Practice and payment trends in neurology in 2012

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Summary

This article describes practice and payment trends among neurologists. Data from the 2012 Practice and Payment Trends survey were compared to results from the 2010 Medical Economics survey. Both surveys were sent to a random sample of 1,000 US practicing neurologists, with a response rate of 32%. Since 2010, there has been an 8% increase in the percent of neurologists working in academic medical centers. Nearly half of neurologists reported working for a hospital-affiliated practice. Wait times have increased 40% for a new patient visit. Only 19% of neurologists indicated procedures as the primary focus of their practice. New delivery models have not yet gained traction with neurologists but the majority (>80%) of neurologists currently use electronic health records in their practice.

Although changes in the health care practice landscape have been anticipated for over a decade,¹ practicing physicians experience these as chaotic due at least in part to the fact that health care reforms are difficult to implement² and programs designed to create change are perceived to be ineffective.^{3,4} Fee schedule reductions and rising overhead also contribute to an increasingly difficult practice environment that threatens the viability of both academic and private practices of all sizes.

Prior to this article, neurology practice trends were evaluated to predict the future needs and preferences of American Academy of Neurology (AAN) members.^{5,6} These previous evaluations merely mentioned looming changes in the health care landscape but did not tie trends into a larger analysis of health care system reforms.

In this article, we report how trends in neurology practice changed in recent years and aim to determine whether trends in neurology practice follow trends observable on a larger scale in the entire health care system. We also aim to identify what can be expected for neurology practices in the years to come.

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The number of neurologists in solo practice is currently the lowest recorded since 1998 and academic medical centers now employ the highest percentage of neurologists overall.

METHODS

Sample

A random sample of 1,000 practicing neurologists was selected from the AAN membership database. For the purpose of the survey, practicing neurologists were defined as neurologists with addresses in the United States with an AAN membership category of Associate, Active, and Fellow. All AAN members who received 3 AAN surveys in the past 3 years, were retired, were selected for a concurrent AAN survey, or participated in the development and review of the survey instrument were excluded from participation. During data collection, 11 members were removed from the survey sample due to invalid contact information, resulting in a final sample size of 989 neurologists.

Survey instrument

The 2012 Practice and Payment Trends in Neurology Survey instrument was a revision of the 2010 Medical Economics Survey, originally drafted by AAN staff and members of the Medical Economics and Management Committee, a group of experts charged with improving the economic and regulatory environment for AAN members through education and advocacy. The original instrument was refined to include questions about innovations in health care delivery such as contracts with Accountable Care Organizations (ACOs). The majority of questions, however, were kept the same to assure that practice and payment characteristics could be trended over time. For the same reason, questions related to demographic and general practice information were adapted from the previous AAN Member Census and Practice Profile Form. The 2012 survey was reviewed by the AAN Member Research Subcommittee and revised for greater clarity based on received comments. A copy of the survey instrument is included in the electronic attachment (appendix e-1 at neurology.org/cp).

Data collection

The survey was sent via both postal or fax and electronic mail to the entire sample on September 4, 2012. The e-mail contained a link to the online version of the survey. Three reminders were sent to nonrespondents 2, 4, and 8 weeks after the initial distribution. Data collection closed on November 6, 2012.

Statistical analysis

SPSS version 20 was used to conduct all analyses. Pearson's χ^2 was used for all categorical data, including practice setting, sex, membership type, US citizenship status, and medical school location. An independent-samples t test was used to calculate the statistical significance for age and wait times using a 95% confidence interval.

The AAN has on file data from 1991 to 2009; however, these data were evaluated separately from the 2010 to 2012 data because the prior data were collected via the AAN census. The census definition of practicing neurologists was different in that "retired neurologists" were not excluded. The 1991–2009 data are only used as reference data and are not included in statistical analysis.

RESULTS

Response rate and demographic information

Out of 989 practicing US neurologists who received the survey, 318 submitted a response, giving a response rate of 32.2% (318/989) with the margin of error of $\pm 5.4\%$ for all respondents

Supplemental Data

neurology.org/cp

Table 1 Practice setting for US neurologists 2010–2012^a

Survey year	Solo practice	Neurology group	Academic medical center group (2012)/ university-based group (2010)	Multispecialty group	Other public/ private hospital or clinic	Government hospital or clinic	Staff-model health maintenance organization
2012	23.3↓	20.8↓	26.2↑	10.7↓	8.8	5.0	1.6
2010	28.2	22.7	18.4	14.6	7.4	4.2	1.3

^aValues are percentages.

at a 95% confidence level. The response rate for the previous 2010 Medical Economics Issues survey was almost identical at 32.1% (312/973), and the sample is representative of the population. Demographic characteristics are captured in table e-1.

