
Research Submission

A Survey of Neurologists on Self-treatment and Treatment of Their Families

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Background.—Although neurologists commonly self-treat for migraine and other conditions, little is known about the patterns of self-treatment by physicians in the United States.

Objectives.—The aim was to obtain information about neurologist's self-treatment and treatment of family members and their attitudes about self-treatment by other physicians.

Methods.—A survey was performed among neurologists attending the Texas Neurological Society's Winter Conference using a questionnaire about self-treatment and treatment of family members during the prior 12 months and attitudes about self-treatment by other physicians.

Results.—Among 186 physicians invited to participate, the response rate was 48%. Although 76% reported having primary care physicians, neurologists reported the following behaviors: 38% self-diagnosed or self-treated medical conditions including migraine in 25%; 56% started themselves on prescription medications including 21% who used triptans and 15% who used migraine preventive medications; 33% ordered blood tests on themselves; and 20% ordered imaging studies on themselves. Sixty percent reported missing no work due to illness, 87% missed 2 days or less, and 99% reported missing 1 week or less. Eighty percent reported treating their family members for acute minor illnesses and 33% for chronic conditions. The following percentage of participants reported that they would be likely to self-diagnose and self-treat the following hypothetical illnesses: 70%, migraines which were not severe; 19%, new onset frequent headaches; and 48%, chronic daily headaches. The following percentage of participants agreed or strongly agreed that the following behaviors were acceptable for physicians: 94%, self-treat acute minor illnesses; 37%, self-treat chronic conditions; 42%, order blood test for diagnostic purposes; 40%, order imaging studies for diagnostic purposes; 87%, treat family members for acute minor conditions; and 36%, treat family members for chronic conditions.

Conclusions.—Neurologists commonly treat themselves and family members.

Key words: migraine, treatment of physician's family members, self-prescribing, self-treatment, physician, neurologist

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Neurologists often advise their patients on the management of neurologic diseases. Relatively little is known about how physicians manage their own illnesses with or without seeking assistance from a physician. In a U.S. survey, neurologists had a much higher prevalence of migraine than the general population.¹ In addition, 63.3% of female and 80.4% of male neurologists reported never missing work due to migraines.^{2,3} Fifty-six percent of female and 49% of male neurologists reported self-prescribing for migraine.^{2,3}

SUBJECTS AND METHODS

To expand our knowledge on patterns of self-treatment of headache by neurologists and to provide a context for interpreting these data, we surveyed a convenience sample of neurologists regarding their self-treatment behavior, attitudes, and beliefs with respect to headache and other conditions. We also obtained information about neurologist's treatment of family members and their attitudes about self-treatment by other physicians.

On February 25, 2005, surveys were provided to all physician registrants along with their syllabus and other materials at the Texas Neurological Society's Winter Conference in Austin, TX, USA. Only neurologists were included in the survey.

The survey contains 19 questions which include asking about the following: demographics; self-treatment; self-ordering of tests; a general assessment of their health; working when ill and days of work missed; specific medical conditions self-diagnosed and/or treated; negative experiences with self-treatment; treatment of family members; whether they would most likely "self-diagnose and treat," "informally consult," or "formally consult a colleague" for a list of 15 hypothetical illnesses; and respond using a 5-point Likert scale to 21 statements about their attitudes toward their own and other physicians' self-treatment, health, healthcare, and treatment of family members.

RESULTS

Of the 186 surveys, 90 were returned for a response rate of 48%. Table 1 provides age and gender of the participants. Four responses could not be used because the physicians were not neurologists.

Data were also collected on retirement status, specialty, subspecialty, and years in practice. Retirement status was unknown for 3, retired for 3, temporarily not practicing for 2, and currently practicing for 78. Seventy-seven respondents were adult neurologists, 7 were pediatric neurologists, and 2 were both adult and pediatric neurologists. Fifteen identified themselves as having a subspecialty—clinical neurophysiology, epilepsy, movement disorders (2), multiple sclerosis, neuromuscular disease (3), neurophysiology (2), pain treatment, psychiatry (2), and rehabilitation (2).

Table 1.—Age/Sex Distribution of Respondents

Age (years)	Male	Female	Total
30 to 39	3	2	5
40 to 49	18	8	26
50 to 59	26	7	33
60 to 69	17	1	18
70 to 75	4	0	4
Total	68 (79%)	18 (21%)	86
Mean age (SD)	54.3 (9.9)	48.5 (7.8)	53.1 (9.8)

The average number of years in practice for the respondents was 20.73 (SD = 10.98).

