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Beyond Persistence: Increasing the Representation of Women Faculty and Leaders in Academic Surgery

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Abstract

In demanding tripartite roles, faculty at Academic Health Sciences Centres provide surgeon training and patient care, while seeking discovery through research and innovation. The persistent imbalance of women in academic surgery has been empirically evident and an intense topic of discussion for decades, yet solutions remain elusive. There has been increasing analysis and scrutiny of the factors affecting women in this domain, while highlighting the disconnect between the current state and our affirmed belief in gender equity in both education and medicine. My Organizational Improvement Plan is focussed on the recognition and resolution of barriers and biases impeding the appointment and promotion of women into faculty and leadership positions in the Department of Surgery at an Ontario University. It will explore the literature; outline theoretical underpinnings (critical theory, feminist theory, social cognition theory); and provide insight into the realm of implicit bias. It will engage authentic and transformative leadership and propose the use of appreciative inquiry as a change implementation framework for an integrated solution. This scholarly work aligns with an overriding public sentiment advocating for change of a social justice nature. Although my doctoral work is limited in scope to women in academic surgery for manageability reasons, it has the potential for scaling and broader application to address inequities that continue to exist for all equity-deserving groups. This is more than the right thing to do. We have a responsibility and obligation in health care and education to pursue equity and social justice.

Keywords: women, academic surgery, equity, social justice, implicit bias, critical theory, feminist theory, authentic leadership, transformative leadership, appreciative inquiry

Executive Summary

Despite equal graduation rates of women from Canadian medical schools since 1996 (Association of Faculties of Medicine of Canada, 2019) and an increasing number of women in surgical residency programs (Association of American Medical Colleges, 2020), fewer women than men continue to attain faculty positions at Academic Health Sciences Centres (AHSCs) compared to the overall percentage of women surgeons in Canada (Canadian Medical Association, 2019; Hunter et al., 2021; Sexton et al., 2012; Webster et al., 2016). Furthermore, the number of women achieving senior leadership roles remains precipitously low, with only five women appointed Dean between 1999 and 2018 among the 17 medical schools in Canada (Federation of Medical Women of Canada, 2018). The data from the Department of Surgery at Stone University (a pseudonym) in Ontario not only confirm these trends but demonstrate even less progress for women than the national context. Notwithstanding an increasing urgency in calls to action to address this disparity, there are clearly forces at play that require identification, overt discussion, and an achievable change framework in order to nudge this trajectory towards greater representation of women in academic surgery. My Problem of Practice (PoP) addresses the need for leaders in the Department of Surgery to focus attention and guide actions aimed at resolving the barriers and biases in their sphere and control that impede the appointment and promotion of women into faculty and leadership positions in academic surgery. As the locus of authority in clinical education, research, and patient care standards in Canada, AHSCs have an obligation and a responsibility to embrace gender equity and inclusion as inherent and fundamental values that guide decision-making and action.

There is no one silver bullet that can instantly or easily fix the issues related to gender inequity in academic surgery. Analysis of a constellation of factors will require the commitment of authentic and transformative leaders working from the basis of a sound theoretical framework. Authentic leadership underscores self-reflection, ethics, and a robust affiliation between leader and follower. An authentic leader is a role model for clear communication and

deep listening; consensus and relationship building; and integrity in adhering to their principles (Avolio & Walumbwa, 2013; Elrehail et al., 2018; Northouse, 2019). Transformative leadership is a corresponding leadership model that adds depth to my PoP by considering the environment in which discrimination and inequity have developed and persisted, and how leaders can act courageously to apply oppositional forces as the voice for change (Shields, 2010). Authentic and transformative leaders are a good fit for higher education and healthcare given their innate focus on the public good. Hence, the Department of Surgery will be positioned to support greater achievement for individuals as well as the broader movement towards social justice in society (Shields & Hesbol, 2020).

This Organizational Improvement Plan (OIP) is founded on the principles of critical theory, feminist theory, and social cognition theory. These theories recognize that beliefs are a social construction. They methodically analyze experiences, leadership, and the social and cultural environment as the underpinnings of injustice affecting women, materializing as systemic power imbalances and discriminatory practices (Blackmore, 2013; Paradis et al., 2020). Individuals must reflect on their values, identity, and assumptions if they are to alter their behaviour in alignment with equity and social justice principles (Kezar, 2018). This theoretical framework provokes us to explore our discomfort (Boler, 1999) and to examine normative assumptions, beliefs, biases, and practices, particularly as they relate to the concepts of individual merit, productivity, value, and success (Cameron et al., 2020; Manning, 2018). It advances the OIP by questioning the status quo, encouraging self-reflection, building trust among adherents, and emphasizing shared values in underscoring the mandate for a social and institutional construct that evolves in response to system and self-analysis, underlaid by a commitment to social justice and equity.

Authentic and transformative leadership and the selected theoretical framework are an excellent fit with the use of appreciative inquiry (AI) as a change implementation framework for the proposed integrated solution. These leadership models support an appreciation of the

strength each individual brings to the team and how a diversity of perspectives and experiences enriches our collective understanding while pursuing common goals (Crippen, 2012). AI is a strengths-based, inclusion-oriented tool grounded in the concept that that we can create the best possible future by focusing on images of what we do right, and what we envision to be the ideal, rather than to linger on deficits and faults (D. Cooperrider et al., 2008; Magruder Watkins et al., 2011; Reed, 2007). AI is formed on the premise that reality is a social construction based on the questions we ask, our openness to listening, and our commitment to each other, and therefore positivity, inclusion, and introspection emerge as central precepts that guide all change interventions. AI supports an appreciation for what has been achieved to lead us to an exploration of possibilities for future opportunities and innovation. AI will be further employed through the evaluation of change segment of this OIP, in the form of evaluative inquiry, which upholds the importance of a positive focus throughout its stages (Preskill & Torres, 1999; Preskill & Tzavaras Catsambas, 2006). Overall, the change implementation plan sets the foundation for co-construction of solutions that embrace complexity, collaboration, and reflection in the quest for equity and social justice.

The Department of Surgery at Stone University has made tremendous progress in the last fifteen years in terms of increasing the number of women faculty. However, there is much work still to be done as this has not kept pace as a percentage relative to overall Department growth or the national context. The challenge will be for authentic and transformative leaders to confront normative assumptions and layers of bias that perpetuate inequality, privilege, and the status quo at the intersection of power and privilege (Cameron et al., 2020; Han et al., 2018). Whether excluded intentionally or accidentally, women deserve access and opportunities to succeed in academic surgery. This transforms the right to resources into a reflection of the intrinsic value of women in society: gender equity is proven to translate into better research, better education, and better clinical care for all people. It is within our power to create an inclusive and equitable workforce that underpins a healthy society.

Acknowledgements

Early in my childhood at the height of the women's movement, my mother bought for me a copy of *Girls Can Be Anything* (N. Klein, 1975). In it, women are depicted as physicians, pilots, and Presidents. This children's book attempted to deconstruct stereotypes before gender and occupation become fixed associations in our minds for a lifetime. My career path in higher education may not have existed back then, but this message is still relevant and meaningful as it guided both my academic work and my life choices. Thank you, Mom. This is for you.

My parents and family instilled in me early on that my options were limitless. Under their tutelage and nurturing, I learned to be independent, inquisitive, and to persevere in the challenges life brings with determination, mindfulness, and grace. Thank you, for creating the space for potential that led to this accomplishment.

My husband Jeremy saw me though long days and late nights, through anxious moments and the satisfaction of completion. My equal partner and clever match, I may have a more extensive vocabulary, but I will never be Tech Support Level III. Thank you, for your unreserved support as I fulfilled this dream.

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List of Acronyms

AFP	Alternative Funding Plan
AHSC	Academic Health Sciences Centre
AI	Appreciative Inquiry
CIHR	Canadian Institutes of Health Research
CPSO	College of Physicians and Surgeons of Ontario
EDID	Equity, Diversity, Inclusion, and Decolonization
FFS	Fee for Service (OHIP billings)
LGBTQ2S+	Lesbian, Gay, Bisexual, Transgender, Queer or Questioning, and Two-Spirit
NPM	New Public Management
OHIP	Ontario Health Insurance Plan
OIP	Organizational Improvement Plan
PoP	Problem of Practice
RCPSC	Royal College of Physicians and Surgeons of Canada
STEM	Science, Technology, Engineering, and Mathematics
TRCC	Truth and Reconciliation Commission of Canada

Glossary of Terms

Academic Health Sciences Centre (AHSC): An AHSC is comprised of a University's medical school (Faculty of Medicine) and one or more Hospitals who have entered into an affiliation agreement to provide clinical education to trainees of multiple health and medical/surgical disciplines, conduct research, and provide patient care at a tertiary/quaternary level, often at a regional geographic scope (Delaney et al., 2010).

Alternative Payment Plan (APP) or Alternative Funding Plan (AFP): A financial agreement entered into by a physician or a group of physicians with the Province of Ontario to fund clinical activities mainly via a fixed payment calculation. There may also be a smaller variable payment component that enhances physician remuneration (Ministry of Health and Long Term Care, 2015).

Chair/Chief: A faculty member and physician serving at the apex of leadership in a Department or Division who has been appointed Chair of the academic unit for the University and Chief of the clinical service for the Hospital (Organizational definition).

Clinical Academic: A full-time physician faculty member with an appointment at the rank of Lecturer, Assistant Professor, Associate Professor, or Full Professor at a University, concurrent with holding active privileges for the provision of patient care at the Hospital(s). This appointment may or may not be associated with academic remuneration (Organizational definition).

Clinical Department: A University Department where the majority of the faculty are practising physicians with responsibility for patient care, education, and research (Organizational definition).

College of Physicians and Surgeons of Ontario (CPSO): The licensing body for medical doctors (MDs) who provide clinical care to patients in Ontario (*College of Physicians and Surgeons of Ontario*, 2021).

Division: A subspecialty unit within a Department, e.g., Orthopaedic Surgery is a Division in the

Department of Surgery at Stone University (Organizational definition).

Equality: As defined by the Canadian Oxford dictionary: “1. The condition of being equal in quantity, magnitude, value, intensity, etc. 2. The condition of having equal rank, power, excellence, etc. with others” (Barber, 2005). In this OIP, the term equality refers to sameness, for example, equal occurrence or equal treatment.

Equity: As defined by the Canadian Oxford dictionary: “1. Fairness, impartiality, even-handedness. 2. The recourse to general principles of justice to correct or supplement common and statue law, esp. to provide remedies not otherwise available” (Barber, 2005). In this OIP, the term equity refers to a process of addressing barriers and biases, leading to the preferred future state where women faculty in the Department of Surgery align at least their overall presence in surgical subspecialties in Canada, with trajectory towards equality as defined above.

Fee-For-Service (FFS): Payment (billings) received from the Province of Ontario Health Insurance Plan (OHIP) by a physician for services rendered for patient care activities (Ministry of Health and Long Term Care, 2015).

Fellow: A student who has completed an undergraduate MD and postgraduate subspecialty training program, and is now enrolled for specific sub-specialty training, e.g., arthroplasty is a fellowship program within Orthopaedic surgery. Fellowships are often internationally competitive placements ([Organization], 2021a).

Governing Committee: Departmental Committees that oversee, formulate, authorize, and approve appointments, policies, or changes within their scope of authority with respect to human resources, financial management, education, and research (Organizational definition).

Resident: A student who has completed an undergraduate MD and is enrolled in a postgraduate subspecialty training program. Surgical training programs vary between five and seven years. Residents in Ontario are members of the Professional Association of Residents of Ontario (*PARO*, 2021)

Royal College of Physicians and Surgeons of Canada (RCPSC): The accrediting body for medical and surgical education programs and their graduates. The culmination of subspecialty training is the Royal College exam and appointment as a Fellow by the Royal College. Surgeons who have qualified for membership in the Royal College list FRCSC after their academic credentials (*Royal College of Physicians and Surgeons of Canada*, 2021b).

Sex and Gender: Sex refers to biological traits typically denoted as male or female. Gender refers to the social construction of roles of people who identify as men or women. The interpretation of gender influences relationships, attributes behaviours to people, and affects the distribution of resources and power in our education system, research, institutions, and society (Canadian Institutes of Health Research, 2020). This OIP refers to women in the sense of gender, rather than sex, in the discussion of equity and inclusion in academic surgery.

Subspecialty: Medical and surgical fields are denoted by type, formally called subspecialties by the Royal College of Physicians and Surgeons of Canada (*Royal College of Physicians and Surgeons of Canada*, 2021b).

Surgical Department: Departments of Surgery across Canada include varying numbers and types of surgical subspecialties. For example, the subspecialty of Otolaryngology – Head and Neck Surgery is its own Department at one institution in Ontario, whereas at other institutions it is included in the Department of Surgery (Organizational definition).

Tithe: Full-time clinical academic Department members pay a percentage of their OHIP billings monthly to the Department to support academic activity. This is recognized by a tax receipt that can be used towards a Scientific Research and Experimental Design (SRED) tax credit ([Organization], 2021d).

Trainee or Learner: A generic term for any level of student in the Faculty of Medicine, including undergraduate students, graduate students, postgraduate residents, and postgraduate fellows (Organizational definition).

Chapter 1: Introduction and Problem

Since 1996, women have comprised more than half of medical school graduates in Canada (Appendix A); however, they disproportionately seek non-surgical postgraduate training programs and pursue practice opportunities outside of Academic Health Sciences Centres (AHSCs). Women who are successful in recruitment to clinical academic faculty positions are promoted through the ranks at a slower pace than men and are less likely to be appointed to leadership roles (Adams Newman & Brown, 2021a; Coleman & Telem, 2021; Conrad et al., 2010; Hunter et al., 2021; Sexton et al., 2012; Webster et al., 2016). The sluggish advancement described in the literature is evident in the statistics of the Department of Surgery at Stone University (Appendices B and C), where gender equity – defined in this OIP as a process of overcoming barriers and biases leading to congruence with the overall presence of women surgeons in Canada and an arc towards true equal representation – remains far out of reach.

Viewed locally or nationally, the persistent gender imbalance among academic surgical faculty and leaders in AHSCs has not self-corrected to a more reasonable trajectory towards parity with time, precedent, or policy changes. Metaphors such as a glass ceiling or leaky pipeline have been used to describe this phenomenon (Ellinas et al., 2018; Greenberg, 2017; Helitzer et al., 2017); however, I believe this imagery is inadequate in characterising the nature of the problem. Instead, we must move beyond a model of tenacity and persistence at an individual level if we are to comprehend fully the contributing factors to inequity and find impactful and achievable solutions. Academic surgery should be an attractive and rewarding career for women seeking to have a broad impact on society through educating the next generation of physicians; altering and oftentimes curing the course of disease and injury; and innovating new surgical treatments. As an AHSC, we need women's voices to be equitably represented if we are to fulfill the potential of academic surgery as a discipline and to reflect accurately our values of dignity, diversity, and fairness.

Organizational Context

This section provides context to the Problem of Practice and insight into the complexity of the organization in which it exists. It provides information and perspective to describe the interconnectedness of the individual and institutional domains.

Mission and Vision Statements

Stone University is a large research-intensive institution that operates one of six medical schools in Ontario. The University's mission is to create, disseminate, and apply knowledge for the benefit of society through teaching, research, and scholarship, and to serve the global public good. Its vision is to be a destination of choice for the world's brightest minds seeking education at a Canadian University ([Organization], 2021f). As a part of its new strategic plan, the University recently announced millions of dollars in funding aimed at supporting equity, diversity, inclusion, and decolonization efforts ([Organization], 2021g). The University is affiliated with several Hospitals in the city, which are integrated at a high level in terms of information technology, physician privileges, coordination of clinical services, and policy alignment. Broadly speaking, the Hospitals' mission and vision statements seek to shape the future of health through provision of excellent clinical care, education, and discovery ([Organization], 2021b).

The Department of Surgery has similarly fashioned mission and vision statements to the University and the Hospitals, seeking to excel as an international leader in education, research, and surgical care ([Organization], 2018b). It is considered an academic Department of the University and a Clinical Department of the Hospitals, with a single academic and clinical leader (Chair/Chief), and an administrative leader (Manager, Administration and Finance), who is employed by the University but sited at the Hospital and charged with a range of responsibilities across the institutions. The Department consists of approximately 100 full-time clinical academics who have surgical practices at the Hospitals and hold faculty appointments with the University; over 100 postgraduate trainees; 12 scientists employed through the University and the Hospital Research Institute; and 11 staff who are all University employees. Academic

surgeons have a tripartite role: to teach learners at all levels on behalf of the University; to conduct clinical and/or basic science research via the University and the Hospitals' Research Institute; and to provide surgical care to a catchment area of several million people.

Where You Sit is Where You Stand

At the centre of large and hierarchical bureaucracies, surgeons possess professional and academic autonomy, but are frequently required to navigate the overlapping and sometimes competing goals espoused by institutions or government agencies. For example, as the COVID-19 pandemic unfolded, tensions arose surrounding the presence of learners in Hospitals and their ability to facilitate patient care at more than one site. On the one hand, the University aims to maintain the safety of students and Hospital Infection Control seeks to prevent outbreaks; but on the other hand, the presence of trainees rotating across all Hospital sites is necessary to maintain the provision of clinical care, which is imperative in the eyes of patients and the Ministry of Health from a regional service perspective. In addition, surgical care and wet-lab training were paused or dramatically reduced during consecutive COVID waves, affecting whether learners were able to attain adequate surgical experience for assessment and progression, exam preparation, and the eventual path to licensure. Depending on what the problem is represented to be (Bacchi & Goodwin, 2016) and the "hat" the physician or leader is wearing – representing the University, the Hospitals, the trainee, or the patient – the concern and the solutions can potentially be fully in alignment or diametrically opposed. While these examples may or may not be related to equity, they demonstrate the unremittingly challenging and complex environment facing the Department of Surgery and its members.

Structural Size and Complexity

Subspeciality Divisions add another layer of intricacy to the organizational structure of the clinical academic realm. There are eight subspecialty Divisions in the Department of Surgery, of which seven have Royal College postgraduate residency training programs. These include areas such as Cardiac Surgery, General Surgery, Orthopaedic Surgery, Plastic and

Reconstructive Surgery, etc. Each Division is led by a Chair/Chief, who reports to the Department of Surgery Chair/Chief. Divisions range in size from five to 25 faculty members. Although faculty appointments are approved at the Department level, Divisions have responsibilities as a part of faculty recruitment process, training program delivery and accreditation, and in ensuring the academic and clinical productivity of the Division members. Divisions are subject to an external review every five years, which is concurrent with the appointment or reappointment of the Division Chair/Chief.

In terms of education programs, subspecialty residency training programs require five to seven years for completion following medical school and enroll a total of two to 25 residents. Additionally, some Divisions train up to 20 fellows annually, who are selected in a competitive process from around the world following residency education for one or two-year programs that provide additional training in research and clinical care related to the subspecialty. Divisions are also responsible for teaching a share of the undergraduate curriculum to over 170 medical school students admitted each year. The overall magnitude of the clinical academic enterprise is striking, with Surgery being the second largest Department in the Faculty of Medicine.

Governance

The highest-level Committee in the Department of Surgery is the Executive Committee, which consists of the Department Chair/Chief, eight Division Chair/Chiefs, five individuals determined by Hospital site roles, and the Manager (Ex-Officio, non-voting). This Committee has final authority in appointments and promotion decisions, budgetary approvals, Departmental policy changes, etc. Generally, Divisions maintain an administrative structure like that at the Department level, with Committee Chairs in areas such as research, education, and finances. While the Department of Surgery is larger than some Faculties at Stone University, and its Divisions larger than some University Departments, faculty appointment and promotion approvals and selection processes for leadership roles (other than the Department Chair/Chief and Subspecialty Program Directors) are not mandated to follow specific rules or procedures

established by the Institution(s) including those related to equity practices or training.

Regardless of the presence of institutional policies or resources, equity is not a quick problem to solve. It takes a minimum of nine years to complete medical school and a surgical residency program, with most individuals following residency with additional subspecialty fellowship training or pursuit of a graduate degree before proceeding to practice. Then at the Departmental level, academic surgical faculty recruitment and leadership selection is a lengthy process in and of itself, often taking a year or more, while dependent on the maintenance of associated Hospital resources. This potentially becomes a vicious circle: fewer women faculty translates into fewer women leaders, leading to inequitable representation on Governing Committees, with women not achieving access to speak of their own interests and to advocate for opportunities for advancement. Perhaps unwittingly, the Department structure becomes an organizational impediment on its own.

Financial Complexity, Management, and Oversight

I have been known to say that even when we are not talking about the money, we are talking about the money. Physicians are employees of the University and independent contractors for the Hospitals, where 90% of surgeons bill the Province for fee-for-service (FFS) delivery of care. Ontario Health Insurance Plan (OHIP) billings represent the vast majority of earnings for the surgeon and have a direct relationship not only with demand for patient care, but with allocation of Hospital resources in the form of operating room and clinic time. In a less proven but widely accepted sense, OHIP billings also have an inverse relationship with academic productivity. This negative correlation between OHIP billings and academic productivity is hypothesized because as (unpaid or lower paid) academic responsibilities related to education and research increase, (higher paid) remunerated clinical responsibilities decrease. For example, physicians with a learner present may see fewer patients as they take more time per patient to explain their clinical reasoning. Another example is that physicians with greater time allocated for research activities will see fewer patients in the course of a normal workweek.

Therefore, in theory, physicians at AHSCs take home less pay than their counterparts in the community who mainly provide clinical care, with little or no academic responsibilities. However, this has not been proven in Ministry analysis of OHIP billings by physicians across Ontario.

In relation to remuneration, two recent studies demonstrated a significant pay gap between men and women surgeons in Ontario (Dossa et al., 2019; Steffler et al., 2021). This is a complex issue on its own as the pay gap is not the result of sexist fee codes related to the gender of the surgeon. Instead, overall earnings are impacted by multiple factors including differentials in subspecialty fee codes, Hospital resources, and services performed outside of the standard workweek, i.e., time and services performed on-call. As essential as remuneration is to the concept of gender equity, OHIP billing and Hospital resource variables fall beyond the scope of this OIP.

The maxim on money being the underpinning of all deliberations continues to ring true at the Department level since our revenue derives from the University, the Hospitals, the Ministry of Health, and from the surgeons directly in the form of a tithe (percentage tax) on clinical earnings. Fluctuations in physician OHIP billings directly affect the Department's revenue. In addition, academic productivity gauged against other Departments using a metrics-based formula impacts the Department budget as afforded from University and Hospital sources. The impact of self-funding and productivity-driven funding is substantial in creating a paradigm unheard of in traditional University Departments, and which also separates Clinical Departments from each other in terms of the decisions they make to support the academic enterprise. For example, the Department of Surgery at Stone University pays a small academic salary based on faculty academic rank; however, our tithe is also relatively low. Other Departments choose to pay large academic salaries depending on a faculty member's responsibilities in teaching or research and have much larger tithes, or alternatively, some Departments do not tithe and pay no academic salaries at all. Another example is that the Department of Surgery funds an internal research grant competition annually, with the level of

funding and number of grants dependent entirely on tithe contributions as a basis for revenue. Other Departments may provide greater funds for research, allocate it differently, or again, provide no funding for research at all.

Many of these choices could be argued to be gender neutral since decisions are not made at an individual level; however, as I will describe later in this OIP, they are not. For example, even when considering faculty salaries by academic rank, there is a noticeable impact on women. The lack of progression of women to senior academic ranks in our current financial structure contributes to the overall lower earnings of women if they do not actively choose to go forward for promotion beyond the career rank of Associate Professor. Fewer women in leadership roles also lowers their global earnings. Fewer women applying for and receiving grants containing funded release time can actually decrease their clinical earnings as well, as they must devote time to research regardless, but then have no mechanism by which to offset remuneration lost from reducing (paid) clinical activity to meet academic expectations. Finally, the complex financial arrangements governing academic and clinical remuneration results in essentially a financial penalty to anyone – but more likely women – who take leaves of absence or reduced responsibility arrangements such as those related to pregnancy, family care, or illness.

These financial decisions are further confounded as they reach to the institutional level. The governance of financial decisions in the Department reinforces a perception of ownership, power, and control over financial operations of the Department, despite that being somewhat procedurally inaccurate since University accounts are subject to policies governing the broader public sector. Thus, the Research and Financial Management Committees direct the establishment and sustenance of academic and research support in the Department, with final approval necessary from the Executive Committee; however, the remuneration process, management of tithe funds, and the application of tithe funds for research purposes are subject to the policies and procedures of the University and the Canada Revenue Agency. The issue of

new public management as it relates to equity and Department funding for academic and research support will be explored further in Chapter 2.

A Constellation of Barriers and Bias

Particularly in recent years, the literature exploring the impediments women face in academic medicine and academic surgery has exponentially expanded. In her inaugural Presidential Address for the Association of Academic Surgery, Dr. Caprice Greenberg asserted that the debate surrounding women and surgery has exceedingly, and inaccurately, focussed on family obligations and work-life balance (Greenberg, 2017). Nevertheless, many authors have explored the barriers women encounter beyond the domestic sphere including: low numbers of role models; lack of mentorship and support; salary differentials; exclusionary social practices ancillary to education and career development; lukewarm reference letters; inequitable interpretation of research productivity; bias in recruitment and conference speaker selection; etc. (Abelson et al., 2016; Adams Newman & Brown, 2021a; Barnes et al., 2019; Coleman & Telem, 2021; Easterly & Ricard, 2020; Han et al., 2018; Sevo & Chubin, 2010). The literature establishes that these and other obstacles affecting women in academic surgery manifest as sexism, microaggressions, and implicit bias (Bates et al., 2016; Coleman & Telem, 2021; Han et al., 2018; Sharma, 2019; Webster et al., 2016). Outright sexism may be less prevalent in this era, or in our institutions, but there is no doubt that microaggressions and implicit bias persist.

