

Five-year Assessment of Healthcare Utilization for Patients With and Without Migraine in a Large Healthcare System

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Background and Rationale

Most evidence on healthcare utilization of those with migraine is based on self-report and has not been validated by documented use of healthcare. We describe healthcare utilization among primary care (PC) patients with and without migraine in a large healthcare system and examine factors that account for variation in use of care.

Design and Methods

Longitudinal EHR data from Sutter Health in Northern California were obtained on 1.5 million PC patients between 1/1/2013–12/31/2017. A previously developed and validated diagnostic algorithm was used to identify 94,149 patients who sought care for migraine and 1.4 million who did not. We stratified migraine patients by those who sought care exclusively from PC (PC-M) and those who saw a neurologist (N-M). We extracted counts of encounters for any reason for PC, neurology, emergency department (ED), and inpatient visits for all patients during the 5 year period.

Results

Compared to PC patients without migraine, patients with migraine experienced statistically significantly more encounters per patient (EPP) over 5 years for PC (10.8 vs 6.4), neurology (1.2 vs 0.2), inpatient (0.17 vs 0.11), and ED (0.67 vs 0.26) visits, (migraine vs no migraine, all $P < .001$). Among migraine patients, N-Ms had more ED EPP than PC-Ms (0.86 vs 0.62, $P < .001$). For ED encounters, N-Ms were more likely to have a discharge diagnosis of migraine than PC-Ms (14% vs 9%, $P < .001$).

Conclusion

During the 5-year period, migraine patients averaged higher any-reason EPP compared to those without migraine for all types of encounters assessed, with the majority of visits occurring in the PC setting. N-M's were more likely to have ED encounters and those encounters were more likely to be for migraine. A limitation to this analysis is that we are unable to distinguish between episodic and chronic migraine patients. It is likely that neurologists see a higher percentage of chronic migraine patients than PCPs, and these patients may utilize healthcare resources more. Further studies are planned to understand factors that contribute to higher healthcare utilization rates for N-M patients.