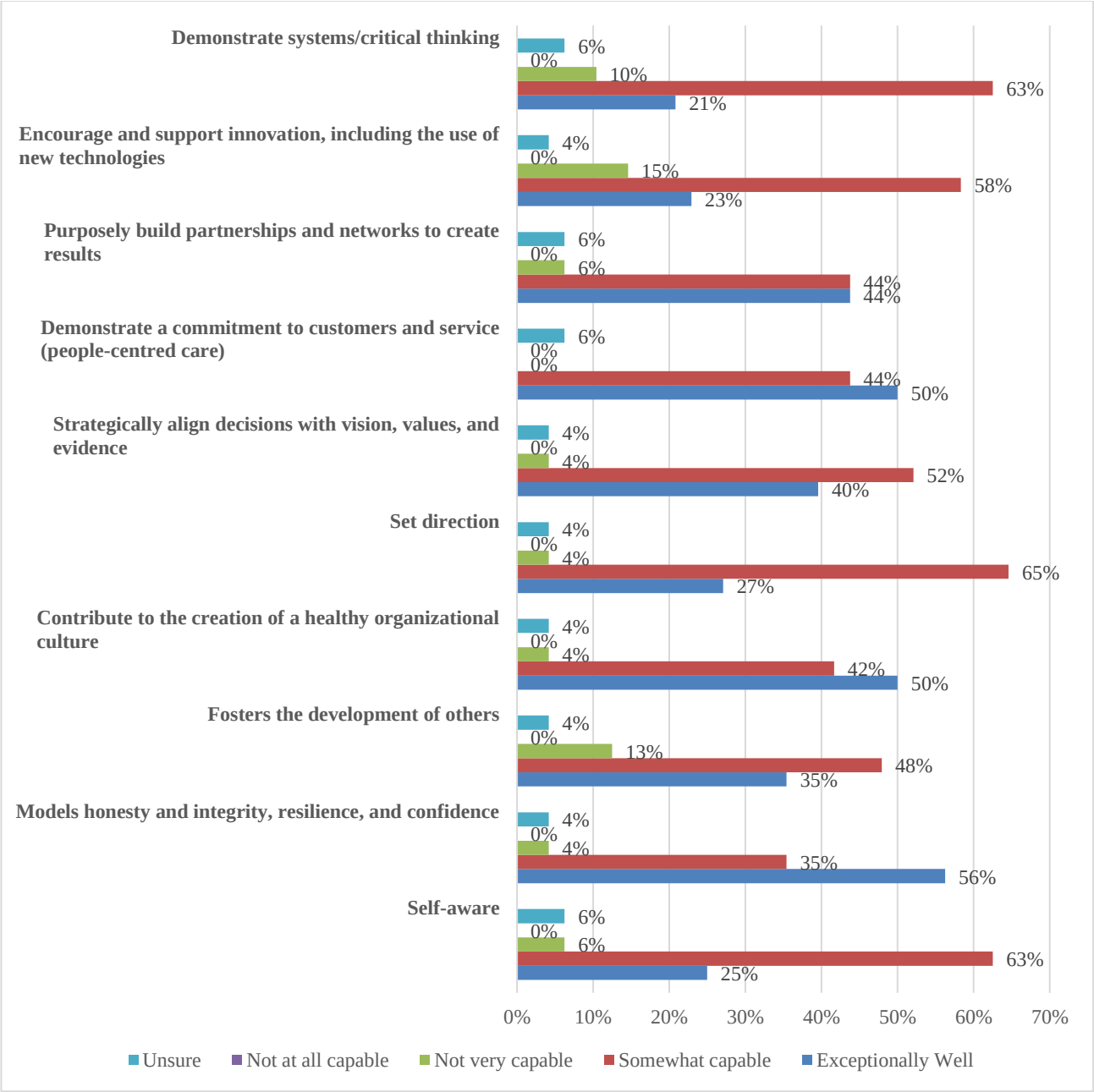
### *Specific leadership capabilities gaps* [2014, A]

Leaders were reported as demonstrating ten key leadership capabilities from the LEADS in a Caring Environment Framework[18] infrequently, with the highest-rated being reported as being demonstrated "exceptionally well" by slightly more than half of respondents (

Figure 17). Even though the ratings were offered by senior leaders (Survey A), the majority rated six of ten key capabilities as being demonstrated only "somewhat" well. The three *highest-rated* capabilities were: model honesty, integrity, resilience, and confidence (56% rated it "exceptionally well"), contribute to the creation of a healthy organizational culture (50%), and demonstrate a commitment to people and service (people-centred care) (50%). The *lowest-rated* capabilities, measured by "exceptionally well" ratings, were: demonstrate systems/critical thinking (21%), encourage and support innovation, including the use of new technologies (23%), (which was also the lowest-rated as measured by "not very capable" ratings (15%), and self-awareness (25%).

**Figure 17.**

**Ratings of specific leadership capabilities**




## *Additional leadership gaps* [All]

More than 450 additional leadership gaps were reported by 2019 respondents (35%). These may be addressed in a future CHLNet report. Responses include a lack of resilience, poor succession planning, and new leaders who lack the experience and development to succeed in their roles.

## Changes in leadership gaps since 2014

*Does it appear that the nature and size of the gaps have changed since the 2014 benchmarking study?* *All (except that diversity of perspectives are 2019 only)*

*Comparing benchmarking questions (2014 and 2019) indicates that:*

The perceptions of capabilities and supply-demand/need gaps have increased for both levels of leadership (i.e. they have reportedly gotten worse) (Figure 19, Figure 18).

**Figure 19.**

**Comparing 2014 data to 2019: skills/capabilities gap**

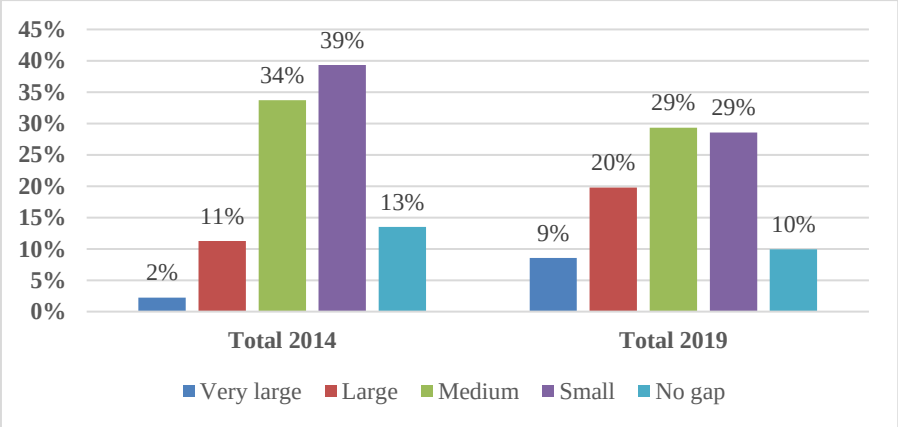
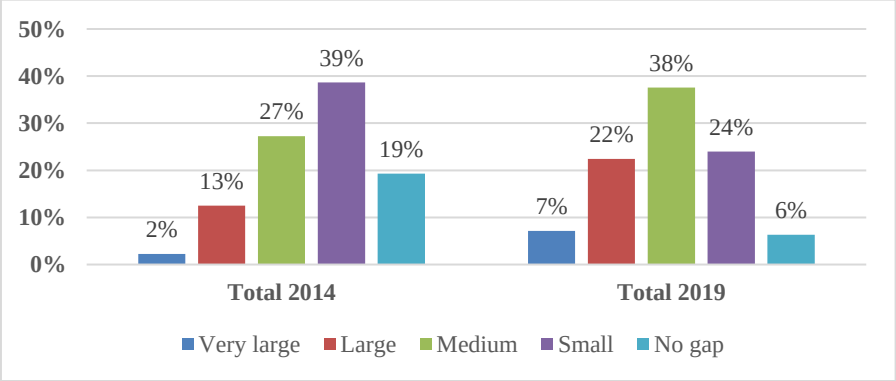



**Figure 20.**
**Comparing 2014 data to 2019: supply-demand/need gap**

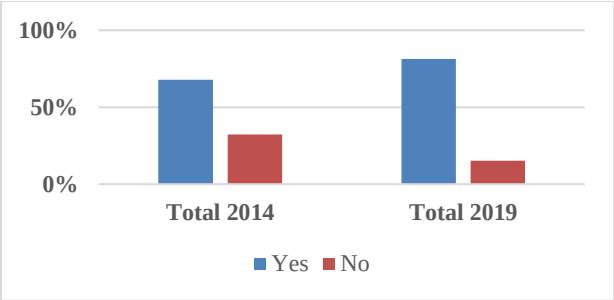



There is also a possible decrease in organizational leadership capacity[6] (Figure 21).

[6] Given the change in the scale from 2014 to 2019, "highly capable" and "somewhat capable" from the 2019 responses were combined and compared to "yes" in 2014; likewise, "not very capable" and "not at all capable" ratings from the 2019 responses were combined and compared to "no" ratings in 2014

**Figure 21.**

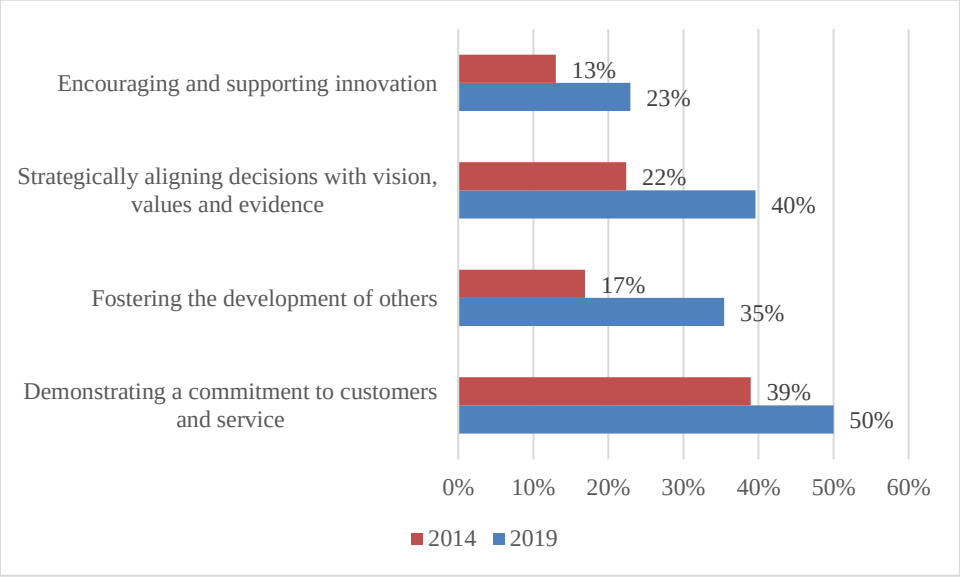
**Comparing 2014 data to 2019: organizational leadership capacity**




Conversely, though still considerably low, the scores of how well leaders demonstrate key leadership capabilities have improved since 2014[7] (Figure 22).

**Figure 22.**

**Comparing 2014 data to 2019: specific leadership capabilities**




There was consistency: the highest-rated capability in 2014 was demonstrating a commitment to people and service, which was the second most frequently ranked in the 2019 results. Similarly, the lowest-rated capability was the same for both surveys: encouraging and supporting innovation.

[7] For this graph, "demonstrates exceptionally well" ratings from 2019 data were compared to "very strong" ratings from 2014 data.

### *2019 respondents' perspectives of changes in the gaps*

In addition to the benchmarking questions that were common to the 2014 and 2019 surveys, those who completed this study's questionnaires were asked for their perceptions of whether the gaps had increased in the past five years. Their responses overall, though mixed, indicated that although many of the 2019 respondents suggested that the leadership gaps have remained the same, more reported that the capabilities and supply-demand gaps have *increased* rather than decreased (Figure 23,

Figure 24, Figure 25,

Figure 26).

Conversely, organizational respondents reported twice as frequently that the supply-demand/need gap has lessened compared to individual respondents; whereas, nurses reported that capabilities and supply-demand/need gaps among senior leaders are increasing twice as frequently as physicians.

**Figure 23.**

**2019 perspectives of gap change - capabilities/skills: senior/executive**

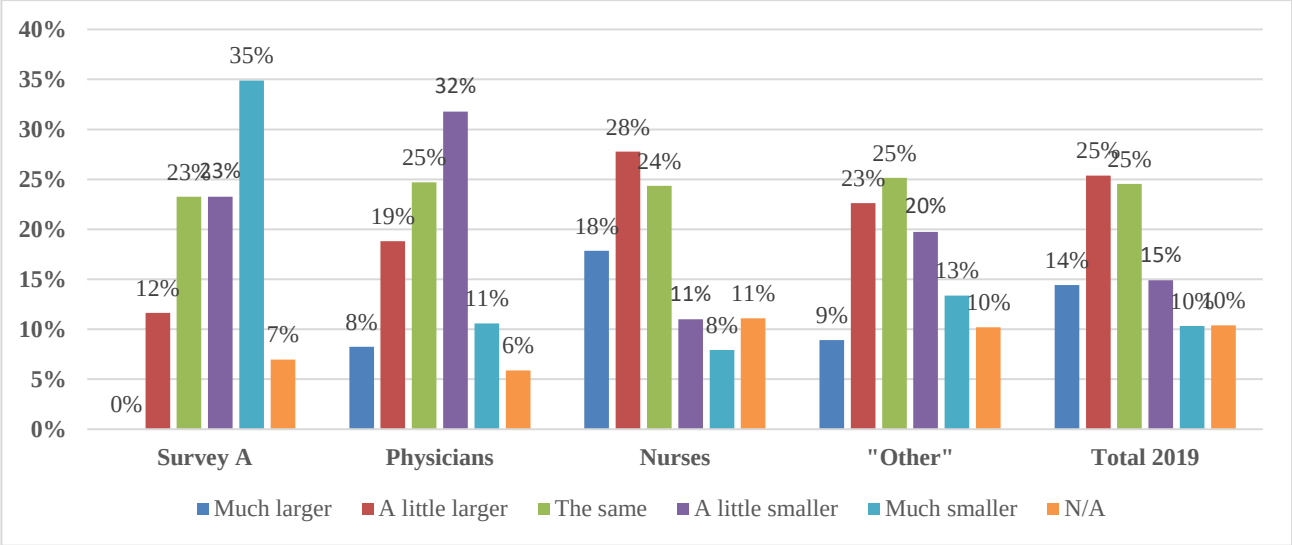


**Figure 24.**

**2019 perspectives of gap change - capabilities/skills: mid-level**

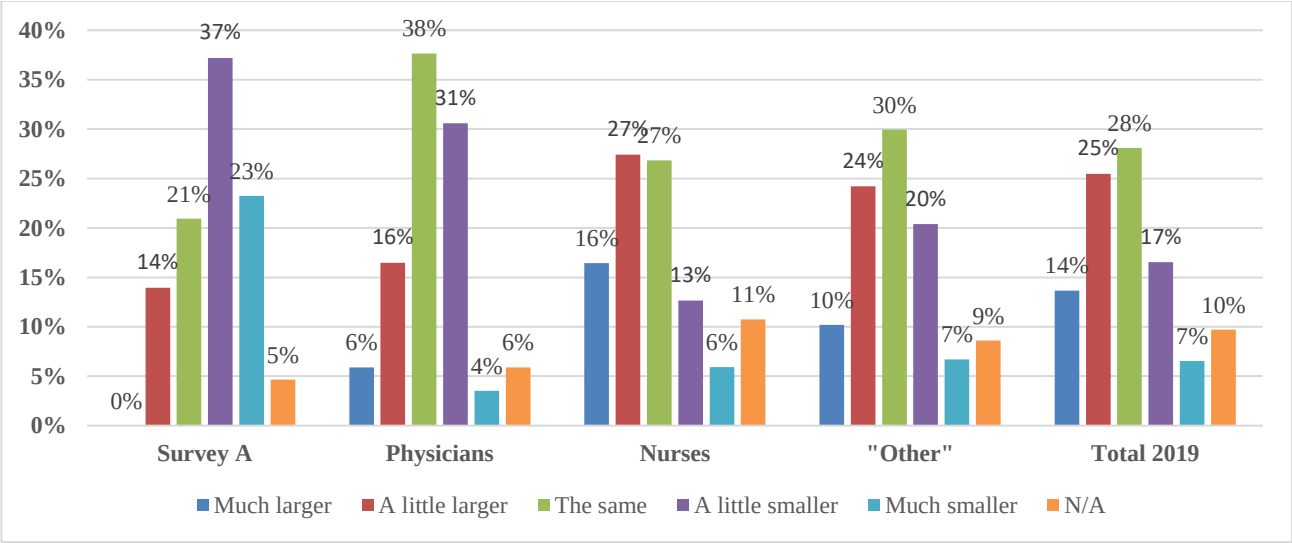



**Figure 25.**

**2019 perspectives of gap change – supply-demand/need: senior and executive**

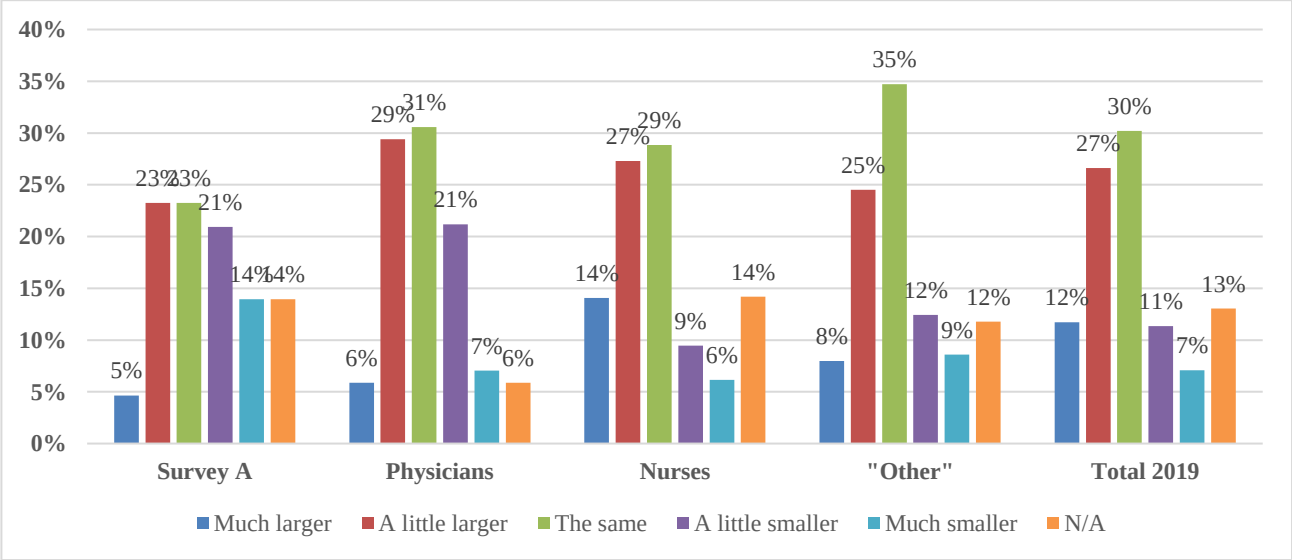
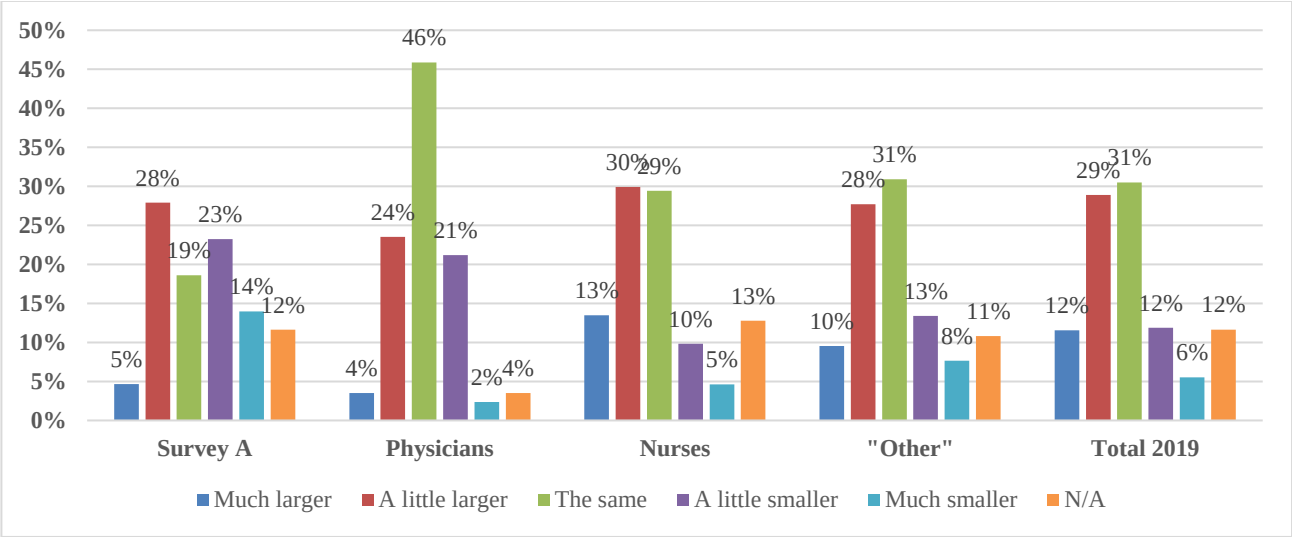


**Figure 26.**

**2019 perspectives of gap change – supply-demand/need: mid-level**




More respondents perceived that the all three of the diversity of perspectives gaps have decreased than increased in the past five years (Figure 27, Figure 28, Figure 29,

Figure 30, Figure 31,

Figure 32). For diversity of perspectives gaps in terms of gender and visible minorities, physicians reported that they were shrinking twice as frequently as nurses.

