TEMERTY FACULTY OF MEDICINE
UNIVERSITY OF TORONTO

Temerty Medicine

ACADEMIC REVIEW REPORT FORM

EDU:C UNDER REVIEW	Centre for Quality Improvement & Patient Safety (CQuIPS)
COMMISSIONING OFFICER	Dr. Patricia Houston – Interim Dean
REVIEW DATE	Thursday September 19, 2024
REVIEWERS' NAMES	Dr. Muhammad Mamdani – Professor, Leslie Dan Faculty of Pharmacy, Director, Temerty Centre for Artificial Intelligence Education & Research in Medicine and Vice President, Data Science & Advanced Analytics, Unity Health Toronto Dr. Danielle Martin – Professor and Chair, Dept. of Family & Community Medicine, Temerty Faculty of Medicine; Women's College Hospital

FRAMEWORK

The academic review process supports a structured approach for creating, assessing, and implementing plans to improve academic units in the context of institutional and divisional commitments and priorities. As per The University of Toronto Guidelines for Extra-Departmental Units, the academic rationale for the establishment of an EDU:C is paramount. The academic review returns to the original expectations and anticipated metrics or measures of success in its assessment of the EDU:C's *"sustainability, performance and achievements relative to the goals set out at its establishment. Possible outcomes of the review could include closure."*

The guidelines acknowledge that—

> *Many EDU's are established in collaboration with the University's Fully Affiliated Health Care Institutions and are an expression of the strong relationship that exists between the University of Toronto and its health care partners. These EDU's may be physically located in hospital space; engage colleagues employed by the University's Toronto Academic Health Science Network (TAHSN) partners and be bound by their rules; depend on hospital infrastructure including finance and HR services; and are often sustained by significant financial contributions from collaborating institutions.*

Expert review is foundational to the academic review process. The academic review report addresses the terms of reference to provide insights and recommendations. The final review report is considered a public document and, together with the Director's response (1) will be circulated within the EDU:C, (2) may be posted on its website, and (3) will be shared with reviewers at the time of the next review.

Please note that issues that are addressed through existing, specific University procedures are considered out of scope for EDU:C reviews (e.g., individual Human Resources issues, specific health and safety concerns). Any such issues raised at any point during a review process (self-study report, review visit, reviewer's report) must immediately be brought to the attention of the commissioning officer and routed through appropriate University channels for resolution.

SUMMARY ASSESSMENT

Provide a summary of your findings. Focus on the assessment of the EDU:C under review relative to the best national and international comparators, including areas of strength and opportunities, and plans for sustainability.

ACADEMIC REVIEW SUMMARY

The CQuIPS team has achieved remarkable milestones over the last 5 years. This EDU-C is viewed across its stakeholder map as bringing substantial added value to the university and to the health system more broadly. Under the highly-effective leadership of Dr. Brian Wong, it has maintained a supportive culture of its staff and learners even through the pandemic, and forged new relationships both locally and internationally. The team showed courage and an innovation mindset during the pandemic, setting a new bar for the ways in which an EDU-C can add tangible value in the health system, particularly for a vulnerable group outside hospitals where less infrastructure exists.

While this EDU-C already punches above its weight, the relatively new strategic plan sets out even more bold goals to move the needle on health equity and grow impact within the health care system. We support these goals and we believe that in order to achieve them, the team may need to focus its efforts differently and build new partnerships in the coming years. We also encourage CQuIPS to be more outcomes-focused and demonstrate its incredible value more objectively and tangibly. Further, we suggest CQuIPS formalize strategic partnerships that align with its values and mission. From an operational and financial point of view, CQuIPS would benefit from growing its core funding and we believe there are several potential models that could help it to do so while maintaining its values and mission.

INTRODUCTION

The Centre for Quality Improvement and Patient Safety (CQuIPS) was established in 2009 as an Extra-Departmental Unit type C (EDU-C) at the University of Toronto through a funding partnership between the Temerty Faculty of Medicine and two hospital partners – Sunnybrook Health Sciences Centre (SHSC) and the Hospital for Sick Children (SickKids). In 2020, a third hospital partner – Women's College Hospital – was added.

In 2024 we were honoured to be asked by the Dean of the Temerty Faculty of Medicine to conduct a regularly-scheduled review of CQuIPS. As part of this process, we had access to the CQuIPS Self-Study Report, the CQuIPS Review Terms of Reference, and a previous External Review Report conducted in 2018 as well as publicly-available information on the CQuIPS

website. We had the pleasure of spending a full day interviewing CQuIPS leaders, executive sponsors, staff, learners, researchers and educators, all of whom were thrilled to showcase the many successes of this exceptional EDU-C. We were tasked with the difficult work of identifying just a few key successes to celebrate, while also challenging the team to think broadly about potential opportunities for growth and improvement in the future.

The renewed CQuIPS vision is 'Everyone striving for better health outcomes for all' and its mission is 'To accelerate and deepen the work of people and organizations that are passionate about enhancing quality and patient safety'. Its three main goals focus on integrating QI and patient safety work with health system priorities, partnering with internal and external groups and organizations to expand the Centre's program of research and advance equity through research, education, and practice, and growing the QI and patient safety community by establishing a learning network.

We will first review findings and recommendations from the previous academic review and then comment on our findings in the areas of relationships, research, education, organizational and financial structure, long-range planning challenges, and international comparators. Based on our findings, we will make specific recommendations that we hope will be useful in informing the evolution of CQuIPS as a world-class centre for patient safety and quality improvement.

FINDINGS

Based on the self-study report and site visit—and following the framework below—address the appended terms of reference.

i) Confirm that you have considered each term in the terms of reference for the EDU:C review.

ii) Comment on the EDU:C's strengths, areas for improvement, opportunities for enhancement, and plans for sustainability.

PREVIOUS ACADEMIC REVIEW

The previous academic review conducted in 2018 offered valuable guidance that has shaped the current structure and work of CQuIPS. The key review points and actions undertaken by

CQuIPS leadership are outlined in the table below. More detailed responses to other recommendations are highlighted on pages 26-31 of the self-study report. We believe that the CQuIPS leadership took the advice from the reviewers to heart and that the structures and programs of the Centre today reflect the advice of the reviewers.

Reviewer Recommendations	**CQuIPS Work Undertaken**
Vision: - Build on a focus of education excellence - Create a Centre of Excellence in QI Innovation and Implementation - Create a dedicated patient safety / QI research division	The CQuIPS organizational structure now reflects dedicated streams in education, research, and partnerships (geared towards working with healthcare organizations to advance patient safety and QI) as well as networks and communication. CQuIPS is committed to engaging fully with community partners and advancing not only QI education initiatives but also the implementation of QI initiatives. Of note, CQuIPS has developed the TASHN QIPS Community of Practice. Further, CQuIPS has recently appointed a new Research Lead and a dedicated research team that has already secured numerous grants from large funding agencies.
Governance: - Timing of leadership change - Improve current governance structure - Expand organizational structure to support an expanded vision	Dr. Wong assumed leadership of CQuIPS in 2019. The CQuIPS organizational structure has indeed changed to reflect the recommendations of the previous review and positions CQuIPS quite well for continued success. There is now an extensive list of directors and leads to provide leadership to CQuIPS numerous initiatives. Further, representation by the Chairs of the cognate Departments has also improved.

