TITLE: Surgical Referral and Appropriateness of Surgery: Clinical Evidence, Best Practices and Guidelines

DATE: 17 May 2011

RESEARCH QUESTIONS

1. What is the clinical evidence regarding optimal referral of patients to surgery by primary physicians?

2. What is the clinical evidence regarding appropriate decisions by surgeons to perform surgery on referred patients?

3. What are the evidence-based guidelines regarding optimal referral of patients to surgery by primary physicians?

4. What are the evidence-based guidelines regarding appropriate decisions by surgeons to perform surgery on referred patients?

KEY MESSAGE

Evidence suggests that surgical referral guidelines have been shown to improve diagnostic investigations and treatment by the primary physician. A small proportion of patients referred for cardiac surgery do not undergo the operation for numerous reasons, including high risk.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2011, Issue 5), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian, and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized controlled studies, and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2006 and May 3, 2011.

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The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

Three systematic reviews and 12 non-randomized studies were identified regarding the optimal referral of patients to surgery by primary physicians and appropriate decision by surgeons to perform surgery on referred patients. Additional studies of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

One systematic review\(^1\) and five non-randomized studies\(^7,8,12,14,15\) examined the effectiveness of referral guidelines or the agreement of primary physicians and surgeons on the appropriateness of the referral. The systematic review\(^1\) assessed the effectiveness of guidelines for referral to elective surgical assessment for a variety of conditions including musculoskeletal, urological, ears, nose and throat, gynecology, general surgery, and ophthalmology. The authors concluded that the guidelines improved diagnostic investigations and treatment, but they could not establish other beneficial effects, including effects on health outcomes based on the evidence in the selected studies.\(^1\) A non-randomized study\(^7\) found that surgical referral practices for patients with degenerative disease of the lumbar spine were poorly predicted by clinical practice guidelines and physician opinions. Another study\(^8\) found the consensus between pediatricians and otolaryngologists regarding the appropriateness of tonsillectomy or adenoidectomy in children to be poor. A study by Mitchell and Keenan\(^12\) sought to analyze the frequency and accuracy of provisional diagnoses by general practitioners (GPs) for patients referred for emergency surgical admissions. The study found that GPs provided a correct provisional diagnosis in 43.6% of cases despite limitations in diagnostic investigations, facilities, and time. A non-randomized study\(^14\) assessed the education needs of primary care physicians who refer patients to the on-call plastic surgeon and found that continued medical education focusing on traumatic injuries to the upper extremity and head and neck regions would have the greatest potential effect on improving patient care. Finally, a study\(^15\) was conducted to analyze the consensus between orthopedic surgeons and referring primary physicians for total hip replacements. The study found that primary physicians reported that the disease needed to be more advanced to merit surgery in comparison to the opinions of surgeons.

Two systematic reviews\(^2,3\) developed classification systems or guidelines to aid in the referral process. The authors of the first systematic review\(^2\) presented a comprehensive classification system to define neoplastic spinal instability including content to guide clinicians when referrals for surgical consultation may be beneficial for the patient. The authors from the second review\(^3\) presented referral guidelines for patients presenting with pelvic/ovarian masses.

Three non-randomized studies\(^4,6,11\) were identified that addressed whether increased diagnostic investigations had effects on referrals or patient outcomes. A study by Li and Yen\(^4\) showed that, despite an increase in MRI and CT scans, the number of surgical candidates did not change.
The authors of a non-randomized study\textsuperscript{5} examined survival in patients with non-hepatobiliary malignancies and concluded that increasing the number of diagnostic imaging tests prior to surgical referral adversely impacted patient survival due to the time delay before surgical referral\textsuperscript{6}. Finally, a non-randomized study\textsuperscript{11} concluded that biopsy review by an internal dermatopathologist after referral for Mohs surgery changed the initial referral diagnosis in a large proportion of patients and thus, caused a subsequent change in the disease management.

Two non-randomized studies\textsuperscript{5,10} were identified pertaining to referral management practices. One study\textsuperscript{5} analyzed the efficacy of a direct booking system for patients referred for tonsillectomy. The direct booking system was accurate for selecting patients requiring tonsillectomies. The direct booking system also reduced patient wait times in comparison to the traditional outpatient system. The authors of the second study\textsuperscript{10} analyzed the role of a nurse-practitioner-led spine consultation clinic on patient satisfaction in patients referred to a spinal surgeon. The findings showed that these clinics offered an accurate clinical diagnosis and an earlier assessment, reducing patient wait times and allowing the management plan to be implemented in a timelier manner.

Two non-randomized studies\textsuperscript{9,13} were identified regarding appropriate decisions by surgeons to perform surgery on referred patients or by primary physicians to refer patients for surgery. In one study\textsuperscript{9} 24\% of patients with isolated hepatic metastasis were referred to a hepatobiliary surgeon and 16\% received surgical resection. In these patients, advanced age was the most common reason that patients were not referred to a hepatobiliary surgeon. An additional study\textsuperscript{13} examined the proportion of patients referred for cardiac surgery that ultimately underwent the operation and the reasons given for not undergoing surgery. The study found 12.8\% of patients referred for consideration of cardiac surgery did not undergo the procedure. High risk was the main reason that patients were not accepted for surgery.
REFERENCES SUMMARIZED

Health technology assessments
No literature identified.

Systematic reviews and meta-analyses


Randomized controlled trials
No literature identified.

Non-randomized studies


Guidelines and recommendations
No literature identified.

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APPENDIX – FURTHER INFORMATION:

Systematic reviews - type of secondary care not specified


Non-randomized studies – referrals by other healthcare providers


Guidelines - methodology not specified


See: Sharing information with colleagues and referring patients, page 41


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