**Figure 27.**

**2019 perspectives of gap change – diversity: gender: senior and executive**

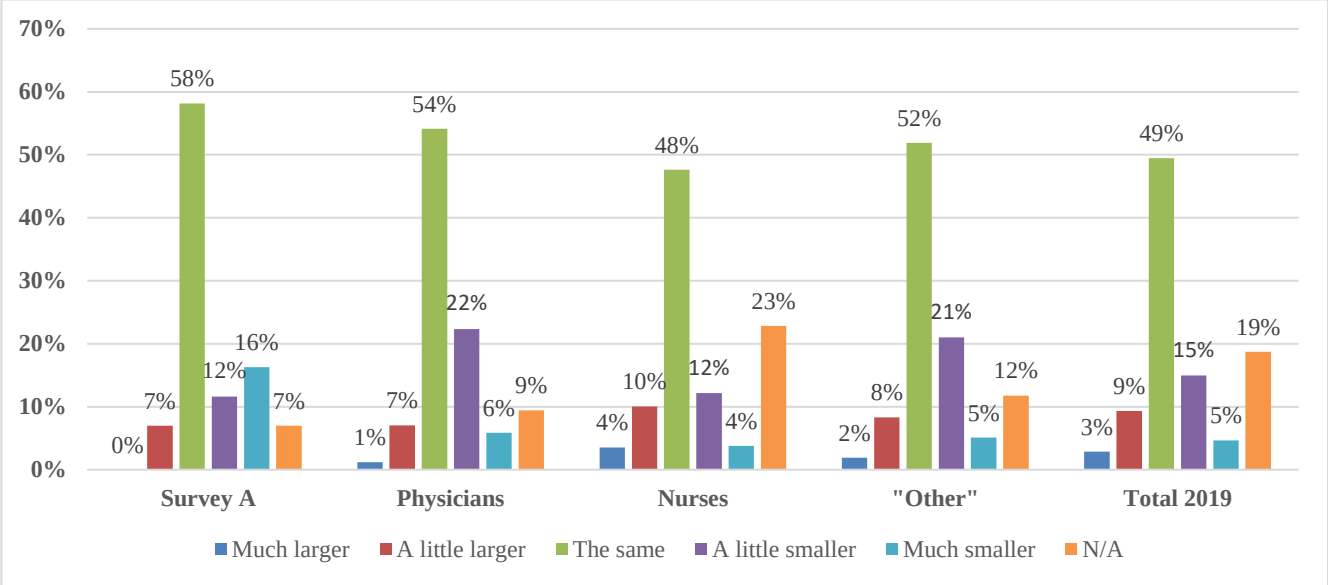



**Figure 28.**

**2019 perspectives of gap change – diversity: gender: mid-level**

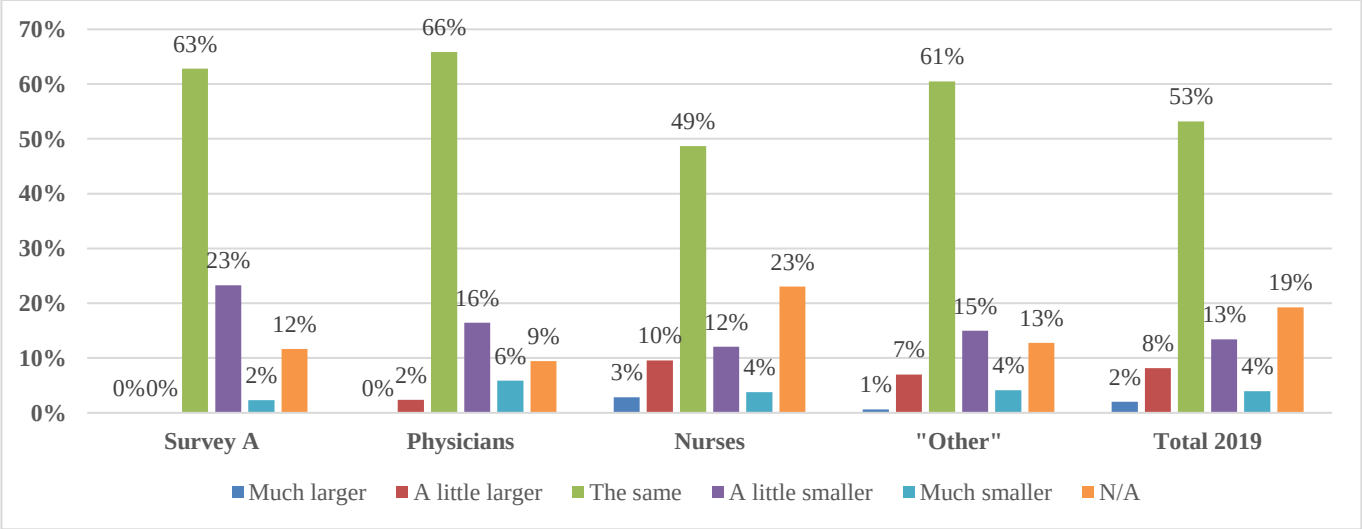



**Figure 29.**

**2019 perspectives of gap change – diversity: Indigenous: senior and executive**

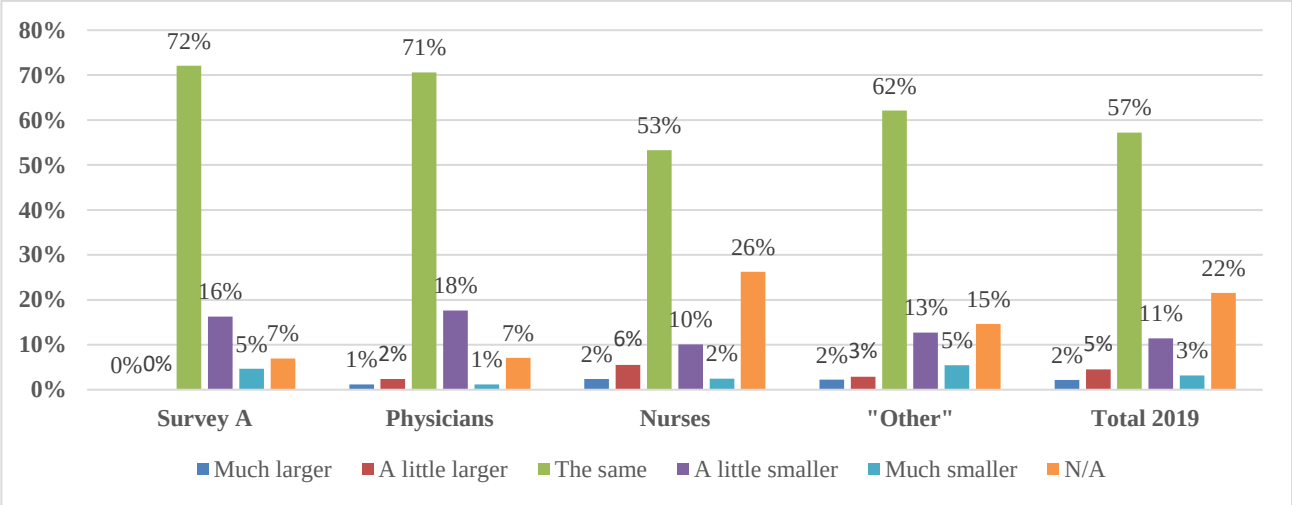

80%
70%
60%
50%
40%
30%
20%
10%
0%
0%
0%
72%
16%
5%
7%
1%
2%
71%
18%
1%
7%
2%
6%
53%
10%
2%
26%
2%
3%
62%
13%
5%
15%
2%
5%
57%
11%
3%
22%
Survey A
Physicians
Nurses
"Other"
Total 2019
Much larger
A little larger
The same
A little smaller
Much smaller
N/A

**Figure 30.**

**2019 perspectives of gap change – diversity: Indigenous: mid-level**

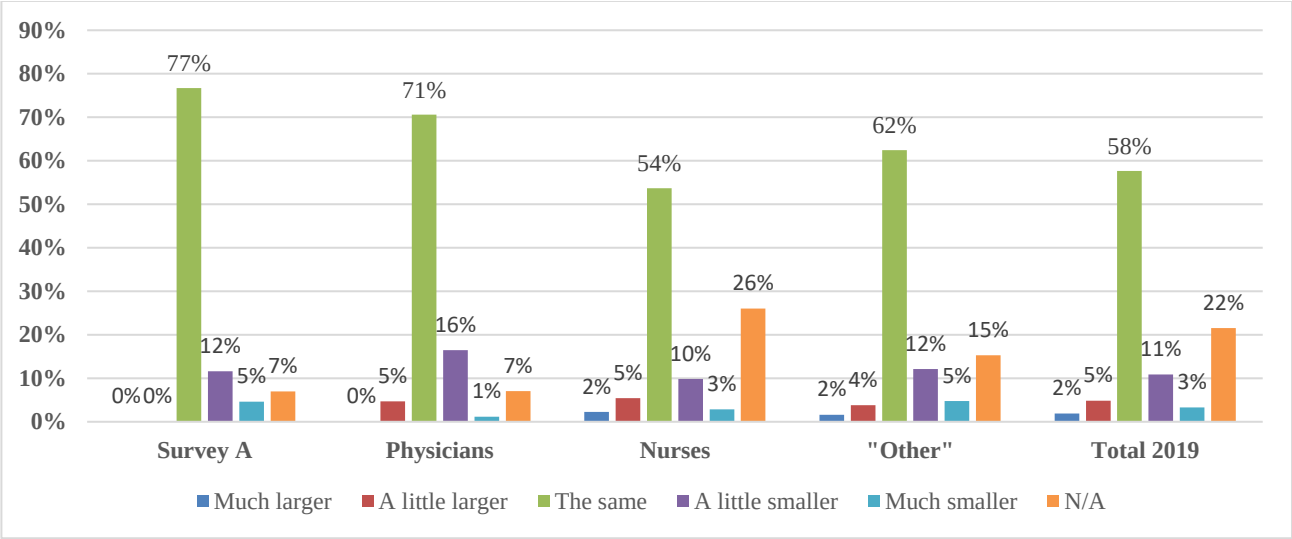



**Figure 31.**

**2019 perspectives of gap change – diversity: visible minorities: senior and executive**

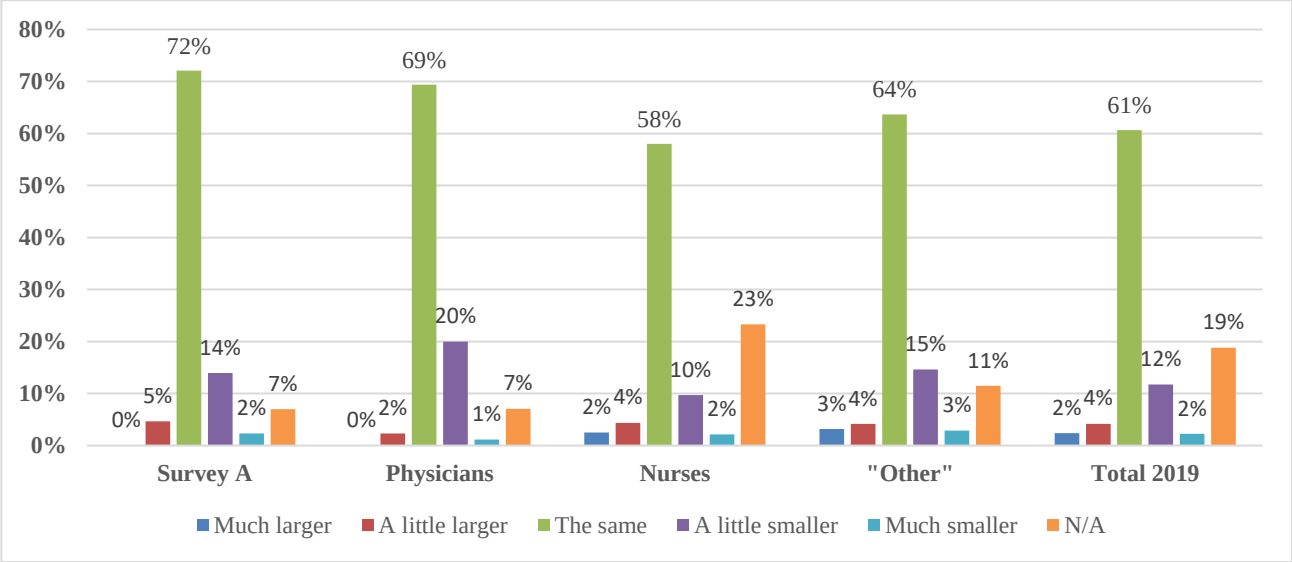
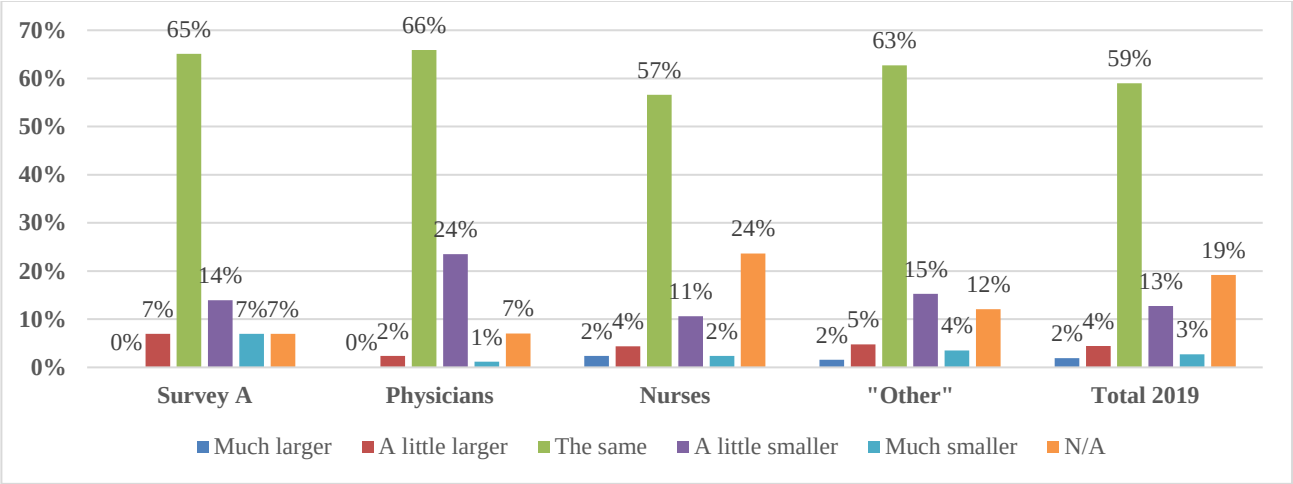


**Figure 32.**

**2019 perspectives of gap change – diversity: visible minorities: mid-level**




## Perceived impact of leadership gaps [All]

*What is the perceived impact of these gaps on organizational performance?*[8]

Nearly half of all 2019 respondents suggested that the leadership gaps at both levels of leadership are having a "large" or "very large" impact on organizational performance (

[8] This was worded as the "importance" of leadership gaps in the 2014 study

Figure 33, Figure 34) and fewer than a quarter of respondents suggested that the gaps are having a small or no impact. These are similar results to those in 2014. Organizational respondents reported that there is “no impact” much more frequently, as well as that there is a “very large” impact much more seldom than individual respondents. Nurse respondents reported the impact as being “very large” more than twice as frequently as physician respondents for both levels of leadership.

**Figure 33.**

**2019 perceived impact of gaps: senior and executive**

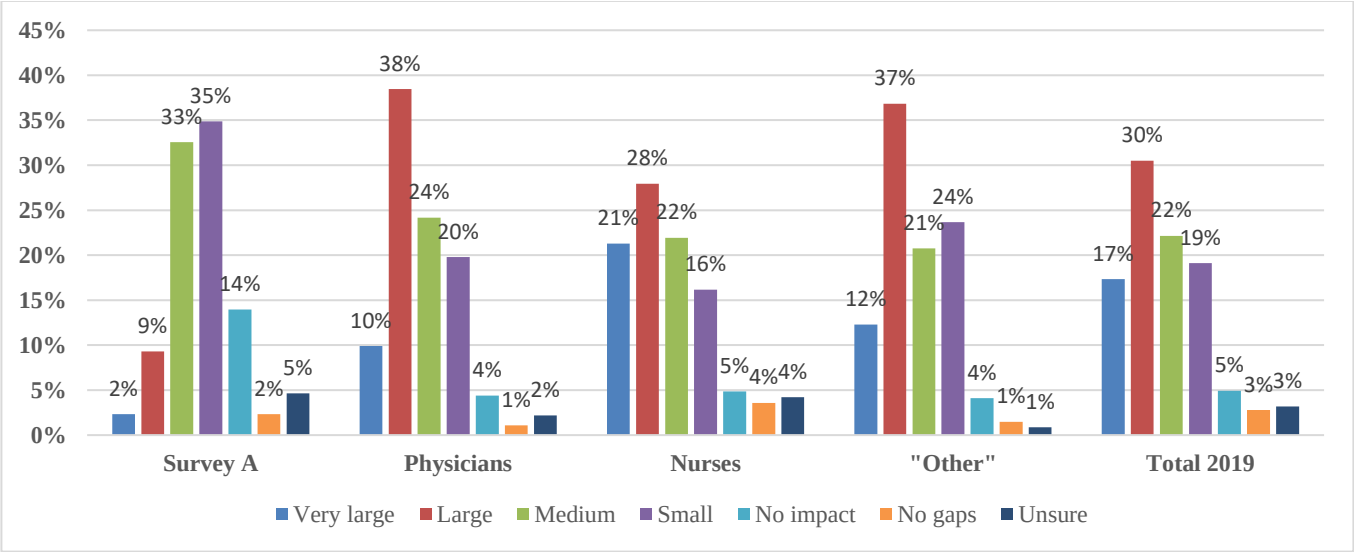
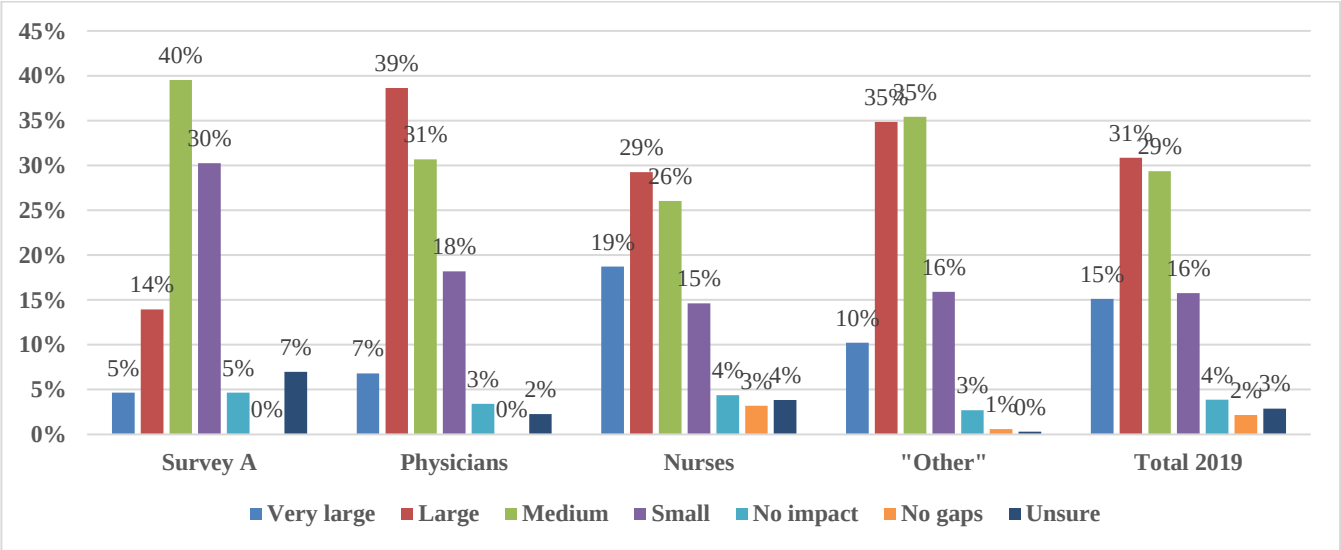



**Figure 34.**

**2019 perceived impact of gaps: mid-level**




### *Impact change in the past five years* [2019]

2019 respondents were asked their perception of whether the impact of leadership gaps had changed in the past five years (Figure 35, Figure 36). Results indicate that many believe that the impact has not changed (36% for senior leaders and 40% for mid-level leaders) and that more

respondents feel that the impact has increased rather than decreased for both levels of leadership. Nurse respondents reported a “much larger” impact much more frequently than physicians and organizational respondents. Organizational respondents reported that the impact has decreased much more frequently than individual respondents for both levels of leadership