Perceived Health.—The following percentages of respondents assessed their health as follows: 65%, good; 21%, fairly good; 12%, average; and 2%, rather poor.

Self-treatment of Diseases.—Thirty-two respondents (38%) reported that they self-diagnosed or self-treated any medical conditions without consulting any other physician during the first 12 months. The conditions and number of respondents are as follows: allergies, 5; back pain, 4; bronchitis, 2; hyperlipidemia, 2; migraine, 8; sinusitis, 4; upper respiratory infection, 4; and other, 23. Only 10% reported ever having any negative experiences with self-treatment.

Prescription Medications.—Fifty-six percent of the respondents reported that they had initiated their own prescription medication over the past 12 months (Table 2). The most frequently reported self-initiated prescriptions were for nonsteroidal anti-inflammatory medications (24), allergy medications (13), proton pump inhibitors (13), statins (10), triptans (10), antihypertensives (8), and migraine preventives (7).

Blood Tests.—Thirty-three percent reported that they had ordered blood tests on themselves in the last 12 months. The following percentage of respondents obtained the tests for these indications: 14%, diagnostic purposes for new symptoms or signs; 50%, monitoring (eg, lipids if on a statin); and 93%, screening (eg, lipid profile, protein-specific antigen, or complete blood count).

Imaging Studies.—Seventeen (20%) respondents reported that they had ordered imaging studies on

Table 2.—Self-Prescribed Prescription Medication

During the last 12 months, have you self-prescribed any prescription medications that another doctor originally prescribed?	44 (51%)
Yes	
No	42 (49%)
During the last 12 months, have you self-prescribed any prescription medications that you self-initiated?	48 (56%)
Yes	
No	38 (44%)
Which ones?	
Allergy medication	13
Antidepressant (for depression)	6
Antihypertensive	8
Asthma medication	5
Benzodiazepine (for anxiety)	1
Butalbital combination for migraine	0
Diabetes medication	3
Hypnotic for sleep	2
Migraine preventative	7
Muscle relaxant	3
Narcotic for pain	1
NSAID	24
PDE-5 (eg, Viagra)	4
Proton pump inhibitor	13
Statin	10
Triptan	10
Other	11

themselves in the last 12 months. The following percentage of respondents obtained the studies for these indications: 53%, diagnostic for new symptoms or signs; 18%, monitoring of a chronic condition; and 35%, screening (eg, chest X-ray, coronary CT, etc.). The following types and number of studies were obtained: CT, 1; MRI, 8; plain X-ray, 8; and other, 3.

Impact of Health on Work.—Sixty percent of the respondents reported missing no work due to illness during the first 12 months, 87% missed 2 days or less, 99% missed a week or less, and 1 respondent missed 2 weeks. Seventy-eight percent reported that in the first 12 months they worked when ill. Eighty-nine percent of them thought that their employees would have missed work due to illness.

Treatment of Family Members.—During the last 12 months, 80% reported treating their family members for acute minor illnesses while 33% reported treating family members for chronic conditions.

Medical Consultations.—Seventy-six percent reported having a personal primary care physician (PCP)

Table 3.—Treatment Path Respondents Would Most Likely Follow for Hypothetical Illnesses

	Self-Diagnose and Treat	Informal Consult	Formal Consult
Acute lumbar radiculopathy	29 (35%)	15 (18%)	39 (47%)
Bell's palsy	37 (44%)	16 (19%)	31 (37%)
Carpal tunnel syndrome	56 (67%)	7 (8%)	21 (25%)
Chronic daily headaches	40 (48%)	12 (15%)	31 (37%)
Chronic low back pain	43 (51%)	16 (19%)	26 (30%)
Definite multiple sclerosis	2 (2%)	1 (1%)	81 (97%)
Possible multiple sclerosis	4 (5%)	7 (8%)	73 (87%)
Migraine (not severe, <2 days per month)	59 (70%)	11 (13%)	14 (17%)
Migraine (severe, ≤4 days per month)	35 (42%)	10 (12%)	38 (46%)
Mild anxiety or depression	39 (48%)	15 (18%)	28 (34%)
Mild hypertension	23 (27%)	12 (14%)	51 (59%)
Mild-moderate hyperlipidemia	16 (19%)	13 (15%)	57 (66%)
Moderate to severe anxiety or depression	7 (8%)	10 (12%)	67 (80%)
New onset frequent headaches	16 (19%)	15 (18%)	53 (63%)
Transient ischemic attack	3 (3%)	4 (5%)	77 (92%)

Denominators vary due to missing data, n = 81 to 86.

and 88% of those with a PCP saw theirs during the last 12 months.

