

## MAXIMIZING USE OF A SURGICAL CLINIC FOR REFERRALS OF PATIENTS HAVING BACK PROBLEMS

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**OBJECTIVE:** To determine ways to improve the delivery of service in a surgical clinic, based on the outcome of surgical consultations for back pain.

**DESIGN:** A prospective outcome study.

**SETTING:** A university teaching hospital providing secondary and tertiary care.

**PATIENTS:** One hundred and forty-two consecutive patients who presented to surgical clinics for assessment of a back problem between Apr. 14 and May 30, 1996.

**INTERVENTIONS:** Surgeons determined the diagnosis and visit outcome; data were tabulated objectively by a third-party researcher.

**OUTCOME MEASURES:** Waiting time for consultation, presence of referral letter, third-party interests, diagnosis and visit outcome.

**RESULTS:** Twenty-five percent of patients had chronic pain not amenable to surgery, 19% of patients were surgical candidates and were offered an operation, 13% were symptomatically improved to the point of not wanting an operation, 11% wanted a second opinion only, 10% had mechanical back pain appropriate for referral to physiotherapy, 9% had not undergone an adequate trial of nonoperative treatment when seen in the clinic and were given follow-up appointments, 5% were "no shows," 3.5% were seen for a medicolegal assessment, 3.5% wanted confirmation from a specialist that they did not need surgery and 1% had symptoms due to a vascular rather than a spinal cause and were referred to a vascular surgeon.

**CONCLUSION:** Delivery of service could be improved by more rigorous screening to reassign appointment times of patients who have not had an adequate trial of nonoperative treatment, are improved or do not intend to keep their appointment.

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**OBJECTIF :** Déterminer des moyens d'améliorer la prestation des services dans une clinique de chirurgie en fonction des résultats des consultations chirurgicales pour dorsalgie.

**CONCEPTION :** Étude prospective de résultats.

**CONTEXTE :** Hôpital d'enseignement universitaire dispensant des soins secondaires et tertiaires.

**PATIENTS :** Cent quarante-deux patients consécutifs qui se sont présentés à des cliniques de chirurgie pour faire évaluer un problème de dos entre le 14 avril et le 30 mai 1996.

**INTERVENTIONS :** Les chirurgiens ont déterminé le diagnostic et le résultat de la consultation, et un tiers chercheur a établi un tableau objectif des données.

**MESURES DE RÉSULTATS :** Temps d'attente pour la consultation, présence d'une lettre de présentation, intérêts de tiers, diagnostic et résultat de la consultation.

**RÉSULTATS :** Vingt-cinq pour cent des patients avaient une douleur chronique qui ne se prêtait pas à une intervention chirurgicale, 19 % étaient candidats à une intervention et s'en sont vu offrir une, 13 % ont vu leurs symptômes s'améliorer au point où ils ne souhaitaient pas subir une intervention, 11 % cherchaient un deuxième avis seulement, 10 % avaient une dorsalgie mécanique qui se prêtait à une physiothérapie, 9 % n'avaient pas fait un essai suffisant d'un traitement non opératoire lorsqu'ils sont venus consulter à la cli-

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*Presented in part at the annual meeting of the Canadian Orthopaedic Association, Hamilton, Ont., June 1997.*

*Accepted for publication Dec. 12, 1998.*

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nique et ont obtenu un rendez-vous de suivi, 5 % ne se sont pas présentés, 3,5 % se présentaient à une évaluation médico-légale, 3,5 % souhaitaient qu'un spécialiste confirme qu'ils n'avaient pas besoin d'intervention chirurgicale et 1 % avaient des symptômes attribuables à une cause vasculaire plutôt que rachidienne et ont été présentés à un chirurgien vasculaire.

CONCLUSION : La prestation du service pourrait être améliorée par un filtrage plus rigoureux qui viserait à modifier les rendez-vous des patients qui n'ont pas fait un essai suffisant d'un traitement non opératoire, dont l'état s'est amélioré, ou qui n'ont pas l'intention de se présenter à leur rendez-vous.

Low back pain is a common problem and is associated with high management costs.<sup>1,2</sup> The rates of surgery for back problems are increasing because of the aging population and technologic advances in diagnosis and treatment.<sup>3</sup> Without increased funding, the resource base for surgical consultations is limited. To shorten the waiting list for clinic appointments, either clinic volume must be increased or the efficiency of present use of this service must be maximized.

Information is lacking about how many patients presenting to a surgical clinic are offered an operation and about those who are not surgical candidates. Once this information is available, a rational choice between increasing service or improving its efficiency can be made in order to address the length of the waiting list.

## METHODS

An objective third-party researcher carried out a prospective study between Apr. 14 and May 30, 1996, to address this lack of information. The study was multidisciplinary with participation by 2 orthopedic surgeons and 4 neurosurgeons, all based at 1 health science centre. Over a 6-week period all new patients presenting to these surgeons' clinics because of a thoracic or low back problem were entered into the study.

A "new" patient was defined as any person who had never been to that particular surgeon because of back problems. Data, collected on a standard form, included patient demographics, the waiting period for

an appointment, the presence of a referral letter, third-party interests, diagnoses and outcome of the clinic visit. The surgeon determined the diagnosis and visit outcome. The researcher was responsible for completing the data sheet at the time of the clinic visit.

