

## LETTER TO THE EDITOR

## Estimates of Annual Spinal Cord Stimulator Implant Rises in the United States

As the immediate Past-President of the North American Neuromodulation Society (NANS), I commend Henderson et al. for their leadership in developing the Policy Statement, NANS Training Requirements for Spinal Cord Stimulation Devices: Selection, Implantation, and Follow-up. *Neuromodulation* 2009; 12:171–4.

The continued advancements in the field of neuromodulation are increasingly tempered by a rapidly shifting policy and payment landscape that affects access to neuromodulation therapies. In addition, the growing interest in neuromodulation by physicians representing a variety of specialty areas requires a baseline understanding of the training and experience necessary for spinal cord stimulation (SCS) implantation and patient management. The NANS Policy Statement is an important tool to guide physicians towards training programs in SCS, advancing the level of quality in the field of neuromodulation and helping physicians meet the challenges of this changing landscape. I urge readers to incorporate this document into their plans for continuing medical education in SCS.

However, I also wish to address a statistic cited in the Policy Statement concerning the number of SCS implants performed annually, which requires further clarification. In the document's introductory paragraph, the authors state that "approximately 4,000 SCS systems are implanted each year in the United States. Over the past 15 years, more than 60,000 U.S. patients have undergone SCS surgery, many with very successful results." This figure significantly understates the number of SCS implants actually performed in the USA each year and cumulatively over the years of its successful use to treat neuropathic pain patients.

I gather that this figure derives from the Nationwide Inpatient Sample for the Medicare population. Given the significant and proportionately higher number of implants performed in an outpatient setting, I recommend that the authors consider the following additional data.

According to the Medicare Physician/Supplier Procedure Summary File (PSPSF) data base, 11,818 SCS implants (CPT 63685) were performed in 2007 for Medicare beneficiaries, with 72% of these performed in an outpatient setting (8509) and 28% performed in the hospital inpatient setting (3309). The authors' figure of 4000 SCS implants annually approximates the 3309 Medicare inpatient implants in 2007 escalated by likely volume growth from 2007 to 2008.

In order to estimate more accurately the total number of annual SCS implants for both Medicare and non-Medicare populations, the Healthcare Cost & Utilization Project (HCUP), sponsored by the US Agency for Healthcare Research & Quality (AHRQ), estimates that Medicare accounts for approximately 43% of SCS implants. Using these figures, I estimate that a total of 27,484 SCS implants occurred in 2007 across all major payer types. Table 1, below, summarizes these estimated figures.

Within a broader policy context, the Policy Statement can serve to raise awareness of efforts in the field of neuromodulation to ensure quality and provide policymakers reliable data on the incidence of SCS. Henderson et al. have provided an invaluable service in demonstrating the former and positioning us to address the latter.

Accordingly, I encourage the authors and NANS to further review and amend its estimate of SCS procedures

**TABLE 1.** Estimated 2007 US SCS Implants

	Inpatient	Outpatient	Total
Medicare	3309	8,509	11,818
Non-Medicare	4387	11,279	15,666
US total	7696	19,788	27,484

SCS, spinal cord stimulation.

performed in the USA in its online and future print versions of the Policy Statement. While the revised estimate is substantially larger than that reported by Henderson et al., it more accurately represents the annual number of implants occurring in the USA.

Finally, it is important to emphasize in any discussion about coverage and access that these numbers do not tell the whole story. If anything, many more patients who could benefit from this important therapy are unaware of it or, in some notable instances such as the Washington State workers' compensation population, denied access to it. As Richard North, MD and others have clearly demonstrated (1–4), SCS is not only therapeutically beneficial. With proper patient selection, implantation and management, SCS is a cost-effective therapy that yields considerable value to payers and patients alike.

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