



# **Sex and Gender-Based Analysis and Reporting:**

Ensuring equity in health research

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## What needs to be done

For decades, research has been male dominated: research led by men with male participants. Two-thirds of heart disease and stroke clinical research is based on men.<sup>1</sup> When research is led by women, sex and gender are more likely to be incorporated into the research itself, and the levels of sex reporting also increases.<sup>2</sup> Unfortunately, the low involvement of women in research – as both researchers and participants – has led to findings that are not always applicable to women, resulting in gaps in treatment, care and recovery. Applying sex and gender methods and analysis in research also leads to higher quality results.<sup>3,4</sup>

Sex refers to biological attributes while gender reflects a spectrum of expressions of identities and socially constructed roles.<sup>5</sup> *Sex and gender-based analysis* systematically examines differences between diverse individuals<sup>5</sup> and recognizes these differences can shape disease onset, diagnosis, treatment and recovery. *Sex and gender-based reporting* aims to improve levels of sex reporting of participants in health research. Sex and gender-based analysis and reporting (SGBAR) in health research has the potential to expand our understanding of health determinants and ensure that the findings are relevant and reflect the entire population. SGBAR must be consistently applied and integrated into research.

This call to action is growing in strength and in volume in Canada. 80% of Canadians support governments doing the following when they fund health research: increasing funding for research that focuses on women's health, requiring sufficient male and female participants in research, and funding research on how disease impacts men and women differently and the resulting effects on diagnosis, treatment and support.<sup>6</sup>

Canada has shown leadership in recognizing and taking actions towards SGBAR, however a truly integrated and nation-wide SGBAR initiative will take years to implement, requiring action by many partners and stakeholders including governments, researchers, educational institutions, people with lived experience (including caregivers) and others.

## What are we proposing?

**Heart & Stroke recommends government-funded and other research institutions at all levels commit to an SGBAR approach in health research by: setting expectations of SGBAR inclusion in research proposals and study design; funding research that integrates SGBAR; supporting women-led research; and translating research results for transformative action.**

## Roles of the federal and provincial/territorial governments:

- Provide funding to incentivize research focused on key issues in women's health.
- Provide funding to federal and provincial/territorial granting agencies that incentivize researchers to develop research proposals with an SGBAR lens.
- Educate staff and peer reviewers who work with or within federal and provincial/territorial funding agencies, on unconscious and conscious biases.
- Continue to fund the promotion of women in science, technology, engineering, and math (STEM) fields and in research chair positions in a broad variety of research areas.
- Support the continued creation and promotion of educational materials on sex and gender for researchers, educators, and peer reviewers.<sup>3</sup>
- Fund cost-effectiveness analyses to determine the economic cost of gaps in research on women's health outcomes.
- Work in partnership with people with lived experience when developing, implementing and evaluating SGBAR action plans to ensure their needs are addressed.

## Roles of research institutes, researchers, charities, and others:

- Research funders should adopt and integrate SGBAR policies and expectations within their research programs, including SGBAR action plans.
- Research funders should mandate training and education to address the conscious and unconscious biases of peer reviewers that prevent female primary investigators from receiving the same funding opportunities as their male counterparts.
- Researchers should collect high quality data and baseline measurements to determine the effect of sex and gender-based policies within organizations and in the population.<sup>8</sup>
- Research journals should raise submission standards for health research to require SGBAR (where relevant).<sup>7</sup>
- Schools of health training/medical schools should incorporate SGBAR into curricula to educate future professionals on the knowledge gaps in health research, and to support future professionals to incorporate sex and gender considerations into health research and practice.

## Why now?

- Despite progress women are still under-diagnosed, under-treated, under-supported and under-aware when it comes to heart and brain health.<sup>1,9-11</sup>
- Heart disease is the leading cause of premature death for women in Canada<sup>12</sup> and one-third more women die of stroke than men.<sup>13</sup>
- Researchers are failing to incorporate sex and gender into relevant research.<sup>1,2,14</sup>
- Biases and failure to adopt SGBAR guidelines in research create gaps in knowledge and medical practice.<sup>10,11</sup> These gaps prevent women from being treated with the most appropriate therapies.<sup>10,11</sup>
- When women researchers play a leading role in research publications, there is an increase in reporting by sex<sup>2</sup> yet biases remain that prevent women researchers from achieving their full potential.<sup>15</sup>

## What's the opportunity?

- Women's heart and brain health would be better supported if it were better understood. Further SGBAR in health research would help determine why women have worse outcomes than men when they experience heart disease and stroke.
- Heart disease and stroke are an enormous burden on families with an estimated economic burden of up to \$25 billion annually,<sup>16,17</sup> and women are disproportionately affected by these conditions. SGBAR is an important step in redressing these long-standing inequities with the potential to improve women's outcomes and reduce the burden across the healthcare system.
- The commitment of the federal government's three largest granting agencies to SGBAR provides an example and momentum for other government funding agencies to make similar commitments to SGBAR in health research.

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