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The Development of Algorithms for Preoperative Management of Antiplatelet and Anticoagulation Therapy in Patients Undergoing Surgical or Invasive Procedures

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Background: Patients receiving chronic antiplatelet and anticoagulation therapy pose a clinical challenge when they present for surgical or invasive procedures. The nurse practitioners (NPs) at Brigham and Women's Hospital Weiner Center for Preoperative Evaluation (WCPE) encountered inconsistencies in the management of these patients in the preoperative period. Procedures were postponed or cancelled due to a lack of consensus and planning in determining whether this therapy should be interrupted, bridged with a substitute agent, or continued. In addition, serious cardiovascular morbidity and mortality can result when anticoagulation therapy is interrupted.

Purpose: To address the lack of interdisciplinary consensus and bridge the gap between current clinical practice and research in this area, algorithms were developed for use as guidelines in the management of this patient population.

Description: NPs in the WCPE document the preoperative medication list for each patient visit. If a patient is taking an antiplatelet or anticoagulant, reference is made to the specific algorithm for preoperative management. This includes consultation with the physician who is managing the patient's therapy to develop an optimal strategy for complex cases. Areas for consideration include the type of medication, the reason for therapy, the surgery/procedure, and the type of anesthesia being used. The medications addressed in the algorithms include clopidogrel, aspirin, Coumadin, and enoxaparin. The algorithms will be presented in detail in the poster.

Results: Preoperative antiplatelet and anticoagulation strategies for all patients are clearly identified prior to the surgical procedure and documented in the patient medication record. Periods without antiplatelet and anticoagulation therapy are kept to a minimum. The practice in the WCPE no longer advises all patients to stop low-dose aspirin therapy in the preoperative period.

Conclusion: These algorithms, when consistently used by the NPs in their preoperative assessments, provide a constant standard of care and allow efficient patient management. The improvement in interdisciplinary communication yields increased patient safety and improved patient outcomes.