what was Unique is still Unique...

Gender and sex are ‘every body’s’ business.

The Institute of Gender and Health (IGH) was founded 10 years ago in recognition of this, and of major gaps in the study of the health of women, girls, men, and boys. IGH is the first—and remains—the world’s only research funding institute with a specific focus on gender, sex, and health. What was unique is still unique.

Yet, so much has changed.

In the past decade, we have moved from building a research community to actively driving a cohesive field forward. Through our highly engaged relationship with a now robust research community, IGH has been a pivotal agent of these changes.

Canadian gender, sex, and health research has matured: our acclaimed women’s health research community continues to thrive; more researchers are studying the biological bases of sex differences; the once nascent men’s health research community has taken root; and, across organizations and disciplines, there is growing recognition of the scientific value of accounting for sex and gender in health research. We also have seen advances in emerging areas with theoretical and policy applications on sex and gender. The way we do health research in Canada is changing.

With a more established field, we are beginning to see that gender, sex, and health researchers are prioritizing knowledge translation in their work, a culture that IGH has helped to cultivate. Gender, sex, and health research evidence is making a difference.

The top 10 success stories profiled in our 10th anniversary special issue of Intersections paint a picture of how far we have come in the past 10 years. We are shifting paradigms, shaping policy, creating new knowledge, translating knowledge in innovative ways, and building capacity for the next generation of researchers. While IGH cannot lay sole claim to all of this work, these stories are revealing of a field that has not only come into its own, but is resonating throughout the health research community writ large. In celebrating our decennial, by IGH, is a testimony to the thriving state of the science in Canada. Where once the role of gender and sex considerations in health policy and practice was questioned, researchers are now recognizing that pre-clinical studies cannot be confined to male animals only, that it cannot be assumed that a drug or device has similar functions for males and females, or that men and women access care in the same way. Because of the dedicated efforts of IGH, CIHR will now be instating two new questions in the certification section of the research module for all grant applications on sex and gender. The way we do health research in Canada is changing.

In going forward, we are building on the momentum of the past decade. By focusing on the development of new methods and measures, we are driving into cutting-edge areas. We are expanding our reach nationally through web-based technologies to further consolidate our Canadian research strengths, and internationally, through partnerships, to share our expertise and extend our leadership. Public engagement is high on our agenda as we continue to foster understanding about why gender and sex matter to health.

One key lesson learned over the past decade is that researchers, clinicians, and policy makers are open to the idea that sex and gender matter to health research, policy, and practice. Sometimes it just takes one simple question—“Do you know the sex of your cell line?”—to spark an awareness of these issues that grows into a way of doing research. As an institute and a community we need to continue to ask gender and sex questions of our colleagues, research partners, and wherever the opportunity presents itself.

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Intersections seeks to showcase excellence in Canadian gender, sex, and health research. We welcome proposals for spotlighting cutting-edge researchers, profiling research achievements and innovations, and highlighting success stories in knowledge translation and training. To submit your ideas or to request further information, please contact ea-igh@exchange.ubc.ca.
It was December 1999. As the turn of the millennium approached, I was driving home from skiing late one winter afternoon when I heard on the radio that a three-month-old baby boy died in his car seat without warning. The cause of death was Sudden Infant Death Syndrome (SIDS), the result of a gradual loss of the normal breathing reflex.

“SIDS is more common in boys,” said the voice on the radio, “because of high levels of androgens in the male lungs.”

