

The Surgical Management of Migraines and Chronic Headaches: A Cross-sectional Review of American Insurance Coverage

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Introduction

- Migraine headaches are a debilitating disease worldwide, usually, but often unsuccessfully, treated with medications
- Surgical management of migraine headache have been recently researched and discussed as a potential treatment
- However, “Migraine Surgery” is currently a **poorly defined term** and can refer to many procedures
- Health insurance may predict migraine treatment, but the novelty of these procedures have led to a poorly defined landscape of insurance coverage

Methods

- Cross-sectional analysis of US insurance policies for the **surgical and non-surgical management of migraine and headache**
- The largest **101 companies** were selected based on state enrollment and market share
- Policies collected from websites and phone calls to company representatives
- Surgical procedures analyzed:**
 - Nerve decompression surgery, peripheral nerve stimulation, trigger site nerve excision, and muscle resection.
- Non-surgical procedures analyzed:**
 - Radiofrequency ablation, botulinum toxin injection, nerve blocks, ablative procedures, and acupuncture

Results

Figure 1: Overall Coverage of Surgical Procedures for Headache or Migraine

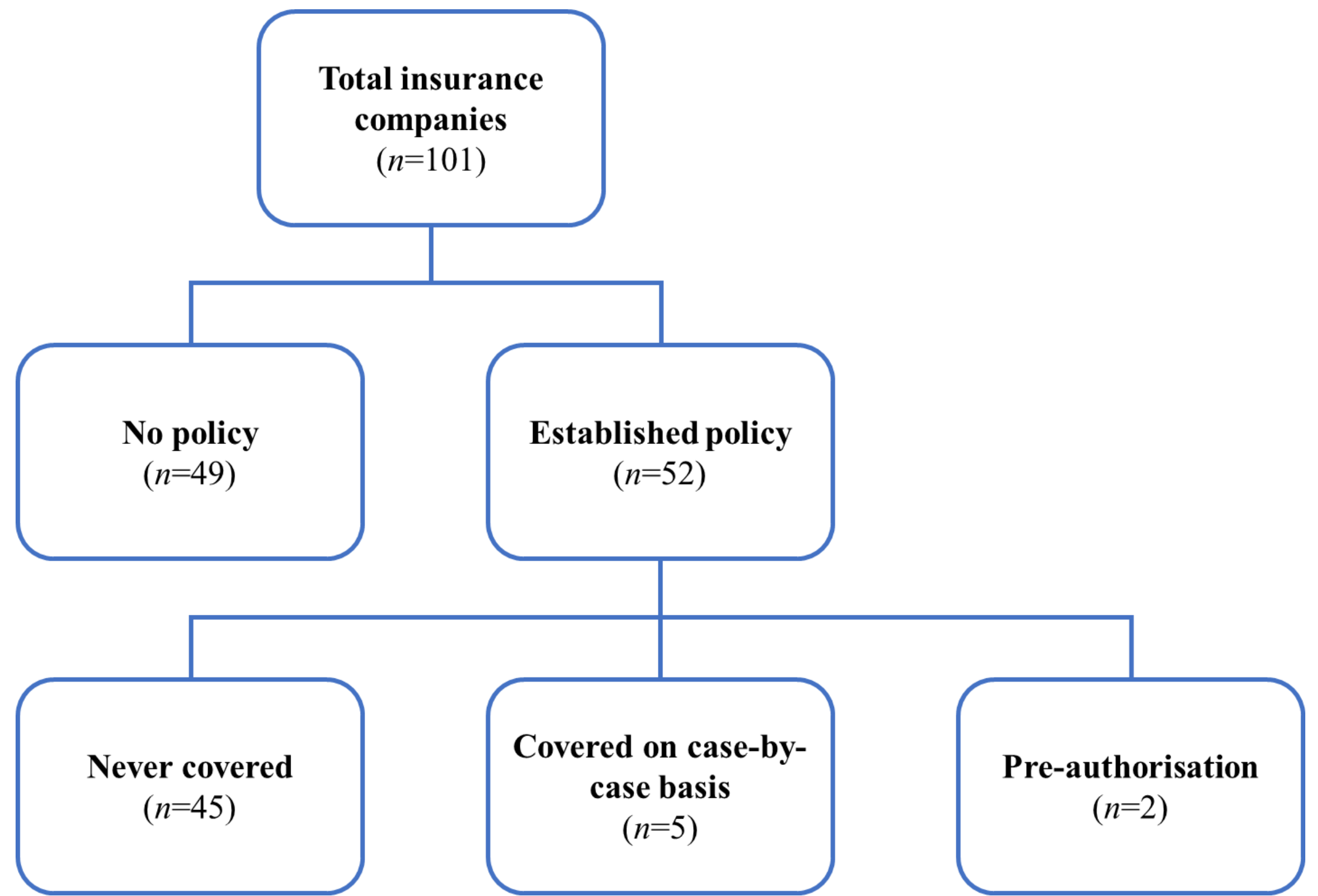


Table 1: Coverage Breakdown of Surgical Procedures for Headache or Migraine

Procedures	Indication	Y	N	CC	NA
Nerve decompression surgery	Headache	1	14	3	83
	Migraine	0	18	3	80
Occipital nerve stimulation	Headache	2	46	4	49
	Migraine	0	47	4	50
Trigger site nerve excision	Headache	0	27	2	72
	Migraine	0	31	2	68
Muscle resection	Headache	0	24	2	75
	Migraine	0	26	2	73
Vagus Nerve Stimulation	Headache	0	34	0	67
	Migraine	0	34	0	67

Y = Covered with pre-authorisation, N = Not covered, CC = covered on case-by-case basis, NA = Policy not accessible