Funding: - Leverage TAHSN and LHIN resources - Targeted philanthropy - Expand the sponsor institutions	Women's College Hospital is now a funding partner of CQuIPS. While this new partnership is encouraging, securing funding from other potential groups such as TAHSN, the LHIN / OHT, and philanthropy has been challenging. However, CQuIPS has added more TAHSN hospital-based researchers on CIHR grants and has expanded its consultancy work for revenue generation with collaborative partners such as St. Mary's Hospital, Scarborough Health Network and East Toronto Health Partners.

RELATIONSHIPS

1. **Findings:**

CQuIPS now has three core hospital partners – SHSC, SickKids, and Women's College Hospital – all of which seem to be quite active in QI and patient safety initiatives relevant to their own organizational missions and with the support of CQuIPS. While CQuIPS has established the TASHN QIPS Community of Practice, the extent of genuine collaboration and shared learnings between the TAHSN hospitals, and even the three core hospital partners, is unclear.

The University of Toronto cognate department engagement is excellent and seems quite positive and supportive. In the prior review, it was recommended that deeper links be built with cognate departments that were not yet fully engaged; in our discussions specifically Psychiatry/mental health and Family and community medicine were mentioned. CQuIPS continues on that journey; thus far, more people have entered programs from those departments than previously but further opportunities for collaboration surely exist.

Within the University of Toronto environment, CQuIPS has engaged with other extra-departmental units and programs such as the Wilson Centre, the Centre for Faculty Development (CFD), the Collaborative Centre for Climate, Health & Sustainable Care, General Medicine Patient Initiative (GEMINI), and the Temerty Centre for Artificial Intelligence Research and Education in Medicine (T-CAIREM). CQuIPS has had research collaborations with the Wilson Centre, CFD and CACHE which have resulted in several peer-reviewed publications in high impact medical educations and health professions education journals. There have also been successful joint grant applications, for example, a major grant from the Society of Academic Continuing Medical Education in the US -- the Manning Grant awarded only once every 2 years. Nevertheless, deeper collaboration could be pursued, particularly in a thematic area of focus jointly identified as high-priority, a concept we will return to in our recommendations.

Externally, CQuIPS continues to engage with other QI and patient safety programs at other institutions such as McMaster, Queens, Western, and NOSM. CQuIPS is clearly a national leader in the QI and patient safety space.

The “pandemic pivot” undertaken by CQuIPS to focus on implementation of large-scale system resilience initiatives like Long Term Care Plus (LTC+) represents the very best example of partnership with purpose in the current CQuIPS portfolio. This work has been meaningful for all partners and clearly gave leadership the confidence to emphasize large-scale health system change in its strategic plan. The Choosing Wisely Canada (CWC) partnership appears to be another example of impactful work linked to the mission. Other partnerships with Canadian Blood Services, East Toronto Health Partners and the TAHSN QIPS Community of Practice have been important steps on the partnership journey towards tangible initiatives with impact.

Nationally, CQuIPS has worked with numerous groups such as the Royal College of Physicians and Surgeons Canada, Healthcare Excellence Canada, CASCADES, Choosing Wisely Canada, and the Canadian Blood Services. These are excellent relationships and funded collaborative initiatives with such groups should continue to be explored.

Internationally, CQuIPS is the only funded Canadian partner organizations of the Patient-Partnered Diagnostic Centre of Excellence and has jointly organized a Masterclass with the University of Pennsylvania. Such collaborative initiatives should continue to be established and more formal relationships with highly reputable international entities should be encouraged.

2. Opportunities:

Locally, opportunities exist to better leverage the TAHSN network of hospitals to advance the goal of health system resilience. This could include expanding the list of core hospital partners, perhaps even in the area of mental health (CAMH). It could also include a "lighter-touch" commitment from all TAHSN hospitals wishing to participate in the QIPS around a set of initiatives linked to a common goal endorsed by TAHSN. Issues raised during the review that have been prioritized by TAHSN where QI support could make a difference included concerted efforts in climate change and planetary health; health equity; and the attachment crisis in primary care. A value proposition could be collaborative, data-driven QI initiatives in partnership with GEMINI where funding is secured from each hospital to support dedicated data analysts and high value QI initiatives. This financial model could increase TAHSN hospital engagement and stabilize core funding for CQuIPS. This is also an area where AI could come into play and a meaningful deepening of partnership with T-CAIREM could be powerful.

With respect to the other EDUs in the university system, continued relationships with these centres and programs are encouraged where it makes sense to do so through substantial collaborative initiatives. Again, a focus on a shorter list of shared goals could help to coalesce an "action group" in a shared space.

Given the emerging areas of focus on equity/community engagement and implementation/knowledge translation, exploring relationships with relevant centres locally, nationally, and internationally with expertise in these areas will likely make sense over the next 5 years. There is a potential significant opportunity with Ontario Health Teams (OHTs) in the primary care space, building on the initiative in East Toronto: in light of the crisis in primary care access, health system resilience in this space today would be less disease-specific and more

focused on core issues of attachment and access to care. Over time, the data holdings supporting the TAHSN model above could also evolve to include UPLEARN and its primary care data holdings in partnership with the Department of Family and Community Medicine, creating the possibility of OHT participation and financial contributions in an "institutional membership" type of model.

Finally, as CQuIPS seeks opportunities to solidify its financial situation, it may be worth exploring a strategy to establish relationships with private sector partners who provide support to health care organizations looking to improve the efficiency and quality of their work. Such consultancies often possess significant expertise and resources. The consultancy work of CQuIPS has thus far been both mission-aligned and reasonably lucrative, but it has been direct-to-client rather than functioning in partnership with a consultancy firm that can offer the business expertise organizations sometimes need alongside the academic expertise. Opportunities to expand this work in partnership with one or a few respected consultancy groups could be explored as a means of expanding this revenue stream so long as the work remains consistent with the values and mission of the Centre.

RESEARCH

1. **Findings:**

CQuIPS has grown its research impact significantly over the last 5 years, and with it, the grant revenue available to the Centre. CQuIPS-affiliated researchers appreciate the collegial, supportive (rather than directional) role that CQuIPS has played in developing and growing independent researchers, many of whom are clinician-scientists with limited time. The hands-on support in practical research activities, including grant-writing and securing grants, are critical in supporting emerging researchers to be able to "stand on their own feet". A vibrant and ongoing community around QI research is a major source of support for many QI researchers and allows for spontaneous collaboration. As was the case throughout the review, the researchers and research staff spoke very highly of the leadership of the Centre.

