MICHIGAN SURGICAL QUALITY COLLABORATIVE

Quality Improvement Implementation, Option D (by invitation only)
Preoperative Testing for Low-Risk Surgeries
Project Time Period: 1/1/2025 – 12/31/2025

Background: Routine preoperative testing before low-risk surgery has no known benefit and is an important target for de-implementation as it is overused, costly, and can lead to downstream care cascades involving invasive diagnostic testing[1].

Several organizations within Michigan – the Michigan Surgical Quality Collaborative (MSQC), the Michigan Program on Value Enhancement (MPrOVE), the Michigan Value Collaborative (MVC), and the Anesthesiology Performance Improvement and Reporting Exchange (ASPIRE) – have partnered to address unnecessary preoperative testing through a collaborative lens that includes data-driven approaches. these groups collaborate under the umbrella of RITE-Size (https://ritesizetesting.org/) to support de-implementation of low-value testing and develop resources for the benefit of their stakeholders.

Project Goal and Summary: Based on the past two years of work on this front, the MSQC project will continue into its third year to work toward reducing unnecessary, routine preoperative testing for low-risk surgeries, as well as implement interventions to heighten awareness and reduce variation among hospitals. This project has been modified and refined in response to participating site feedback and analysis of findings.

Continuing sites who participated in the pilot project in 2023 and/or in the 2024 QI project are eligible if their average rate of preoperative testing is >20% from their most recent set of measurement data. MSQC will analyze the data and reach out to eligible sites, inviting them to consider the preoperative testing project as one of their QI options for 2025.

Through a multi-faceted approach, invited sites will: 1) abstract preoperative testing variables on low-risk surgical cases, 2) evaluate the effectiveness of their current protocols and decision support tools to develop an action plan, 3) employ strategies to promote adherence to the protocol, and 4) analyze MSQC, MVC, and internal data reports to monitor progress.

Eligible low-risk surgery cases will meet the procedure inclusion criteria:

- Minor hernia, laparoscopic cholecystectomy, and breast lumpectomy (Table 1), AND
- ASA classes 1 and 2, AND
- Surgical Priority = Elective, AND
- Surgical Procedure Tab: Is the CPT code the intended primary procedure = Yes.

QI Implementation Goals and Requirements (45 total project points)

Goal #1: **Data collection of 100% of preoperative tests** for eligible procedures that were performed within 30 days prior to the surgery date, including testing obtained preoperatively on the day of surgery. The measurement period is 1/1/2025 – 12/31/2025 OR dates for all sites. **(3 points)**

The presence or absence of all of the following preoperative diagnostic tests on an eligible case must be captured in the MSQC Workstation to meet the numerator requirement:

- ECG
- Trans-thoracic echocardiography
- Cardiac stress test
- Chest Xray

- Urinalysis
- Complete blood count
- Basic metabolic panel
- Coagulation tests
- Pulmonary function tests

Goal #2: In-depth QI analysis of existing preoperative testing protocol and CDS tool implementation from prior year(s) to identify an action plan for the current project year. Using a quality tool of your choice (e.g., A3, failure mode effects analysis, 5 Whys, Fishbone, etc.), perform an in-depth analysis of your prior year performance to identify specific variables impacting your preoperative testing rate. Utilize your findings to develop an action plan to improve compliance for the project year. This analysis should be completed with the multidisciplinary team early in the project year. Include a copy of this analysis with your 2025 final project summary. (15 points)

Goal #3: Reduce the rate of unnecessary preoperative testing (10 points each; 20 points total)

- Goal 3a: Reduce the percentage of cases that receive one or more of the specified preoperative tests (as listed in Goal #1) by 20% (relative) as compared to the baseline rate
    - Baseline period will be your most recent measurement period from a prior project year:
        - 2024 project sites: 4/1/2024 – 12/31/2024 OR dates
        - 2023 project sites: 4/1/2023 – 12/31/2023 OR dates
    - Measurement period for all sites: 4/1/2025 – 12/31/2025 OR dates
- Goal 3b: Preoperative testing performed on the day of surgery must have supporting clinical documentation to justify the need for testing (Goal ≥ 90%)
    - Baseline period: 1/1/2025 – 3/31/2025
    - Measurement period: 4/1/2025 – 12/31/2025

