



The Physician Assistant as Headache Specialist: From Concept to Reality

Like many primary care clinicians, I have found that the most enjoyable parts of my work have never included caring for headache. I have always dreaded confrontations with migraineurs (or pretend migraineurs) over parenteral meperidine, which many headache patients request when they arrive shortly before our clinic closes in the evening. In the past, I have asked nurses to divert these patients to other clinicians.

In 1996, I was asked to review an article called, "Headache: acute, benign and desperate," for the *Journal of the American Academy of Physician Assistants*.¹ Glancing at the title, I was initially less than enthusiastic, but I changed my mind after reading the article. Claiming that nonnarcotic parenteral treatments other than meperidine were more effective for these patients, the author reported a landmark study showing that meperidine is the least effective drug for reversing severe, nonmalignant headache in the urgent care setting.² After I began following recommendations made by the author for use of intravenous metoclopramide and dihydroergotamine, I was pleasantly surprised at the success of this protocol. This success gave me confidence that I could successfully treat patients with persistent, severe headaches.

Headache Management at KPNW: Role of Physician Assistants

Coincidentally, I was also asked to review a headache guideline being developed for the Kaiser Permanente Northwest (KPNW) Division's Clinical Guidelines Program. Although not an expert in headache, I raised a few questions with the workgroup. Several months later, the Chief of the Neurology Department requested my help in managing chronic headache among Kaiser Foundation Hospitals/Health Plan (KFH/HP) members in the Salem area, explaining that evaluating and treating headaches occupied 30% of our neurologists' time.

KPNW cares for more than 400,000 members, 47,000 of whom live in the Primary Care Service Area served by our three Salem Medical Offices. The Neurology Department was understaffed and unable to provide timely consultation for patients referred by the Primary Care Department's 38 full-time employees. The proposed new clinical role for me sounded interesting, but I felt inadequately prepared to take on this part-time assignment. For that reason, I requested—and received—some specific training and support including the following:

- An academic neurologist assigned to guide me through my study of a new discipline, direct me to latest appropriate medical literature, and help refine my skills in doing physical examinations and obtaining medical histories;

- A neurologist to perform chart reviews on request;
- A neurologist to provide backup support during any hours I worked.

During the project's first three months, I sent copies of all my consultations to the neurologist, who then provided helpful suggestions and other feedback. A department member was always available by pager, so this method of communication proved effective for urgent communication. I also developed an excellent relationship with the neurologist who supervised my academic learning.

Oregon law requires that a "practice description" be filed with the State Board of Medical Examiners to delineate the responsibilities of the physician assistant (PA) as well as the relation between these responsibilities and those of the supervising physician. Most PAs are located in the same facility as the supervising physician, although exceptions are numerous. In my case, supervision is provided by a neurologist who works at my clinic one day each week and who is otherwise available by telephone. This working relationship has functioned well for us, and no problems have arisen regarding access or supervision.

The Salem Area Medical Director added his endorsement to our announcement that the Departments of Neurology and Family Practice would be directing referrals for chronic headache to me. This change was expected to financially benefit both the Neurology Department and the Salem Primary Care Service Area, given that the cost of specialty referral is eventually borne by the Primary Care Department, and neurologists are compensated at slightly more than twice the rate for a senior physician assistant. (Personal communication, Marci Clark, Director, Professional Resources, KPNW.)

At first, few Salem clinicians referred patients directly to me, and the neurologists seemed to forget I was available. However, after six months, that changed. A triage system was implemented for scheduling patients referred to Neurology from the Salem area, and primary care clinicians in Salem began to identify me as the local "headache specialist." Today, most referrals from Primary Care come directly to me. Fifteen months after our announcement, neurologists are rarely needed to perform consultations for Salem patients with headache, and virtually all patients referred to me are seen within two weeks. This practice meets the guidelines for specialty care.

How does my headache practice differ from that of the neurologists? All of us require an hour for initial consultation. We do minimal follow-up, returning patients to their primary care providers as soon as practical. Other comparisons could provide meaningful information for

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ERIC SCHUMAN, a physician assistant since 1975, joined Kaiser Permanente Northwest in 1990. He works in the Department of Family Practice and the Immune Deficiency Clinic at offices in Salem and Portland, Oregon.

the future. How do our prescribing patterns compare? Are laboratory and imaging utilization similar? Do our patients require similar numbers of follow-up visits? Are our member satisfaction scores similar? How do these parameters compare among neurologists? These questions may merit research which could enhance the role of the PA who specializes in headache management.

Special Challenges, Special Rewards

Each week, I generally see two to four new patients and several patients for follow-up visits. My patients have the usual array of rebound, migraine, and tension headaches (See Table 1). Some have a mixed headache disorder. Identifying headache triggers as well as the substances causing rebound are a focus of the medical history, and the most important piece of many treatment plans includes elimination of triggers and rebounding as well as prescription of prophylactic agents.

Headache patients addicted to narcotics present a formidable challenge. My experience is that most are unwilling to reduce reliance on narcotics and so are

seldom helped by specialty referral—unless, of course, they decide to make a major lifestyle change. Prescription of prophylactic agents is usually futile unless patients first give up substances which cause rebound phenomena.³ Most of these patients who have been referred to me decline consultation with substance abuse therapists. Many require case management because of frequent visits, inappropriate Emergency Department utilization, “clinician shopping,” and polypharmacy.

