



# EFFECTIVE GOVERNANCE FOR QUALITY AND PATIENT SAFETY PROGRAM: AN EVALUATIVE ASSESSMENT

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## KEY MESSAGES

- ▶ Based on matched pre- and post-survey responses, the Effective Governance for Quality and Patient Safety program curriculum was effective in improving the respondents' group knowledge and skills in the area of quality and patient safety.
- ▶ The program was successful in providing the participants with the required knowledge, resources and tools that they intend to apply to advance quality and patient safety improvements within their respective healthcare organizations.
- ▶ There may exist a potential need for a more integrated curriculum that would help participants better understand the importance of levers to improve quality and patient safety.
- ▶ There may exist a need for future educational sessions to be custom-tailored for professional groups according to their specific knowledge and information needs.
- ▶ The program's curriculum may benefit from greater customization to the needs of small hospitals and community-based healthcare organizations.
- ▶ A follow-up evaluation to determine the longer-term changes in knowledge application, organizational performance, and patient outcomes is recommended.

## EXECUTIVE SUMMARY

For over a decade, quality and patient safety have been key areas of emphasis for Canadian healthcare organizations and their boards. However, governing boards and executive leaders of healthcare organizations often feel poorly equipped to effectively oversee the quality and patient safety performance of their organizations. Acknowledging this need, the Canadian Health Services Research Foundation (CHSRF) and the Canadian Patient Safety Institute (CPSI) partnered to deliver an educational curriculum and resources as part of the Effective Governance for Quality and Patient Safety program (hereafter, Effective Governance). The program aimed to help board members and executive leaders improve their current governance knowledge and skills in overseeing safety and quality improvements within their organizations.

Between March 2010 and May 2011, a total of 557 health services board members, senior managers, quality and patient safety executive leads, and clinical staff leaders from 196 Canadian healthcare organizations participated in one of the 12 Effective Governance workshops held across three provinces (Ontario, Manitoba, and Saskatchewan).

CHSRF led an evaluative assessment of the Effective Governance program in order to understand program effectiveness and process. A pre-post survey that included closed and open-ended questions was designed and administered to all Effective Governance program attendees.

A combination of quantitative and qualitative techniques was used for analysis.

In total, 268 participants completed the post-program survey (48.1% response rate), while 164 participants completed both the pre- and post-program survey (29.4% response rate). Based on matched pre- and post-program survey responses, participation in the Effective Governance program curriculum resulted in statistically significant improvements in self-assessed knowledge of nine out of 10 training content areas. Largest knowledge gain was registered in the area of board's required skills and knowledge, while no significant difference was recorded in the area of the board's role in building relationships with the CEO.

Board members, CEOs, and other health services professionals (n=131) seem to have benefited the most from Effective Governance training. However, findings are mixed among quality and patient safety executive leads (n=25), who recorded insignificant knowledge increases in six areas of the program's curriculum. Nonetheless, significant differences in improvement between professional groups following the training were found in only three areas of the program's curriculum (board's required skills and knowledge; board's role in building relationships with the CEO; and board's role in developing and maintaining a culture of quality and patient safety). Post-program data also revealed a variety of intended areas in which the participants plan to use the knowledge and resources acquired as a result of this program.

Qualitative feedback indicated that the main strength of the Effective Governance program was the sharing of experiences and tools across the different healthcare organizations, patient narratives, and group work discussions. The main limitations concerned the inadequate opportunity for participants to engage in a practical application of their knowledge and skills as well as a lack of content relevant to small or community-based healthcare delivery organizations.

An additional educational session and access to governance- and quality-related documents through a web-based repository were rated as the most useful types of post-program support, by 83% and 88% of respondents, respectively.

CEOs were more willing to pay for 1) scheduled check-ins with the education program representatives (odds ratio, OR = 8.4;  $p < 0.10$ ) and for 2) access to governance- and quality-related documents through a web-based repository (OR = 5.2;  $p < 0.03$ ) than were board members. Participants coming from "other" organizations (largely made up of health system level organizations and Local Health Integration Networks) were also significantly more motivated to pay for 1) access to expert consultation through a scheduled group webinar (OR= 23.2;  $p < 0.02$ ) and for 2) an additional educational session with more members of their organization (OR = 11.7;  $p < 0.09$ ) than were participants coming from hospitals.

## INTRODUCTION

The board's role in ensuring healthcare quality and patient safety is of increasing importance to the Canadian healthcare sector as numerous high-profile events in several provinces brought the issue into the public eye.<sup>i</sup> In fact, governing boards in the Canadian healthcare sector bear the ultimate legal responsibility for the safety and quality of care provided in the institutions they govern. Historically, however, governing boards of healthcare institutions have been more engaged in overseeing the financial operations of their organizations, while following staff leadership on quality and patient safety issues.<sup>ii</sup>

Research evidence clearly shows that the quality and safety performance of Canadian healthcare organizations can be improved. For example, studies show that 1 in 13 adult patients admitted to Canadian hospitals experience an adverse event each year, while up to 10,000 Canadians die annually from preventable errors.<sup>iii, iv</sup> As a result, there is a growing recognition of the importance of the role the governing boards can play in helping their organizations improve the quality and safety of the care they deliver and ultimately contribute to better healthcare patient outcomes.<sup>v</sup>

Indeed, the potential of effective governance for quality and patient safety cannot be accomplished without the leadership, commitment, and support of governing boards and their executive teams. In contrast to the board's responsibility for financial oversight, quality of care and patient safety is a relatively new area of performance which the governing boards and executive leaders feel poorly equipped to oversee effectively because most board members do not possess the clinical expertise in quality and patient safety.<sup>vi, vii</sup>

In the fall of 2010, the Canadian Health Services Research Foundation (CHSRF) and the Canadian Patient Safety Institute (CPSI) partnered to offer an educational program and resources on quality for boards and executives of healthcare organizations. Composed of a mix of didactic and interactive educational sessions, the Effective Governance for Quality and Patient Safety program (hereafter, Effective Governance) was designed to address the need for healthcare boards and senior leadership to enhance their current governance knowledge and skills related to quality and patient safety through the use of evidence.