Goal #4: Conduct a minimum of two multidisciplinary meetings with key stakeholders to review project requirements, implement project components and monitor project performance. (4 points total)

- Goal 4a: host a project kickoff meeting held no later than March 31, 2025. (2 points)
- Goal 4b: host at least one follow-up multidisciplinary meeting between July and December 2025 to discuss protocol implementation, progress and barriers to implementation, and monitoring of compliance data (including MVC and MSQC preoperative testing data). (2 points)
- Meeting participants must include a general surgeon, anesthesiologist, and MSQC/Quality dept representation; additional attendees can also include the hospital's MVC Site Coordinator (if applicable), a primary care provider (PCP), a representative from the preoperative clinic (if applicable), a surgical resident, and others as appropriate for your site.
- Meetings can be in person, virtual, or hybrid (project information shared over email, or multiple one-on-one meetings do not count toward this requirement).
- For each meeting, submit the meeting minutes and attendee list (with attendee name, credentials, and department represented) with your 2025 final project summary.

Goal #5 Performance Data Monitoring: Utilize the MSQC and MVC data reports to monitor your site's progress and identify when program adjustments are necessary. (3 points total)

- Goal 5a: Access regularly distributed MSQC QI push reports from your site's Dropbox account, monitor performance, and share results with the project team at multi-disciplinary meetings. Include documentation in meeting minutes (to be submitted with your 2025 final project summary) that addresses your data findings and interpretations. (1 point)
- Goal 5b: Access and download your site's interactive preoperative testing reports from the MVC data registry application and discuss the report findings with your team during the multi-disciplinary

meetings. Meeting minutes should reflect discussion of the data findings. At a minimum, download the reports prior to each required multi-disciplinary meeting, and include a copy of each downloaded report as attachments to the meeting minutes. (**1 point for each** required meeting occurrence (prior to 3/31/2025, and again for July – December 2025)).
Note: MVC will be offering data registry training in early 2025. MSQC will notify sites of training availability.

Goal #6: **Submit the 2025 final project summary**, due to the MSQC Coordinating Center no later than **January 16, 2026.**

- The QII project summary will be submitted using the template available on the Quality Improvement page of the MSQC website. The document will contain a narrative describing the adoption, implementation, and monitoring of a preoperative testing protocol for low-risk surgeries, along with successes, barriers, plans for moving forward with the project. Additional documents to be submitted with the summary include:
    - Analysis using a quality tool of how the protocol and clinical decision support tools that were developed in the prior project year were modified or implemented differently to improve compliance with reducing preoperative testing (from Goal #2).
    - Meeting documents (minutes, participant list) from the project kickoff and subsequent follow-up multi-disciplinary meetings held during the project year (from Goal #4).
    - Discussion of MSQC QI push reports captured in multidisciplinary meeting minutes (from Goal #5a).
    - Copies of each of two (2) downloaded MVC registry interactive preoperative testing reports as attachments to the meeting minutes (from Goal #5b).

Implementation Points

An additional 0-10 implementation points may be granted based on the detail of the project narrative, tracking log and analysis, to be added to achieve the maximum of 45 project points.