Patients who have chronic headache and have seen multiple providers over many years may have used dozens of medications. Taking a medical history from such patients takes at least 30 minutes and presents a challenge, especially if prior medical records are unavailable. Unfortunately, few primary care clinicians can spend that much time with a patient, much less spend the additional 30 minutes required for performing the physical examination, developing a treatment plan, delivering patient education, and creating all appropriate documentation. Accordingly, I believe that innovative scheduling techniques will be needed to accommodate those patients who require more time per visit.

For patients with status migrainosus, I use intensive parenteral therapy available at our Nurse Treatment Room—serial intravenous dihydroergotamine treatments provided on an inpatient or outpatient basis for three to five days.⁴ I have been disappointed, however, at the KFH/HP’s denial of coverage for bio-feedback services; this migraine treatment was developed in the 1970s at The Menninger Clinic in Kansas and is widely used today in headache centers throughout the United States.^{5,6}

My year as a headache specialist has been gratifying for many reasons. The medical literature about headache defines successful treatment of chronic headache as 50% reduction in severity and frequency of pain.⁷ If able to tolerate the first prophylactic medication (usually a tricyclic antidepressant or beta blocker), most patients I have seen exceed this benchmark by the time of their six-week follow-up. In the case of a tricyclic agent (eg, nortriptyline), my patients have seldom needed more than 75 to 100 mg at bedtime. Patients tend to respond to the treatment more quickly than I lead them to expect—an outcome which results in patient satisfaction.

At the completion of my initial consultation, I usually tell patients they are likely to see substantial improvement in their symptoms if they follow the treatment plan. Those who have suffered for ten or more years frequently say something like, “I’ve been to many doctors for headaches, and I had about given up. You’re the first person who has really listened.” As a specialist, I can give patients the time they need for evaluation and take the time to develop a comprehensive treatment plan.

Table 1. Headache patients seen from 10/21/97 through 5/18/98 at Kaiser Permanente Medical Offices, Salem and Portland, Oregon

Reason for visit	No. of patients
New consultation	87
Follow-up	73
Diagnoses:	
migraine (with and without aura)	46
rebound	29
tension type	30
myofascia	7
hypertension, inadequately controlled	4
cavernous sinus mass	1
exertional	1
coital	1
menstrual migraine	1
cluster	1
hypnic	1
carotidynia	1



Recommendations for Primary Care Clinicians

I believe that clinicians who follow recommendations included in the KPNW *Headache Guideline in Primary Care* will find it less necessary to refer headache patients to neurologists or headache specialists.⁸ Several basic principles included in the Guideline could decrease reliance on specialist consultations:

- Take a careful medical history. Determine which substances are capable of causing rebound headache, as well as their quantity, and instruct the patient to terminate use of all of these substances.
- Ask the patient about all possible headache triggers and recommend avoidance of any believed to cause headache.
- After the patient is no longer exposed to substances causing rebound or trigger pain, plan a systematic trial of prophylactic agents, abandoning each only if not tolerated, or if ineffective at therapeutic doses for two to three months.
- A variety of anti-headache agents should be tried, giving patients support, reassurance, and education regarding ways to minimize side effects.

Publishing a guideline is only the first step in its implementation. Educating staff and integrating clinical guidelines into patients' electronic medical record through alerts, smart text, and "Smart Rx" (typing the word "headache" instead of a drug order in the electronic medical record causes a pop-up menu to appear with an array of medications used for headache—both prophylactic and abortive) can help.

Evaluating and Adding to KPNW's Experience

Is becoming a headache specialist an unusual or pioneering role for a physician assistant?^{9,10} Not at all. Approximately half of PAs work in specialty care (including neurology), and most of these have received on-the-job training by specialists instead of formal postgraduate training programs.¹¹ In some specialties (eg, cardiothoracic surgery), the role of the PA (eg, in preoperative and postoperative care, saphenous vein harvesting) is limited compared with that of the supervising physician (eg, the cardiothoracic surgeon); in other specialties (eg, rheumatology), their roles are virtually indistinguishable.¹² This characterization of the PA's role is not true in all cases, because the ability and experience of PAs in a given subspecialty may vary widely, resulting in major differences in roles and responsibilities.

Primary Care physicians can also become known as informally trained headache specialists. For example, a Family Practice physician in our clinic who has interest and experience in sports medicine is frequently a referral source for Primary Care clinicians, who refer patients

to him instead of to the orthopedic surgeon. This practice saves the organization money and improves access to more expensive specialty care providers. The ability of PAs to assume some or most tasks of many subspecialists enhances patient access and decreases the cost of operating an HMO.

Has our experiment succeeded? The problem of delayed access to a headache specialist was easily remedied. Primary Care providers now have the option of referring patients directly to me or specifying that they be examined by a neurologist. The Neurology Department reports that during the 15 months of our project, only two requests for "second opinions" have followed consultation with me, and no negative feedback has been received from Primary Care providers. No Primary Care providers have requested initial consultation by a neurologist.

The future of this project is a story still being written. In both the Northwest and California Divisions, proposals are being submitted to formalize the training of Primary Care headache specialists. Perhaps our pilot project will prove worthwhile of duplication in other KP Divisions. As with many ideas which seem to make sense, time will allow us to measure the ultimate outcomes. ♦

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