

# Stronger Health System

ICES research has improved the quality of Ontario cardiovascular screening and care, leading to better care at a lower cost.

## The Problem

Cardiovascular illnesses drive some of Ontario's highest health system costs, with heart disease and stroke being among the leading causes of death. As more people age with risk factors that call for early detection and treatment, the practice of screening for cardiovascular diseases has become more widespread and costly. ICES research has shown that in 2009 Ontario spent \$130 million on echocardiograms alone. But are Ontarians getting better care for these higher costs?

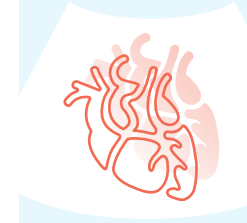
## The Research

Key to the work of ICES' Cardiovascular Research Program is the population-level evaluation of access, outcomes and costs associated with cardiovascular and stroke care, including testing. By linking large data sets that include claims data and outcomes, ICES scientists are able to assess population-level appropriateness of diagnostic testing, thereby helping to identify targets for savings in one of the most costly domains of health care delivery.

## Recent Impact

- A 2013 ICES study showed an 82% rise in the use of echocardiography in Ontario between 2001 and 2009, with a quarter of these tests done as repeat procedures. The findings helped to shape new echocardiography standards and billing requirements made mandatory by the Ontario government in 2016.
- A 2015 ICES study revealed a 30-fold variation in cardiac testing before low-risk surgeries. This finding contributed to the introduction of new guidelines by the Canadian Cardiovascular Society, the Canadian Society of Internal Medicine and the Canadian Anesthesiologists' Society and to updated Choosing Wisely recommendations.
- A 2017 ICES study showed that the implementation of appropriate use criteria for cardiac imaging in 2009 was associated with a reduction in the use of myocardial perfusion imaging, with almost 90,000 fewer scans performed at a cost savings of \$72 million over seven years. The study team will next look at whether this reduction in imaging has affected patient outcomes.

## Impact Highlights



Helped to shape new Ontario billing requirements and standards for the **more appropriate use of echocardiography**.



Contributed to **new guidelines and recommendations** on cardiac testing before low-risk surgeries.



Showed that appropriate use criteria for cardiac imaging resulted in **large health system cost savings**.

"Cardiovascular illnesses represent a heavy burden in Ontario, both in terms of years of life lost and costs to the health care system. The robust data we hold and analyze at ICES shows where we get good value for our money, where we are underperforming, and where we have opportunities to reduce the use of unnecessary or inappropriate procedures."

**Douglas Lee**

Senior Scientist and Lead, Cardiovascular Research Program

### REFERENCES

- Blecker et al. *ACC Cardiovasc Imaging* (2013).
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- Roifman et al. *JAHA* (2018).