



EDU:C UNDER REVIEW	Centre for Quality Improvement and Patient Safety
COMMISSIONING OFFICER	Professor Trevor Young, Dean
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REVIEWERS: Dr. Lisa Calder, University of Ottawa and Dr. Jennifer Myers, University of Pennsylvania

EXTERNAL REVIEW SUMMARY

It was truly a pleasure for the reviewers to conduct the external review of a center with such notable national and international reputation in Quality and Safety. This was not only well known to the reviewers prior to engaging in this review process, but also very evident in our discussions with the Vice-Dean of Graduate and Academic Affairs and the CEOs of the sponsoring institutions. It is clear that the partnership of Dr. Shojania and Dr. Wong has been an essential success factor. Furthermore, the leadership of CQIiPS has not only been able to cultivate key relationships in what has been described as a challenging environment, but also demonstrated an impressive amount of scholarship and the ability to create effective new leaders in patient safety and quality improvement at both Sunnybrook Health Sciences Center and The Hospital for Sick Kids. However, CQIiPS is now at a critical developmental crossroads, and we believe that its future success is contingent upon addressing 3 key areas:

1. Vision
2. Governance
3. Funding

We present our findings and specific recommendations which we trust will be useful in determining the future direction of CQIiPS and assuring even greater success to advance the urgent and critical efforts to improve the quality and safety of healthcare in Canada.



INTRODUCTION

We begin this review by highlighting several notable strengths that became apparent through our interviews. We were struck by the effusive praise for CQuIPS in terms of leadership and impact from multiple levels, including the Vice-Dean, CEOs of sponsoring organizations, Department Chairs, Hospital Program Directors, alumni and staff. Many leaders indicated that the return on investment for CQuIPS was truly remarkable, and “nothing short of spectacular” according to one interviewee. Significant praise was attributed to Drs. Shojania and Wong in particular, which speaks to not only their strengths as leaders but also the culture that has been created among the various partners who contribute to and receive benefit from CQuIPS. We also wanted to highlight the outstanding self-study materials that were provided, and the CQuIPS staff time and dedication to developing these comprehensive, highly informative materials. Finally, the contributions of CQuIPS to building quality improvement (QI) capacity among physicians and other healthcare providers was almost palpable in the resulting workplace QI cultures, particularly at Sunnybrook Health Sciences Center.

Over the past 10 years, CQuIPS has demonstrated phenomenal productivity in terms of the number and diversity of QI trained professionals and scholarly output. The center has moved beyond the proof of concept phase since its value has been clearly established in terms of contributing to continuing professional development in quality and safety along the continuum of health professions education. But in terms of future direction, CQuIPS is at a crossroads. The future direction will be contingent upon key decisions related to vision, governance and funding.



1. Relationships

a. Findings:

- Overall the relationships between CQuIPS and each of the cognate departments appear supportive and positive. In particular, the Departments of Medicine & Pediatrics and the IHPME were all very supportive of CQuIPS leadership and direction thus far. There were no described relationships with other EDUs.
- CQuIPS has well established relationships with the affiliated hospitals, although one participant characterized the relationship between the 3 institutions (SHSC, THSC, IHPME) as “three solitudes” – not adversarial but there is no dialogue. We will come back to this later as an opportunity.
- There appear to be no formal and very little informal relationships with the research institutes or other universities.
- Several CQuIPS leaders and core faculty members have developed important external relationships. Several faculty have roles with the Ministry of Health committees and Health Quality Ontario. Others have well established relationships with the Royal College of Physicians and Surgeons of Canada (one RCPSC director characterized CQuIPS as a powerhouse and essential national educational resource). Dr. Shojanian was editor-in-chief for the British Medical Journal of Quality and Safety and under his tenure, the impact factor for this journal rose significantly and is considered by many to be the most impactful peer-reviewed journal in the field of healthcare quality and safety. Dr. Wong is internationally known for his leadership in QI education, and he is currently Chair-Elect of the American Association of Medical Colleges Integrating Quality Steering Committee. Other core CQuIPS member such as Dr. Baker and Etchells are also well known outside of U of T.
- We heard many examples of CQuIPS-led local quality improvement projects which were impacting the frontline of healthcare. There were also 3 clear examples of these projects spreading locally and in 2 cases, provincially. CQuIPS alumni have had impacts on quality of care with their work across the country and the scholarly outputs have been published in high impact international journals. There have also been early efforts in international education outreach as well.

