

The Family Impact and Costs of Migraine

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Objective: To obtain information on migraine and its impact on the family, particularly on the healthcare utilization and productivity of family members without migraine.

Study Design: Retrospective study using linked medical and pharmacy claims data that allowed identification of families and individuals with migraine.

Patients and Methods: Families with at least 1 migraineur were matched with up to 3 nonmigraineur families on employer, age of migraineur, number of family members, sex, and index date quarter. For a subset of employees, data on short- and long-term disability as well as absenteeism also were evaluated to determine the impact of migraine on these indirect costs.

Results: The total healthcare costs of a family with a migraineur were 70% higher than those of the nonmigraineur family, with most of the difference concentrated in outpatient costs. The impact of having a migraineur in the family persisted even after controlling for other disorders and demographics in a multivariate model. Total healthcare costs per family depended on which family member was the migraineur, and were about \$600 higher when the sole migraineur was a child versus a parent and almost \$2500 higher when both a parent and child were affected (compared with families in which the sole migraineur was a child). Work absence days, short-term disability, and workman's compensation days all were higher among migraine families than among families without a migraineur.

Conclusion: Migraine families incur far higher direct and indirect healthcare costs than nonmigraine families, with variation depending on which family member is the clinically detected migraineur.

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For editorial comment, see page 305.

Migraine is a common disorder, affecting about 18% of women and 6% of men in the United States.^{1,2} It is characterized by recurrent episodes of disability that impact quality of life,³ productivity,⁴ and job attainment,⁵ and add substantially to direct medical costs.^{6,7} Migraine prevalence is highest between the ages of 25 and 55 years, corresponding with the most productive years for individuals, and places a substantial burden on employers in terms of lost or diminished productivity and increased healthcare costs.

The impact of migraine and its treatment on productivity has been reviewed in detail elsewhere,⁴ and

although we can speculate that decreases in productivity at work also would be reflected at home, that research has not been undertaken to date. Although there is an extensive body of literature on pain and the family, it contains few data on migraine and its impact on the family. Most of the available research on the impact of migraine on the family focuses on the likelihood of time lost by migraineurs from family activities.^{8,9} In one study, 73.6% of migraineurs claimed that their headache adversely affects their lifestyle through interference with family relations, work attendance, and work efficiency.⁸ Among a national sample of migraine sufferers, 61% believed that their families were significantly affected by their migraines, including delay in accomplishing household duties and activities with children (62%) and spouses (69%); a substantial proportion reported cancellation of pleasure trips, celebrations, and social activities.⁹ Most striking was that 5% reported that their migraines caused their divorce or separation. Most stated that their families were understanding, but a considerable number reported that family members took a negative attitude. This was particularly so with young children deprived of parental care during their parent's migraine attacks. Spousal relationships also suffered, and frequency and quality of sexual relationships were adversely affected by migraine.

If one looks at the family as a production unit, it is possible to determine the impact of the child's headaches on his or her own production as well as that of the parents. Furthermore, the impact of the parent's headache on the "production" of the child may be determined. Statistically and clinically, we can determine what impact, if any, migraine has on the rest of the family. We undertook this analysis using a data

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source that allowed us to link families, identify migraineurs, and analyze medical claims (healthcare utilization) to address the question of the impact of migraine on the family, particularly on the healthcare utilization and productivity of the nonmigraine family members. Additional data were used for a subset of employees for whom we also had short- and long-term disability and absenteeism data.

METHODS

The analytic files were derived from 2 MarketScan research databases: the Commercial Claims and Encounters Database and the Health and Productivity Database. The Commercial Claims and Encounters Database, the largest of the MarketScan research databases, reflects the combined healthcare service use of more than 3.5 million privately insured individuals (in the 1999 database), covered under a variety of fee-for-service (FFS), fully capitated, and partially capitated health plans. The Health and Productivity Database was used to assess indirect costs. This database includes information on 1997-1999 medical care and pharmacy utilization for 6 large US employers, with data on workplace absence, short-term disability, and workman's compensation for a subset of the employers. The database contains person-level information on more than 800 000 individuals, including approximately 350 000 employees. Data on absenteeism, short-term disability, and workers' compensation varies by year. For example, absence data is available for approximately 15 000 to 16 000 workers in 1997-1998, and 112 000 persons in 1999. Data on short-term disability and workman's compensation is more complete than absence data. Short-term disability data are available for approximately 227 000 to 275 000 workers, and workman's compensation data are available for 227 000 to 242 000 workers. These differences stem from the fact that absenteeism records tend to be kept in noncentralized locations at regional offices of large employers.