The main objective of this evaluative assessment was to analyze the effectiveness of the Effective Governance program curriculum for health services board members and executive leaders that attended one of the 12 workshops offered between March 2010 and May 2011. Effectiveness was evaluated in terms of self-assessed knowledge and skills and participant intention to apply the acquired knowledge, related tools, and resources provided by the program. The differential effects of knowledge and skills acquisition in relation to the attendee's professional role in their respective healthcare organization were also explored. The secondary objective was to assess the format and process of the Effective Governance program. Format and process were evaluated in terms of the perceived usefulness of the educational sessions, and participant suggestions to improve them. In addition, the perceived usefulness of a range of potential post-program support activities and participants' willingness to pay for them were analyzed.

Underlying evaluative questions that motivated the assessment of the Effective Governance program included:

- ▶ Does an evidence-informed educational program curriculum improve participant's knowledge and skills related to governance in healthcare quality and patient safety?
- ▶ Have participants acquired knowledge and skills equitably across professional categories?
- ▶ What are the underlying strengths and weaknesses of the program?
- ▶ How have participants rated the usefulness of post-program support activities, and how likely are they willing to pay for them?

## Developing a Quality and Patient Safety Governance Curriculum

In 2008, a team of researchers led by Dr. G. Ross Baker were commissioned by CHSRF and CPSI to synthesize existing research evidence on the role of governing boards in the improvement of quality and safety in healthcare organizations across Canada and the U.S. Based on a literature review, case studies, and key informant interviews, the resulting report entitled *Effective Governance for Quality and Patient Safety in Canadian Healthcare Organizations* identified seven interdependent drivers or levers of effective governance that can help boards guide improvement of quality and patient safety.<sup>viii</sup> The drivers identified included:

- ▼ Gaining knowledge of quality and patient safety
- ▼ Acquiring governance skills and identifying roles for effective governance in quality and patient safety
- ▼ Assessing and improving quality and patient safety culture
- ▼ Enhancing the relationships between the board, senior leadership and medical staff
- ▼ Gathering information on quality and patient safety,
- ▼ Measuring quality and patient safety, and
- ▼ Creating and executing a quality and patient safety plan

Baker and his research team agreed that board governance for quality and patient safety remains in the early stages of development within the Canadian healthcare system. Some of the major barriers that governing boards and senior leadership face are a lack of data, resources, and understanding of the drivers involved in the Canadian quality journey. Acknowledging this need, the findings of the Baker et al. (2010) study provided the basis for the development of the program's curriculum and the accompanying toolkit for effective governance in quality and patient safety. Both the curriculum and the toolkit were modeled after the above-mentioned drivers of effective governance in healthcare quality and safety.

## Delivering Training and Resources

A total of 557 health services board members, senior managers, quality and patient safety executive leads, and clinical staff leaders from 196 Canadian healthcare organizations located across three provinces (Ontario, Manitoba, and Saskatchewan) participated in the Effective Governance educational program. The Effective Governance program was offered a total of 12 times between March 2010 and May 2011 in a workshop format. Each educational offering was attended by an average of 46 governing board members and senior leaders. The first two of these were pilot workshops that involved a total of 58 participants from three Regional Health Authorities in Manitoba and from a Local Integrated Health Network in Ontario. The results from the two pilot workshops indicated a need for the curriculum to place a greater emphasis on applied, case-based presentation. Three to four faculty board members, including one patient safety expert, each of whom had extensive experience in quality and patient safety as well as teaching taught at each one of the workshops offered.

The Effective Governance educational module had four key objectives, to help participants understand:

- 1) Core functions of a board related to quality and patient safety
- 2) Approaches to measuring organizational quality of care
- 3) Tools, structures, processes and priorities to support improvements in the governance practices of organizations' related to quality and patient safety, and
- 4) How a culture of quality and patient safety within an organization can be led, supported and sustained by a board.

The last six of the 12 workshops offered were held in Ontario and additionally aimed to help program participants learn to apply the principles of the *Excellent Care For All Act*.<sup>ix</sup>

The Effective Governance program curriculum took a hands-on approach and emphasized the experiences of other healthcare organizations in their journey to improve quality and patient safety. It relied on experiential learning and included didactic lectures, a keynote speaker presentation, video segments, case study discussions, small group work exercises and tools to help boards and executive leaders drive quality and patient safety effectively in their organizations.

The first day of the quality curriculum began with an introduction to quality and patient safety. It included three sessions on the importance of quality and patient safety for healthcare organizations and their boards, as well as an overview of the current changing healthcare environment and its impact on the board's role in quality and safety of care. The sessions were followed by a discussion of participant needs, desires, and expectations of the Effective Governance program, a keynote speaker presentation, movie, and dialogue. Participants learned to appreciate the challenges and opportunities of leading a quality and patient safety improvement through the board, and recognized the importance of continually improving quality and patient safety governance practices.

The second day of the Effective Governance program curriculum included seven sessions. The first six of these sessions progressed through the seven identified drivers of effective governance for quality and patient safety. During these sessions participants heard didactic lectures on the quality and patient safety drivers and participated in case study discussions that focused on the experiences of other healthcare organizations. At some of the sessions, participants also viewed video recordings of real-world examples and stories of patients and other healthcare organizations. Central to the course was the opportunity for participants to reflect upon case-based discussion as well as on their own board practices in relation to each of the seven identified drivers. Working in small groups, participants were also asked to record their reflections and ideas into a 'gap analysis' tool.

The last session provided the participants with a comprehensive toolkit containing best governance practices, resources and examples of tools shared by several hospitals, health regions and continuing care providers.<sup>x</sup> Having been provided with the toolkit, the participants were given the opportunity to work in small groups to create an action plan. The action plan exercise involved a final reflection on their gap analysis tool and an identification of two to three actions that they plan to undertake to enhance the governance leadership in quality and patient safety at their home organizations. The course also offered the opportunity for social interaction and networking at scheduled meal and break times.