Veiled by its nature, implicit bias may in fact be the most challenging of these barriers to address. Implicit bias, which is also referred to as unconscious or inherent bias, denotes our underlying assumptions and values that subconsciously affect our thoughts and actions, for good or ill. Implicit bias is an evolutionary advantage and can be thought of as an automatic reaction that can serve as a protective function, like stopping at a red traffic light. However, in complex scenarios like clinical decision making or recruitment, bias emerges in our unconscious judgements and provokes conduct that preserves systemic gender imbalance, contrary to our established and conscious beliefs in equality, justice, and fair treatment (Adams Newman &

Brown, 2021a; Coleman & Telem, 2021; Gullo et al., 2019; Santry & Wren, 2012).

Some deny the existence, prevalence, or impact of bias; however, multiple studies demonstrate that being aware of a stereotype distorts an individual's ability to process information, and that physicians are not immune (Chapman et al., 2013). Though they often consider themselves to be objective and evidence-based, implicit bias in medicine has been well documented, affecting patient care decisions, selection and education of students, and research study processes and outcomes (Borkhoff et al., 2008; Brown et al., 2020; Chapman et al., 2013; Hagiwara et al., 2020; B. Y. M. Johnson et al., 2016; Myers et al., 2020; Plevkova et al., 2020; Sabin & Greenwald, 2012; Santry & Wren, 2012; Zestcott et al., 2016).

Bias is insidious, materializing subconsciously in ways that preserve systemic oppression contrary to our outwardly stated beliefs in equity and social justice (Gullo et al., 2019), like a paradox of prejudice (Nordell, 2021). Figure 1 speaks to implicit bias with humour.

Figure 1

How are you even alive?

Note. A comic depiction interpreted as implicit bias (Piraro, 2016).

Figure 1 addresses the concept of implicit bias at the same time as it visually demonstrates it. First, the doctor in the picture appears to be in denial about Kermit's life force. This equates to

many individuals across health care and academia being in denial that barriers to equity for women surgeons continue to exist in 2022. Second, the visual evidence of bias in Figure 1 is the artist using the illustration of a white man as a doctor, which is in turn easily understood, accepted, and likely unquestioned by the viewer. The humor in this cartoon is obvious, but the underlying bias deceptive. This continued characterization of white and male as physicians in popular culture imagery is significant and widespread. Yet representation is essential for both the encouragement of women to pursue medicine as a career and for patients to see and expect women as their treating practitioners. This cartoon, in a funny and yet profound way, symbolizes merely two depictions of bias that run deeply through our organizations and society.

My organizational context is not merely complex, it conveys that achieving gender equity in academic surgery will require a focus on obstacles beyond those readily apparent, using strategies that challenge the concepts of individual merit and determination as the basis for success. While some of the barriers discussed are clearly beyond the scope of this OIP, they demonstrate the interconnectedness of bias with culture, values with actions, and privilege with power. These relationships will be explored further as they intersect with leadership, organizational theory, and the change framework proposed in this OIP.

Leadership Position and Lens Statement

This segment provides information on my role, my agency in the Department of Surgery relative to the proposed change process, and finally my leadership lens through the perspective of authentic and transformative leadership.

Role Overview

For the past 16 years, I have served as the Manager, Administration and Finance in the Department of Surgery. This is considered a senior administrative position, which has been evaluated at the second highest level of professional and managerial staff roles that exist at Stone University. The formal rating by the central Human Resources Department reflects the scope of responsibility and level of authority delegated to my role, as well as an

acknowledgement of the complexity inherent in managing a clinical academic Department that spans multiple institutions and is funded and managed through an intricate web of administrative policies and procedures. My role ensures consistency in operations, so that regular transitions in clinical academic (faculty) leadership roles do not disrupt the allocation and delivery of Departmental services and support. As such, I work in close partnership with the Department of Surgery Chair/Chief and I have a strong and trusting relationship with the academic leaders of our Divisions and Committees. With over 20 years of institutional memory at Stone University, I often serve as a resource to my peers, leaders, and staff in considering past actions and future directions in Clinical Departments.

Agency

My formal responsibilities in the Department of Surgery include serving as the conduit and interpreter for policies and procedures originating from the University and the Hospitals. I directly supervise 10 staff and I am responsible for all human resource processes related to those staff as well as for faculty Hospital privileges, academic appointments, and University appointment and promotion processes. I also hold responsibility for financial management of the Department, including oversight of operating, research, and special funds (tithe, expendable endowment accounts), budgeting and forecasting, and compliance with internal and external requirements for funding verification reporting and formal audit. I participate in nearly every Governing Committee in the Department as an Ex-Officio (non-voting) member, which enables me to see linkages across functions and spheres.

Micro Level Agency

Although I do not have formal authority in faculty recruitment and promotion decisions, I have an impact in providing advice and guidance to Department leaders in a consultative manner. Therefore, I would characterize my agency as occurring primarily through influence rather than through enforcement at the micro level. My well-founded relationship with our leaders and staff may lessen the possibility of a negative interpretation of University or Hospital

regulations (Gill et al., 2018) and is linked positively with employee engagement and improved work environments (Alilyyani et al., 2018). I believe my impact at the micro level will be best understood in light of my authentic leadership philosophy, to be discussed further in this OIP.

Meso Level Agency

Perhaps more pertinent to this OIP is my formal authority at the Department level. I have defined this agency as meso (middle) since it goes beyond the micro (small, individual) level in terms of responsibility for Departmental management and oversight; although truthfully it could be considered micro when perceived against the backdrop of the Faculty of Medicine, the University, and Ministry levels exerting influence and regulation on the Department from above. Nevertheless, in describing meso to equate to the Department level, my responsibilities include: enacting administrative support structures for Departmental initiatives and Committees; creating Departmental communications; and ensuring adherence to institutional policies and procedures, such as those related to finances, human resources, and equity.

In a complementary sense to my influence at the micro level, my role as Department Manager at the meso level will be to encourage the academic leadership to deepen their understanding of the impediments facing women faculty and leaders in academic surgery, and then to create, oversee, and assess the programs and processes aimed at mitigating this complex and nuanced problem. Leadership is essentially a layered partnership in my Department between administrative and academic staff. Addressing this PoP will require the adept application of leadership models that embody human connection, link personal accomplishment with organizational effectiveness, and fulfill academic and clinical need using principles of social justice.

Authentic Leadership

Although I manage innumerable transactions, I am not a transactional leader. Rather than focus on an exchange of information or a series of steps necessary to complete a task or improve performance, my focus and faith rest firmly in the strength of relationships to find

purpose, achieve outcomes, and effect change. Authentic leadership therefore resonates powerfully with me in terms of underscoring the importance of human connection through self-reflection, respect, a fastidious adherence to ethics, and a robust affiliation between leader and follower (Elrehail et al., 2018). Authentic leaders are disciplined and concentrate on their core values, providing a sense of motivation, purpose, and satisfaction (Northouse, 2019). Authentic leaders are role models for deep listening, consensus building, and in adhering to their principles with integrity.

I find the five features of an authentic leader to be directly applicable to my formal role (Covelli et al., 2017). I have never believed that the public service is about the bureaucracy of institutions. Rather, the features of an authentic leader serve as a foundation for how I approach my responsibilities and my relationships with faculty, staff, and other stakeholders. I have structured these concepts in Table 1, alongside my interpretation using relevant examples.

Table 1

Five Features of an Authentic Leader

Feature	Personal or Professional Perspective
Understanding purpose	Work is not just about tasks or job titles; it is about relating our roles to the vision and goals articulated by our leaders and institutions. Everyone can make a difference.
Practicing solid values	I believe in making choices that are grounded in an ethical framework. I value curiosity and continuous learning to expand the horizon of my understanding. Both similarities and differences are to be explored and cherished as part of the human experience.
Establishing connected relationships	Having solid interpersonal bonds is critical to my ability to perform well in my role and to support others. I provide clear, open, and honest communication to build confidence and trust. I ask for input and listen carefully before making a decision that I can explain and defend.
Demonstrating self-discipline	My heavy workload is largely self-directed and I have proven my ability to be self-disciplined and productive. I have confidence in my staff and give them space to navigate their roles and responsibilities independently while maintaining an open door for questions, comments, and concerns.
Leading with heart	Essential to my leadership and my own well-being is upholding steadfast, compassionate, and caring ties with others. This social support is an important aspect for both mental and physical health (Read & Laschinger, 2015).

Note. My application of the five features of an Authentic Leader (Covelli et al., 2017).

Table 1 reinforces the appropriateness of authentic leadership as it applies to my professional work as Manager of the Department of Surgery, and personally, as it informs my life choices. For me as an authentic leader, these five features translate into self-reliance, hopefulness, and resilience, which are key principles that sustain my positive outlook.

Authentic leadership also fits with my role given its innate focus on service, unity, and understanding. As an authentic leader, I can be relied upon for responsiveness, protecting confidence, consistency, and the ability to validate viewpoints through deep listening (Avolio & Walumbwa, 2013). I am mindful that I may be confronted with information that challenges my opinions, beliefs, and worldviews (Gill et al., 2018). This may be uncomfortable in realizing my own biases and privilege but is essential for relationship building during instances of disagreement, as well as to provide a scaffold for context, growth, and empathetic support.

Authentic leadership promotes key values including truthfulness, respect, and collaboration and affords an appreciation for diversity and experience while pursuing common goals (Crippen, 2012). Even amidst large and complex bureaucracies, the Department of Surgery cannot remain static in our operations. Authentic leaders are open to two-way feedback and hearing what works well, and more importantly, what needs improvement (Al-Moamary et al., 2016). In alignment with the core tenets of authentic leadership, I firmly believe that regardless of the formal organizational structure, that the relationships between leaders and followers will make or break a team, promote or kill progress, and lead us either to success in our goals or to fail miserably.

Transformative Leadership

The relationships between faculty and staff leaders, and between them to the Department as a whole, also deserves attention through the lens of transformative leadership. This is a corresponding model to authentic leadership which adds depth to my OIP by emphasizing relationships, process redesign, and goal setting within a social justice framework. Transformative leadership is distinct from transformational leadership, which espouses a prerequisite for a charismatic “cultural change agent who seeks achievement by values driven by group interests” (P. O. Smith, 2015, p. 229). The transformational leadership approach is silent on how values and culture have been influenced, defined, and developed by the organizational and societal landscape. Its focus remains limited to leader traits and achievement

of cultural change (Northouse, 2019); whereas transformative leadership concentrates a critical lens on the environment in which inequity has occurred in order to build strategies necessary to alter this condition before equity can be achieved (Shields & Hesbol, 2020).

Shields (2010) describes how transformative leadership employs the concept of private gains as a stepping-stone to attainment of the public good. “Transformative leadership begins with questions of justice and democracy; it critiques inequitable practices and offers the promise not only of greater individual achievement but of a better life lived in common with others” (Shields, 2010, p. 559). Transformative leaders work within existing social structures but display courage in applying oppositional force as a change champion (Shields & Hesbol, 2020). This has the potential to create conflict in a hierarchical structure; however, it is necessary in pursuit of transformation to extend beyond the organization to society at large. This is essential in academic surgery because personal well-being and career trajectories are not a formulated along a linear journey consisting of individual episodes of treatment or even institutional mandates; rather, the social determinants of health and success dwell at an evolving intersection of education, economics, and equity.

In this context, transformative leaders do not naturally seek a single, innovative answer, but rather contemplate how to move forward using a range of solutions framed by a wide-angle social justice lens. Transformative leaders are therefore critical in a resilient healthcare workforce that adheres to high ethical standards, has an emphasis on leading others, and values lived experiences as learning opportunities (Raper et al., 2018). Surgical training is not merely comprised of technical skill mastery or transmission of scientific knowledge. Instead, it enmeshes clinical and academic decision-making within a moral, ethical, and socio-cultural team-based framework (Princeton, 2015). Authentic leaders add the essence of relationships to this paradigm, which is imperative because change does not occur in a vacuum, without wider ripples of impact, or absent of support or resistance from other leaders or followers. This milieu demands both authentic and transformative leaders who are able to reflect on their own beliefs

and assumptions to achieve an understanding of themselves and others (Al-Moamary et al., 2016) for the delivery of optimal and personalized educational experiences and surgical care.

In my Department, change implementation will require multiple authentic and transformative champions – including my Department Chair/Chief and myself – who believe in common principles and each other. Therefore, I believe that the combination of these leadership models is best suited to champion and lead change supportive of women in academic surgery, particularly within the constructs of clinical, educational, and research team structures dedicated to seeking a better tomorrow.

Leadership Problem of Practice

Academic Health Sciences Centres (AHSCs) drive population health today – and the clinical workforce and treatments of tomorrow – in the face of demands from government and institutions to achieve ever greater efficiency in adherence to performance-based metrics. In demanding tripartite roles, faculty at AHSCs provide surgeon training and clinical care, while seeking discovery through research and innovation. This Problem of Practice is extremely relevant to the future of education and health care. I believe there is an opportunity and need to present tangible solutions that will have a clear and direct impact in cultivating and facilitating the growth of women faculty and leaders in academic surgery.

The persistent imbalance of women in academic surgery has been empirically evident and an intense topic of discussion in the literature for decades, yet solutions remain elusive. Increasing internal and external scrutiny call for analysis of the factors affecting women in this domain, while highlighting the disconnect between the current state and our affirmed belief in gender equity in both academia and medicine. My Department at an Ontario University is representative of both the emphatic discourse and the overall slow of progression of women in terms of faculty and leadership appointments. To shift the balance of power and sphere of influence for women in this highly esteemed and essential field, we will need to do more than declare gender equity as an aspirational goal for the future. Departmental leaders, while well-

intentioned, infrequently access equity resources and training, resulting in a knowledge gap and the absence of a strategic approach to the achievement of gender equity. My PoP addresses the need for leaders in the Department of Surgery to focus attention and guide actions aimed at resolving the barriers and bias in their sphere and control that impede the appointment and promotion of women into faculty and leadership positions in academic surgery.

Framing the Problem of Practice

Organizational theory sets the backdrop for proposing and implementing change related to my PoP. This portion will consider the overarching application of critical and feminist theories. It will integrate social cognition theory and an iceberg model in order to craft a vision for shared truth, access to power, leadership, and examination of privilege in academic surgery, with an emphasis on social justice.

Critical Theory

Critical theory posits that reality is an individual construct shaped by the interplay of personal characteristics and experiences with institutional, cultural and social structures (Paradis et al., 2020). However, it also recognizes that a collection of individual perspectives can be amalgamated within an overarching landscape of bias and privilege. Paradis et al. (2020) write:

> Critical theorists and scholars consider social reality as shaped partly through discourses: a set of tacit rules mediated by language and symbols that regulate what can or cannot be said, who has the authority to speak, who must listen and obey, and whose social constructions and experiences are valid or invalid. (p. 843)

Critical theory confronts normative assumptions and stereotypes, particularly as they relate to the concepts of individual merit, productivity, value, and success (Cameron et al., 2020; Manning, 2018). Social constructions of gender in this milieu are unavoidable, despite being routinely ignored (Manning, 2018). Cameron et al. (2020) explain:

> The professional culture of medicine and criteria for advancement, promotion, and what

> counts as “success” in the field, have largely been shaped by dominant norms such as objectivity, mastery, authority, and rationality. This culture has also shaped, and been shaped by, very specific ideas of what constitutes productivity and value within these professions. (p. 1797)

Critical theory emphasizes language and symbols, shedding light on “the hidden curriculum and to the voices that are silenced by dominant culture in institutions and societies” (Sharma, 2019, p. 571). As a relational concept, gender becomes a powerful construct in a knowledge-driven subspecialty such as surgery that uses symbols, hierarchy, history, and social dynamics to control work and learning environments that perpetuate the status quo (Isaac & Griffin, 2015).

The underlying perception that desirable physician leadership qualities are innate, can then be re-examined using critical theory, against the knowledge that optimal leadership talents develop best as a product of learning and development (Helitzer et al., 2017). A critical analysis of surgery as a discipline would then consider its overall resistance in deviating from the invisible, default standard as “male”, with women remaining as outsiders. Certainly the history of medicine and surgery exhibit overwhelming evidence of prioritizing the male perspective (Gherardi, 2009). The barriers this has created over the last two centuries echo throughout training and into medical practice at a systemic level (Sharma, 2019).

Feminist Perspective

The feminist perspective builds upon critical theory in methodically analyzing culture and leadership as the underpinnings of injustice, materializing as systemic power imbalances and discriminatory practices that disadvantage women (Blackmore, 2013). This is fundamental to my OIP where surgeons navigate overlapping and sometimes competing demands thrust upon them by formidable University, Hospital, and government bureaucracies. A feminist perspective provokes us to defy normative assumptions and practices in the context of power and privilege (Cameron et al., 2020). Feminist theory can be used to explore further individual experiences and to engage in uncomfortable analysis and conversations – a pedagogy of discomfort – of

how systems, leaders, and followers propagate inequity and marginalization (Boler, 1999).

The examination of neutrality – or lack thereof – also links critical theory with the feminist perspective. This reveals bias disguised as impartiality and the false dichotomy underlying expectations as they relate to men and women. Gender norms in fact continue to have a momentous impact on women pursuing leadership roles in academic medicine, which is reflective of wider socio-cultural patterns, despite denial of their existence (Cameron et al., 2020). The feminist perspective promotes enlightened reform that maneuvers past "a collusion/resistance binary" (Tzanakou & Pearce, 2019, p. 1195) and offers the ability to reframe systems and discourse with a novel viewpoint (Gherardi, 2009). It recognizes the boundaries of conventional knowledge and challenges its adherents to be contemplative, considerate, and culturally aware. Redefining and overcoming static models of thought will deepen the application of the principle of merit in a fair and equitable manner in the appointment of women faculty and leaders in academic surgery.

Blackmore, using a feminist lens, contends that "educational work is political due to unequal power/knowledge relations embedded in education systems and governance" (Blackmore, 2013, p. 148). This is an accurate description for clinical academic Departments, with faculty designated by rank, a hierarchical power structure in place in both the University and the Hospitals, and a direct funding of the enterprise from clinical earnings leading to the perception of control. Critical theory and a feminist perspective will guide change in recognizing that even with an outward and visible commitment to social justice in place, this environment is not value neutral. With leadership grounded in theory, we can create shared truths and common values with an emphasis on equity for women in surgery and academia.

Social Cognition and Social Constructivism

The frameworks and leadership philosophies of this OIP can be further analyzed and understood using social cognition or social constructivism. These concepts complement critical theory and a feminist perspective in recognizing that beliefs by individuals and groups are a

social construction which holds power to interpret, legitimize, or delegitimize what is considered truth and reality (Kezar, 2018; Pfadenhauer & Knoblauch, 2019). Individuals must reflect on their values, identity, and assumptions if they are to alter their behaviour in alignment with social justice. The gap between intended action and achievement of social justice occurs when people resist change, not because they disagree with it, but because it does not reconcile with their present understanding of reality, or when they fail to understand the nature of the change or how it would be integrated within their work or life context (Kezar, 2018; Vilchez, 2018). This highlights the importance of sensemaking to bridge the chasm between information and purpose, as gained from organizational learning and leadership influences.

Social cognition and social constructivism connect with authentic and transformative leadership philosophies through the reinforcement of leadership behaviour as a relational construct between people. “Leaders’ demonstrations of empathy, caring values, and affective concern for others may improve the ability of functionally diverse teams to develop cohesion and other-oriented team norms” (Post, 2015, p. 1157). Leadership has an impact on solidarity, collaboration, and group learning. Authentic and transformative leadership in group learning then provides an opportunity to reinforce sensemaking within a social setting.

Social cognition theory specifically allows people to release the tie between their identity and associations with past strategies and successes, for example, associating personal success only with personal effort (Kezar, 2018). This is an important step for surgeons who have gained their self-image, and who may implicitly associate their successful career paths, with an existing system that is connected to interpretation of individual achievements. Using social cognition and social constructivism, we will be able to examine the correlation of meaningful, everyday dialogue and action, with formal learning of the impediments and biases facing women in academic surgery.

The Iceberg Model

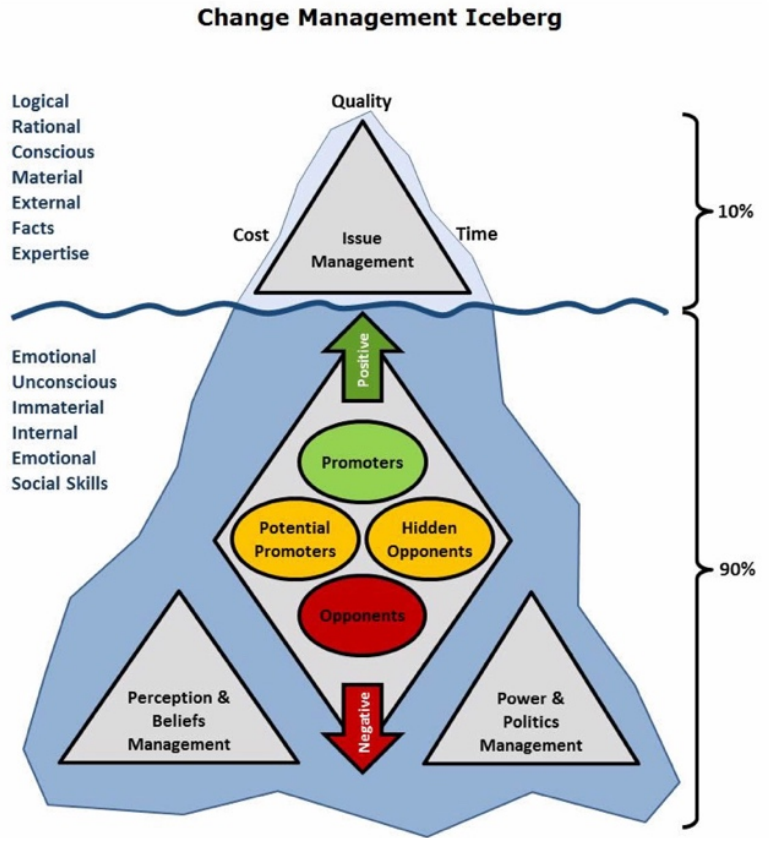
I first encountered Krüger’s representation of change as an iceberg (Figure 2) through

the work of Buller (2014), although it has been explored extensively in the change management industry, with many depictions being available publicly. An iceberg is an apt illustration of my PoP, where the visible issues, in this case the number of women recruited and promoted into roles at AHSCs, is evident and understandable; however, the underlying dynamics of bias, power, and politics are submerged to a greater extent than we realize, and have a stronger influence on proposed change than the observable factors (Buller, 2014). The iceberg model encourages consideration of the voices and tensions that rest below the surface, but which still require representation and resolution.

The graphic provided in Figure 2 was created by a change management firm in Australia based on Krüger's original imagery. The visible concepts apparent in the iceberg, noted as cost, quality, and time, could be considered through empirical data such as the number of women recruited and promoted, and academic metrics such as publications and grants. The much larger, immersed portion of the iceberg would include barriers such as lack of mentorship or sponsorship, exclusion from research teams or social planning, and implicit bias. As noted in this illustration, the hidden elements of the iceberg not only have a negative pull but also likely consume far more attention and resources in order to address them effectively.

Figure 2

Change Management Iceberg



Note. Adaptation of Krüger's Iceberg Model (The Data Group, 2011)

This visualization of an iceberg model in Figure 2 could also be considered in the setting of the Appointments and Promotion Committee, which may openly and strongly support the recruitment and promotion of women surgeons (iceberg tip); however, factors including a lack of formal structures for sponsorship and research support, or overall perceptions influenced by implicit bias, could serve to inhibit this very purpose (iceberg base). These variables could potentially be mitigated through effective power and political structures, management of perceptions and beliefs, supporting promoters and addressing opponents, all as displayed.

Guiding Questions Emerging from the Problem of Practice

There are several questions or themes that guide my thoughts and the development of this OIP, from theory to practice. Four will be discussed below.

Voice

The literature on women in surgery appears to have been mostly written by surgeons, for surgeons. I have a unique voice and perspective as an experienced staff leader and administrator; however, there is no doubt in my mind that I will need academic leaders as allies and advocates in order to effect change in this sphere. The first question I ask myself as I craft this OIP is not only have I found my own voice as a scholar practitioner, but have I accurately and comprehensively captured the issues, choices, and possibilities, in a way that is logical and compelling to my academic leadership partners?

Analysis-Paralysis

As the number and interconnectedness of obstacles identified in the literature as affecting women in surgery at the individual, organizational, and systemic levels proliferate at an exponential rate, it can become overwhelming and directionless. Some matters – such as OHIP billings – are clearly beyond the scope of this OIP. However, the relationship between remuneration, academic rank, and academic performance may still be worthy of investigation. The second question is how can I avoid a state of analysis-paralysis given the scope, depth, and breadth of the literature, and guide the Department in moving effectively from barrier identification to prioritization of potential solutions?