The dollar amounts reported are payments inclusive of cost-sharing (copayments, deductibles, etc). Because the individuals captured in the Health and Productivity Database database are a proper subset of those in the full MarketScan files, we linked the absenteeism, short-term disability, and workers' compensation data to the corresponding subset of episodes in the MarketScan files. This enabled us to investigate the covariation of Health and Productivity Database metrics with traditional measures of healthcare utilization captured in standard claims databases.

The analytic file contains a mix of patients with FFS health plans and those with partially or fully capitated

plans. In the economic analyses, we examined health-care utilization using information on service utilization (eg, outpatient visits, emergency room use, hospitalizations) that is available from both the FFS and encounter records. For the capitated group, the value of patients' service utilization was priced using average payments for corresponding procedure codes from the FFS sample. We imputed the costs in the encounter plans using costs from the FFS plans. Average payments by Current Procedural Terminology (CPT) procedure code from the FFS plans were calculated and assigned, by CPT code, to the services in the encounter data; this was undertaken by region and year. This analysis takes the perspective of the employer/payer.

Definition of Migraine Case

A migraine case was defined as any subject having an *International Classification of Diseases, Ninth Revision (ICD-9-CM)* diagnosis code for migraine (346.xx), or a pharmaceutical claim for an ergot, triptan, or isometheptene (Midrin). We evaluated the possibility of using other headache codes (307.81 and 784.0), but thought that they would lack sensitivity (even though code 784 includes vascular headache, according to some *ICD-9* coding manuals). The remaining medication classes were not specific enough to migraine sufferers.

Definition of a Control

Nonmigraineurs were matched to migraineurs in up to a 3:1 ratio on employer, age (5 year bands), number of family members, sex, and index date quarter. Enrollees were randomly selected within each stratum. Because of the sampling with no replacement requirement, it was not always possible to achieve the target 3:1 ratio for each stratum, but this ratio was achieved in most instances. The exceptions were higher ratios for pediatric enrollees and lower ratios at the tail end of the age distribution. The control group does not contain migraine patients, but other headache patients who may have not met our criteria for migraine were eligible for inclusion.

Sample Identification

To construct the analytic file, all inpatient, outpatient, and pharmaceutical claims for the first observed *International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)* code and/or prescription medication indicating migraine during the period January 1, 1997, through December 31, 1999, were searched. The index date is the first date on which a patient qualifies as a migraine case by the definition above. For those who may have a medication from the list first and a diagnosis sometime later, the index date was that of the first prescription.

Family Impact of Migraine

The medical costs for patients in the HMO/capitated plans were imputed by using the FFS data from MarketScan. We calculated average payments by CPT procedure, year, and region, and then assigned the imputed costs to each individual service in the encounter portion of the project data, again by CPT procedure, year, and region. The costs were annualized for reporting. For migraine patients, only postindex costs are reported and were considered migraine related if a visit was associated with a primary diagnosis code of 346.xx; only prescriptions for an ergot, triptan, or isometheptene were considered migraine related. For the control group (matched sample), costs were reported for enrollment during the 1997-1999 study period. We used total healthcare costs as the basis of compari-

son with matched nonmigraine families, because total costs show the incremental differences in healthcare costs that can be due to migraine itself and to its influence on comorbidities. Multivariate analysis (ordinary least squares of logged total expenditures) was used to test the effect of other family demographic and healthcare expenditures on the impact of migraine on total healthcare expenditures. Logged expenditures were used in the model to reduce the skewness in the expenditure distribution.