## EVALUATION METHODOLOGY

In order to assess the effectiveness and the process of the Effective Governance program, a pre-post survey was administered to all participants attending one of the 12 Effective Governance workshops. The two-part survey used a seven-point Likert scale from 1 (strongly disagree) to 7 (strongly agree) to assess the changes in the perceived knowledge and skills of the attendees following the educational program. Participant responses, pre- and post-program, were solicited on nine questions related to quality and patient safety drivers identified by Baker et al. (2010):

- 1) Board core functions
- 2) Board roles
- 3) Board skills and knowledge
- 4) Culture
- 5) Board relationship with CEO
- 6) Board relationship with clinical leadership
- 7) Information
- 8) Measurement, and
- 9) Quality and patient safety plan components.

The pre- and post-program survey administered to participants attending the last six workshops held in Ontario included an additional question of understanding related to the application of the *Excellent Care for All Act*.

In total, the pre- and post-program survey consisted of 10 questions (11 for workshops held in Ontario). The first question gathered demographic information about the respondents' professional role at their home organization. The remaining nine questions (10 for workshops held in Ontario) assessed the attendees' understanding of quality and patient safety prior to the program (*see Appendix A*).

The post-program survey included three parts (*see Appendix B*). For comparison, Part I incorporated the same nine questions (10 for workshops held in Ontario) as the pre-program survey. Part II introduced five additional open-ended questions, four of which solicited responses on program design and delivery. The remaining question addressed the participants' intentions for applying their newly acquired knowledge, resources and tools from the program. Part III consisted of eight questions. Six questions assessed the perceived usefulness of six different post-program support activities along a five-point ordinal (Likert) scale from 1 (useless) to 5 (very useful). Participants were also asked to indicate their willingness to pay for each of the six proposed post-program support activities using an open-ended question format. The last question of the post-program survey allowed the participants to record any additional comments related to the educational program.

The pre-program survey was distributed online 10 days before the start of the workshop. A reminder was sent six days later to all participants that have not completed the survey. The post-program survey was administered onsite after the program's concluding discussion. Participants were also invited to complete the post-program survey online following the workshop.

## Assessing Program Effectiveness

Paired sample t-tests were performed to assess the effectiveness of the Effective Governance program curriculum in improving participant knowledge of quality and patient safety. Pre to post-program changes in responses to 10 knowledge statements of all matched survey respondents were evaluated for statistical significance. The same analysis was repeated based on the matched survey respondent's professional role (Board member, CEO, quality and patient safety lead, and other). One-way analysis of variance was used to evaluate the significance of the degree of change between the four professional groups. Bonferonni post-hoc tests were performed for each significant ANOVA result. Effect size calculations were conducted for each knowledge acquisition statement\* to ascertain the size of the significant knowledge gains arising from the program. The Hedges' *g* effect size was chosen for calculation as it corrects for bias in small sample sizes. Open-ended responses as to the survey respondents' intention to apply knowledge, resources, and tools obtained from the program, were analyzed using content analysis methods.

## Assessing the Process

Qualitative data were collected on questions that allowed CHSRF and its partners to understand the perceived usefulness of the program and to make suggestions for process improvements. Descriptive analysis was used to understand the utility and participants' willingness to pay for a range of post-program support activities. For follow-up analysis, a series of binary outcome logistic regressions were performed to determine whether the likelihood of being willing to pay for each of the six post-program support activities could be predicted. The predictor variables were: respondents' professional role, organizational affiliation, and location. Any significant effects were evaluated by a significant odds ratio (OR) estimate. Open responses were qualitatively analyzed for themes using the principles of grounded theory. Inter-rater reliability was used to validate the qualitative thematic categories. All statistical evaluations were done with Stata version 10.0.<sup>xi</sup>

## FINDINGS

### Program Effectiveness in Improving Knowledge and Skills

Out of the 557 board members and executive leaders who attended one of the 12 Effective Governance training workshops, 164 of them completed both the pre- and post-program survey (29.4% response rate). Of those who completed both surveys, 97 were board members (59.1%), 23 were CEOs (14%), 25 were quality and patient safety leads (15.2%), and 11 performed other professional roles (6.6%), which for the most part included Chiefs of Staff, Chief Nursing Officers, Medical Directors, Department heads, and consultants. A total of eight respondents did not provide information on their professional role.

The pre- and post-program survey data (Table 1) revealed a significant pre to post knowledge increase for nine out of 10 areas of quality and patient safety covered by the program. All of these domains were significant at the 1% level of significance, with an exception relating to question five (board's role in building relationships with the CEO), which was found to be insignificant.

The area that showed the greatest knowledge gain with the largest effect size concerned knowledge that can be practically applied to improve quality and patient safety performance (such as finding information on planning, designing, and implementing a board quality and patient safety plan). In particular, the program had the largest effect on respondents' understanding of board's required skills and knowledge (ES of 1.21) while, medium to large effects were noted (ES of 0.58 to 0.84) in eight of the nine remaining areas.