The flurry of information in this simple story was all it took. I was astounded—astounded that the disease was linked to the presence of androgens in the lungs. Androgens are active steroid hormones normally produced in the testes that affect the development of male sex characteristics. This information implied that the lungs might have the capacity to produce active steroids, a concept called intracrinology. Given my research background in steroids, the idea that baby boys’ lungs were more sensitive to androgens than baby girls’ was mind-boggling to me. Medically speaking, the lungs are considered an asexual tissue, meaning they perform the same function in both sexes: carrying out vital gas exchange. This radio newscast implied otherwise.
I finally learned that, in this particular understand what this might mean. It very premature infants and is the result distress syndrome (RDS). RDS affects development of the lung: respiratory important contributing factors to the on, I came across another disease that do with SIDS. However, in the process was indeed SIDS, but that steroids, and in which the biological activities and clarify what role androgens be expected to play an important role. As a result of these experiments, I line did in fact metabolize androgens. The results were very encouraging: this cell line did in fact metabolize androgens. As a result of these experiments, I proposed that the fetal lung might be regarded as a new type of organ, as an intracrine tissue with the ability to form steroids, and in which the biological factors differentiating the sexes could be expected to play an important role. The next step was therefore to better define these dependent androgenic activities and clarify what role androgens playing in created sex differences in the incidence of RDS. The fascinating aspect of these new studies was that they seemed to promise rapid access to a therapeutic pathway that would specifically help premature boys. My impulse was to think that because only boys produce androgens during fetal development, only male lungs are exposed to them, and hence it would suffice to block or at least control this exposure. My vision was falling into place: the administration of an antandrogen into the fetal lungs via amniotic fluid would be the miracle solution. We first studied a male human cell line derived from cancerous pulmonary skin cells. These cells had the ability to express genes that produced androgens by transforming non-active steroids normally found in the circulatory system. We also characterized several normal human cell lines derived from healthy pulmonary tissue. These cells were taken from male and female lungs at various fetal and postnatal ages. An exhaustive analysis of these cells in terms of androgen production produced a surprising finding: all of these cells had the same androgenic activity— they inactivated the androgens. Even more surprising was that there was no correlation with the sex and/or age of the cells. The cells could, however, be classified into two categories: those with a high capacity to inactivate androgens, and those with a high capacity to do so. Using these findings, in my lab we developed a new model in which the lung’s androgenic potential was assumed to result from a differing ability to inactivate androgens. Hence, certain lungs would be more or less exposed to androgens and more or less likely to develop RDS in cases of premature birth. But we still faced two major questions: (1) why are newborns deprived of female androgens even if only male lungs produce androgens? and (2) Was it possible that female lungs also produce androgens? To answer these questions, we turned to an animal model. These animal studies modified our understanding of the role that androgens play during lung development. We found that not only does the fetal lung synthesize and inactivate androgens, but also that this characteristic belongs to both males and females. This phenomenon also coincides with the appearance of lung cells that specialize in the production of pulmonary surfactant, the fluid that allows for normal respiration. As a result of these studies, we introduce a new concept about the role of androgens in RDS. We showed that androgens had two different effects on lung development: (1) a harmful effect that occurs only in males and whose origins could be traced to the production of androgens when the gonads develop in the male fetus, and (2) a positive effect that is common to both sexes whereby the lung regulates its exposure to androgens by producing and inactivating androgens during the period when the cells that produce surfactant first appear. As a direct result of these findings, we had to fundamentally modify our approach in subsequent research. Our goal was no longer to block the production of androgens by the lungs, but rather to target genes that are regulated by androgens and that are responsible for the male/female sex difference. Throughout all these years I stood my ground that the current therapies for RDS, though effective, did not resolve everything—certainly not the difference between boys and girls in the disease. My colleagues’ opinions were divided. We not only had different understandings about the impact of sex, but also concerning the decision to begin, continue, or cease medical intervention with these infants when born on the threshold of viability. I realized that clinical beliefs regarding sex differences and the impact of fetal sex on clinical practice varied not only from one practitioner to another according to their culture and their workplace, but also sometimes from centre to centre within a given city. As a direct result, the information conveyed to parents is not uniform and varies depending on the context. The bottom line was that to better informed, clinical practitioners must be better informed. And for that to happen, the first step must be to document the issue of premature birth from various disciplinary standpoints. The second will be to work toward consensus on how we understand and approach RDS and premature infant health. The third will be to formulate a statement on the reach to date, based on available evidence. To achieve this goal, researchers in the biomedical sciences, along with clinicians and various other professionals, will have to join forces and work together. Toward this end, after a year of preparation, we established the new Multidisciplinary Scientists’ Team (MUST), spanning the fields of medicine, Biomedicine, pediatrie, and population health, supported by the Institute of Gender and Health. The team is dedicated to studying extremely premature infants and the impact of sex on their future. In the coming years, we hope to expand into other areas, including ethics and sciences such as speech therapy and audiology, all with a focus on the consequences of being born very prematurely and with a sex- and gender-based approach and analysis. To learn more about MUST and the consequences of being born prematurely as a boy, please visit: http://www.mfed.ulaval.ca/prema/
There is scant research on how women’s healing is impacted by the stigma linked with drug use, criminal involvement, and being of Aboriginal descent in Canada. Guided initially by the literature and practice-based expertise, our research team committed to undertaking a study in this area. Our community-based approach soon revealed the need to prioritize the often silenced voices of women with the lived experience of coping with this stigma. The members of our team included Aboriginal Elders, treatment providers, First Nations, Métis, and Inuit women who had been in drug treatment, treatment centre directors, academic researchers (including myself as principal investigator), community agencies working with criminalized women, and government decision makers. Our team’s collective voice directed the study. With funding support from the Canadian Institutes of Health Research Institute of Aboriginal Peoples’ Health, in 2006 our team began gathering stories with women to understand the impacts of stigma. The women shared throughout their stories about experiences of having their voices silenced; they spoke about how they want to be heard and for others to “walk in their shoes.” And so, it was decided that the most effective and appropriate way to share the study’s findings was through a song and music video. In February 2009, alongside community partners and some of the women interviewed, members of our team participated in a three-day song writing gathering. Guided by the findings of the study and the knowledge of Violet Naytowhow, an award-winning Woodland Cree singer/songwriter, we drafted the lyrics of the song. The song has become a medium through which women’s life experiences and wisdom about healing can be heard. It celebrates their voices. 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Building Our Communities Through Research