Family-Level File

A family-level file containing the inpatient, outpatient, and pharmaceutical claims for all individuals in families containing at least 1 migraineur was created. A

Table 1. Summary of Family Characteristics

Characteristic	Migraine Families			Total Migraine Population	Matched Families (No Migraineurs)	P
	1 Migraineur	2 Migraineurs	3+ Migraineurs			
No. of families	69 819	3089	186	73 094	200 094	
Household size, %						
Single-person households	20.5	—	—	19.6	22.1	<.0001
Families with 2 members	23.9	14.4	—	23.4	22.7	<.0001
Families with 3+ members	55.6	85.6	100.0	57.0	55.2	<.0001
Migraine therapy, %						
Triptans	35.6	57.8	73.7	36.7	—	<.0001
Ergot/isometheptenes	26.8	41.9	50.0	27.5	—	<.0001
Other pain medications	37.5	54.7	62.4	38.3	—	<.0001
Insurance type, %						
Indemnity	39.4	38.4	46.8	39.4	39.7	.1381
HMO/capitated plans	31.3	34.7	31.2	31.5	31.8	.0842
PPO/POS	29.2	26.9	22.0	29.1	28.5	.0008
Region, %						
Northeast	14.5	13.7	12.9	14.4	16.4	<.0001
North Central	29.0	35.1	44.1	29.3	28.1	<.0001
South	37.7	31.3	25.3	37.4	36.4	<.0001
West	7.6	6.8	4.8	7.5	7.4	.3099
Unknown	11.3	13.1	12.9	11.4	11.6	.0762
Mean No. of MDCs	9.4	11.9	13.1	9.5	7.4	<.0001
Charlson Comorbidity Index	1.30	1.76	2.36	1.32	0.98	<.0001
Comorbid condition (% of families)						
Allergic rhinitis	31.3	46.4	51.1	32.0	21.7	<.0001
Asthma	17.0	26.6	33.3	17.4	12.1	<.0001
GERD	14.5	20.6	26.3	14.8	8.7	<.0001
Anxiety disorder	8.9	14.5	22.0	9.2	5.2	<.0001
Bipolar disorder	2.4	5.1	6.5	2.5	1.3	<.0001
Major depression	20.5	31.7	41.9	21.1	12.0	<.0001
OCD	0.9	1.2	2.7	0.9	0.5	<.0001
Panic disorder	2.1	4.1	4.8	2.2	1.2	<.0001
Epilepsy	2.1	3.7	7.5	2.2	1.0	<.0001

GERD indicates gastroesophageal reflux disease; MDCs, Major Diagnosis Categories; OCD, obsessive-compulsive disorder; PPO, preferred provider organization; POS, point of service.

Table 2. Annualized Unadjusted Mean Healthcare Costs for Families

Cost	Migraine Families	Matched Nonmigraine Families	P
No. of families	73 094	200 094	
Total healthcare cost	11 669	6838	<.0001
Migraine related	630	0	<.0001
Nonmigraine related	11 039	6838	<.0001
Outpatient cost	6247	3496	<.0001
Migraine related	264	0	<.0001
Nonmigraine related	5983	3496	<.0001
Pharmacy cost	2359	1056	<.0001
Migraine related	307	0	<.0001
Nonmigraine related	2052	1056	<.0001
Inpatient cost	3063	2285	<.0001
Migraine related	59	0	<.0001
Nonmigraine related	3005	2285	<.0001

sample of nonmigraine families (ratio of 3:1) that were matched on number of family members, plan, and geography was used as a comparator group. Members of the same family were identified by eligibility codes that also distinguish employee from dependent. Family position was determined from eligibility files that included both demographic information (age, sex) and relationship to the policy beneficiary.

Major Diagnosis Categories, a Centers for Medicare & Medicaid Services classification system that groups diagnosis codes into 24 major categories, were used as proxies for extent of medical and mental health comorbidities. Similarly, Charlson Comorbidity Index scores were generated.¹⁰

For the family cost measures, we identified the earliest migraine index date within the family. All services after that date (up through December 31, 1999) were

reported for all family members. If there was another migraineur in the family with a later index date, that index date was ignored for the purposes of the family analysis. Simple descriptive statistics were used to characterize the cohorts under study.