**Figure 35.**

**2019 perceived change in impact of gaps: senior and executive**

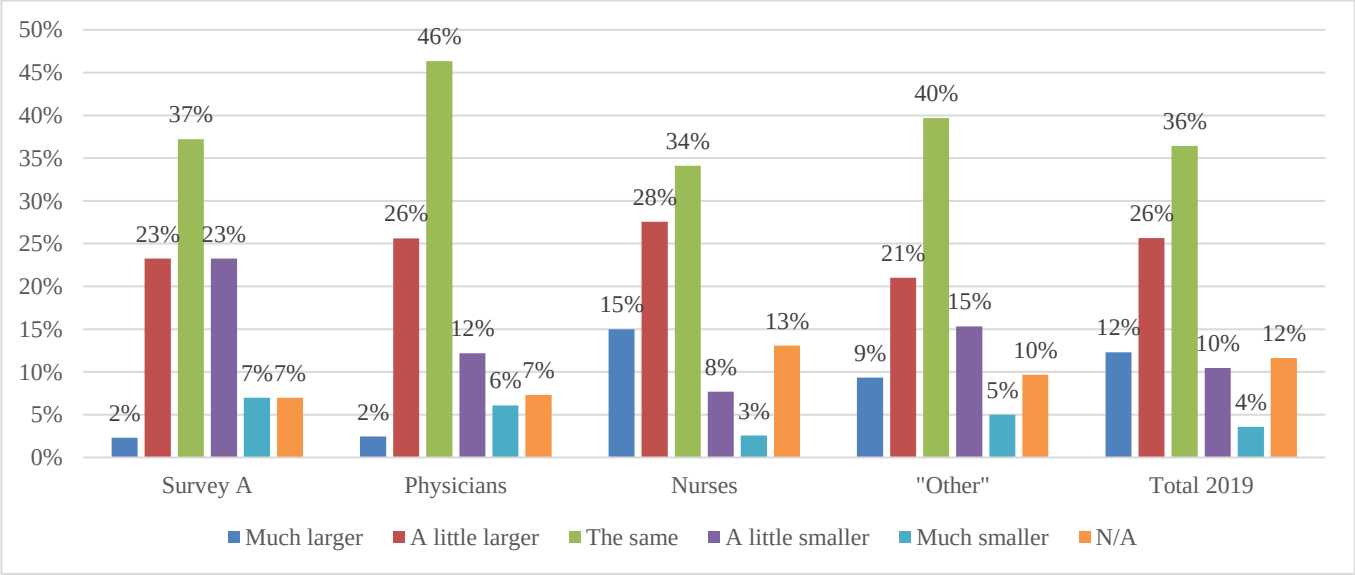
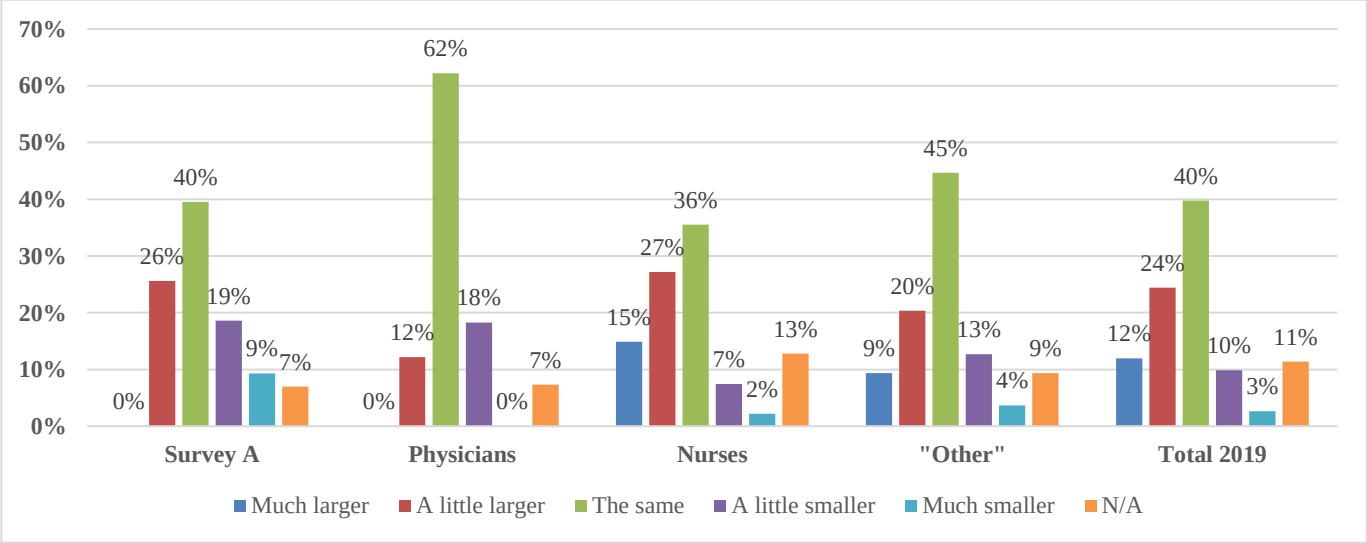



**Figure 36.**

**2019 perceived change in impact of gaps: mid-level**



*Additional impact* [2019]

Organizational participants suggested that among other impacts, leadership gaps create capacity limitations that restrict the ability to achieve results and to meet organizational targets (n = 6).

## Efforts to Close the Gaps

Having established that there is a widespread perception of a variety of leadership gaps among senior and mid-level leaders in healthcare organizations across Canada, it is important to ascertain which human resources (HR), organizational development (OD), and leadership development (LD) practices and priorities can be effective in closing the gaps.

*What perceived priority is given to a selection of common human resources, organizational development, and leadership development practices?*[9] [All]

Almost half of respondents indicated that nearly every HR/OD practice was either a low priority or not a priority at all to their organizations. The highest-rated priority was increasing employee engagement, though only 27% of respondents reported that their organizations consider it a high priority (Figure 37, Figure 38). Interestingly, the most frequent ratings of a "low priority" or "not at all a priority" were increasing nurse engagement (56%) and increasing physician engagement, retaining critical talent, and developing a talent management or succession plan strategy (52% each) (Figure 41, Figure 42). Retaining critical talent was also the lowest-rated according to "high priority" ratings, along with developing a talent management and succession planning strategy (15% each). Many physicians and nurses reported that physician and nurse engagement is a low priority or not a priority at all (37% and 56% respectively). Engagement scores have declined since 2014. There were also consistently significant differences between the organizational responses and the individual respondents. For example, three quarters of organizational respondents rated increasing staff engagement as a "high priority", whereas only a quarter of individual respondents ascribed that rating to it. This pattern was common to all HR/OD practices surveyed.

---

[9] Participants were asked to select from among: increasing employee engagement, increasing physician engagement (nurse engagement for the nurse survey), providing regular performance feedback based on established expectations, developing a talent management strategy and succession plan, retaining critical talent, and providing formal leadership development opportunities.

