Real-world Diagnostic Pathway and Prescribing Patterns in Patients Newly Diagnosed with Migraine in the United States from 2018-2021

Vincent Martin,[1] Avani Patel,[2] Simon Dagenais,[2] Shelby Corman,[3] Katie Tellor,[2] Meghan Fajardo,[2] Alexis Turko,[2] Ekta Agarwal,[2] Fred Cohen[4,5]

[1] University of Cincinnati College of Medicine, Cincinnati, OH, USA
[2] Pfizer Inc., New York, NY, USA
[3] Precision AQ, MD, USA
[4] Department of Medicine, Icahn School of Medicine at Mount Sinai, NY, USA
[5] Department of Neurology, Icahn School of Medicine at Mount Sinai, NY, USA

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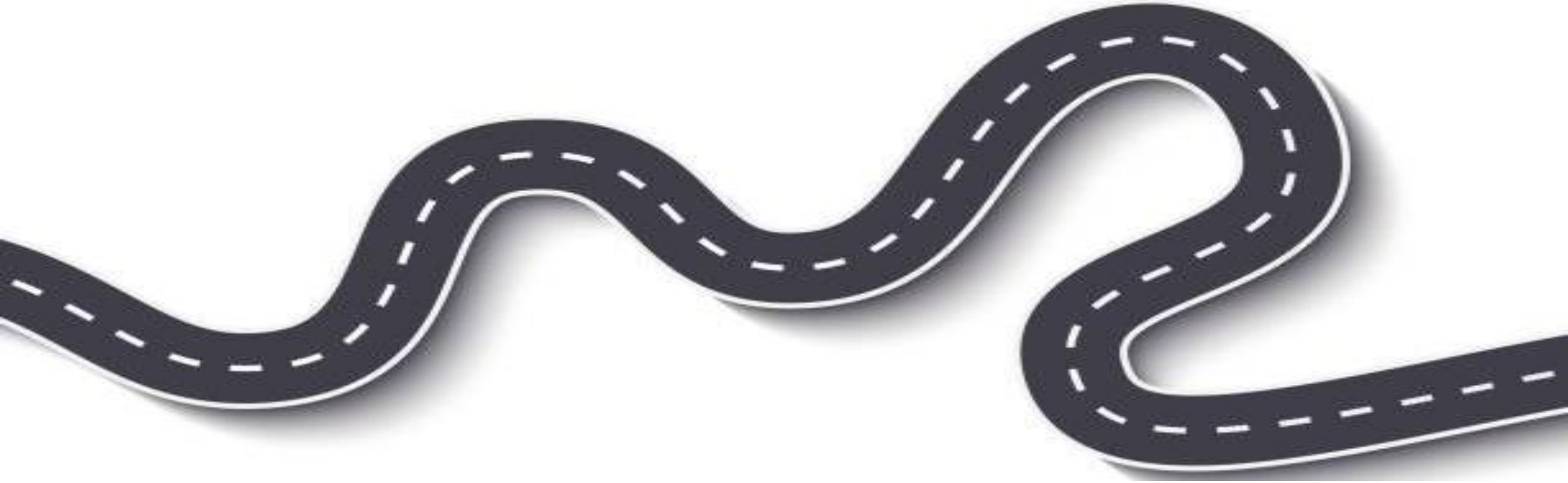
Disclosures

- Dr. Vincent Martin
  - Consultant: Pfizer, Satsuma
  - Speaker: Pfizer, Abbvie
  - Research: Eli Lilly, Teva, Amgen
- Dr. Fred Cohen
  - Consultant: Pfizer, Abbvie, Teva
  - Speaker: Pfizer, Abbvie
- Avani Patel, Simon Dagenais, Katie Tellor, Meghan Fajardo, Alexis Turko and Ekta Agarwal are employees of Pfizer Inc, and hold shares in Pfizer Inc
- Shelby Corman is an employee of Precision AQ