CQuIPS now has a dedicated research team from the appointed Research and Scholarship Lead, Dr. Patricia Trbovich, full-time research coordinator and research assistant to support a wide

variety of research activities. It's core and affiliated research members have together brought over $40 million research grants from international, national, provincial and regional funding agencies, published 325 peer-reviewed publications (2020-2024) that are cited 20,884 times in high-impacts QIPS journals. CQuIPS also made efforts in developing and growing research capacities of early-stage clinician-researchers through a more structured approach with the Healthcare Improvement Fellowship program. Revenue from grant funding has increased considerably from $42,000 in 2020-2021 to $152,000 in 2023-2024.

Since 2020, CQuIPS have pivoted timely and successfully during the COVID-19 pandemic to lead applied research efforts in building health system resilience, through the implementation and evaluation of CIHR-funded Long-Term Care Plus (LTC+) initiative and the IPAC Hub and Spoke model of care to address emerging challenges experienced by the Long-Term Care Sector across Ontario. Stemming from TASHN QIPS CoP discussions, CQuIPS also developed an added focus on Equity, Diversity, Indigeneity, Inclusion and Accessibility (EDIIA) in all of its research and education initiatives. Some examples include the development of equity frameworks in QI, starting to engage patients and community partners in QI research, and evaluation of equity integration in QI education programs.

By engaging with the TAHSN community and beyond on important infrastructure work such as data sharing agreements and the SQUIRE initiative, CQuIPS is building a scaffolding for projects that can potentially achieve both process and outcome improvements. This scaffolding is critical because it highlights a commitment to data/driven improvement and a rigorous academic focus, positioning CQuIPS as a serious academic centre. It is also critical because it opens the door for deeper partnerships across TAHSN and beyond that can really help the Centre make an impact on the outcomes its leadership cares about.

2. **Opportunities:**

As CQuIPS continues to grow, a major strategic decision to be made, both in the areas of concerted QI activity in the health system and in the area of formal research, is how hard to push the areas of focus outlined in the strategic plan. These areas are sufficiently broad that a

very wide range of activities could fit under their “big umbrellas”, but a loose thread connecting disparate activities may not be enough to achieve the system impact CQuIPS leaders want to see. Should leadership decide that the Centre is ready to pull in the same direction, as it did in the case of LTC+ during the early days of the pandemic, a focused pursuit of grant opportunities and publications in a specific domain could be undertaken.

Should CQuIPS decide to head in this direction, it may make sense to seek real impact on EDIIA with respect to a specific health inequity, rather than continuing solely to put an equity lens on all work. While of course an equity lens helps to unmask opportunities for improvement, it may not in and of itself lessen inequity. In the next phase of the strategic plan CQuIPS leadership could explore opportunities for real-world health system improvement that differentially affect populations experiencing systemic marginalization, such as urban Indigenous patients receiving care in emergency departments across the GTA or newcomers to Toronto without access to primary care. Equity gaps are often ripe for the application of QI methods. Such an approach would require new partnerships and new approaches for the CQuIPS team, but having invested time, energy and money in extensive EDIIA training this team may be ready to take on such a challenge.

As we have discussed previously, it is possible that lending research expertise to other organizations both as revenue generation strategy and opportunity to grow and develop long-term partnerships with TASHN hospitals or in the private sector could both add value to the health system and increase the financial stability of the Centre.

EDUCATION

1. **Findings:**

CQuIPS has been a pioneer in QI capacity-building, and has helped learners develop QI leadership through an impressive range of educational offerings led by clinician trainers and speakers who bring real-world knowledge backed up by academic expertise. The diversity of learners is a huge strength, including nursing and allied healthcare professionals as well as non-

clinical staff from urban and rural settings beyond Toronto in regions across Ontario, Canada, and even the United States. This diversity is seen as a real strength by all stakeholders: it demonstrates the breadth and reach of the Centre's relevance. These remain core to the CQuIPS identity and they are also a credit to Temerty Medicine as they show an authentic commitment to interdisciplinarity and an understanding of the crucial contributions made to health care quality by non-physicians.

Learners appreciate the wide spectrum of CQuIPS education offerings and opportunities for continuous support and mentorship. CQuIPS has taken into consideration the practicality of program/course design, including ensuring financial affordability, offering hybrid sessions and schedule flexibility to accommodate learners' busy work schedules.

2. Opportunities:

We were tempted to try to identify possibilities for program consolidation given the number of educational offerings, but we were assured by the Education leaders that each program serves a unique function and is highly valued by stakeholders. It is good practice to routinely ask the question, "what could we give up to make room for exciting new opportunities?" and we trust that the leadership of the Centre will continue to identify such opportunities where relevant.

Perhaps the biggest opportunity we heard from CQuIPS learners was the desire to maintain a more formal connection to CQuIPS after the educational offering is complete. Learners find their experience in the Centre's programs so valuable, and then often feel unsure of their connection to CQuIPS once they bring home their certificate. An opportunity exists to offer a more formal ongoing relationship with graduates, along the lines of a "CQuIPS Fellow" designation that could include ideas such as:

- Continuing mentorship after completing the more introductory programs, and the possibility of participation as a mentor for more senior graduates of advanced programs
- Attendance at least a few continuing education events annually
- Access to specialized resources through a password-protected section of the website
- Payment of a small annual fee, perhaps a few hundred dollars

This idea could be explored more fully over time, but the concept of building stronger ties with graduates appeared to resonate across stakeholder groups. There are enough CQuIPS alumni out there that this represents a potentially powerful community.

The question of whether educational offerings should further expand is an important one from a strategic perspective. Could CQuIPS move beyond its traditional focus on the GTA and explore opportunities to offer education programs elsewhere, whether in partnership with hospitals (building on the St Mary's experience), OHTs (building on the East Toronto experience), or a formal consultancy partnership? Since enrolment and revenues from education programs are falling, such possibilities are worth exploring and importantly they should be analyzed in terms of their opportunity costs and ultimately strategic alignment. We believe there is a 'market' for CQuIPS offerings out there; the key to success will lie in choosing only expansion strategies that will serve multiple goals for the Centre.

Finally, recognition of CQuIPS certification across health disciplines and possibly accreditation as an additional source of revenue to sustain program offerings (e.g. CME/CPD credits recognized by CPSO, RCPSC, OCFP and other medical professional associations) was mentioned in more than one session. We imagine that some of this work must already be underway and want to emphasize that, if achieved, it could allow for natural linkage of CQuIPS courses in time and space to national professional meetings across disciplines and the country (and thus also revenue generation opportunities).

ORGANIZATIONAL AND FINANCIAL STRUCTURE

1. **Findings:**

CQuIPS has grown into a much larger and more mature organization over the last 5 years. The addition of Women's College Hospital has increased TASHN representation and collaboration with hospital partners, and with the focus on health system resilience this proved to be a wise addition to the group. The previous review identified the need to build expertise in business, communication, and strategic planning and the issue of significant amount of retained earnings

not being invested. These opportunities have been fully addressed, with significant revenues accruing from investments and strategic growth occurring with a balanced budget in the 2023-24 fiscal year. Expansion has occurred in research, communications, and consulting by hiring full-time and temporary staff members. The leadership team has also grown through increased base funding from partner organizations' contributions and reserve funding investments, in addition to increased research funding, consulting and education revenues.