**TABLE 1: SELF-ASSESSED KNOWLEDGE AND SKILLS (ALL MATCHED SURVEY RESPONSES)**

I HAVE CLEAR UNDERSTANDING OF:	N	PRE-PROGRAM MEAN (SD)	POST-PROGRAM MEAN (SD)	PAIRED T (SIGNIFICANCE P)	95% CONFIDENCE INTERVAL		ES†
					LOWER	UPPER	
Board's core functions related to quality and patient safety	164	5.65 (1.05)	6.24 (0.82)	t (163) = 6.44(0.000)*	0.41	0.77	0.62
Board's roles related to effective governance practices for quality and patient safety	164	5.48 (1.10)	6.26 (0.91)	t (163) = 8.09(0.000)*	0.59	0.96	0.76
Board's required skills and knowledge	164	4.68 (1.34)	6.09 (0.94)	t (163) = 13.25(0.000)*	1.2	1.62	1.21
Board's role in developing and maintaining a culture of quality and patient safety	164	5.07 (1.27)	5.92 (0.86)	t (163) = 9.40(0.000)*	0.67	1.02	0.79
Board's role in building relationships with the CEO	163	6.08 (1.07)	6.24 (0.82)	t (162) = 1.88(0.062)	-0.01	0.38	0.18
Board's role in building relationships with the clinical leadership	162	5.44 (1.31)	6.11 (0.90)	t (161) = 6.34(0.000)*	0.44	0.85	0.58
Board's role in selecting and monitoring appropriate information	164	5.31 (1.22)	6.17 (0.79)	t (163) = 8.76(0.000)*	0.67	1.06	0.84
Board's role in selecting and monitoring measurement indicators	164	4.98 (1.32)	5.75 (1.00)	t (163) = 8.01(0.000)*	0.58	0.96	0.66
Board's role in the creation and execution of the quality plan	164	5.21 (1.20)	6.03 (0.87)	t (163) = 7.97(0.000)*	0.62	1.02	0.78
How the Excellent Care for All Act (ECFAA) supports the work of the board	66	5.20 (1.18)	5.98 (0.90)	t (65) = 6.50(0.000)*	0.54	1.03	0.75

\* P < 0.01

† Effect size (Hedges' g) was calculated from Cohen's d using the formula:  $g = d/(\sqrt{df/N})$ . Effect sizes of 0.20, 0.50, and 0.80 represent small, medium, and large effects, respectively (see Cohen, 1988).<sup>xii</sup>

*Who benefited the most from the program's curriculum?* A stratified analysis by participants' professional role (Table 2) indicated that the significant gains in knowledge reported by the respondents following their participation in the program's curriculum are driven by the responses of Board members, CEOs, and others. CEOs seem to have registered the largest knowledge improvement in the area of board's roles related to effective governance practices for quality and patient safety (ES of 1.33). Board members' knowledge appeared to have improved most with respect to their required skills and knowledge (ES of 1.18). Quality and patient safety executive leads seem to have benefitted the least from the program's curriculum, recording insignificant pre to post knowledge increases in six content areas despite scoring a pre-program mean comparable to other professional groups.

**TABLE 2: SELF-ASSESSED KNOWLEDGE AND SKILLS IN QUALITY AND PATIENT SAFETY (BY PROFESSIONAL ROLE)**

I HAVE CLEAR UNDERSTANDING OF:	BOARD MEMBERS, N = 97†				CEO, N = 23‡				QUALITY AND PATIENT SAFETY EXECUTIVE LEADS, N = 25~				OTHER, N = 11*				DIFFERENCE BETWEEN GROUPS (ANOVA)
	PRE-PROGRAM MEAN (SD)	POST-PROGRAM MEAN (SD)	SIG. P	ES	PRE-PROGRAM MEAN (SD)	POST-PROGRAM MEAN (SD)	SIG. P	ES	PRE-PROGRAM MEAN (SD)	POST-PROGRAM MEAN (SD)	SIG. P	ES	PRE-PROGRAM MEAN (SD)	POST-PROGRAM MEAN (SD)	SIG. P	ES	
Board's core functions related to quality and patient safety	5.53 (1.13)	6.24 (0.82)	0.00*	0.75	6.13 (0.84)	6.47 (0.57)	0.11	0.46	5.86 (0.83)	6 (0.84)	0.59	0.16	5.27 (1.13)	6.14 (0.80)	0.02**	0.86	
Board's roles related to effective governance practices for quality and patient safety	5.59 (1.01)	6.26 (0.91)	0.00*	0.81	5.76 (0.99)	6.78 (0.42)	0.00*	1.33	5.34 (1.40)	5.73 (1.23)	0.24	0.28	4.62 (1.22)	5.71 (1.14)	0.11	0.92	
Board's required skills and knowledge	4.6 (1.46)	6.09 (0.94)	0.00*	1.18	5.22 (1.32)	6.23 (0.81)	0.00*	0.97	4.78 (0.97)	5.87 (1.11)	0.00*	1.04	3.74 (0.96)	6.36 (0.81)	0.00*	2.93	
Board's role in developing and maintaining a culture of quality and patient safety	5.11 (1.33)	5.92 (0.86)	0.00*	0.76	5.16 (1.37)	6.09 (0.87)	0.00*	0.8	5.27 (1.09)	5.74 (0.82)	0.02**	0.48	4.07 (1.02)	5.82 (0.93)	0.00*	1.78	
Board's role in building relationships with the CEO	6.15 (1.07)	6.24 (0.82)	0.22	0.15	6.5 (0.67)	6.22 (0.80)	0.15	-0.44	6.03 (0.89)	6.14 (0.76)	0.62	0.13	4.85 (1.40)	6.15 (0.55)	0.015**	1.75	
Board's role in building relationships with the clinical leadership	5.46 (1.32)	6.11 (0.90)	0.00*	0.52	5.46 (0.83)	6.49 (0.72)	0.00*	0.94	5.56 (1.28)	5.98 (0.77)	0.2	0.43	4.74 (1.36)	6.04 (0.72)	0.015**	1.18	
Board's role in selecting and monitoring appropriate information	5.32 (1.33)	6.17 (0.79)	0.00*	0.76	5.64 (0.83)	6.3 (0.62)	0.00*	0.87	5.42 (1.14)	6 (0.71)	0.064	0.56	4.4 (0.96)	6.14 (0.77)	0.00*	2.04	
Board's role in selecting and monitoring measurement indicators	4.85 (1.4)	5.75 (1.00)	0.00*	0.71	5.31 (1.34)	5.77 (1.03)	0.03**	0.38	5.2 (1.21)	5.87 (0.73)	0.00*	0.67	4.62 (0.96)	5.6 (1.05)	0.00*	0.97	
Board's role in the creation and execution of the quality plan	5.1 (1.27)	6.03 (0.87)	0.00*	0.89	5.63 (0.83)	6.13 (0.76)	0.00*	0.62	5.53 (1.16)	5.92 (1.18)	0.21	0.33	4.51 (1.27)	5.93 (0.84)	0.00*	1.31	
How the Excellent Care for All Act (ECFAA) supports the work of the board	4.97 (1.35)	5.98 (0.90)	0.00*	0.79	5.78 (0.83)	6.44 (0.73)	0.02**	0.85	5.36 (0.74)	6.07 (0.83)	0.00*	1.31	N/A	N/A	N/A	N/A	