b. Opportunities:

- The executive committee would benefit from representation from the chairs and directors of the cognate departments
- Having site-specific advisory committees reinforces silos. We suggest bringing these committees together at least once per year to encouraging spread of educational efforts, collaborative research, and other related quality & safety learning opportunities.
- The CQuIPS value proposition is demonstrated via high impact publications and testimonials but the impact on patient care processes and outcomes has not been quantified and is a missed opportunity. This could be articulated as a business case for the value created and the need for more resources.
- There is an opportunity to increase the local reach in terms of collaborative education and research across TAHSN by formalizing the relationship between this network and CQuIPS



2. Research

a. Findings:

- The scope of research includes QI educational research, PS/QI research, and implementation science. The work is aligned with CQuIPS core faculty and trainees' interests which in many cases appears aligned with local hospital priorities.
- The quantity and quality of the scholarly outputs are impressive and continue to grow. CQuIPS faculty and core members are publishing in high impact journals collectively and individually and presenting both nationally and internationally.
- The amount of research activity far exceeds the current funding model. The level of external funding would be considered low compared to other non-QI research centers, but it should be noted that there are no national comparators (see International Comparators Section below)

b. Opportunities:

- Opportunity for increased collaboration between CQUIPs researchers. Additional research staff could support this (e.g. research coordinator to connect interested parties)
- CQUIPS leadership and core members do not identify one or more areas of research focus within the broad field of QI/PS. Rather than selecting a particular focus area (e.g. handovers, healthcare associated infections) which they may not wish to do, there may be an opportunity to unite around a methodological theme
- Alumni expressed a need for more methodological support in the design of their QI work and research. CQuIPS could establish a methods center which would provide advice on QI study design, data collection, qualitative research methods support and analytics support. This also could be a potential new revenue stream
- Opportunity for Canadian Institutes of Health Research (CIHR) team grant which could be administered by a CQUIPS PI or co-PIs
- Opportunity to work more collaboratively with health services researchers for mutual benefit– the Department of Medicine could play a key role in bringing these groups together

3. Education

a. Findings:

- Consistent across all interviewees was the perception that the education provided is of high quality in terms of how the courses and programs are developed and delivered, as well as how they have met and continue to meet the needs of multiple diverse learner groups.
- We are confident in stating that CQuIPS is exceeding its educational mandate, particularly given the funding model.
- Based on the material provided and our knowledge in the field, we believe that CQuIPS is a national and international model for how an academic medical center can build capacity in QI.
- A few interviewees expressed a desire for a broader focus on interprofessional training in QI, rather than the current focus which is primarily targeting physicians. However, we believe that the physician focus within CQuIPS educational programming has been appropriate given the enormous need for physician leadership and participation in local QI efforts and the external mandates for undergraduate and graduate medical education in this field.

b. Opportunities:

- Regarding the interest among some for more interprofessional education, we would submit that this is not an either/or proposition. CQuIPS would benefit from maintaining the current



balance of building QI capacity among physicians while supporting expanding opportunities for other healthcare professionals and teams

- Networking of graduates – consider focused efforts to engage in quarterly evening networking events for alumni, which may include visiting speakers. This could help extend the capacity of a limited pool of mentors. This could also include a small paid membership fee as a revenue stream.
- We suspect other Canadian and American universities would be interested in the advice of CQuIPS on how to educate in PS/QI & set up educational programs. A consultation service and the provision of workshops in this area is a potential revenue stream.