Greta Bauer, University of Western Ontario

I had watched, and in some cases walked, a few trans (transgender, transsexual, or transitioned) friends through some pretty sticky health care situations. I had seen that getting a good pelvic exam can be difficult if you’re a man, and that mental health providers often wanted to reduce every issue to one of gender identity, making it difficult to receive care for unrelated issues. Being new to Ontario in 2005 and not trans myself, I knew that I could not do a study on trans health without the involvement of trans community members and organizations. Through a very fortunate confluence of events, I soon met a group of trans community members and an ally that had already received seed funding to build a team for such a study.

The Research Team for the Trans Health Research Project—which was to become the Trans PULSE Project—was developed through a call-out for additional trans community members, and then a call for academic researchers. Community members interviewed and chose academic partners. As one of two academic researchers on the project, I recall my first meeting: I arrived and the agenda was written on a white-board: 1) Updates, 2) Process for the Trans PULSE project developed into a mixed-methods community-based study on how social exclusion impacts the health and well-being of trans people, and 3) Greta Bauer. For the entire evening I was asked questions about my potential involvement: What was my background and interest in trans communities? What skills would I bring to the project? Did my academic background meet the needs of the project? Would I be an ally in fighting transphobia? Given the history of pathologizing research on trans people, I was excited to be part of a team with a deep commitment to producing knowledge that would document the realities of trans lives that are so often invisible to those not part of, or closely connected to, trans people and communities. The Trans PULSE project developed into a mixed-methods community-based study on how social exclusion impacts the health and well-being of trans people, supported by grants from the Canadian Institutes of Health Research, the Wellesley Institute, and the Ontario HIV Treatment Network.

Until recently, most health research on trans people was driven by medical questions related to endocrinological or surgical treatment or academic concerns on the etiology of transsexualism. In contrast, Trans PULSE is heavily based in community concerns and focused on producing knowledge on the lived experiences of trans community members that has the potential to shape policies and practices across a broad range of areas including employment, housing, protection from violence, mental health, sexual health, and family medicine. Given community concerns and vast unmet knowledge needs, we broke many of the conventions of research, including in the development of a breathtakingly long (87-page) survey, and in nearly “real-time” release of survey results through electronic bulletins. These e-Bulletins allow for rapid uptake of results by community members and agencies, and establish community accountability, while more detailed peer-reviewed publications are prepared and reviewed. Our electronic mailing list has over 600 subscribers, including policy makers, community agencies, researchers, doctors, and of course many, many, trans community members.

The policy- and education-related uptake of our data has been significant. Our first publication on how erasure (the process that creates invisibility) impacts health care access for trans people has been used in university courses in nursing, health sciences and women’s studies, and is currently ranked number five on the Journal of the Association of Nurses in AIDS Care’s “Top 25 Hottest Articles.” Our qualitative and early quantitative data were used by the Ontario Ministry of Health and Long-Term Care in the 2008 decision to restrict sex reassignment surgeries (SRS) for public funding, and in a recently announced decision to decentralize the approval processes for publicly funded SRS, provide training on trans-related primary care to family physicians, and conduct an evaluation of trans health care in Ontario. Our data were also referenced in this year’s parliamentary debate over Bill C-389, a measure to include gender identity and gender expression in the Canadian Human Rights Act and hate crimes provisions of the Criminal Code of Canada, and have been used in meetings with Ontario’s Attorney General on incorporation of such explicit protections into the Ontario Human Rights Code. Statistics from Trans PULSE have also been used by a number of community and academic groups to provide support for funding applications for community programming and additional research.