The Thin Edge of the Wedge

An overriding public sentiment advocating for change of a social justice nature has permeated our collective awareness through media coverage and marches, shaping institutional mandates and government policy. With this in mind, I recognize that the focus of this OIP on women in academic surgery is relatively narrow and represents only a fraction – the thin edge of the wedge – of the equity and social justice issues we face. It pains me that I have not been able to account for intersectionality and the perpetuation of injustices inflicted upon marginalized and racialized individuals, including the Black, Indigenous, People of Colour, and LGBTQ2S+ communities. Nonetheless, this was a difficult choice, made intentionally to keep the scope of

this OIP manageable. The third question is am I able to provide a framework that addresses my PoP, but leaves open the prospect for scaling and a broader application of equity and social justice principles and remedies in academia and health care?

The Right Thing to Do

Oftentimes the argument for equity more generally is made in terms of economic benefit and empowerment. No doubt, lifting marginalized segments of society from the burdens of poverty, disease, and illiteracy is essential to personal welfare and the success of the nation. However, we ought not let this overshadow the fact that the pursuit of equity and social justice – in academic surgery and beyond – is simply the right thing to do: privately and publicly, individually and collectively, consciously and reflexively. This OIP is about more than tinkering with a traditionally male-dominated sphere: it is about structurally empowering and valuing half of the population. Women deserve to be represented and to feel seen and heard in all aspects of academic surgery. The last question is how can I guide its ultimate purpose, to weave the ideals and expectations of equity and social justice, into the fundamental aspects of everything we do in the Department of Surgery?

Leadership-Focused Vision for Change

This section provides additional information on the current and desired future state of the Department of Surgery, the quest for second order change, the current landscape of legislation and policy related to gender equity as applicable to the Department of Surgery, and a demonstration of change drivers as they relate to my PoP using the PESTEL analysis structure.

Current State

The data available from the Department of Surgery paint a clear picture of a lethargic progression for women in terms of faculty appointments and promotion through the ranks. As shown in Appendix B, while the number of women faculty appointed in my Department has increased overall – from 11% to 21% in the last 15 years – by no means are we on a trajectory to parity in traditionally male-dominated surgical subspecialties. In terms of in-year recruitment,

Appendix C illustrates a highly variable outcome each year, showing that on average 33% of new recruits are women since 2006, and the number of women at the rank of Assistant and Associate Professor remains relatively stagnant over time, particularly in light of the first promotions to the rank of Full Professor in 2020. At this time, it is fair to say that the ratio of women to men in our Department remains poor overall; yet in many areas, mirrors the lack of women in surgical subspecialties across the country. The national comparative data is shown in Appendix D, which indicates that 38.5% of surgical specialists in Canada are women; thus, the Department lags considerably behind the national context in overall percentage. Without targeted intervention in recruitment, retention, and promotion of women faculty, our faculty complement may take another decade or more to reach the current national average for representation of women in surgical subspecialties at this exceedingly slow pace.

Recruitment of women to faculty positions requires subspecialty graduates, as shown in Appendix E. In 2019-20, the lowest of surgical subspecialties engaging women trainees were: orthopaedic surgery (14.5%); neurosurgery (18%); thoracic surgery (19.2%); urology (25.3%); and vascular surgery (32.1%). However, these results are uneven across all subspecialties, with women clearly drawn to gender specific sub-fields – sometimes coined “pink ghettos” (R. Smith, 2014, p. 466) – such as paediatric and women’s health-related surgical programs. For example, obstetrics and gynaecology has over 65% women trainees, and paediatric orthopaedic surgery has 40% more women trainees than orthopaedic surgery as a whole.

With respect to leadership selection, although women now Chair several governing Committees in the Department of Surgery, they have never been appointed Chair/Chief in more than two of eight clinical subspecialty Divisions, and never as Department Chair/Chief. This aligns with a recent analysis of the Canadian context for Surgical Departments in Canada, which confirms that women are far less likely than men to be appointed into leadership roles (Hunter et al., 2021). At an even higher level, the ignoble data are even more depressing: the first woman Dean in Canada was not appointed until 1999 and as of 2018, only a total of five

women have held that role among the 17 medical schools in Canada (Federation of Medical Women of Canada, 2018). Therefore even with an increase in the number of women surgeons, this has not “translated directly to increased representation at the highest academic promotion or leadership levels, with a study showing no narrowing of the gap over the last 35 years” (Hunter et al., 2021, p. 9). Persistent, inequitable representation of women in the faculty and leadership ranks is not unique to Stone University; however, that does not release us from our obligation to pursue equity locally in the Department of Surgery, and collectively as a clinical academic discipline.

Desired Future State

I would like to say that the desired state for the Department of Surgery would be to have equal numbers of men and women appointed into faculty and leadership roles. Unfortunately, that is not only unlikely, it is simply not feasible in the short term based on subspecialty residency graduation data. However, it may be worth considering the definitions of equality and equity as expressed by Judge Abella in the Employment Equity Report’s publication in 1984. Agócs (2014) interprets Abella’s comments in defining that equality is not fixed or absolute. It evolves over the long-term through removal of discriminatory practices and increasing access to opportunities for members of marginalized groups (Agócs, 2014). Agócs (2014) writes,

> This vision of how to remedy systemic discrimination suggests that employment equity is a transformative process, since in theory it promotes *substantive equality*, not by forcing members of designated groups to assimilate to the workplace as it exists, but by changing the culture and structure of the workplace to create fairness for all and remove a bias in favour of white males. (p. 5)

In this respect, I believe that attainment of equity in the Department of Surgery requires *at a minimum* that the percentage of women surgeons in the Department is at least equal to the percentage of women surgeons in Canada on an ongoing basis, with an increasing trajectory towards true 1:1 representation. In addition, I will later explore in this OIP the potential for

evidence of equity through the generation of qualitative data related to second order change, as exhibited through survey perceptions of a supportive culture and a reduction in bias.

Second Order Change

Second order change is achieved when a change in values and culture is manifested in an organization's structure (Kezar, 2018), as compared to a first order change, such as a change in a Departmental policy. Once individuals are aware of their biases, they are able to open their minds to new perspectives that shift their worldview. Second order change, whether provoked by sensemaking, training, or experience, comes from within. Supported by educational and institutional support, it is not a directive to change, but rather reveals individual agency in relation to social and organizational structures. This manifests as a social justice orientation where institutions "promote reproduction of and respect for group differences without oppression" (Young, 2011, p. 57). Guiding second order change requires an analysis of the complexity inherent in organizations and how power is yielded beyond a person's formal authority (Ryan, 2016). This provides an individual with content and context, and encourages consideration of the butterfly effect (Rajagopal, 2015), where one small change in personal behaviour can later result in significant and beneficial organizational consequences.

An example of second order change might be considered in the context of mentorship versus sponsorship. In the Department of Surgery, all new faculty recruits are assigned a mentorship Committee. This is recognized to be an important factor in shaping the careers of academic surgeons and is required according to University policy ([Organization], 2018a). However, mentorship may be inadequate for women surgeons who do not actively self-promote in similar methods or venues as men surgeons (Linscheid et al., 2020; López et al., 2018). Sponsorship transforms beyond mentorship when senior faculty intentionally include junior faculty in research, nominate them for awards, and openly accommodate and address their schedules and needs for support. Mentors are called upon to confer guidance to the mentee, whereas sponsors assume an active role in endorsing and promoting an academic career path

through their understanding and actions. Implementing a requirement to offer mentorship to all new recruits is a first order change. The conversion to sponsorship could then be considered a second order change, where authentic and transformative leaders and mentors build upon relationships using a moral, ethical, and social justice-oriented compass that echoes through training, research, and clinical care.

Legislative and Policy Landscape

Aside from a requirement for mentorship at the University, this PoP is framed by the current state of legislative and policy requirements specific to equity, or lack thereof.

Employment Equity

Universities became subject to employment equity regulations in 1986 by virtue of their participation in the Federal Contractors Program based on number of employees and federal funding. Universities are required to collect recruitment data and formulate a plan to achieve employment equity (P. Stewart & Drakich, 1995). Indeed, the collection and reporting of appointment data falls within my scope of responsibility for faculty appointments. Every University in Canada has developed and implemented rules and procedure related to equity, diversity, and human rights; although, they vary considerably in comprehensiveness, application, and enforcement (Henry et al., 2017).

Policies related to employment equity often face a web of passive and active resistance that counter efforts seeking to remedy the underrepresentation of women in the workforce (Bakan & Kobayashi, 2007; Henry et al., 2017). Under the guise of supporting the concept of individual merit, women in fact require superior qualifications than men in order to advance comparatively in institutional hierarchy (Levine et al., 2021; Ng & Wiesner, 2007). The hidden attack on equity policies renders them not only ineffective, but that “their presence has the potential to contain or restrict equity” (Henry et al., 2017, p. 207) by altering the dynamics of the recruitment processes. Decades of research substantiate that despite the lofty goals of employment equity legislation and policies, they are neither benign nor a consistently positive

influence. Instead, the literature demonstrates their linkage to hurdles, misconceptions, and bias (Henry et al., 2017).

Ineffective, ambiguous, and toothless, employment equity legislation in Canada is clearly no longer considered the primary solution for workforce inequity, with a negligible impact and criticism from both its proponents and detractors. More than four decades since the original investigation into workplace inequity, we appear unable to move forward using this legislation to eliminate systemic bias and exclusion. Employment equity policy discussion is simply absent in the Department of Surgery. It has never been raised in a substantive way at our Appointments and Promotion Committee since I began attending in 2006.

Institutional Policy Documents and Training

Clinical faculty in the Department of Surgery are subject to an overall policy document issued by the University ([Organization], 2018a). This document contains a brief clause with respect to employment equity:

> All members of any Committee mandated under these Conditions of Appointment for Physicians shall undertake the Committee's work in compliance with the principles of employment equity. Appointments Committees will use search procedures that endeavour to ensure a diverse applicant pool is generated before proceeding to short-list candidates and identifying the best candidate. (p. 11)

The document is absent of language requiring formal equity or bias training or the inclusion of such specifically-trained individuals on Appointments and Promotions Committees. Employment equity is a mention on a job advertisement and a check box on a form. Aside from the fact that it is difficult, if not impossible in some surgical subspecialties to generate a diverse pool of applicants, this clause and its application essentially have no requirements and no consequences for Clinical Departments. At best, application of the legislation is overlooked and unmeasurable; and at worst, counterproductive in failing to address the potential for a subtle cultural backlash to its principles as described in the literature.

Change Drivers

This OIP is positioned squarely at the centre of the higher education and health care spheres, where change drivers shift and collide, affecting our understanding of the problem and the options and tools leaders are able to wield for organizational transformation. I believe that the PESTEL analysis framework appropriately organizes and explains the change drivers related to this PoP (G. Johnson et al., 2008). PESTEL stands for political, economic, social, technological, environmental, and legal (or legislative), all of which are relevant and impactful as they relate to my PoP, as shown in Table 2.

Table 2

PESTEL Analysis of Change Drivers

Category	Relationship to PoP
Political	Government, external/accreditation agency (Royal College, CPSO, etc.), University, and Department leadership support and advocacy for equity, diversity, and inclusion.
Economic	Factors driving the funding of clinical and academic systems by Government Ministries, University priorities, and Departmental decisions as they impact on women in surgery.
Social	Societal support for equity and social justice, specifically in education and health care. Considerations include socio-cultural expectations, biases, roles, and actions as they relate to self-selection, recruitment, and promotion of women in academic surgery.
Technological	Impact of technology (innovation) as a driving force for education and clinical care; for example, the impact of using online systems (Zoom, WebEx) for surgical training and remote patient care as well as the impact of technology on work-life balance.
Environmental	Layered and interconnected AHSC leaders and systems that espouse related goals but present conflicting or competing directives that impact on equity.
Legal (Legislative)	▪ Employment Equity legislation and reporting. ▪ University policies and procedures related to equity. ▪ Potential for development of (mandated) equity or bias training.

Note. Application of the PESTEL analysis framework to my PoP (G. Johnson et al., 2008).

As a scaffold for appreciation of the change drivers that relate to my PoP, the PESTEL analysis in Table 2 efficiently frames the issues impacting on women in surgery from multiple angles. It becomes evident that movement from the current state to the ideal state is supported by leadership and the wider societal interest in equity, diversity, and inclusion; however, the increase of women in faculty and leadership positions in academic surgery will occur only in the context of the development and implementation of supportive, effective, and directed economic, social, technological, environmental, and legislative measures.

Organizational Change Readiness

This section provides a discussion of change readiness and an assessment of the Department of Surgery's preparedness to embark on a change journey towards equity through consideration of individual and organizational readiness as well as change readiness dimensions and beliefs.

Individual and Organizational Readiness

Embarking on a change journey to increase the representation of women faculty and leaders in academic surgery requires an assessment of the organization's state of readiness at multiple levels. "Readiness for change equates to the preparation stage, whereby individuals have positive attitudes toward a change and indicate an inclination to take action in the immediate future" (Holt & Vardaman, 2013, p. 10). Readiness at an individual level requires a high level of mutual trust and respect between leaders and followers – demonstrating psychological safety – through a willingness to have challenging and potentially uncomfortable conversations about change events (Rafferty et al., 2013).

Theoharis (2007) touches upon the elements that prepare and support an organization's readiness for change in describing social justice leadership. He writes, "communicating purposefully and authentically, developing a supportive administrative network, working together for change, keeping their eyes on the prize, prioritizing their work, engaging in professional learning, and building relationships" (Theoharis, 2007, p. 244). Essentially, these features and foci complement authentic and transformative leadership, setting the foundation for change readiness: being open with evidence and dialogue, emphasizing the urgent and necessary need for longstanding change, and uniting achievement of personal triumph with organizational success and a duty to pursue social justice.

Change Readiness Dimensions

Napier et al. (2017) outline four dimensions relevant to change readiness: cultural readiness, technical readiness, process readiness, and people readiness. Their commentary in

terms of people readiness specifically is of interest in relation to my sphere and agency:

> Perhaps nowhere is this more challenging than within government institutions, where it is not uncommon to find employees who may equate their value to the institution as being tied in significant ways to their understanding of the history of 'how things have always been done' as well as the knowledge of how to work with current processes and players. (p. 134)

I am a longstanding University employee with significant institutional memory that enables me in many cases to get things done by knowing who to call and how to work through (or around) an intricate bureaucratical matrix of policies and procedures. I agree that this history is considered useful and valuable. However, I also believe this better prepares me to serve as a change agent, rather than to transform me into a change resistor as the authors imply.

In fact, this may be my advantage in leading change in academic surgery: I am not a product of the training system, research, and clinical experiences that shaped women in successful academic surgical careers; instead, my vocation was formed through administrative leadership over two decades that encompassed a steady stream of system changes, service changes, staff changes, and the ascendency of neoliberal principles in academia and healthcare. I am most definitely well-informed of the past but not wedded to it. "Leadership takes the change techniques and not only implements and supports them, but encourages people to think beyond the normal boundaries of their responsibility" (Napier et al., 2017, p. 140). I believe this is exactly what I have done as a senior staff leader in the Department of Surgery in writing this OIP. With a perspective grounded in critical theory, a feminist perspective, and social cognition theory, and with the backing of my academic leaders, I am prepared to challenge – rather than defend and maintain – the status quo.

Adding insight to the people and process change readiness concepts discussed, Holt and Vardaman (2013) review how change readiness is a multi-dimensional construct embedding both discrete and structural factors. "Our conceptualization of change readiness

should move beyond those that are associated with a single episodic organizational change and expand to consider the complex interactions as multiple changes are occurring within organizations simultaneously" (Holt & Vardaman, 2013, p. 14). This is absolutely the case when considering the myriad of impediments facing women in academic surgery at the individual, organizational, and systemic levels. Change simply cannot occur at one level alone; it requires the readiness and acceptance of stakeholders both alone and together in order to navigate layers of intended or unintended consequences.

Change Readiness Beliefs

Organizational change readiness may also be assessed through change beliefs, including discrepancy, appropriateness, efficacy, principal support, and valence (Armenakis & Harris, 2009). These factors explain readiness for change at the individual and organizational levels. To evaluate the state of readiness to embark on a change journey, I have structured a brief explanation of the categories crafted by Armenakis and Harris (2009) alongside Department examples in Table 3.

Table 3

Five Key Change Beliefs with Department Examples

Change Factors	Department Examples
Discrepancy – a shared understanding of the gap between the current and preferred states.	There is widespread agreement of the need to increase the number of women faculty and leaders in academic surgery, based on institutional and national data.
Appropriateness – belief that a change path, model, or solution is fitting to address the problem.	Many ideas and voices are coming forward to support the change process. However, consensus has not yet been achieved on the path, model, or solution(s) to address the problem.
Efficacy – belief that successful change is possible to benefit the individual and the organization.	The establishment of an EDID Committee demonstrates a shared conviction that change is possible. Its goals include serving the needs of equity-deserving groups with the understanding that the entire Department will benefit from equity, diversity, inclusion, and decolonization.
Principal Support – belief that change is supported by formal leaders as essential for the success of the organization. It is not temporary as a "passing fad".	The Department Chair/Chief met with every Committee Chair in the fall of 2021 to discuss how to incorporate EDID into all aspects of operations. This reinforces the importance of EDID to him as a leader in advancing EDID within the Department and as an academic and clinical discipline.
Valence – belief at the individual level that change will provide personal benefit.	Valence materializes through individual Department members who feel valued, represented, and supported through EDID efforts.

Note. Assessing change readiness in the Department through five key beliefs (Armenakis & Harris, 2009).

Table 3 confirms that there is widespread recognition of the gap between the current and ideal

state in the Department, and a robust commitment by leaders and followers – supported by government, institutions, accrediting agencies and the public at large – to improve upon equity, diversity, and inclusion in academic surgery as a discipline. Although the category of appropriateness is still in flux, Table 3 indicates substantive awareness and support for change in the Department of Surgery in outlining individual and group readiness, particularly as it relates to the crossover of micro and meso levels of agency in my OIP.

Chapter 1 Conclusion

Many find it hard to believe that it is 2022 and there is still an urgent need to address the lack of progress for women in academic surgery. Chapter 1 investigated how inequity for women surgeons is demonstrated in data, expressed in a growing body of literature, and evident in popular culture; proving that gender bias is woven into the fabric of academia, healthcare, and society. The challenge presented in Chapter 1 will be to confront normative assumptions and layers of prejudice that perpetuate inequity and inertia at the intersection of power and privilege (Cameron et al., 2020; Han et al., 2018). However, this Chapter also explored that equity will be achieved not through training alone, but through everyday choices, actions, and words at the micro and meso levels, grounded in theory and delivered through practical tools. Through a change framework to be developed in this OIP, authentic and transformative leaders will learn to build upon their skills and understanding of how the pieces of social networks, careers, and opportunities for women in academic surgery fit together on a continuum: to link mentorship with sponsorship, privilege with access, and bias with opportunity. Chapter 2 will begin the change journey through the planning and development stages.

Chapter 2: Planning and Development

This Chapter explores how authentic and transformative leadership will guide the approach to change using two models of Appreciative Inquiry (AI) as a change framework. It provides a critical organizational analysis and proposes solutions, and then concludes with an examination of leadership ethics, equity, and social justice challenges in organizational change.

Leadership Approaches to Change

This section explores a shifting need for leadership as a guiding force in higher education: to serve as a social influence in addressing cognitive dissonance, as well as to situate sensemaking within organizational learning and a global context.

Setting the Stage for Change

Although higher education institutions have long purported to offer solutions to the ills of society, in fact they remain complicit in preserving the status quo. “Rather than reducing race, class and other inequalities over the years, educational institutions continue to perpetuate them” (Ryan, 2016, p. 88). Powerful organizational forces resist deviation, enabled by individuals invested in maintaining the specific rules and processes that fashioned them as scholars and leaders. The lack of progress for women in academic surgery is more broadly reflected in STEM fields in academia, where women remain underrepresented at the undergraduate and graduate levels as students; translating into low numbers of women faculty that has persisted for decades (Casad et al., 2021). It is clear that the answer to persistent inequity is not more “policies and practices that have political currency but that have been proven ineffective” (Shields, 2010, p. 6). A new leadership approach is necessary if we are to nudge the needle towards gender equity in academia and health care. This begins with a recognition that change leaders are inseparable from their environment but can rise above it when committed to thinking and behaving differently as they relate to followers and to the system at large (Shields, 2010).

Leadership as a Social Force

Leadership is the undercurrent and the guiding force in organizational change. It melds

individual interests with the collective will, adapting and evolving through group interactions and an agreement of shared values (Burnes & By, 2012). Leadership requires social intelligence in order to glean the relationship between politics and people, and to respond in divergent ways depending on changing circumstances. “Moreover, the extent and effectiveness of a leader’s authenticity is relative to the cultural, organizational and situational context” (Covelli et al., 2017, p. 4). Leadership demands an openness to learning and the ability to accept feedback as a prerequisite to successful problem solving (Yukl & Mahsud, 2010). Although leaders guide organizational change, they are not “a catalyst that remains unaffected by the change, but a key ingredient in the change itself. You can’t change an organization without being changed yourself” (Buller, 2014, p. 90). Lasting and impactful change requires insight and the ability to apply learning to new circumstances and challenges.

Cognitive Dissonance and Sensemaking

Embedded in social cognition theory, cognitive dissonance occurs when two pieces of conflicting information appear concurrently (Kezar, 2018). This suggests that information that does not align with a person’s existing beliefs will be dismissed or forgotten. The overriding desire for consistency leads to confirmation bias where the only information sought and retained is that which that agrees with pre-existing viewpoints (Allahverdyan & Galstyan, 2014). The ability to overcome cognitive dissonance and enact social change is dependent on organizational learning, steered by leaders who are trusted by followers to interpret meaning and thereby guide collective sensemaking (McGrath et al., 2016; Rafferty et al., 2013). Yukl and Mahsud (2010) explain:

> Sometimes role expectations are based on outmoded beliefs or irrelevant norms and values (e.g., gender role stereotypes, centralized authority, intolerance for any failures, or promotion based on seniority rather than performance). To expand their choices, it may be necessary for a leader to influence people to change their assumptions and beliefs about what is appropriate and effective, especially when the beneficial effects of

> innovative approaches are not immediately obvious. (p. 84)

Although Yukl and Mahsud (2010) provide this reasoning in the context of flexible and adaptive leadership, this citation speaks to cognitive dissonance and sensemaking in terms of addressing outdated constructs of role expectations through a leader's presentation of new evidence via social interaction. This focus on cognitive dissonance and sensemaking corresponds with the principles of authentic leadership, and my confidence in its tenets reinforces that acceptance and internalization of the message is dependent less on the logic of the leader's argument, than it is on the strength of relationship that exists between the leader and followers.

Authentic Leadership Guiding Change

The understanding of leadership as a dynamic social influence impacting both leaders and followers is congruent with authentic leadership. Authentic leaders develop genuine connections through trust, honesty, and respectful relationships. By grounding decision making with ethical reasoning and a moral compass, followers are able to understand and support authentic leaders and their change directions. With a deep understanding of themselves and a commitment to the development of others, authentic leaders positively influence perceptions of work and feelings of empowerment, leading to sustainable performance levels and goal achievement (Covelli et al., 2017).

Education is an environment where authentic leadership thrives because of its focus on importance of relationships between leaders and followers, and more broadly speaking, the education system and its students. Crippen (2012) clarifies:

> Schools are all about relationships, and relationships are developed, in part, through caring, listening, trust, honesty and collaboration. They are about reaching out to each other first, by trying to understand and being true to ourselves (authentic) and then by trying to understand and appreciate our colleagues. It's about telling our stories and realizing how much we have in common and yet how rich we are in diversity. It's about discussing our values and why we are where we are in our lives and in our schools. It's

about service to the common good. (p. 197)

Authentic leadership does not find inspiration or purpose in altering the transactional nature of a bureaucracy; nor is it fixated on upholding an inspirational, charismatic individual as the driver for change. Rather, spurred on by a growing societal cynicism of business and government, authentic leadership answers the call in education to lead by example, to build trust based on ethics and care, and to remain transparent in decision-making (Avolio & Walumbwa, 2013).

Transformative Leadership Emerging from Global Discontent

The global context of uncertainty and unethical behaviour in business and government demands a new model for leadership to guide change – transformative leadership – which aligns with authentic leadership in placing primacy on relationships but in the context of a volatile, uncertain, complex, and ambiguous (VUCA) world. Borrowed from the military, the VUCA concept articulates that the world is no longer predictable, clear, and rational. Change leadership requires engagement, patience, and sensemaking, such that VUCA can be transformed as a leadership practice into vision, understanding, clarity, and agility, directed at reshaping society using social justice principles (Shields, 2012b). Cultural literacy displayed by authentic and transformative leaders supports connections and collaborations among workers navigating the VUCA world (Shliakhovchuk, 2021). This is especially the case in healthcare, where clinicians and allied health teams work to serve, innovate, and advocate to improve the health of patients in vulnerable communities (Maini et al., 2020).

Transformative leadership considers a messy reality of discrimination and the failed promise of equal opportunity as it works towards the creation of an inclusive and equitable system that benefits every person (Shields, 2012a). As a part of a critical analysis of the current systems, transformative leadership deliberates power as a force not for inspiration, but its role in perpetuating “hegemonic and dominating behaviors, cultures, and structures” (Shields, 2010, p. 567). Working within dominant organizational and social structures, transformative leaders are required to act courageously to resist, and persist, in applying oppositional forces as the voice

for change (Shields, 2010). They provide reassurance and stability to followers – and indeed to organizations – through a change process occurring in a VUCA world.