4. Capacity Building

a. Findings:

- CQuIPS has been very successful in creating capacity for QI particularly for SHSC and THSC
- The mentoring within the educational programs is perceived by the trainees and alumni graduates to be of very high quality with particular recognition of the mentorship expertise of Drs. Shojania, Wong, Baker, Etchells, Coffey, Liu and Leis.
- Several participants including staff highlighted a concern about ongoing mentorship capacity which could limit growth.
- It was noted that several graduates had rapidly been promoted to PS/QI leadership positions within their institutions, and thus may have less time for mentorship roles.
- We heard many examples of QI projects with patient care impact at the local level conducted by graduates.

b. Opportunities:

- It is important to recognize that while the growth in QI capacity has come a long way at the University of Toronto, particularly SHSC and THSK, – there remains an ongoing market opportunity to educate more physicians and other healthcare professionals across the TASN and nationally.
- Education for physicians and other healthcare professionals who work in non-hospital settings such as ambulatory care, mental health, and even dental health are ripe for exploration.

5. Organizational + Financial Structure

a. Findings

- While the governance and organizational structure may have served CQuIPS well in the past, it is clear that changes need to be considered to allow for future growth and success.
- The current three-person executive committee represents a missed opportunity for broader leadership engagement across the University of Toronto.
- The two hospital-based advisory committees at SHSC and THSK do not appear to communicate with or learn from each other through any structured forum or process. This can inhibit a strategic orientation for CQuIPS activities.
- Current staff have many talents suited to the nature of their work; however we noted that none of the staff have a business, communications, or strategic planning background.
- There were no concerns about space and physical infrastructure.



- The current financial model does not allow for growth and does not appear to be matched to the recognized value by all of the stakeholders. If this model is not adjusted, not only will growth be significantly challenged, but the University of Toronto should be concerned about the ability to retain current talented leaders and core members.
- Currently CQuIPS has a significant amount of retained earnings that is not being invested.

b. Opportunities

- The executive committee should be expanded to include more leaders at appropriate levels. Currently, only Drs. Apkon, Smith, and Brown sit on the executive committee. We recommend expanding the executive committee to include the chairs of key clinical departments that benefit from CQuIPS programming (e.g. medicine, pediatrics, surgery), a quality or dean-level leader from the School of Nursing, Dr. Brian Wong, and perhaps one or two key research leaders whose work or centers overlap with the CQuIPS mission.
- Hospital-level Governance - We advise that the advisory committees meet at least once annually to share their work to allow for the identification of spread and collaborative opportunities. Structured agendas identifying recurring themes could be helpful here.
- Consider the following potential revenue generating ideas to allow for an expansion and fulfillment of future vision with current and expanded talent:
 1. External Revenue Sources:
 - a. CIHR Team grants – describing a program of research either cross-cutting across one or more QI/PS themes or oriented around one methodological approach
 - b. Targeted philanthropy – Philanthropy could have potential challenges or even be counterproductive if the interests of hospitals and the university are not aligned. Therefore, we suggest a unified fundraising plan that is supported by the executive leadership team, key clinical departments, and sponsoring organizations. The proposal could be oriented towards building a Center of Excellence in QI Innovation and Implementation or oriented towards improving pediatric patient safety. The example of the Ted Rogers Center for Heart Research demonstrates precedence for this.
 - c. Leveraging TAHSN and LHIN resources. The CEO of TAHSN could work with member hospitals to contribute to a fund to support CQuIPS with expansion of educational programs in QI/PS across the network. LHIN resources could also be targeted towards research to help achieve the MoH goal of improving health quality.
 - d. Expand the sponsor institutions to include one or two additional UofT hospitals. The next logical partners identified through our interviews included Women’s College Hospital and/or Michael Garron Hospital
 2. Internal Revenue Sources:
 - a. Consultation service – how to educate and do QI, implement HRO practices
 - b. Methods center – providing methodological support to QI teams in the greater Toronto area, to current students and alumni. Other centers have a business model for this to be revenue generating and CQuIPS has the expertise to staff such a center. An administrator would be required.
 - c. QI Networking Community of Practice – this could have a membership fee, feature invited speakers, bring together students, alumni and core members