Since its inception, CQuIPS has been fortunate to have exceptional leadership and developed an international reputation in QI and patient safety education and research. Despite the disruption of huge amounts of academic and non-essential health care work globally between 2020-2022 due to the COVID-19 pandemic, CQuIPS leadership has established and maintained an excellent work culture within the Centre and consistently received considerable praise from all individuals and groups we interviewed. The team undertook a massive "pandemic pivot" that has increased its relevance in the TAHSN environment hugely and represents an opportunity for even greater impact in future. While Dr. Wong is clearly an exceptional leader, the entire CQuIPS team is high functioning and should be immensely proud of their significant accomplishments.

Rapid growth and development have created predictable challenges in maintaining positive team spirit among staff, who generally love the team and the culture and feel trusted and supported by leadership. The move to an office hoteling model and the very part-time nature of engagement of many faculty do pose a risk to ensuring that each staff member feels supported and connected to each other and to the leaders they work with. This is worth keeping an eye on and may require some calibration in the work models over time.

The Centre needs more stable long-term funding support and/or sources of revenue to support the growth and expansion in all areas of education, research, and capacity building. We saw it as a key responsibility for us as reviewers to make some concrete suggestions in this regard.

2. Opportunities:

There is no easy way to achieve operational and financial sustainability in today's academic environment. CQuIPS however has a well-respected brand and a cadre of academic experts who we believe will be able to continue to balance the books through a combination of well-designed educational offerings, aggressive pursuit of the "right" research grants with appropriate overhead back to the Centre, and exploration of other funding models. We invite the leadership to consider the following potential sources of potentially stable revenue as they craft a business plan for the next 5 years:

1) Revenue from other TAHSN hospitals:
    a. Consider expanding core membership to include at least one other hospital whose focus is complementary to existing partners, such as a community hospital serving an equity-deserving neighbourhood or CAMH with its focus on mental health.
    b. Consider opening more formal opportunities to other TASHN hospitals to become revenue-contributing partners by identifying area(s) of focus (e.g. Indigenous outcomes in hospital, climate sustainability initiatives, primary care attachment for patients in the ED or being discharged from the ward, etc.). The possibility of a "second tier" of CQuIPS hospital members who pay a smaller fee to access a formal TAHSN learning collaborative building on the TASHN QIPS Community of Practice. This latter opportunity could be strengthened through one or a few highly curated deepened partnerships:
        i. GEMINI—recommend deepening relationship by fostering a stronger model of partnership through data-sharing and analytics (e.g. hiring a data analyst) and potential collaboration with T-CAIREM, and eventually UPLEARN that serve TASHN with primary care and Ontario Health Teams as potential clientele. The work is underway for data sharing across TAHSN
        ii. CASCADES and the Centre for Climate and Sustainable Health—consider strengthening this partnership and tapping into possible funding sources through collaboration

iii. T-CAIREM – consider joint funding opportunities with T-CAIREM that advance artificial intelligence-driven QI initiatives

2) Revenue from former learners: Consider offering paid memberships/mentorships to CQuIPS program graduates for continuous access to the CQuIPS community and resources.

3) Revenue from research grants: Consider a more aggressive strategy to pursue grants in areas of focus and recover overhead costs.

4) Revenue from outside the TAHSN environment: Consider growing the consultancy arm which has thus far been small but successful. A strategy could include intentional business development with hospitals outside the GTA, OHTs, Ontario Health and others to offer courses, team trainings, learning collaboratives etc. at a fee that brings in a stable base revenue source. Another approach could be to seek out opportunities to collaborate with bigger players in the industry, such as local firms like Santis Health or larger ones like Deloitte, McKinsey, and others, offering up QIPS expertise as additional way to generate revenue in a partnership model.

5) Revenue through philanthropy: we strongly advise the CQuIPS team to work closely with the new Dean of Medicine and other university leaders on opening the doors to the advancement teams of the university. This work takes time and it will need to dovetail with decanal fundraising priorities, but the focus on equity and health system impact seem highly likely to fit the bill. The challenge may be in framing the donor case less around “improving quality” and more on impact on a set of problems that are widely acknowledged to be important in health care, such as Indigenous health outcomes, climate change, attachment to primary care, wait times in the ED or for specialty care, etc. Should the team decide to tackle problems of this magnitude and prioritize them, we suspect that the work would be very interesting both to TFOM and to potential donors.

Should CQuIPS evolve further into a service provider through its partnerships and consultancies (and perhaps engagement with private sector), a more formal approach to managing contracts and finances may be needed. In this we believe that the resources available centrally through TFOM and the university more broadly could be helpful.

From a governance perspective, the self-study identified deeper patient engagement as a need in the next phase. We agree. We noted that in our very busy day of meetings related to this external review, despite having the opportunity to speak with a very wide range of stakeholders, we did not encounter a single patient advisor. Particularly once the Centre gets more deeply into equity-focused work, that voice of lived experience will be extremely important and we recommend considering a wide range of ways in which community voices as well as individual voices can be heard in work to improve quality and safety in health care. We note that meaningful and respectful patient and community engagement also costs money, and would suggest that this be taken into account in the financial plans for the Centre.

LONG-RANGE PLANNING CHALLENGES

1. **Findings:**

Over the next five years, key areas of focus for CQuIPS will include: i) addressing inequities in care via education, research, and practice, ii) expanding CQuIPS' position as a key health system partner, iii) growing connections and collaborations to drive improvements at scale, iv) enhancing CQuIPS international reputation, and v) partnering more meaningfully with patients.

These goals are exciting and activities may need to be opportunistic; the CQuIPS team showed itself capable of seizing unexpected opportunities in the pandemic, for example. But clearly outlining organizational priorities in rank order may be helpful to focus efforts on the initiatives most likely to help achieve the mission. Ideally, initiatives that may generate revenue (such as through some of the opportunities identified earlier or any others) would help to offset the costs associated with non-revenue generating but important initiatives (especially in the equity and primary care spaces where there are fewer resources available).

2. Opportunities:

In achieving these ambitious goals, a formal financial and sustainability/business plan may be advisable as the coming work will require considerable human and financial resources. Expert consultants could be helpful in producing such a plan, but we would caution against relying too heavily on someone from outside because the prioritization exercise requires the whole team: moving from strategy to implementation requires a brave declaration of priorities. Further, the current physical space for CQuIPS staff may require further consideration as the team grows. While remote working environments can be productive, maintaining the excellent team culture as the team grows in a hybrid/hotelling environment may be a challenge.

CQuIPS has worked exceptionally hard to develop an exemplary QI and patient safety community, a world-class education program, and leading research. As the team increasingly engages with health system partners and drives improvements at scale, a greater emphasis on innovation and clinical outcomes (as opposed to processes) may be helpful and would certainly be bold. Demonstrating the value of its engagements through improvements in meaningful patient outcomes, particularly in the difficult spaces of health equity and population health, would not only place CQuIPS as a key driver for healthcare system transformation, but also better position it for future funding through public and private sector sources.