Table 1: Project-Eligible CPT Codes

Abdominal Hernias less than 3 cm and all Inguinal/Femoral Hernia Repairs ("Minor Hernia")	
49505	49505: Repair initial inguinal hernia, age 5 years or older; reducible.
49507	49507: Repair initial inguinal hernia, age 5 years or older; incarcerated or strangulated.
49520	49520: Repair recurrent inguinal hernia, any age; reducible.
49521	49521: Repair recurrent inguinal hernia, any age; incarcerated or strangulated.
49525	49525: Repair inguinal hernia, sliding, any age.
49550	49550: Repair initial femoral hernia, any age; reducible.
49553	49553: Repair initial femoral hernia, any age; incarcerated or strangulated.
49555	49555: Repair recurrent femoral hernia; reducible.
49557	49557: Repair recurrent femoral hernia; incarcerated or strangulated.
49591	49591: Repair of anterior abdominal hernia(s) (ie, epigastric, incisional, ventral, umbilical, spigelian), any approach (ie, open, laparoscopic, robotic), initial, including implantation of mesh or other prosthesis when performed, total length of defect(s); less than 3 cm, reducible
49592	49592: Repair of anterior abdominal hernia(s) (ie, epigastric, incisional, ventral, umbilical, spigelian), any approach (ie, open, laparoscopic, robotic), initial, including implantation of mesh or other prosthesis when performed, total length of defect(s); less than 3 cm, incarcerated or strangulated
49613	49613: Repair of anterior abdominal hernia(s) (ie, epigastric, incisional, ventral, umbilical, spigelian), any approach (ie, open, laparoscopic, robotic), recurrent, including implantation of mesh or other prosthesis when performed, total length of defect(s); less than 3 cm, reducible
49614	49614: Repair of anterior abdominal hernia(s) (ie, epigastric, incisional, ventral, umbilical, spigelian), any approach (ie, open, laparoscopic, robotic), recurrent, including implantation of mesh or other prosthesis when performed, total length of defect(s); less than 3 cm, incarcerated or strangulated

Abdominal Hernias less than 3 cm and all Inguinal/Femoral Hernia Repairs ("Minor Hernia")	
49650	49650: Laparoscopy, surgical; repair initial inguinal hernia
49651	49651: Laparoscopy, surgical; repair recurrent inguinal hernia
49659	49659: Unlisted laparoscopy procedure, hernioplasty, herniorrhaphy, herniotomy.
Laparoscopic Cholecystectomy	
47562	47562: Laparoscopy, surgical; cholecystectomy
47563	47563: Laparoscopy, surgical; cholecystectomy with cholangiography
47564	47564: Laparoscopy, surgical; cholecystectomy with exploration of common duct
Breast Lumpectomy/Partial Mastectomy	
19301	19301: Mastectomy, partial (e.g., lumpectomy, tylectomy, quadrantectomy, segmentectomy)

Table 2: Comparison of Preoperative Testing QI Project P4P Point Distribution, 2024 to 2025

Goal Description	2024 Project Points		2025 Project Points	Project Changes
	New Sites	Continuing Sites		
Data collection of 100% of preoperative testing use	3	3	3	Increased from 95%
Develop/implement a standard preoperative testing protocol for low-risk surgeries (20 points total for new sites; 10 points total for continuing sites)				Retired; must be a continuing site to participate in project
Adopt a preoperative testing guideline protocol to implement at your site	10			
Adopt clinical decision support tools to embed preoperative testing protocol into practice	10			
In-depth QI analysis of existing protocol and CDS tool implementation from prior year(s) to identify action plan for current project year		10	15	Increased point value
Reduce rate of preoperative testing by 20% as compared to baseline	10	20	10	Decreased point value
Preoperative testing performed on the day of surgery must have supporting clinical documentation to justify the need for testing (Goal ≥ 90%)			10	New measure
Conduct a minimum of two multidisciplinary meetings with key stakeholders (4 points total)				
Host a project kickoff meeting held no later than March 31, 2025	2	2	2	n/a
Host at least one follow-up multidisciplinary meeting between July and December 2025	2	2	2	n/a
Performance Data Monitoring	1	1	3	Increased point value
Analyze preoperative testing on day of surgery (prior to In Room Time)	2	2		Retired
Total	40	40	45	Increased point value
Optional Implementation Points (based on detail of project narrative, tracking log and analysis)	0-10	0-10	0-10	n/a

Resources

- Berlin NL, Yost ML, Cheng B, et al. Patterns and Determinants of Low-Value Preoperative Testing in Michigan. *JAMA Intern Med.* 2021;181(8):1115–1118. doi:10.1001/jamainternmed.2021.1653
- https://ritesizetesting.org/
- https://ihpi.umich.edu/featured-work/michigan-program-value-enhancement
- https://ihpi.umich.edu/news/routine-testing-surgery-remains-common-despite-low-value
- https://michiganvalue.org/value-based-initiatives/
- https://choosingwisely.org/

References

[1]Berlin NL, Yost ML, Cheng B, et al. Patterns and Determinants of Low-Value Preoperative Testing in Michigan. *JAMA Intern Med.* 2021;181(8):1115–1118. doi:10.1001/jamainternmed.2021.1653