

# Despite guidelines, too many medical tests are performed before low-risk procedures

June 1 2015

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Despite guideline recommendations to limit medical tests before low-risk surgeries, electrocardiograms (ECGs) and chest x-rays are still performed frequently, found a study in *CMAJ (Canadian Medical Association Journal)*.

Evidence indicates that for [patients](#) undergoing low-risk surgery, routine testing does not improve outcomes and can actually lead to surgical delays, patient anxiety and other issues. The Choosing Wisely campaign, which started in the United States and spread to Canada and other countries, aims to raise awareness of unnecessary tests and procedures among physicians and patients to decrease their use.

Researchers looked at data from administrative health care databases at the Institute for Clinical Evaluative Sciences (ICES) on 1 546 223 patients aged 18 and over who underwent 2 224 070 procedures, such as endoscopy, ophthalmologic surgery and low-risk surgical procedures including knee and hernia repair in 137 institutions in Ontario over 5 years (Apr. 1, 2008, to Mar. 31, 2013). Despite guidelines that do not recommend routine cardiac screening before low-risk procedures, the researchers found that ECGs were performed before about one-third of surgeries. Preoperative testing was performed more frequently in older patients, with ECGs conducted 18.3 times more often in people between 66 and 75 years of age than in those aged 18 to 25.

"Rates of preoperative testing before low-risk procedures were higher than expected, given current guidelines and recommendations, with a

significant degree of regional and institutional-level variation across hospitals in a large, diverse jurisdiction with a single-payer health system," writes Dr. Sacha Bhatia, Department of Cardiology and the Institute for Health System Solutions and Virtual Care, Women's College Hospital, Toronto, Ontario, with coauthors.

There was a 30-fold difference between institutions with the lowest and highest rates of ordering preoperative tests.

Previous studies have looked at patients over age 65, whereas this study included all patients over age 18.

"Our finding emphasizes the need for re-evaluation of ordering decisions and clinical pathways for patients preparing for low-risk procedures. In particular, preoperative anesthesia and medical consultations have been shown to increase preoperative testing rates."

The authors suggest more research to understand why these tests continue to be performed, which may be useful for institutions in improving their ordering practices.

**More information:** *Canadian Medical Association Journal*, [www.cmaj.ca/lookup/doi/10.1503/cmaj.150174](http://www.cmaj.ca/lookup/doi/10.1503/cmaj.150174)

Provided by Canadian Medical Association Journal

Citation: Despite guidelines, too many medical tests are performed before low-risk procedures (2015, June 1) retrieved 27 April 2024 from <https://medicalxpress.com/news/2015-06-guidelines-medical-low-risk-procedures.html>

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