Study reveals "old boys' club" in surgical referrals

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ale physicians refer patients to male surgeons far more frequently than to female surgeons with similar skills and experience, according to an analysis of nearly 40 million referrals in Ontario between 1997 and 2016.

The cross-sectional, population-based study published in *JAMA Surgery* found that male surgeons received 87% of all referrals from male physicians and 79% of referrals from female physicians, despite accounting for only 77% of all surgeons in the analysis. The study uses male and female (sex) and men and women (gender) interchangeably, without distinguishing between them.

Overall, male physicians were 32% more likely to refer patients to a surgeon of the same gender — "thereby disadvantaging female surgeons," the authors concluded. In contrast, female doctors were just 1.6% more likely to refer to a surgeon of the same gender.

These disparities could not be attributed to differences in the surgeons' experience or availability, or to patient characteristics. And growth in the number of female surgeons since 1997 did not impact referral trends.

Corresponding author Dr. Nancy Baxter, head of the Melbourne School of Population and Global Health in Australia, told *CMAJ* that it wasn't surprising to find evidence of an "old boys' club" in medicine, but it was

surprising to find that the situation didn't improve over the 10-year period analyzed.

"This is about as clear a reflection of gender bias that one can find," Baxter told *CMAJ*. She said the findings establish why it may be harder for women to build and maintain surgical practices: "The reason you are not getting the same number of referrals [as your male peers] isn't because you are a 'bad' surgeon or provide poor patient care. It is simply because you are a woman."

Female surgeons were also less likely to receive lucrative procedural referrals than their male peers — a difference that may partly explain the gender pay gap in surgery.

A previous analysis by the same authors published in 2019 found that female surgeons in Ontario earned 24% less per hour than their male counterparts.

According to Baxter and colleagues, their new findings suggest the need for systemic strategies to reduce gender bias — including the adoption of single-entry referral models with frequent auditing to ensure equitable case distribution.

Baxter told *CMAJ* that medical groups such as the Ontario Medical Association must also do a better job representing the interests of female physicians or reduce the dues they're required to pay. "If we aren't getting equal pay and equal representation, then the least we can get is a discount."

In a related commentary, Drs. Patricia Quinones, Caprice Greenberg, and Renee Hilton noted a tendency to attribute the gender pay gap to differences in "lifestyle choices," despite a lack of data supporting that notion.

"This important study provides us with yet more data to suggest that the system, not women, is broken," they argued. Now, research on gender bias in surgery must shift from "descriptive observational analyses to testing the effectiveness of system-based interventions."

Dr. Gigi Osler, president of the Federation of Medical Women of Canada, told *CMAJ* that gender bias affects women in medicine at every stage of their career, and in all specialties. "Action is needed by both individual physicians and the health care system" to ensure that health care policies, organizational structures, research, and medical curricula are grounded in equity and inclusivity, Osler said.

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