- d. Marketing to other professions – educational programs can be further expanded to nursing, physiotherapy, mental health, dentistry, social work, and pharmacy for example
- e. Potential opportunity to engage the leadership of current member hospitals (THSK and SHSC) even further by demonstrating the value of CQuIPS in terms of dollars saved related to hospital outcomes that have been impacted by the QI project work that has been led by CQuIPS faculty and their trainees. This would require an engagement with hospital finance and the cost accounting department to determine the revenue impact for the hospital(s) on relevant CQuIPS QI projects.
- f. There is opportunity to use the CQuIPS retained funds (which total over \$500,000) to either address planned growth and/or transfer these funds into formal investment opportunities to allow for a growth of capital which could be re-invested into the center in the future.

6. Long-Range Planning Challenges

a. Findings:

- U of T is clear that the EDU-C should satisfy both research and educational mandates. CQuIPS accomplishes this through their scholarly outputs in both QI education and research. While the CQuIPS focus on education and capacity building in QI/PS has been well designed and implemented, the research program is less coherent and could benefit from further strategic planning.
- One key challenge for the next 5 years is the decision on future vision -whether the focus will continue to be primarily on education and capacity building or whether a more strategic research plan will be developed (see next page for Specific Recommendations)
- While there has been some thought given to succession planning, the executive committee and Dean should take into consideration the desired vision. Some leadership candidates will have expertise in QI education, others will have expertise in QI research (including implementation science methods), while others may have both. We suggest that the search committee understand and agree upon their vision before launching a search.
- As highlighted in the previous section, the current funding model is not appropriate for growth and expansion.
- While current space is adequate, if the center chooses to expand, this will need to be a consideration.

2. Opportunities:

- Currently, CQUIPs appears to have a great workplace culture featuring openness, generosity, and a collaborative nature. As CQuIPS grows, this could be threatened. This observation leads us to wonder whether a change in leadership at this critical time of growth and change is the right direction. We urge the U of T leadership to consider extending the current leadership to a third term in order to facilitate successful guidance into an expansion phase. Depending on the vision selected, this 3rd term could facilitate a pathway to leading a center of excellence and allow for director succession planning execution. Retention of the current leadership talent is a key consideration for this challenge.
- A challenge as CQUIPs grows is the risk of redundancy with respect to QI efforts across hospitals and not learning from similar challenges at different institutions. This is evident in the silos between institutions witnessed in our review. This could be addressed by attending more intentionally to spread mechanisms in a formal rather than informal way. CQuIPS would need to seek innovative and potentially virtual ways to collaborate since attendance by busy clinicians can be challenging



7. International Comparators

a. Findings:

- Because the field of quality and safety is relatively new, there are few international centers for quality improvement and patient safety, and the comparators that do exist have different missions and structures. For example, Northwestern University has numerous educational programs in quality and safety within their Center for Education in Health Sciences but have less of a combined research portfolio. The Center for Healthcare Quality and Safety at the University of Texas has a robust research portfolio that began with a large AHRQ grant, but their educational offerings are less well developed.

b. Opportunities:

- There is an opportunity to conduct interviews with the leadership of the identified comparators centers in the United States and other countries to more closely understand their funding model. However, we caution against benchmarking too closely with any one program as the field is young and U of T and CQuIPS is already being looked to as a leader in this area. Indeed the University of Pennsylvania has used U of T as a benchmark for developing our Center for Healthcare Improvement and Patient Safety, and we are aware of other programs that have similarly looked to CQuIPS as a leading model.

8. Conclusions

In conclusion, we found the Centre for Quality Improvement and Patient Safety at the University of Toronto to be an exemplar for national and international centers wishing to build similar programs. In order to take CQuIPS to the next level of excellence, we urge the Dean and the executive committee to carefully discuss and consider our specific recommendations outlined below.



