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Dedicated women's heart centers can improve accurate diagnoses and outcomes

Important study in the Canadian Journal of Cardiology showcases improvement in outcomes for women with ischemic heart disease by attending a multidisciplinary women's health center

Philadelphia, September 7, 2022 – Cardiac conditions in women are underdiagnosed, undertreated, and under-researched compared to men. In an important [prospective study](#) in the [Canadian Journal of Cardiology](#), published by Elsevier, investigators report that attending a multidisciplinary dedicated women's heart center can increase the likelihood of an accurate diagnosis and significantly improve clinical and psychological outcomes of women reporting chest pain due to insufficient heart-muscle blood flow (myocardial ischemia) but not diagnosed with obstructive coronary artery disease.

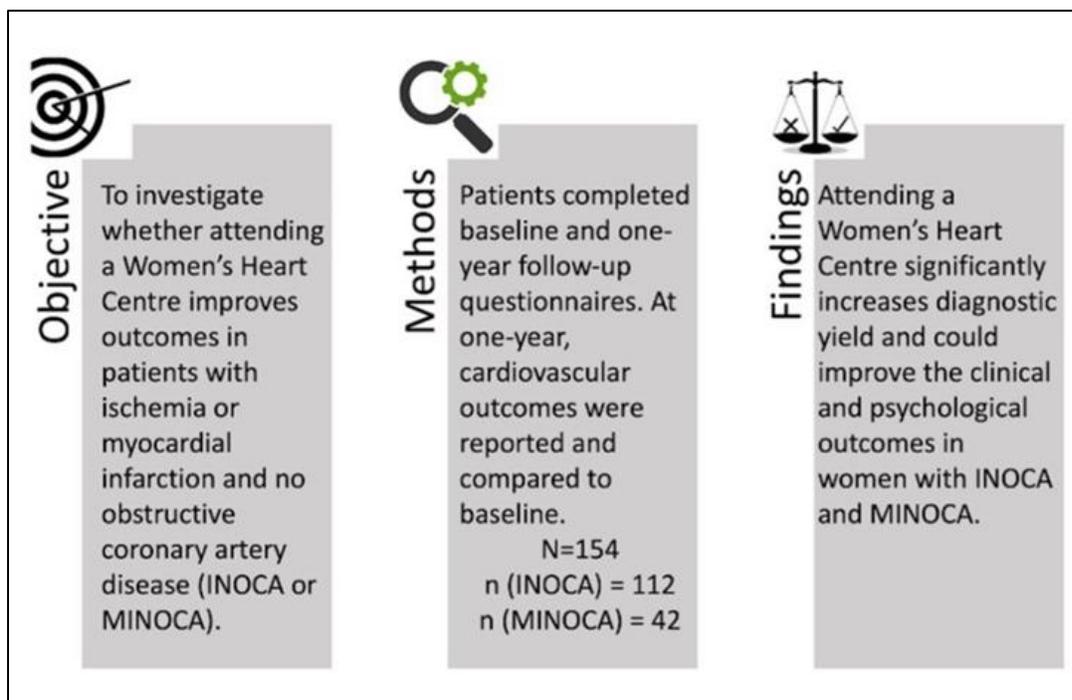
Cardiovascular disease (CVD) continues to be a leading cause of hospitalization and death in women. Declines in CVD death rates have stalled in mid-life women compared to men, suggesting sex-specific approaches may be needed.

Many women with cardiac chest pain and ischemia or myocardial infarction do not have significant blockages in the arteries supplying the heart (obstructive coronary artery disease). Ischemia with no obstructive coronary artery disease (INOCA) may affect up to 62% of women undergoing coronary angiography for suspected angina, with a higher prevalence in mid-life women aged 45-65 years. Myocardial infarction with no obstructive coronary artery disease (MINOCA) accounts for 6% of myocardial infarctions and is more frequently diagnosed in women. Studies suggest that patients with INOCA and MINOCA have a decreased quality of life and are at increased risk of cardiovascular events like heart attacks and acute heart failure.

"Most studies of heart health consist primarily of male participants, and numerous clinical outcomes such as patient symptoms and treatments do not therefore necessarily apply to women with certain types of heart disease," explained lead investigator Tara L. Sedlak, MD, Vancouver General Hospital Department of Cardiology, University of British Columbia Faculty of Medicine, and British Columbia Women's Hospital, Vancouver, BC, Canada. "We conducted this research to gain a better understanding of the etiologies and treatment of women with ongoing signs and symptoms of INOCA, which is one of these understudied areas in heart health."

Investigators prospectively followed 154 patients (112 INOCA and 42 MINOCA patients) attending the women's heart center at Vancouver General Hospital, who completed baseline demographics

questionnaires. Median age was 59, and the most common referral was for chest pain (94% in INOCA and 66% in MINOCA). After one year, chest pain frequency, quality of life, depression/anxiety symptoms, and cardiovascular outcomes were compared to baseline.



