

Editorial

Preoperative laboratory and diagnostic testing: cost vs. value

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The more experience we have gained in providing compacted perioperative care to the ambulatory surgery patient; the more experience we have gained in balancing excellence of care with cost containment constraint; the more we are realizing what we once took for granted, the need for and the importance of a physician's thorough history and physical examination in advance of the scheduled day of surgery.

A quarter century ago, ambulatory surgery was championed as being more convenient for patients and physicians, and more cost efficient than a traditional hospital stay while maintaining a comparable level of patient safety. As outcomes began to support these premises, we became more cavalier, and began to place greater reliance upon a battery of screening tests to evaluate our patients and less upon the physician's examination. Final clearance to proceed was often made on the day of surgery when the anesthesiologist reviewed data and performed an evaluation. We are now beginning to realize this attempt at expediting the evaluation process has subtracted both costly operating theatre inefficiencies (i.e. last minute delays, postponements, cancellations) and the expense of what many consider unnecessary testing, from the cost savings attributed to ambulatory surgery.

The cost versus the value of preoperative laboratory and diagnostic tests is fast becoming one of the most discussed cost containment issues in ambulatory surgical care. The system of testing by previously established protocol evolved from the mistaken belief that the more information, regardless of relevance, added to patient safety and reduced physician liability for any adverse events [1]. Testing by protocol, although a more costly alternative to selective testing based upon a patient specific profile, relieved the physician of both the time required and the decision making that would be a part of a thorough history and physical examination.

Evaluating a patient in advance of a procedure can reduce the cost of unnecessary testing while decreasing operating room inefficiencies. Data support the concept that a thorough medical history and the physician deciding whether there is need for further evaluation of the patient's health status can reduce costs [2]. The American Society of Anesthesiologists (ASA) supports the concept that 'no routine laboratory or diagnostic screening test is necessary for the preanesthetic evaluation of patients.' If legal requirements (government or hospital) exist regarding preoperative testing these should be observed even though current practice may dictate otherwise. For ASA PS1 and 2 patients, it can be argued that no laboratory or diagnostic testing is required. For patients with medical problems, tests should be organ or disease specific (i.e. pulmonary, cardiac, etc.) [3]. The lack of value of screening tests without specific clinical indicators has been well established [2]. In the USA, annual estimates for the cost associated with unnecessary testing approximates four billion dollars.

A preoperative assessment clinic (Stanford University Medical Center, Stanford, California, USA) under the direction of the department of anesthesiology, now evaluates patients several days in advance of surgery. A one-year review of the effectiveness of such a program revealed: an 88% decrease in day of surgery cancellation, a \$112 per patient decrease in testing costs; a significant decrease in internal medicine, pulmonology and cardiology consultations [4]. Preoperative evaluation is now gaining recognition as an area of importance in its own right.

Testing by protocol has run its course, it needs to be changed, and in fact is changing. A return to physician decision making based upon a thorough history and physical examination must replace predetermined testing protocols. Physicians and the facilities in which they provide care must address cost versus value of patient specific preoperative testing and the impact, if any, on patient safety.

## References

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