

Nurse-Anesthesia Collaboration in Preadmission Testing

To Improve Efficiency and Reduce Costs Diane Brackin, R.N. CAPA, Ruth Gwin, R.N. BSN, Linda Hirt R.N. CAPA Longmont United Hospital Centura Health



Abstract

An efficient, high quality preadmission testing (PAT) process is vital for ensuring positive outcomes for surgical patients. As of 2008, there was no structured PAT process at Longmont United Hospital Centura Health (LUH). Preoperative testing was determined by individual surgeon preference, rather than by surgical risk, comorbidities, or best practice, often resulting in unnecessary testing. Preoperative testing was often not done until the day of surgery, putting patients at risk for unnecessary cancellations due to lab or EKG abnormalities, which are costly, and cause patient dissatisfaction. A structured PAT process was initiated in 2008 to streamline testing and improve efficiency. The changes resulted in fewer cancellations the day of surgery and improved patient satisfaction. In 2012 the American Society of Anesthesiology (ASA) released new evidence-based preoperative testing recommendations, and proposed a new model of care, called the "Perioperative Surgical Home", recommending a collaborative team approach. Based on these recommendations the PAT process was restructured. The new process was rolled out in increments in 2014. The new process established a nurse-anesthesia collaborative approach to PAT, established earlier patient interview time frames, and reduced preoperative testing requirements. Nurse-Anesthesia collaboration in this endeavor has built trust between the two disciplines, improved efficiency and patient satisfaction, decreased cancellations by 50%, and had significant cost reductions. It is imperative for healthcare providers to be more efficient and cost effective, while providing quality care, increasing patient satisfaction, with optimal outcomes. Preadmission testing at Longmont United Hospital Centura Health has demonstrated commitment to this goal.

Introduction

The purpose of PAT is to ensure patients are physically optimized for surgery. Diagnostic testing is one part of assessing patient readiness, however, it has been common practice to order a wide range of tests, which may be unnecessary and wasteful. According to the ASA, there is no evidence to support this practice. Preoperative testing should be done based on surgical risk and comorbidities, and recommendations for further testing should be made after reviewing history and physicals previously done by other healthcare professionals. These evaluations may reflect optimization of stable, chronically ill patients with abnormal test results, which would eliminate unwarranted testing and cancellations. In 2014, after five years of an established PAT process at LUH, deficiencies were identified. The anesthesiologists recognized they needed to support PAT by being actively involved and establish clearly defined PAT guidelines. They proposed recommendations for change to two multidisciplinary hospital committees. The recommendations were based on a new model of care called, "The Perioperative Surgical Home", and current testing guideline recommendations by the ASA. The proposal was accepted. The revised process took several months to develop. After final approval by the committees, the process was implemented.

Project Goals

The goals for revising the PAT process were to streamline the process, increase efficiency, improve communication, reduce costs, and increase patient satisfaction.

Objectives

- Establish a collaborative PAT process.
- Revise preoperative testing guidelines to reflect best practice.
- Increase PAT appointment participation to 100%.
- Have PAT appointments completed early to prevent unnecessary cancellations.
- Create an anesthesia assessment tool for PAT nurses to use in interviews.
- Eliminate routine preoperative medical and cardiac clearance requirements.
- Have anesthesiologists determine need for medical or cardiac clearances.
- Get agreement and adoption of the new process by surgeons.

Project Description

New testing guidelines were developed based on surgical risk and comorbidities, and preoperative orders were changed to reflect the new guidelines. PAT appointments were changed to be done one to three weeks prior to surgery, either by phone or in person, based on need for lab work. An assessment tool was developed for PAT nurses to use during each interview. Anesthesiologists would be assigned daily to PAT, to review charts, and collaborate with PAT nurses. Medical and cardiac clearances would only be required if deemed necessary by anesthesiology.

Surgeons are notified if their patients need further evaluations. The goal is for evaluations to be completed timely to prevent surgical cancellation or rescheduling.

These two forms are initiated in PAT. There are utilized throughout the perioperative process to communicate essential patient information.

Results/Findings

COST COMPARISON FOR PREADMISSION TESTING AFTER CHANGES IN GUIDELINES

Pre-op testing charges		
Total Joints - 2013	419 cases	\$395,536.00
Total Joints - 2015	445 cases	\$79,341.00
Savings in charges		\$316,195.00

Cases cancelled - clearances not obtained in time

OR cost for same day cancellations		\$5520.00
Cases cancelled 2013	16	\$88,320.00
Cases cancelled 2015	8	\$44,160.00
Potential savings		\$44,160.00

Surgical cancellations were reduced by 50%

Savings on unnecessary charges reflect only the Total joint cases. Potential savings are much greater if data was obtained from the additional 3586 surgical cases in 2015. Actual reimbursed savings undetermined due to variables among insurance companies.

Summary of Anesthesia review in 2015

Total joint cases for 2015	445
Total cases reviewed by Anesthesia	306
Charts cleared - no further testing needed, due to adequate records on chart	264
Anesthesia requested cardiac clearance	30
Cardiac clearance done prior to PAT visit	30
Anesthesia requested PCP clearance	7
PCP clearance done prior to PAT visit	16
Anesthesia requested labs/EKG DOS	9
Cases cancelled - clearance not obtained prior to surgery date	7
Cases cancelled - due to UTI	1

Evaluation Strategy

Total joint cases from 2013 and 2015 were used as the sample populations for comparison, to evaluate effectiveness of the new process. Assuming all cases in 2013 followed the previous guidelines, charges were assigned to every case accordingly. Chart review was done on all 2015 cases to obtain actual charges from preoperative testing and medical clearances done based on the new protocol. 2013 and 2015 cancelled cases from not obtaining clearances prior to their surgery date were tallied. Data was collected on the charts reviewed by anesthesia. Cardiac evaluations were not included in the data due to variabilities. Effects on patient satisfaction was not evaluated.

Conclusion & Implications

The results for 2015:

- 100% participation in the new process with joint cases.
- There were more joint cases done, with less testing, and fewer medical clearances done.
- Only 69% of the cases required anesthesia review.
- Of those case 86% were passed, not requiring any further testing.
- Cancellations were reduced by 50% due to early PAT interviews.

Our data shows we developed a streamlined and efficient process. Having a collaborative process has reduced costs and increased efficiency. There were no reported adverse perioperative outcomes related to the PAT process or reduced testing, therefore we can assume our new process confirms the research showing more testing does not equal improved perioperative outcomes for patients. If the new PAT guidelines were adopted by all surgeons, we could potentially save millions of dollars and reduce unnecessary cancellations, improving patient satisfaction. Increased patient satisfaction can only be assumed, since there was no data regarding patients' responses to the new PAT process.

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