

**Statewide partnership to
reduce low-value preoperative tests**



Quality Improvement Option C

Appropriate Preoperative Screening for Low-risk Surgeries



Background re: Quality Improvement Option C

Appropriate Preoperative Screening for Low-risk Surgeries

BACKGROUND IS WELL-ESTABLISHED: ROUTINE PRE-OPERATIVE TESTING REMAINS HIGH DESPITE...



Pre-Op testing rates for low-risk surgeries range from 8-85% across Michigan

Testing before low-risk procedures is common, with >50% of patients undergoing at least 1 test



Not recommended by several academic societies



Associated with surgical delays



Wasteful spending for health systems & patients



Unnecessary patient stress due to cascade events of incidental findings

Background re: Quality Improvement Option C

Appropriate Preoperative Screening for Low-risk Surgeries

BACKGROUND IS WELL-ESTABLISHED: ROUTINE PRE-OPERATIVE TESTING REMAINS HIGH DESPITE...

- Reducing unnecessary preoperative testing before low-risk surgery can improve quality, safety, experience, and value in surgery
- Less testing means...

Fewer dangerous cascade events



Reduced provider burden

Reduced patient cost & time burden



Fewer surgical delays

Lower spending on unnecessary care



Evidence Base for Quality Improvement Option C

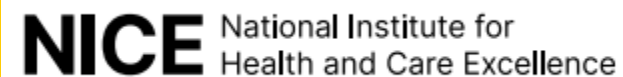
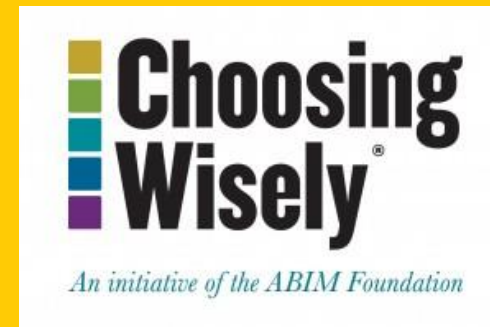
Appropriate Preoperative Screening for Low-risk Surgeries

[Choosing Wisely](#) has assembled hundreds of clinical recommendations that aim to reduce unnecessary testing, are supported by evidence, free from harm, and truly necessary.

Of these recommendations, Choosing Wisely has a top 12 list, which includes guidelines for **Preoperative testing in patients scheduled to undergo low- and/or intermediate-risk non-cardiac surgery**.

Based on the recommendations put forth by the following professional societies:

- *American Academy of Ophthalmology*
- *American College of Physicians*
- *American College of Radiology*
- *American College of Surgeons*
- *American Society of Anesthesiologists*
- *American Society for Clinical Pathology*
- *American Society of Echocardiography and*
- *Society of Thoracic Surgeons*



Recommended Links & Resources

- [Choosing Wisely](#)
- [National Institute for Health and Care Excellence \(NICE\)](#)

Evidence Base for Quality Improvement Option C

Appropriate Preoperative Screening for Low-risk Surgeries

Recommendations by test: Multiple societies have recommended against routine preoperative testing in low-risk patients prior to low-risk procedures.

Blood Work



American Society of Anesthesiologists- Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery – specifically complete blood count, basic or comprehensive metabolic panel, coagulation studies when blood loss (or fluid shifts) is/are expected to be minimal.

ECG



American College of Cardiology- Avoid performing electrocardiography (ECG) screening as part of preoperative cardiovascular risk assessment in asymptomatic patients scheduled for low-risk non-cardiac surgery.

American Society of Echocardiography- Avoid echocardiograms for preoperative/perioperative assessment of patients with no history or symptoms of heart disease.

Cardiac Stress Test



The Society of Thoracic Surgeons- Patients who have no cardiac history and good functional status do not require preoperative stress testing prior to non-cardiac thoracic surgery.

American Society of Anesthesiologists- Don't obtain baseline diagnostic cardiac testing (echocardiography or cardiac stress testing) in asymptomatic stable patients with known cardiac disease (e.g., CAD, valvular disease) undergoing low or moderate risk non-cardiac surgery.