SPECIFIC RECOMMENDATIONS:

1. Vision

The fundamental decisions ahead should focus first on vision. We heard 3 possibilities that deserve careful consideration by the leadership, core members and staff:

- a. **Build on a Focus of Education Excellence:** Continue to build upon the existing excellence in PS/QI education with additional focus specifically on education research. CQuIPS appears primed to explore opportunities for spread of education efforts within the greater Toronto area, provincially, nationally and internationally. The center has demonstrated experience in engaging in scholarly education efforts and is well positioned to continue to succeed. For this vision there would not be a specific focus on patient safety and/or quality improvement (PS/QI) research.
- b. **Create a Center of Excellence in QI Innovation and Implementation:** While efforts are underway to further excellence in PS/QI education, there is an opportunity to mobilize the Dean of the Faculty of Medicine, the CEO of the Toronto Academic Health Sciences Network (TAHSN) and a new executive committee to aim for a new philanthropic donation to support a Center of Excellence in QI Innovation & Implementation Science. This would result in increased prominence for U of T on the international stage and also take advantage of current innovation laboratories and new partnerships with departments such as U of T Computer Science, Medical Anthropology, and Human Factors Engineering. One possibility is that CQuIPS could become a specific division focused on education and capacity building under this new Center of Excellence. Current leadership would be well positioned to facilitate this effort.
- c. **Create a Dedicated PS/QI Research Division:** While excellence in education and scholarly educational activities are well established, there is opportunity to build a focused research program within CQuIPS. If this vision is selected, we would recommend an education director and a research director. The research director would need new infrastructure and administrative support in order to engage in research grant opportunities and dissemination activities. This could include applying for a large CIHR team grant to support a thematic program either oriented around a methodology or a suite of key pressing quality issues.

2. Governance

If the intent is to continue to develop the excellence of CQuIPS and expand the vision, there are 3 important considerations for leadership and governance:

- a. **The timing of leadership change:** Depending on the vision chosen, CQuIPS may benefit from an established leader in QI education, an established leader in PS/QI research or a leader who can guide the creation of a new Center of Excellence in QI Innovation and Implementation. We believe the next 5 years are a critical stage for CQuIPS. Consideration of a third term for the current director Dr. Kaveh Shojania should be seriously entertained as well as a clear succession plan to ensure retention of the current leadership talent.
- b. **Improve the current governance structure:** In our view, the executive committee would benefit from representation by the chairs and directors of the cognate departments and expand to other



involved departments such as Surgery. We also advise merging advisory committees into one rather than site specific to allow for strategic planning, and the identification of spread and collaborative opportunities.

- c. **Expand the organizational structure to support an expanded vision:** The organizational structure needs to be expanded if there is a desire to grow beyond a 2 hospital focus. Changes will need to be aligned with the decision on which vision to pursue and the balance of research and education. If there is agreement to pursue further revenue generation, staff with a business and strategic planning background would be essential. If a focused research direction is chosen, dedicated staff to generate funds, write grants, navigate REBs would be key requirements.

3. Funding

The success and productivity of CQuIPS is truly remarkable given the current funding model. Furthermore, we were surprised to learn that recommendations from the previous external review were not actioned to secure a more appropriate funding model. This needs urgent attention. To this end, we have made several suggestions for revenue generation in the section on Organizational and Financial Structures above. The three most promising ideas in our view are:

- a. **Leveraging TAHSN and LHIN resources:** The CEO of TAHSN could work with member hospitals to create a fund to support CQuIPS with expansion of services across the network. LHIN resources earmarked for research could also support this effort and achieve the Ministry of Health goal of improving health quality. Engaging member hospitals using a business case articulating the CQuIPS value proposition and concomitant cost saving could be a powerful tool.
- b. **Targeted philanthropy:** This could be a joint effort by the foundations of the sponsoring organizations similar to the Ted Rogers Center for Heart Research. The proposal could be oriented towards building a Center of Excellence in QI Innovation and Implementation or oriented towards improving pediatric patient safety.
- c. **Expand the sponsor institutions** to include one or two further local hospitals. The next logical partners identified included Women's College Hospital and/or Michael Garron Hospital.