PART I

SYSTEMS OF CARE, QUALITY, AND PRACTICE MANAGEMENT
INTRODUCTION

Medical consultation is an integral part of an Internal Medicine or a Hospital Medicine practice. Internists and hospitalists are often asked to evaluate a patient prior to surgery. The medical consultant may be seeing the patient at the request of the surgeon, or they may be a member of the primary care team assessing the patient prior to consideration for a surgical procedure. The timing of the consultation may vary from days to weeks prior to a planned elective surgical procedure and sometimes a few hours before an urgent procedure. The former is usually performed in a preoperative clinic or in an internist’s office. The latter situation is frequently encountered in a hospitalist practice. Irrespective of the timing, the general objective of this evaluation is to determine the risk to the patient from the proposed procedure and from the patient’s own known and unknown comorbidities and to recommend interventions to minimize these risks. This objective is accomplished by identifying comorbid disease conditions and risk factors for medical complications of surgery, optimizing the medical management of these conditions, recognizing and treating the potential complications, and working together with the surgical and anesthesia colleagues to form an efficient and effective perioperative care team.

Internists and hospitalists, especially individuals who have recently completed training, may not always be well acquainted with the process of medical consultation. This is often because of inadequate exposure to the intricate nuances of medical consultation during residency training. However, medical consultation is an important component of both the outpatient internal medicine practice and the hospitalist practice. Therefore, it is worthwhile to develop an optimal consultation technique. This will also increase the likelihood that the recommendations of the consultant are implemented.

The focus of this chapter is on the general principles of medical consultation and specifically on the optimal interaction/communication between referring physicians and the medical consultant.
ADVANTAGES OF MEDICAL CONSULTATION

Medical consultation is a widely prevalent practice. However, there is no evidence to show that this practice is associated with a decrease in perioperative morbidity and mortality. In fact, in a recent, large population-based cohort study conducted by Wijeysundera et al., preoperative medical consultation was associated with significant, albeit small, increases in mortality and hospital stay after major elective non-cardiac surgery. This study did have several limitations including the fact that it was an observational study and the mortality increase was small.²

But there is evidence showing that internists identify medical conditions that are related to surgical outcome and often recommend potentially lifesaving interventions for these conditions. In addition, medical consultants occasionally cancel or delay surgery so that medical conditions can be optimized.³ In another study by Devereaux et al., it was found that medical consultants frequently recommended perioperative changes in the use of cardiac medications.⁴ If the medical consultant makes evidence-based recommendations, then it is reasonable to conclude that consultation will improve the care of the surgical patient if such recommendations are followed. The effect of medical consultation on the length of stay is unclear. Phy et al. demonstrated a reduction in the length of stay and fewer minor complications when a hospitalist was part of the care team for patients after hip fracture surgery.⁵ Macpherson et al. reported a decrease in the length of stay when an internist performed a postoperative medical management in patients who had undergone elective cardiothoracic surgery.⁶ However, a more recent study by Auerbach in 2007 showed similar or increased costs and length of stay for patients who had a consultation from a generalist.⁷ The authors of this study concluded that perioperative medical consultation produces inconsistent effects on the quality of care. Both this study and the other limited observational evidence are fraught with limitations and biases, and good randomized clinical trials are difficult to do in this area to study the true impact of medical consultation.

GENERAL PRINCIPLES OF MEDICAL CONSULTATION

Goldman et al. laid out the general principles of an effective medical consultation in 1983.⁸ These principles are often referred to as the “Ten Commandments” of medical consultation and they are as follows:

I: Determine the Question

All too often consultants meticulously recapitulate the case and offer detailed recommendations but fail to address the question for which the consultation was called. It is important to respond to the specific question asked.

II: Establish Urgency

The consultant must determine whether the consultation is emergent, urgent, or elective and provide a timely response.
III: Look for Yourself
Confirm the history and physical exam, and check the test results.

IV: Be as Brief as Appropriate
Limit the number of recommendations.

V: Be Specific
It is recommended that the consultations should be brief and goal oriented. The impressions and differential diagnosis should be expressed concisely in order of likelihood.

VI: Provide Contingency Plans
Consultants should try to anticipate potential problems, such as what kind of postoperative complications might be expected in a particular patient. A brief description of therapeutic options to be employed should these problems arise is appropriate.

VII: Honor Thy Turf (or Thou Shalt Not Covet Thy Neighbor’s Patient)
In general, consultants should play a subsidiary role. They should address the problem for which they were called and avoid running arguments in and out of the medical record with other services, especially if the problem lies outside their domain.