Figure 2: Overall Coverage of Nonsurgical Procedures for Headache or Migraine

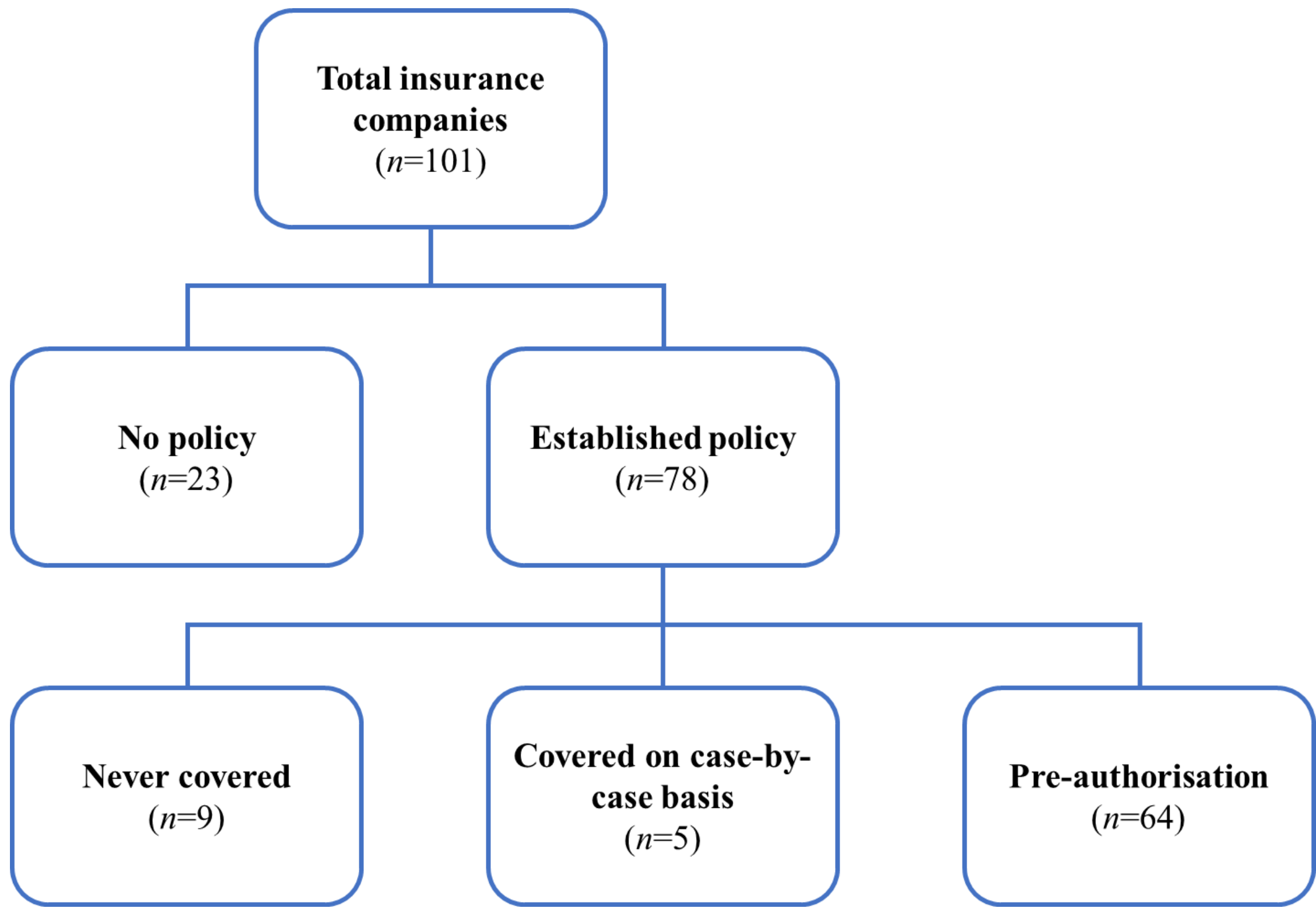


Table 2: Surgical Procedure Coverage Criteria

Company	Medical Necessity Criteria
Healthnet	
Occipital Nerve Stimulation may be medically necessary if	Individuals with intractable occipital neuralgia that is refractory to standard treatment Occipital Neuralgia that is having a negative impact on quality of life.
Optic Nerve Decompression Surgery may be medically necessary if	Papilledema accompanying idiopathic intracranial hypertension (IIH) with either of the following: 1. Visual function that is severely impaired or continues to deteriorate, despite aggressive medical management (e.g., Diamox, furosemide, and corticosteroids); 2. Incapacitating headaches
Gesinger	
Occipital Nerve Stimulation may be medically necessary if	Medicare Business Segment Only Prior authorization by a plan medical director

Discussion

- Of 101 insurers, 52% ($n=52$) had existing policies on surgical treatments for migraine or headache and 78% ($n=78$) for nonsurgical treatments
- Significantly fewer** existing policies for surgical procedures than for nonsurgical procedures (52% vs 78%, $p<0.0001$)
- No significant difference** between number of policies for surgical procedures for headache versus migraine (52% vs 50%, $p=0.8881$)
- Headaches were an approved indication in 4% ($n=2$) of occipital nerve stimulation, and 2% ($n=1$) of nerve decompression policies
- Migraines were a **universally denied** indication in all surgical procedure policies
- Insurers denied coverage citing **investigational or experimental procedures, lack of efficacy, and methodological flaws** in migraine surgery studies

Conclusion

- Currently little recognition** by insurers of surgical procedures for migraine or headache as effective therapies
- As evidence builds, insurers should consider providing access to these alternative treatment options to patients

References

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