RESULTS

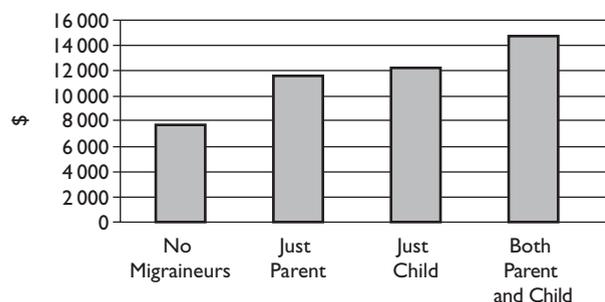
We identified 73 094 families with at least 1 migraineur per family (Table 1). The vast majority of the families (96%) had only 1 migraineur identified and the majority of families had more than 3 members (57%). About 20% were single-person households. The likelihood of triptan use increased with the number of migraineurs in the family, going from 36% in families

with 1 migraineur to 74% in those families with 3 or more migraineurs. This pattern was repeated for the other drug classes as well. Similarly, both the mean number of Major Diagnosis Categories and the Charlson Comorbidity Index increased with an increasing number of migraineurs in a family.

The total healthcare costs of a family with a migraineur were 70% higher than those of the nonmigraine family (Table 2), with most of the difference concentrated in outpatient and pharmacy costs. Pharmacy costs showed the greatest discrepancy; they were more than twofold higher in migraine families than in nonmigraine families. However, pharmacy costs accounted for 20% of total healthcare costs in the migraine families versus 15% in the nonmigraine families. Outpatient costs also were 80% higher for migraine families than for nonmigraine families, but accounted for just over 50% of the total costs in each group.

Total healthcare costs per family depended on which family member was the migraineur (Figure 1). Total healthcare costs for the family were about \$600 higher when the sole migraineur was a child versus a parent and almost \$2500 higher when both a parent and child were affected (2.5% of migraine families) (Table 3). We also examined the impact of migraine on other family members who apparently did not have migraine (Table 3). As is shown above, the total healthcare costs per family were 70% higher in the migraine families than in the matched nonmigraine families (Figure 1). The differential was even higher (90%) among families with both parent and child migraineurs. Homes with just a

Figure 1. Mean Total Healthcare Costs per Family (No Migraineurs = Control Families With Children)



child migraineur incurred more total healthcare costs than homes with just an adult migraineur, but the difference was not striking. Adult family members of migraineurs had more than twice the total healthcare costs than the sibling or child of a migraineur (\$3500 vs \$1400), while the migraineurs themselves incurred more than \$6400 in total healthcare costs (Figure 2). All of these estimates were far higher than the mean total healthcare costs (weighted average) of the matched individuals in the original cohort (\$2691).

Among migraineurs, the proportion of total healthcare costs that could be attributed to migraine was 9%, while between 5% and 7% of the total healthcare costs in migraine families were attributable to migraine. The impact of the migraineur on the rest of the family's total healthcare costs also could be approximated, as the spouse of a migraineur had 24% higher total healthcare costs and the child of a migraineur had 11% higher total healthcare costs compared with their nonmigraine family counterparts. Both the nonmigraine parent of a migraineur (26% increase) and specifically the mother of a child migraineur (25% increase) also were substantial-

ly affected when compared with parents in nonmigraine families.

Table 4 shows that absence days, short-term disability, and workman's compensation days were higher among migraine families than among families without a migraineur (see also Figure 3). These data were available for 7307 migraine families and 19 981 matched families. Migraine appeared to increase the number of annual work loss days caused by absence or short-term disability by 54% or more; however, it had less impact on workman's compensation. Short-term disability appeared to be particularly influenced by migraine status in the adult family members; the number of short-term disability days was 2.3 times higher than the number in the matched nonmigraine families. A 62% increase in short-term disability days (59% higher absenteeism) was evident when only a parent was the migraineur, but that increase was more than twofold higher when a parent and child were both migraineurs. Even in those families with just a child migraineur, there were 11% more short-term disability days and absenteeism was 35% higher than in nonmigraine families

