

Sex and Gender, Hips and Knees: A Sex- and Gender-based Analysis of Total Joint Arthroplasty

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Introduction

During the past two decades, demands on the health care system and the costs of providing care have escalated. Canada, like many other nations in the world, has gone through a series of health care reforms, ranging from administrative restructuring to removing services from the publicly funded health care system. Despite these changes, however, the growing number and duration of lengthy delays in getting care and services – known as “wait times” – have continued to plague the health care system. In 2004, Federal, Provincial and Territorial First Ministers in Canada devised a strategy to reduce wait times as part of a *10-Year Plan to Strengthen Health Care*.^[1] The strategy included a Wait Time Reduction Fund and the appointment of a Federal Advisor on Wait Times, Brian Postl.

In the fall of 2005, Women and Health Care Reform – a working group of representatives from the four Centres of Excellence for Women’s Health and the Canadian Women’s Health Network – was invited by the Federal Wait Times Advisor to contribute a sex- and gender-based analysis of wait times for the report he was preparing. The group chose to focus on total joint arthroplasty (TJA) – hip and knee replacement surgery – as it was one of the action priorities identified by the First Ministers. The aim was to illustrate the value of SGBA to the wait times issue and to health policy making more broadly. In June 2006, Dr. Postl released his Final Report^[2] and included the SGBA on wait times as an appendix.

The purpose of this case study is to illustrate sex- and gender-based analysis as a process, which entails asking questions that illuminate the assumptions, evidence base and interpretations of an issue and often leads to a different way of understanding a problem and the potential solutions.

Making an Issue of Wait Times

In Canada today, the issue of wait times is framed by a deepening concern for the state of the health care system. There is also growing concern that long waits for health care have serious individual, social and economic costs, implications for fairness and contribute to declining confidence in the health care system. Many users of health care, as well as practitioners and managers, believe that wait times are increasing. The media often reinforces this perception by reporting extreme cases of waiting. However, while wait times for some procedures have increased, evidence from Statistics Canada and provincial databases suggest that overall, wait times for non-emergency surgery and major diagnostic services, such as MRI scans, have been stable in recent years.^[3]

Something to Think About

Sex- and gender-based analysis is accomplished by asking “new questions” that take into consideration the potential for differences between and among women and men.

These are some of the sensitizing questions we can bring to the issue of wait times, informed by SGBA:

- How is the problem of wait times framed?
- How are wait times defined and measured?
- How do we assess the health condition in question?
- Are measurement tools valid for women and men across a range of social locations?
- Are data disaggregated by sex and other social locations?

Defining the Issue and Defining the Terms

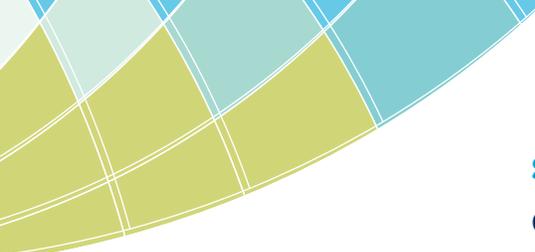
Discussions of wait times are complicated by the fact that researchers and policy makers across jurisdictions have used a variety of definitions and measurements of “wait times,” that is, when “the clock starts and stops.” Some argue that waiting begins when a patient gets a referral from her or his general practitioner. Others contend that the clock starts when a specialist makes the decision to prescribe a certain treatment. In addition, others believe that waiting commences when a patient is placed on a hospital waiting list.

By December 2005, it was clear that in the absence of a consensus about the meaning of wait times, a single definition would have to be adopted for the purposes of evaluating and trying to influence wait times. As a result, the Federal, Provincial and Territorial Ministers made the decision that wait times would begin when a doctor or specialist booked a service (such as a test or surgical procedure) and end when the patient began to receive the service. In the case of TJA, an orthopaedic specialist books the surgery so the clock starts with the booking and stops when the patient receives the surgery.

While this decision may have been necessary, the definition of wait time – like so many other past and present definitions – excludes significant and meaningful portions of the “patient journey” through the health care system. In the process, the definition also excludes significant elements of waiting that are important from the patient’s perspective as well as that of the health care system. When we take sex and gender into account and examine the entire patient journey more closely, we find that women spend a lot of time “waiting to wait.” In other words, they begin looking for care long before the official clock starts, but it is difficult to find women on wait lists because of the way they are treated by health care providers and because wait time data are usually not reported by sex. Consequently, our SGBA process took us back to the research literature to understand the need for TJA, the experiences of both sexes and the effects of waiting on women and men, including the relationship between waiting and gendered social roles, such as care-giving.