Seeking Treatment.—Table 3 describes that treatment path respondents would seek for hypothetical illnesses or what they did if they actually had the illness. The vast majority of the respondents reported that they would be more likely to seek formal consultations from a colleague than to self-diagnose and treat transient ischemic attack (TIA) and both possible and definite multiple sclerosis. However, they would be more likely to self-diagnose and treat migraines (not severe, <2 days per month) and carpal tunnel syndrome.

Attitudes.—Table 4 shows attitudes regarding self-treatment, behavior in seeking formal care, and personal experiences of their own healthcare. Most considered treatment of acute minor illnesses for self and family acceptable. Over a third of the respondents thought that it was acceptable to treat self and family for chronic conditions and 60% thought that it was

Table 4.—Participants Who “Agree” or “Strongly Agree” to Attitudes on Seeking Healthcare

It is acceptable for physicians to:	
Self-treat acute minor illnesses	78 (94%)
Self-treat chronic conditions	31 (37%)
Order blood test on self for monitoring purposes	50 (60%)
Order blood test on self for diagnostic purposes	35 (42%)
Order blood test on self for screening purposes	54 (65%)
Order imaging tests on self for diagnostic purposes	33 (40%)
Self-prescribe antidepressants for depression	17 (20%)
Self-prescribe narcotics for pain	8 (10%)
Self-prescribe hypnotics for sleep	15 (18%)
Treat family members for acute minor conditions	73 (87%)
Treat family members for chronic conditions	30 (36%)
Opinions on doctors' behavior in seeking healthcare	
Doctors make few errors when treating self	21 (25%)
Doctors are more likely to work when sick	78 (93%)
Doctors' symptoms are under-investigated	49 (58%)
Doctors' symptoms are over-investigated	13 (15%)
Attitudes regarding own healthcare and practice	
When I see another physician, I prefer to be treated like a patient	63 (75%)
When I see another physician, I prefer to be treated like a doctor	22 (26%)
If I consult another physician, I am embarrassed if the problem turns out to be minor	16 (19%)
I am satisfied with my own healthcare	67 (81%)
I am usually honored and pleased to be a physician for my colleagues	76 (90%)
Physician's families, when patients, are often overly demanding and fail to follow recommendations	20 (24%)

Denominators vary because of missing data, n = 83 to 86.

acceptable to order blood tests on oneself for monitoring purposes. Only 10% believed that it was acceptable to self-prescribe narcotics for pain.

COMMENTS

The response rate was 48%, which is average for physician surveys and comparable to a similar survey.^{4,5} Our response rate may have even been a bit higher since 25 of the meeting registrants were speakers, many of whom gave their presentations and immediately left perhaps without looking through the meeting materials. This study may have limited generalizability because the respondents were self-selected and we have no information on nonrespondents.

During the prior 12 months, 25% of the neurologist respondents reported self-diagnosing and/or

self-treating migraine without consulting any other physician. This reflects a high rate of migraine prevalence in neurologists consistent with a prior survey.¹ Of those who reported self-prescribing prescription medications that they self-initiated during the prior 12 months, 21% used triptans and 15% used migraine preventive medications. When asked about hypothetical illnesses (Table 3), <50% of respondents would seek a formal consultation for migraine (not severe, <2 days per month; and severe, ≤4 days per month) or for chronic daily headaches. In contrast, 63% endorse obtaining a formal consultation for new onset frequent headaches. Similarly, for potentially more serious neurological disorders, the vast majority would seek a formal consultation for possible or definite multiple sclerosis or transient ischemic attacks.

Self-treatment of migraine may be reasonable when the physician can maintain objectivity in treatment. For those with frequent headaches, there is a risk of medication overuse headaches for the busy neurologist who does not keep a headache diary and document medication use and has a sample closet replete with triptans. For those for whom triptans do not work, have contraindications, or who need rescue medication, caution is certainly advisable about self-prescribing narcotics or butalbital combinations. As discussed below, physicians should certainly know their state guidelines. Preventive medication, even when appropriate, may seem less than ideal to someone all too familiar with tolerability and efficacy shortcomings. If there is any doubt or concern, even if you are one of the approximately 75% of headache subspecialists with migraine, see a colleague!