**Figure 37.**

**2019 perceived priorities of HR/OD practices total**

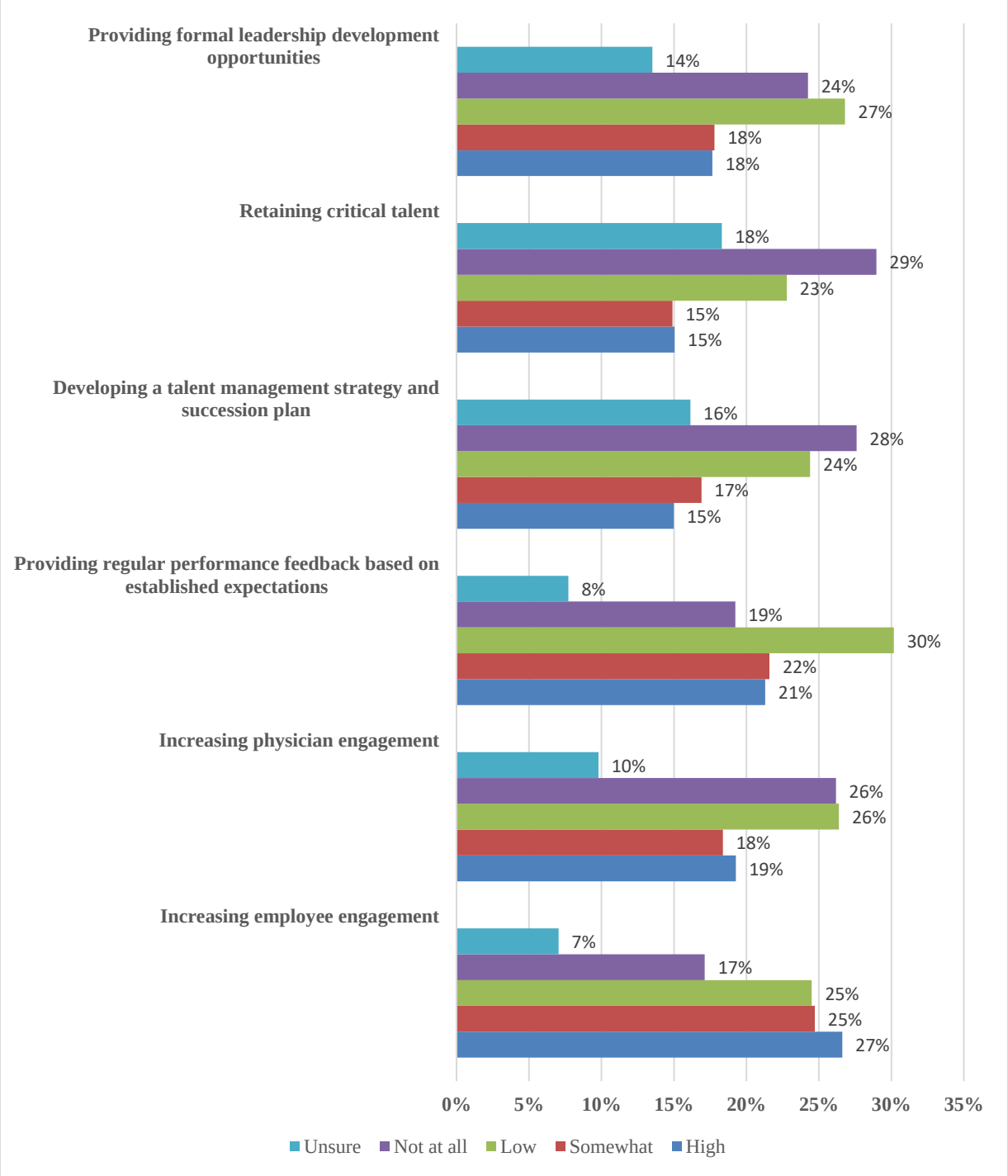


**Figure 38.**

**2019 perceived priority of increasing employee engagement**

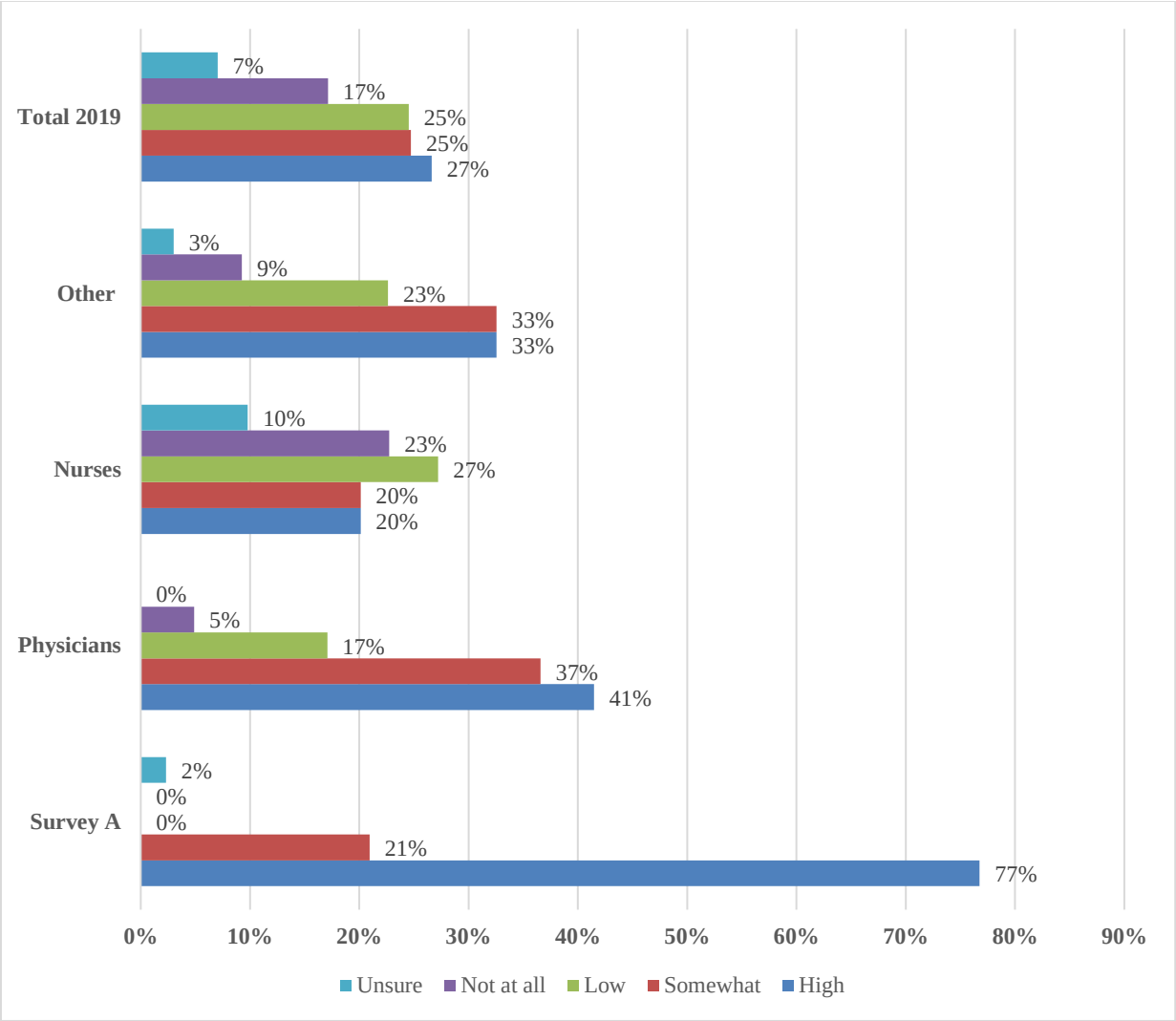


**Figure 39.**

**2019 perceived priority of increasing physician/nurse engagement**

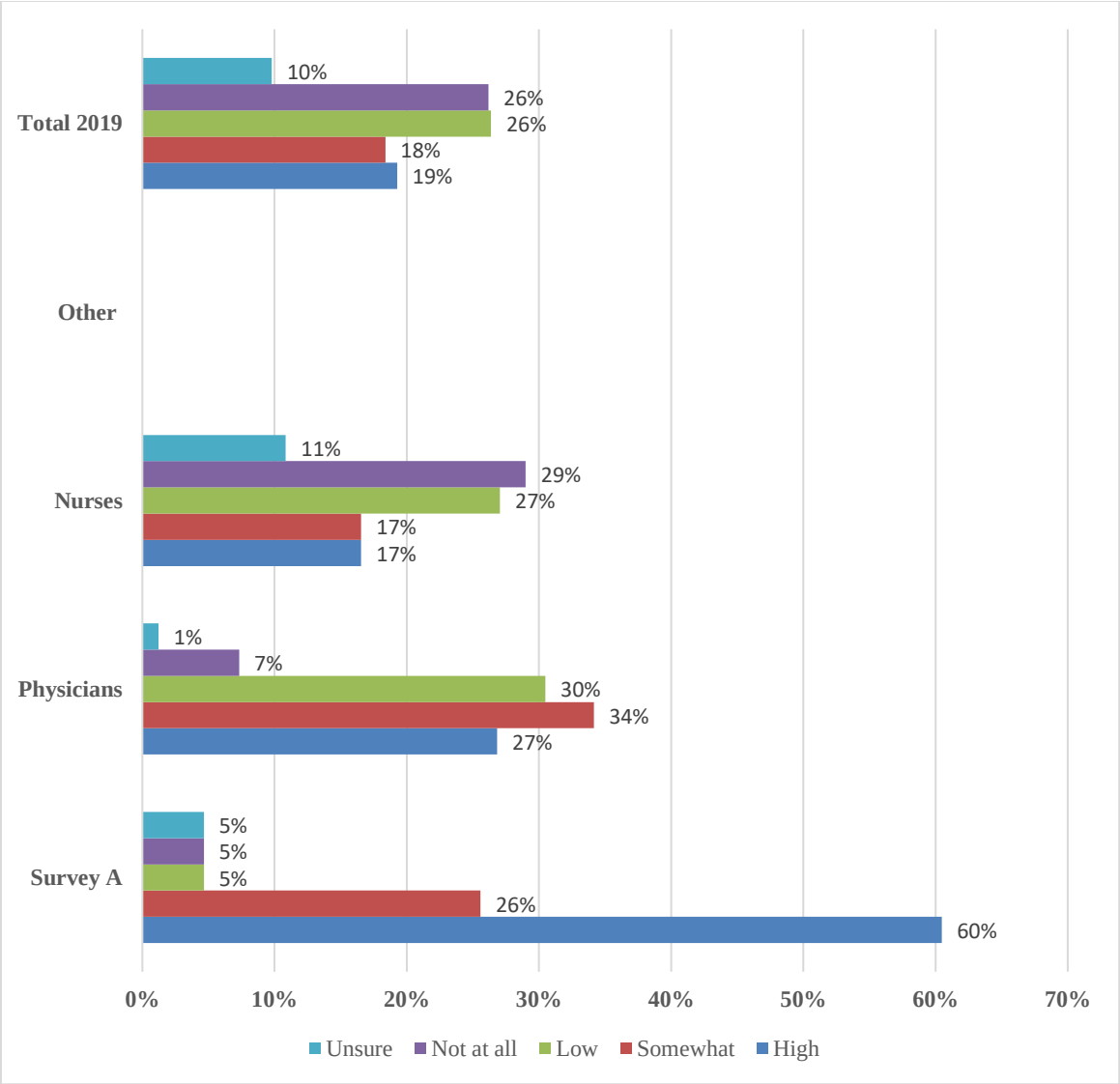


**Figure 40.**

**2019 perceived priority of providing regular performance feedback based on established expectations**

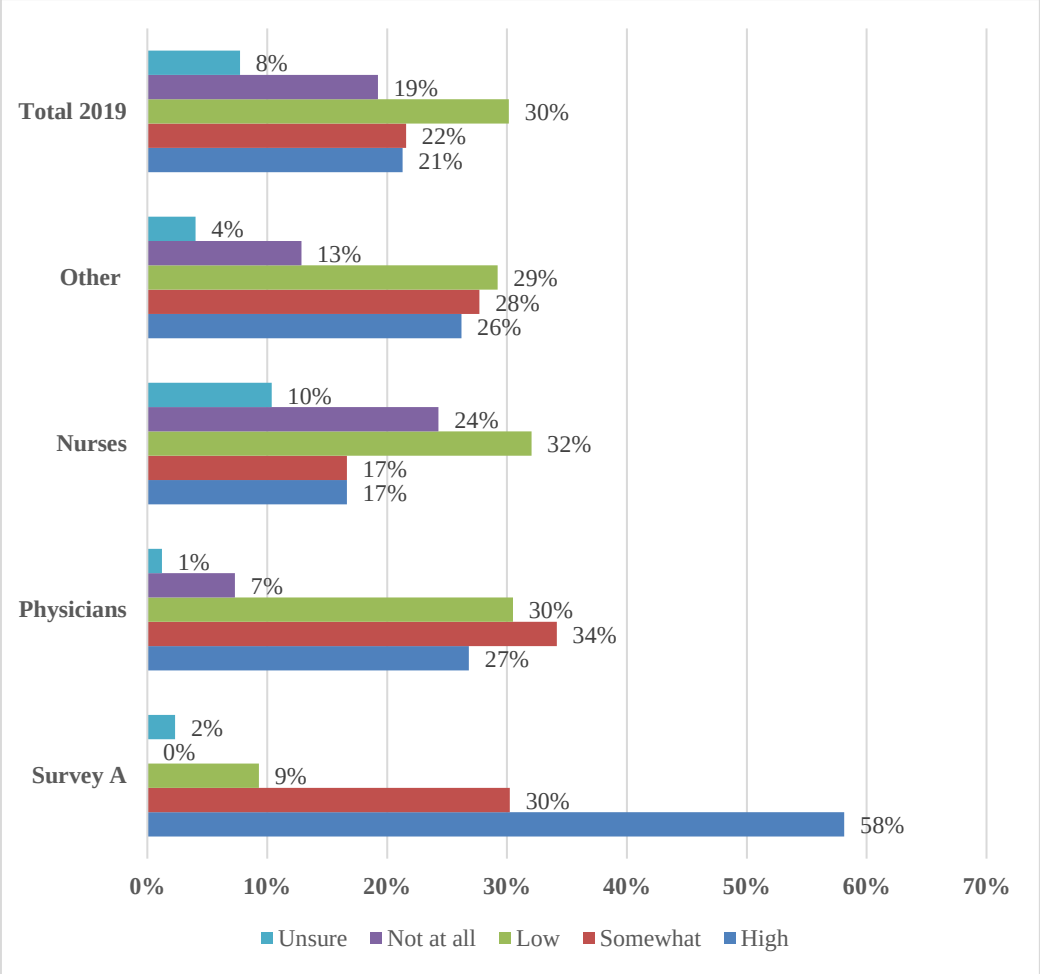


**Figure 41.**

**2019 perceived priority of developing a talent management strategy and succession plan**

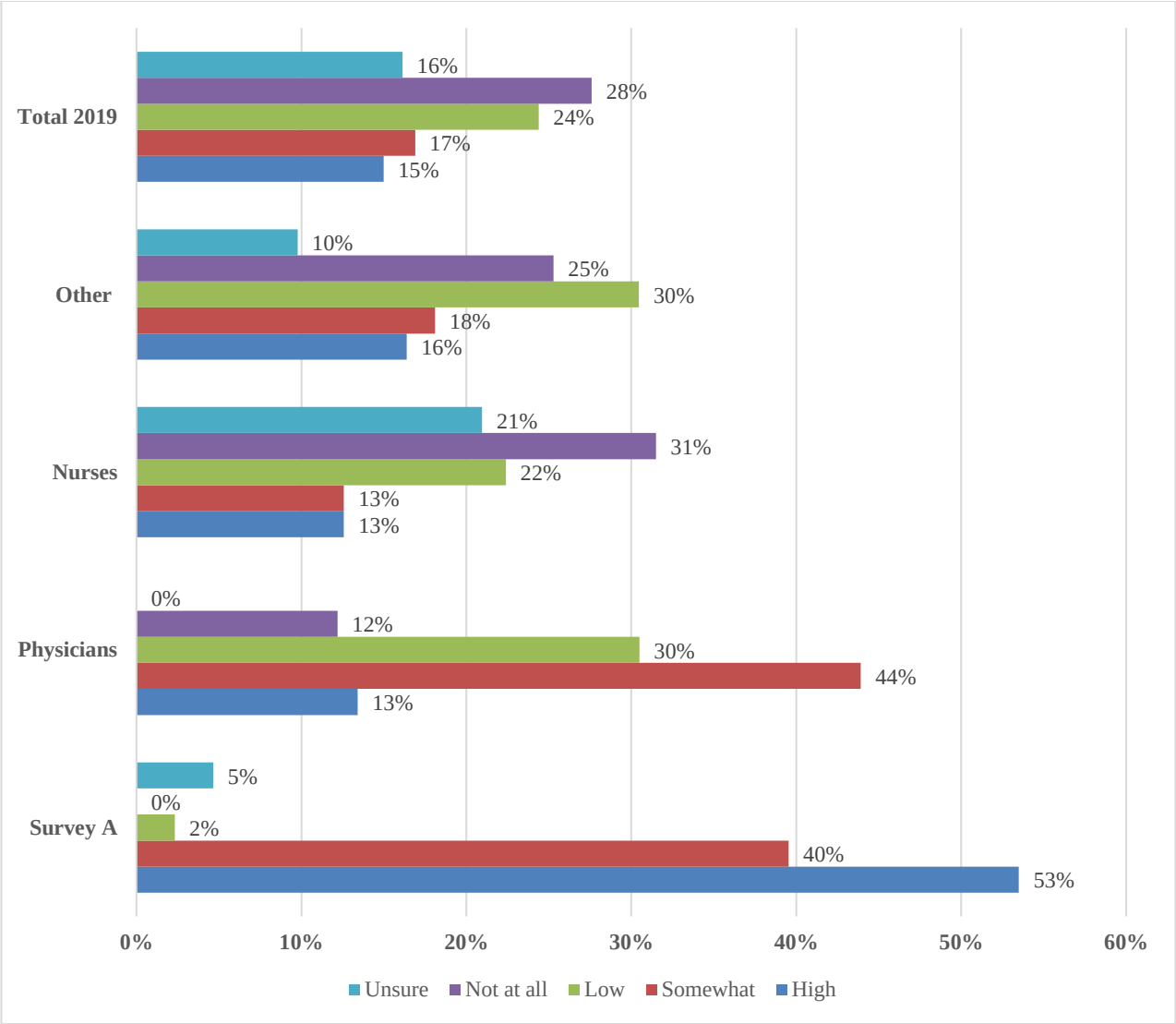


**Figure 42.**

**2019 perceived priority of retaining critical talent**

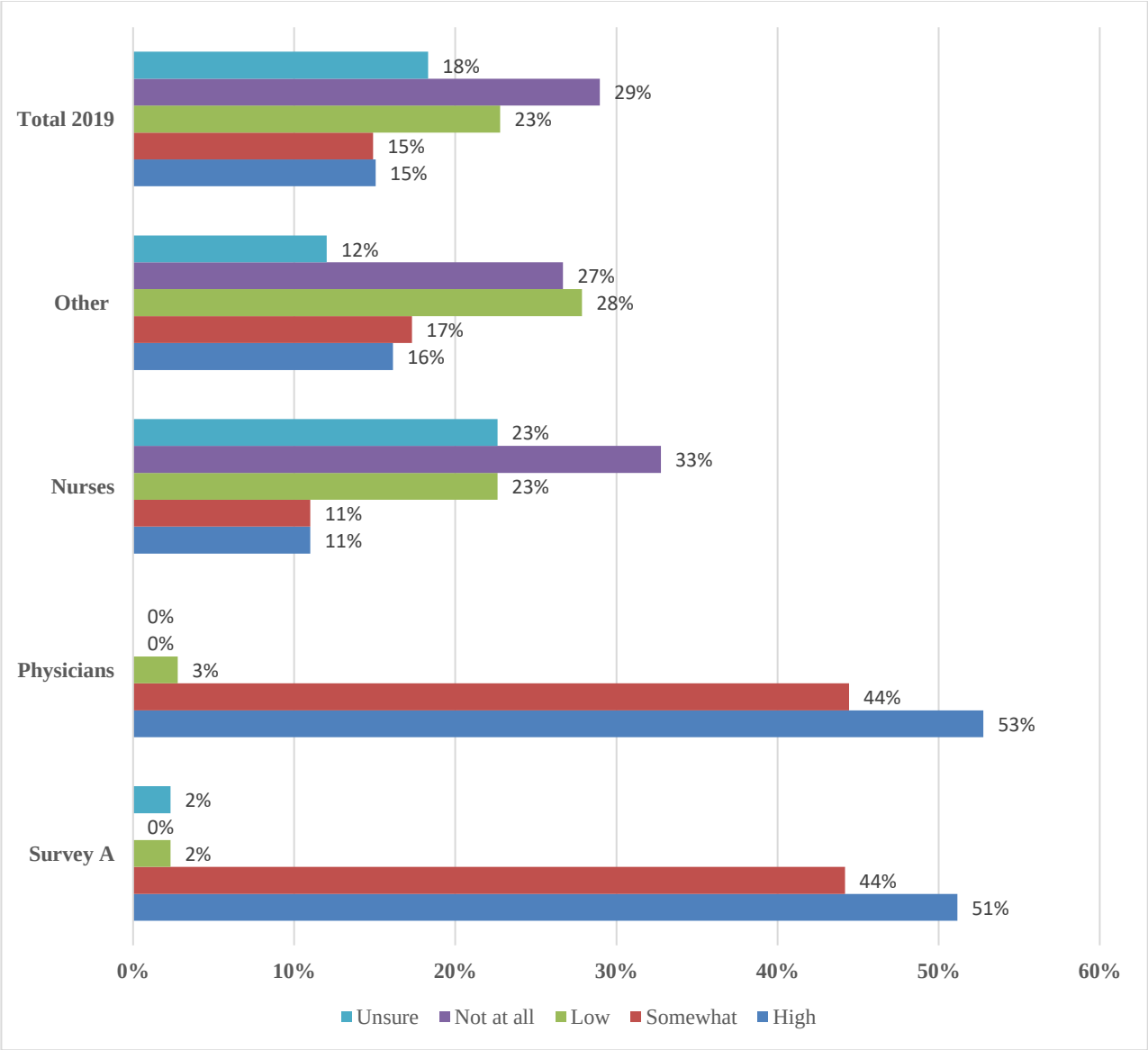
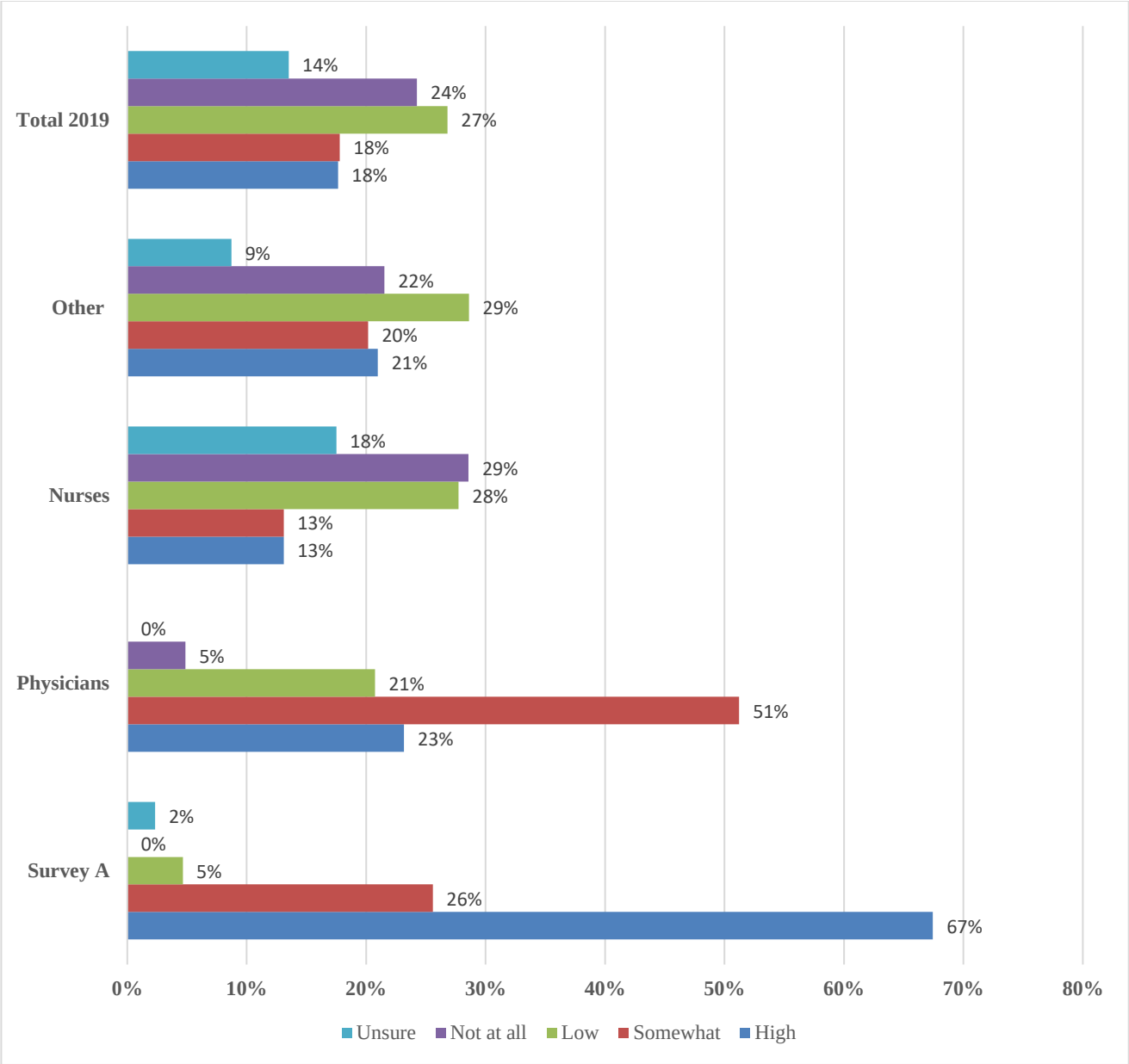


**Figure 43.**

**2019 perceived priority of providing formal leadership development opportunities**




Two additional HR practices were suggested by Survey A respondents as priorities through free text responses: “learning basic Indigenous and French communication skills” and “coaching philosophy and mentoring”.

### *Capability frameworks [2014, A] and their uses [A]*

Leadership capability (or competency-based) frameworks are reportedly being used in 86% of 2019 Survey A respondents' organizations (Figure 44), which is nearly double the number of reports by 2014 respondents (47%) (Figure 45). The LEADS capabilities framework is the most common, with nearly 80% of organizations reporting its use. Capability frameworks are most frequently used for leadership development (74%) and performance evaluations (67%) (Figure 46). Aligning the frameworks to the organization's Strategic Plan was reported by fewer than half of respondents.

**Figure 44.**

**2019 leadership capability framework adoption**

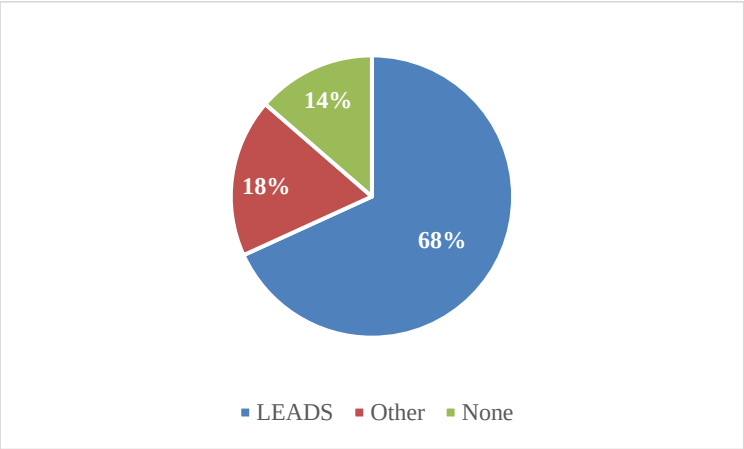



**Figure 45.**

**2014 leadership capability framework adoption**

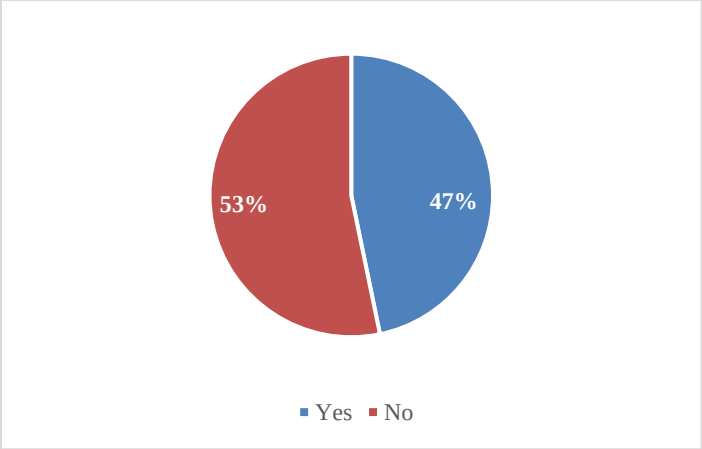
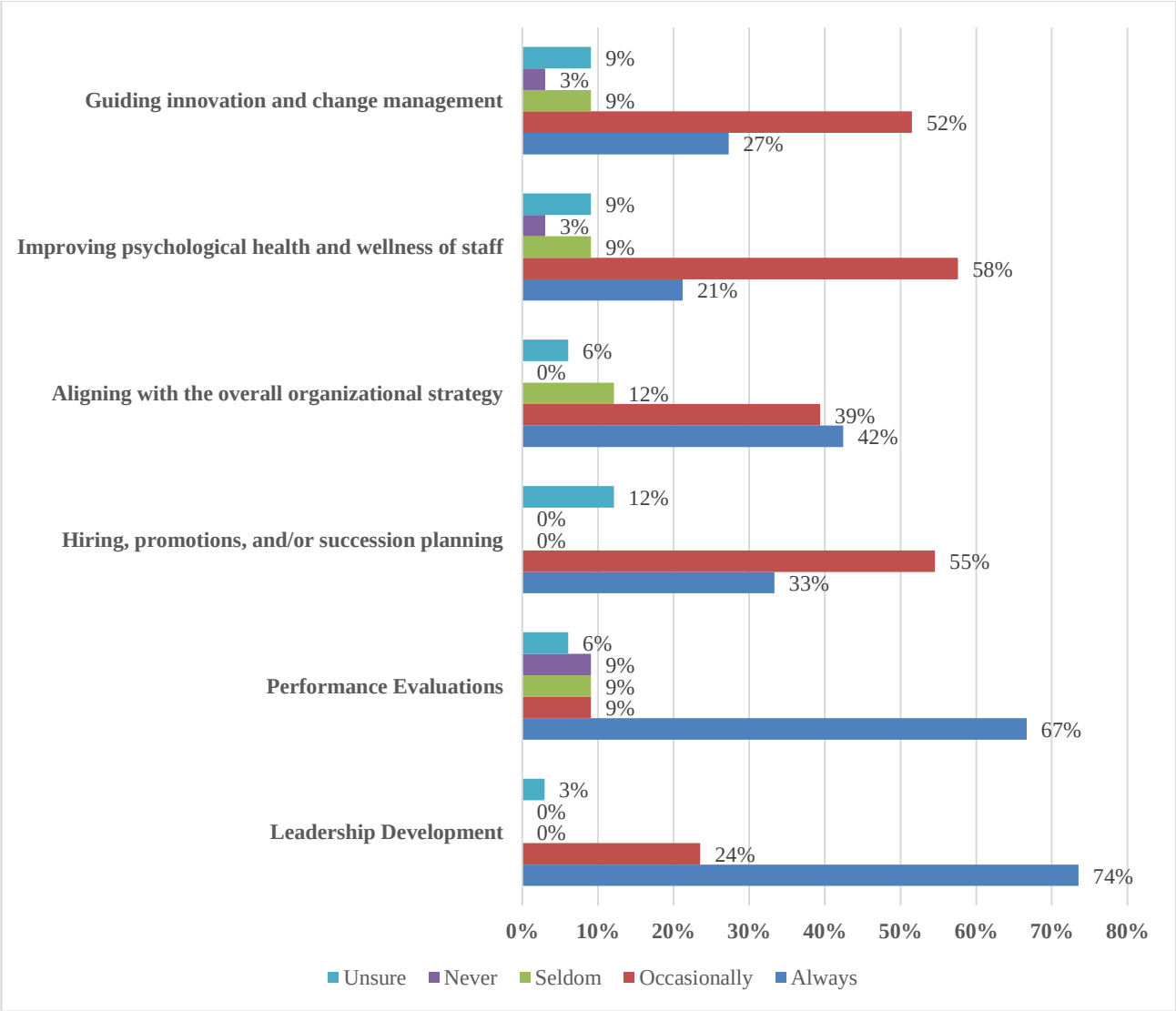


**Figure 46.**

**2019 leadership capability framework: uses**




*Providing formal or informal leadership development and the distribution of the two* [2014, A]

93% reported that their organizations provide formal or informal leadership development, usually in an even distribution between two (

Figure 47). These results are similar to those in 2014 (Figure 48,

Figure 49).

**Figure 47**

**2019 distribution of formal versus information leadership development**

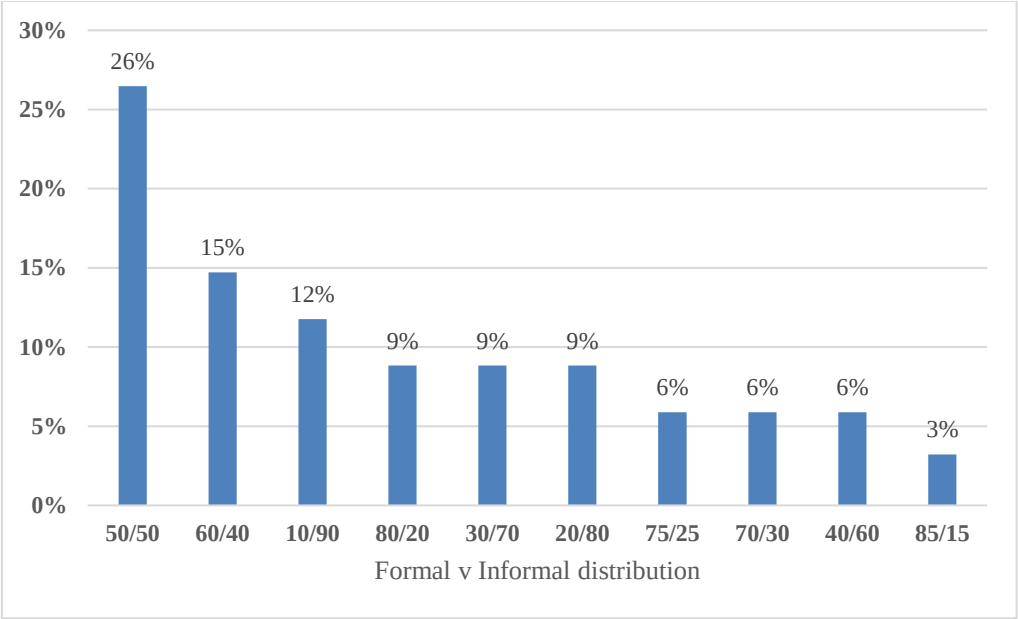



**Figure 48**

**Comparing 2014 to 2019 providing formal or informal leadership development**

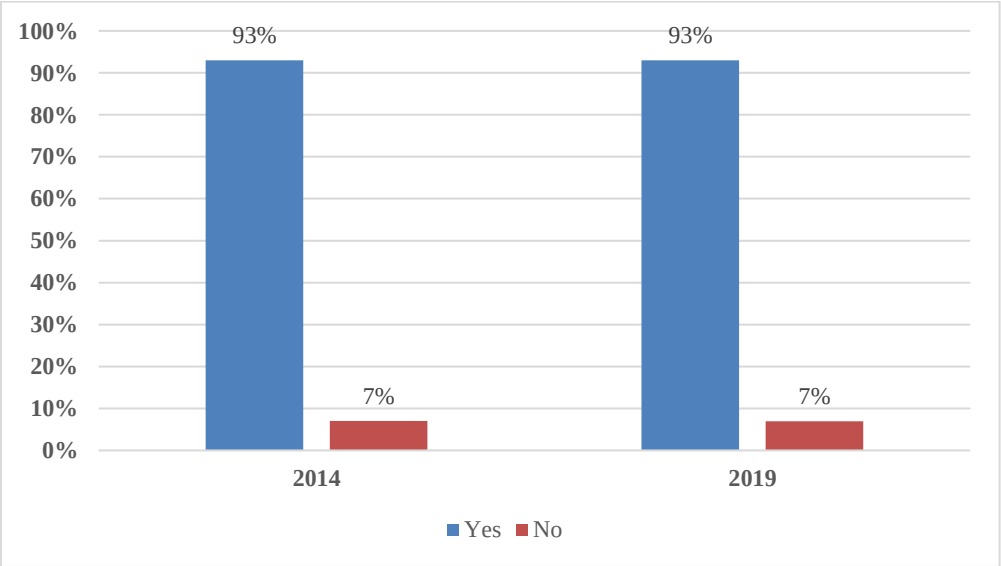
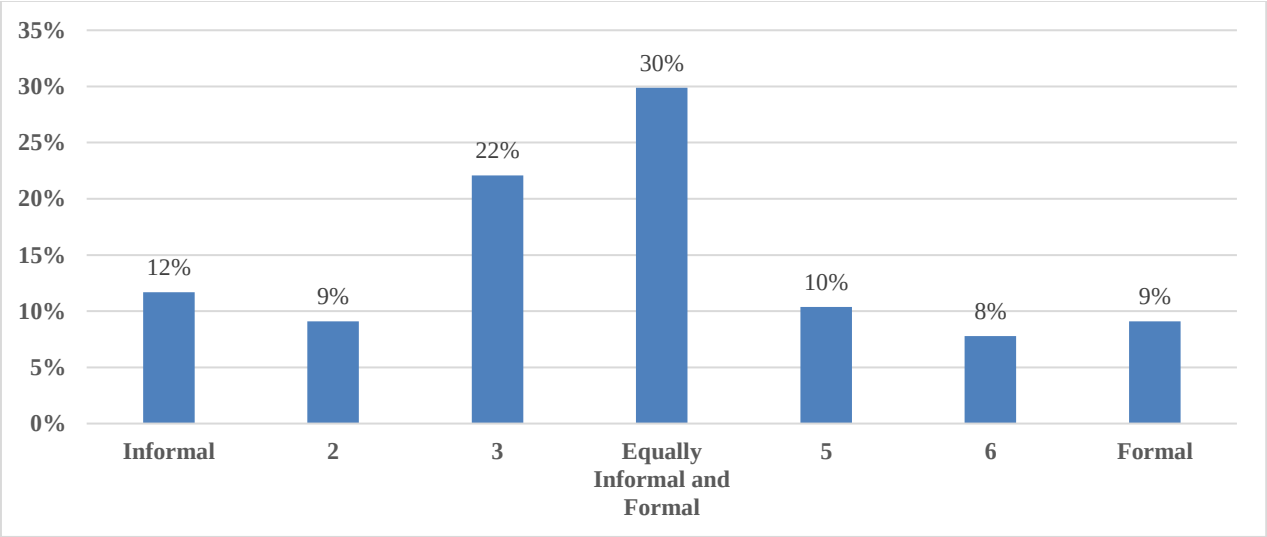


**Figure 49**

**2014 distribution of formal versus information leadership development**




*Percentage of budget allocated for leadership development and change in the past five years* [A]

Nearly 80% of respondents reported that their organizations spend fewer than 1% or 1 - 1.5% of the annual budget on leadership development (

Figure 50). The ratings of more than 2.5% have decreased four-fold since 2014, though the number of organizations that reportedly spend nothing has dropped from nearly a quarter in 2014 to zero in 2019. Overall, the average percentage of the budget devoted to leadership development has reportedly decreased since 2014, though nearly half of the organizational respondents suggested it had increased (mostly by a little) and half reported that it had remained the same (

Figure 51). Thus, it seems that more organizations are devoting funds to leadership development, but the percentage of the annual budget being allocated is less overall.