Study Objective

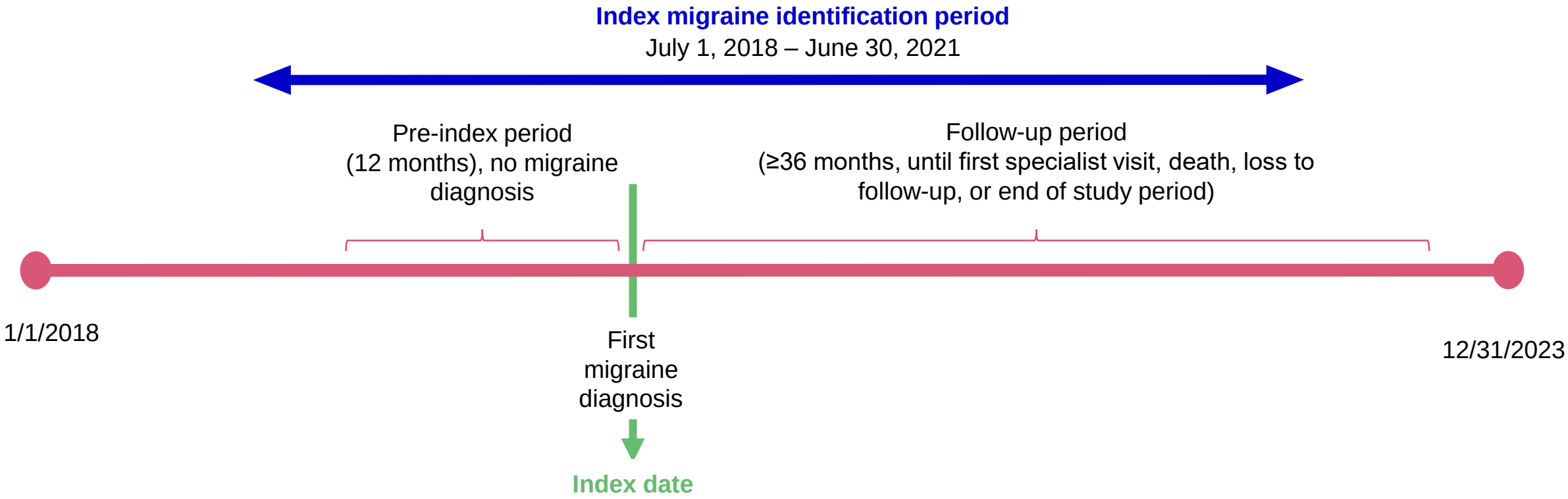
To describe the real-world diagnostic journey and treatment patterns in individuals newly diagnosed with migraine between 2018-2021



Study Design and Population

Retrospective cohort study using medical and pharmacy claims from the Optum Market Clarity® database, with records from over 86 million individuals primarily insured by United Healthcare

Study population consisted of adults (≥18 years old) with a new diagnosis of migraine, defined as at least one inpatient or two outpatient claims with an ICD-10-CM diagnosis of migraine



ICD-10-CM, International Classification of Diseases, 10th Revision, Clinical Modification

Study Outcomes

Diagnostic journey	• Age at first migraine diagnosis • Comorbidities at the time of first migraine diagnosis • Setting of diagnosis • Specialty of provider diagnosing
Migraine medications	• First migraine prescription by type (acute, preventive, both acute and preventive prescribed simultaneously) • Acute migraine medications prescribed during follow-up: triptans, CGRP antagonists, ergots, lasmiditan • Analgesics prescribed during follow-up: butalbital, NSAIDs, opioids • Preventive migraine medications prescribed during follow-up – Migraine-specific: oral CGRP antagonists, CGRP monoclonal antibodies – Non-migraine specific*: ACEi/ARBs, anticonvulsants, beta-blockers, memantine, onabotulinumtoxinA, SNRIs, TCAs

* Defined as a filled prescription for medications after migraine diagnosis and no use prior to migraine diagnosis

ACEi, angiotensin converting enzyme inhibitor; ARBs, angiotensin receptor blockers; CGRP, calcitonin gene-related peptide; NSAIDs, non-steroidal anti-inflammatory drugs; SNRIs, serotonin norepinephrine reuptake inhibitors; TCAs, tricyclic antidepressants