The team has spent a great deal of time, energy and resources building its capacity to engage thoughtfully in questions related to EDIIA. In the next phase, an impact lens would suggest that it is time to identify specifically which equity issues will be addressed by the team. What are the big equity gaps in health care in the GTA that might be amenable to the expertise of this group? Who are the experts in those areas that might be open to partnering? There may be an opportunity to move from a broad “equity lens” approach to a deep understanding of specific equity challenges that plague our healthcare system and community to help prioritize initiatives that may be amenable for intervention. While many groups in the U of T and TAHSN communities do excellent work on equity research, we are not aware of a structured, consolidated, collaborative initiative to identify key equity issues and a process to engage the TAHSN community in addressing these.

INTERNATIONAL COMPARATORS

1. **Findings:**

The growth in QI and patient safety initiatives globally has resulted in increased competition, especially in educational initiatives, but also opportunities to benchmark. CQuIPS is clearly the leader in QI and patient safety in Canada. As CQuIPS increasingly positions itself as a global leader, international comparators would be more appropriate.

CQuIPS certainly 'punches above its weight' with respect to critical measures such as publications (e.g. publications since 2020: 410 for CQuIPS vs 368 for UK's THIS Institute) in spite of being in a position of having to seek out sources of base funding on an annual basis. Similar international comparisons with respect to education and community would be helpful.

Interestingly, CQuIPS has assumed oversight of SQUIRE, which is the international publication guidelines for the reporting of QI research and scholarship. This clearly recognizes CQuIPS as a global leader in QI and patient safety. Again the commitment to embedding equity in this work is meaningful and should be applauded.

CQuIPS compares quite favorably to other QI programs internationally with respect to research output such as number of publications. The addition of other important and widely accepted research and productivity metrics, such as the quality of publications (e.g. as measured by the journal impact factor) and research funding secured as well as number of education initiatives and learners supported, would be helpful. Such metrics would help advocate for more funding to better compete with much larger QI and safety initiatives.

2. **Opportunities:**

Given the growing number of QI and patient safety initiatives internationally, thoughtfully and strategically partnering with world-leading programs without competing with giants in the QI field will continue to be of the utmost importance.

Related to the above point, strategic international partnerships, especially with an equity focus, would position CQuIPS well in attracting funding from large philanthropic organizations such as the Gates Foundation or with the World Health Organization as many low and middle-income countries (LMICs) are increasingly interested in building capacity for health care improvement.

International reputation is often shaped not only by tangible accomplishments, but the ability to communicate them. There may be an opportunity to further expand communications so the national and international communities can increasingly know of CQuIPS' incredible work.

RECOMMENDATIONS

Make at least three recommendations for specific steps to be taken. (The EDU:C Director will be required to provide a response to each recommendation.) Please include only formal recommendations; observations or suggestions can be made above in FINDINGS.

We offer below 5 recommendations which we hope will be useful to the CQuIPS team. The examples of the types of work that could be included here are not intended to be a roadmap, as we recognize that the leadership knows the Centre much better than we do; there may be more appropriate ways to achieve these goals. Nevertheless, we have tried to offer specific ideas that the team could consider when exploring how to bring the recommendations into their work. Because we have expanded on all the recommendations in the body of this report, we offer here only a brief summary of each.

1. **Develop an operating and financial sustainability plan that commits to more precise themes of work and outlines a path to resourcing it, including consideration of local, national, and international sources of funding.**
    a) **A stronger commitment to thematic work could include:**
        1) Grow existing TAHSN relationships into a more impactful, focused and revenue-generating collaborative.

- Expand core CQuIPS membership to at least one other TASHN hospital whose focus is aligned with existing hospital partners, for example a community hospital serving an equity-deserving neighborhood or CAMH with its focus on mental health.
- Grow partnerships with the TASHN network of hospitals on prioritized and specific issues such as climate change and planetary health, health equity, and the attachment crisis in primary care and their respective impacts on one or a few groups of equity-deserving patients who use hospital services, such Indigenous communities, newcomers, and urban homeless populations.
- Explore more formal opportunities for other TASHN hospitals to become revenue-contributing partners, such as through a "second tier" of membership. This could build on the QIPS collaborative shared priorities of focus mentioned above (e.g. primary care attachment for patients in ED or being discharged from the ward, Indigenous clinical outcomes in hospital, climate sustainability initiatives, etc.). Deepen the relationship with GEMINI through data-driven QI initiatives to drive this work. In future a similar model could be explored with UPLEARN/POPLAR and the Ontario Health Teams should primary care become more of a focus.
- Depending on the themes selected, other EDUs and departments at the university as well as community organizations could be natural partners.

b) Funding and resourcing opportunities could include:

2) Local/provincial ideas:
   - Work closely with the new Dean of Medicine and other university leaders on opening doors to the advancement teams of the University.
   - Explore opportunities to work with Ontario Health Teams in the primary care space, building on initiative in East Toronto, with strong focus on the core issues of attachment and access to care.
   - Expand CQuIPS educational offerings beyond GTA to other regions in Ontario and across the province in partnerships with other hospitals, OHTs. The Ontario Hospital Association could be a conduit for some of this work.

- Increase recognition of CQuIPS certification across health disciplines and consider program accreditation such that a strong presence at annual conferences could offer additional sources of revenue.

3) National/International ideas:
   - Explore strategy to grow the consultancy arm of CQuIPS by establishing relationships with (a) private sector partner(s), including respected consultancy groups, to support health care organizations looking to improve QIPS.

2. **Explore formal collaborations with select local international organizations whose work aligns with prioritized themes.**
   - **This work could include bringing CQuIPS expertise to:**
     - Local organizations engaged in Health Equity work in Toronto, Ontario and Canada
     - Large philanthropic organizations such as the Gates Foundation
     - The World Health Organization as many low and middle-income countries (LMICs) are increasingly interested in building capacity for health care improvement (For example, the DFCM at Temerty Medicine hosts a WHO Collaborating Centre on Family Medicine and Primary Care)
3. **Place greater emphasis on demonstrating impact on clinical outcomes and value of data-driven and AI initiatives.**
   - Demonstrating the value of the Centre's engagements through improvements in meaningful patient outcomes, particularly in the difficult spaces of health equity and population health, would not only place CQuIPS as a key driver for healthcare system transformation, and better position it for future funding opportunities.
   - Consider joint funding opportunities with GEMINI, UPLEARN/POPLAR, and T-CAIREM that advance artificial intelligence-driven QI initiatives, both in hospitals and in the community.
4. **Embed patients and communities more fully into the governance of CQuIPS.**
   - **This work could include:**
     - Increase patient partner representation in the Centre's decision-making processes, whether through a PFAC, engaging with existing hospital network PFACs, or other creative strategies.

- Consider deeper collaborations with community organizations working in the particular thematic equity spaces of interest to the Centre.