**Figure 50.**

**Percentage of annual budget allocation for leadership development (2014 and 2019)**

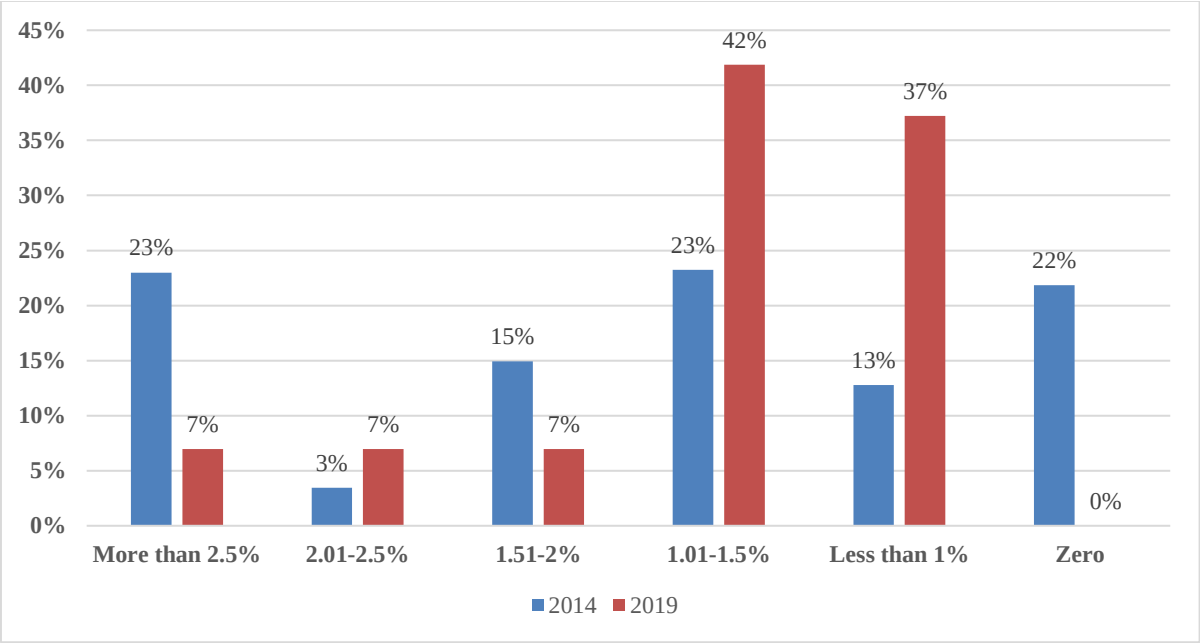
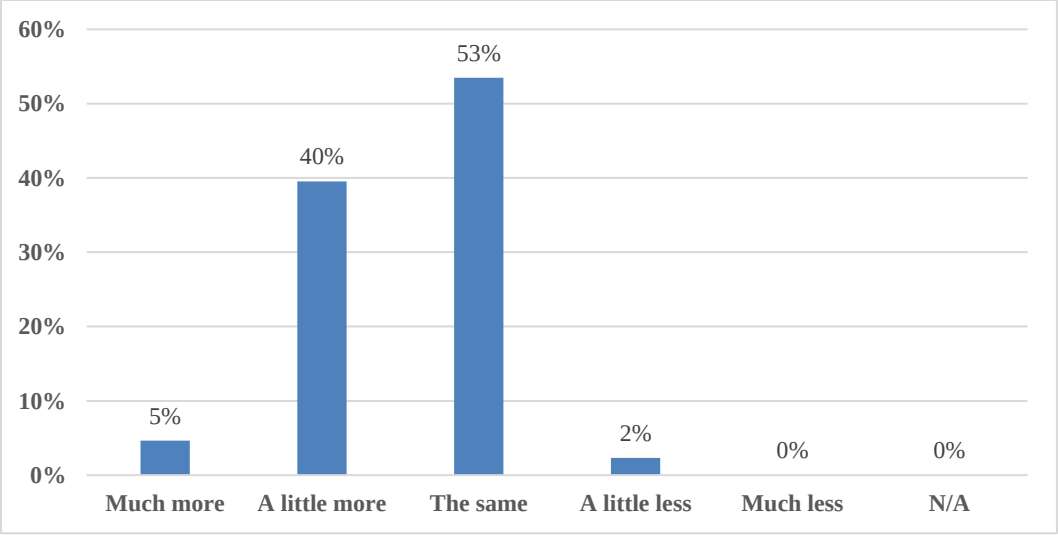



**Figure 51.**

**2019 perceptions of budget increase for leadership development in the past five years**




*Types of formal and informal leadership development* [2014, A, O]

The most common leadership development activities were ad hoc programs or tools, such as webinars, and ongoing goal setting and feedback (23% each), followed by stretch assignments,

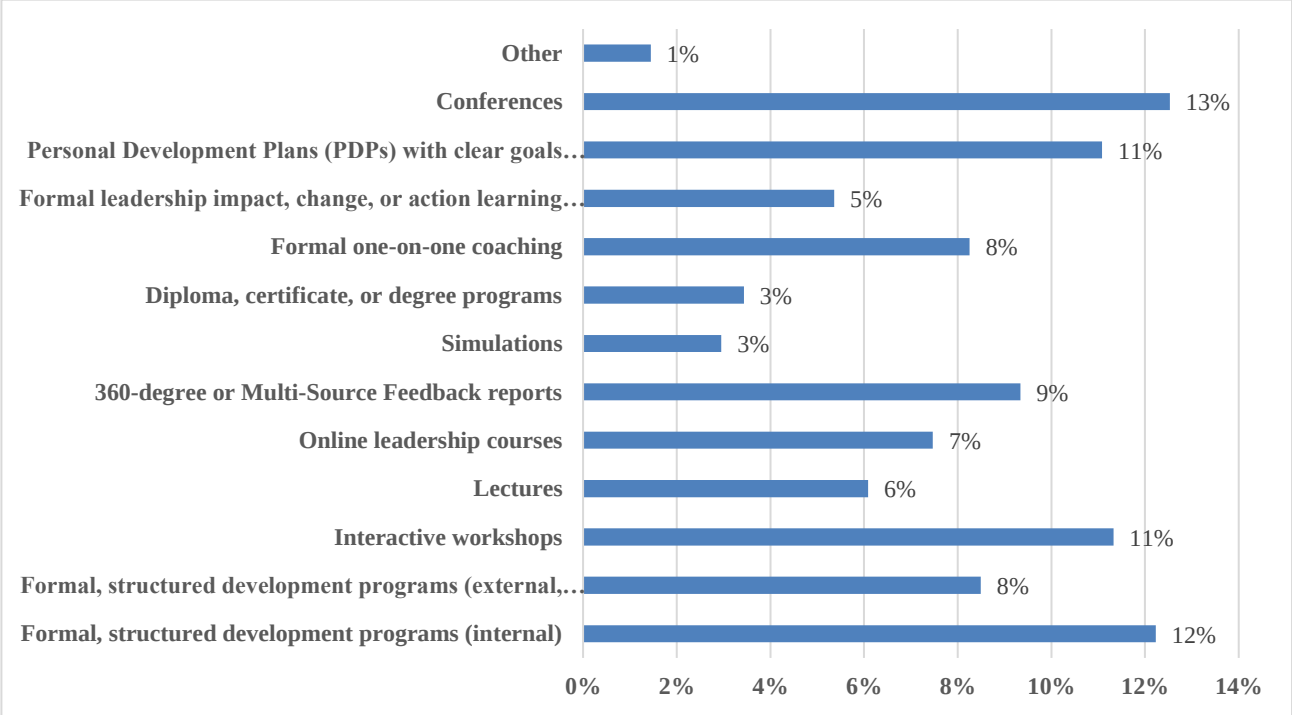
mentoring, and conferences (13% each) (

Figure 52,

Figure 53). Only 12% of respondents reported having internal formal leadership development programs. Lectures and online courses were also seldom referenced, which could demonstrate a shift from the traditional didactic default. Empirically supported experiential forms of leadership development, such as action learning or leadership impact projects and simulations, as well as 360-degree assessments, coaching, and mentoring, are reportedly rarely offered (5%, 3%, 9%, 8%, and 16% respectively). Categorizing the responses according to the Centre for Creative Leadership's 70-20-10 model[10], the responses are: 61% reported on the job development opportunities, 48% reported learning from others, and 86% reported formal programs.[11]

**Figure 52.**

**2019 types of formal leadership development programs**

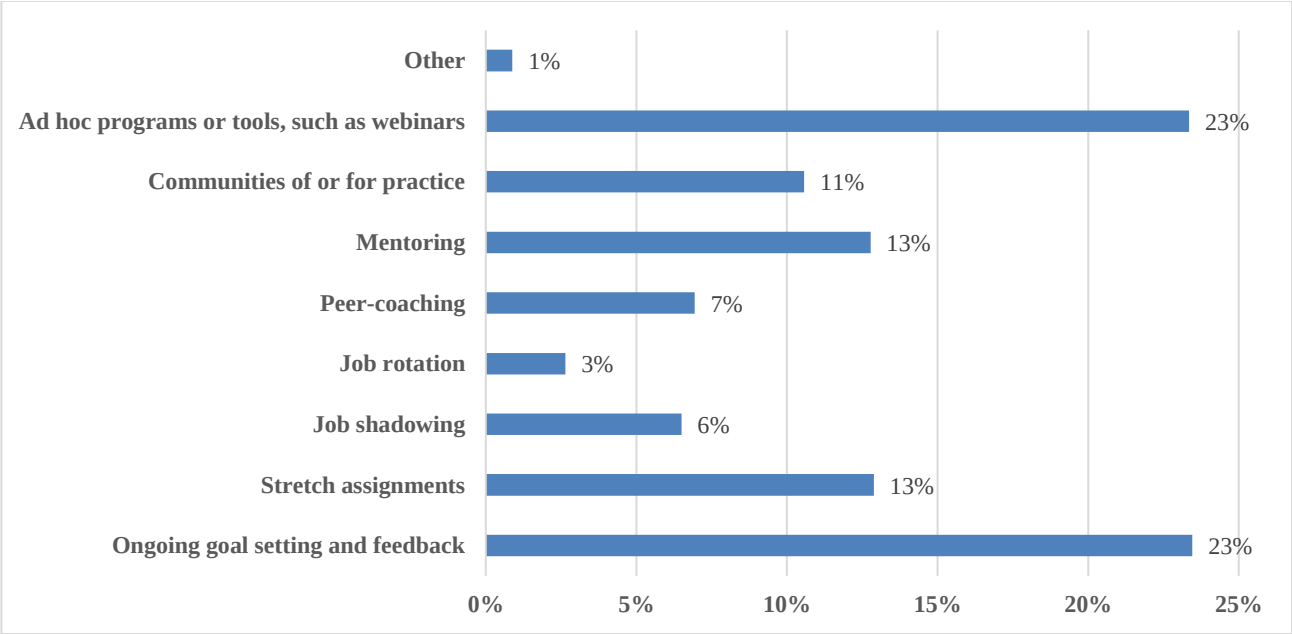



[10] The model suggests that 70% of leadership learning should take place on the job, 20% should be learning from colleagues and others, and 10% should be formal programs

[11] Note: the 2019 numbers refer to whether each activity is offered by the organization, not the amount of time spent on each or their perceived effectiveness

**Figure 53.**

**2019 types of informal leadership development programs**




Two additional forms of formal leadership development were offered via free text responses: quarterly leadership development institutes and participation in Canadian Foundation for Healthcare Improvement (CFHI) Fellowships.

### *Interdisciplinary leadership development* [All]

Most leadership development programs offered are reported to be interdisciplinary (75%) (

Figure 54), which is nearly double the percentage reported in 2014 (42%) (Figure 55). Only one 2019 respondent listed “single-profession” as the only form of leadership development.

**Figure 54.**

**2019 interdisciplinary leadership development**

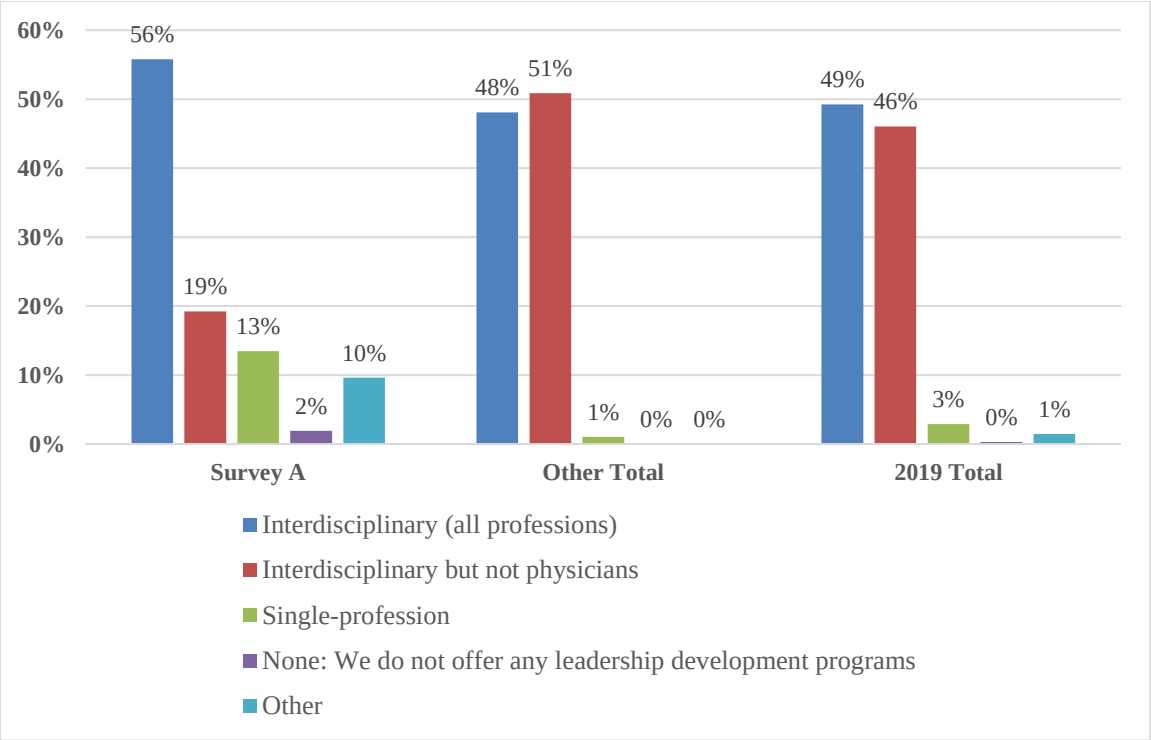
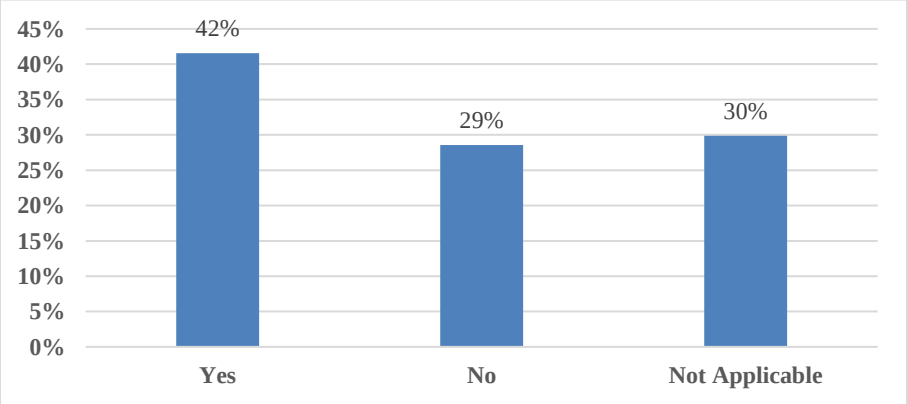



**Figure 55.**

**2014 interdisciplinary leadership development**



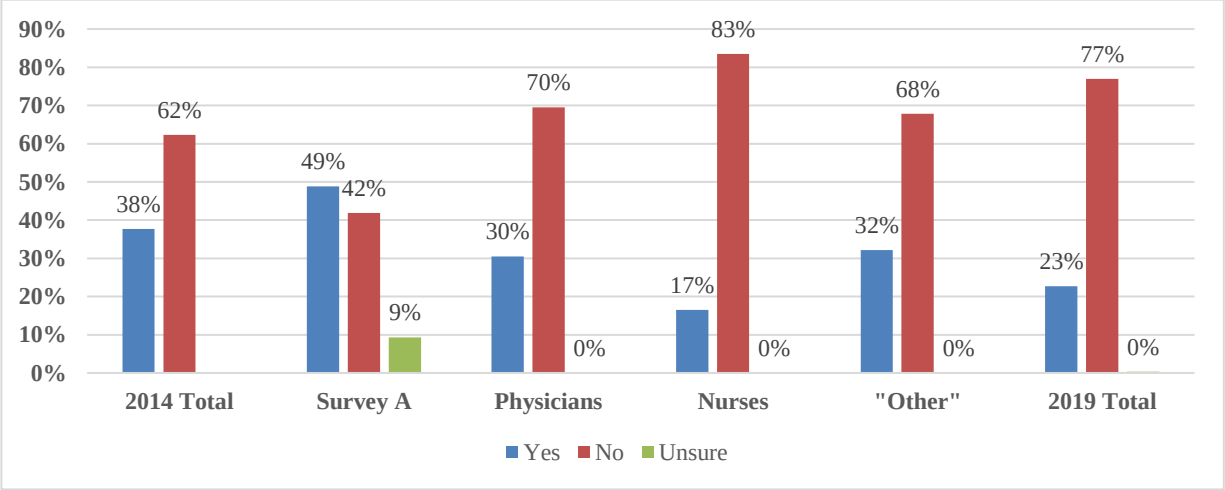

*Protected time for leadership development* [All]

Only a third of 2019 respondents reported having protected time for leadership development, which is a substantial decline since 2014 (67%) (Figure 56). Individual 2019 respondents reported

that their organizations offer protected time less than half as frequently as organizational respondents (22% versus 49%). Physicians and "other" respondents reported having protected time twice as frequently as nurses (30%, 32%, and 16% respectively).

**Figure 56.**

**Protected time for leadership development (2014 and 2019)**




*LD evaluation* [A]

Only 40% of respondents said that their organizations evaluate the impact of leadership development (at all) (Figure 57). Post-program evaluations (PPE's), a measure of participant satisfaction, are reportedly the most common form of evaluation (38%) (Figure 58). Only one organizational respondent reported having a robust approach to evaluation.