\* P < 0.01; \*\* P < 0.05;

† Except for questions 6 (n = 95) and question 10 (n = 40);

‡ Except for question 5 (n = 22) and question 10 (n = 9);

~ Except for question 10 (n = 4);

\* Except for question 10 (n = 1).

All professional groups, except “others”, recorded no significant knowledge improvements in the area of the board’s role in building relationships with the CEO. Although a non-significant result, it is interesting to note that there was a slight reversal in the knowledge of CEOs regarding this aspect of the curriculum. There may have occurred a “halo effect” for CEOs who might have felt over confident in their knowledge of this area upon the start of the program. Knowledge gains seem to have been the highest for “others” in every area except board’s roles related to effective practices for quality and patient safety (ES of 0.86 to 2.93). This is not surprising given that those participants whose work may not directly be tied to governance and quality registered the lowest pre-program knowledge means across all measured areas of quality and patient safety.

An analysis of variance comparing the different professional groups on the significance of their reported knowledge changes, found two highly significant differences between “others” and the remaining three professional groups following the educational program. This indicates that at the end of the training there was a highly significant difference in improvement between “others” and the remaining three professional groups in two areas of the program’s curriculum:

- 1) Board’s required skills and knowledge; and
- 2) Board’s role in building relationships with the CEO.

Additionally, a significant difference between “others” and quality and patient safety leads was registered in the area of board’s role in developing and maintaining a culture of quality and patient safety.

In the post-program survey, attendees were also asked about their intentions to adopt or apply their knowledge, practices, resources or tools acquired during the training. Of the 268 participants who answered the post-program survey, 213 (79.4%) stated their intention to apply their acquired knowledge and/or use the materials and resources provided by the program, particularly those deemed to have practical value (for example, sample dashboards/scorecards, examples of quality and patient safety plans, toolkit, gap analysis, case studies, and so on).

In addition, a total of 143 (53.7%) respondents provided qualitative comments revealing the purposes for which they intend to use their knowledge and the materials acquired during the training (Table 3). Overall, these comments showed that participants intend to draw on a variety of program resources to initiate important changes within their healthcare organizations that are required in the implementation of safety and quality improvements. This indicates that the program was successful in providing the participants with information, ideas, and materials relevant to addressing the differing, current needs of their respective healthcare organizations as they progress through their quality journey.

**TABLE 3: QUALITATIVE FEEDBACK ON THE USE OF KNOWLEDGE AND RESOURCES ACQUIRED DURING THE PROGRAM**

AREA OF APPLICATION	PARTICIPANT DIRECT QUOTES
Development and design of quality and patient safety plans, structures and processes (n = 63)	<ul style="list-style-type: none"> <li>• Each piece of the puzzle is an important integral part of the whole. All have to be incorporated into our strategic plan and quality and patient safety process protocols</li> <li>• [I envision] to establish a Quality and Patient Safety Committee</li> </ul>
Board engagement (n = 40)	<ul style="list-style-type: none"> <li>• [I envision] to encourage fellow board members of the importance of asking questions on quality and safety</li> <li>• [I envision] to re-focus our Board on their responsibility to quality and safety of the organization</li> </ul>
Performance measurement (n = 29)	<ul style="list-style-type: none"> <li>• Use dashboards to identify indicators important to the CEO and Board</li> <li>• Regular monitoring of quality indicators</li> </ul>
Board education (n = 18)	<ul style="list-style-type: none"> <li>• Provide an “education session” at each meeting</li> <li>• Prepare a coherent succession planning, orientation, and education for new board members</li> </ul>
Further education (n = 17)	<ul style="list-style-type: none"> <li>• I’ll find some of the books that were mentioned and read them</li> <li>• Will review the toolkit and information presented for board members</li> </ul>

## Usefulness and Process of the Effective Governance Program

Following Effective Governance training, 268 attendees completed the post-program survey (48.1% response rate). In total, 154 post-program survey respondents were Board members (57.5%), 38 were CEOs (14.2%), 38 were quality and patient safety executive leads (14.2%), while 28 identified themselves as performing ‘other’ professional roles (10.4%). Ten post-program survey respondents failed to provide information on their professional role.

**Most Useful Aspects of the Program:** Two post-program survey questions solicited feedback on the perceived usefulness of the program’s educational sessions. When asked which particular session of the program’s curriculum they found to be most useful (n=216), 51 respondents indicated that all training sessions had been useful. Others, however, noted that the most useful element of the training was hearing feedback from other healthcare organizations and gaining insight into the patient perspective (n=69). In particular, the case study presentations and sharing of tools from other organizations were highly valued by the respondents as they provided the opportunity to not only learn from real-life implementations, but also served as practical examples that made the possibility to succeed in the quality journey possible.

As demonstrated by the comments of some respondents, it is precisely these elements of the program that can affect the participants in one way or another in their future work to advance quality and patient safety improvements within their organizations:

*“I found it useful when specific questions were put to the group on what questions to ask at a Board meeting given a certain fact situation. I am growing to understand that the Board should question whether the processes are in place to address the problem rather than asking the specifics of what is being done to fix a problem” (Participant quote).*

*“I was haunted by the view of the family of father and two small children around the table and the story of why the mother was missing. It put an urgent human face around the issue of patient safety and the need to be constantly vigilant in whatever role we have in the healthcare system” (Participant quote).*

The opportunity to obtain group-based feedback and engage in discussions and small group work were also cited as useful elements of the program (n=31). The participants appreciated these training methodologies as they provided an additional venue to learn from the experiences of other participants and to obtain feedback on their quality and patient safety plans.

