

# INFLUENCE OF PRIMARY PRACTICE CHARACTERISTICS ON MIGRAINE DIAGNOSIS

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## OBJECTIVE

The objective of this study was to discover what personal and practice characteristics of primary care physicians influenced their frequency of making migraine diagnoses.

## DESIGN AND METHODS

We surveyed the 86 primary care physicians in the Unity Medical Group who had 6 months of claims data available (March–September 1999). The group is a large integrated health care delivery system (IHDS) in St. Louis. Fifty-three physicians responded to the survey (37 men and 16 women).

As an indicator of their attentiveness to migraine diagnosis, each physician's frequency of diagnosis was determined by dividing their total number of migraine diagnoses over the 6-month study period by the mean total monthly visits, as determined from claims records. We used the resulting index (diagnosis frequency index or DFI), to assign physicians to diagnostic frequency groups, from high to very low (Table). **[[DR. SMITH: ARE THE RANGES CORRECT?]]**

Table. Primary care physicians surveyed by DFI category

DFI Category	High	Medium	Low	Very Low
DFI Range	≥0.15	0.14–0.10	0.09–0.06	≤0.05
Number of physicians	10	6	22	15

The survey questions were designed to test the assumptions that diagnosis of migraine would be affected by the demographics of the practice, the volume of patients seen, the physician's attentiveness to screening for migraine, his or her recent education and degree of clinical competence in migraine diagnosis, and his or her personal or family history of migraine. The data were analyzed for trends associated with physicians' tendency to diagnose migraine, indicated by their DFI category.

## RESULTS

### Physician Gender

Female physicians on average had 43% higher DFIs than male physicians. Although equal numbers of women and men fell into the high DFI category, the proportion of men was higher in lower DFI categories and greatest in the very low DFI category (Figure 1).

### Practice Demographics

Patient gender and patient age were also notably different among

DFI groups. Higher DFI groups tended to have younger and mostly female patients (Figure 2).

### Patient Volume

The tendency to diagnose migraine was lowest in the busiest practices, with physicians in the very low DFI category averaging 28% more patient visits per month than physicians in the high DFI group (Figure

3). Physicians with high DFIs had a greater tendency to diagnose migraine, regardless of how busy their practices were (Figure 3).

### Physicians' Migraine History

A physician's personal, and especially family, history of migraine strongly correlated with their tendency to diagnose migraine (Figure 4).

### Migraine Screening

Less strongly correlated with DFI was the physician's stated attentiveness to screening patients for migraine (Figure 5).

### Headache Education

Recent CME or other educational activity related to headache also was not closely related to DFI (Figure 6). Although half the physicians in the high DFI category had participated in such an activity within the last 2 years, so had nearly half of the very low DFI physicians.

## CONCLUSIONS

For the last few years, headache researchers and educators have noted the large number of undiagnosed migraine sufferers in the United States and directed educational programming on migraine to primary care physicians.

This study suggests, however, that the tendency to diagnose migraine in primary care practice may be influenced more by the physician's personal characteristics and practice demographics than his or her level of interest in headache, participation in recent educational activities, or even use of office screening programs. Interestingly, the physicians in this survey seemed to be more attentive to the diagnosis if they had a close family member with migraine than if they had migraine themselves.

The other striking result of this study is that the busiest clinicians are the ones who appear to be least attentive to the diagnosis of migraine, contrary to the expectation that busy practices would have more migraineurs and therefore migraine diagnoses. This finding indicates that appropriate diagnosis and treatment of migraine takes time, something that many primary care physicians do not have.

Although ensuring physicians have enough time to spend with patients may have more influence on their ability to diagnose migraine than their participation in an educational activity on headache, the results may be sending a message about educational activities. Despite being scientifically sound and academically provocative, educational activities may miss the opportunity to equip the primary physician with the necessary tools to be efficient and attentive to the needs of the migraine sufferer.

Although this study is limited by its small size, the potential inaccuracies in claims data, and the lack of validated instruments for assessing physicians' diagnostic tendencies, these issues are clearly important and deserve further study.