**Figure 57.**

**Leadership development evaluation**

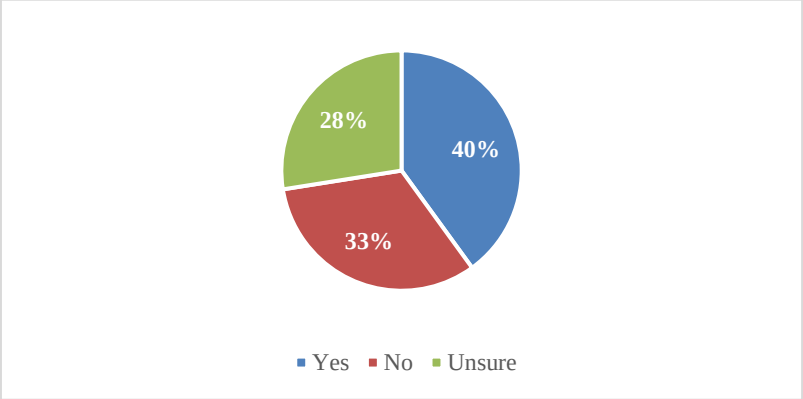
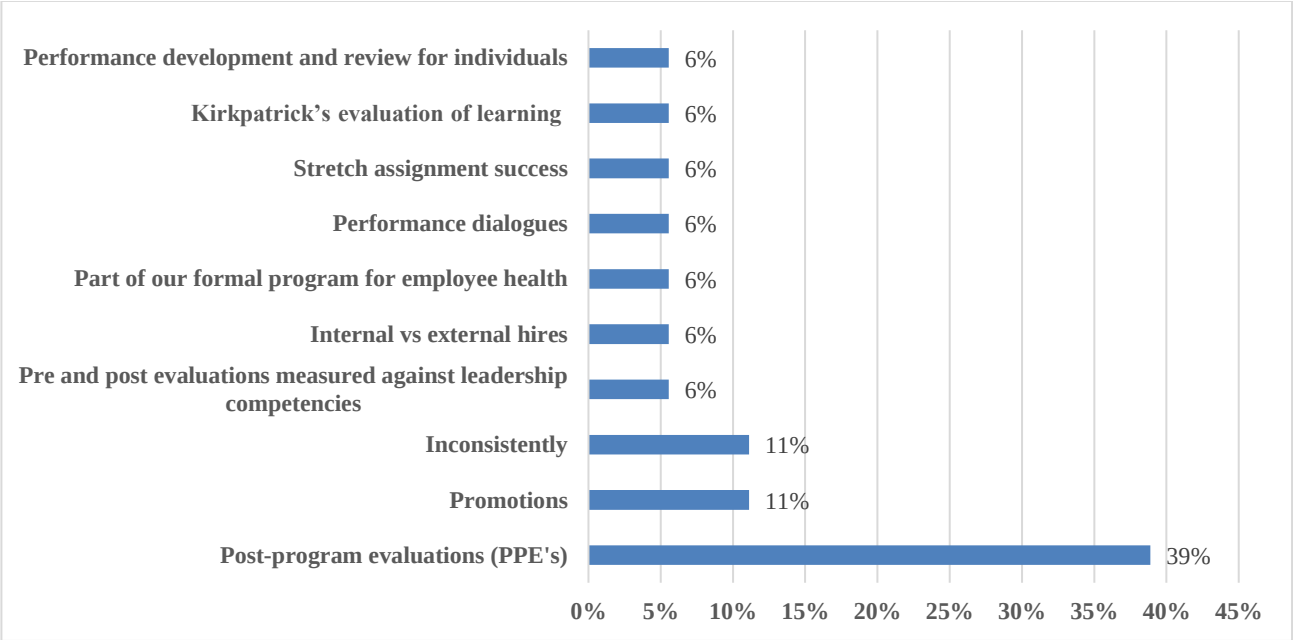


**Figure 58.**

**2019 methods of evaluating leadership development programs**



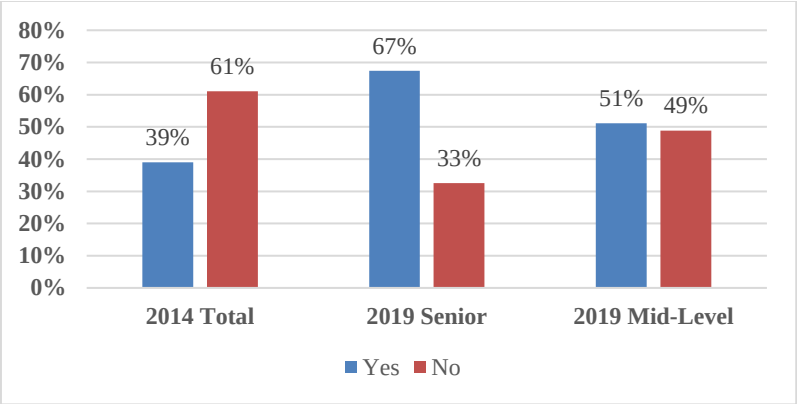

## *Succession planning* [2014, A]

Two-thirds of respondents reported that their organizations have a formal approach to succession planning for their senior leaders and half indicated that they had one for mid-level leaders (Figure 59). The former is a significant increase from the 39% in 2014, however, the latter is a decrease to nearly half[12]. These results also indicate that a third of organizations have no formal succession planning for senior leaders and half have none for mid-level leaders.

[12] The levels of leadership were not distinguished for this question in 2014

**Figure 59.**

**Succession planning (2014 and 2019)**

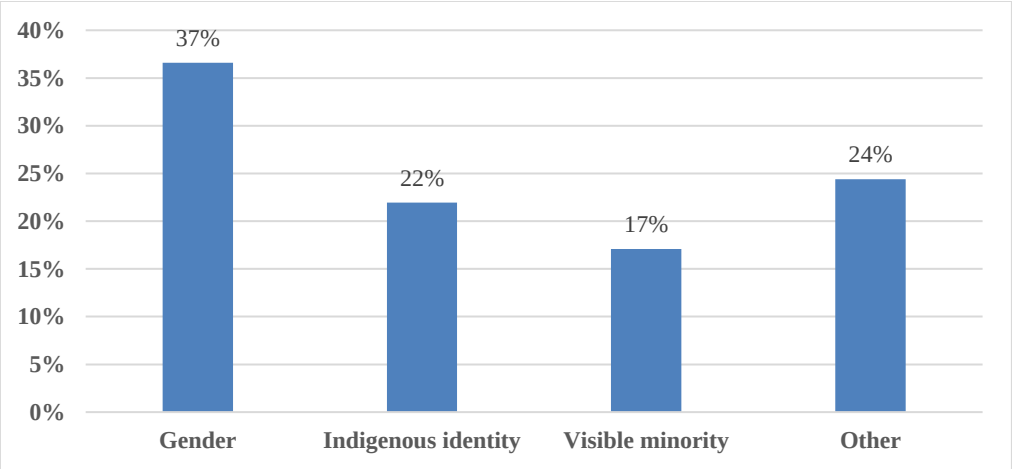



*Diversity in succession planning* [A]

Diversity of representation is reported to be infrequently considered when succession planning in terms of gender, Indigenous identity, visible minorities, and other forms (52%, 31%, 24%, and 35% respectively)[13] (Figure 60). Eight additional forms of diversity were mentioned by 2019 organizational respondents via free text responses: francophone, age, geographic, policy and care delivery experience, sexual orientation, disability, and professional background/training.

**Figure 60.**

**2019 diversity being considered for succession planning**




[13] Only respondents who reported that their organizations had a formal approach to succession planning were offered the question of whether diversity of representation was considered (n = 29)

## Effectiveness of Efforts

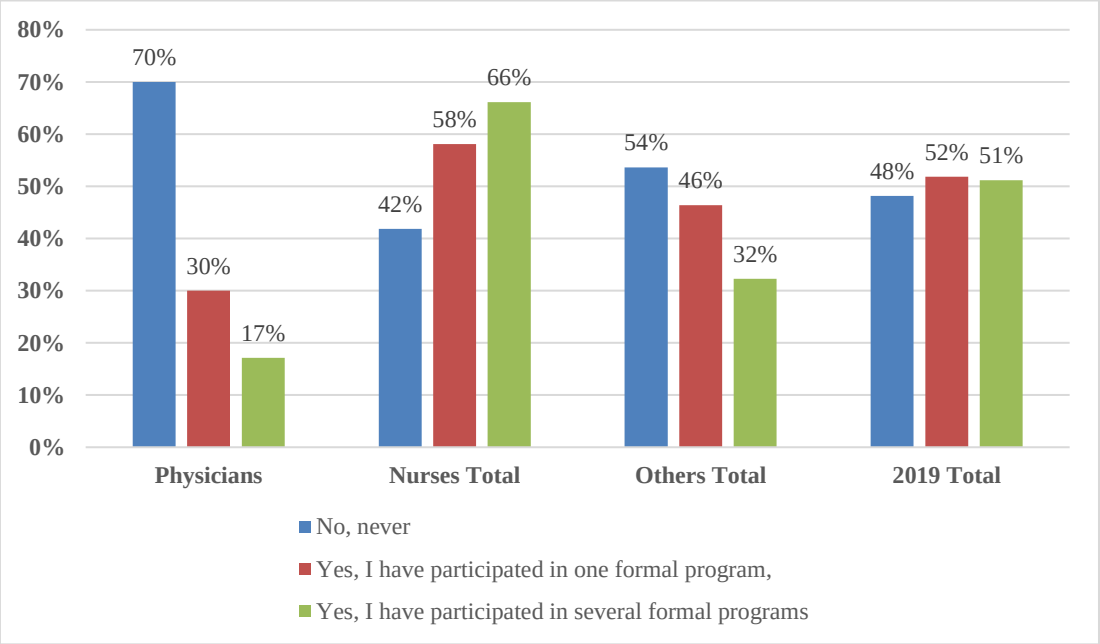
In addition to the types of leadership development programs and HR/OD practices that are being offered in healthcare organizations, their perceived effectiveness was investigated.

### *Leadership development experience of respondents' [B's]*

Before discussing leadership development programs that are being offered, respondents were asked if they have participated in programs themselves and nearly half reported having never (Figure 61).

**Figure 61.**

**Previous participation in leadership development programs**




### *Leadership development: satisfaction [All] and effectiveness [A, O]*

Nearly half of 2019 respondents rated being "not very" or "not at all" satisfied with both the selection and effectiveness of leadership development (Figure 62,

Figure 63), which is similar to the results in 2014 (Figure 64). The most effective leadership development activities according to 2019 "other" respondents were ongoing goal setting (20%),

mentoring, and stretch assignments (16% each)[14], though, again, with low frequency. 2019 organizational respondents were more favorable in their assessments than individual respondents.

**Figure 62.**

**2019 satisfaction with the selection of leadership development programs**

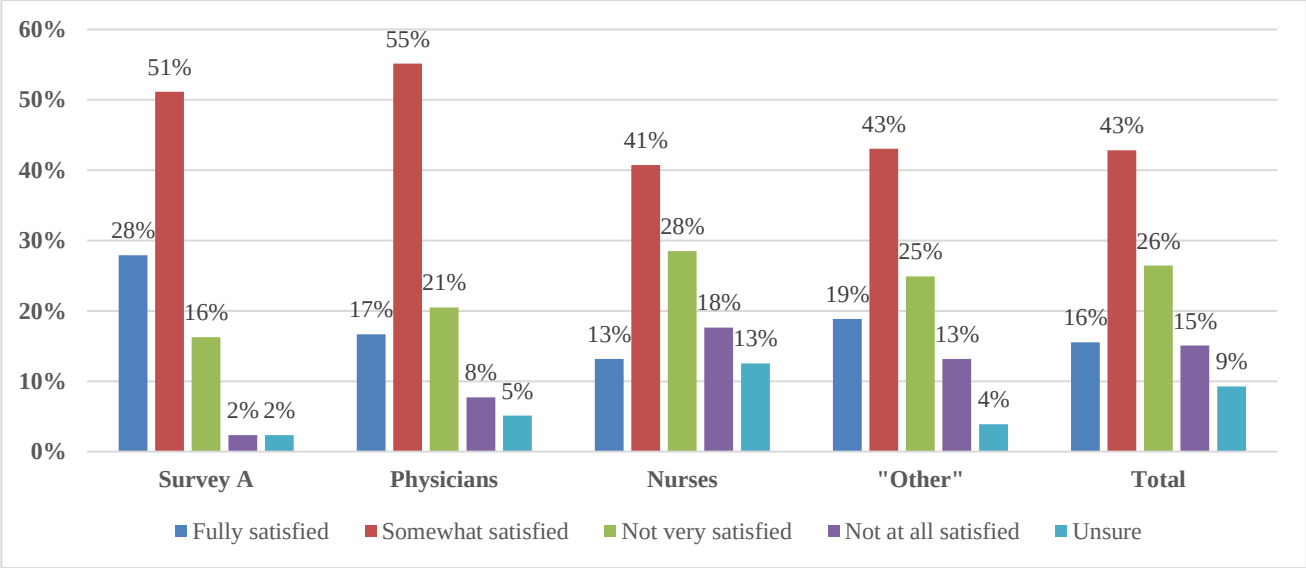
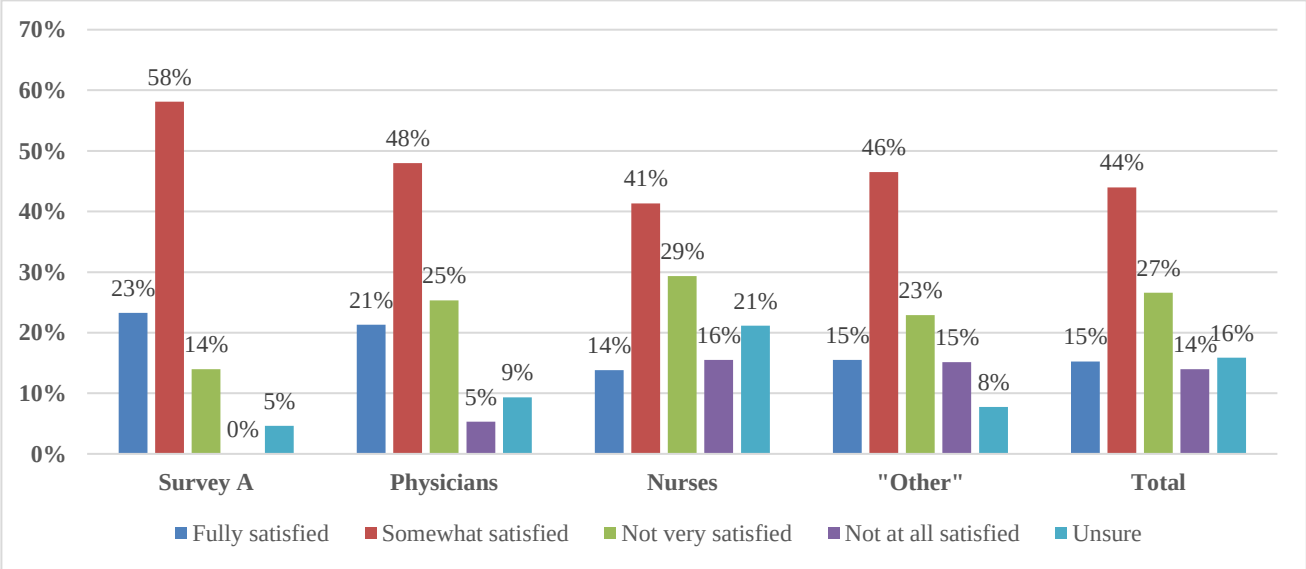



**Figure 63.**

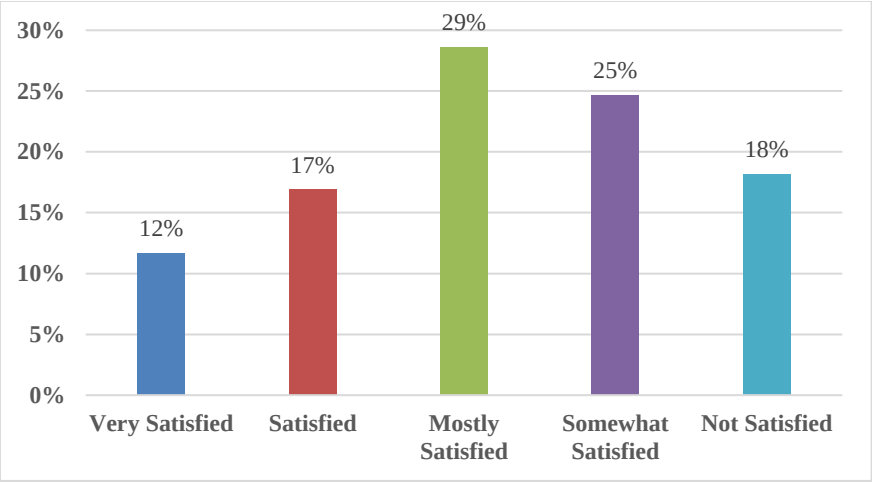
**2019 satisfaction with the effectiveness of leadership development programs**




[14] It should be noted that participants may have chosen not to rate the effectiveness of activities that are not offered by their organization

**Figure 64.**

**2014 satisfaction with the effectiveness of leadership development programs**




## What more could be done

This study also investigated what more could be done to close the leadership gaps in healthcare organizations and improve organizational leadership capacity.

### *Leadership turnover* [A]

Turnover among senior and mid-level leaders in the past five years was most frequently considered “small” or “moderate” (

Figure 65), but was thought to have been larger for senior leaders than for mid-level leaders three times more often (28% versus 9%). The anticipated turnover in the next five years was reported by two-thirds of respondents as being considerable (

Figure 66). Diversity is supposedly being considered more often when turnover occurs among both senior and mid-level leaders in a third of the organizations; whereas, half of respondents expected that it would remain the same for senior leaders and nearly two-thirds reported the same for mid-level leaders (

Figure 67).

**Figure 65.**

**Estimated leadership turnover in the past five year**

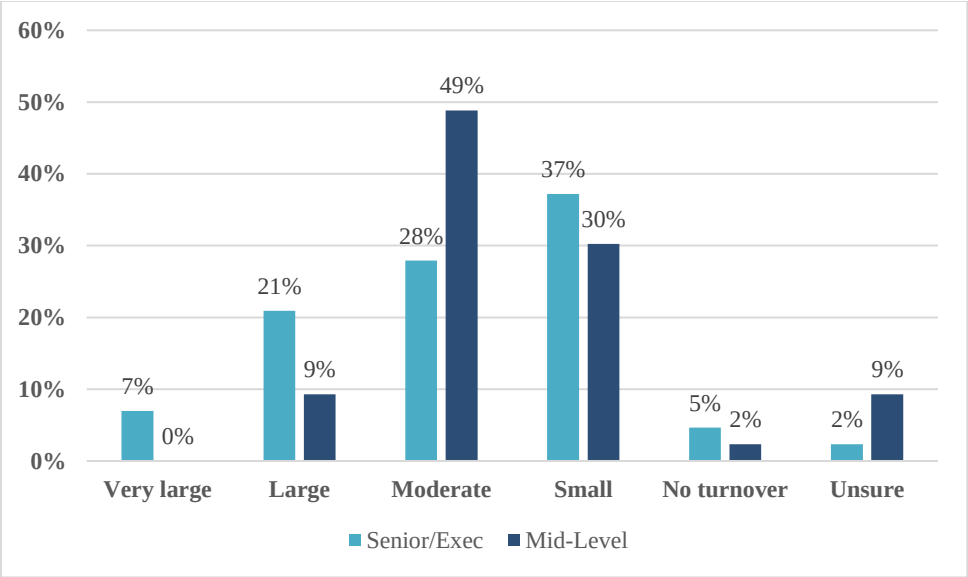



**Figure 66.**

**Anticipated leadership turnover in the next five years**

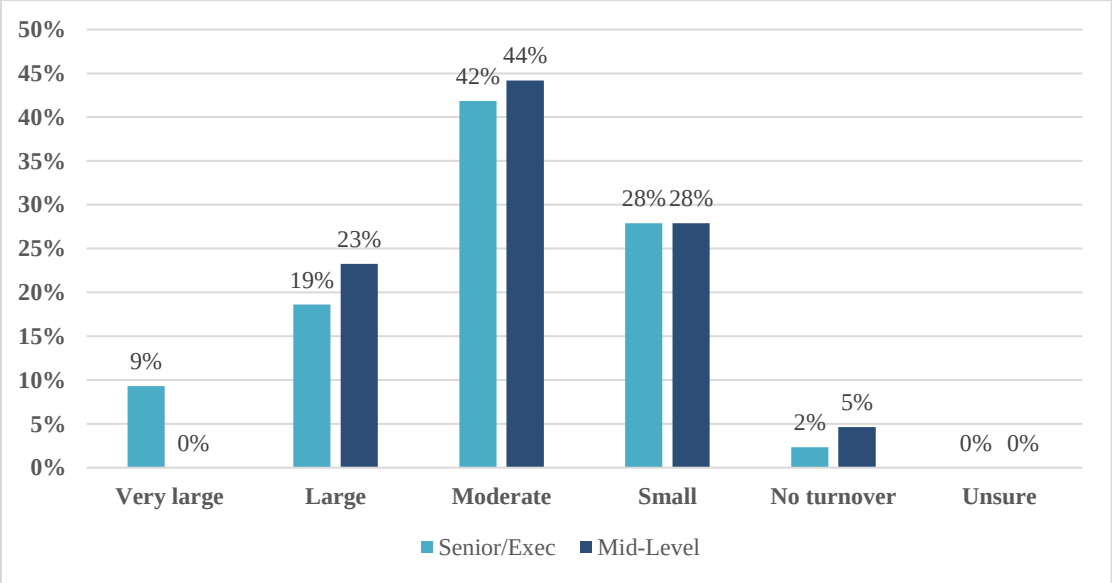
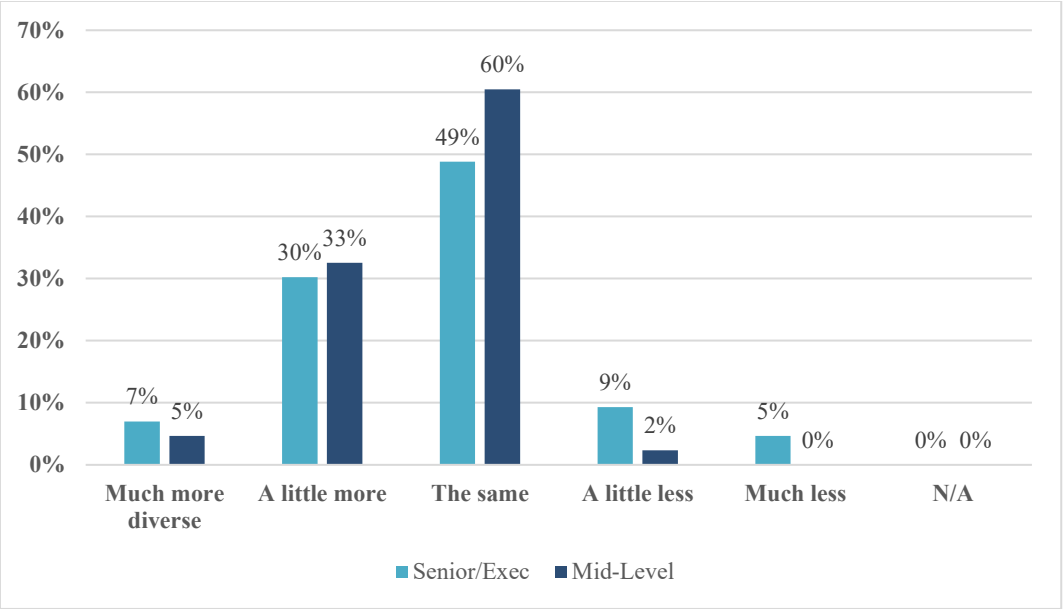


**Figure 67.**

**Leadership turnover in terms of diversity in the past five years**

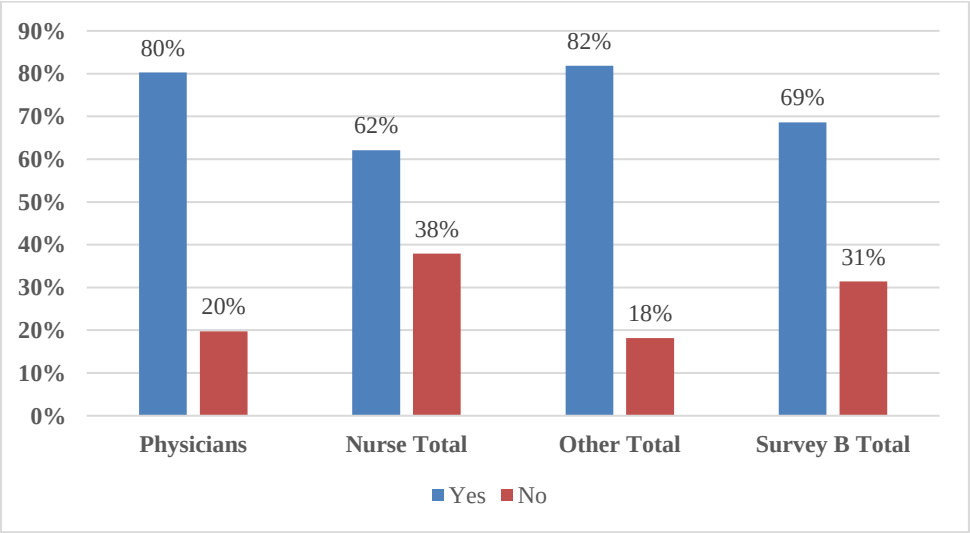



*Are you currently in a leadership role?* [B's]

Roughly 80% of the physicians and "other" respondents reported being currently in leadership roles, along with two-thirds of nurses (Figure 68). This is intriguing given that 50% reported having never undertaken leadership development.