Chest X-ray



American College of Physicians- Don't obtain preoperative chest radiography in the absence of a clinical suspicion for intrathoracic pathology.

American College of Radiology, American College of Surgeons- Avoid admission or preoperative chest x-rays for ambulatory patients with unremarkable history and physical exam.

Focus of Quality Improvement Option C

Appropriate Preoperative Screening for Low-risk Surgeries

TARGET PROCEDURES: THREE LOW-RISK AMBULATORY SURGERIES

Lumpectomy

Hernia

Cholecystectomy

PRE-OP TESTS

- *Blood tests (CBC, BMP, CMP, INR/PT/PTT, T&S, LFTs)*
- *Chest X-Ray*
- *Cardiac Tests (EKG, Echo, Stress Testing)*

Resources for Quality Improvement Option C





Appropriate Preoperative Screening for Low-risk Surgeries



RESOURCES OFFERED TO SITES



These resources will be provided to participating sites to support quality improvement related to pre-op testing

Resource	How it will assist participating sites
Recommended Pre-op Testing Guidelines 	<ul style="list-style-type: none"> Decision aid to help providers order pre-op tests based on current evidence-base & recommendations Recommendations will be distributed to participating sites in a variety of formats (3x5 card, handouts, slides, & more)
Provider Education 	<ul style="list-style-type: none"> Provider education detailing the evidence base around pre-op testing will be made available in numerous formats to add convenience for providers. These will include a website, handouts, webinars, presentation, and in-person meetings
Audit & Feedback 	<ul style="list-style-type: none"> Data regarding pre-operative testing rates will be provided each site to inform current testing rates & document any observed changes or improvements
Clinical Decision Support 	<ul style="list-style-type: none"> Where possible, recommendations & resources will provided to update EMRs to encourage appropriate pre-op testing

Quality Improvement Option C

Appropriate Preoperative Screening for Low-risk Surgeries

Suggested Further Reading

- Berlin, N. L., Yost, M. L., Cheng, B., Henderson, J., Kerr, E., Nathan, H., & Dossett, L. A. (2021). [Patterns and determinants of low-value preoperative testing in Michigan](#). *JAMA Internal Medicine*, 181(8), 1115-1118.
- Cuttitta, A., Joseph, S. S., Henderson, J., Portney, D. S., Keedy, J. M., Benedict, W. L., ... & Mian, S. I. (2021). [Feasibility of a Risk-Based Approach to Cataract Surgery Preoperative Medical Evaluation](#). *JAMA ophthalmology*, 139(12), 1309-1312.
- Baskin, A. S., Mansour, A. I., Kawakibi, A. R., Das, P. J., Rios, A. E., Miller, J., ... & Dossett, L. A. (2022). [Perceived Barriers to the De-implementation of Routine Preoperative History & Physicals Preceding Low-risk Ambulatory Procedures: A Qualitative Study of Surgeon Perspectives](#). *Journal of Surgical Research*, 270, 359-368.
- Ganguli I, Simpkin AL, Lupo C, et al. [Cascades of Care After Incidental Findings in a US National Survey of Physicians](#). *JAMA Network Open*. 2019;2(10):e1913325-e1913325.
- Katz RI, Dexter F, Rosenfeld K, et al. [Survey study of anesthesiologists' and surgeons' ordering of unnecessary preoperative laboratory tests](#). *Anesthesia and analgesia*. 2011;112(1):207-212.
- Pickering AN, Zhao X, Sileanu FE, et al. [Prevalence and Cost of Care Cascades Following Low-Value Preoperative Electrocardiogram and Chest Radiograph Within the Veterans Health Administration](#). *Journal of general internal medicine*. 2022.
- Salar O, Holley J, Baker B, Ollivere BJ, Moran CG. [Omitting pre-operative coagulation screening tests in hip fracture patients: stopping the financial cascade?](#) *Injury*. 2014;45(12):1938-1941.
- Welch JM, Zhuang T, Shapiro LM, Harris AHS, Baker LC, Kamal RN. [Is Low-value Testing Before Low-risk Hand Surgery Associated With Increased Downstream Healthcare Use and Reimbursements?](#) A National Claims Database Analysis. *Clinical orthopaedics and related research*. 2022.