Although there are no studies, as migraine is often familial, many neurologists have children with migraine; spouses are often migraineurs as well. There is similarly no information on prevalence rates among neurologists' parents or siblings who may also be treated. The same concern about treating family members without keeping formal records and headache diaries arises, which may lead to substandard care. Documentation is particularly critical if controlled medications are prescribed. When a colleague treats a family member for migraine or other neurological

disorder, it can be particularly difficult not to get involved and provide a second opinion. Ideally, medical care is left to others. However, at times, improper care is provided so, realistically, monitoring the treatment of family members is reasonable.

Other surveys of physician self-treatment have been performed in the following countries among different types of physicians: Australasia (urologists); Australia (general practitioners, various specialties); Finland (various specialties); Ireland (general practitioners and hospital consultants); New Zealand (various specialties and also asking about treatment of families); Norway (various specialties; various specialties); Spain (various specialties); United Kingdom (general practitioners; general practitioners and hospital consultants; senior house officers; general practitioners and consultants and also asking about treatment of families; various specialties); and the United States (various specialties; internal medicine residents).⁶⁻²² There have also been surveys of physicians treating family members and specifically treating wives and children.²³⁻²⁵ Although one study of 3313 Finnish physicians included 47 neurologists, no study has specifically provided detailed information about neurologists' self-treatment or any information about their treatment of family members.⁹

Fifty-six percent of our respondents reported self-prescribing prescription medications that they had self-initiated in the previous year. This is somewhat lower when compared to other studies reporting self-prescription rates of 61% to 84%.¹⁵

This survey found neurologists missing relatively little, if any, work due to illness which has been similarly reported for other specialties.^{9,18}

Treatment of family members was also common with 80% reported treating for acute minor illnesses while 33% reported treating for chronic conditions. This is not surprising from reports in the literature. In a study of 465 physician respondents on the staff of a community hospital, 83% had prescribed medication for a family member, 80% had diagnosed medical illnesses, 72% had performed physical examinations, 15% had acted as a family member's primary attending physician in the hospital, and 9% had operated on a family member.²³ Another survey found that most

physicians treat their children with 65% prescribing medications.²⁵

Most neurologists concurred that it was acceptable for physicians to treat themselves and family members for acute conditions but only a minority agreed with self-treatment for chronic conditions. Australian general practitioners and specialists had similar opinions about physician self-treatment as well as about other attitudes and opinions reported in Table 4.⁵ Some respondents had concerns about treating other physicians or physician's family members. The neurologist Schneck provides suggestions for care of doctors and their families.²⁶

Twenty-five percent of respondents believe that doctors make few errors when treating themselves. However, lack of objectivity and treating outside of one's specialty can lead to errors. Spiro and Mandell discuss the difficulty physicians have when becoming patients and also suggest a major drawback of self-treatment: "More than most people, sick doctors deny that they are sick. They may worry privately about their health, but the unconscious pact with the Creator that many physicians have made—we will take care of the sick and You will guarantee us good health—makes it hard for them to realize that they, too, are mortal. The hypochondriasis of medical school contributes to easy denial, because when physicians fear one disease after another and find them all phantom, they come to believe in their own invulnerability."²⁷ Although most neurologists responded that they prefer to be treated like a patient rather than a doctor when they see another physician, we suspect that the actual answer is a VIP patient. We suspect that few neurologists would actually prefer standard waiting times for appointments, testing, results, surgery, etc., as for any other patient.

Regulations governing self-treatment and treatment of family members may vary from state to state in the United States. Physicians should certainly be quite familiar with the guidelines with which they practice. In Texas, for example, when physicians treat themselves and family members, the Texas Medical Board expects documentation of the treatment in a medical record just as for any other patient (personal communication with Assistant General Counsel Robert

Simpson, April, 2006). The only explicit reference to this issue in the disciplinary guidelines of the Texas Medical Board is contained in rule § 190.8:

“When substantiated by credible evidence, the following acts, practices, and conduct are considered to be violations of the [Medical Practice] Act. The following shall not be considered an exhaustive or exclusive listing.

(M) inappropriate prescription of dangerous drugs or controlled substances to oneself, family members, or others in which there is a close personal relationship that would include the following:

- (i) prescribing or administering dangerous drugs or controlled substances without taking an adequate history, performing a proper physical examination, and creating and maintaining adequate records; and
- (ii) prescribing controlled substances in the absence of immediate need. ‘Immediate need’ shall be considered no more than 72 hours.”²⁸

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Conflict of Interest: None

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