Framework for Leading the Change Process

This section expands on the application of appreciative inquiry (AI) and the TEAM model as a framework for leading the change process in the Department of Surgery.

Appreciative Inquiry (AI)

The foundation for a change process is learning. It requires continuous evaluation with steps designed to understand the problem, plan a possible solution, implement it fully, evaluate the outcome of the action, and repeat (Burnes & By, 2012). These phases should prevent backward movement and direct the organization unremittingly forward on a path to improvement. I envision an ideal change process not occurring in a linear fashion, but evolving as concentric circles of analysis and action that allow for iterative change in a complex environment, attending to intended and unintended consequences arising in the process (Whelan-Berry & Somerville, 2010). I also believe that it is important to implement a positive-focused change model, as that will create a milieu for open minds to consider new ideas, perceptions, and frameworks using a critical but non-threatening approach, while building relationships through teamwork towards a common goal.

This conceptualization of a change framework is ideally suited for AI, which is grounded in a social-constructivist view of organizational development and human interaction (Reed, 2007). This is aligned with social cognition theory which advances that truth and reality are social constructions. The choices we make in the questions we ask, who we ask, and the active listening and reflection in the discussion that follows, very much define “reality” as much as the “facts” we believe delimit the problem (Reed, 2007). This is also aligned with critical theory, which is an essential element of this OIP. Both AI and critical theory advocate that inquiry is necessary to challenge and critically evaluate current ways of knowing and doing. This interrogation releases individuals from the bonds of the status-quo and allows for deliberation

into the role of power – and the social construction of power – in the organizational context. AI challenges its adherents to critique historical and cultural underpinnings and to use knowledge development to sustain social action (Magruder Watkins et al., 2011; Reed, 2007).

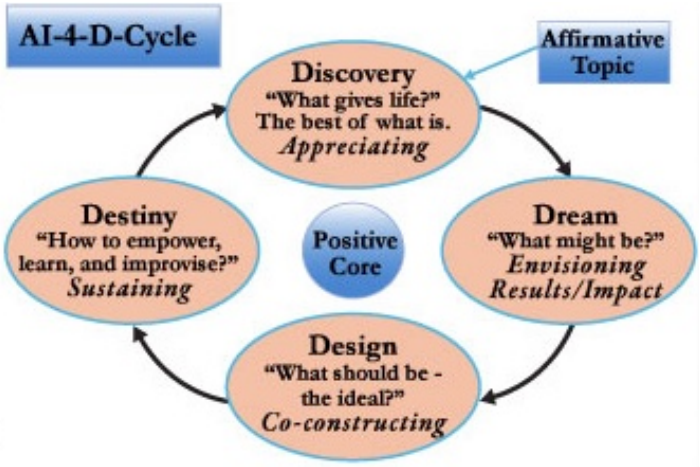
AI values diversity and fosters innovation through a positive-focussed framework. It is a method to engage with others and create a shared understanding that builds on existing strengths in an organization. AI supports an exploration of what people find valuable in their work as a basis for organizational development and uses sensemaking as a starting point for the change process (Cooperrider et al., 2008; Reed, 2007; Whitney et al., 2010). Antithetical to many organizational design processes that work within small groups or through authoritarian decision making (Whitney et al., 2010), this deliberate recognition of the involvement of many stakeholders shapes the importance of inclusion and debate from the beginning of the change process. It provides an opportunity for the wider group to review critically the assumptions behind the work they do and to craft future plans based on what they believe has worked well, rather than to retain a focus on the elements of what has not worked well. This co-construction of future direction – centred on effective past accomplishments and strategies – has a powerful impact on behaviour and support for change (Cooperrider et al., 2008; Reed, 2007; Whitney et al., 2010).

AI is based on five core principles: 1) the constructionist principle – knowledge is based on social construction and interpretation, and organizational change is driven by the questions asked; 2) principle of simultaneity – inquiry and change coexist as both the impetus and intervention; 3) poetic principle – an organization's story is being continually rewritten and serves as a source of knowledge and inspiration; 4) anticipatory principle – the way people think about the future will shape the organization's development; and 5) positive principle – asking positive questions will engage individuals at a deeper level and produce hope, social bonds, and long term engagement (Cooperrider et al., 2008). These AI principles are embedded in its framework, which sets out five stages of the change process, starting with affirmative topic

selection, and moving through discovery, dream, design, and destiny. At the centre of AI, figuratively and as exhibited in Figure 3, is a positive focus.

Figure 3

The 4-D Appreciative Inquiry Cycle



Note. The stages of AI (David Cooperrider and Associates, 2012)

Each step of the cycle fashioned by Cooperrider et al. (2008), as shown in Figure 3, is an important part of the overall AI process. The affirmative topic selection constructs the narrative of the organization and the direction for inquiry using a strengths-based lens. The discovery or appreciating stage intentionally engages a wide range of stakeholders in positive discussions of best practices as well as successful individual and organizational accomplishments. The dream or envisioning stage allows for an exploration of the potential, hopes, and dreams for the institution and the individuals touched by it. Led by transformative leaders, this stage would provide a heightened sense of purpose to serve the greater good. The design or co-construction stage is also considered the opportunity for "provocative propositions" (Whitney et al., 2010, p. 26), where AI participants describe their ideal future state, framed in a positive, clear, and compelling manner. Finally, the destiny or sustaining stage has a concentration on individual and collective commitments for action (Whitney et al., 2010).

There is some criticism that AI imagines a Pollyanna version of organizational life, avoiding negative issues while offering a metaphorical group hug that provides comfort but little

real progress in addressing the difficult challenges that occur within the human experience (Grant & Humphries, 2006). Another criticism is linked to perceived ineffectiveness or inaction, which could be derived from the fact that AI is expressed and utilized in different ways due to varying cultural and institutional contexts, thereby making it difficult to substantiate its effect in organizational change (Van Der Haar & Hosking, 2004). AI has also been faulted for possibly creating naïve perceptions and actions that discourage critique and lack robust analysis (Grant & Humphries, 2006).

The limitations expressed of AI are possibly valid in some respects; however, in a complex environment, an AI approach gives participants the power to transcend a binary divide of positive and negative viewpoints in considering what brings life meaning (Cooperrider & Fry, 2020). AI is a reflexive process aimed at provoking a thoughtful and positive response to situations and contexts. This is also a tenet of authentic leadership, which requires self-reflection, respect, and deep listening in building and maintaining relationships with followers. AI's emphasis is aligned with authentic leadership in terms of collaboration and participation. It sees value in people's input and in organizational history.

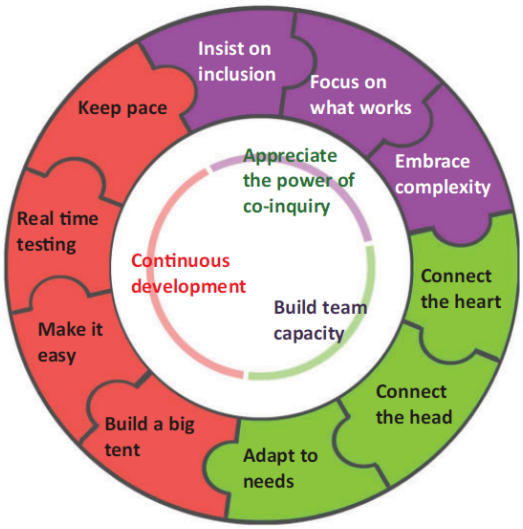
The TEAM Model

A new model for the AI process was developed by Hung et al. (2018), who endorse the benefits of AI as a positive and egalitarian approach. They contend that AI is a good fit for health care as team models are responsible for envisioning and implementing practice improvements. They reiterate that while AI has been criticized for avoiding negative problems and creating an artificially positive environment, in fact AI constructively reframes these experiences as an opportunity for improvement. I believe that this limitation is actually better addressed in the TEAM model, which reflects the concepts of AI using multiple sub-stages. It allows participants to raise negative problems in a manner that strengthens relationships while moving forward towards a common goal. The clear language of the TEAM model eliminates the potential for ambiguity or confusion in the classic AI simple-language steps as outlined by

Cooperrider et al. (2008). The TEAM model is designed to embed knowledge co-creation and utilization in a manner that counters the hierarchical structures existing in a health care environment (Hung et al., 2018). Figure 4 visualizes the proposed new AI-based TEAM model.

Figure 4

The Team Engagement Action Making (TEAM) Model



Note. A new AI conceptual model developed for use in healthcare organizations (Hung et al., 2018)

As shown in Figure 4, this new AI-based TEAM model aims to shift the attitude and practices of health care workers through positive dialogue, learning, reflection, and collaboration. The TEAM model explicitly identifies a process of continuous improvement that recognizes the interrelationship between individual development, team dynamics, trust, and inclusion. This approach applies directly to the Department of Surgery as an entity within an AHSC, where learning, collaboration, and patient-centred care form the core of the Department's mission.

The TEAM cycle is broken down into three main sections, each with three or four sub-components (Hung et al., 2018). The first section, appreciate the power of co-inquiry, correlates the traditional AI emphasis on inclusion and a positive focus with the intricacies inherent in a health care enterprise. By noting, "embrace complexity", the model conveys that complexity is not necessarily problematic; rather, it should be considered as necessary or in fact

advantageous as a part of the change process. The second section, build team capacity, has sub-sections of connecting the heart, connecting the head, and adapting to needs. This relates directly to authentic leadership: building strong and trusting relationships amongst health care workers promotes deep listening, reflection, and dialogue. Adapting to needs allows for local customization, which builds a sense of agency and ownership. Finally, the third section, continuous development, encompasses build a big tent, make it easy, real-time testing, and keep pace. This segment allows health care workers to step back and view the big picture of how their individual contributions make a difference overall. It keeps participants engaged in the process and provides another opportunity for storytelling and sharing of best practices. Finally, this aspect of the model allows participants to reflect on their success and continue the momentum forward.

Although this model was used on a small scale within a single Hospital, I believe it is well-grounded in the original principles of AI and clarifies the core AI elements as they relate to an acute care setting. It encompasses the classic stages of AI described by Cooperrider (2008), but in a model that gives specific language directing the process. For example, the “discovery” phase could translate into insisting on inclusion, focussing on what works, and embracing complexity. In my opinion, this clear phrasing and staging within the first conceptualization of AI suggests concrete actions, in contrast to the imprecise word “discovery”. I believe this mental and visual shift could play an important role for acceptance of the change framework in a tactile and results oriented subspecialty such as surgery.

The TEAM model specifically considers the impact of AI in enacting patient-centred care, leading the authors to conclude that that this approach has the potential to overcome knowledge gaps and propose actionable practices to move forward. This evidence and testing in a clinical setting could position the TEAM model for wider acceptance in the Department of Surgery at the very start of this process. I believe this model, and AI in general, are aligned with my OIP’s articulation of authentic and transformative leaders grounded in a positive, ethical, and

relationship-based framework. AI and the TEAM model embrace complexity, which is intrinsic in AHSCs: from a surgeon's perspective in a tripartite role; from an academic leader's outlook in reporting to multiple Presidents or CEOs; or from a manager's viewpoint in overseeing overlapping and sometimes conflicting institutional processes and procedures. Most importantly, AI and the TEAM model have a focus on inclusion, and their circular processes are driven by appreciation, team building, and continuous development. The complexity of the organization, drive for inclusion, and relationship to the proposed change model are further explored in the next section, which provides a critical organizational analysis.

Critical Organizational Analysis

This section will situate the PoP within the University and medical school strategic planning processes and consider further the impact of new public management on Departmental operations as it relates to research and recruitment. External influences associated with education curricula and accreditation will also be contemplated as they impact on organizational readiness for change. Finally, the relationship between the organizational state of readiness and the proposed AI change path models (Cooperrider et al., 2008; Hung et al., 2018) will be examined in carrying forward the prior analysis using the PESTEL framework (G. Johnson et al., 2008) and reflection on five key change beliefs (Armenakis & Harris, 2009).

University and Medical School Commitment to EDID

In the last few years, and in fact most intensely in recent months, Stone University has directed significant funding and attention to equity, diversity, inclusion, and decolonization, and has reflected upon how these concepts can permeate all aspects of the University's mandate and operations. The University's strategic plan was published in 2021 and includes a major focus on equity, diversity, inclusion, and decolonization ([Organization], 2021g). Following the release of the final report of the Anti-Racism Working Group to the President, the University announced a multi-million dollar allocation supporting a range of EDID initiatives ([Organization], 2021e). Shortly thereafter, the medical school released its strategic plan in 2021, which contains

a high level commitment to social accountability, and a specific mention of EDID therein, to be led by a new Associate Dean, with initiatives having an impact across the school ([Organization], 2021c). This builds on the movement over the last few years related to EDID, as the medical school admissions process was amended several years ago specifically to encourage, recognize, and admit higher numbers of qualified applicants from marginalized and racialized communities.

The University and medical school's public planning efforts reflect that the overriding sentiment advocating for change of a social justice nature has permeated the awareness and governance of our institutions. This validates the idea that governance is intertwined with values, culture, and purpose, and is changeable and responsive to important social issues. However, it also raises the question of whether this institutional focus will filter down to resource decisions and funding calculations at the Department level, or whether the resource commitment and priority setting will essentially remain siloed at the macro levels of the institution.

Still About the Money: New Public Management, Research, and Women

Academic Clinical Departments have increasingly, and perhaps unwittingly, been forced to adhere to the principles of neoliberalism expressed in New Public Management (NPM). The foundation for NPM is process and control principles including audits, reporting, and funding allocations dependent on metric calculations (Austin & Jones, 2016; Sporn, 2006; Sultana, 2012). NPM is also characterized in the Department of Surgery by an understanding and an expectation that academic, financial, and human resource reporting is often required by multiple funding and governing bodies. In addition to NPM practices, its vocabulary has been widely assimilated into the clinical academic enterprise, through emphasis on patient and student satisfaction, quality assurance, efficiencies, and responsiveness. These qualities are intended to oversee and ensure the judicious use of public funding but have an impact beyond that scope.

The NPM relationship between funding and research metrics is limited in absolute value

in terms of our current funding model, i.e., the share of funding distributed based on research output is relatively low and does not shift substantially from year to year because of the Department's size and sustained output relative to the entire medical school. However, the significance of the funding tagged to research – and the perception of the importance of research – impacts directly and indirectly upon women in academic surgery. These dynamics are multifaceted and challenging to measure empirically. For example, women are more likely to encounter delays in education or career progression due to pregnancy or family responsibilities. As such, they may possibly be excluded (or choose to self-exclude) from research teams and research mentorship seemingly to avoid disruption of research in progress. With less research exposure in their education or early in their careers, women may be discouraged in their ability to pursue research, which then creates a vicious circle: with less research output they present at fewer academic conferences, receive fewer awards in the research environment, have less opportunities for research collaboration, have lower numbers of publications, and are less likely to be considered as viable candidates for faculty positions at research-intensive AHSCs.

Even when women do succeed in research, they arguably suffer gender bias in publication rates and the H-index (Astegiano et al., 2019), which measures the influence of research publications, with both research productivity and impact considered essential standards to be assessed along an academic career path (Adams Newman & Brown, 2021a). "In hiring decisions, the evaluation of candidates' research and scholarly profiles tends to favour typical male career patterns. Under these conditions, a political culture may develop in which 'excellence' and 'merit' are equated with male career patterns" (P. Stewart & Drakich, 1995, p. 433). Moreover, it is not only career accomplishments that factor into recruitment decisions. Men are judged on potential, while women are judged on performance (Player et al., 2019). In professional disciplines such as medicine and surgery that have a tendency to focus on reputation and prestige, this can further disadvantage women applicants to faculty positions (P. Stewart & Drakich, 1995).

Certainly some authors reinforce the concept that a larger institutional investment in research will result in greater productivity for all researchers (Jongbloed & Lepori, 2016). This may be true on the surface; however, increased institutional funding and focus on research may also exacerbate gender inequality given that it exists under the weight of NPM. Because of the direct relationship to institutional funding, and notably to university rankings, research has a comparatively outsized perception of significance in terms of the Department of Surgery's reputation and success. The Department of Surgery at Stone University is known to be a research-intensive Department and recruitment to nearly all faculty roles is dependent on an applicant's demonstrated achievements in research and their expected research career trajectory. This absorption of NPM into the recruitment process illustrates evidence that academic surgery – and indeed the education and health care sectors – have been vulnerable to global trends extolling the virtues of competition, competence, and conformity (Lumby, 2012).

There are no easy answers to the quandary presented related to research and women in academic surgery. However, there is encouraging movement signalling readiness to embark on difficult conversations. Recent changes include a requirement for applicants to the Department's Internal Research Fund competition to include a statement on how EDID will be addressed in their work. This aligns with the CIHR requirement to address sex and gender as variables in research grant applications (Canadian Institutes of Health Research, 2021). In addition, a separate Internal Research Fund competition was added in 2022 to provide grant funds specifically related to an EDID project. These changes, along with the strong support of the Department of Surgery Chair/Chief and the Research Committee Chair, indicate substantial readiness to move forward in the change journey towards equity as it relates to research, at least insofar as the consideration of gender and equity in research stimulates the inclusion of women faculty and trainees in conducting research themselves.

EDID in Clinical Education: Missing in Action?

There are two organizations that oversee medical education in Canada: the Association

of Faculties of Medicine (AFMC), which is responsible for undergraduate (MD) education and school accreditation; and the Royal College of Physicians and Surgeons of Canada (RCPSC), which directs subspecialty training as well as accreditation at the individual and program levels.

Association of Faculties of Medicine of Canada (AFMC)

AFMC is the membership body representing academic medicine in Canada. Its sub-Committee, the Committee on Accreditation of Canadian Medical Schools (CACMS), reviews medical schools in Canada on a cyclical basis. AFMC has issued media statements condemning racism (AFMC, 2020), the need to improve the culture in academic medicine (AFMC, 2021), social accountability (AFMC, 2018a), and commented on income as an equity issue in terms of access to medical school (AFMC, 2018b). The AFMC website does not list equity, diversity, inclusion, and decolonization anywhere in their long list of priorities, although some items suggest that direction, e.g., Indigenous Health (AFMC, n.d.).

As a part of the medical school accreditation process, EDID is not specifically indicated to be assessed, although it is possibly captured in aspects of the review related to the learning environment (Committee on Accreditation of Canadian Medical Schools, 2021). Although the medical school curriculum was redesigned in recent years to contain Entrustable Professional Activities (EPAs) – essentially standards of performance for medical school graduates required for successful completion and transition to a residency program – nowhere in the EPA document is there a mention of EDID as it relates to identification and understanding of barriers and bias that occur in the health care system, and likely influence the patient's care journey of which the learner is a part (AFMC EPA Working Group, 2016). To my knowledge, there is no formal EDID curriculum required at the MD (undergraduate) level of education required by AFMC or CACMS, leaving a "hidden curriculum" intact – essentially socialization into biased normative culture, values, and definitions (Adams Newman & Brown, 2021b; Mahood, 2011) – subject only to intervention if pursued independently by faculty members and education leaders with an interest in this area. Thus, although there is a focus on EDID at the University and

medical school levels, it has not permeated the education that learners consistently receive across all Clinical Departments. Because there are many other required curricular elements, faculty involved in undergraduate education may be less ready or prepared to embark on a change process or revision of curriculum related to EDID simply because they lack awareness and information from an accreditation or medical school standpoint.

Royal College of Physicians and Surgeons of Canada (RCPSC)

The RCPSC is the accrediting body for postgraduate subspecialty training as well as for individual physician certification of competency through exams that occur following residency training. The RCPSC transitioned to a competency based medical education system (CBME) starting in 2017, with all programs now required to adhere to the new program content and standards (as of 2022). CBME is also known as Competence By Design (CBD), which is the RCPSC's trademarked name for this education and evaluation system (Royal College of Physicians and Surgeons of Canada, 2022). CBD at a high level does not directly mention EDID. However, both the medical school and the subspecialty program curricula are intended to follow the CanMEDS framework, which denotes the seven roles incumbent upon a practising physician to exemplify (Royal College of Physicians and Surgeons of Canada, 2021a). Among these roles is "Health Advocate", which does speak to a physician's obligation to help patients reach their full health potential who may be otherwise disadvantaged due to racial or socio-economic-demographic factors. None of the role descriptions speak to physician bias, although the "Scholar Role" does make mention of bias in research.

Although rather concerning that EDID and social justice have clearly taken a backseat in medical education, it has not been ignored at the RCPSC leadership level. The President, Dr. Susan Moffatt-Bruce, issued a public statement in March 2021 to outline the equity, diversity, and inclusion initiatives underway or planned to begin last year (Moffatt-Bruce, 2021). Notably, Dr. Moffatt-Bruce is a surgeon and the first woman to lead the RCPSC. Her message described in-reach and outreach initiatives for physician members of the RCPSC as well as working

groups that are intended to remedy gaps in education and to create an EDID-focused culture in subspecialty training programs. Compared with the absence of EDID from an undergraduate medical education perspective, this dialogue from the RCPSC is encouraging, both to highlight the importance of EDID to its members, and to send a positive message from an accrediting body that reinforces the importance of this work overall in terms of faculty human resources, education, research, and clinical care.

Putting AI into Action

Using a PESTEL analysis (G. Johnson et al., 2008) and through assessment of five key change beliefs (Armenakis & Harris, 2009), it would appear that the Department of Surgery, led by authentic and transformative leaders, is largely prepared to embark on a change process. There is a widespread commitment to equity in the Department of Surgery and evidence of its priority within the political, economic, social, technical and legal environments. This is essential as trust, openness, and a positive mindset are essential in order to employ AI effectively as a change path model, whether through the classic design of Cooperrider (2008) or the TEAM model proposed by Hung et al. (2018). Table 4 demonstrates the application of AI principles in my PoP in a general sense using the 4-Ds of AI.

Table 4

The 4Ds of Appreciative Inquiry and Application to the PoP

4-Ds of Appreciative Inquiry	**Application to PoP**
Affirmative Topic Choice	Creating a shared definition of what is meant in a positive sense for equity, diversity, and inclusion for women at the Department level.
1. Discovery	Expressing gratitude and recognizing leaders, members, and initiatives that support and encourage women in surgery presently.
2. Dream	Envisioning the future where all disciplines in academic surgery are a welcome and sought-after career path for women as faculty and leaders, and where education and research have overcome visible and invisible barriers to equity.
3. Design	Devising ideas for translating the vision into action. This stage excites, empowers, and engages the current leaders in the Department.
4. Destiny	Translating the design into cultural transformation through critical analysis, education, and training (e.g., social cognition/cognitive dissonance, implicit bias training, self-reflection), communication pathways, monitoring and evaluation.

Note. Application of an AI change model in the Department of Surgery (Whitney et al., 2010).

Table 4 shows that the AI principles of discovery, dream, design, and destiny create a

progressive framework by which to interpret past success and envision the future. It does not focus on deficits as the path towards problem solving, but rather analyzes on building capacity for change – individually and collectively – across the Department. Following the initial cycle, innovative ideas and concepts could spin-off into multiple AI phases, supporting and sustaining continuous improvement. This will be explored further in Chapter 3.

Solutions to Address the Problem of Practice

This section will outline five possible solutions to the PoP: do nothing; implement training requirements; recruit or appoint equity champions; review processes, standards, norms, and values through an EDID lens; or an integrated solution. These solutions will be assessed based on resource demands (time, human resources, and cost), availability, and potential efficacy.

Option 1: Status Quo

It is nearly always an option to continue with the status quo, particularly in this case, where there has been some advancement for women in terms of faculty appointments and promotion in the Department of Surgery over the past 15 years. Given the increased attention on EDID from the media, the University, and the medical school, it is possible that progress will occur even in the absence of Department-specific action. It is also possible that this movement, if directed from the macro level, will be accompanied by resources, rules, and process requirements that essentially aim to fulfill the mandate to increase the representation of equity-deserving groups in the faculty complement and at the leadership level. However, the literature and data trends have demonstrated quite clearly that up to this point, the status quo is unlikely to be an effective solution for correcting inequity affecting women in academic surgery.

Option 2: Training

Option 2, training, has several aspects to explore. First, there is the question of what training: employment equity training, diversity training, mentorship/sponsorship training, or implicit bias training. Second, there is the question of whether training should be mandatory or voluntary for faculty, staff, leaders, and trainees. Third, there is the question of frequency. There

is a vast array of training options that surely cannot be addressed all at once. However, it is incumbent on us to consider how training can help change perspectives and support advancement for equity in the Department of Surgery.

Employment Equity Training

The issue of employment equity training is perhaps the most controversial in terms of demonstrating effectiveness towards its intended purpose. As noted in Chapter 1, employment equity legislation in Canada has been assessed as weak and absent of both scrutiny and penalty (Henry et al., 2017). Furthermore, employment equity training is not presently a requirement for clinical faculty or members of Appointments Committees in Clinical Departments at Stone University. Even if it were recommended, it may not be a good idea as the weight of the backlash to employment equity training is profound (Henry et al., 2017).

While appearing to support objectivity and merit, the force of the backlash displayed following training strongly counters the intent of the legislation. For example, men tend to indicate agreement with the principles of employment equity when it is framed in terms of merit and fairness; express support to a lesser extent when emphasized as it relates to hiring and instruction; and show definite antagonism in the case of special treatment. “Moreover, when employment equity directives are strengthened, there appears to be a subtle backlash for women but not for men” (Ng & Wiesner, 2007, p. 177). Thus, there emerges a clash between the aspiration of institutional equity policies and the actual outcomes, such that “equity policies, namely, that their presence has the potential to contain or restrict equity" (Henry et al., 2017, p. 207). Therefore, I do not believe that employment equity training is an optimal solution in altering power dynamics and gender representation in the clinical academic workforce.