***Least Useful Aspects of the Program:*** When the participants were asked which particular session of the program’s curriculum they found least useful (n=120), 41 survey respondents indicated that they did not find any session to be least useful. There was no general agreement among the remaining 79 respondents regarding the least useful session or aspect of the program. However, some participants (n=18) thought that particular sessions and presentations were too focused on review and background information that took away time from discussion and application of knowledge and skills. For example, the content of the introductory sessions focusing on the importance of quality and patient safety was often cited as being “dry” or “repetitive” as some board members and executives indicated a high awareness of the importance of the topic:

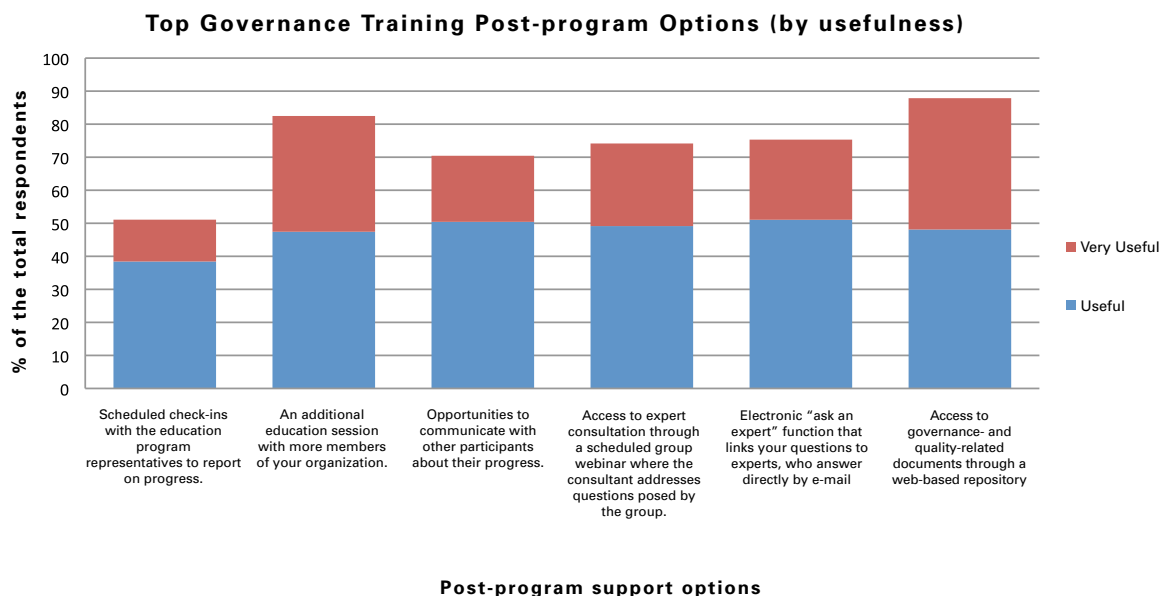
*“Opening presentations—feel we have been focused on quality and safety for some time now and session seemed redundant compared with our present level of awareness and action” (Participant quote).*

*“Not sure that this was a great way to start and ignored the fact that while hospital quality and safety is not perfect, it has been a work in practice for the past 20 years. Also, everyone in that room is intimately involved in quality and Excellent Care For All Act” (Participant quote).*

***Suggested Improvements:*** A total of 142 respondents made comments on how the process and the format of the Effective Governance program could be improved. The main themes that emerged from the comments were related to presentation style and content (n=78), the structuring of the program (n=50), and meeting facilities and audio-visuals (n=11). On presentation style and content, most comments referred to the heavy lecture (didactic) format of the program, leaving little room to reflect and discuss the presentations. This mirrored the earlier qualitative finding revealing that participants enjoyed sessions that focused on practical application. In addition, some respondents expressed concerns about the relevance of the content, suggesting the use of more tailored case studies and examples of small hospitals and community-based healthcare services organizations. In regard to the structure of the program, most respondents (n=36) thought that the sessions were too long and that a great deal of information had been provided. The suggestions for improvement among these respondents were split, however. While some suggested extending the length of the program’s curriculum to two full days, others preferred to see shorter presentations and/or to obtain the information in advance.

**Post-Program Support:** The post-program survey was also used to discern what type of post-program support board members and their executive leaders believe their organizations could benefit from the most. This question does not only catalogue the interests of board members and their executives across the three provinces where the Effective Governance program was offered, but also gives CHSRF and its partners practical feedback on how to potentially support health services board members and executives in their continuing education and engagement in quality and patient safety.

**FIGURE 1: RESULTS OF POST-PROGRAM SURVEY RESPONSES ON THE MOST USEFUL POST-PROGRAM SUPPORT TRAINING OPTIONS IN BOARD GOVERNANCE**



Overall, the post-program survey data revealed strong board and executive interest in traditional support activities, such as an additional educational session with more members of their organization and access to governance and quality related documents through a web-based repository (Figure 1). These were rated as either 'useful' or 'very useful' by 83% and 88% of respondents, respectively. More interactive web-based types of post-program support (such as an electronic "ask an expert" function that links board members and executives' questions to experts who answer directly by e-mail and access to expert consultation through a scheduled group webinar where the consultant addresses questions posed by the group) were also found to be 'useful' or 'very useful' by 75% of respondents.

In contrast, a more time-consuming post-program activity, such as that of scheduled check-ins with the education program representatives to report progress was clearly the least popular option, with only 51% of respondents rating this activity as 'useful' or 'very useful.' It seems that the low perceived usefulness of the afore mentioned post-program support activity may be related to the board members' and executives' belief that this activity may least contribute to their professional development, that is, to increasing their knowledge and skills in quality and patient safety.

