# Preoperative Consultations

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**KEYWORDS**

• Preoperative care • Preoperative period • Perioperative care • Perioperative period • Referral and consultation • Delivery of health care • Physician's practice pattern • Organization and administration

**KEY POINTS**

- Medical consultations outside the scope of the routine preanesthesia evaluation by anesthesiologists and surgeons are separately billed and have been increasing in frequency.
- Preoperative consultations are often not driven by patient medical or surgical risk factors, and show unwarranted geographic variation.
- There is substantial variation between surgical specialties in the frequency of use of preoperative consultation.
- There are no studies guiding the indication for preoperative consultation or definitively determining the role of preoperative consultation on patients' outcomes.
- Future payment models may facilitate improved coordination of consultations with other aspects of preoperative care.

## INTRODUCTION

Although all surgical patients undergo routine preoperative evaluations by surgeons and anesthesiologists, many are further referred for preoperative medical consultation. Such medical consultations are distinct from routine preoperative visits and are separately billed. Most preoperative medical consultations are provided by specialists

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in internal medicine, cardiology, and family practice but they may be provided by other medical subspecialists. The volume of preoperative consultations has increased[1] in recent years, and these consultations now consume substantial resources. This article reviews the current role and practice patterns of preoperative medical consultations and provides a framework for how the use of consultations could reasonably be improved.

## THE PURPOSE OF CONSULTATION

Ultimately, the purpose of preoperative medical consultations is to improve value-based, patient-centered surgical outcomes. In addition to a good surgical result per se, there are several different outcomes that are important and relevant to patients. Examples of desirable perioperative outcomes include reduced anxiety, satisfactory pain control, rapid recovery, and ability to return to a normal living situation, including return to work. Nonetheless, avoiding complications is an overarching goal. The most frequent complications, as reported by the National Surgical Quality Improvement Program, are listed in **Box 1**.

Prevention of perioperative complications is a major focus of surgeons' and anesthesiologists' training and practice. Although complications can be related to patient, provider, or system factors, they can be thought of as surgical or medical. There is a paucity of data on how preoperative medical consultations affect the complications listed in **Box 1** and other complications; however, it is plausible that consultants' services are more likely to positively affect nonsurgical (ie, medical) complications. For example, deep vein thrombosis would be affected by the medical consultant if this area of care is delegated to the consultant. The typical consultant services are listed in **Box 2**.

Previous studies have documented that specific questions are rarely asked by the surgeon requesting a preoperative consultation. In a retrospective analysis of 202 cardiology consultations, 108 were requested for an evaluation, 79 for clearance, and 9 did not specifically request to address any concerns.[2] The most common problem leading to a request for consultation was an abnormal electrocardiogram. Another study reported that referral dynamics was a reason for referral.[3]

**Box 1**
**Perioperative complications, National Surgical Quality Improvement Program 2005 to 2013**

| Complications | Frequency (%) |
|---|---|
| Bleeding requiring transfusion of >4 units of blood | 5.0 |
| Superficial wound infection | 2.2 |
| Sepsis within 30 d postoperatively | 1.7 |
| Urinary tract infection | 1.6 |
| Postoperative pneumonia | 1.4 |
| Organ/space surgical site infection | 1.2 |
| Unplanned intubation | 1.2 |
| Ventilator dependent >48 h after surgery | 1.2 |
| Septic shock within 30 d postoperatively | 0.9 |
| Deep incisional surgical site infection | 0.7 |
| Deep vein thrombosis/thrombophlebitis | 0.7 |
| Wound disruption | 0.5 |
| Acute renal failure requiring dialysis | 0.4 |
| Cardiac arrest | 0.4 |
| Q-wave myocardial infarction within 30 d postoperatively | 0.3 |
| Pulmonary embolism | 0.3 |