Diversity Training

As a stand-alone experience, the literature on diversity training is mixed, even within large scale analyses. Some studies present diversity training as a solution for increasing cultural skills, improving productivity, and engendering the loyalty of some workers (Bezrukova et al.,

2016; Saira et al., 2020). Other studies report that diversity training possibly achieves a mildly positive result related to cognitive learning such as skills and knowledge, but a negligible imprint on changing attitudes (Bezrukova et al., 2016; Karalić, 2016). Or worse, some studies show that diversity training evokes a backlash (Bezrukova et al., 2016), eerily echoing analysis of the effects of employment equity legislation and training discussed earlier.

Diversity training may be more effective when internal leaders serve as trainers and role models (Karalić, 2016); however, I would raise the concern that leaders may not necessarily be effective trainers, particularly if they are not genuinely committed to diversity in their organizations. Critics have noted that diversity training can create an “us vs. them” scenario, where members of the majority group, e.g., white men, feel targeted, despite its intent to make people aware of their prejudices while providing recommendations for alternate behaviour. Indeed, contrary to transformative leadership principles, this may be the hallmark of diversity training: it focuses *not* on why inequality exists, but on *how* to eliminate it (Cocchiara et al., 2010). Two opposing approaches are possible in diversity training: it can highlight how individuals are similar in order to build relationships through appreciation of common characteristics, or, it may focus on unique elements that emphasize the importance of individuality (Holladay & Quiñones, 2008). Unfortunately, even with multiple options and approaches available, I am not convinced that stand-alone diversity training has clear evidence of its benefits and impact to be recommended as a possible solution.

Mentorship/Sponsorship Promotion and Training

Although mentorship is widely recognized in academic surgery for its role in ensuring faculty career progression and success (Cochran et al., 2019), mentors are commonly not provided training and do not receive feedback on their mentorship skills with the goal for improvement, with poor mentorship having little or no consequences (Hund et al., 2018). Despite the lack of training, mentors are assigned multiple roles with respect to faculty and students, including setting standards, providing introductions and opportunities for collaboration

and networking, assisting with problem solving, and potentially mediating conflicts (Hund et al., 2018). Mentorship Committees became a requirement for all Assistant Professors in 2018 in accordance with the new governance agreement for clinical faculty at Stone University ([Organization], 2018a), and in 2022, a brief (one-hour) asynchronous training program was launched for clinical faculty mentors and mentees in the medical school. This mentorship training is voluntary, and its effectiveness remains to be determined given its newness. There are also efforts underway to rectify inconsistency in mentorship Committee activity across the Department and the medical school.

In comparison to mentorship, sponsorship has been promoted as a more effective tool to support the advancement of women in academic surgery. “Sponsorship in contrast to mentorship is often an episodic, transactional relationship that is critical for high-level advancement” (Levine et al., 2021, p. 2). This could, for example, involve anonymous nominations for awards or leadership positions. Unfortunately, this places sponsorship at odds with leadership roles in academic surgery, where expectations and norms for behaviour include concepts such as transparency and merit-based advancement. In addition, sponsorship is susceptible to gender-specific expectations, such as where women appear more concerned than men about the negative optics of self-promotion, or are perceived to need higher levels of support from sponsors for career advancement and credibility (Levine et al., 2021). Gender bias, it seems, is alive and well even in positive aspects of career support such as mentorship and sponsorship.

Sadly, if there was little information available in terms of mentorship training programs, there is virtually nothing when it comes to sponsorship training. Therefore, while sponsorship may be a long-term answer, it may have to become a natural outgrowth of mentorship, as discussed earlier in this OIP with respect to second order change. The development of mentorship training at the medical school is encouraging given its widespread availability and low cost. However, given the paucity of research-informed information on mentorship and

sponsorship training, at this point, I hesitate to recommend either as mandatory training components within the solutions suggested in this OIP, despite their potential important influence in the development of women's careers in academic surgery.

Implicit Bias Training

The concept of implicit bias has become familiar in academia and healthcare, although training on implicit bias is far from uniform in delivering an impactful and sustained message. It stems from the desire to inform and educate on the social, political, and environmental influences that shape identity and the socialization of images, where "meaning is negotiated between the producer and the viewer, reflecting their individual social/cultural/ political beliefs, values and attitudes" (R. Smith, 2014, p. 467). This conceptualization of bias links identity, particularly in a professional field, with concepts of prestige and power. An understanding of implicit bias in the context of hierarchical organizational structures and decision-making is therefore essential, where there is potential to create a precarious situation where the "other" is viewed in a deficit-based model, risking an exercise of power in a manner that reinforces prevailing social constructs and hegemonies (Lumby, 2012).

Purpose. The bedrock and purpose of implicit bias training is not to eliminate bias, but to convey that bias is expected and normal. There is no finger pointing, blaming, or shaming in bias training because bias is not limited to one gender, occupation, culture, or socio-economic demographic. However, the universal prevalence and deeply ingrained nature of bias does not excuse the nefarious role it often plays in perpetuating discrimination and injustice. "Moreover, these concepts have advanced our understanding of how "good people," those who ostensibly endorse egalitarian values and do not believe they are part of the problem, contribute to the persistence of systemic oppression often unwittingly" (Applebaum, 2019, p. 131). Therefore, it is only when we have an awareness of our own bias and its impact on our work and relationships that we can consciously choose alternate thoughts and actions that support social progress, including equity, diversity, inclusion, and decolonization.

Tools and Cost. The most common tool to gauge bias is the online Implicit Association Test (*Project Implicit*, 2011). This test considers speed of response to associate images with positively or negatively charged words in order to measure bias. However, this is not implicit bias training. The test is context specific and does not clearly predict behaviour or outcomes (Fitzgerald et al., 2019). This is merely an easily accessible starting point to raise awareness as to the existence of bias, despite self-perceptions of neutrality and acceptance. The online bias tests are free. Clearly training would come at a cost; however, I would expect there to be a range of budgetary options that could be delivered by internal or external professionals.

Effectiveness. The dilemma though for implicit bias training is whether drawing awareness is sufficient to instigate corrective behaviour and actions. By focusing on individual beliefs, such training may actually allow for bias to persist by obscuring the relationship between collective bias and institutional power structures. Furthermore, the confession of bias in training may sustain an illusion of remediation through performance (Applebaum, 2019). It is just not that easy to achieve social justice through bias training alone. Studies in fact report mixed results, including limited efficacy in behaviour change, with the training being effective in reducing, but not eliminating implicit bias by raising awareness, at the risk of backlash from exposure to stereotypes (Atewologun et al., 2018). This can be particularly problematic, as noted by Fitzgerald et al. (2019):

> Ineffective training sessions may give participants and companies false confidence when in fact the training has had no ameliorative effect. False confidence in this area is particularly problematic because there is evidence that being asked to reflect on instances where one has behaved in an unbiased manner actually increases implicit bias, while reflecting on presumed failures to be unbiased reduces it. (p. 2)

This criticism does not dismiss the benefit of implicit bias training altogether; rather, it points to the importance of selecting effective interventions to follow awareness training. A systematic review of implicit bias training concluded that the most effective interventions included:

intentional strategies to overcome bias; exposure to counter-stereotypical exemplars; identifying the self with the outgroup; evaluative conditioning; and inducing emotion (Fitzgerald et al., 2019).

Make it Personal: Counter-Narrative. Although not examined by Fitzgerald et al. (2019), another intervention to mitigate implicit bias is the judicious use of counter-narrative. Counter-narrative is storytelling that presents an alternative reality experienced by marginalized groups that would not be readily apparent to those in power (Miller et al., 2020). Counter-narrative is a tool to be employed for self-reflection and movement beyond innate beliefs and biases. While implicit bias manifests as subconscious assessments and actions, counter-narrative brings prominence to marginalized voices. Counter-narrative provides context and contrast with the perceptions of members of dominant groups, perhaps then aligning with several successful intervention options specified, including identification with the outgroup, exposure to exemplars, and inducing emotion. It layers an understanding of reality with nuance, personalizing and enriching the experience for those telling and hearing the stories (Miller et al., 2020). With this appreciation, the relational bond between listener and storyteller is strengthened while providing a viewpoint that would otherwise have remained hidden. Members of majority groups within the organization are provided with a novel or perhaps unexpected version of events that highlights injustice and bias, *from one of their own,* making it is much more difficult to ignore or dismiss the perspective of a valued colleague. The benefit to the storyteller is validity; to the listener, perspective; and to the system, transformation.

The danger to inclusion of counter-narrative also needs to be considered at a personal level and as a threat to the perceived validity of bias training in general. Negative experiences for individuals can form an inequity loop that perpetuates the very discrimination we are attempting to eliminate (Miller et al., 2020). Sharing a vulnerable experience may be avoided by some participants for fear of becoming a target of scorn, derision, or pity, or in having the information used against them. Miller (2020) suggests the possibility of using composites or

anonymous contributions as counter-narrative. However, the peril in doing so is that a disassociated narrative may dilute the power of counter-narrative and be dismissed by majority groups as exaggerated or untrue if it is not presented by a known, trusted figure.

Counter-narrative supports the pursuit of social justice and equity by reinforcing the concept that words have power and we can shift dynamics by giving presence and emphasis to new perspectives. It ties in with both authentic and transformative leadership through an appreciation for the limits of conventional knowledge, while probing individuals to be considerate of others, contemplative of new ideas, and culturally sensitive. Central to the views of authentic and transformative leadership, counter-narrative encourages a critical self-reflection of beliefs and biases. Counter-narrative provides the ability to reveal biased assumptions, covert barriers, and difficult circumstances faced by members of marginalized groups, thus shifting culpability for underachievement from the individual to the system at large. It creates a framework for the re-examination of concepts in academic surgery such as authority, rationality, and merit that have embedded prejudice through definitions created primarily by and for a white, male, Euro-centric cultural model (Cameron et al., 2020). This concept though requires caution and leadership, so that the use of counter-narrative in the examination of implicit bias does not appear to be judgmental or threatening, but rather signals that introspection and internalization can become a transformative force for positive change.

Mandatory vs. Voluntary

Mandatory training sends a strong message of organizational commitment; however, it also sets up the possibility of resistance to training, particularly from academic surgeons who have many other competing priorities for their time and attention. On the other hand, voluntary training sends a message that it is not fully endorsed by the leadership, required for effective intervention in relation to bias, or is necessarily a judicious use of available time. Full implementation of training for the entire Department naturally carries a much greater and immediate cost than a slower, staged progression. There may be a balance to mandatory vs.

voluntary training, particularly in the early stages of the change process.

Frequency

Implicit bias training is not a one-time event. However, frequent repetition of training is a significant investment in time and resources. Nevertheless, repeat sessions do not necessarily need to be extensive. For example, they can highlight the thematic issues, and provide an opportunity for a “bias check-in”, or further exploration of a specific area of interest to the training participants. Frequency is another issue to consider as part of the change solution.

Option 3: Equity Champions

I propose that there are two choices for equity champions, which are inversely related in terms of support and cost: hire an Equity Officer or appoint Equity Champions who have existing leadership roles in the Department of Surgery.

Hire an Equity Officer

The more expensive but fulsome option is to hire a new professional level staff member in the Department with a focus on EDID. This individual would have full-time hours, and be capable of delivering training sessions, developing curricula, and providing faculty recruitment and promotion support with an EDID lens. The Equity Officer would serve as a liaison with the medical school and University EDID offices. This recruitment also emits a positive message internally and externally about the Department’s prioritization of EDID in our operations. Unfortunately, in a resource constrained environment, I feel this is unlikely to be the preferred option, although having a dedicated individual would no doubt provide the highest level of support for progress in this field.

Appoint Equity Champions

The more realistic option from a budgetary standpoint – and possibly from a faculty buy-in standpoint – is to appoint Equity Champions in the Department, such as Division Chair/Chiefs, Committee Chairs, and the EDID Committee members to serve as leaders and sponsors. The responsibility for EDID measures, ultimately aimed at increasing the

representation of women faculty and leaders, would fall to academic leaders in separate, but meaningful ways. This vision upholds that “success depends on a broader base of support built with other individuals who act first as followers, second as helpers, and finally as co-owners of the change” (Nadler & Tushman, 1989, p. 200). For example, the Division Chair/Chiefs would need to be EDID Champions as a part of the appointment and promotion processes, while the EDID Committee members would lead efforts to host guest speakers, build collaborative academic research teams in EDID, provide personal support related to EDID, and promote networking opportunities for women and other equity-deserving groups. Between these two groups of Equity Champions, the Department will build capacity for EDID work and inspire change.

The danger remains however that academic leaders have many other demands on their time, and as humans, may resist deviating from current processes that they perceive to be efficient and effective. Therefore, unless it is of genuine personal interest, the vision of these leaders serving as true champions for EDID may never become a reality. On the other hand, a leadership-endorsed focus on EDID not only encourages new scholarship and interest but provides an opportunity for the Department and the University to cultivate internal expertise and possibly to become a leading, national expert in the field.

Bring in the Experts and Prove It

Perhaps nowhere more so than in academia and healthcare is it important to bring in experts to impart essential, factual information. This does not necessarily mean external consultants; there may be some local experts given the increasing academic productivity related to EDID within the Department, the medical school, and the University. Experts convey a sense of legitimacy and urgency to the topic while delivering the message in a format specifically intended for an academic audience. Grand rounds are a regularly scheduled event in the Department that have an established budget and are normally well-attended. I have agency in suggesting speakers, topics, and in organizing and disseminating information on grand rounds.

Pivoting at least one or more grand rounds session per year to this vital topic reinforces its value and delivers another opportunity for education, networking, and developing a culture that accepts and promotes EDID. Academia and health care are two fields where research-informed evidence is expected to govern decision-making. The need to “prove it” relates to providing Department-specific data demonstrating ongoing inequity, expertise to validate the lack of progression for women faculty and leaders, and to providing education on historic inequities across academia and healthcare as well as the current context for EDID initiatives promoted by the medical school and the University.

Option 4: Review Processes, Standards, Norms, and Values Using an EDID Lens

Re-examination of processes using an EDID lens can be approached from several angles. This relates to consideration of whether faculty recruitment competitions are in fact open, attract an equitable pool of candidates, and conduct candidate assessment using techniques that counter the impact of bias and promote equity. Each of these steps needs further attention in the Department of Surgery, where candidates who are Canadian citizens or permanent residents and Canadian-trained, can now be presented as the preferred (or only) option to the Department’s Appointments Committee, without having advertised the specific position, and without explanation of other candidates considered (if that occurred). Often this pool of recruits comes from the Department’s graduates.

Where Divisions do not already have a preferred candidate, advertising requires University approval, and ads are placed in three mandatory locations as well as at least one subspecialty specific venue. However, assessment of candidates typically occurs at the Divisional level, without the Department’s Appointments Committee’s oversight. It is only in cases where foreign nationals are actively considered part of the applicant pool that all applications are brought to the Department’s Appointments Committee. There is no doubt that these processes limit the applicant pool and potentially perpetuate bias in recruitment, especially since bias training is near absent for clinical faculty and leaders institutionally. This

creates a scenario where faculty recruitment is in effect a series of one-off decisions reflecting the status quo more so than our overall commitment to equity. Although I have formal responsibility and agency in the administrative aspects of the Department's recruitment process, I would need the academic leadership to endorse the implementation of fulsome advertising and assessment processes to be overseen in all instances by the Department's Appointments Committee, or at a minimum by a subset of equity and bias-informed Committee members should there remain no institutional mandates in place.

As women come forward in the appointment and promotion processes, Committee members will need to contemplate the impact of implicit bias on faculty evaluations of teaching as a key element of the application or promotion dossier being assessed. Various studies show mixed results. One large-scale study proved a strong association between physician gender and evaluation score, where women physicians received lower scores in all clinical subspecialty areas when rated by medical students but not so when rated by residents (Morgan et al., 2016). Other studies show consistently lower ratings for women physicians when rated by residents, but only in certain aspects, for example, depending on setting (in-patient vs. out-patient) or domain (professionalism vs. medical knowledge) (Angelo et al., 2019; Sheffield et al., 2021). Therefore, the Appointments and Promotion Committee may need to dive deeper into faculty evaluations and investigate whether bias appears to have been a factor in the results before using this data to make a recommendation for recruitment or promotion.

Finally, processes related to faculty promotion will need to be considered using an EDID-informed lens. The literature suggests that clarity in faculty promotion processes can help narrow the gender gap (Van Miegroet et al., 2019); however, that does not change the structure or procedures of the process itself. One novel study published recently postulates that the perception of competition – and willingness to engage in competition – differs significantly for men and women. This variance in competitive participation (more for men, less for women) can be mitigated by using an "opt-out" process (He et al., 2021), ideally targeted to women who

have yet to go forward for promotion from the rank of Associate Professor to Full Professor, as this is not a required stage for career progression. Opting-out does not appear to affect well-being for men or women. Thus by reframing the structural aspects of promotion to be one of "opting-out" for moving forward in the promotion process once a faculty member has reached a certain threshold for accomplishment, academic surgery could be more successful in having women achieve the highest academic rank (He et al., 2021).

The option to set standards in terms of representation of women on governing and leadership selection Committees is challenging given the low number of women faculty and leaders in the Department at the current time. Setting minimum standards of women faculty in these positions could place a heavy burden on a limited number of individuals. However, by specifying such requirements, the Department would be sending a strong message about the importance of inclusion in every aspect of the Department's governance and operations. This is a challenging trade-off that will need to be considered both by the leadership and by those individuals who would potentially be called upon to participate.

Whether in the appointment and promotions processes for faculty, in the selection of leaders, or across every aspect of Department operations, there must also be a discussion of norms and assumptions of "default". Social constructions of gender are deeply rooted in society, particularly in the professional culture of medicine shaped by male images and career patterns (Cameron et al., 2020; Manning, 2018). These norms and gender stereotypes continue to have a hidden impact on appointment and promotion processes, despite the perception that they are neutral and merit-based (Acker et al., 2012; Teelken et al., 2021). We are just not nearly as objective as we think we are in assessing performance or in selecting candidates.

Therefore, whether as a part of bias training, in Committee discussions, in educational materials, or in Departmental presentations, leaders must be clear in articulating our definitions and values as they relate to equity, inclusion, diversity, and decolonization. Open dialogue will need to consider norms, inclusion, and representations of gender and race with respect to

research, images, symptomatology, treatment differences, and equipment. It is within my agency to draft presentations for leaders and to be present and serve as a resource in all Departmental Committees, as I am already an Ex-Officio member. Honest, and perhaps uncomfortable discourse is required to redefine normative assumptions and definitions of merit, productivity, value, career progression, and success. Words and images have meaning. They convey power. Equity needs to become a constant conversation in the Department of Surgery.

Option 5: Integrated Solution

The call to increase the representation of women faculty and leaders in academic surgery is unlikely to be answered through maintenance of the status quo. However, it will also not be solved with a single antidote. Although it would be inefficient to attempt every option simultaneously, there surely is benefit to pursuing more than one option at a time given their interconnectedness, and knowing that we will still require thoughtful deliberation, diligent planning, extensive testing, and thorough review as a part of multiple AI cycles. For this reason, I recommend a range of options be implemented concurrently, as follows:

1. Implicit bias training be made a mandatory, annual event for Appointments and Promotion Committee members and Committee Chairs, followed by a voluntary option for enrolment open to the entire Department.
    a. Counter-narrative, or some method of connecting EDID with personal and relevant experience, be provided as a part of implicit bias training.
    b. Concrete data, literacy on historic inequity, and education on definitions of EDID as well as current EDID mandates (e.g., the TRCC's calls to actions) be provided a part of the training and education process.
2. Equity champions be appointed among the faculty leaders, to serve as inspirational role models, educators, and sponsors, and to keep the conversations on EDID ongoing in Department governance and operations.
3. Experts be brought in to impart legitimacy for EDID efforts, to convey a sense of

importance and urgency, and to provide a higher-level context, as presenters to the entire Department for (existing, scheduled) grand rounds.

4. Processes, standards, norms, and values, be reviewed regularly through an EDID lens in terms of appointments and promotion processes, leadership selection, Committee composition, and Committee deliberations.

Solution 5 involves multiple aspects of options presented in solutions 2-4, selected as a balance in terms of impact, resource use, availability, and effectiveness. It also speaks to the need to have ongoing, mandatory training to begin at least with leaders in specific Department roles. The factors leading to this recommendation will be reviewed in the next section.

Solution Comparison and Recommendation

The solutions offered in this OIP can be assessed in terms of resource requirements and the potential they have to address the gap between the current status and the desired outcome of equity for women in academic surgery. Table 5 provides my interpretation of resource intensity, availability, and potential efficacy for each of the solutions (or components thereof) as proposed. For example, employment equity training is currently offered to some employee groups at Stone University. It is not a long course in terms of time commitment, but it does require dedicated HR staff to deliver the training. If provided by the University, this would not come at a great cost to the Department. It is currently available; however, as evidenced in the literature, is not particularly effective at increasing equity in the workplace.

Table 5

Solution Resource Requirements, Availability, and Potential Efficacy Comparison

Proposed Solution	Resources Time	HR	Cost	Currently Available	Potential Efficacy
1. Do Nothing	Low	Low	Low	Yes	Low
2. Training					
a. Employment equity training	Low	Medium	Low	Yes	Low
b. Diversity training	Low	Medium	Medium	No	Low-Medium
c. Mentorship training	Low	Low	Low	Yes	Unknown
d. Implicit bias training	Medium	Medium	Medium	Yes	Medium-High
3. Equity champions					
a. Hire equity officer	High	High	High	No	High
b. Appoint equity champions	Medium	Medium	Low	Yes	Medium
c. Experts/Prove it	Low	Medium	Medium	Yes	Medium
4. Review process, standards, norms, values	Low	Low	Low	Yes	Medium
5. Integrated solution	Medium	Medium	Medium	Yes	Medium-High

Note. The integrated solution will be divided into three solution cycles in Chapter 3.

Cost in terms of time, human resources, and budget is certainly an important factor in assessing possible solutions, as considered in Table 5. It may in fact be a deciding factor against the solution proposed to hire an equity officer, which is prohibitively expensive in an environment where physicians themselves fund a large share of the Department's operating budget. Nevertheless, perhaps equally, if not more important, is the assessment of each solution's possible impact, based on the literature discussed throughout Chapters 1 and 2. Although each option has the potential for improving equity for women surgeons in the Department of Surgery, if embarked on in isolation, solutions 1-4 have a much lower likelihood of global impact and success. The preferred solution that will be explored further is #5, integrated solution. The integrated solution involves implicit bias training, appointing equity champions, presenting information and expertise, and considering processes, standards, norms, and values using an EDID lens. This will be segmented into three solution cycles using an AI change framework in Chapter 3. Overall, by selecting an integrated solution that contains medium to high efficacy and low to medium cost, I believe that momentum can be gained towards achieving equity for women in academic surgery.

Leadership Ethics, Equity, and Social Justice Challenges in Organizational Change

This OIP comes forward at a time when social justice for marginalized peoples has

gained the collective attention of our nation. As we come to terms with our troubled history through the report and recommendations of the TRCC (Truth and Reconciliation Commission of Canada, 2015), the role of higher education is clear in its mandate to serve as a pillar for equity, diversity, inclusion, decolonization, and social justice. But media attention is not the sole driver for change for this OIP, nor should it detract from the enduring obstacles that preclude the equitable participation of women in academic surgery. This section will discuss leadership ethics, equity, and social justice challenges in organizational change.

Ethics

The call for ethical leadership has become prominent worldwide across a myriad of domains. In the context of academia, ethical school leadership aligns with equity and inclusivity, concerned with social relationships delivering education as a moral purpose (Wood & Hilton, 2012). “Ethical leaders, in this professional context, are those who act fairly and justly. They are viewed as caring, honest and principled persons who make balanced decisions and who communicate the importance of ethics and ethical behaviour to their followers” (Ehrich et al., 2015, p. 199). Promoting inclusion, respect, and collaboration with students and colleagues, ethical leaders ensure the achievement of all students. This encompasses the principle of an “ethic of care” where concern for the person – particularly those who have been marginalized to date – is of primary importance (Ehrich et al., 2015; Wood & Hilton, 2012). An ethical leader expresses loyalty to the person, respecting their dignity and right to present themselves and their beliefs openly and honestly, without fear of repercussions or of damaging the relationship.

Viewed through the lens of an ethic of critique, a leader nurtures an environment built on democratic principles that is critical of power structures embedded in relationships, practices, policies, and organizations which present as barriers to fairness (Ehrich et al., 2015; Wood & Hilton, 2012). This is challenging as people often go through work and life following what they consider to be standards or typical ways of knowing and doing, which is in fact perpetuating oppression, even though they do not see their actions in that light (Young, 2011). Therefore, it

requires an ethical leader to have the courage and strength to make changes to shift the structural elements of an organization, despite the Sisyphean image that it provokes in relation to a large and complex bureaucracy.