Trans PULSE has become a model for community-based research. It is unique in that it was initiated and has always been controlled by trans community members. Of the 38 individuals who have served as investigators, staff, student research assistants, and Community Engagement Team (CET) members, all but 9 are trans. Our project Terms of Reference specifies that for all major project decisions, a majority of team members present must be trans. Our Community Engagement Team, a group of 16 trans people from around Ontario, also contributed countless hours to survey development and technical piloting, as well as promotion.

One of the biggest joys of working on such a community-intensive research project is building our collective capacity to do this kind of research. Trans PULSE has provided opportunities for community investigators to co-author papers and other research materials, to present at conferences, and to be involved as researchers in policy consultations. We have thus far trained eight graduate students, two of whom are trans and six of whom are cissexual (non-trans). Our project manager and graduate student Todd Coleman says, “I personally owe any achievements and milestones in my career to starting out as a research assistant on Trans PULSE. The skills and eye-opening knowledge that I have acquired in the areas of gender, sex and health over the last three years working for the project would likely not have occurred had it not been for Trans PULSE. It will continue to shape every piece of work in my career.”

Trans PULSE is now made up of an experienced research team serving as stewards of the most comprehensive data resource on trans health in Canada. Our efforts—which will continue for years to come—are already having a real impact on policy and practice. Our work is contributing to the un-erasure of trans people in informational and institutional contexts. We have held ourselves to high standards of ethics and community accountability, and developed research processes and knowledge translation strategies that reflect those commitments. We are, as our project’s tagline reads, “building our communities through research.”

For more information, please visit www.transpulse.ca
I was a rather young graduate student when I first came across differences between men and women in their responses to stress. At the time, I didn’t quite know whether these were due to sex (biological) or gender (social) factors.

I was a research assistant in a laboratory that was performing stress studies using a public speaking scenario in front of an audience as a stressor, and measuring various physiological (blood pressure, heart rate) and endocrine (Adrenocorticotropin hormone, Cortisol) variables as outcomes. This type of performance task is both competitive and social; that is, you have to do a good job in front of peers. What was just being established at that time was that women showed a consistently lower stress response to this task than men, as measured by the major stress hormone Cortisol.

This could be interpreted in two ways. First, it could mean that women were less stressed because they didn’t get to them in the same way as men. Second, there was an equally feasible biological (sex) explanation, in that women had lower levels of stress hormones because these were inhibited by their higher presence of female hormones. We initially didn’t know which was which but were intrigued by the apparent possibilities of both gender and sex playing a role.

My sense of intrigue was piqued a couple of experiments later when—still as a research assistant—I helped with an experiment investigating the effects of social support on stress. Participants had to speak in front of an audience either with or without their partners. Our common sense notion (and everybody’s expectation) was that women would be at play here. Indeed, the different responses appeared to have more to do with the social than the biological: when the partner was present, the stress responses of the women to the earlier stress task were the opposite: they showed increased social support. As it turned out, this was true only for men. If accompanied by their female partner, men responded to the public speaking stress task by releasing higher levels of stress hormones. For women, however, the responses were the opposite: they showed lower stress responses to the public speaking task when they confronted the audience in the presence of their male partner! This was absolutely unexpected and caused some raised eyebrows.

It was then that the importance of sex and gender in stress research crystallized for me. It also helped to clear up the initial question of whether hormones alone might explain the lower responses of the women to the earlier stress task. More than biology seemed to be at play here. Indeed, the different responses appeared to have more to do with the social than the biological: when the social relevance of the public speaking situation was amplified by the presence of the women’s partners, women responded more strongly with the release of stress hormones.

Fifteen years have passed since my first entrée into stress research, and a lot has changed. Now it is officially accepted that men and women differ in their social roles and responsibilities with which they respond to stress, thanks in part to the work by Taylor et al. (2000) and Stroud et al. (2002). Taylor’s seminal paper “Tend and befriend, not fight or flight’ officially introduced the notion that women might pursue different response strategies when stressed (and it is interesting to ponder that might be sex- or gender-based). Stroud, Salovey, and Epel (2002), in turn, demonstrated that the nature of stress might also be different for men and women. They documented differential responses in the sexes depending on the task used. To summarize it crudely: women respond more to the danger of social rejection, while men respond more to competitive aspects of the situation.