5. **Explore ways to engage CQuIPS alumni.**
   - **This work could include:** Explore the development of a modest revenue-generating "CQuIPS Fellow" program for alumni to stay engaged with the CQuIPS community through:
     1) Mentorship (giving and receiving)
     2) Education events/community of practice
     3) Access to specialized resources

CONCLUSIONS

Over the last 5 years, the CQuIPS team has built on a very solid foundation to achieve impressive relevance and goodwill. The team has managed to maintain and grow its reputation around QI capacity-building, establishing a loyal base for its education group that continues to be the core of its value to its key stakeholders.

At the same time, this team has shown courage in stretching beyond that core. It has grown its research output and diversified its funding sources through grants, consultancy and other means. And it has put in place a bold strategic plan, one that envisions a better world both through process – "everyone striving" - and importantly, through outcomes - "better health care for all".

The philosophical question as to whether quality improvement methods are the right tools to shift big health system outcomes becomes less relevant when a team "leans in" to the health system in the way this team has done since the beginning of the COVID-19 pandemic. Through programs like LTC+, CQuIPS has shown its value through the partnerships it has built and maintained, focusing less on support for very specific care pathway improvements and more on populations and relationships. We believe this is the right strategy and in the coming 5 years the team will be able to further deepen its commitment. We congratulate the leadership of CQuIPS on a remarkable 5 years and look forward to seeing what they do next!

SIGNATURES OF REVIEWERS

ACKNOWLEDGEMENTS

We wish to thank Chelsa Gao for her support of this review.

TERMS OF REFERENCE

Appended for reference.

Director's Response

We would like to thank Drs. Danielle Martin and Muhammad Mamdani for providing such a comprehensive and thoughtful review of the Centre for Quality Improvement and Patient Safety (CQuIPS), and for highlighting the many examples of impactful work that reflect our Centre's efforts to deliver exceptional value to our members, the University and the healthcare system at large. Given the extremely challenging circumstances associated with the COVID-19 pandemic that coincided with the start of my term as Director, it was particularly gratifying when the reviewers noted that our team *"showed courage and an innovation mindset during the pandemic, setting a new bar for the ways in which an EDU-C can add tangible value in the health system"*.

The reviewers' recommendations emphasized the need for our Centre to grow its core funding and provided concrete strategies that we fully intend to explore. While the suggested approaches are not mutually exclusive, many of them require a significant investment of time and resources and would be difficult to pursue simultaneously. Decisions regarding which recommendations to prioritize and where to focus our team's energy will require further reflection and stakeholder engagement. In fact, the reviewers were careful to point out that "*the examples of the types of work that could be included here are not intended to be a roadmap, as we recognize that the leadership knows the Centre much better than we do".*

We are also mindful of the fact that the Temerty Faculty of Medicine (TFoM) has just appointed Dr. Lisa Robinson in her role as Dean in July 2024. She will be creating a new strategic plan for TFoM, which we anticipate will be announced in the coming months. We feel strongly that our work at CQuIPS should be informed by the strategic priorities of TFoM. Thus, our responses and thinking regarding next steps may evolve depending on the direction of the new TFoM strategic plan to ensure that we fully capitalize on opportunities for alignment and partnership. We also hope that this will allow us to work closely with the new Dean of Medicine and other university leaders to open doors to the advancement teams of the University.

With these considerations in mind, we would like to provide a high-level summary of the initial next steps that we plan to pursue, informed by the recommendations provided by the reviewers.

- Expanding CQuIPS membership to include a 4th full-time partner hospital is a priority for CQuIPS. Not only would this increase our annual base funding, hospital partnership also brings with it new team members and in-kind resources that would help to sustain our Centre's growth. We aim to formalize this expansion with the renewal of the Centre's MOU in 2025.

- Developing a mechanism for additional TAHSN hospitals to contribute funding to CQuIPS at a lower 'second tier' level would be beneficial. The suggestion to partner with GEMINI, UPLEARN/POPLAR or T-CAIREM to lead data-driven QI within TAHSN

organizations represents one promising model, which we plan to explore. We would also like to advocate for stable funding to support our current leadership of the TAHSN QIPS Community of Practice, which has produced tangible outputs such as a common taxonomy for serious safety event review, a framework for integrating equity considerations into QI projects, and a streamlined data sharing process for multi-site QI projects that the TAHSN leadership may leverage to address broader challenges related to research collaboration across organizations.

- Incorporating patients into the future CQuIPS governance model is also a priority. While we have made strides to embed patient partnership in some work, the reviewers were correct to point out that they did not encounter a single patient during the review process. As mentioned in the "Long Range Planning" section of our self-study, we will seek external consultation to review our Centre's governance, activities and priorities to develop a clear strategy towards more meaningful partnership with patients and communities.

- Growing our international partnerships is work that we have already undertaken over the last year, when CQuIPS became the stewards for the SQUIRE international writing guidelines. There is a strong international community connected to SQUIRE, and we started engaging with this group with the intent to integrate equity considerations into SQUIRE 3.0 (the next major revision to the writing guidelines). We are also building a partnership with a major US university to offer a joint certificate program, using the EQUIP program as the foundation. We see this as an exciting opportunity to further expand our reach in the US and increase revenue for CQuIPS through our educational offerings.

The reviewers also challenged our Centre to place greater emphasis on demonstrating impact on clinical outcomes. To some extent, we believe that there are already examples where this is happening within CQuIPS, and we will start to better catalogue the ways that people connected to CQuIPS are improving outcomes through their QI work. However, we know that we can do more, and that a focus on initiatives where improvements in clinical outcomes are attainable would help us to prioritize our Centre's efforts and open new funding opportunities.

In summary, our team is extremely proud to have received such a positive review of our Centre's activities, and very appreciative of the recommendations provided by Drs. Martin and Mamdani. The concrete, actionable recommendations provided by the review are consistent with our Centre's ethos and will push us to evolve in directions that will sustain our growth and allow for even greater impact.

RECOMMENDATIONS

We offer below 5 recommendations which we hope will be useful to the CQuIPS team. The examples of the types of work that could be included here are not intended to be a roadmap, as we recognize that the leadership knows the Centre much better than we do; there may be more appropriate ways to achieve these goals. Nevertheless, we have tried to offer specific ideas that the team could consider when exploring how to bring the recommendations into their work. Because we have expanded on all the recommendations in the body of this report, we offer here only a brief summary of each.

1. **Develop an operating and financial sustainability plan that commits to more precise themes of work and outlines a path to resourcing it, including consideration of local, national, and international sources of funding.**
    a) A stronger commitment to thematic work could include growing existing TAHSN relationships into a more impactful, focused and revenue-generating collaborative.
        i. Expand core CQuIPS membership to at least one other TASHN hospital whose focus is aligned with existing hospital partners, for example a community hospital serving an equity-deserving neighborhood or CAMH with its focus on mental health.

        Director Response: For the past 2 years, we have been working towards expanding CQuIPS membership to include one new full-partner TAHSN hospital. The members of the CQuIPS Executive Committee, including all three current partner hospital CEOs, strongly endorsed this idea (we discussed the possibility of expanding partnership at our most recent Executive committee meeting in early 2024). Michael Garron Hospital (MGH), a community hospital with a strong commitment to serving equity-deserving neighbourhoods, is the most viable option, given the strength of our collaboration with MGH researchers and quality improvers over the past 3 years. We have also signaled to the University's Dean's Office that discussions are underway, as a change to our Centre's existing MOU will be necessary to expand to include a 4th partner hospital.