Caption: The objective of this study was to investigate whether attending a women's heart center improves diagnosis and outcomes in women with INOCA and MINOCA. INOCA: Ischemia with no obstructive coronary artery disease; MINOCA: Myocardial infarction with no obstructive coronary artery disease (Credit: *Canadian Journal of Cardiology*).

Many women with cardiac chest pain and ischemia or heart attack have no significant blockages of their larger coronary arteries but can have narrowing or dysfunction of their small coronary vessels or spasm of their blood vessels, which may be missed at initial diagnosis.

At baseline, 64% of INOCA and 43% of MINOCA patients did not have a specific diagnosis. Following investigations in the center, 71% of INOCA patients established a new or a changed diagnosis (the most common of which was coronary microvascular dysfunction at 68%), while 60% of MINOCA patients established a new or change in diagnosis (the most common of which was coronary vasospasm at 60%). At one year, participants had significantly decreased chest pain, improved quality of life and improved mental health.

"To our knowledge, this is the first prospective report of the outcomes in Canadian women with chest pain who have attended a women's heart center," noted Dr. Sedlak. "We hope our findings highlight the importance of having a dedicated women-specific heart center, which provides comprehensive care for women with heart disease by providing risk factor assessment, referral to psychiatrists, exercise classes, smoking cessation treatment, and consultation with a dietitian in addition to a focus on conditions such as INOCA that are more common in women."

In an [accompanying editorial](#), C. Noel Bairey Merz, MD, Barbra Streisand Women's Heart Center in the Smidt Heart Institute at Cedars-Sinai, Los Angeles, CA, USA. and colleagues congratulate Dr. Sedlak and coinvestigators on this important study as one of the first in Canada to showcase the improvement in outcomes for women with INOCA or MINOCA through a specialized women's health center.

“These centers and programs continue to increase awareness, improve education for patients and healthcare providers, and facilitate accessibility to specific diagnosis, risk stratification, and management. Furthermore, as illustrated by this study, the multidisciplinary foundation of these centers fosters collaborations across the various disciplines that provide care for women, bridging the continuity between advocacy, research, and clinical expertise, Dr. Merz commented. “With the growing momentum from the last three decades, specialized women’s health centers are increasingly recognized as a long-term, sustainable model to address ongoing disparities facing women with cardiovascular risk factors and disease.”

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Notes for editors

The article is “One-Year Prospective Follow-up of Women With INOCA and MINOCA at a Canadian Women’s Heart Centre,” by Mahraz Parvand, MSc, Lily Cai, BA, Siavash Ghadiri, MD, Karin H. Humphries, DSc, Andrew Starovoytov, MD, Patrick Daniele, MSc, Natasha Prodan-Bhalla, DNP, and Tara L. Sedlak, MD (<https://doi.org/10.1016/j.cjca.2022.07.005>).

The editorial is “INOCA and MINOCA: Are Women’s Heart Centres the Answer to Understanding and Management of These Increasing Populations of Women (and Men)?” by Christine Pacheco, MD, Judy Luu, MD, Puja K. Mehta, MD, Janet Wei, MD, Martha Gulati, MD, and C. Noel Bairey Merz, MD (<https://doi.org/10.1016/j.cjca.2022.06.016>).

Both articles appear online ahead of the *Canadian Journal of Cardiology*, volume 38 issue 10 (October 2022) published by [Elsevier](#).

Full text of the articles is available to credentialed journalists upon request. Contact Eileen Leahy at +1 732 238 3628 or cjcmmedia@elsevier.com to obtain copies. Journalists wishing to speak to the study’s authors should contact Tara L. Sedlak, MD, at tara.sedlak@vch.ca. To reach the editorial’s authors for comment, contact Cara Martinez, Lead Communications Specialist, Cedars-Sinai, at cara.martinez@cshs.org.

About the *Canadian Journal of Cardiology*

The [Canadian Journal of Cardiology](#) is the official journal of the [Canadian Cardiovascular Society](#). It is a vehicle for the international dissemination of new knowledge in cardiology and cardiovascular science, particularly serving as a major venue for the results of Canadian cardiovascular research and Society guidelines. The journal publishes original reports of clinical and basic research relevant to cardiovascular medicine as well as editorials, review articles, case reports, and papers on health outcomes, policy research, ethics, medical history, and political issues affecting practice. www.onlinecjc.ca

About the Editor-in-Chief

Editor-in-Chief Stanley Nattel, MD, is Paul-David Chair in Cardiovascular Electrophysiology and Professor of Medicine at the University of Montreal and Director of the Electrophysiology Research Program at the Montreal Heart Institute Research Center.

About the Canadian Cardiovascular Society (CCS)

The [CCS](#) is the national voice for cardiovascular clinicians and scientists, representing more than 2,300 cardiologists, cardiac surgeons and other heart health specialists across Canada. We advance heart health for all by setting standards for excellence in heart health and care, building the knowledge and expertise of the heart team, and influencing policy and advocating for the heart health of all Canadians. For further information on the CCS visit <https://www.ccs.ca/en>.

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