**Figure 68.**

**Respondents currently in leadership roles**



*Organizational culture and its support of change and innovation* [2019]

Only a quarter of respondents rated their organizational culture[15] as being "highly supportive" of change and innovation (

Figure 69,

[15] **Organisational culture** refers to the explicit and implicit priorities, assumptions, expectations, values, norms, practices, and symbols in an organisation that convey meaning and influence behaviour[15].

Figure 70). Nurses rated their senior leaders as being “highly supportive” the least frequently; whereas, physicians rated mid-level leaders as “highly supportive” the least frequently. There was a substantial disconnect between organizational respondents and individuals. For example, all but two organizational respondents rated the culture of their workplace as being “highly supportive” or “somewhat supportive” of change and innovation; whereas, marginally more than half of individuals concurred. Similarly, more than a quarter of individual respondents rated the culture as “not very” or “not at all” supportive for senior leaders, compared to only two organizational respondents (and no organizational respondent rated it as “not at all supportive” for either level leaders). Individual raters tended to be consistent with each other.

**Figure 69.**

**Organizational culture: senior and executive leaders**

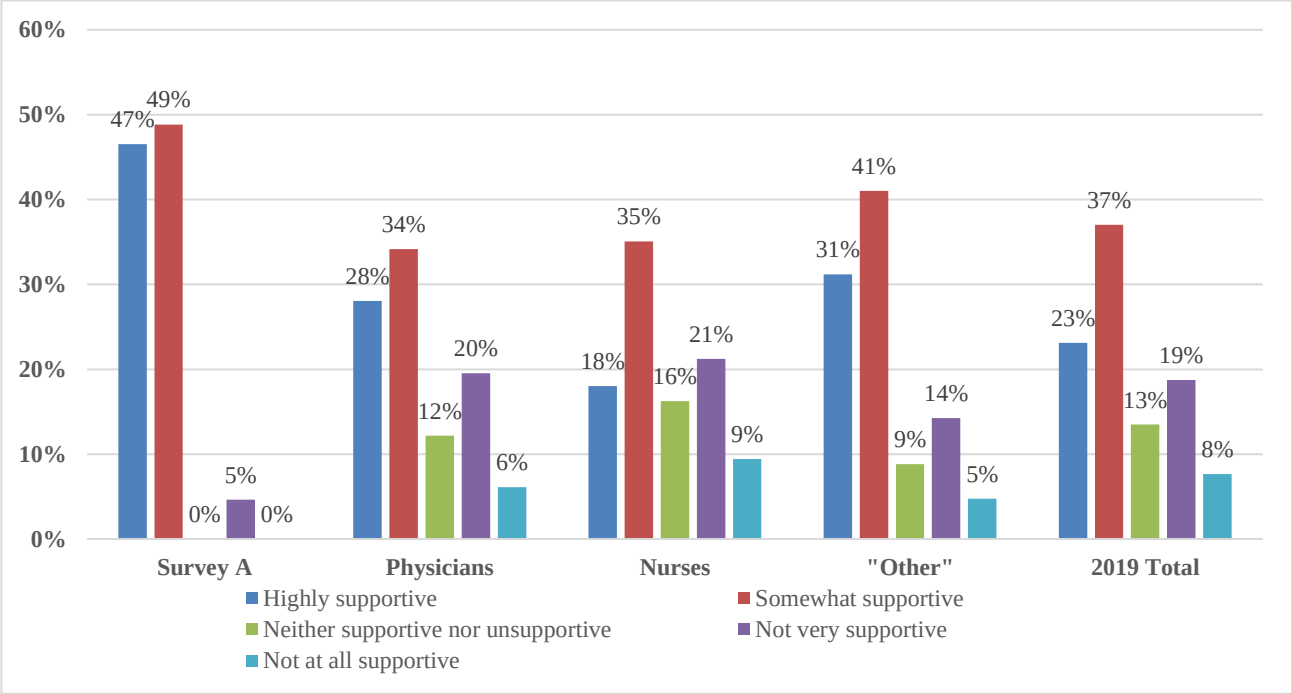
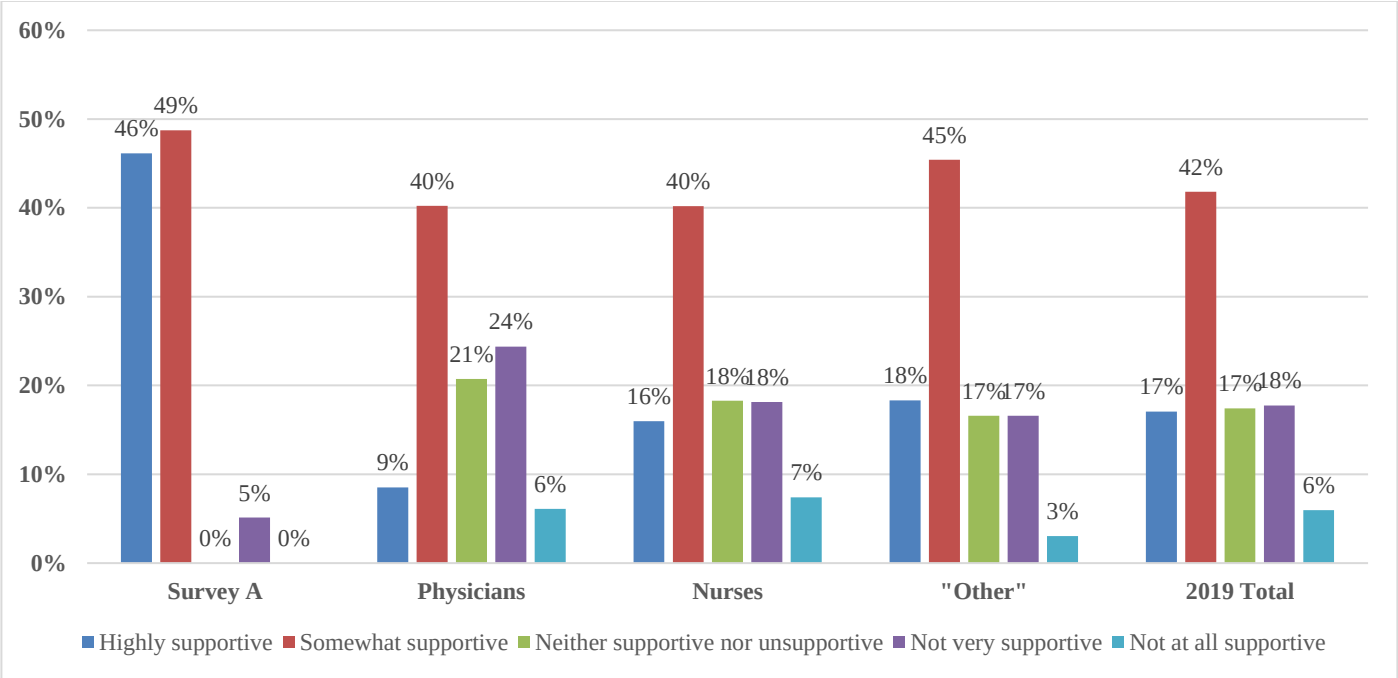


**Figure 70.**

**Organizational culture: mid-level leaders**




### *Staff engagement* [2019 16]

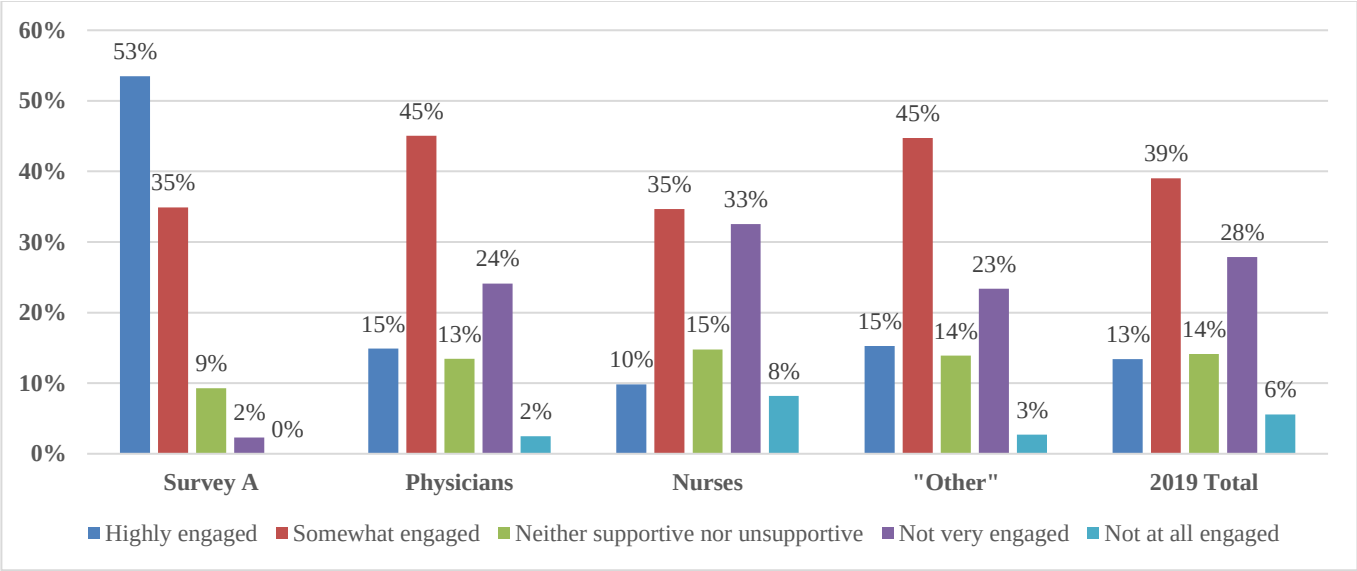
Only 13% of all respondents suggested that staff at their organizations are "highly engaged", compared to more than half of organizational respondents (

[16] Organizational respondents and "other" respondents were asked to rate staff engagement; physicians were asked to rate physician engagement; and nurses were asked to rate nurse engagement

Figure 71). Nearly half of 2019 respondents assessed staff as being “neither engaged, nor not engaged”, “not very engaged”, or “not at all engaged”, compared to only 11% of organizational respondents. Reports of nurse engagement scores were slightly lower than others.

**Figure 71.**

**2019 staff, physician, and nurse engagement**



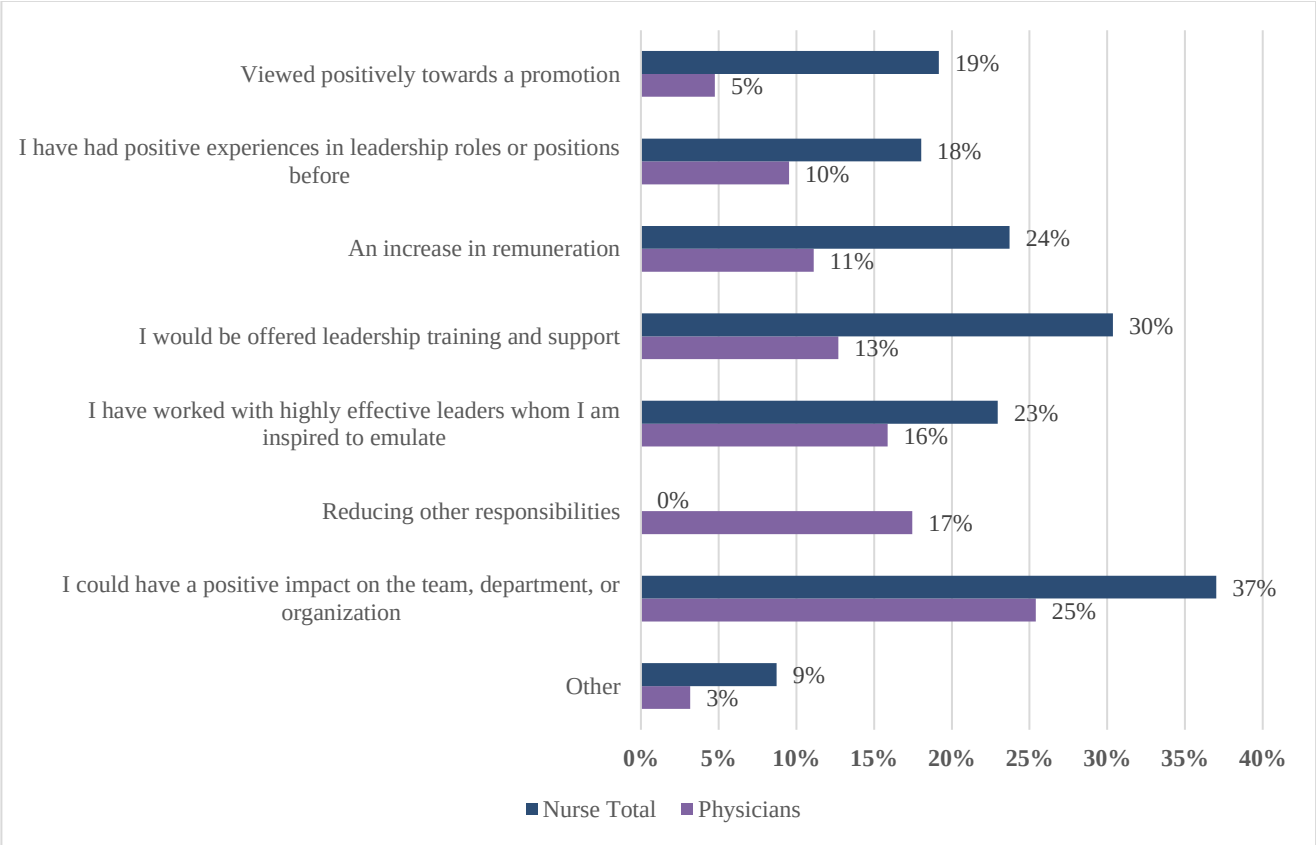

### *Incentives for promotion* [P, N]

For both physicians and nurses, the notion that one could have a positive impact on the organization was the top incentive to consider taking on a leadership role or position (Figure 72). For physicians, reducing other responsibilities and emulating a respected leader were the next most desirable incentives, whereas only 11% of physician respondents suggested that an increase in remuneration and only 5% indicated that being seen as favourable for a promotion would be incentivizing. For nurses, being given the requisite training and support was reported as the second most effective incentive, followed by an increase in remuneration[17].

[17] Unintentionally "reducing other responsibilities" was not included as an incentive in the nurse survey

**Figure 72.**

**Incentives for taking on a leadership role or position**



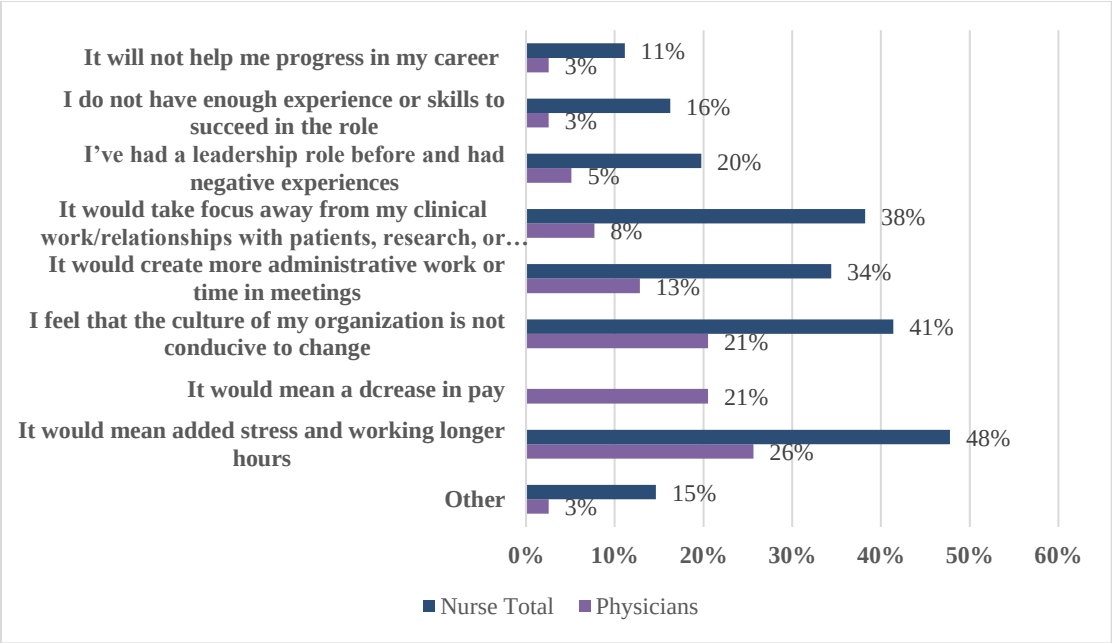

### *Disincentives for promotion* [P, N]

For both physicians and nurses, the leading disincentive was a worry that it would increase stress and hours at work, though this was far more frequently a concern for nurses (77% versus 26% for physicians) (Figure 73). A decrease in remuneration was only reported as a disincentive by a fifth of physicians and, surprisingly, only three physicians reported that they were concerned that a leadership role would take time any from clinical roles and relationships with patients. This seems very likely attributable to an appreciation for the positive influence one can have as a positional leader and not a lack of interest in one's clinical role. Three quarters of nurses reported that they would be disincentivized by their perception that their organizational culture is not conducive to change, as well as by concerns over decreased attention to clinical responsibilities[18].

[18] Unintentionally, "a decrease in remuneration" was not included as a disincentive in the nurse survey

**Figure 73.**

**Disincentives for taking on a leadership role or position**




## Final thoughts

*What is the best way to develop leaders?*[19]

The most common responses offered by way of free text (n = 25) were a combination of formal and informal leadership development programs (28%), mentoring (24%), experiential, action-based, or simulated learning that enable participants to practice behaviours (20%), coaching (16%), and stretch assignments (16%).

## Discussion

## Results of the Statistical Analysis

The statistical analysis reinforce that the skills and supply-demand/need gaps are perceived to be larger than they were in 2014 and that there has been a significant decrease in the perceived organizational priority of retaining critical talent since 2014. Satisfaction with organization's leadership programs has improved since 2014.

[19] The question stated, "Finally, in your estimation, what are the most effective ways to develop the kind of leaders required to achieve organizational goals and anticipate/meet the current and future challenges facing Canadian healthcare organizations (either generally, or at the two levels described above)?"

## Return to the research questions

The study's research questions are a helpful starting point for the discussion, which are approached from an appreciative inquiry perspective. The two central questions were:

*Are there perceived leadership gaps in healthcare organizations across Canada?*

Yes, this was consistently clear; however, perceptions of organizational leaders were much more favourable than those of individual healthcare professionals and academics.

*What is the nature of these gaps?*

The gaps pertain to a limited organizational leadership capacity to achieve organizational outcomes and anticipate and meet future challenges and reforms, low ratings of the leadership capabilities of senior and mid-level leaders, an insufficient supply of current competent leaders given what and who is needed, a lack of reflection in positional leaders of diversity of perspectives in terms of gender, Indigenous identity, and visible minorities, and other gaps, such as a lack of resilience and unpreparedness for formal roles.

Further questions of interest are listed below:

*Does it appear that the nature and size of the gaps have changed since the 2014 Benchmarking Study?*

The gaps that were reported in the 2014 Study have not only allegedly persisted; they appear to have increased (gotten worse).

*What is the perceived impact of these gaps on organizational performance?*

Nearly half of respondents described it as "large" or "very large" and the negative impact is reported to have augmented in the past five years, which is increasingly concerning.