Wait Time and TJA

Hip and knee replacement surgeries have received a lot of attention in wait times debates, in part because there is growing demand for these operations in Canada. Between 1995 and 2002 there was a 19 percent increase in hip replacements and a 62 percent increase in knee replacements.^[4] Getting treatment early is important because the costs of surgery are lower when there is less damage in a joint. Delaying hip and knee replacement can also lead to poorer health. We also know that there are differences between women and men in the level of need for hip and knee replacement as well as how they are diagnosed and referred for treatment. Discrepancies also exist in terms of the types of supports women and men have before and after surgery. There are also gender disparities in responsibilities as wage earners and/or caregivers for family members, which affect one’s likelihood of being on a wait list as well as one’s experiences of waiting. Furthermore, factors other than gender – such as income, education and race – also have an impact on waiting for care and it was important to be mindful of them in the analysis.



Sex- and Gender-based Analysis of TJA

Conducting a sex- and gender-based analysis of hip and knee replacement surgery will determine what the available evidence tells us about wait times. In order to do an analysis of differences between men's and women's wait times for hip and knee replacement, one might be tempted to simply look at the wait list data, break it down by sex and see if there are any differences in the length of time men and women wait. But that would leave out important information about how men and women get to the wait list as well as what the impact of waiting might be for each of them. Therefore, this SGBA starts at the very beginning by looking at the underlying condition that generates the “demand” for TJA.

Who Gets Arthritis?

Arthritis is one of the most prevalent chronic conditions in Canada and a leading cause of long-term disability, pain and increased health care utilization. It is also the underlying condition that prompts most hip and knee replacements. Osteoarthritis affects about twice as many women as men.^[5] Its causes may differ by sex and gender, insofar as women and men have different rates of correlated conditions and undertake different activities that are predictors of osteoarthritis (e.g., previous knee injury, occupational kneeling and squatting).^[6] Because women have a greater incidence of osteoarthritis, we might expect research on the impact of physical activity and mechanical occupational exposure to attend to women's experiences. Instead, the research has concentrated primarily on men, focusing on former athletes and “masculine” occupational categories such as agriculture, forestry, fishing and transportation.^[6,7] This is one important evidence gap.

There are also differences in arthritis prevalence related to class, race, relationship status and labour force participation. For example, higher rates of arthritis are found among people with lower income and less education.^[5] Arthritis is also the most prevalent chronic condition in Canada's Aboriginal population and is 10 percent more prevalent than in non-Aboriginal Canadians.^[8] Aboriginal people in Canada have reported that arthritis is one of the five most important health problems in their communities.^[8] In the United States, African-American women have been found to have higher rates of knee osteoarthritis than Caucasian women.^[9]

Does the Need for TJA Differ Between Women and Men?

A Canadian population-based study found that the estimated potential need for TJA was more than twice as great among women as men because of the higher prevalence of severe hip and knee arthritis in women.^[10] In comparison with men, women have more arthritis pain, are more likely to be disabled from the condition and are more likely to need assistance with daily activities, but they are less likely to report unpaid help (mostly because they are more likely to live alone).^[10,11] The same study found that TJA was underused in both men and women, but that the degree of underuse was more than 3 times greater in women.^[10] The authors concluded that because earlier intervention in the course of hip or knee osteoarthritis results in better postoperative outcomes, “underuse

of arthroplasty may have substantial direct costs to the health care system and indirect costs to society, and that more of these costs are due to underuse in women than in men.”^[10,p1020]

Why Don't More Women Get Hip and Knee Replacements?

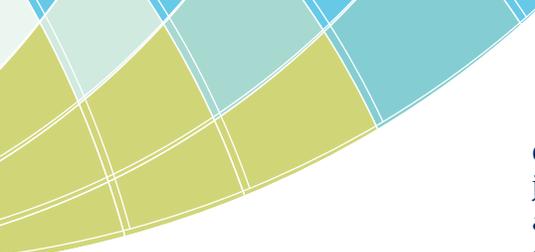
How can we account for women's greater underuse of TJA? In our analysis we looked at three main areas: (1) how women and men are diagnosed; (2) how women and men report symptoms AND how clinicians make treatment decisions; and (3) how patients make decisions about treatment. Each of these factors can be thought of as having an “upstream effect” on wait lists. That is, they determine who does or does not get on a wait list.