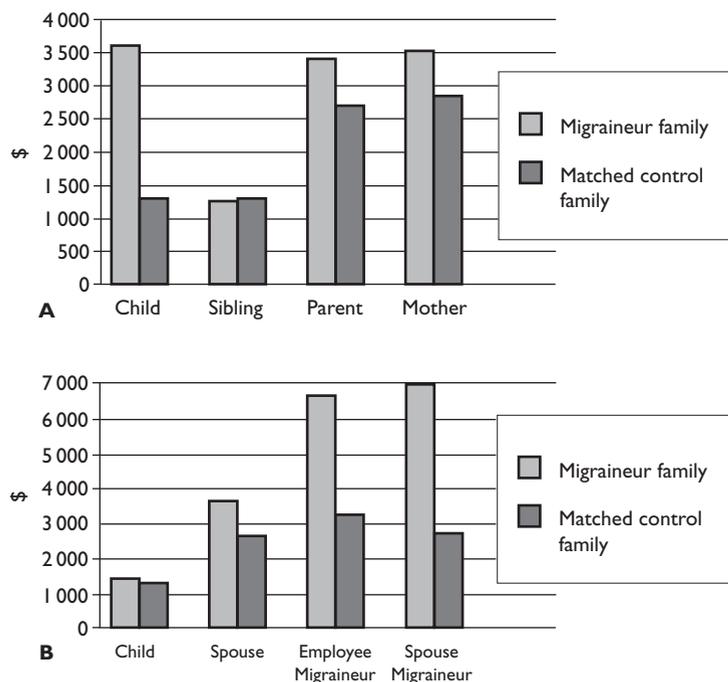
Table 3. Summary of Family Impact (Migraine Families)

Cost	No.	Total Healthcare Costs (\$)	Migraine Costs (\$)	Nonmigraine Costs (\$)	Annualized Work Loss Days, Employed Subsample*					
					Absence		Short-Term Disability		Workman's Compensation	
					No.	Days	No.	Days	No.	Days
Cost per family										
All migraine families	73 094	11 669	630	11 039	7297	6.2	16 549	5.9	13 921	8.8
Just parent migraineur	62 362	11 519	631	10 887	6206	6.4	13 909	6.1	11 646	9.0
Just child migraineur	8891	12 112	545	11 567	896	5.2	2201	4.1	1906	7.1
Parent + child migraineurs	1841	14 637	1001	13 636	195	3.6	439	7.6	369	12.7
Cost per member										
All migraineurs [†]	73 094	6413	581	5832						
Employee migraineur	39 214	6692	597	6095	3461	7.9	7831	8.7	6348	10.8
Spouse migraineur	24 961	6984	591	6392						
Child migraineur	8919	3593	480	3113						
Spouse of migraineur	46 796	3600	29	3571	2944	4.4	6516	3.1	5664	7.1
Parent of migraineur	16 585	3402	23	3379	899	5.2	2210	4.1	1914	7.1
Mother of migraineur	8509	3530	34	3496	264	7.5	517	6.1	411	10.8
Sibling of migraineur	11 221	1256	5	1251						
Child of migraineur	67 140	1447	13	1434						

*Total absence, short-term disability, and workman's compensation days after earliest migraine study index date for family.

[†]If family has multiple migraineurs, pick 1 for member relationship to migraineur analysis.

Figure 2. Mean Total Healthcare Costs for a Given Individual When Migraineur Is (A) Child or (B) Parent



with children. The number of absence days in families with just a child migraineur also was higher, but was approximately the same as the number in families with both a parent and a child migraineur compared with non-migraineur families. However, the employed parent in migraineur families lost, on average, 4 additional sick

are a valuable method of assessing the true impact of an illness, because migraine, like many disorders, is comorbid with a number of other illnesses that make it difficult to determine to what extent costs are driven by which illness. Ideally, effective treatment of 1 illness should offset the costs of comorbid or consequent illness; howev-

days per year, 5 additional short-term disability days, and 3 additional workman's compensation days compared with his/her nonmigraine counterpart.

Table 5 reports the results of the multivariate analysis of the persistence of the effect of migraine on total healthcare expenditures after controlling for other family demographic and health status variables. The results indicate that, after controlling for family size, regional location, and medical comorbidities measured at the individual and family level, total healthcare expenditures were significantly higher for families containing a member suffering from migraine than in matched families without a migraineur. Collectively, these variables accounted for more than 46% of the variation in logged total healthcare expenditures.