**Willingness to Pay for Post-Program Support:** To assess the value that board members and executives place on post-program support, we asked the participants whether they would hypothetically be willing to pay for six different post-program support activities in a yes/no format. These six post-program support activities included: (1) scheduled check-ins with the education program representatives to report

progress, (2) an additional educational session with more members of their organization, (3) opportunities to communicate with other participants about their progress, (4) access to expert consultation through a scheduled group webinar where the consultant addresses questions posed by the group, (5) electronic “ask an expert” function that links their questions to experts, who answer directly by e-mail, and (6) access to governance and quality related documents through a web-based repository.

Descriptive analysis revealed low percentages of respondents willing to pay for any of the six post-program support activities. Holding an additional educational session with more members of their organization was the option that participants were most often willing to pay for, with 47 out of 91 respondents (51.65%) responding affirmatively. A total of 33 out of 86 respondents (38.4%) were willing to pay for access to expert consultation through a group webinar; 30 out of 86 (34.8%) were willing to pay for access to governance and quality related documents through a web-based repository; and 22 out of 80 respondents (27.5%) were willing to pay for an electronic “ask an expert” function. The respondents were least motivated to pay for scheduled check-ins with the education program representatives and for opportunities to communicate with other participants about their progress, with 93% of respondents stating a negative willingness to pay.

To identify the factors influencing willingness to pay for post-program support, responses to each of the six willingness to pay questions were regressed against three participant characteristics: location (Saskatchewan, Manitoba, and Ontario), type of organizational affiliation (Hospital, non-for profit healthcare service delivery organization, community healthcare centre, Regional Health Authority, and Other), and professional role (Board member, CEO, quality and patient safety executive lead, and Other). All the independent variables were entered into a binary choice logistic regression model as dummy variables.

The results showed that respondents’ location does not significantly influence willingness to pay for any of the six different post-program support activities. However, the respondents’ organizational setting emerged as a significant positive predictor in two regression equations. In relation to hospital-based respondents, affiliation to an “other” organization increased the odds of being willing to pay for an electronic “ask an expert” function by a factor of 23.7 ( $p < 0.02$ ) as well as for an additional educational session with more members of their organization ( $OR = 11.7$ ;  $p < 0.09$ ).

The regression analysis also demonstrated that CEOs were 8.4 times more likely to pay for scheduled check-ins with the education program representatives than Board members ( $p < 0.10$ ). In addition, CEOs were 5.2 times more willing to pay for access to governance and quality related documents through a web-based repository than Board members ( $p < 0.03$ ). Location, professional role, and organizational affiliation, emerged as insignificant predictors of willingness to pay for each of the following two post-program support activities: opportunities to communicate with other participants and access to expert consultation through a group webinar.

## METHODOLOGICAL LIMITATIONS

Several limitations of this evaluative assessment should be noted. The data gathered for this evaluative assessment was dependent on participants' self-assessments making it subject to biases, such as social desirability and response shift. In addition, the pre-post evaluation design lacked a control group, and we cannot thus account for the possibility of other confounding variables. Another major limitation included the low response rate on pre- and post-program surveys, which may introduce selection bias into the evaluative assessment by excluding about 70% of Effective Governance program participants. Given the low matched response rate, the results of the effectiveness evaluation have limited generalizability.

Furthermore, it should be kept in mind that we did not administer a formal willingness to pay survey—the post-program survey was not designed with the intent of conducting an econometric analysis of the possible determinants of willingness to pay for a variety of post-program support activities. The response rate to willingness to pay questions was very low, but this does not necessarily mean that investment in post-program support activities is not worthwhile. The low response rate on the willingness to pay questions was due most likely to the poor formulation of the question itself.

As indicated by unsolicited open-ended comments, participants found it difficult to answer the willingness to pay questions partly because the potential cost of the activities was not proposed. Some participants also felt that they did not have the authority to make such decisions prior to consultation with other board members at their organization. Their comments are further substantiated by the findings that CEOs were more likely to pay for certain post-program activities.

As such, the program evaluation component of this assessment did not provide a complete exploration of all the factors that affect the willingness of board members and executives to pay for post-program support activities. It did, however, provide a methodology for carrying out a wider and more encompassing assessment that would give recommendations, especially regarding potential target markets that may be applicable across other CHSRF programming areas.

## RECOMMENDATIONS AND CONCLUSIONS

The matched pre- and post-program survey responses suggest that board members and their executive leadership teams can increase their self-assessed knowledge and skills of quality and patient safety drivers through participation in this evidence-informed curriculum. The data also suggests that there was an insignificant pre to post knowledge increase in the area of the board's role in building relationships with their CEO. Designing a more integrated curriculum that would help board members and their executives make connections across the importance of understanding all quality and patient safety drivers involved in the quality journey may prove beneficial. We also found significant differences in self-assessed knowledge improvement between the professional groups following the training in certain areas of the curriculum. This indicates that some areas of the curriculum could be improved to respond better to the specific information and knowledge needs of different actors engaged in governance and quality improvements within their organizations. In addition, some professional groups (particularly, quality and patient safety executive leads) could benefit from more exposure to governance and leadership training in quality and patient safety. This is further corroborated by new findings related to quality and performance of Canadian healthcare organizations.<sup>xii, xiii</sup>

Qualitative feedback indicated that the main strengths of the Effective Governance program were the sharing of experiences and tools across the different healthcare organizations, patient narratives, and group work discussions. However, the main limitation concerned the inadequate opportunity for participants to engage in a practical application of their knowledge and skills. Additionally, qualitative feedback indicated that the program's curriculum could benefit from more contextualization.

