

Carpal Tunnel Syndrome: Assessment of Surgeon and Patient Preferences and Priorities for Decision-Making

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Purpose This study tested the null hypothesis that there are no differences between the preferences of hand surgeons and those patients with carpal tunnel syndrome (CTS) facing decisions about management of CTS (ie, the preferred content of a decision aid).

Methods One hundred three hand surgeons of the Science of Variation Group and 79 patients with CTS completed a survey about their priorities and preferences in decision making regarding the management of CTS. The questionnaire was structured according the Ottawa Decision Support Framework for the development of a decision aid.

Results Important areas on which patient and hand surgeon interests differed included a preference for nonpainful, nonoperative treatment and confirmation of the diagnosis with electrodiagnostic testing. For patients, the main disadvantage of nonoperative treatment was that it was likely to be only palliative and temporary. Patients preferred, on average, to take the lead in decision making, whereas physicians preferred shared decision making. Patients and physicians agreed on the value of support from family and other physicians in the decision-making process.

Conclusions There were some differences between patient and surgeon priorities and preferences regarding decision making for CTS, particularly the risks and benefits of diagnostic and therapeutic procedures.

Clinical relevance Information that helps inform patients of their options based on current best evidence might help patients understand their own preferences and values, reduce decisional conflict, limit surgeon-to-surgeon variations, and improve health. (*J Hand Surg Am.* 2014; 39(9):1799–1804. Copyright © 2014 by the American Society for Surgery of the Hand. All rights reserved.)

Key words Assessment of needs, carpal tunnel syndrome, shared decision-making.



DECISION AIDS (VIDEOS, WEB SITES, or handouts that contained balanced information about diagnostic and treatment options) can help patients understand their values and preferences and

more fully participate in decision making.¹ The Ottawa Decision Support Framework (ODSF) is an evidence-based, practical theory used to guide the development of decision aids. It uses a 3-step

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TABLE 1. Comparison of the Desirability of the Different Treatment Opportunities Between Patients and Physicians

	Patients		Physician		P
	Mean	SD	Mean	SD	
Orthosis fabrication	2.8	0.13	3.3	0.08	< .01
Corticosteroid injection	1.8	0.09	2.7	0.07	< .01
Surgery	2.5	1.30	3.1	0.88	< .01

One is the most desirable of all treatment options and 5 is the least desirable.

process: measure the needs of patients and their providers, provide decision support tailored to patients' needs, and evaluate the decision-making process and outcomes.¹ The ODSF asserts that unresolved needs will affect decision quality,² which in turn can affect illness behavior, health outcomes, emotions, and resource utilization.^{1,3}

There are many misconceptions about carpal tunnel syndrome (CTS) and its treatment. There are also many areas of debate including the role of electrodiagnostic testing, the best operative technique, and the indications for surgery for mild (normal electrodiagnostic testing) or severe (atrophy, static numbness) disease. A decision aid could inform patients of the best available evidence and ongoing areas of debate in order to limit the effect of both patient and surgeon bias and improve the patient's comfort and participation in the decision.

This study assessed the priorities and preferences of patients and hand surgeons facing decisions about management of CTS. We tested the null hypothesis that there are no differences in priorities and preferences of patients with CTS and hand surgeons.

MATERIAL AND METHODS

Using an institutional review board–approved protocol, we surveyed hand surgeon members of the Science of Variation Group (SOVG) and 79 new patients diagnosed with CTS after the first consultation with one treating physician regarding factors that influence decision making and their preferences about decision aids. The patients were English speaking, 18 years or older, able to fill out the questionnaire, and not pregnant with CTS eventually verified by electrodiagnostic testing presenting between May 2012 and April 2013. The study was described in detail to the patients, and the research assistant obtained informed consent.

One hundred three hand surgeon-members of the SOVG completed the survey (Appendix A, available on the *Journal's* Web site at <http://www.jhandsurg.org>).

The SOVG is an international collaboration of hand surgeons. Incentives, other than acknowledgment as part of the SOVG, were not provided. None of the surgeons were involved in the care of the patients surveyed. After logging into the web site, each surgeon entered identifying demographic and professional information: sex, country or region of practice, years in practice, supervision of trainees, and surgical subspecialty. The surgeons were then presented with an online survey based on the ODSF.^{4,5}

Ninety-one patients were enrolled, but 1 patient was excluded for not being able to navigate the online questionnaire and 11 patients declined participation. The mean age of the 79 patients who completed the study was 55 years (SD = 16; range, 20–90 y), and 29 patients (35%) were men (Appendix B, available on the *Journal's* Web site at <http://www.jhandsurg.org>).

Measurement tools

The survey was based on the ODSF. There is a general framework that measures the following aspects of various treatment options: desirability; advantages and disadvantages; probability of choosing; preferred way to arrive at a final decision; who, if anyone, is usually involved in the decision-making process; what would help to arrive at a final decision; ways to facilitate the decision-making process; the type of information desired; and who should prepare the information. When surveying patients and caregivers with respect to a specific disease, one simply inserts common diagnosis and treatment options into the framework. For instance, for CTS we provided the widely used treatment options of orthosis fabrication, corticosteroid injection, and surgery (Appendix C, available on the *Journal's* Web site at <http://www.jhandsurg.org>).

Statistical analysis

A post hoc power analysis showed that 103 subjects of the SOVG and 79 patients with CTS with the observed effect size of 0.54 provided 93% power to detect a significant difference using a 2-tailed Student *t*-test,

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