VIII: Teach with Tact
Requesting physicians appreciate brevity and clarity, but they also appreciate consultants who make an active effort to share their expertise and insights without condescension.

IX: Talk Is Cheap and Effective
It is crucial to have a direct conversation with the primary physician after a consultation has been performed. This is especially true if the recommendations are urgent or controversial.

X: Follow-Up
Consultants should recognize the appropriate time to fade gracefully into a background role, but that time is almost never the same day that the consultation note is signed.

A consultation is a request made to another physician to give his or her opinion (given their expertise in the field) on the diagnosis or management of a particular patient. The requesting clinician may seek consultation for preoperative risk assessment for surgery and anesthesia, advice on diagnostic problems or management issues in the perioperative period, confirmation of a plan or assessment and reassurance, or documentation for medical legal reasons. In general when a consultation is requested, the role of the consultant should be defined through communication with
the referring physician. In a recent study by Salerno et al., it was found that surgeons more often desire “co-management” by internists in which the internist is asked to assume the management of specific aspects of the patient’s care including order writing. However, unless there is a preexisting arrangement for co-management, the surgeon needs to explicitly communicate this to the medical consultant.

Consultations should be requested in doubtful or difficult cases, or when they enhance the quality of medical care. The referring physician should always send a formal written or verbal consult request to the consulting physician unless a verbal description of the case has already been given.

Effective communication is the key to the art of medical consultation. The way in which the question or information is phrased can influence the consultant’s response. For example, a request for “management of medical conditions” will generate a completely different response as opposed to a request for “management of postoperative hypertensive urgency.” Ideally, the requesting physician should clearly state the questions to be answered by the consultant. However, this is often not the case. For example, Lee et al. found that there was disagreement between the primary physician and the consultant about the primary reason for consultation in 14% of cases. A study by Kleinman et al. found that among preoperative cardiology consultations, over half of the consult requests were for “evaluation,” 40% for “medical clearance,” and no specific reason was noted for 5%. In such instances, the consultant should directly communicate with the requesting physician to get a better sense of his or her needs in this regard. Given the high frequency of misunderstanding between consultants and referring physicians, direct communication is important and likely will prevent misinterpretation.

The consultant should always discuss potentially controversial recommendations with the primary team. It is not good practice to leave inflammatory notes in the chart. If the consultant identifies areas of concern distinct from the original reason for the consult, it is recommended that they discuss this with the primary team and seek their permission before discussing this in the chart. Conflicts of opinion should be resolved by a second consultation or withdrawal of the consultant.

Traditionally, consultative advice should be specific to the question asked. However, Salerno et al. found that only 41% of surgeons believed that internal medicine consultants should limit themselves to a specific question. Consults should be performed in a timely fashion. It is very useful if the requesting service indicates whether the consult is emergent, urgent, or routine to allow the consultant to respond accordingly.

The attending physician has overall responsibility for the patient’s treatment and is in charge of the patient’s care. The consultant physician should not assume the primary care of the patient without the consent of the referring physician. The medical consultant should be able to anticipate potential problems and make succinct therapeutic recommendations. As a consultant, the physician should restrict advice to his or her area of expertise. For internists, this usually includes general internal medicine or cardiology and various aspects of perioperative medicine. It is not advisable to make recommendations regarding the type or route of anesthesia.

The consultant should make clear and concise recommendations regarding the management of the problem at hand. These immediate concerns must be evaluated
in terms of their severity, the planned surgical procedure, the patient’s perioperative risk, and the need for further testing or intervention. It is crucial to avoid making a long list of recommendations about all of the patient’s issues as this might decrease the compliance with the recommendations.

Quite often, patients are interested in knowing the consultant’s opinion at the end of the consultation visit. Unless the consultant is the patient’s primary care physician, he or she should not express an opinion as to whether surgery should proceed. The final decision is best made by the surgeon in conjunction with the patient. The consultant does have the right to share his or her recommendations with the patient in the presence of the surgeon.

When the consultant’s expertise is no longer necessary for the care of the patient, he or she should relay this to the primary team and write a note indicating that they are signing off the case. The sign-off note should ideally indicate appropriate recommendations and arrangements for follow up of the medical problems once the patient leaves the hospital.