This brings us to the current line of stress research, and the adaptations that are taking place to acknowledge these sex- and gender-based differences. While earlier stress research was performed using a “one size fits all” approach—where men and women were exposed to the same stressors to study interindividual differences—we now realize that we might cause some of these differences by using stimuli that are biased toward one gender or the other. As a consequence, we are currently exploring tests that are either emphasizing female or male relevant situational aspects. It is hoped that these developments will in turn allow for a better assessment of sex- and gender-based differences in future stress research.

Now it is officially accepted that men and women differ in the social roles and responsibilities with which they respond to stress.
Recognizing a missed opportunity gave "birth" to the FACET (Families Controlling and Eliminating Tobacco) program of research, dedicated to reducing and eliminating tobacco use in young families. During the course of our research, we became intrigued by the fact that many women "stop smoking" for pregnancy, only to return to cigarette use either during pregnancy or soon after the baby was born. This represented to us an important missed opportunity for intervention.

Yet our own efforts, like those of others, to support successful and sustained smoking cessation by intervening directly with postpartum women only raised more questions than answers. We found that the theories guiding smoking cessation interventions did not fit with women’s experiences. We were convinced that new parenthood provided a unique window for tobacco reduction. However, we believed that a much better understanding about how women’s efforts to reduce and stop smoking were influenced by everyday life, household dynamics, and gender roles was needed to develop new approaches.

For over eight years, we have been generating new insights into the roles of family gendered relations in shaping smoking behaviours, with support from the Canadian Institutes of Health Research. This new knowledge has enabled our work to move from the initial phases of describing the gendered nature of the problem to designing and developing innovative gender-specific tobacco reduction interventions. As the FACET research program has evolved to focus on evidence-based solutions, our research team has increasingly incorporated a range of multidisciplinary researchers, health professionals, and community partners committed to connecting critical pieces of the tobacco reduction puzzle in pregnancy and the postpartum.

Our focus in the first phase of FACET was on couple interactions around tobacco during pregnancy. We discovered how tobacco-related dynamics between couples created challenges for women’s tobacco reduction efforts. These findings underscored the need to support women by taking into account the role partners play in their tobacco use, as well as the realities of women’s everyday lives. This led us to identify fathers’ smoking as a potentially important way to assist mothers’ efforts and this became an important focus in the next phase of the FACET research.

We learned that despite repeated requests and sometimes nagging, women were largely unsuccessful in getting their partners to stop smoking. As a result, they worked hard to regulate men’s smoking to fulfill their role as “good” mothers. We found that the smoking issues faced by new fathers were different than those associated with expectant and postpartum mothers. Fathers rationalized and defended their continued smoking by linking it to masculine characteristics of strength and risk-taking. It became apparent that the stress associated with being a new dad reinforced the need for stress relief through smoking. Although expectant fatherhood prompted men to re-think and sometimes modify their smoking
A missed opportunity to support women’s tobacco reduction efforts during pregnancy…has led us to novel approaches to support both women’s and men’s tobacco reduction.

As we move forward, we are focusing our efforts on diverse modes of knowledge translation. Our project is on Twitter (http://twitter.com/FACETobacco), Facebook (http://bit.ly/DadGear), and MySpace (http://www.myspace.com/S44277291). We anticipate a FACET video on YouTube in the very near future.

Gender Inequities in Health Care: Physicians’ Contributions

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Total joint arthroplasty (TJA) surgery of the hip or knee is one of the most impressively effective medical discoveries of the last century, and is considered the definitive treatment for relieving pain and restoring function in individuals with moderate to severe osteoarthritis for whom medical therapy has been tried and failed. Numerous studies indicate substantial and sustained improvement in patients’ quality of life with low complication and revision rates following TJA. Why then isn’t everyone who needs this highly effective treatment and deemed an appropriate surgical candidate, getting TJA? This is the story of how gender bias may inappropriately influence physicians’ clinical decision making regarding TJA and what this evidence means for reducing gender inequities in osteoarthritis care.