*What perceived priority is given to a selection of common human resources (HR), organizational development (OD), and leadership development (LD) practices?*

The overall perceived priority was low, with nearly half of respondents rating every HR/OD practice as being considered a low priority by their organizations or not a priority at all. Increasing staff engagement was the highest rated, but only a quarter of respondents indicated that their organizations considered it a high priority. The lowest-rated was retaining critical talent.

*How effective are leadership development opportunities perceived to be?*

Nearly half of respondents indicated that they were "not very satisfied" or "not at all satisfied" with both the selection and effectiveness of the leadership development options provided by their organizations. This should be qualified by the fact that half of respondents reported having never participated in leadership development programs.

*What more could be done to close the gaps and how?*

To answer this question, a more in-depth discussion follows regarding reflections on the key findings. A series of overarching themes are presented in a seemingly narrative progression that represent areas of important attention, hopeful opportunities, and recommended next steps in light of current scholarship for healthcare organizations across Canada.

## Areas of important attention

1. *There are concerning perceived leadership gaps in Canadian healthcare organizations; the impact of these gaps on organizational performance is significant; and the gaps are reportedly getting larger (worse)*

The numerous consistent perceived leadership gaps in Canadian health organizations are concerning. It is important to state that the presentation of these data and recommendations are intended to be dispassionate and without inference regarding the individuals currently working and leading in healthcare organizations. Certainly, there is no aim to undermine them or the work they do in the attempt to engage with the findings and suggest next steps from an appreciative inquiry perspective.

The perceptions of leadership gaps were fairly consistent: roughly a third of respondents indicated that there are "large" or "very large" gaps in terms of both the number of competent senior and mid-level leaders in their organizations and those leaders' capabilities or skills compared to what or who is needed. These results may account for the fact that half of respondents suggested that their organizations are only "somewhat capable" of achieving organizational outcomes and anticipating/meeting future challenges and opportunities. For this question, very few indicated that there is no gap and only a third asserted that the leadership capacity of their organizations is "highly capable".

Similarly, while it may be unclear what the expectation should be of how often positional leaders should demonstrate key leadership capabilities, it is surprising that only half of respondents

rated their leaders as "demonstrating people-centred care" exceptionally well. There were also unexpected scores for encouraging and supporting innovation, systems/critical thinking, and developing others, which are key capabilities for the VUCA world and for leading complex adaptive systems. Ratings for self-awareness among leaders were also underwhelming, with only a quarter of respondents suggesting that their leaders demonstrate it exceptionally well. This is interesting given that self-awareness is closely linked to effective leadership[19] and that leaders who lack self-awareness have also been shown to have deleterious effects on organizations[20]. The fact that diversity of perspectives in terms of gender, Indigenous identity, visible minorities, and other forms are reported to be under-represented significantly among senior and mid-level leaders, highlights are area for improvement. In addition to the obvious social justice reason to actively eliminate this situation, there is reliable evidence that in some cases diverse teams and organizations outperform homogenous ones.

In addition to the warnings that these results raise for the future, the various leadership gaps are considered to be already having a significant negative impact on organizational performance. In the healthcare sector, poor organizational performance affects not only staff well-being and other related outcomes, but it also puts patients at risk through consequences such as preventable clinical errors[21].

Finally, what is perhaps most concerning, is that the leadership gaps are perceived to be getting larger (worse), as is their impact on organizational performance. Comparisons between the data from both 2014 Benchmarking Studies indicate this, as do the reports from 2019 respondents.

The findings of this study related to the perceptions of leadership gaps allude that healthcare in Canada is approaching a tipping point.

2. *Satisfaction with leadership development is low and many are not participating in development opportunities*

Given the empirical evidence that leadership development can result in improved outcomes at various levels, this would otherwise be a conspicuous solution; however, ratings in this study were generally low.

On one hand, it is encouraging that the number of organizations that provide some form(s) of leadership development has allegedly increased since 2014; however, the average overall percentage of the annual budget allocated to leadership development seems to have decreased and there has been a considerable decline in reported protected time for leadership development. A lack of time is

one of the key contributors to participants failing to successfully applying development learning to the workplace [22] and simply putting the onus on them to 'make the time' without requisite organisational support is unlikely to yield preferable results. The extent to which shrinking budgets and lessened protected time are contributors is unclear; however, half of the 2019 respondents suggested that they are dissatisfied with the selection and effectiveness of leadership development programs. They also indicated that many of the most empirically supported forms of developing leaders, such as action learning projects, simulations, and 360's, coaching, and mentoring[23], are reportedly seldom being offered. Surprisingly, only a quarter suggested that their organizations provided common practices, such as ongoing goal setting and feedback, and that this frequency was curiously the highest of all leadership development activities. It is interesting but unclear why nearly 80% of respondents indicated that they are currently in leadership roles; however, nearly half suggested that they had never participated in leadership development themselves. The near-absent reports of evaluating leadership development beyond the level of participant satisfaction represent another clear area for improvement, since a robust evaluation framework can provide indications of the impact of programs and can enhance the development and outcomes of participants[24].

Taken together, these results reinforce reliable evidence that although development interventions can lead to improved outcomes at various levels, success is not automatic or certain.

The impact that leadership can have on individual, team, organizational, and system outcomes, the results that leadership development can facilitate at various levels, and the pressure on those designing, funding, delivering, and undertaking programs to demonstrate that leadership development is demonstrably effective signal very clearly that an evidence-based approach is needed[25]. In response, CHLNet is in the process of preparing a report based on an international research study for its Network Partners on "Wise Practices" of leadership development based on empirical evidence from cutting-edge scholarly literature and on the input of international Subject Matter Experts (SME's).

3. *People priority: respondents perceive that staff are under-appreciated and under-prioritized by their health organizations*

A key overarching theme that this study has revealed is that many healthcare professionals feel that their organizations under-appreciate and under-prioritize their staff. This is evident by the low ratings of the HR/OD priorities: nearly everyone was considered a low organizational priority or not a priority at all. The fact that the highest-rated, increasing staff engagement, was deemed to be a high priority by the organizations of only a quarter of respondents, and the fact that the lowest-rated HR/OD practices were retaining critical talent and having a formal approach to succession planning, reinforce the notion that there is a widespread feeling that healthcare organizations do not value or support their people sufficiently. Similarly, the low scores for organizations prioritizing increasing physician and nurse engagement (fewer than 20% and 10%, respectively), which are lower than the engagement ratings in 2014, are troubling for many reasons. Low clinician engagement is linked to various negative outcomes, including decreased retention and increased absenteeism, clinical errors, and burnout, the latter of which is on the rise among healthcare professionals concerningly[26] to the point where it has been described as an epidemic[27].

These results indicate that solutions are needed at both the team, department, and system levels. A concerted effort to engage, value, and prioritize healthcare leaders and staff appears to be necessary.

4. *Organizational priority: the encouragement and support of innovation is perceived to be low and organizational cultures are thought to be unsupportive of change*

The need for innovation in healthcare is clear, especially given how rapidly technology is advancing, including artificial intelligence (AI), as well as the associated rising costs. The ability to innovate and lead change is essential in the VUCA world and in complex adaptive systems. This study revealed that encouraging and supporting innovation was the lowest-rated LEADS capability among healthcare leaders, which is reminiscent of the 2014 study results. Innovation is often intimately linked to organizational culture. Similarly, the most common reason that participants in leadership development programs report failing to experiment and apply their learning to the workplace is a culture that is adverse to change[28]. Only a quarter of respondents in this study reported that their organizational culture is highly supportive of change and innovation, which challenges the ability of people to achieve the Quadruple Aim. Similarly, two-thirds of nurses reported that a disincentive for taking on a leadership role is their sense that their organizational culture is not conducive to change.

Given that senior leaders are responsible for the culture of their organizations, it seems important that a dedicated effort is made to enabling them to develop the ability to support and encourage innovation and to champion a culture of innovation and leadership system wide.

5. *Differing perspectives between organizations and individuals (SD)*

Two trends arose in this study in terms of consistency of rater groups: those of the organizational representatives and those of the nurses. Organizational respondents (Survey A) tended to have consistently significantly more favourable perspectives than individual (Survey B) respondents. This was the case for having more confidence in their organizational leadership capacity, perceiving that the gaps were much smaller, particularly among senior leaders, and sensing that the gaps were decreasing in size and having less of a negative impact on organizational performance than Survey B respondents. Organizational respondents also rated every HR/OD priority three times higher than individual respondents on average, particularly increasing staff engagement (77% compared to 27% by individual respondents, in terms of "high priority" ratings), and they were much more positive about the selection and effectiveness of leadership development and organizational culture.

Similarly, though not as severe as those described above, there was a notable trend concerning nurse ratings. For example, nurse respondents reported the most frequently that there is a large supply-demand/need gap among senior leaders, that the gaps are having a very large negative impact, and that there has been a large increase in the impact of the leadership gaps. Nurses also claimed that their organizational cultures are "highly supportive" the least frequently and that they are "not at all supportive" the most frequently. Finally, ratings of nurse engagement were the lowest of all groups.

This study did not investigate why there are such consistent disconnects in the ratings and it would be dubious to speculate without further data. These points are potentially worthy of being addressed through open dialogue among organizational leaders, nurses, nurse leaders, physicians, HR/OD directors, and other healthcare professionals. They also suggest that assuming one is aware of the perceptions of colleagues is erroneous, rather than involving them regularly in discussions and decision-making processes. Addressing this disparity seems to be an important priority.

## References


[1] Lee, T. H., & Hall, K. W. (2010). Turning doctors into leaders. *Harvard Business Review*, *88*(4), 50–58.

[2] Stoller, J. K. (2018). Developing physician leaders: a perspective on rationale, current experience, and needs. *Chest*, *154*(1), 16–20; Stoller, J. K. (2019). Developing physician leaders: does it work? *BMJ Leader*, *In press*.

[3] Bodenheimer, T., & Sinsky, C. (2014). From Triple to Quadruple Aim: care of the patient requires care of the provider. *The Annals of Family Medicine*, *12*(6), 573–576. https://doi.org/10.1370/afm.1713

[4] Austin, R. D., & Pisano, G. P. (2017, May 1). Neurodiversity as a competitive advantage. Harvard Business Review, May–June 2017. https://hbr.org/2017/05/neurodiversity-as-a-competitive-advantage; Duppati, G., Rao, N. V., Matlani, N., Scrimgeour, F., & Patnaik, D. (n.d.). Gender diversity and firm performance: Evidence from India and Singapore. Applied Economics. https://doi.org/10.1080/00036846.2019.1676872; Gomez, L. E., & Bernet, P. (2019). Diversity improves performance and outcomes. Journal of the National Medical Association, 111(4), 383–392. https://doi.org/10.1016/j.jnma.2019.01.006; Gompers, P., & Kovvali, S. (2018). The other diversity dividend. Harvard Business Review, 96(4), 72–77; Norbash, A., & Kadom, N. (2020). The business case for diversity and inclusion. Journal of the American College of Radiology. https://doi.org/10.1016/j.jacr.2019.11.018; Perryman, A. A., Fernando, G. D., & Tripathy, A. (2016). Do gender differences persist? An examination of gender diversity on firm performance, risk, and executive compensation. Journal of Business Research, 69(2), 579–586. https://doi.org/10.1016/j.jbusres.2015.05.013; Smulowitz, S., Becerra, M., & Mayo, M. (2019). Racial diversity and its asymmetry within and across hierarchical levels: The effects on financial performance. Human Relations, 72(10), 1671–1696. https://doi.org/10.1177/0018726718812602; Tekleab, A. G., Karaca, A., Quigley, N. R., & Tsang, E. W. K. (2016). Re-examining the functional diversity–performance relationship: The roles of behavioral integration, team cohesion, and team learning. Journal of Business Research, 69(9), 3500–3507. https://doi.org/10.1016/j.jbusres.2016.01.036; Xie, L., Zhou, J., Zong, Q., & Lu, Q. (2020). Gender diversity in R&D teams and innovation efficiency: Role of the innovation context. Research Policy, 49(10), UNSP 103885. https://doi.org/10.1016/j.respol.2019.103885.

[5] Bennett, N., & Lemoine, G. J. (2014). What VUCA Really Means for You. *Harvard Business Review*, *January–February 2014*. https://hbr.org/2014/01/what-vuca-really-means-for-you

[6] Devlin R. Hallway health care: a system under strain. Premier's Council on Improving Healthcare and Ending Hallway Medicine (2019). Report No.: 1st Interim Report; Geerts, J. M. (2019). Leadership defined for our generation and the next. *Canadian Journal of Physician Leadership*, *5*(4), 207–214; Pype P, Mertens F, Helewaut F, Krystallidou D. (2018). Healthcare teams as complex adaptive systems: understanding team behaviour through team members' perception of interpersonal interaction. *BMC Health Services Research*, 18 (1):570; Stoller JK. (2020). Developing physician leaders: Does it work? *BMJ Leader*. 2019; in press; Hannah ST, Uhl-Bien M, Avolio BJ, Cavarretta FL. (2009). A framework for examining leadership in extreme contexts. *The Leadership Quarterly*, 20(6):897–919.

[7] Gagnon, S., Ritchie, J., Lynch, A., Drouin, S., Cass, V., Rinfret, N., … Valois, M. (2006). *Job satisfaction and retention of nursing staff: The impact of nurse management leadership*. Toronto: Canadian Health Services Research Foundation; Geerts, J. M., Goodall, A. H., & Agius, S. (2020). Evidence-based leadership development for physicians: a systematic literature review. *Social Science & Medicine*, *246*, 1–17. https://doi.org/10.1016/j.socscimed.2019.112709

[8] Caulkin, S. (2015, December 6). Have we created an unachievable myth of leadership? *Financial Times*. https://www.ft.com/content/07ed132e-8fa3-11e5-8be4-3506bf20cc2b; Kellerman, B. (2018). *Professionalizing leadership*. Oxford University Press; Pfeffer, J. (2016). Getting beyond the BS of leadership literature. *McKinsey Quarterly*, 1–7.

[9] Taylor, B. (2010). *Effective medical leadership*. University of Toronto Press.

[10] Arvey, R., Rotundo, M., Johnson, W., Zhang, Z (February 2006). The determinants of leadership role occupancy: genetic and personality factors. *The Leadership Quarterly*, 17(1), 1-20; Arvey, R., Zhang, Z., Avolio, B., Krueger, R (2007). Developmental and genetic Determinants of Leadership Role Occupancy among women. *Journal of Applied Psychology*, 92(3), 693-706.

[11] Geerts, J. M., Goodall, A. H., & Agius, S. (2020). Evidence-based leadership development for physicians: A systematic literature review. *Social Science & Medicine*, *246*, 1–17. https://doi.org/10.1016/j.socscimed.2019.112709; Husebø, S. E., & Akerjordet, K. (2016). Quantitative systematic review of multi professional teamwork and leadership

training to optimize patient outcomes in acute hospital settings. *Journal of Advanced Nursing*, *72*(12), 2980–3000. https://doi.org/10.1111/jan.13035; Rosenman, E. D., Shandro, J. R., Ilgen, J. S., Harper, A. L., & Fernandez, R. (2014). Leadership training in health care action teams: A systematic review. *Academic Medicine*, *89*(9), 1295–1306; Steinert, Y., Naismith, L., & Mann, K. (2012). Faculty development initiatives designed to promote leadership in medical education. A BEME systematic review: BEME guide no. 19. *The International Journal of Medical Technology*, *34*(6), 483–503. https://doi.org/doi: 10.3109/0142159X.2012.680937; Vilches, S., Fenwick, S., Harris, B., Lammi, B. & Racette, R. (2016). *Changing health organizations with the LEADS leadership framework: report of the 2014-2016 LEADS impact study.* Ottawa, Canada: Fenwick Leadership Explorations, the Canadian College of Health Leaders, & the Centre for Health Leadership and Research, Royal Roads University.

[12] DeNisi, A. S., & Kluger, A. N. (2000). Feedback effectiveness: can 360-degree appraisals be improved? *The Academy of Management Executive*, *14*(1), 129–139; Geerts, J. M. (2018). *Optimal leadership development for professionals* [Unpublished doctoral thesis]. University of Cambridge; Kwamie, A., Dijk, H. van, & Agyepong, I. A. (2014). Advancing the application of systems thinking in health: realist evaluation of the Leadership Development Programme for district manager decision-making in Ghana. *Health Research Policy and Systems*, *12*(29), 1–12; Malling, B., Mortensen, L., Bonderup, T., Scherpbier, A., & Ringsted, C. (2009). Combining a leadership course and multi-source feedback has no effect on leadership skills of leaders in postgraduate medical education. An intervention study with a control group. *BMC Medical Education*, *9*(72), 1–7.

[13] Gilpin-Jackson, Y., & Bushe, G. R. (2007). Leadership development training transfer: a case study of post-training determinants. *Journal of Management Development*, *26*(10), 980–1004.

[14] The Conference Board of Canada. (2007). *The Canadian Health Leadership Network learning and development outlook: A report on the leadership development practices in the Canadian health sector*. The Conference Board of Canada.

[15] Canadian Health Leadership Network. (2014). *Canadian health leadership benchmarking survey report: CHL-Bench*. Ottawa: Canadian Health Leadership Network.

[16] Baker, A., Bech, M., Geerts, J., Axelsen, S. M., Ullum, H., Krabbe, M. P., & Goodall, A. H. (2019). Motivating doctors into leadership and management positions: a cross-sectional survey. *BMJ Leader*, *Under review*; Spurgeon, P., Mazelan, P., & Barwell, F. (2011). Medical engagement: a crucial underpinning to organizational performance. *Health Services Management Research*, *24*(3), 114–120; Spurgeon, P., Long, P., Clark, J., & Daly, F. (2015). Do we need medical leadership or medical engagement? *Leadership in Health Services*, *28*(3), 173–184. https://doi.org/10.1108/LHS-03-20140029

[17] Baker, A., Bech, M., Geerts, J., Axelsen, S. M., Ullum, H., Krabbe, M. P., & Goodall, A. H. (2020). Motivating doctors into leadership and management positions: A cross-sectional survey. *BMJ Leader.* [Accepted pending revisions].

[18] LEADS in a Caring Environment is a healthcare-specific leadership capability framework.

[19] Rowland, D. (2016). Why leadership development isn't developing leaders. *Harvard Business Review*, 1–5; Steinert, Y., Naismith, L., & Mann, K. (2012). Faculty development initiatives designed to promote leadership in medical education. A BEME systematic review: BEME guide no. 19. *The International Journal of Medical Technology*, *34*(6), 483–503. https://doi.org/doi: 10.3109/0142159X.2012.680937

[20] Caulkin, S. (2015, December 6). Have we created an unachievable myth of leadership? *Financial Times*. https://www.ft.com/content/07ed132e-8fa3-11e5-8be4-3506bf20cc2b; Kellerman, B. (2018). *Professionalizing leadership*. Oxford University Press; Pfeffer, J. (2016). Getting beyond the BS of leadership literature. *McKinsey Quarterly*, 1–7.

[21] The Mid Staffordshire NHS Foundation Trust. (2013). *Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry*.

[22] Fernandez, C. S. P., Noble, C. C., Jensen, E. T., & Chapin, J. (2016). Improving Leadership Skills in Physicians: A 6-Month Retrospective Study. *Journal of Leadership Studies*, *9*(4), 6–19. https://doi.org/10.1002/jls.21420

[23] Geerts, J. M., Goodall, A. H., & Agius, S. (2020). Evidence-based leadership development for physicians: a systematic literature review. *Social Science & Medicine*

[24] Brock, G. W., McManus, D. J., & Hale, J. E. (2009). Reflections today prevent failures tomorrow. *Communications of the ACM*, *52*, 140–144; Salas, E., Tannenbaum, S. I., Kraiger, K., & Smith-Jentsch, K. A. (2012). The science of training and development in organizations: What matters in practice. *Psychological Science in the Public Interest*, *13*, 74–101.

[25] Geerts, J. M., Goodall, A. H., & Agius, S. (2020). Evidence-based leadership development for physicians: a systematic literature review. *Social Science & Medicine*, *246*, 1–17. https://doi.org/10.1016/j.socscimed.2019.112709; Hamlin, B. (2010). Evidence-based leadership and management development. In J. Gold, R. Thorpe, & A. Mumford (Eds.), *Gower handbook of leadership and management development* (5th ed., pp. 197–220). Gower; Klimoski, R., & Amos, B. (2012). Practicing evidence-based education in leadership development. *Academy of Management Learning & Education*, *11*(4), 685–702. https://doi.org/10.5465/amle.2012.0018; Salas, E., Tannenbaum, S. I., Kraiger, K., & Smith-Jentsch, K. A. (2012). The science of training and development in organizations: what matters in practice. *Psychological Science in the Public Interest*, *13*, 74–101.

[26] Aronsson, G., Theorell, T., Grape, T., Hammarstrom, A., Hogstedt, C., Marteinsdottir, I., Skoog, I., Traskman-Bendz, L., & Hall, C. (2017). A systematic review including meta-analysis of work environment and burnout symptoms. *Bmc Public Health*, *17*, 264. https://doi.org/10.1186/s12889-017-4153-7.

[27] Noseworthy, J. (2019). The future of care—Preserving the patient-physician relationship. *New England Journal of Medicine*, *381*(23), 2265–2269. https://doi.org/10.1056/NEJMsr1912662

[28] Geerts, J. M. (2019). *Emerging Leaders Program (ELP) and Advanced Emerging Leaders Program (AELP). Independent Review and Report* (p. 98). Yale University School of Management; Geerts, J. M. (2018). *Optimal leadership development for professionals* [Unpublished doctoral thesis]. University of Cambridge; Gilpin-Jackson, Y., & Bushe, G. R. (2007). Leadership development training transfer: A case study of post-training determinants. *Journal of Management Development*, *26*(10), 980–1004; Rowland, D. (2016). Why leadership development isn't developing leaders. *Harvard Business Review*, 1–5.