**PREOPERATIVE MEDICAL EVALUATION**

A commonly stated purpose of a preoperative consultation request is to “clear” a patient for surgery. As we have indicated before, the role of the internist or hospitalist is to outline the risks and interventions to help decrease this risk. We do not “clear” patients but in such referrals, the consultant can presume that the request is to provide a comprehensive preoperative evaluation. The consultant should avoid the use of the phrase “cleared for surgery.” Instead, they should quantify the risk of potential complications from the procedure and propose a plan for risk reduction. This is accomplished by identifying all the risk factors (cardiac and pulmonary morbidity) and their severity, and making recommendations for optimizing the medical management of these risk factors. Risks are specific to the individual patient, the type of procedure proposed, and the type of anesthesia selected. If no such risks are identified, then the consultant’s final statement could categorize this risk as low, intermediate, or high for the proposed surgery.

Another important aspect of preoperative medical consultation is management of perioperative medications. The medical consultant should make recommendations about the perioperative management of the patient’s usual outpatient medications. The consultant should also identify potential complications of the procedure (venous thromboembolism [VTE], wound infection, etc.) and make appropriate recommendations to prevent their occurrence. Many surgeons view postoperative VTE prophylaxis and surgical wound infection prophylaxis as their domain. But consultants who notice that optimal VTE and surgical wound prophylaxis is not being given should consider providing recommendations.

In summary, the medical consultant should be able to identify the pertinent medical problems, integrate this information with the physiologic stressors of anesthesia and surgery, anticipate potential perioperative problems, assess a patient’s risk and need for further interventions, and communicate effectively with the surgeon and anesthesiologist.
CO-MANAGEMENT

The field of medical consultation has changed significantly since Goldman et al. published the Ten Commandments of Effective Consultation. It is common practice these days, for the consultant to step beyond the usual role of consultant and actively manage medical conditions by ordering tests and initiating therapies, which involves writing orders in the medical record—a practice known as co-management. With the increasing prevalence of the hospitalist model of care, co-management has also become commonplace. Co-management is seen most often in orthopedic surgery patients, but other surgical subspecialties are starting to request this type of service.\textsuperscript{16–18}

One advantage of the co-management model is that the medical consultant writes

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<th>Commandment</th>
<th>Meaning</th>
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<td>1. Determine your customer.</td>
<td>Ask the requesting physician how you can best help them if a specific question is not obvious; they may want co-management.</td>
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<td>2. Establish urgency.</td>
<td>The consultant must determine whether the consultation is emergent, urgent, or elective.</td>
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<td>3. Look for yourself.</td>
<td>Consultants are most effective when they are willing to gather data on their own.</td>
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<td>4. Be as brief as appropriate.</td>
<td>The consultant need not repeat in full detail the data that were already recorded.</td>
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<td>5. Be specific, thorough, and</td>
<td>Leave as many specific recommendations as needed to answer the consult but ask the requesting physician if they need help with order writing.</td>
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<tr>
<td>descend from thy ivory tower to</td>
<td>help when requested.</td>
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<td>help when requested.</td>
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<td>6. Provide contingency plans and</td>
<td>Consultants should anticipate potential problems, document contingency plans, and provide a 24-h point of contact to help execute the plans if requested.</td>
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<td>discuss their execution.</td>
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<td>7. Thou may negotiate joint title to thy neighbor’s.</td>
<td>Consultants can and should co-manage any facet of patient care that the requesting physician desires; a frank discussion defining which specialty is responsible for what aspects of patient care is needed.</td>
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<td>8. Teach with tact and pragmatism.</td>
<td>Judgments on leaving references should be tailored to the requesting physician’s specialty, level of training, and urgency of the consult.</td>
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<td>9. Talk is essential.</td>
<td>There is no substitute for direct personal contact with the primary physician.</td>
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<td>10. Follow-up daily.</td>
<td>Daily written follow-up is desirable; when the patient’s problems are not active, the consultant should discuss signing off with the requesting physician beforehand.</td>
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orders thereby guaranteeing compliance with recommendations. A potential disadvantage of this practice is duplicate or conflicting orders if the consultant or surgeon is not knowledgeable of all orders in the chart.

In order to accommodate for these changing trends in the practice of consultative medicine, Salerno et al. have proposed minor modifications to the original “Ten Commandments of Effective Consultation” by Goldman et al.8,9 The proposed changes have been presented in Table 1.1. These modified commandments recommend focusing less on defining a specific question for the consult and more on direct verbal communication about how the consultant might be able to help the requesting physician. If a co-management relationship is desired, then the consultant should take a proactive role in the management of the medical problems and in writing orders. They also recommend that the consultant need not worry about offering multiple recommendations relevant to the patient’s care especially if the referral is from a surgeon Furthermore, the consult should provide explicit instructions on where he or she or an on-call colleague can be reached if the patient’s clinical condition deteriorates. This more involved and interactive approach may be more apt for hospitalists and surgical subspecialists. This topic is discussed in more detail in Chapter 2.

REFERENCES