Research regarding the rates of use of TJA began in 1990 with early research focused on the phenomenon of area variation (i.e., if whether you get TJA depends on where you live). Our research included the first attempt in exploring the appropriateness of rates of utilization for a surgical or medical procedure using a population-based approach. We surveyed all individuals over the age of 55 years in a county with high rates of TJA being performed and a county with low rates of TJA in Ontario, Canada to determine the population need for TJA. We defined “unmet need” as candidates medically appropriate for TJA who, when advised of the risks and benefits of TJA, were still willing to consider TJA. We found an unmet need for TJA in both counties and that the degree of unmet need was greater in the high- compared with the low-rate utilization county. These findings shifted our attention away from area variation, towards the underutilization of TJA.

Our prior population-based study also established the presence of unmet need for TJA by gender and socioeconomic status. This finding indicates that unmet need varies by identifiable segments of the population, an issue that has been labelled as disparity. Previously documented disparities were largely based on analyses of administrative data that told us only about who is getting care, not about who is not. Although we found that TJA was underused in all segments of the population, the degree of underuse was more than three times greater for women (5.3 vs. 1.6/1000 for women and men, respectively) and those of lower socioeconomic status. For comparable levels of osteoarthritis, women in our sample expressed equal willingness to have surgery. Disparities in this highly effective procedure are a matter of major concern because they may adversely affect the health of vulnerable population subgroups.

Our recent research focused on subtle or overt gender biases potentially affecting physicians’ treatment
The results of this study suggest that physicians may be at least partially responsible for the gender disparity in TKA utilization. Recommendations regarding TJA. Biased care occurs when non-clinical factors such as stereotypes or social attitudes based on gender guide physicians’ clinical behaviour. When surveyed, referring physicians and orthopaedic surgeons indicated that a patient’s gender does not affect their decision to refer for, or perform, total knee arthroplasty (TKA). A ground-breaking study by our group published in the Canadian Medical Association Journal using standardized patients, also known as “mystery” patients—i.e., one male and one female with moderate knee osteoarthritis and otherwise identical clinical scenarios—demonstrated that the odds of an orthopaedic surgeon recommending TKA to a woman was 21 times that for a man. The odds of a family physician recommending TKA to a man was 2 times that for a woman. Furthermore, shared decision making was more problematic for women with physicians including fewer shared decision making elements when the standardized patient was a woman compared to a man. Specifically, physicians provided less medical information and less encouragement to participate in the decision to undergo TKA to a woman compared with a man. Physicians also seldom discussed her role in decision making, explored whether she understood the decision, or elicited her preferences. The results of this study suggest that physicians may be at least partially responsible for the gender disparity in TKA utilization. Our study is important as it is the first to demonstrate that patients’ gender affects physicians’ clinical decision making and provides some of the most conclusive evidence to date of a significant provider contribution to gender disparity in health care. In addition, no study has previously addressed whether physicians are less participatory with women compared with men for patients presenting with the same chief complaint, suggesting that gender bias may also influence physicians’ interpersonal behaviour. In addition, no study evaluating the effect of patients’ gender on physicians’ clinical decision making had previously compared actual behaviour with physician responses to matching case vignettes. Unlike their treatment recommendations for standardized patients, the same physicians’ treatment and referral decisions for matching “paper” patients were not influenced by patients’ gender. While paper patients (or written case vignettes) may be useful in the assessment of clinical competency, they are not a sensitive method of assessing gender bias among physicians. Addressing the physicians’ contribution to gender disparity in treatment is likely to require a multiple intervention approach, such as shared decision making and communication skills programs for physicians and decision support tools that facilitate shared decision making between patients and their practitioners. However, because these educational interventions are likely to target physicians’ explicit (conscious) beliefs rather than implicit (unconscious) stereotypes about patients, they are probably not sufficient to address physicians’ biases and eliminate gender disparity in treatment for all populations and settings. Addressing the impact of gender and power dynamics between male and female partners is critical in transforming gender norms to improve women’s status, as opposed to just accommodating, or even reinforcing them. In short, there is a long way to go in solving the smoking problem in women.

The bigger question remains as to whether tobacco control efforts can assist in transforming gender norms to improve women’s status.
from RESEARCH to POLICY: Improving Sexual Minority Health

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If ever there was a fortuitous time when social necessity met academic preparedness and combined to create an effective, practical response to a vexing condition, it was in Quebec in June 2005. It happened during an intense social debate about homosexuality in Canada, a month before the legalization of same-sex marriages. The Ministry of Justice was under pressure from gay and lesbian community leaders to find solutions to the problem of homophobia in Quebec and address the well-being of sexual minorities. Recognizing that little was known about the current state of homophobia in Quebec, the Ministry called for a marshalling of knowledge as Quebec society progressed toward new human rights realities.