        We are mindful of the fact that meaningful partnership and relationship building takes time, and that a phased approach to expansion would be prudent. However, we see tremendous opportunity in fostering a partnership with CAMH, especially given the fact that Dr. Tara Burra, the CQuIPS Education Lead, is now the Medical Director of Quality, Experience and Safety at CAMH. We also work closely with Dr. Sanjeev Sockalingam, Senior Vice President, Education and Chief Medical Officer, and have collaborated in the past with Lee Fairclough, Senior Vice President, Clinical Care, in her prior roles at Health Quality Ontario and St. Mary's Hospital. Thus, we will be exploring a multi-year capacity-building contract with CAMH, with the hope that this will evolve into full-time partnership in the next few years.

        ii. Grow partnerships with the TASHN network of hospitals on prioritized and specific issues such as climate change and planetary health, health equity, and

the attachment crisis in primary care and their respective impacts on one or a few groups of equity-deserving patients who use hospital services, such Indigenous communities, newcomers, and urban homeless populations. Depending on the themes selected, other EDUs and departments at the university as well as community organizations could be natural partners.

Director Response: We agree that a focus on one or more of the listed issues would create many opportunities to grow existing partnerships and pursue new ones. We appreciate the reviewers' suggested areas for consideration, given that they represent some of the most pressing issues faced by people in our society. As a first step, we will explore opportunities for expanded partnership with groups, organizations and departments leading efforts in these areas (e.g., the Collaborative Centre for Climate, Health & Sustainable Care, the Indigenous Health Action Network, the Department of Family and Community Medicine), and based on these conversations, determine where the most promising opportunities are for CQuIPS to engage and partner.

iii. Explore more formal opportunities for other TASHN hospitals to become revenue-contributing partners, such as through a "second tier" of membership. This could build on the QIPS collaborative shared priorities of focus mentioned above (e.g. primary care attachment for patients in ED or being discharged from the ward, Indigenous clinical outcomes in hospital, climate sustainability initiatives, etc.). Deepen the relationship with GEMINI through data-driven QI initiatives to drive this work. In future a similar model could be explored with UPLEARN/POPLAR and the Ontario Health Teams should primary care become more of a focus.

Director Response: We appreciate the suggestion that other TAHSN hospitals could contribute to base funding for CQuIPS through a 'second tier' type of membership. The suggestion to partner with GEMINI, UPLEARN/POPLAR or T-CAIREM to lead data-driven QI within TAHSN organizations represents one promising model to pursue. A focus on Ontario Health Teams (OHTs) also makes sense, particularly given our prior work co-leading LTC+ which involves close collaboration with 8 OHTs in OH-Toronto Region, as well as our collaboration with Michael Garron Hospital and the East Toronto Health Partners OHT.

However, we would also like to advocate for stable funding from TAHSN hospitals to support our current leadership of the TAHSN QIPS Community of Practice, which has produced tangible outputs such as the adoption of a common taxonomy for classifying serious safety events, a framework to guide the integration of equity into quality improvement work, and a streamlined data sharing process to enable multi-site QI projects. The latter example was so well received by TAHSN leadership at a recent strategy retreat that preliminary discussions are underway to leverage this work to address broader challenges related to research collaboration across organizations. Given that CQuIPS has coordinated the TAHSN QIPS CoP activities without any direct funding

for the past 2.5 years, we would appreciate the opportunity to engage with TAHSN leadership to consider a proposal for stable funding.

b) Funding and resourcing opportunities could include:
    i. Local/provincial ideas:
    - Work closely with the new Dean of Medicine and other university leaders on opening doors to the advancement teams of the University.

Director Response: To date, we have not engaged with philanthropy or advancement as a funding opportunity for CQuIPS. We see this as an important avenue to pursue and would appreciate the dedicated support of advancement teams at the University of Toronto and the opportunity to work with the new Dean of Medicine to raise funds in areas that are strategically aligned with the TFOM. Ideally, an endowed chair for CQuIPS held by the Director would provide a consistent funding stream that could support Centre activities.

- Explore opportunities to work with Ontario Health Teams in the primary care space, building on initiative in East Toronto, with strong focus on the core issues of attachment and access to care.

Director Response: A focus on Ontario Health Teams (OHTs) makes sense, particularly given our ongoing work co-leading LTC+, which involves close collaboration with leaders and clinical teams working across 8 OHTs in OH-Toronto Region, as well as our collaboration with Michael Garron Hospital and the East Toronto Health Partners OHT. These initiatives have focused on improving access to care more generally rather than patient attachment to primary care. We plan to initiate conversations with key stakeholders within the Department of Family and Community Medicine at the University of Toronto and Ontario Health more broadly to explore opportunities for CQuIPS to collaborate and support initiatives to improve primary care attachment.

- Expand CQuIPS educational offerings beyond GTA to other regions in Ontario and across the province in partnerships with other hospitals, OHTs. The Ontario Hospital Association could be a conduit for some of this work.

Director Response: We agree that expansion of CQuIPS educational offerings beyond the GTA, targeting hospitals and OHTs, represents a promising strategy to increase revenue. The suggestion to engage with the Ontario Hospital Association is appreciated. As mentioned in our self-study, our main hesitation to pursue broader expansion of this line of work is that we have already reached our internal team's capacity to support consulting activities. Thus, we would need to grow our organizational capacity building activities incrementally and invest in new instructors to expand our ability to deliver on new contracts.

- Increase recognition of CQuIPS certification across health disciplines and consider program accreditation such that a strong presence at annual conferences could offer additional sources of revenue.

Director Response: We have gone back and forth over the years with respect to program accreditation, recognizing that this might serve as an additional incentive for physicians to register for our education programs and conferences. One of the main concerns has been the fact that program accreditation by the Royal College and the College of Family Physicians of Canada is only relevant for physicians and does not benefit other health professionals. Further, accrediting bodies charge a fee per attendee to accredit a conference or event, irrespective of whether they are physicians or not, which we, like other conference organizers, would have to pass onto attendees by charging higher registration fees. When we discussed this with our leadership team and members of our community, they agreed that we should not have nurses, pharmacists, managers and other health professionals incurring higher registration costs so that physicians can derive the benefit of conference accreditation.

ii. National/International ideas:

- Explore strategy to grow the consultancy arm of CQuIPS by establishing relationships with (a) private sector partner(s), including respected consultancy groups, to support health care organizations looking to improve QIPS.

Director Response: We briefly explored this idea of establishing a relationship with a private sector healthcare consultancy firm several years ago. At the time, it did not make sense given that our experience as a health system partner was quite limited. However, our team may be better positioned to pursue this type of work and will explore potential opportunities to grow our capacity building program.

