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An Analysis of Preoperative Testing Protocols in Academic Anesthesiology Programs

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Introduction: Preoperative testing remains a controversial area, especially since there are no formal guidelines in the literature. A survey of academic anesthesiology programs was therefore undertaken to analyze practice patterns.

Methods: A detailed questionnaire on preoperative test ordering, preoperative test billing, and impact on cancellation rate was devised using input from a group of academic anesthesiologists with specific expertise in preoperative assessment. The questionnaire was sent via e-mail to anesthesiology program directors in the United States. Data were collected and descriptive analysis was performed.

Results: Responses were submitted from 75 of 130 academic anesthesiology programs (58% response rate). Although 94.7% of institutions require no testing unless indicated based on patient history, age, or type of surgery, 70.8% of institutions have age requirements for electrocardiograms. 78.6% consider them outdated if done more than a year prior to surgery and 64% base their protocols on the literature. 68.6% have no requirements for preoperative chest x-ray and 43.9% base ordering on surgery type. Even though 20% of institutions have no specific guidelines for preoperative pregnancy testing, 56.5% that do have guidelines require testing in all menstruating females. 66.2% utilize urine pregnancy testing. While 72.5% of institutions have no specific requirements for preoperative coagulation studies, 40% of those institutions with guidelines require them for joint replacement surgery. The majority of institutions have no specific requirements for electrolytes based on age (77.9%), type of surgery (72.1%), or American Society of Anesthesiologists status (86.4%). 71.6% of institutions report that their testing guidelines have not changed within the past year. In 31.3% of the institutions, 1% to 5% of all surgeries are canceled for inadequate preoperative workup; 16.4% of the institutions report greater than 5% cancellation rate based on inadequate evaluations, and 16.4% have no idea what percentage of canceled surgeries is the result of inadequate preoperative workup. 52.2% of institutions do not understand how they are reimbursed for preoperative testing and 27.7% bill separately. 30.8% have no idea if they bill for this service. 81.5% of institutions would not let knowledge regarding payment influence ordering of preoperative tests.

Conclusions: Analysis of our data demonstrates that although there is no generalized consensus on preoperative testing, surgery cancellation rates continue to depend on inadequate preoperative evaluations. An understanding of the reasons behind preoperative protocols is likely to impact efficient operating room resource use.