The indicated practice focus of respondents vs nonrespondents was also similar. General neurology was indicated as practice focus by over half of respondents and nonrespondents alike. EMG, epilepsy, and headache were the next most frequently cited practice areas. More than half (53%) of respondents have been in practice for at least 15 years. Only a small percent (7%) of respondents are planning to retire within 4 years.

Practice setting

Changes in practice setting trends for US neurologists 2010–2012 are captured in table 1. The number of neurologists in solo practice is currently the lowest recorded since 1998 and academic medical centers now employ the highest percentage of neurologists overall. Although previous analysis of survey findings from 1991 to 2009 reported little change in neurology practice setting over time,⁶ this survey identifies changes in the period between 2010 and 2012. For example, there was an 8% increase in the percent of neurologists working in an academic medical center from 2010 to 2012. There exists a 2% decrease in the number of neurologists working in a neurology private group setting, and a 5% decrease in the percent of neurologists working in a solo private practice.

There are multiple hospital-affiliated practice arrangements. From provided answer choices, nearly half of neurologists reported working for a hospital-affiliated practice, and the plurality of those who work in a hospital-affiliated practice are employed directly by the hospital. Other arrangements include a range of options such as contracting with independent physicians for services, hospital-owned groups employing physicians, or gaining access to patients and receiving laboratory privileges without compensation (figure e-1).

While the majority of neurologists take call at a hospital, most are not paid for this service, consistent with the 2010 survey results. Neurologists are not at all likely to work under locums tenens arrangements or in concierge practices.

Practice characteristics

Patients have to wait longer to see a neurologist now than in 2010 (table 2). Wait times have increased a striking 40% for a new patient visit.

Neurologists see more private insured patients than Medicare patients, but Medicare is more common than Medicaid, most likely due to reimbursement patterns (figure e-2). Although most respondents have not reduced (or are considered reducing) the number of patients evaluated, they are more likely to reduce the number of Medicaid patients compared to Medicare, privately insured, and self-pay patients. The top scenarios under which neurologists report that they would stop seeing new Medicare patients are as follows: 1) if Medicare revenue falls by more than 10%, 2) if there are additional regulatory hurdles, 3) if Congress does not fix the sustainable growth rate system, and 4) if there is increased auditing activity.

Neurology is considered a nonprocedural specialty. Only 19% of neurologists indicated procedures as the primary focus of their practice. Most neurologists see their patients on an ongoing basis with a small exception for patients who self-pay for their services (figure 1).

Table 2 Wait time in days for a new and a follow-up appointment

	Survey year	Mean (SD) days	Median days	p Value
Wait time for a new appointment, d	2012	34.8 (37)↑	21↑	0.02 ^a
	2010	28.1 (31)	15	
Wait time for a follow-up appointment, d	2012	30.0 (36)↑	15↑	0.11 ^a
	2010	25.6 (31)	14	

^aIndependent-samples t test calculated for the median values.

Changes in practice

New delivery models, such as patient-centered medical homes (PCMHs) (PCMH is a coordinated care delivery model designed to meet the needs of patients with chronic conditions) and ACOs, have not yet gained traction with neurologists. The majority (72%) of neurologists do not currently comanage their patients with primary care physicians organized into PCMHs and only 12% of respondents said that they currently contract with an ACO. Few (6%) said that they plan to contract with an ACO in the next 12 months and many (43%) were unsure.

Almost half (42%) of neurology practices use nonphysician extenders (NPEs). Groups based in academic medical centers have been most likely to employ NPEs; solo practices have been least likely to do so. Figure e-3 shows that nurse practitioners are the NPEs most often employed in neurology practices.

The number of neurology practices that have faced Medicare and Medicaid audits is rising. Private insurer audits have remained stable over the last 3 years (table 3).

Electronic health records

The vast majority (>80%) of neurologists currently use electronic health records (EHRs) in their practice, up 20% from 2010. Almost all staff-model health maintenance organizations (HMOs), multispecialty private groups, academic medical center–based groups, and government hospital and clinics use EHRs. Solo private practices are least likely to implement EHRs (figure e-4).

Nearly half of respondents received technology support or training from their affiliated institution to implement the EHR system. The support was received most commonly in academic medical center–based groups, staff-model HMOs, and those in other public or private hospitals or clinic settings. The majority (73%) of neurology private groups and 68% of solo practices did not receive any support to install an EHR system.