The invisibility of systemic oppression makes it even more difficult to address. Although structural injustice clearly disadvantages some groups, it does not necessarily manifest as an obvious, intentional, and dichotomous benefit-bias pattern favouring one group over another. Rather, systemic oppression appears through the established "exercise of power as the effect of often liberal and 'humane' practices of education, bureaucratic administration, production and distribution of consumer goods, medicine, and so on" (Young, 2011, p. 41). Welton et al. (2018) add:

> This institutionalization process is why embarking on the change needed to achieve racial equity in education—or any change for that matter—is rather difficult, because it forces institutional members to call into question how the norms, practices, and routinization they have long grown comfortable with may in fact be the cause of racial inequities that are injurious to marginalized students, faculty and staff, and even the surrounding community. (p. 2)

As described by Welton et al. (2018) in this quote, institutional processes are designed to perpetuate the status quo through policies and procedures that outlast the careers of those who manage them. Therefore, this work must be continuous at a systemic level to be effective.

Leadership and change require an ethical grounding (Burnes & By, 2012) in order to achieve movement beyond dialogue into conscious, measurable, and intentional action. This is especially true in medicine, viewed through the perspective of an ethic of the profession, where physicians take the Hippocratic Oath at the start of their training, promising to uphold ethical professional standards (History of Medicine Division et al., 2012; Wood & Hilton, 2012). The first step on the path to action is to recognize and call out sexism that continues to exist in education and health care. The second step is to question critically whether dominant perspectives, ideals,

and beliefs add to the problem. This may be uncomfortable for majority groups in realizing the privilege they have enjoyed that contributed unsuspectingly to their success. However, discomfort is not a reason to avoid difficult conversations, and undeniably, this is well understood by academic surgeons whose labour often lingers in the space between health and sickness, or even life and death. We can use that fortitude as a tool for awakening and understanding in the quest for equity and social justice.

Equity

Scientific advancements made in the 20th and 21st centuries are nothing short of remarkable. Public health measures increased lifespans and quality of life, vaccines and medical treatments eradicated devastating illnesses or turned them into manageable chronic conditions, and healthcare became not only widely available, but transformed into a universal human right for all Canadians starting in the 1940s (Marchildon, 2018). However, equality between men and women in medical school graduation rates did not occur until 1996 (Association of Faculties of Medicine of Canada, 2019), and the abysmal rates of women trainees, faculty, and leaders in many surgical subspecialties persists to this day (Cameron et al., 2020; Sexton et al., 2012). “Changes in society and culture are often slow and difficult to implement, but without ongoing awareness, gender equality cannot be achieved” (Llorens et al., 2021, p. 2049). This is clearly the case at Stone University and in Canada as a whole.

Solutions to this OIP focus in large part on leaders directing deliberate and conscious attention to equity, because despite the progress made to date, barriers for women in surgery still arise at every point along the way in their training and career progression. Returning to Justice Abella’s definition of equity, meaning *substantive equality*, our attention must remain on the removal of obstacles and discrimination that impede access to equal opportunity in the workplace (Agócs, 2014). Change in this sphere will require a multi-faceted approach propelled forward by ethical leaders and equity champions who are willing to challenge the status quo, speak up and speak out, and embed principles of social justice into recruitment and promotion

practices, research support, education curricula, and clinical care.

Social Justice

This OIP is a reflection of social justice principles at its core: to achieve equitable representation of women in all academic surgical subspecialties. This is necessary not only in terms of the advancement of women in a traditionally male dominated field; in fact, the inclusion of women surgeons improves overall patient care and outcomes (Hay et al., 2019), recognizes the importance of representation of women surgeons as role models and leaders in AHSCs, and supports a diversity and inclusion orientation that permeates across education, research, and clinical care spheres. Social justice is not achieved through a melting pot of differences; rather, it requires that leaders and organizations demonstrate care and respect for individual and group distinctions without oppression (Young, 2011). Therefore, ethical leadership – as envisioned through authentic and transformative leadership – is necessary to inspire, encourage, and shepherd social change through to completion. Shields (2010) observes:

> The common elements in these transformative approaches include the need for social betterment, for enhancing equity, and for a thorough reshaping of knowledge and belief structures—elements that reappear as central tenets in the concept of transformative (although not so necessarily in transformational) leadership. Transformative concepts and social justice are closely connected through the shared goal of identifying and restructuring frameworks that generate inequity and disadvantage. (p. 566)

This OIP is about more than integrating women into a traditionally male-dominated sphere. Its ultimate purpose is to weave leadership in social justice – represented through an equity perspective – into fundamental aspects of academic surgery.

Leadership Responsibilities and Commitment

As previously discussed in this OIP, leadership is a layered partnership between faculty and administrators in the Department of Surgery. My agency – and perhaps any leader's agency in terms of ethics, equity, and social justice – rests firmly at the micro level. In this

regard, as an authentic leader possessing strong, trusting, and longstanding relationships with our academic leaders, I may be called upon for individual or group conversations that explore further the theoretical constructs delineated in this OIP that support progress towards equity for women in academic surgery. True to authentic and transformative leadership principles, this does not entail merely the provision of new information. It involves facilitating introspection, critical analysis, advocacy, and an unwavering commitment to social justice, in order to recruit and empower leaders as equity champions.

At the meso level, my agency will be to connect the Department's functions with institutional mandates and initiatives related to EDID, as well as to operationalize the preferred solution. I am the already the person responsible for the administrative aspects of the Department recruitment processes, organizing and tracking training requirements, providing data, and managing all of the logistics related to extending invitations to experts and guest speakers. My role includes drafting Department communications, policies, and procedures, which will need to be completed as we categorically declare our values and reconceptualize processes, norms, standards, support, and expectations using an EDID lens so as to foster the appointment and promotion of women in academic surgery. This could also require redefining staff responsibilities that support EDID as a part of our academic and clinical mandates, which is within my formal responsibilities. In short, the role of the academic leaders is to endorse the vision. My role is to make it happen.

Chapter 2 Conclusion

Meaningful change will only occur when we profoundly explore our core beliefs and values, in order to inform our actions, and help us achieve a newfound conceptualization of the challenges before us (Buller, 2014). Chapter 2 fulfilled this purpose through a deeper examination into organizational elements affecting and guiding the change process, including authentic and transformative leadership, cognitive dissonance and sensemaking, alignment with institutional mandates for EDID, the effect of New Public Management on research funding, and

the lack of EDID focus in surgical education and from an accreditation standpoint. Chapter 2 explored the application of AI as a change framework as classically designed by Cooperrider et al. (2008) and subsequently adapted into the TEAM model specifically for a healthcare setting by Hung et al. (2018). Chapter 2 offered an extensive discussion of possible solutions, with an integrated solution proposed to address the major issues relating to barriers and biases that inhibit the appointment and promotion of women faculty and leaders in academic surgery. Finally, Chapter 2 examined ethics, equity, and social justice more closely as they relate to education, healthcare, and agency. The progression of Chapter 2 from beginning to end carried the vision of leadership from analysis to frameworks to social justice. Chapter 3 will provide a detailed plan for the next stages of change: implementation, evaluation, and communication.

Chapter 3: Implementation, Evaluation, and Communication

Chapter 3 may be the closing segment of this OIP; however, it also serves as a starting point for the journey ahead in addressing my PoP: to focus attention and guide actions aimed at resolving the barriers and biases in our sphere and control that impede the appointment and promotion of women into faculty and leadership positions in academic surgery. Chapter 3 elaborates on the use of appreciative inquiry (AI) as a change framework for the proposed integrated solution, which includes implicit bias training, appointing equity champions, presenting evidence and expertise, and reviewing processes, standards, norms, and values using an EDID lens. It will briefly discuss change in academia and health care and explore a three-stage AI cycle for implementation, followed by plans for evaluation and communication aimed at achieving progress in equity measures for women in academic surgery. Finally, next steps and future considerations will be presented in this Chapter. Like the principles of AI itself, the change process will be a circular, living, and evolving path forward that embraces the uniqueness and strengths of the Department of Surgery at Stone University.

Change Implementation Plan

The change implementation plan for this OIP is intended to allow the Department of Surgery to reach our potential for gender equity with a strong but flexible framework that offers an opportunity to address many of the factors identified extensively in the literature (Ellinas et al., 2019; Rouse et al., 2020). To be most effective, the change plan requires a structure that is organized, socially oriented, inclusive, well-communicated, and championed by trusted leaders (Dudar et al., 2017). This section proposes a change implementation plan based on the principles of AI: forward-thinking, positive, and strengths-based. It will amalgamate key factors such as institutional focus, context, scale, and leadership, with the principles of continuous improvement (Welton et al., 2018). I believe this reinforces the appropriate use of AI in organizational learning as a dynamic and inclusive process that is intentional, meaningful, and motivating (Belle, 2016).

Appreciative Inquiry as a Change Framework

Appreciative inquiry is established on the principle that we can create the best possible future by focusing on images of what we do right, and what we envision to be the ideal, rather than to linger on deficits and faults (D. Cooperrider et al., 2008; Magruder Watkins et al., 2011; Reed, 2007). This is reinforced in the literature through the emphasis on questions to understand, explore, and relate to the issues being considered. “Underlying AI is a belief that the questions we ask are critical to the world we create” (Preskill & Tzavaras Catsambas, 2006, p. 2). AI is therefore a philosophy as well as a process. Concerns have been raised that AI invalidates or supresses negative organizational experiences (Bushe, 2011); however, AI is not directed towards solving a problem. It is a reframing of a change plan and represents a fundamental shift in how we make sense of the world and see ourselves as a part of the solution (Preskill & Tzavaras Catsambas, 2006).

AI is based on the belief that reality is a social construct, and therefore language, discourse, and storytelling emerge as central precepts that guide all change interventions. The change process becomes an appreciation for what has been achieved and an exploration of possibilities for future opportunities and innovation. AI can be applied broadly to existing organizational processes, such as strategic planning, team building, restructuring, individual and project evaluation, etc. (Magruder Watkins et al., 2011). Even without direct mention in most AI literature, AI clearly holds alignment with authentic and transformative leadership as described in this OIP, which values perspective, self-reflection, relationships, ethics, and trust.

There are several AI diagrams in the literature that illustrate its concepts. For example, the possibilities include the 4-D model or a 4-I model consisting of Inquire, Imagine, Innovate, and Implement (Magruder Watkins et al., 2011). These models build on the principles of AI and perhaps have appeal to slightly different user groups. As noted in Chapter 2, I have chosen to overlay the original 4-D model (Cooperrider et al., 2008) with the TEAM model (Hung et al., 2018) as I feel that the latter grounds the original core principles of AI in a series of

unambiguous steps, which may achieve greater clarity, and appeal to stakeholders functioning within a hospital and research-based setting. It may also address the limitation of AI as functioning inconsistently across applications and circumstances (Van Der Haar & Hosking, 2004) by providing structure that can be used reliably across all three AI cycles.

The AI process would begin with the Department of Surgery Executive Committee, which also functions as the Department's Appointments and Promotion Committee. This Committee is led by the Department Chair/Chief, who is fully supportive of the principles of equity and has committed Department resources to support change initiatives, such as training and guest speakers. The Committee also includes the Division Chair/Chiefs and Site Chiefs, and myself as Manager of the Department (Ex-Officio, non-voting). Potentially thereafter, AI cycles could branch out to other governing Committees – particularly the EDID Committee – and the Department-at-large. The goal will be two-fold: to train sufficient numbers of leaders so that they are comfortable and capable of leading and participating in an AI change process; and to stimulate interest in the AI process among all Department members so as to maintain enthusiasm and trust in the process as it moves through multiple cycles.

I believe this roll-out process returns full circle to the principles of AI: a positive experience will garner positive attention, which will drive interest and commitment to change using this framework. AI also reinforces that people are our strength and the foundation for successful change. Although I may not be the individual to deliver the AI training due to my existing workload demands, I would be the person responsible for finding and presenting training options to the Executive to begin its roll-out and to track its uptake across the Department. I believe this is helpful as my involvement can bring clarity to a complex Department and the dynamics that exist between leaders, Committee members, and the Department membership at-large. My presence as an Ex-Officio member on nearly all governing Committees means that I have agency and influence to carry the information and messaging consistently across the Department. In addition, an external facilitator or trainer may

be able to elicit open and honest feedback confidentially and to train individuals in the principles in AI from a neutral perspective.

Change in Academia and Healthcare

As public institutions, universities and hospitals have an inherent social obligation to be held to a higher standard and to change as science and society evolve. This is reflected in AI principles that seek to create images of the best possible outcome and most desired future (Cooperrider & Srivastva, 2013; MacCoy, 2014; Magruder Watkins et al., 2011). As a Clinical Department, the Department of Surgery has an opportunity for critical self-examination that spans many boundaries, followed by integration of operational complexities through a fulsome change process, rather than to segment the many factors that impact gender equity into institutional silos for examination and action (Buller, 2014). In a recent editorial, Cafley reflects on the concepts of gender equity and leadership in academia:

> Canadian Universities need to do more to ensure that their leadership reflects their communities. These institutions turn a mirror on the world through the important research they advance. It's time to turn that mirror on themselves. They need to design a more equitable future for female university leaders, or they risk irrelevance in an inclusive future designed with diversity at its foundation. (Cafley, 2021)

This statement is particularly germane as it applies to the Department of Surgery. Based on the data provided earlier in this OIP, the persistent lack of representation in women faculty and leaders cannot be dismissed; nor will it be eliminated with the status quo. From a health perspective, the large burden of disease requiring surgical intervention reinforces the urgent need for representation of marginalized groups to improve clinical and academic decision-making and health outcomes (Adams Newman & Brown, 2021b; Lopez et al., 2020). We remain accountable not only to our institutions for appointment and promotion decisions, but to society as a whole, if we are to address deep-seated and widespread bias affecting women in surgery.

AI Cycle 1: Implicit Bias

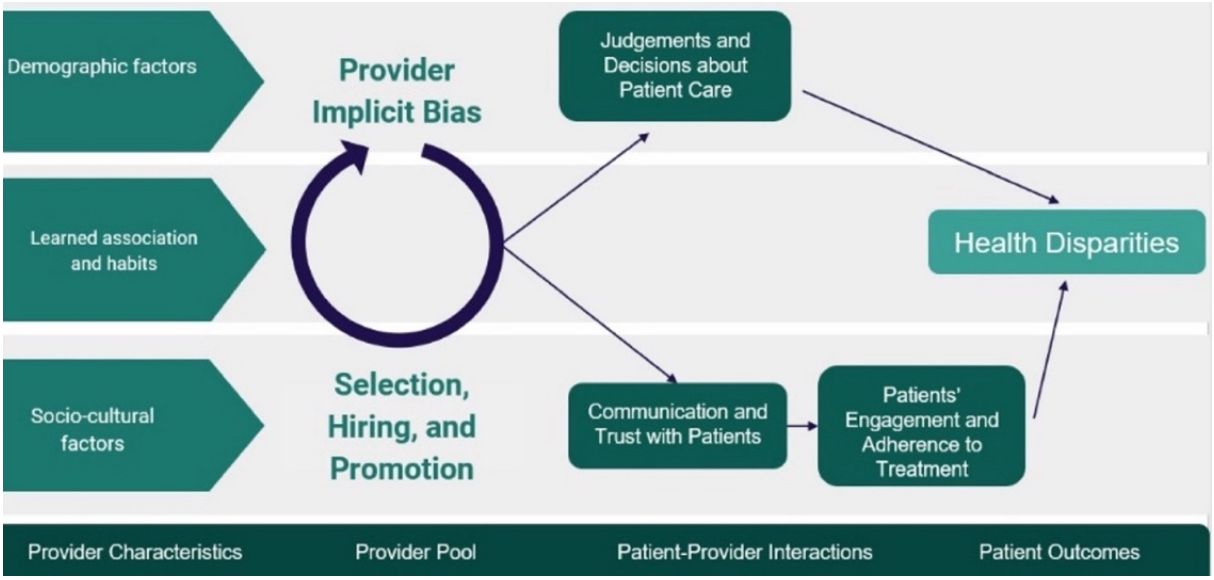
Although the concept of implicit bias may be charged with negative connotations, it can be addressed effectively through the positive-focus inherent in AI. In order to confront implicit bias, we must first be aware of its universal existence, and second of its personal application to our lives and workplaces. Mindfulness of bias is key, but concern about the consequences and impact of bias will drive behaviour to mitigate it (DiBrito et al., 2019). This is the basis for social justice as it breaks down stereotypes and statistics to give meaning at an individual level. Through AI, we can take an active role in promoting bias literacy grounded in both personal experience and research (Sevo & Chubin, 2010). Sevo and Chubin (2010) explain that AI is fulsome in revealing and addressing bias:

> This is not an intellectual exercise. Once we understand the dynamics and impacts of discrimination, we should understand what to do, and what others are doing successfully, in order to make bias transparent where it has been hidden or unacknowledged, and to control illegal bias. We are all victims of discrimination when our society or profession or group is built on a false sense of equity. (p. 22)

Dialogue about bias and fairness is intended to raise our capacity to appreciate how varying beliefs and experiences hold value and affect actions. In health care, this is particularly important because implicit bias plays a role in terms of physician background, education, training, and recruitment, which in turn affects health care delivery and patient outcomes. This chain of events linked by implicit bias appears in Figure 5.

Figure 5

Proposed Mechanism for Factors Underpinning Bias Affect Physician Selection and Health Disparities



Note. Implicit bias across the physician-patient continuum (Lopez et al., 2020)

Although the focus of this OIP and its change plan are on increasing the representation of women faculty and leaders in academic surgery, in fact attentiveness to the impact of implicit bias has far-reaching potential, particularly in health outcomes (Adams Newman & Brown, 2021b; Lopez et al., 2020). Therefore, this may require several AI cycles, each with a nuanced focus, in order to consider fully the many ways in which bias permeates academic surgery. The risk to this complexity is that the added time devoted to AI cycles could weaken the momentum towards change. However, if well-managed, the connections between the AI cycles should fuse together into a longer-term strategy and a stronger whole.

In this section, I provide a visual example of how the Department of Surgery could use AI and the TEAM model to explore implicit bias training as a first step. The far left column of Table 6 displays the original AI step (Cooperrider et al., 2008). The next two columns correlate the AI step with the TEAM Model's components and sub-components (Hung et al., 2018). The right-most column suggests questions to guide the conversation using AI principles as they relate to implicit bias training.

Table 6

AI Cycle 1: Implicit Bias Training

AI Step	TEAM Model	TEAM Model Sub-Category	Guiding Questions
Discovery Dream	Appreciate the power of co-inquiry	Insist on inclusion	Who would benefit the most from implicit bias training and discussions?
		Focus on what works	How does awareness of implicit bias help us to make better decisions in terms of recruitment and promotion?
		Embrace complexity	How does awareness of implicit bias enhance the academic and clinical domains?
Design	Build team capacity	Connect the heart	How are we connected or disconnected through our biases?
		Connect the head	Looking back, where might we have seen implicit bias have an impact on decision making?
		Adapt to needs	How can implicit bias training be made more applicable or relevant to the Department of Surgery?
Destiny	Continuous Development	Build a big tent	How can we collaborate on research and development related to implicit bias?
		Make it easy	How can we make implicit bias training more accessible and beneficial?
		Real time testing	Does feedback from implicit bias training show where we can make improvements?
		Keep pace	How often should we have formal implicit bias training to maintain momentum?

Note. Application of AI principles to AI Cycle 1 (Cooperrider et al., 2008; Hung et al., 2018)

Table 6 shows that even with a topic that could be considered negative (bias), it is possible to use an AI framework based on positivity to achieve solutions. Discussion of bias is not intended to be judgemental or pejorative. Using an AI framework, the conversation can be guided in a positive sense, to build on our successes in addressing or mitigating the appearance and impact of bias in the clinical and academic enterprise. Again, my role would not necessarily be to deliver the bias or AI training, but it would include investigation of options and implementation once approved by the Department leadership, and potentially to keep AI cycles on track. It is possible that this initial cycle will take four to six months given the scope and complexity of the topic, the time needed for training and evaluation of the training, and the size of the audience.

AI Cycle 2: Equity Champions and Experts

The second AI cycle proposed in this OIP is to address the need to recruit equity champions in the Department of Surgery as well as to provide research-informed evidence and expertise to support equity initiatives. Table 7 uses the same format as Table 6 to follow the principles outlined for AI and the TEAM model (Cooperrider et al., 2008; Hung et al., 2018).

Table 7

AI Cycle 2: Building Evidence and Equity Champions

AI Step	TEAM Model	TEAM Model Sub-Category	Guiding Questions
Discovery Dream	Appreciate the power of co-inquiry	Insist on inclusion	How do we seek equity champions across the Department?
		Focus on what works	What information is most meaningful and helpful as it relates to equity?
		Embrace complexity	How will equity champions bridge the clinical and academic spheres?
Design	Build team capacity	Connect the heart	How will equity champions support each other as they reach out to the wider Department?
		Connect the head	What institutional or sector data would help raise awareness and understanding?
		Adapt to needs	How can we be responsive and supportive of equity champions?
Destiny	Continuous Development	Build a big tent	How can we expand our base of equity champions?
		Make it easy	How can we facilitate access to equity expertise?
		Real time testing	How has our equity data changed relative to other surgical Departments?
		Keep pace	How do we encourage continuous learning models and team research in equity?

Note. Application of AI principles to AI Cycle 2 (Cooperrider et al., 2008; Hung et al., 2018)

The second cycle of AI may be more straightforward than the first cycle of AI and may only take one to three months. It may be easier to identify equity champions in the Department and experts in equity research following implicit bias training, as it becomes evident in group discussions which Department members have embraced the concepts and have already begun to incorporate methods by which to counter implicit bias in their teaching, research, and clinical care. This does not diminish the importance of continuous learning once evidence and champions have been established; rather, this cycle sets the foundation for the next stage, where AI can be used to review processes, standards, norms, and values that permeate the vocabulary and functioning of the Department. My role in this stage would be to make recommendations of equity champions and experts to the Department leadership, organize meetings and grand rounds, and to serve as a resource for faculty, staff, activities, and discussions across the Department of Surgery.

AI Cycle 3: Review Processes, Standards, Norms, and Values Using an EDID Lens

Explicitly reviewing processes, standards, norms, and values using an EDID lens is essential in order to emphasize the importance of equity and to consider equity in every activity

and discussion held in the Department of Surgery. Good intentions and a public commitment are simply not enough to overcome inertia, break the norms that benefit those already in power, and achieve social justice (Welton et al., 2018). Inclusive and safe venues for learning conversations are key, not only for participants to speak from the heart, but to identify and interrogate the voices who dominate and those that are absent (Belle, 2016).

Thus, this AI cycle is critical to the entrenchment of equity principles and actions in the Department of Surgery. It ensures a thoughtful review of what builds and sustains our Department: the processes that uphold faculty and leadership regeneration. It ties together the earlier discussion in this OIP of counter-narrative, which is necessary to understand better the impact of hidden inequities on women in academic surgery. It speaks to the importance of relationship building and the pursuit of continuous learning supported by authentic and transformative leaders who are driven to address the underlying factors that prevent social justice from occurring. It addresses the necessity to become comfortable having uncomfortable conversations and for Department members to speak out when behaviours and practices come into conflict with the processes, standards, norms, and values viewed through an EDID lens.

There is a risk that people will not feel safe or comfortable speaking up with respect to processes, standards, norms, and values; whether out of concern for offending fellow Department members or trainees, because of the power imbalance existing in hierarchical institutions, or because they have yet to learn how their actions have played a role in perpetuating the status quo. This is where the AI process will shine in enabling dialogue that focuses on accomplishments as well as hopes and dreams for the future. The transformation of conversation that supports this PoP and this AI cycle in a broad sense is represented in Table 8, which demonstrates the transformation of diversity and inclusion language, as expressed by Stewart (2018).

Table 8

Transforming Language from Diversity and Inclusion to Equity and Social Justice

Diversity and inclusion asks…	Equity and justice responds…
Who's in the room?	Who is trying to get into the room but can't? Whose presence in the room is under constant threat of erasure?
Have everyone's ideas been heard?	Whose ideas won't be taken as seriously because they aren't in the majority?
How many more of a [minoritized identity] group do we have this year than last?	What conditions have we created that maintain certain groups as the perpetual majority here?
Is this environment safe for everyone to feel like they belong?	Whose safety is being sacrificed and minimized to allow others to be comfortable maintaining dehumanizing views?
Isn't it separatist to provide funding for safe spaces and separate student centers?	What are people experiencing on campus that they don't feel safe when isolated and separated from others like themselves?
Wouldn't it be great to have a panel debate Black Lives Matter?	Why would we allow the humanity and dignity of people or our students to be the subject of debate or the target of harassment and hate speech?
How can we celebrate the increase in our numbers of Black and Latinx faculty from 2% to 3%?	Have we reduced harm, revised abusive tenure and promotion systems, and increased supports in the local community to support these faculty's life chances?
How have we individually supported diverse candidate pools in searches?	How can we eliminate practices and policies that have disparate effects on minoritized groups?

Note. Transforming language in support of equity and social justice (D. L. Stewart, 2018)

Table 8 supports the essential tenet of AI that words matter and we will not move beyond a basic understanding of equity into transformative change without open discussion of key concepts related to equity and social justice. In fact, AI supports this through the use of provocative propositions to guide the redesign of organizations (Magruder Watkins et al., 2011). Transformative leaders incorporate advocacy and conflict into planning processes to reflect pluralistic values and to explore power as a force "that both implicitly and explicitly perpetuates hegemonic and dominating behaviors, cultures, and structures" (Shields, 2010, p. 567). This addresses the criticism that AI avoids discussion of serious problems and permits individuals to consider their work, values, and behaviour in a different light as it relates to agency in organizational change (Dudar et al., 2017). AI is not about avoiding difficult issues; it is about employing a positive change method to move beyond them.

