

Improving Beta Blockade Continuation During the Perioperative Period

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Problem: Cardiovascular complications, such as myocardial infarction, are common during surgery, and may result from discontinuation or withholding of beta-blocker medication. To help ensure protection during this period, an algorithm was developed to preserve beta-blocker medications in patients previously receiving this therapy.

Evidence: Led by the Center for Medicare and Medicaid Services in 2004, The Surgical Care Improvement Project (SCIP) consists of a large panel of researchers whose goals are to reduce surgical complications 25% by year 2010. The supporting level of evidence recommending that patients chronically receiving B-blockers for angina, hypertension, and arrhythmias should continue through the perioperative period was cited by American College of Cardiology/American Heart Association guidelines being class I and level C. Medline, Cinahl, SCIP, and Cochrane database supplied the additional evidence supporting the best practice criteria. Key words used were SCIP, surgery, and beta-blockers.

Strategy: A step-by-step algorithm was made available to help the nursing staff identify healthcare professionals (HCP) accountable for medication administration. The surgical services unit's clinical nurse specialist (CNS), with the help of interdisciplinary team members, was responsible for its creation. The algorithm was posted in the medication room to provide a process that will decrease reliance on memory.

Practice Change: The specific practice change identified the HCP involved in both inpatient and outpatient departments. In the inpatient department, the pharmacy identified the beta-blockers on the medication administration record by printing "core measure, if pre-op," and the staff nurse called the prescribing physician / surgeon for an order to administer beta-blockers before surgery. The HCP in the outpatient department was the pre-admission testing nurse who identified the patient's beta-blockers and informed the patient to take their medications as usual, with a sip of water, up to and including the day of surgery.

Evaluation: Formation of the algorithm and HCP education began in September 2007. Measurements were taken of patients who were on beta blockers and who received their medications within their 24-hour perioperative course as defined by SCIP initiative.

Results: Percentages in September and October 2007, respectively, showed a 50% and 87.5% compliance rate, with the following months in 2007 being 100% compliance rate.

Recommendations:

1. Identify beta-blockers during the surgical "time out," as a final reminder before incision.
2. Add 'beta-blockers' to the white board checklist in each OR suite.
3. Identify patients on beta-blockers with a "beta-bear" sticker to the front of the chart.

Lesson Learned: Ongoing communication of the project's data helped to reinforce the continuation of the beta-blockers. Implementation of SCIP quality measures will aid in the prevention of cardiovascular complications and keep patients safer during the perioperative period.

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