It is critical to recognize that enhanced knowledge and skills level is a poor indicator of whether the Effective Governance program has made a lasting impact. The participants only indicated an intention to use their newly acquired knowledge, skills, tools and resources in a variety of areas, particularly as a foundation to develop and build upon the existing quality and patient safety structures and processes within their own organization. In this light, the Effective Governance program would benefit from a follow-up evaluation aimed at examining whether the positive changes in knowledge and skills were applied by the board members and their executive teams and whether they have resulted in improved board governance and organizational performance in quality and patient safety, and ultimately, contributed to better patient care outcomes.

## APPENDIX A: PRE-PROGRAM SURVEY

### Pre-Program Survey

Information is collected for the purposes of improving program delivery and enhancing our understanding of participant knowledge.

NAME: \_\_\_\_\_

Organization: \_\_\_\_\_

Check the circle that best describes your current role:

Board Member       CEO       Quality and patient safety executive lead       Other \_\_\_\_\_

On a scale from 1 to 7, where 1 is strongly disagree and 7 is strongly agree, please circle the number indicating your level of agreement with the following statements.

TO SUPPORT EFFECTIVE GOVERNANCE FOR QUALITY AND PATIENT SAFETY, I HAVE A CLEAR UNDERSTANDING OF:	STRONGLY DISAGREE	DISAGREE	SOME-WHAT DISAGREE	NEITHER AGREE NOR DISAGREE	SOME-WHAT AGREE	AGREE	STRONGLY AGREE
1. The board's core functions related to quality and patient safety.	1	2	3	4	5	6	7
2. The board's roles related to effective governance practices for quality and patient safety.	1	2	3	4	5	6	7
3. The board's required skills and knowledge.	1	2	3	4	5	6	7
4. The board's role in developing and maintaining a culture of quality and patient safety.	1	2	3	4	5	6	7
5. The board's role in building relationships with the CEO.	1	2	3	4	5	6	7
6. The board's role in building relationships with the clinical leadership.	1	2	3	4	5	6	7
7. The board's role in selecting and monitoring appropriate information	1	2	3	4	5	6	7
8. The board's role in selecting and monitoring appropriate measurement indicators.	1	2	3	4	5	6	7
9. The board's role in the creation and execution of the quality plan.	1	2	3	4	5	6	7
10. How the Excellent Care for All Act (ECFAA) supports the work of the board	1	2	3	4	5	6	7

THANK YOU!

## APPENDIX B: POST-PROGRAM SURVEY

### Post-Program Survey

Information is collected for the purposes of improving program delivery and enhancing our understanding of participant knowledge.

NAME: \_\_\_\_\_

Organization: \_\_\_\_\_

Check the circle that best describes your current role:

Board Member     CEO     Quality and patient safety executive lead     Other \_\_\_\_\_

On a scale from 1 to 7, where 1 is strongly disagree and 7 is strongly agree, please circle the number indicating your level of agreement with the following statements.

TO SUPPORT EFFECTIVE GOVERNANCE FOR QUALITY AND PATIENT SAFETY, I HAVE A CLEAR UNDERSTANDING OF:	STRONGLY DISAGREE	DISAGREE	SOME-WHAT DISAGREE	NEITHER AGREE NOR DISAGREE	SOME-WHAT AGREE	AGREE	STRONGLY AGREE
1. The board's core functions related to quality and patient safety.	1	2	3	4	5	6	7
2. The board's roles related to effective governance practices for quality and patient safety.	1	2	3	4	5	6	7
3. The board's required skills and knowledge.	1	2	3	4	5	6	7
4. The board's role in developing and maintaining a culture of quality and patient safety.	1	2	3	4	5	6	7
5. The board's role in building relationships with the CEO.	1	2	3	4	5	6	7
6. The board's role in building relationships with the clinical leadership.	1	2	3	4	5	6	7
7. The board's role in selecting and monitoring appropriate information	1	2	3	4	5	6	7
8. The board's role in selecting and monitoring appropriate measurement indicators.	1	2	3	4	5	6	7
9. The board's role in the creation and execution of the quality plan.	1	2	3	4	5	6	7
10. How the Excellent Care for All Act (ECFAA) supports the work of the board	1	2	3	4	5	6	7

11. What knowledge, practices or related tools learned during the training do you envision applying or adopting?

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12. Which session did you find most useful at today’s event? Please explain.

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13. Which session did you find least useful at today’s event? Please explain.

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14. Were there any particular aspects related to the design or delivery of this training session that you feel could be improved?

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15. Is there anything that you would like to have seen at today’s training session, but did not?

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**POST-PROGRAM SUPPORT**

We would like your thoughts on what kinds of post-session activities might help you make changes at your organization. On a scale from 1 to 5, where 1 is useless and 5 is very useful, please rate the potential usefulness of the following post-session activities in supporting change in your organization.

	<b>USELESS</b>	<b>NOT VERY USEFUL</b>	<b>NO OPINION</b>	<b>USEFUL</b>	<b>VERY USEFUL</b>
16. Scheduled check-ins with the education program representatives to report on progress.	1	2	3	4	5
17. An additional education session with more members of your organization.	1	2	3	4	5
18. Opportunities to communicate with other participants about their progress.	1	2	3	4	5
19. Access to expert consultation through a scheduled group webinar where the consultant addresses questions posed by the group.	1	2	3	4	5
20. Electronic “ask an expert” function that links your questions to experts, who answer directly by e-mail.	1	2	3	4	5
21. Access to governance- and quality-related documents through a web-based repository.	1	2	3	4	5

22. Which particular activities listed above (16-21) would you be willing to pay for?

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23. Are there any other activities that your organization might find useful in supporting change?

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**THANK YOU!**

- \* Except those for which  $n < 5$
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  - ii Baker, G. R., Denis, J-L., Pomey, M-P., & MacIntosh-Murray, A. (2010). Effective Governance for quality and patient safety in Canadian healthcare organizations: A report to the Canadian Health Services Research Foundation and the Canadian Patient Safety Institute. Retrieved from <http://www.patientsafetyinstitute.ca/English/research/PatientSafetyPartnershipProjects/governanceForQuality/Documents/Full%20Report.pdf>
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