Sex- and gender-based analysis can reveal important limitations of so-called “objective” measurement tools and can point to the need for more robust and equitable measures. For example, damage to hip and knee joints is often assessed by radiographic images such as x-rays. These images are understood to be objective, leading us to believe that they measure the severity of damage or disease accurately, regardless of the sex of the person being assessed (a joint is always thought to be the “same” regardless of the sex of the body it is in). However, x-rays may not be able to show how arthritis disease manifests differently in women and men. One study that examined patients waiting for knee replacement revealed that women had more impairment and disability than men, even though they had similar joint damage as determined by radiographic images.^[12]

The results of such studies suggest that referrals for TJA and management of wait lists guided by the “objective” tool of radiographic imaging may *create* gender inequity, because this tool underestimates the severity of disease and the urgency for surgery in women. Women whose disease is underestimated will not be referred to a surgical wait list. Some researchers have suggested that patient symptoms, perceptions of impairment, and pain tolerance should



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drive the decision to refer for surgery rather than radiographic assessments of joint damage.^[11] This recommendation expands the parameters of what counts as evidence in health care decision-making and this evidence may be more sensitive to sex and gender differences.

At the same time, there is substantial research evidence to suggest that doctors make more errors in diagnosis and choose less aggressive treatment options with women than men. Hawker and colleagues found that women were more likely than men to seek treatment for arthritis, but women with a potential need for TJA were not as likely as men to say they would discuss the procedure with a doctor.^[10] Physicians may also hold beliefs about the risks of, indications for, and expected outcomes of TJA that make them consider women less appropriate candidates than men.^[10] For example, physicians may conclude that surgery is not as urgent for women because they believe that women are less likely than men to be in the paid workforce. Without the need for urgency, women are less likely than men to be referred to a specialist, or are referred to a surgeon only after a longer period of pain and debility.

Finally, patients' concerns about lack of support after surgery may increase their unwillingness to undergo TJA in the first place and thus patient decision-making may affect use of TJA among women and men.^[13] Given that elderly women are more likely than elderly men to live alone, they may find it harder to get support.^[14] As well, elderly women are more likely than elderly men to be living on limited resources and may not be able to afford care. In addition, because women are more likely than men to be caregivers for others, women may already be *providing* support, rather than receiving it.^[14]

Implications

The policy goals of reducing wait times are praiseworthy and include: reducing suffering, improving quality of life, limiting costs to the health care system by treating people earlier in the course of illness, and ensuring the system operates fairly, “such that access to ... health care is ... prioritized on the basis of need and potential benefit.”^[15,p171] But these goals cannot be met if the people with the greatest need – women – are not recognized and do not make it to the list in the first place.

The Health Council of Canada acknowledges: “One of the most difficult tasks that face health services managers is the accurate estimate of true need and demand” and the Council “supports continuing attempts to better define true need.” However, the Council recommends that “historical utilization patterns should be accepted as the best estimate of current need.”^[16,p7] This approach is clearly flawed. In the case of TJA, this perpetuates the masking of women's greater need and underuse of joint replacement surgery. This recommendation is a clear example of how developing wait times policy *without* applying a sex- and gender-based analysis will not only thwart the goals of better wait time management, it may actually *increase* health inequities. The measurement of wait times must take into account men's and women's different journeys through the health care system. Clinicians need to better understand the contexts of men's and women's lives so they can more equitably assess men's and women's symptoms and needs (both pre- and post-intervention). Gender-sensitive diagnostic and referral tools must also be developed and implemented to ensure that the men

and women who need medical intervention will get it. The outcomes of these efforts may increase the number of women on surgical wait lists, but also reduce costs to the system and the social costs in the long run.

Women “Waiting to Wait”

This sex- and gender-based analysis indicates that women have twice the rate of osteoarthritis as men, they have more arthritis pain, are more likely to be disabled from the condition, and are more likely to require personal assistance with daily activities. Women are less likely than men to report having unpaid help. Despite the greater prevalence and disability experienced by women, they are less likely than men are to report having discussed TJA with a physician. As a result, women are less likely than men to be referred, or receive a referral after a longer interval to an orthopedic surgeon. Hence, women with knee and hip osteoarthritis spend substantial time “waiting to wait.”

At the same time, SGBA contributes to a deeper understanding of wait times by inviting us to expand our thinking beyond wait lists. It exposes important elements of waiting that are not included in official wait time data and helps us to understand the limitations of existing policies and approaches. Because wait time is defined as the time between booking and receiving a procedure, the extra time that women wait is effectively erased.

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