The task was assigned to the Commission des droits de la personne et des droits de la jeunesse (CDPDJ) to produce a report. A mixed working group, under the guidance of Monika Aidos, included representatives of different ministries, public sectors (e.g., unions), community organizations, and academic researchers in the field of sexual minorities.

Into this propitious time, two researchers, professors Line Chamberland (UQAM) and Bill Ryan (McGill), were invited to be representatives of the academic research sector. As the principal investigator of the Sexual diversity, vulnerability and resilience (SVR) research team, I knew Line and Bill as members of our investigator of the Sexual diversity, Vulnerability and Resilience (SVR) research team, I knew Line and Bill as members of our research team. In particular, I was heartened at the time when in May 2009 the Quebec Human Rights Court of Justice used information from the report to arrive at three favorable decisions in favor of plaintiffs pleading human rights discrimination based on sexual orientation. Further, the court upheld the plea of a plaintiff in a case of sexual harassment in the workplace.

One month after the announcement of the policy, the government mandated an inter-ministerial committee to create a plan of action to combat homophobia in Quebec. It is hoped the plan of action will be a profound endorsement of the findings of the commission. The final plan is expected to be announced in December 2010.

From proposal to the final established policy, in terms of research and parliamentary procedure, it was like watching a fast horse on a fast track. The Quebec initiative is unquestionably the result of the actions of several social sectors, including the research sector.

The final plan is expected to be announced in December 2010.

However, the acceptance of this “opportunity meets chance” experience has been limited or locked down; that would be limited by proprietary health is about the opportunities and privileges that flow from our subject, our process, and our product. Gender and health speaks to us as physicians and as people; it speaks to us as human beings and as citizens. It is from this perspective that we were drawn together in gender and health by our shared interest. We were able to include content on career choice and streaming, medical school well-being, sexuality and depression—taboo topics that students might not encounter elsewhere within their programs.

Along the way, there were many centrifugal forces, trying to pull us apart, but in the balance, there was a centripetal force: the need to know that they are not getting elsewhere. When a fourth year gender and health student came to the office for help with the CanMEDS framework—the guidelines for essential physician competencies in Canada. The website is used by medical schools provincially, nationally, and internationally and across a range of health disciplines and social sciences. The project has provided a Canadian perspective on gender and health that is not biologically focused, such as the CanMEDS framework.

Perhaps the biggest success of the project is that we actually did it. When students told us that the project allowed them to do things we would not have done if we had not been working on it. It is important that we continue to use the resources the schools have provided. We have been using our expertise to develop resources that can be used for students, to change the way people think, and to make health care more open and accessible for all people. It was from this perspective that we were able to collaborate. Like moving water shapes, and is shaped by, the landscape, our understanding of gender and health was shaped by our gendered lives in this collaboration.

It was at the end of our wanderings that we understood what gender and health meant to us. We could look to the series of modules for medical students and know that we demonstrated what gender and health meant to us. We were able to clearly define what gender competencies were and recommended them in the CanMEDS framework.

In early 2020, the Deans of the Ontario medical schools, through Council of Ontario Faculties of Medicine (COFM), began to explore the possibility of collaborating on curriculum development. There was a group of faculty members interested in the process: small steps to understanding the components and then applying that understanding and summarizing it before moving on. The COFM Education Committee, which is composed of the Deans of Medical Education and Gender, and builds to what is gender and health. In other modules, we examined how gender fits with other social determinants. The curriculum then turns to specific areas in medicine and asks how gender is considered.

The educational material is grounded in the literature and presents latest findings in an interactive way that aims to engage the student with the material but also to change the way students understand gender and the effects that these have on health. It is hoped that this project has been knowledge translation and perspective shift. The reflective exercises are constructed with transformative intent and to challenge learners to become aware of their own assumptions and biases.

