

Abstract 16

Development of an Electronic Medical Record Smart Set Form to Increase Standardization, Consistency, and Compliance with ACC/AHA Perioperative Guidelines

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Background: Our Internal Medicine Preoperative Assessment Consultation and Treatment Center sees a volume of 14,500 patients per year. The preoperative assessment is done by a group of 35 physicians who rotate through our center using an electronic medical record (EMR) for documentation, which has generally only permitted free text entry. This may result in inconsistencies with preoperative risk assessment and discordance with the current American College of Cardiology (ACC)/American Heart Association (AHA) guidelines.

Purpose: We aimed to devise a smart form for standardization of our perioperative risk assessment and to improve compliance with the current ACC/AHA guidelines.

Description: A task force was established, which included our information technology personnel, to develop a smart set form to create simple drop-down reminders in our assessment and plan portion. This drop-down menu included a separate cardiac portion which reminded the physician of all 6 revised cardiac risk index (RCRI) criteria and helped tabulate its total count. Another drop-down menu reminded the physician with regard to starting a beta-blocker if the RCRI was greater than 2, increasing the dosage for suboptimal heart rate or blood pressure, or not starting beta-blockers for listed absolute or relative contraindications. It also reminded the physician of the patient's metabolic equivalents (METs) capacity and cardiac risk factors and to order stress testing if appropriate with the guidelines.

Results: After the implementation of our smart set and re-education of our staff, our compliance with the current ACC/AHA guidelines went up to 100%. As a result of the above success we are now in the process of incorporating venous thromboembolism prophylaxis, stress dose steroids, the new guidelines for infective endocarditis prophylaxis, antibiotic prophylaxis for patients with prior prosthesis, preoperative pulmonary assessment, anemia management, and diabetic management into the above smart set.