A number of issues can be explored in this AI cycle with respect to considering processes, standards, norms, and values using an EDID lens. For example, institutionally or departmentally mandated processes can be reviewed as they relate to faculty recruitment and promotion or Committee membership. Process enquiries to consider include: how

advertisement wording for leadership or faculty positions can address barriers affecting members of marginalized groups; how review of candidate applications can better take into account EDID measures; the impact of gender bias on evaluations used in performance assessment, particularly with respect to promotion; whether promotion processes would encourage more women to come forward if designed as “opt-out” rather than “opt-in”; and how Committee member selection can become inclusive and representative of equity-deserving groups.

Consideration of standards and norms is essential in a procedural-based discipline like surgery, particularly as it relates to gender, race, and class. Problems to consider are whether equipment is suitable and usable by people who vary in stature and physical strength; how best to teach students of differences in disease symptomology depending on skin colour and gender; or whether treatment options have taken into account the patient’s socio-economic status. There are also norms to consider in terms of expectations for career progression for clinical academic faculty that may be based on historic, gendered ideals. Declaration of values brings unity to the conversation in making overt the Department’s commitment to equity, human rights, and our obligation to pursue social justice as part of the TRCC’s Calls to Action and beyond. Given the focus on equity at the University and Hospitals, discussions of processes, standards, norms, and values will also build common ground as we work through the change cycle.

Table 8 explores the re-examination of processes, standards, norms, and values using an EDID lens in a broad sense as they relate to equity using a third cycle of AI. It again follows the same format as prior AI cycles. This cycle of AI will require multiple iterations because each of these concepts represent multiple procedures, ideas, and beliefs. For example, one AI cycle in this series could be broken down into appointment vs. promotion processes. However, for simplicity, the concepts and guiding questions are presented together in Table 9.

Table 9

AI Cycle 3: Consideration of Processes, Standards, Norms, and Values

AI Step	TEAM Model	TEAM Model Sub-Category	Guiding Questions
Discovery Dream	Appreciate the power of co-inquiry	Insist on inclusion	How do we define and promote processes, standards, norms, and values through an EDID lens in the Department?
		Focus on what works	How do our current processes, standards, norms, and values support equity?
		Embrace complexity	How are our processes, standards, norms, and values affected by institutional mandates or influences?
Design	Build team capacity	Connect the heart	How do we share and support each other through processes, standards, norms, and values?
		Connect the head	How should our processes, standards, norms, and values impact Committee functioning?
		Adapt to needs	How do we support the evolution of processes, standards, norms, and values?
Destiny	Continuous Development	Build a big tent	How do processes, standards, norms, and values span the Department and its members?
		Make it easy	How can we make our processes, standards, norms, and values clear and accessible?
		Real time testing	How do our processes, standards, norms, and values compare with other surgical Departments?
		Keep pace	How often should we revisit our formal documentation of processes, standards, norms, and values?

Note. Application of AI principles to AI Cycle 3 (Cooperrider et al., 2008; Hung et al., 2018)

More than one AI cycle related to Table 9 will be required to consider processes, standards, norms, and values using an EDID lens not only because of the wide range of topics that exist under these headings, but because of the complexity of the Department and to account for the progression of organizational learning as we embed ownership of AI and equity principles into all aspects of research, education, and clinical care. This could take six months or more, but this AI cycle is essential because it provides leaders with foundational language to support change efforts. It can also be used to prepare and support followers in their personal approach to change at a micro level (Kang et al., 2014). In essence, leaders in this AI cycle create the conditions for equity and social justice to occur, by achieving EDID-sensitive processes, standards, norms, and values that embody fairness, respect, understanding, and social justice. My role, and the role of the Department Chair, with whom I work in close partnership, will be to serve as a resource, to encourage and guide these AI-constructed discussions, and to consider and manage the implications for Department operations as we move into monitoring and evaluation.

Change Process Monitoring and Evaluation

This segment will review the change process monitoring and evaluation framework proposed to address my PoP. This section will review the purpose of monitoring and evaluation, expand on planning for a mixed methods approach to monitoring, followed by the use of evaluative inquiry for ongoing assessment of progress.

Definitions and Purpose

A monitoring and evaluation framework aligns closely with NPM principles described earlier in this OIP. Monitoring is based on management principles including reporting and accountability while evaluation adds a program development lens (Markiewicz & Patrick, 2016). The requirement for monitoring and evaluation is well-established, accepted, and valued in Clinical Departments as it is already a component of surgical education as administered and overseen by accreditation bodies such as the AFMC and RCPSC in the form of cyclical reviews that include narrative reporting, external reviewer site visits, and ongoing program development based on student and faculty feedback. It is also a part of Department processes such as regular external reviews of Divisional leadership, financial reporting, and audits.

There are differences, or perhaps progression, from monitoring to evaluation, as explained by Markiewicz and Patrick (2016). “Monitoring tells us what is happening, while evaluation will provide a more complete understanding, illuminating the dimensions of why and how” (Markiewicz & Patrick, 2016, p. 173). Monitoring is more than assessing readily available data; although, that can certainly be a part of it. There also needs to be a broader consideration of what information is necessary to understand progress so that can be built into the framework. Once established, monitoring is done regularly and frequently, while formal evaluation occurs on a periodic basis, permitting a deeper level of exploration and analysis. This framework represents both formative and summative evaluation. Formative evaluation employs a forward-thinking lens aimed at guiding initiatives for future progress and improvement, conducted on a regular and established basis. Summative evaluation is retrospective in nature and assesses

quality, value, and achievement of results (Markiewicz & Patrick, 2016). The concepts of formative and summative evaluation are familiar in both medical education and academia (Broadbent et al., 2018; Velan et al., 2008). These recognizable components of the monitoring and evaluation framework will assist with its adoption within the Department of Surgery.

A monitoring and evaluation framework aligns with the concept of a continuous improvement cycle, with the organizational change literature stressing the need for work to be ongoing and systemic (Welton et al., 2018). The overall premise of organizational learning, as experienced through a monitoring and evaluation framework, is that increased knowledge will inform action and improve performance (Preskill & Tzavaras Catsambas, 2006). Universities and hospitals, as learning organizations, have long been dedicated to continuous improvement through research, internal and external reviews, and rounds. Although the concept of monitoring and evaluation in the Department is not new, it will perhaps be a new experience in applying these principles to a different aspect of our operations; or indeed, to the more abstract concepts of culture, norms, and bias.

Monitoring

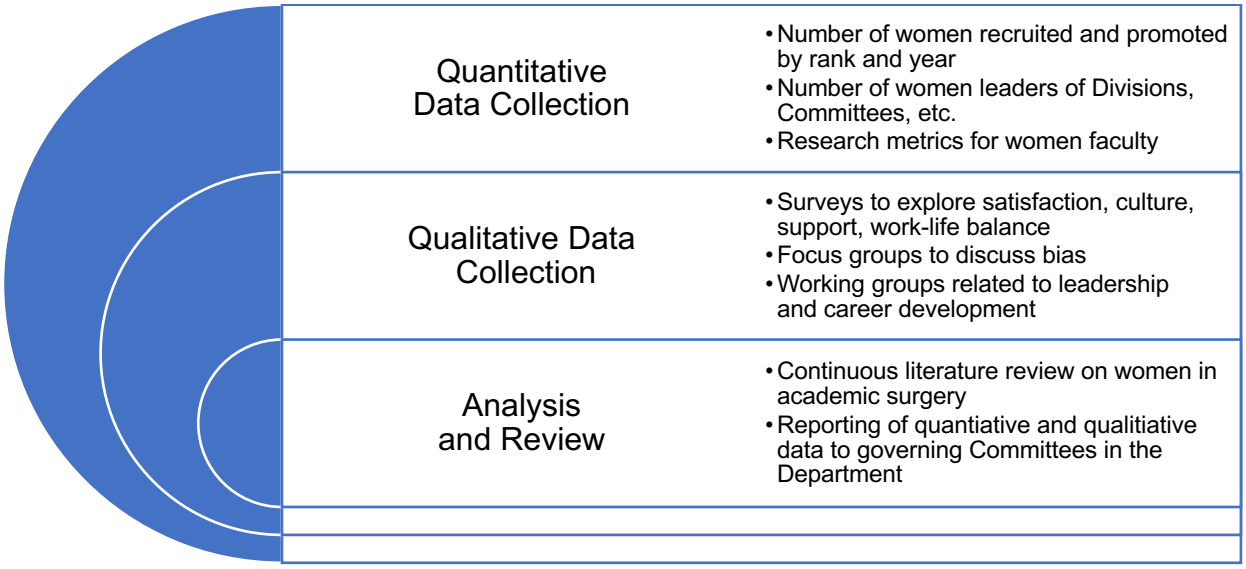
Monitoring the increasing presence and promotion of women in academic surgery is certainly feasible and straightforward using existing data sets fully available as a part of my formal role and responsibilities at Stone University, including hire date, rank, promotion date, etc. There are also self-reported data available in the Department on research-related metrics, such as number of peer-reviewed publications, grant funding, teaching hours, etc. These data points form important quantitative measures that demonstrate inclusion and career progression of women in fundamental aspects of academic surgery. However, quantitative data monitoring will not paint a multi-dimensional picture of change in the Department of Surgery. Change can also be explored and captured through surveys, focus groups, and participation in workshops. These qualitative opportunities permit a narrative exploration of progress and the engagement of a wide range of faculty in the change process.

The combination of quantitative and qualitative data in the monitoring framework is powerful in organizational learning. This is found in health care studies, where a mixed-methods framework is used to assess quality improvement initiatives in a clinical setting (Crowe et al., 2017). For example, the addition of surveys to data stored in health care systems enables linkages between the perception of care and standard medical indicators such as surgical complications (Kelley-Quon, 2018).

In this OIP, a mixed-methodology framework may be an important tool to dispel myths related to a lack of need for continued action related to gender equity (Carr et al., 2017). This is reinforced by Markiewicz and Patrick (2016), who write, “where possible, the use of both quantitative and qualitative methods for evaluation data collection and analysis will provide a more holistic view of a specific context and offset the limitations of using either data set on its own” (Markiewicz & Patrick, 2016, p. 166). The proposed mixed methods approach to monitoring for this OIP includes both quantitative and qualitative measures in order to capture data, provide meaning, and also to demonstrate commitment to increasing the representation and promotion of women in academic surgery on a long-term basis. This approach adds a layer of complexity and will increase the time required for monitoring change; however, it is most likely to capture change progress, even if slight in the beginning. The mixed-methods approach to monitoring is presented in Figure 6.

Figure 6

Monitoring Using a Mixed-Methods Approach



Note. Mixed-methods monitoring to support the change implementation plan (Markiewicz & Patrick, 2016)

Figure 6 demonstrates the layers necessary in monitoring to support change related to gender equity in the Department of Surgery. It encompasses a range of quantitative and qualitative measures that gauge performance improvement, as well as an exploration of literature and data reporting to reinforce the urgent need for change.

I believe I am well positioned to lead the monitoring framework given my experience, education, and formal responsibilities in the Department of Surgery. First, my formal responsibilities include retrieval and reporting on the Department's quantitative data noted in Figure 6, whether tracked locally or sourced from the University's website. Recruitment, promotion, and academic productivity data often form the basis for presentations made by the Department Chair/Chief across the AHSC. Second, in terms of qualitative data, the University provides free access to online software (Qualtrics) that is regularly used in the Department. I also have access to public Institutional data provided by a central University office and have the option to seek additional information, clarification, or opportunities for collaboration when possible or necessary. In addition, my Master's degree was focussed on data collection and

analysis in social science statistics, including the potential for non-sampling survey errors such as interview-induced error and question-related error. In total, I have the skills and experience to design survey instruments, the ability to disseminate them, the software and background to collect and analyze the data, and the agency to report on all aspects of monitoring described as an Ex-Officio member of every Governing Committee in the Department of Surgery. I am well positioned to use monitoring to tell the story of where we are, and where we are headed. The next stage of the process, evaluation, will inform how we continue to move forward in creating an equitable future for women in academic surgery.

Evaluation

Evaluation is the process by which we transform what we have learned from monitoring into actions that engage every individual in shaping the organizations – and the society – in which we want to live. Authentic and transformative leaders support the creation and sustenance of a learning culture in evaluation through active listening, consideration of new points of view, and through building relationships with followers. Such leaders understand the linkage between evaluation and strategy, apply evaluative information to organizational development. This leadership is critical as it explicitly supports learning and development in organizations (Markiewicz & Patrick, 2016). Evaluation, at its best, affords an opportunity for deeper exploration of complex and nuanced issues in order to inform policy development and the larger change process (Dunlap, 2008; MacCoy, 2014; Markiewicz & Patrick, 2016; Preskill & Torres, 1999; Preskill & Tzavaras Catsambas, 2006).

Despite the progressive goals of evaluation, the concept itself can easily carry and convert into negative connotations through the explicit or implicit assignment of judgement. Magruder Watkins et al. (2011), explain the risks of typical evaluation processes:

> Even though most traditional evaluations point out successes as well as failures uncovered in an evaluation process, it seems to be human nature to focus on, if not obsess about, those things that other declare (or that we ourselves fear) do not measure

> up to some standard assumed to define “perfection”. (p. 276)

It is a common maxim that we should not let perfection be the enemy of the good. It is also a precept of AI that focussing on the negative will not lead to progressive change. It is only through converging on our strengths and past successes – no matter how small or large – through a positive lens that we will be able to envision and create a better outcome than where we are now. In combination, these ideas describe evaluation not as a fixed endpoint, but as a continuous cycle where will and capacity are related to attitude and ability, shaped by learning and experience (Tichnor-Wagner et al., 2017).

Evaluation is particularly challenging in the context of change directed to improve social or cultural conditions. A social justice evaluation approach can be taken, which emphasizes using evaluation findings to rectify or reduce inequalities. This approach is aimed at addressing power imbalances while building capacity of group members. Markiewicz & Patrick (2016) further clarify the impact of a social justice approach in evaluation in achieving participation:

> In using a social justice approach to evaluation, deliberative, proactive strategies may be employed to locate and elicit the views and experiences of marginalized groups and to encourage their active involvement in evaluation activities, with the aim of best representing their perspectives. (p. 62)

This approach is well-supported by authentic and transformative leaders who build trusting relationships that uphold an environment where a diversity of viewpoints is appreciated, respected, and valued. This is particularly apparent in counter-narrative, as described earlier in the solutions section of this OIP. Counter-narrative supports social justice evaluation through recognizing and welcoming dialogue that describes the alternate reality experienced by marginalized groups that would not otherwise be apparent to dominant groups (Miller et al., 2020). This further embeds self-reflection as a part of the evaluation process, recognizing that the systems and organizations we fashion are experienced differently by different people, as explained by Magruder Watkins et al (2011). “Indeed, working in human systems requires a

flexible, open, creative stance that embraces ambiguity and innovation" (Magruder Watkins et al., 2011, p. 276). Therefore, while monitoring could be seen to outline the basic elements of a painting's landscape, evaluation leaves open the interpretation of colour, depth, contrast, and focus in order to appreciate the artist's vision. It is the tools of evaluation that will next be considered in moving the OIP forward.

Appreciative Inquiry in Evaluation

Evaluation using an AI lens enriches and personalizes the experience for individuals and organizations. AI adds value and effectiveness to the evaluation process, yielding a richer data set than in traditional evaluation practices (Dunlap, 2008). AI has been criticized for its inconsistency in application in across different circumstances and organizations (Richer et al., 2010); however, this fluidity is necessary as AI does not inherently seek to achieve a single outcome or best practice. Rather, AI recognizes that there are multiple variables that affect our ability to identify or define future directions. AI is not a tool for evaluation, but rather "a total *reframing* of our current theory of practice" (Magruder Watkins et al., 2011, p. 37) that leverages personal development with organizational learning to support change.

AI is based on the concept that the questions we ask will shape the direction in which we move, and that to build a better future requires positivity: in our phrasing, in our interpretation of responses, and in the continuity we envision between past experiences and future direction. Embedding AI in evaluation acknowledges that there is no such thing as neutrality in our observations, interpretations, and recommendations as what is positive for one person may be negative for another (Bushe, 2011; Magruder Watkins et al., 2011). This builds cohesiveness with the earlier discussion of bias, and how an awareness of bias holds promise in the pursuit of equity. In this instance, stakeholders participate in an evaluation process through open and honest conversations, which may touch upon mindfulness of bias, context, and circumstances, guided by positive AI principles.

Conducting interviews, or asking questions, is at the core of evaluation using AI

(Magruder Watkins et al., 2011; Preskill & Torres, 1999; Torres et al., 1996). This holds common principles with participatory, collaborative learning approaches (Preskill & Tzavaras Catsambas, 2006). Using AI for evaluation engages participants and develops capacity for reflection and analysis. The evaluative process will therefore begin with a discussion among leaders in this change process that defines the frequency and inclusiveness of the process, keeping in mind that who we choose to participate, and how often we choose to assess, will impact the evaluation process as much as its outcomes.

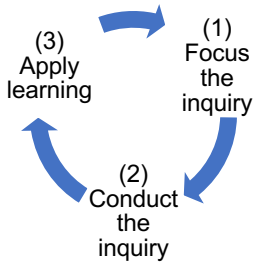
In terms of evaluation process, the creation of an interview schedule for evaluation purposes is again well established in the Department of Surgery for program and Division reviews. However, the difference with current practices to one shaped using AI for evaluation would be that the latter is not focussed on a report of findings, such as a SWOT (strengths, weaknesses, opportunities, threats) analysis. Instead, the discussions would be geared towards ways to enhance collaboration and organizational learning; achieving a better understanding of the potential issues leading to success or failure; and representing a diversity of perspectives. As such, evaluators conduct culturally responsive interviews focussed on performance improvement in the context of continuous learning and change (Preskill & Tzavaras Catsambas, 2006). This process raises similarities to social cognition theory, as described earlier, where reality becomes a social construction based on questions, responses, and reflection. The evaluation process then supports the likelihood for success in the change process by raising awareness and a building a shared sense of understanding and purpose.

Evaluative Inquiry

Evaluative inquiry describes the integration of AI principles with evaluation. This flexible approach reflects upon context, beliefs, values, and experience in shaping worldviews and future directions of evaluators and participants. The three key phases, as an evaluative inquiry cycle, are shown in Figure 7.

Figure 7

Evaluative Inquiry Phases



Note. The three phases of evaluative inquiry (Paydon et al., 2020; Preskill & Torres, 1999)

Each phase indicated in Figure 7 grants an opportunity for dialogue, clarification, and reflection. In some respects, evaluative inquiry mirrors the stages of AI as created by Cooperrider et al. (2008), where determining the focus of evaluative inquiry equates to determining the positive topic selection; conducting the inquiry relates to discovery and dream; and applying learning is associated with design and destiny.

Similar to the AI-based change implementation plan presented earlier in this work, the evaluation process for this OIP can also be applied through multiple cycles. For example, the first evaluation cycle could be focussed on implicit bias training, the second on recruitment of equity champions, and the third on review of processes, standards, norms and values (or a subset thereof) through an EDID lens. I envision the Department of Surgery Executive Committee, led by the Department Chair/Chief and where I sit as an Ex-Officio member, serving as a steering group that would determine the focus for evaluation, thereby completing the first phase of evaluative inquiry.

Once the focus phase of evaluation is established, the second phase of evaluative inquiry can proceed by conducting interviews using appreciative inquiry principles, which allows for flexibility. This phase could be completed using preferred evaluators, whether internal or external, based on the focus selected. For example, evaluators for the focus on implicit bias may derive from the EDID Committee in the Department of Surgery. This is similar to external reviews of Divisions or Programs that occur at present in the Department, where experts for a

specific subspecialty are selected as evaluators. My role would be to recommend evaluators to the Department Chair/Chief for selection and to support the administrative organization for this stage. The role of evaluators would be to engage participants through appreciative questions as they begin the evaluation process. “When appreciative questions are crafted well and asked with integrity, they invite participants to begin a journey of discovery that leads to increased trust, learning, and constructive change” (Preskill & Tzavaras Catsambas, 2006, p. 75). Preskill & Tzavaras Catsambas (2006) elaborate further on appreciative questions as a part of the evaluation process:

> Appreciative questions, however, are not simply about asking people what they liked or how things looked from a positive perspective. Appreciative questions ask respondents to communicate their concept of the nature, worth, quality, and significance of a program or some aspect of the organization. Moreover, they ask respondents to honor the past while expressing gratitude for, and pride in, their achievement. (p. 76)

The dialogue between evaluator and participant remains open, honest, and non-judgemental throughout the evaluative inquiry process. This may be challenging for some individuals in reconciling existing beliefs and assumptions with divergent perspectives (Paydon et al., 2020), described earlier as cognitive dissonance and sensemaking. However, this reflection and reconciliation is precisely what builds strong relationships and the ability to agree on common goals. It honours the experience of members and demonstrates the value that varying perspectives bring to our understanding of issues and potential solutions.

The establishment of trust in collaborative relationships and open, honest dialogue leads to the third phase of evaluative inquiry, applying learning. This phase is grounded in the principle that evaluation is essential for both building upon strengths as much as for identifying areas for improvement. Evaluation findings can also be used to celebrate and relate to future plans of the organization. Negative conclusions are presented as opportunities to improve, grow, and learn (Preskill & Tzavaras Catsambas, 2006). This phase of evaluation can include

formal reporting, which summarizes the discussions and recommendations, and addresses the need for accountability. It addition, it serves as documentation of progress, performance, and learning (Markiewicz & Patrick, 2016). My role would be to serve as a resource to the evaluators and to disseminate results or reports. As it began with a positive focus, evaluative inquiry ends with a positive focus, leading to reduced negative perceptions associated with monitoring and evaluation and an increased sense of ownership and commitment to the change process and the Department (Dunlap, 2008).

Consideration of the PDSA/PDCA Tool

The Plan-Do-Study-Act (or Plan-Do-Check-Act) cycle is frequently employed as a monitoring and evaluation tool. This tool involves discrete steps for formulating the vision and strategy (plan), operationalizing and engaging the strategy (do), testing and monitoring (study/check), then confirming or adapting strategies (act), then repeat. (Paliszkiewicz & Pietrzak, 2015; Tichnor-Wagner et al., 2017). Although there is merit in this established tool, I have simply found it too rigid – or perhaps oversimplified – to manage the transformation of the complex and bias-influenced issues raised in this OIP. Instead, I believe there is not only a correlation, but a strong enmeshing of the theoretical framework, leadership approach, and change management plan proposed with evaluative inquiry. Similar to PDSA/PDCA, evaluative inquiry is a learning framework; however, it retains flexibility at the same time as reflecting on the core values of AI. Like my OIP, evaluative inquiry may be less straightforward to undertake than it appears. With flexibility comes the potential for a greater time investment in the process or a lack of concrete results. However, with evaluation being critical to the change implementation, I believe an evaluative inquiry framework is a better choice than PDSA/PDCA as it is more likely to result in findings and outcomes that will be positive and beneficial to the Department of Surgery, maintain momentum, and result in lasting change.

Plan to Communicate the Need for Change and Change Process

Following monitoring and evaluation, the final step for this change implementation

framework involves the creation of a solid plan for communicating the need for change, the plan for change, and the results of change. This section will cover these concepts through areas outlining the need for communicating clarity and change, leadership and communication, communication principles and methods, and finally, the formal communication plan.

Communicating Change and Clarity

Communicating change clearly and effectively is essential to short- and long-term success, particularly given the multiple iterations or cycles of AI and evaluative inquiry outlined in this OIP. This is critical because any type of change has the potential to cause alarm, even if intended with the best possible outcome in mind, as explained in the literature. “Even changes that appear to be ‘positive’ or ‘rational’ involve loss and uncertainty” (Kotter & Schlesinger, 2008, p. 107). In instances where change is intended to support social justice, it may be understood to be beneficial for the greater good, but in fact encounter resistance when change appears to have a less direct benefit to individuals, and a greater impact (or inconvenience) on everyday operations. In this case, experts note that having clarity of the change desired and the terminology surrounding is critical. “People use the same terms and concepts and unconsciously think that other people’s understanding of the term or concept is the same as theirs” (Kang et al., 2014, p. 26). Clarity of terms and concepts ensures that Department members have a foundation for understanding, supporting the ability to have productive and positive dialogue. This also reduces uncertainty and ambiguity, which are associated with a negative response to organizational change (Applebaum, 2019).

Communications of change must be viewed as central to progress in the Department of Surgery. Where change is not considered key to the health and survival of an organization, it could be perceived as a transient force, dependent on the sponsorship of senior leaders (Nadler & Tushman, 1989). In this OIP, change towards increasing the representation of women faculty and leaders in academic surgery will need to be connected to the individual and institutional obligations and initiatives supporting equity. Dialogue and behaviour supportive of equity that is

espoused by leadership and rooted in shared values and social norms will persist if these principles are absorbed as a fundamental way of being, doing, and knowing for all aspects of operations (Applebaum, 2019).

Leadership Communication

Leaders in the Department of Surgery, united through the Department of Surgery Executive Committee, form a powerful and focussed core communications team. This is vital for articulation of a shared vision for gender equity across the Department of Surgery, as described by McBride (2010). “By focusing on values and vision, people can often overcome personal preferences or prejudices in order to work for the common good or a greater cause than their own self-interests” (McBride, 2010, p. 10). It will require leaders to be strong and to maintain momentum using a positive change process in order to address the multi-layered factors impacting on equity for women in surgery. Communications from this respected group of leaders will transmit the importance of the topic to the wider Department. It will also relay that the current state of inequity in the Department – or the current rate of progress towards equity – is not acceptable (Whelan-Berry & Somerville, 2010). Finally, hearing this message from authentic and transformative leaders within the hierarchical environment of an AHSC is essential to support the willingness to engage in bi-lateral conversations that overcome the perception of a power imbalance between leaders and followers, in order to advance gender equity.