The choice of topics was primarily based on allowing students to work in areas of their interest. If we had not followed the lead of our summer students, we would not have our module on Gender and Sexual Diversity, or the module on Gender, Globalization and health, or the varied collection of topics that we now offer. We were able to include content on career choice and streaming, medical student well-being, sexuality and depression—taboo topics that students might not encounter elsewhere within their programs.
Mentored into Sex and Health Research

Jordan Guenette, Queen's University

I was in the third year of my undergraduate degree in the School of Human Kinetics at the University of British Columbia. I was a typical student achieving mediocre grades and realizing that I had no idea what I wanted to do with my life and career. All I knew is that I was passionate about endurance sports and that I loved to learn about exercise physiology. Unfortunately, I had no idea how to turn these passions into a career. A friend suggested that I look into undergraduate research opportunities so I could study exercise physiology in more detail. In searching on the web, I came across a faculty member named Dr. Bill Sheel, a CIHR Institute of Gender and Health New Investigator who was studying sex differences in exercise physiology. Coincidently, Bill also happened to be my statistics instructor at the time.

I reluctantly sought out Bill after class one day to inquire about possible research opportunities in his lab. My hesitation was in large part because I had absolutely no clue what research was all about and because my grades weren’t particularly impressive. Fortunately, Bill was very approachable and he decided to give me a chance, despite my modest grade point average and lack of research experience. I think he recognized my enthusiasm for exercise physiology and that I was willing to work hard. After discussing some research ideas we decided to explore studies on the respiratory response to exercise in men and women.

After helping with a review article on sex differences in respiratory physiology, we recognized a major gap in the literature. Most exercise scientists exclusively use male subjects in their research and assume the responses will be the same in women. And so it was that Bill and I decided to carry out research on sex differences in how humans breathe during exercise. Bill gave me the confidence and independence to run with my ideas. Rather than giving me the answers to my questions, he would point me in the right direction and he allowed me to struggle. Bill’s mentorship model has trained me as a health researcher and has given me the tools to one day mentor my own students and to continue exploring the important role that sex and gender have in human health.

He created a research environment where I felt like his colleague rather than one of his subordinates. Bill instilled in me a passion for science and encouraged me to pursue graduate studies and a career in sex and gender research. I became very motivated and ended up publishing my undergraduate research and presented at national and international conferences. This newfound desire to pursue graduate studies encouraged me to persevere for the remainder of my undergraduate degree, resulting in my selection to give the valedictorian address at my convocation. My confidence as a student shifted in a positive direction because I had a role model that believed in my potential.

Following graduation, I immediately started my master’s with Bill. My master’s dealt with sex differences in breathing mechanics during exercise in elite endurance athletes. We demonstrated that women may be more susceptible to breathing limitations and that the growing interest in sex-based research made it very easy for me to decide to continue with Bill for my Ph.D.

My doctoral thesis determined some of the physiological consequences associated with breathing limitations in women during exercise. For example, we demonstrated that women have smaller airways than men resulting in an increase in airflow resistance while breathing. Despite this observation, we found that female respiratory muscles were more resistant to developing fatigue relative to their male counterparts during exercise. Bill continued to provide me with opportunities to pursue independent research during my Ph.D. in an effort to further diversify my academic training. He also recognized some of the limitations a student might experience when doing all of their degrees at the same institution and with the same supervisor. So I ended up spending several months in Europe doing additional research at the Copenhagen Muscle Research Centre and in the Department of Critical Care Medicine and Pulmonary Services at the University of Athens. This research resulted in the first successful attempt at measuring blood flow to respiratory muscles in conscious humans. Few supervisors would allow their students to spend several months doing independent research with other principal investigators—another example of how Bill holds his trainees’ interests above his own.

Bill’s CIHR Institute of Gender and Health New Investigator Award afforded him the time to focus his attention on mentoring his research trainees. His mentorship model has trained me as a scientist. This selfless attitude towards student mentorship and my growing interest in sex-based research led me to pursue independent research with other students and to continue exploring the important role that sex and gender have in human health. I decided to write this story to acknowledge Bill for being such an outstanding role model, supervisor, friend, and colleague. It is my goal that I will one day be able to offer my students the same quality of mentorship that I received from Bill.

I recently defended my doctoral thesis and I am now a post doctoral fellow in the Department of Medicine at Queen’s University. I have taken the knowledge that I acquired about elite athletes with Bill and I am now applying similar models to understand sex and gender differences during exercise in chronic diseases. My goal is to eventually run an independent research program focusing on sex and gender differences during exercise in both health and disease with the long term objective of generating optimal exercise interventions designed to prevent, treat, and manage chronic diseases.

[Bill’s] mentorship model has trained me as a health researcher and has given me the tools to one day mentor my own students and to continue exploring the important role that sex and gender have in human health.
Improving the health of every body

Institute of Gender and Health
www.cihr-irsc.gc.ca/e/8673.html