DISCUSSION

This is the first extensive study of migraine and its impact on family healthcare costs. Total healthcare costs

Table 4. Summary of Family Impact (Matched Nonmigraine Families)

Cost	No.	Matched Sample Total Healthcare Costs	Annualized Work Loss Days, Employed Subsample*					
			Absence		Short-Term Disability		Workman's Compensation	
			No.	Days	No.	Days	No.	Days
Cost per family								
All families	200 094	6838	17 996	4.0	42 676	3.8	36 721	7.6
Families (no children)	85 376	5619	6575	4.3	15 383	4.0	12 926	7.5
Families (with children)	114 718	7744	11 421	3.8	27 293	3.7	23 795	7.7
Cost per member								
Employee	200 606	3243	18 000	4.0	42 701	3.8	36 743	7.6
Employee or spouse (no children)	126 562	3791	6576	4.3	15 395	4.0	12 937	7.5
Employee or spouse (with children)	217 203	2699	11 424	3.8	27 306	3.7	23 806	7.7
Mother (with children)	113 034	2832	3719	4.9	7577	8.1	6318	11.8
Spouse	143 159	2902						
Child	231 160	1307						

*Total absence, short-term disability, and workman's compensation days during health plan enrollment period.

er, it would be difficult to determine whether this is the case from these data.

This analysis provides new and interesting information regarding migraine and its impact on the family. The results suggest that migraine, even under treatment, is associated with a substantial increase in total healthcare costs for a family. The impact of having a migraineur in the family persisted even after controlling for other disorders and demographics in a multivariate model. These costs are disproportionately concentrated in outpatient and pharmacy costs. Costs were substantially higher when both parent and child were affected; however, adult migraineurs had a higher incremental cost (versus adult nonmigraineurs) than their pediatric counterparts. Similarly, first-degree relatives of a migraineur appeared to incur about 25% higher total healthcare costs. These differences could be due to the increased stress of the illness on other family members. These data are of more interest when one considers that these estimates may be conservative. There are a substantial number of subjects in the “nonmigraine” category (more than 100 000; data not shown) who suffer from severe headaches that did not meet our criteria for migraine. Our analysis compared migraineurs with those who did not meet our conservative criteria for migraine: an analysis comparing migraineurs to the total true nonheadache population is likely to show even more striking differences.

A few limitations of the current study must be borne in mind. First and foremost is that we are examining the impact of

Figure 3. Annualized Work Loss: Migraine vs Controls

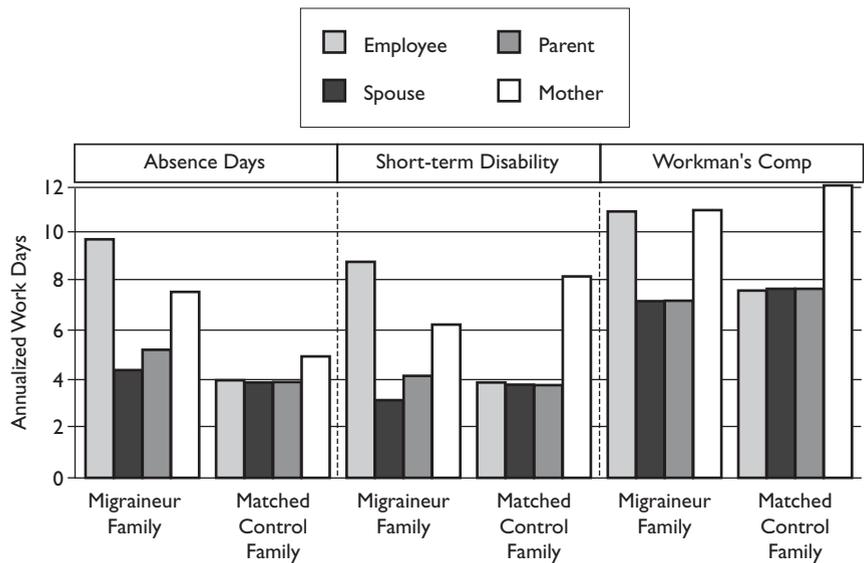


Table 5. Ordinary Least Square Regression Analysis for Migraine and Nonmigraine Families*