Communication from leaders supporting this change process will need to be conducted regularly, not only to give the topic prominence, but to serve as a motivating force (Whelan-Berry & Somerville, 2010). This also supports open and honest conversations led by leaders, with whom followers can identify and agree, as explained by Kang et al. (2014). “Furthermore, communication with people is more effective when people perceive that the change agent is similar to theirs, such as values, education, and beliefs” (Kang et al., 2014, p. 30). Klein (1996) affirms that communications from Department leaders, by virtue of their roles and backgrounds as surgeons themselves, increases the credibility of the message, which is often accepted more

readily when transmitted from leaders at the apex of the hierarchy. “Those who have collegial authority have a disproportionate impact on others’ opinions and attitudes” (S. M. Klein, 1996, p. 36). The communications process between leaders and follows not only transmits the vision for change, but is a central element in building relationships and trust, and in empowering all members of the Department to participate in bringing an equitable future to fruition (Welton et al., 2018). Communication by leaders therefore promotes organizational learning, serving as a basis for good governance, and legitimizing efforts that support social justice (Belle, 2016).

Strong communication skills and processes reinforce the goals and objectives of the change process. This is especially important in complex environments seeking significant long-term change (Kang et al., 2014). The process begins by communicating the need for change and clarifying the gap that presently exists as well as the difference between outcomes that are possible as a result of the change process. This should begin with communications from the senior leader, in this case, the Department Chair/Chief. Both oral and written materials should invite opportunities for questions and feedback (S. M. Klein, 1996). This is currently represented in a multitude of ways in the Department of Surgery. For example, the Chair/Chief provides an oral report at the quarterly Department meetings, following by an opportunity for questions and answers. The Chair/Chief also provides a written introduction at the beginning of newsletters, inviting written feedback at any time. The oral and written communication opportunities and processes can be carried through to the Divisional levels, for example, at Division meetings or in Divisional newsletters, to strengthen the change message across social structures and subspecialties. The message throughout the communication plan is key: change is possible when we work together towards a common goal using a positive, respectful, and strengths-based framework.

Communication Principles and Methods

This communication plan is based on the notion that communications should be frequent, widespread, and multi-directional in order to ensure a comprehensive understanding

of the issues at stake and their role in achieving equity in the Department of Surgery. Klein (1996) outlines key principles of organizational communications that are relevant to this PoP:

- Message redundancy is related to message retention.
- The use of several media is more effective than the use of just one.
- Face-to-face communication is a preferred medium.
- The line hierarchy is the most effective organizationally sanctioned communication channel.
- Direct supervision is the expected and most effective source of organizationally sanctioned information.
- Opinion leaders are effective changers of attitudes and opinions.
- Personally relevant information is better retained than abstract, unfamiliar or general information. (p. 34)

Each of the principles outlined by Klein (1996) will be employed in this communication plan. Communications will be frequent and include a variety of communication avenues in order to achieve impact and transparency across the Department of Surgery. In-person (or video-conference) methods will be utilized whenever possible, to support connection and relationship building as we work towards a shared goal of equity, in alignment with Applebaum's (2019) recommendation. "This type of oral persuasive communication not only allows the message itself to be communicated, but also, the importance of the issues to be symbolically magnified by the fact that time, effort, and resources are utilized to communicate the changes directly" (Applebaum, 2019, p. 767). Finally, clear assertion of definitions, norms, and values will be presented with visual support to allow individuals to understand the concepts related to equity and the implications of this change process on their everyday environment.

Communication Plan

The communication plan for this OIP takes into account the internal staff support for communications available in the Department of Surgery. We receive some materials from the

University and Hospital communications offices, and we send information to them whenever possible to increase our media footprint. My agency and responsibilities for communications are based on my role, and I delegate as necessary to my Administrative Assistant. Together, we draft the majority of electronic and print materials and run our social media accounts. I also support the creation of many informal and formal reports delivered by senior leaders. The communication plan for this OIP is based on delivering a message related to equity across a spectrum of elements outlined in the integrated solution, such as implicit bias training opportunities, advertising events and speakers related to EDID, and the examination of processes, standards, norms, and values using an EDID lens. The plan presented below in Table 10 has intentionally been kept generic for clarity and brevity.

Table 10

Department of Surgery Equity Communication Plan

Department of Surgery Equity Communication Plan		
Leaders: Department Manager, Chair/Chief Start date: [Date]		
Overall Goal: Increase trajectory towards equity for women faculty and leaders in academic surgery		
Project Objectives: ▪ Increase awareness of equity concepts and need ▪ Increase awareness of bias and promote training opportunities ▪ Increase understanding of processes, standards, norms, and values that support equity in research, education, and clinical care ▪ Promote equity champions and link equity-initiatives across groups ▪ Disseminate announcements of equity-related accomplishments and research		
Communication Tool	Audience	Frequency
Equity updates at Executive meetings	Division Chair/Chiefs Site Chiefs	Monthly
Equity updates at City-Wide Department meetings	All Department members	Quarterly
Equity updates/discussion at Committee meetings	Committee members	Varies
Newsletters (PDFs) (one page reserved for equity articles)	All Department members, trainees University and Hospital Leaders	Quarterly
E-casts (one section reserved for equity information)	All Department members, trainees	Every two weeks
Social Media (equity related)	Followers	Varies
Equity-related grand Rounds	All Department members, trainees Invited guests	Twice per year
Surveys / Evaluations	All Department members, trainees	Varies

Note. Communication plan related to equity in the Department of Surgery, may be expanded or tailored upon implementation of AI cycles.

The communication plan outlined in Table 10 shows overall how the equity message will be disseminated across the Department, and beyond, using a variety of written and oral

communication tools delivered in-person and online. It reflects the principles that communications can be both brief and expanded to reach a variety of stakeholders, while providing a record of sessions and priorities related to equity (Torres et al., 1996). Some of these communication vehicles can be assessed using statistics such as open rates (newsletter items), views/likes (social media), attendance (meetings, grand rounds), and completion rates (training, surveys, evaluations). This communication plan encourages knowledge mobilization and normalization of discussion related to equity concepts.

As described earlier, the formal communication tools of newsletters, e-casts, and social media as noted within Table 10 fall within my oversight as Department Manager. Equity updates at Committee meetings will be the responsibility of Committee (or Department/Division) Chairs; however, they will receive my support for content and messaging. If concerns, questions, or comments arise, they will be directed to myself for response, as it is within my agency as Manager, and in serving as a resource for equity matters in the Department. Issues outside my scope of authority or responsibility will be directed to the Department Chair/Chief.

It is important to note that this communication plan is the start of the journey towards equity. Unlike a standard communications plan crafted to address a straightforward change or single issue, there is likely no real end date. It is not only that achievement of true gender equality will occur long past my retirement date; it is that equity must become an ingrained part of the Department – a constant conversation – which is not well captured in a communication plan that requires a beginning and an end. Change related to equity is multifaceted and evolving. Some aspects of the change management plan will have continuous cycles, such that even the case of implicit bias training, it is not one and done. For example, it may be necessary to complete training, improve upon it, and repeat, with the frequency to be determined as a part of the AI cycle. This is not easily reflected in a typical communication plan template.

Some aspects of what might be considered a communications pre-launch and launch have already been undertaken in the Department of Surgery. The Chair/Chief and I have met

with every Committee Chair to discuss equity and how it can be considered in the context of their work and leadership. Equity has been established as a standing item on Committee agendas and the Department Chair/Chief has given a presentation on equity at our Research Day. Grand rounds have started with plans for EDID topics to be featured at least twice per year. We have launched a content management website to organize links to a variety of equity resources, both internal and external. We have reached out to the medical school Equity Office to participate in one sub-Committee. We have had a broad discussion of equity with a newly established Hospital office. One interesting topic that arose in the course of these meetings is that communications and discussions about equity and bias are not about saying the wrong thing. This could differ from a typical communication plan that defines or restrains dialogue on key points in order to ensure that there is a balance between saying too much or too little (Beatty, 2015). In this case, the Department members have to start talking, and keep talking, even when the conversation is difficult or uncomfortable. Individually, and institutionally, we have an obligation to pursue equity and social justice on an ongoing basis. This is the basis of this OIP's communication plan, and what it will continue to reflect in perpetuity.

Next Steps and Future Considerations

The intent of my OIP is clear: to achieve equity in the recruitment and promotion women faculty and leaders in academic surgery. The source data exposing the longstanding gender imbalance in the Department of Surgery at Stone University tell a compelling story as to the need for this organizational change to start, take hold, and gain momentum. However, beyond the empirical facts of the number of women faculty and leaders, cultural change supportive of equity is more difficult to benchmark and track. This does not minimize our duty to pursue equity; nor does it excuse inaction. Rather it brings us to the place where we become ready to engage each other with empathy, meaningful dialogue, and education, because there is no one silver bullet solution that can effectively solve this complex problem on its own. We can begin with statistics, and then involve the Department in moving forward with an actionable change

framework. This OIP has been crafted to give Department of Surgery members the insight, tools, and skills by which to look at a situation from a new perspective and to embrace our identities and differences as an opportunity for learning and appreciation of what makes us unique as well as what makes us stronger, together. The authenticity and commitment already present in the Department will guide leaders and followers to have courage and trust as we make mistakes and gains along the way as we move into the next steps for change supportive of gender equity.

Next Steps

Having worked through the implementation of change in this OIP, there are three steps to consider next. First, the Department will need to be prepared to launch the AI cycles described in the change implementation plan. However, it will also be necessary while doing so to remain mindful of representation: taking notice of the leaders or Department members who have embraced the principles of equity (or not), who is present in the room (or not), and where we have succeeded (or not) in our efforts to recruit and promote women faculty and leaders in academic surgery. We need to ensure we avoid tokenism and placing an undue burden on individuals to serve as representatives for equity in every possible venue. Furthermore, as we celebrate successes, it is also our collective calling to remain relentless in the pursuit of equity from all angles, no matter what challenges lie ahead.

Second, equity has to become a constant consideration in everything we do in the Department of Surgery. We will have to contemplate bias, privilege, and assumptions – audibly and powerfully – because what stays unspoken or invisible is likely to continue to be ignored. We will need to recruit equity champions and promote the equity message with compelling proof and narratives across the Department. We will need to provide concrete definitions related to equity terminology so as to convey clarity and emphasis, and in doing so, redefine our processes, standards, norms, and values, particularly those that we use in faculty appointment, promotion, and leadership selection procedures. As the equity message is internalized,

physicians will learn to be cognizant of the images they present in research and education and whether diagnosis, symptomatology, and treatment can or should differ based on gender or race or other biological or sociological factors. The physical and sociological environment will be freshly scrutinized in terms of the impact it has on women. Physicians will begin to factor in the social determinants of health, education, and research, as they intersect with gender, race, and economics. Above all, this change process demands that we ask questions – rather than rest in complicit, awkward silence – and raise our voices to disrupt the perpetuation of inequities already embedded in our systems, institutions, and society.

Third, we will need to recognize that change can be difficult and uncomfortable, not necessarily because there is disagreement on where we want to go, but because of where we are now. Every surgeon in the room – whether man or woman – is a product of the system as it has been designed and functioned. Critical reflection on this would no doubt be a challenging or even a conflicting internal process for some in recognizing how their status, privilege, and advantages have shaped their choices and careers. In addition, while support for equity initiatives is strong, there is often a feeling that they don't need to be applied to our environment because physicians often deem themselves to be free from bias. Case in point: faculty are required to declare any paid conflicts-of-interest to the University annually, in their presentations, and in their published research. However, does not having any remunerative activities equate to being free from any conflicts-of-interest or from bias?

Future Considerations

The literature validates that the systemic and ubiquitous nature of gender bias means that it will need to be a constant consideration in academia and in healthcare as we move into the future. Gender is a fundamental factor embedded into health systems that predetermines health encounters and outcomes (Hay et al., 2019). Gender gaps persist in medical education and treatment even where sex-differences are well-known. It is in ignoring gender dissimilarities and experiential differences that we worsen inequality. The stories we tell, the assumptions we

make, and the information we seek, teach, and learn are distinctive in our era not for the headway we have made but for their continued absence of women. A unisex scrubs shirt is not designed for a woman's body. Equipment is typically based on a man's size and strength. The career demands on academic surgeons are generally based on underlying expectations related to limited family responsibilities. Medical research and treatment have historically – and in many instances continue – to be founded, tested, and administered on the belief that men represent humanity (Criado-Perez, 2019). What we do not know about gender and bias in medicine and surgery can be ill-fitting or inconvenient. Or it can cause injury or even death (Criado-Perez, 2019; Hagiwara et al., 2020; Lopez et al., 2020).

Whether excluded by design or by chance, women in academic surgery deserve access and opportunities to succeed. This goes beyond the right to resources to reflect the intrinsic value of women in society: gender equity sets a foundation for stronger research, enhanced education, and superior clinical outcomes for everyone. Women have made great strides in representation in education and healthcare, but the progress has been uneven. The power to change this trajectory is in every person's hands. We can choose to become more open and insightful as we embrace change. We can structurally value women and the contributions they make to academic surgery. We can internalize the message that bias is normal and then expect that we will have to mitigate its impact on our thoughts and behaviour. This is our responsibility and our commitment to our colleagues, students, patients, and future generations. The stakes are high for our Department: not only in caring for patients, educating trainees, and conducting research, but in advancing an inclusive and equitable workforce that underpins a healthy society.

Chapter 3 Conclusion

Chapter 3 concludes this OIP but does not end the quest for equity for women in academic surgery. It serves as the launching pad for the journey: to embrace appreciative inquiry as a change implementation framework for the proposed integrated solution that

includes implicit bias training, appointing equity champions, presenting evidence and expertise, and redefining processes, standards, norms, and values using an EDID lens. Chapter 3 challenged the Department to assess and embrace our progress using evaluative inquiry, and to integrate equity into all aspects of communications. As the literature mounts and the dialogue expands across the Department and the discipline, Chapter 3 demonstrated that the challenge is not to begin but to continue. It is within our power to plan, to raise awareness, and to resolve barriers and biases as we evolve and grow, keeping faith that this change process will lead to an even better version of an already outstanding Department. I believe that from start to finish, this OIP is a novel approach – grounded in theory and practical tools – that will make a difference to women in surgery, my Department, and beyond. Now, let's get started.

Epilogue

When I began my doctoral studies in 2019, I felt as if this topic was something I was always meant to pursue. It was my quiet interest and passion, lurking in the recesses of my mind, just waiting for the right time and place to emerge. Then my work and life experience converged to point me in this direction. Yet what I could not have foreseen when I started on this academic journey was the concurrent impact and speed by which equity, diversity, inclusion, and decolonization would spread as a movement across our institutions and the nation. First there was #BlackLivesMatters, then #OurLondonFamily, then #EveryChildMatters. Surrounded by media images filled with death and despair, my heart broke, over and over.

But a pernicious legacy does not predetermine our future. In our collective grief, there was also an outpouring of faith and love – firmly aimed at healing through the pursuit of social justice, truth, and reconciliation – as we embraced the humanity of each loss. Through tear-stained eyes and raw emotions, we saw. We understood. We internalized the enormity of the past and the mission now before us. With this framing my worldview, it became harder and harder to limit the dialogue in my head and the readings I selected to focus only on women; however, I believe in the end that was the right choice for this OIP, true to my guiding questions. And so, it remains my fervent hope that this work will serve as a foundation in the quest for justice for all equity-deserving groups in medicine and academia.

This narrative belongs to all of us, and in its becoming, is the future we deserve.

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Appendix A

MD Graduation Rates in Canada by Gender, 2019

Table H-1
MD Degrees Awarded by Canadian Universities by Sex of Graduates
1991 - 2019

Year	Number of MD Degrees Earned by:			
	Men	Women	Total	% Women
1991	941	763	1,704	*44.8*
1992	983	766	1,749	*43.8*
1993	979	723	1,702	*42.5*
1994	939	747	1,686	*44.3*
1995	948	791	1,739	*45.5*
1996	842	843	1,685	*50.0*
1997	783	794	1,577	*50.3*
1998	828	776	1,604	*48.4*
1999	756	838	1,594	*52.6*
2000	796	782	1,578	*49.6*
2001	766	771	1,537	*50.2*
2002	770	773	1,543	*50.1*
2003	794	865	1,659	*52.1*
2004	818	938	1,756	*53.4*
2005	758	1119	1,877	*59.6*
2006	803	1,154	1,957	*59.0*
2007	846	1,200	2,046	*58.7*
2008	917	1,205	2,122	*56.8*
2009	999	1,339	2,338	*57.3*
2010	1019	1,428	2,447	*58.4*
2011	1,080	1,446	2,526	*57.2*
2012	1,102	1,542	2,643	*58.3*
2013	1,140	1,518	2,658	*57.1*
2014	1,213	1,582	2,795	*56.6*
2015	1,261	1,552	2,813	*55.2*
2016	1,294	1,553	2,847	*54.5*
2017	1,214	1,597	2,811	*56.8*
2018	1,302	1,561	2,863	*54.5*
2019 *	1,288	1,568	2,856	*54.9*

* Preliminary data

(Association of Faculties of Medicine of Canada, 2019)

Appendix B

Department of Surgery, Clinical Faculty by Rank and Gender, 2006-21

	Assistant	Associate	Professor	Total Faculty	% Women
2006	7	1	0	70	11.4%
2007	11	1	0	76	15.8%
2008	10	2	0	76	15.8%
2009	9	3	0	78	15.4%
2010	9	3	0	79	15.2%
2011	8	3	0	77	14.3%
2012	8	2	0	79	12.7%
2013	5	7	0	84	14.3%
2014	5	7	0	86	14.0%
2015	5	8	0	86	15.1%
2016	5	10	1	89	18.0%
2017	5	9	1	89	16.9%
2018	6	10	1	87	19.5%
2019	7	10	1	90	20.0%
2020	8	5	4	94	18.1%
2021	10	7	4	100	21.0%

As of July 1st, annually.

Used with permission, Department of Surgery, Stone University

Appendix C

Department of Surgery, Clinical Faculty Recruitment by Gender and Year, 2006-2021

	Women	Men	Total Recruitment	% Women
2006	5	1	7	83%
2007	1	3	4	25%
2008	0	2	2	0%
2009	1	6	7	14%
2010	0	0	0	N/A
2011	1	1	2	50%
2012	1	7	8	13%
2013	0	1	1	0%
2014	3	4	7	43%
2015	0	1	1	0%
2016	1	2	3	33%
2017	1	3	4	25%
2018	0	2	2	0%
2019	4	7	11	36%
2020	3	5	8	38%
2021	2	2	4	50%
AVG	1.4	2.9	4.4	33%

Used with permission, Department of Surgery, Stone University

Appendix D

Physicians in Canada by Subspecialty and Gender, 2019

Number and percent distribution of physicians by specialty and gender, Canada 2019

Specialty	Female		Male		Unknown		Canada	
	N	%	N	%	N	%	N	%
SURGICAL SPECIALISTS	3,139	30.3%	7,227	69.7%	4	0.0%	10,370	100.0%
Cardiac Surgery[2]	13	8.7%	136	91.3%	0	0.0%	149	100.0%
Cardiothoracic Surgery[2]	11	10.7%	92	89.3%	0	0.0%	103	100.0%
Thoracic Surgery[2]	16	14.0%	98	86.0%	0	0.0%	114	100.0%
Colorectal Surgery	9	34.6%	17	65.4%	0	0.0%	26	100.0%
General Surgery	544	27.9%	1,403	72.1%	0	0.0%	1,947	100.0%
General Surgical Oncology[2]	18	48.6%	19	51.4%	0	0.0%	37	100.0%
Paediatric General Surgery[2]	35	44.3%	44	55.7%	0	0.0%	79	100.0%
Vascular Surgery[2]	35	15.5%	191	84.5%	0	0.0%	226	100.0%
Neurosurgery	36	10.6%	302	89.1%	1	0.3%	339	100.0%
Obstetrics/Gynecology	1,305	61.8%	808	38.2%	0	0.0%	2,113	100.0%
Gynecologic Oncology[2]	26	76.5%	8	23.5%	0	0.0%	34	100.0%
Gynecologic Reproductive Endocrinology and Infertility[2]	31	60.8%	20	39.2%	0	0.0%	51	100.0%
Maternal-Fetal Medicine[2]	54	81.8%	12	18.2%	0	0.0%	66	100.0%
Ophthalmology	352	28.3%	894	71.7%	0	0.0%	1,246	100.0%
Otolaryngology	189	24.3%	590	75.7%	0	0.0%	779	100.0%
Orthopaedic Surgery	213	12.6%	1,478	87.3%	2	0.1%	1,693	100.0%
Plastic Surgery	169	26.5%	469	73.5%	0	0.0%	638	100.0%
Urology	83	11.4%	646	88.5%	1	0.1%	730	100.0%
ALL SPECIALISTS	15,974	38.5%	25,510	61.5%	17	0.0%	41,501	100.0%
MEDICAL SCIENTISTS	0	0.0%	7	100.0%	0	0.0%	7	100.0%
ALL PHYSICIANS	36,755	42.7%	49,295	57.3%	42	0.0%	86,092	100.0%

Notes:
Excludes medical residents and physicians over age 80.
Includes non-clinicians and physician who work primarily in administrative positions, who maintain a licensed to practice. Include part-time and semi-retired physicians.

[1] Includes non-certified specialists

[2] Counts for these specialties had been included within the counts of other related specialties in earlier years.

Source: CMA Masterfile, January 2019, Canadian Medical Association

(Canadian Medical Association, 2019)

Appendix E

Postgraduate Graduation Data by Subspecialty and by Gender, 2019-20

Table B3. Number of Active Residents, by GME Specialty, and Sex
2019-20 Active Residents

ACGME-Accredited Specialties and Subspecialties	U.S. and Canadian MD Graduates				
	Men		Women		
	Number	Percent	Number	Percent	Total
Colon and Rectal Surgery	43	45.3	31	32.6	74
Neurological Surgery	1,085	70.9	275	18.0	1,360
Endovascular Surgical Neuroradiology (Neurological Surgery)	1	100.0	0	0.0	1
Obstetrics and Gynecology	596	10.9	3,614	65.9	4,210
Female Pelvic Medicine and Reconstructive Surgery (Obstetrics and Gynecology)	26	18.2	96	67.1	122
Gynecologic Oncology (Obstetrics and Gynecology)	50	22.8	136	62.1	186
Maternal-Fetal Medicine (Obstetrics and Gynecology)	49	13.7	234	65.4	283
Reproductive Endocrinology and Infertility (Obstetrics and Gynecology)	22	14.5	105	69.1	127
Orthopaedic Surgery	3,022	71.7	612	14.5	3,634
Adult Reconstructive Orthopaedics (Orthopaedic Surgery)	27	67.5	4	10.0	31
Foot and Ankle Orthopaedics (Orthopaedic Surgery)	7	53.8	4	30.8	11
Hand Surgery (Orthopaedic Surgery)	98	69.0	37	26.1	135
Musculoskeletal Oncology (Orthopaedic Surgery)	9	69.2	3	23.1	12
Orthopaedic Sports Medicine (Orthopaedic Surgery)	121	71.2	19	11.2	140
Orthopaedic Surgery of the Spine (Orthopaedic Surgery)	17	65.4	2	7.7	19
Orthopaedic Trauma (Orthopaedic Surgery)	9	69.2	1	7.7	10
Pediatric Orthopaedics (Orthopaedic Surgery)	14	41.2	11	32.4	25
Otolaryngology	926	56.5	578	35.3	1,504
Otology-Neurotology (Otolaryngology)	22	71.0	6	19.4	28
Pediatric Otolaryngology (Otolaryngology)	20	52.6	15	39.5	35
Plastic Surgery	88	43.1	49	24.0	137
Plastic Surgery: Integrated	506	53.1	391	41.0	897
Craniofacial Surgery (Plastic Surgery: Integrated)	3	60.0	2	40.0	5
Hand Surgery (Plastic Surgery: Integrated)	9	60.0	6	40.0	15
Surgery: General	3,693	40.1	3,103	33.7	6,796
Complex General Surgical Oncology (General Surgery)	50	45.5	36	32.7	86
Hand Surgery (General Surgery)	4	50.0	1	12.5	5
Pediatric Surgery (General Surgery)	32	39.5	44	54.3	76
Surgical Critical Care (General Surgery)	111	42.9	81	31.3	192
Vascular Surgery (General Surgery)	109	45.8	56	23.5	165
Thoracic Surgery	125	53.4	45	19.2	170
Congenital Cardiac Surgery (Thoracic Surgery)	4	44.4	3	33.3	7
Thoracic Surgery: Integrated	143	64.1	58	26.0	201
Urology	1,080	64.6	424	25.3	1,504
Female Pelvic Medicine and Reconstructive Surgery (Urology)	8	23.5	23	67.6	31
Pediatric Urology (Urology)	14	40.0	16	45.7	30
Vascular Surgery: Integrated	183	54.5	108	32.1	291
Total	***45,630***	***32.6%***	***39,915***	***28.5%***	***85,545***

Note: Residents whose sex was unavailable were excluded.

Source: GME Track® as of Aug. 13, 2020.

(Association of American Medical Colleges, 2020)