2. **Explore formal collaborations with select local international organizations whose work aligns with prioritized themes.**
    - **This work could include bringing CQuIPS expertise to:**
        - Local organizations engaged in Health Equity work in Toronto, Ontario and Canada
        - Large philanthropic organizations such as the Gates Foundation
        - The World Health Organization as many low and middle-income countries (LMICs) are increasingly interested in building capacity for health care improvement (For example, the DFCM at Temerty Medicine hosts a WHO Collaborating Centre on Family Medicine and Primary Care)

Director Response: We thank the reviewers for providing bold recommendations and for pushing us to think bigger when it comes to international partnerships. As described in our self-study, we have benefited from formal collaborations during the past 5 years (e.g., East Toronto Health Partners, Choosing Wisely Canada), and so exploration of new formal collaborations with local, national or international organizations resonates with

us. To start, we intend to explore international collaborations in QI education and training, where we have a strong international reputation and track record. We have engaged in serious discussions with a major US university with a world-renowned QI centre of excellence to deliver a joint QI certificate program for academic and operational healthcare improvement leaders based off our EQUIP program. We have also recently assembled an international advisory committee involving QI leaders and experts in Canada, the US, the UK and the Netherlands – together, we will work collaboratively to evolve the SQUIRE guidelines and will hopefully open new opportunities for international collaboration.

3. **Place greater emphasis on demonstrating impact on clinical outcomes and value of data-driven and AI initiatives.**
    - Demonstrating the value of the Centre's engagements through improvements in meaningful patient outcomes, particularly in the difficult spaces of health equity and population health, would not only place CQuIPS as a key driver for healthcare system transformation, and better position it for future funding opportunities.

Director Response: There are already examples where CQuIPS members are leading QI work that has led to improvements in clinical outcomes. For example, Dr. Olivia Ostrow led a QI initiative in the SickKids emergency department that safely reduced unnecessary hospital admissions for young infants with fever from 24% to 12% (*Paediatrics & Child Health, 29(3); 2024*). Dr. Trey Coffey demonstrated a 30% reduction in central-line associated blood stream infections at SickKids (*Implement Sci Commun, 2(105); 2021*). Dr. Jerome Leis reported on the impact of the IPAC Hub and Spoke model of care for congregate care settings in North Toronto, demonstrating a significant impact on COVID-related mortality rates in homes without pre-existing IPAC programs (3.76% to 0.37%–0.98%) (*Can Commun Dis Rep 2023;49(2/3):67–75*). We will start to better catalogue the numerous ways that people connected to CQuIPS are improving clinical outcomes through their QI work and leveraging our communication channels to tell their stories. However, we know that we can do more, and that a focus on initiatives where improvements in clinical outcomes are attainable would help us to prioritize our Centre's efforts and open new funding opportunities.

    - Consider joint funding opportunities with GEMINI, UPLEARN/POPLAR, and T-CAIREM that advance artificial intelligence-driven QI initiatives, both in hospitals and in the community.

Director Response: We agree that pursuit of joint funding opportunities with GEMINI, UPLEARN/POPLAR and T-CAIREM would be mutually beneficial for CQuIPS and these groups. As suggested above, one potential joint funding opportunity would involve implementation of data-driven QI initiatives, funded by TAHSN organizations through a 'second tier' funding model. Another strategy could involve partnership with GEMINI, UPLEARN/POPLAR and/or T-CAIREM to submit joint funding proposals to Ontario Health.

For example, CQuIPS and GEMINI currently have a funding proposal under consideration with Ontario Health to fund a multi-site delirium reduction initiative, where CQuIPS team members would coordinate teams across 13 TAHSN hospitals to lead delirium-prevention initiatives and use the GEMINI-AI Delirium Measurement tool to evaluate the program's impact on hospital-acquired delirium rates. Given that delirium affects 20-30% of hospitalized patients, increases length of stay by 8 days, doubles the mortality risk and increases hospitalization costs, a focus on delirium has the potential to demonstrate impact on important clinical outcomes. Another funding opportunity for CQuIPS physicians who receive AHSC AFP funding at our TAHSN fully-affiliated hospitals is to apply for the Innovation Funds that are associated with the AFPs.

4. **Embed patients and communities more fully into the governance of CQuIPS.**
    - **This work could include:**
        - Increase patient partner representation in the Centre's decision-making processes, whether through a PFAC, engaging with existing hospital network PFACs, or other creative strategies.
        - Consider deeper collaborations with community organizations working in the particular thematic equity spaces of interest to the Centre.

Director Response: There are several examples where we have embedded patients and communities into our work at CQuIPS. For example, CQuIPS is a collaborating organization that supports the Patient-Partnered Centre for Diagnostic Excellence. Through this work, we collaborated on several patient-partnered research studies related to diagnostic safety. Furthermore, our CIHR-funded grant related to equity considerations for patient safety monitoring systems has a co-principal applicant, Allison Kooijman, who is a patient representative and will lead a patient advisory committee consisting of 8 members from Ontario, British Columbia and Alberta who bring diverse backgrounds, experiences and expertise to inform all stages of our research study on equity and hospital safety monitoring systems. More recently, we engaged with a panel of diverse community members through EMPaCT (Equity Mobilizing Partnerships in Community) at Women's College Hospital, who provided consultation and feedback on the development of a framework to guide the integration of equity considerations into quality improvement work.

While we have made strides towards meaningful patient partnership, we acknowledge that we need to expand the involvement of patients in the Centre's decision-making processes. As mentioned in the "Long Range Planning" section of our self-study, we will seek external consultation to review our Centre's governance, activities and priorities to develop a clear strategy towards more meaningful partnership with patients and communities. We are also pursuing the addition of Michael Garron Hospital as a full-member partner hospital. This partnership, if realized, would bring to CQuIPS deep expertise in patient partnership and community engagement, which we would leverage to inform changes to CQuIPS governance and processes to be more patient-oriented.

5. **Explore ways to engage CQuIPS alumni.**
    - **This work could include:** Explore the development of a modest revenue-generating "CQuIPS Fellow" program for alumni to stay engaged with the CQuIPS community through:

I. Mentorship (giving and receiving)
II. Education events/community of practice
III. Access to specialized resources

Director Response: We currently have a revenue-generating model in place similar to what is being recommended by the reviewers. CQUIPS+, our virtual learning hub that features a monthly speaker series, workshops and masterclasses, is available through a membership model where registrants pay a one-time fee of $50 to join (the fee gets them access to the speaker series and discounted rates for workshops and masterclasses). All our CQuIPS education program participants are provided complimentary access to the CQUIPS+ platform, and so we could consider charging them the one-time fee to maintain their membership as alumni.

Beyond this, we have not generally considered alumni engagement to be a direct source of revenue generation. Instead, we have engaged our alumni to support our educational programs, collaborated with them to submit grant applications, and reached out to them to promote our capacity building program. We have felt that this way of engaging with alumni has produced revenue-generating opportunities and access to in-kind resources, collaborations and partnerships, that have helped to advance our collective goals. We have expanded our team's capacity to provide some methodological support (e.g., qualitative methods, statistical process control) and we will explore the provision of these services to alumni at a cost to create a new potential revenue source.