The outcome was divided into the following categories of patients:

- those suffering chronic pain not amenable to surgery
- surgical candidates offered an operation
- those symptomatically improved to the point of not wanting an operation
- those who wanted a second opinion only
- those having mechanical back pain appropriate for referral for physiotherapy
- those who had an inadequate trial of nonoperative treatment when seen in the clinic and were given a follow-up appointment
- those who did not show for the appointment
- those who wanted a medicolegal assessment
- those who wanted confirmation from a specialist that surgery was not required
- those who sought the cause for symptoms related to a body system other than the spine.

Patients having conditions that required immediate assessment such as fractures or progressive neurologic deficit were seen in the emergency department. They were dealt with on an immediate basis and were not considered further in this study.

## FINDINGS

Patients assessed in the clinics for orthopedic or neurosurgical problems unrelated to the thoracic or lumbar spine were excluded from the study. Over the study period, 142 patients presented to the participating surgeons' clinics because of back problems.

Of the 142 referrals, 27 (19%) were referred by specialists, and the remaining 115 (81%) were referred by family doctors. Referral letters were received for 101 (71%) patients.

The outcome of the consultation is shown in Table I. The average waiting period between the time of referral and the clinic appointment was 10 weeks.

## DISCUSSION

The reasonable waiting time for consultation nationally is 4.2 and 6.8 weeks for neurosurgery and orthopedics respectively.<sup>4</sup> The 10-week average waiting time for a clinic appointment at our centre, with a further wait if surgery or referral was required, supports the need to find ways to improve delivery of this service.

The timing of the study was such that major holidays for patients and physicians were avoided. There are only 2 other surgeons at our centre who perform back surgery. They each saw 5 or fewer patients in consultation for back problems over the study period. Our health science centre is unique in that it supplies all of the secondary and tertiary spine care for the city and tertiary care for the region. We believe that the data collected are a

valid reflection of the spinal service offered to the population in our region.

Clinical judgement is required to determine whether a patient will benefit from surgery, and it is not possible for the physician to refer only those who will be candidates for operation. We realize, therefore, that appointments will be given to those who are not offered surgery, which in this study consisted of patients in the categories of having chronic pain not amenable to surgery (25.4%), symptomatically improved to the point of not wanting an operation (13.4%), wanting a second opinion only (11.3%), having mechanical back pain appropriate for referral for physiotherapy (9.9%), having had an inadequate trial of nonoperative treatment when seen in the clinics and given a follow-up appointment (8.5%), "no shows" (4.9%), being seen for a medical legal opinion (3.5%), wanting confirmation from a specialist that surgery was not required (3.5%), and having symptoms related to a body system other than the spine (0.7%). Some would argue that the operating surgeon is the best one to determine whether a patient will be helped by surgery and there-

fore should be the one screening all patients having back pain, whereas others believe that primary care physicians provide the most cost-effective care to this group.<sup>5</sup> This study does not address that issue but provides data for future investigation by quantifying and categorizing the group of patients who are seen in the surgical clinic but are not considered to be candidates for operation.

Some patients can be screened without the need for clinical judgement. Specifically, those who are symptomatically improved to the point of not wanting an operation (13.4%) and the "no shows" (4.9%) could have their appointment times given to others without having to be seen by a surgeon. Such a procedure is labour intensive, requiring that all patients be contacted in advance of their appointments. This is presently done by some, but not all, offices and none among the surgeons' practices studied. We believe that the extra patients who could be serviced by carrying this out is worth while and have trained personnel to do this.

Clinical judgement is required to screen for patients who have not had an adequate trial of nonoperative

treatment when seen in the clinics and are given a follow-up appointment (8.5%). By delaying their initial appointment until nonoperative treatment has been given an adequate trial, we may be able to eliminate the need for a subsequent follow-up assessment after the initial consultation visit. We believe that this screening can be done by the referring physician or by the surgeon reviewing the referral letter. In this study, referral letters were received before appointment for 71% of those seen in the clinics, and 81% of the referrals were from family physicians. We believe that extra patients could be seen by employing both of these screening methods, and therefore we now require referral letters and have presented an algorithm for management of back pain at continuing medical education events targeted for family physicians.

**Table 1**

**Outcome of Clinic Visit by 142 Patients Referred for Thoracic or Lumbar Spine Problems**

Outcome category	No. (%) of patients
Suffering chronic pain not amenable to surgery	36 (25.4)
Surgical candidate offered an operation	27 (19.0)
Symptomatically improved to the point of not wanting an operation	19 (13.4)
Wanted a second opinion only	16 (11.3)
Mechanical back pain appropriate for referral for physiotherapy	14 (9.9)
Inadequate trial of nonoperative treatment when seen in clinic and given a follow-up appointment	12 (8.5)
Did not show for the appointment	7 (4.9)
Wanted a medicolegal assessment	5 (3.5)
Wanted confirmation from a specialist that surgery was not required	5 (3.5)
Sought the cause for symptoms related to a body system other than the spine	1 (0.7)*

\*This patient had vascular claudication.

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