Figure 1 Mean percentage of patients seen on ongoing basis vs one-time consultation by type of payment

Percent may not add up to 100 due to rounding.

Table 3 Types of audit performed in the last 12 months^a

Survey year	Medicaid Recovery Audit Program (recovery audit contractors)	Medicare Recovery Audit Program	Private insurer	Other
2012	18↑	44↑	58	12
2010	11	18	59	25

^aValues are percentages.

DISCUSSION

Data from this survey clearly indicate a workforce shift of neurologists toward large group-based practices and away from small and solo practices. Similar findings exist in other specialties.⁷ This employment model is increasingly attractive because it may offer more economic security, a more desirable work–life balance, and temporary protections from the current system reforms.⁸

The current EHR-related reforms often require high capital investments, likely explaining the difference in use of EHRs. This finding is also consistent with the Physician Foundation's Survey (Physician Foundation's Survey examines professional morale, practice patterns, career plans, and health care perspectives of physicians, aggregated by age, sex, primary care/specialists, and practice owners/employees; the survey is conducted on behalf of the Physician Foundation by Merritt Hawkins), where the majority of physicians who have not implemented EHRs cited financial burden as the principal reason.⁷ Small and solo practices cannot absorb the higher overhead for EHR installation, whereas academic medical centers and large groups enjoy economies of scale.

Solo practitioners are least likely to work with NPEs. It is possible that smaller groups do not require extenders due to shorter wait times than larger practices. Larger neurology groups also have subspecialties, including epilepsy and stroke, that increasingly lend themselves toward the use of affiliate providers more than small groups.

Physicians might feel pressure to align with hospitals in order to participate in new delivery models. Some neurologists are open to contracting with ACOs, but the majority is either uninterested or unconvinced why contracting with an ACO would benefit their practice. A similar sentiment is shared toward the PCMH model. Both sentiments are trends identified in other physician groups.⁷

Data from the survey can be generalized to US neurologists as the error rate was slightly over 5%, a result expected for this sample size and response rate. Limitations may include sampling error, which could be the reason that there is a statistically significant difference in the response rates by AAN membership type. Nonresponse errors may contribute to some of the error in our survey. Measurement error is theoretically mitigated by trend comparison to the 2010 survey, which was done in the same fashion. Coverage error is also addressed as the survey sample is representative of the underlying population being measured.

Neurologists face similar practice trends as primary care physicians because evaluation and management services are the primary focus of their practice. Like primary care physicians, many neurologists coordinate care for their patients on an ongoing basis. Over the years, neurologists have reported increasing wait times for appointments, suggestive of a looming shortage in the neurology workforce, a trend also apparent in primary care. While recent policy incentives directly supporting primary care have been beneficial (e.g., 10% increase in Medicare payments, parity of Medicaid payment to Medicare rates), policies supporting neurology practice have not followed this trend. This is surprising given the prevalence of the complex diseases neurologists manage for their patients and families.⁹

To the contrary, neurologists have recently been subjected to an estimated 7% reduction in total reimbursement due to drastic cuts to EMG and nerve conduction studies, some of the limited number of procedures that extend their diagnostic capability. This reduction is much greater (40%–65%) for those neurologists whose practices concentrate on diagnostic procedures. Consistent with our expectations, comments submitted by surveyed participants show

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that neurologists are less positive about health care system reforms and genuinely concerned about the future of neurology.

Taken together, the future trends in neurology practice can be analyzed as foreseeable events. Lack of parity in payment for Medicaid services, lack of a cognitive care bonus, decreasing reimbursement for procedural services, accompanied by increasing scrutiny over medical fraud for which practices have to financially prepare are prominent factors that threaten financial viability of all neurology practices.

The overwhelming majority of neurologists see Medicare patients, but continued threats to the conversion factor, in absence of a permanent fix to the sustainable growth rate formula, may limit access in the future to Medicare beneficiaries. The access problem will worsen as the increasing prevalence of neurologic conditions confronts a limited neurology workforce.¹⁰ With the growing prevalence of new delivery models, neurologists will be forced to assume more responsibility for the population of patients they treat, and their reimbursement levels will rely on measures of performance. To mitigate these risks, more neurology practices will seek affiliations with neighboring hospitals as well as multispecialty or academic medical center–based groups. Neurologists in solo practice will remain relevant by understanding their individual cost and quality data and articulating their value to policymakers and payers.

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