Variable	Parameter Estimate	Standard Error	t Statistic	P
Intercept	5.4548	0.00869	627.98	<.0001
Family member with migraine	0.35851	0.00605	59.29	<.0001
No. of family members	0.14561	0.00357	40.84	<.0001
Location of residence				
Northeast region	-0.20053	0.00785	-25.54	<.0001
North Central region	-0.37071	0.00672	-55.19	<.0001
West region	-0.29123	0.01038	-28.05	<.0001
Unknown	-0.22942	0.00893	-25.69	<.0001
No. of MDCs	0.26218	0.0008605	304.69	<.0001
Charlson Comorbidity Index	0.09173	0.0012	76.57	<.0001
Comorbid conditions				
Family member with allergic rhinitis	-0.00641	0.00649	-0.99	0.323
Family member with asthma	-0.09452	0.00808	-11.7	<.0001
Family member with GERD	0.1179	0.00879	13.41	<.0001
Family member with anxiety disorder	-0.03886	0.01128	-3.45	.0006
Family member with bipolar disorder	0.25073	0.02103	11.92	<.0001
Family member with major depression	0.11704	0.00803	14.58	<.0001
Family member with OCD	0.09578	0.03278	2.92	.0035
Family member with panic disorder	-0.00152	0.02221	-0.07	.9455
Family member with epilepsy	0.15892	0.02273	6.99	<.0001
Adjusted R²	0.4651			

*GERD indicates gastroesophageal reflux disease; MDCs, Major Diagnosis Categories; OCD, obsessive-compulsive disorder.

clinically detected and treated migraine. Studies have shown that a substantial proportion of migraineurs do not seek care.^{1,7,11} This would suggest that there were “undetected” migraine subjects in our comparison group who likely generated additional costs that we did not detect. The net effect would be to bias our results toward a conservative estimate of differences between groups. We used medical claims data as our source of medical care and charge information. Although intended to reflect actual practice, our identification of subjects and assignment of migraine status were strongly dependent on coding. It is possible that these data are distorted because of incentives for reimbursement; however, this has not been shown to be the case in other migraine studies. The proper diagnosis of migraine is part of the art and practice of medicine, and despite formal guidelines provided by the International Headache Society,¹² we were unable to validate the extent to which the subjects in this study met formal criteria. Research has shown a high positive predictive value of a migraine diagnosis in the clinical record and medical claims.¹³ Our analysis of “migraine-related” costs (unpublished date, 2003) shows that migraine itself accounted for a very small proportion of all healthcare costs for the migraine subject, which suggests that migraine may be a marker for more systemic or comorbid illnesses. Our comorbidity analysis did show that comorbidity rates among migraineurs were higher than those among non-migraineurs; however, in the multivariate model adjusting for comorbidities, the effect of having a migraineur in the family persisted, which provides compelling evidence that a migraineur in the family is a strong and independent predictor of higher family costs. Finally, our costing methodology annualized costs of care and may have distorted the results; it is unclear whether this would overestimate or underestimate costs.

Our analysis of absenteeism, short-term disability, and worker’s compensation days lost was in a subset of subjects for whom these data were captured. The strength of our findings lie in the objective capture of these data and the lack of reliance on self-report or attribution of impact to migraine. Although the results are striking, it is possible that the subset is in some way not representative of the general experience of migraineurs in an employer setting. There was a modest effect of migraine in other family members on absenteeism and short-term disability, as being the parent of a migraineur increased absenteeism days 28% and short-term disability days 11%. The magnitude of absenteeism in our current study was higher than that reported in previous studies from a managed care organization¹⁴ and was broadly consistent with results from more general US population samples.^{4,7,15,16} We found far fewer work days

lost than those reported in a clinical trial sample,¹⁷ due at least in part to the severity of migraine among the patients enrolled in the trial and to the theory that the employed population from which our data were derived are generally thought to be in better health than those not employed (the “healthy worker effect”).¹⁸ Given that these data probably reflect healthier migraineurs, these findings are that much more important, as past research has shown migraine to be associated with significant impact on workforce participation,⁵ which in turn could have significant effects on the family.

CONCLUSIONS

Migraine is a common and costly illness that appears to have financial impact not only on the sufferers, but also on others in their families. This is evident for both direct and indirect costs. Migraine families incurred far higher direct and indirect costs than nonmigraine families, with the variation depending on which family member was the clinically detected migraineur. Further analyses need to be undertaken to continue to better understand the relationship between migraine, comorbidities, and their relative impact on families.

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