Population Demographics

	Study Population N=165,281
Female, n (%)	134,341 (81.3%)
Age at first migraine diagnosis (years), mean (SD)	46.0 (15.1)
Age group (years), n (%)	
18-34	40,749 (24.7%)
35-54	76,014 (46.0%)
55-64	28,778 (17.4%)
65+	19,740 (11.9%)
Race, n (%)	
African American	14,778 (8.9%)
Asian	2,188 (1.3%)
Caucasian	112,967 (68.4%)
Other/Unknown	35,348 (21.4%)
Insurance type, n (%)	
Commercial	107,281 (64.9%)
Medicaid	32,978 (20.0%)
Medicare	29,461 (17.8%)
Unknown	375 (0.2%)

A total of 165,281 individuals newly diagnosed with migraine between July 1, 2018 – June 30, 2021

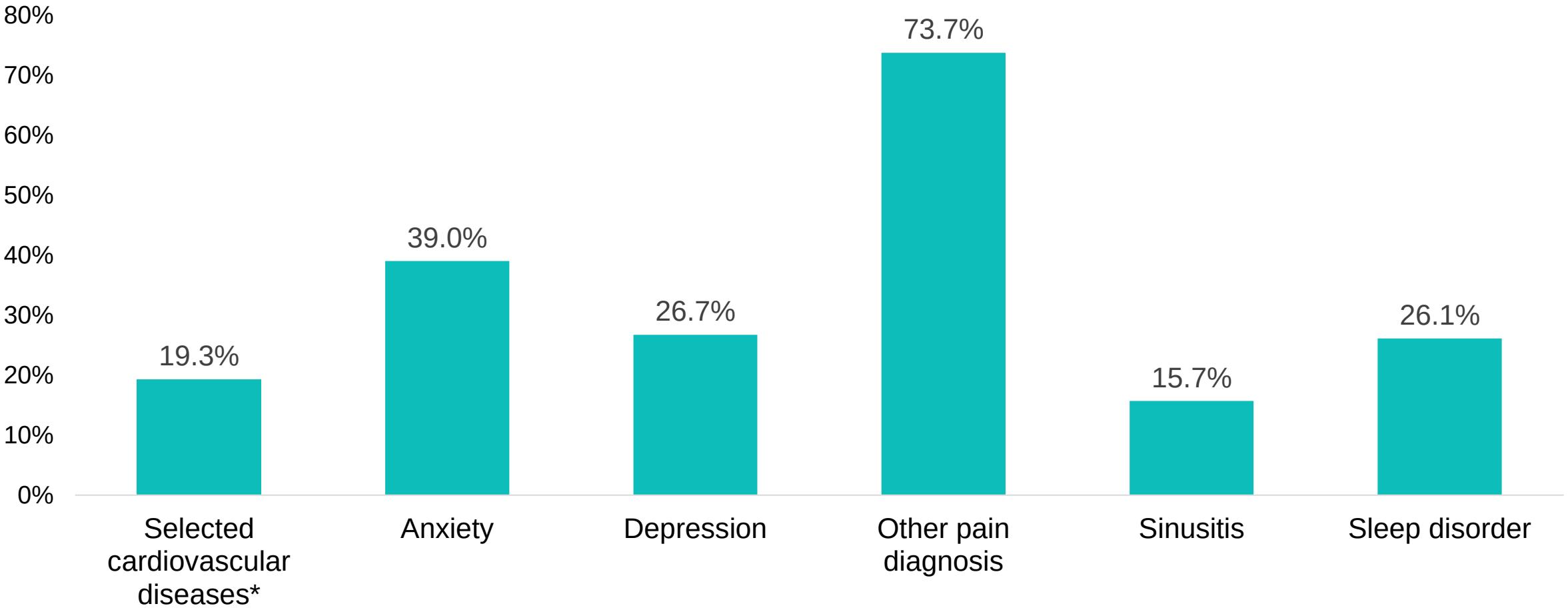
Individuals were predominantly female, Caucasian, and had commercial insurance

Mean age was 46 years

SD, standard deviation

Selected Comorbidities at Index Migraine Diagnosis

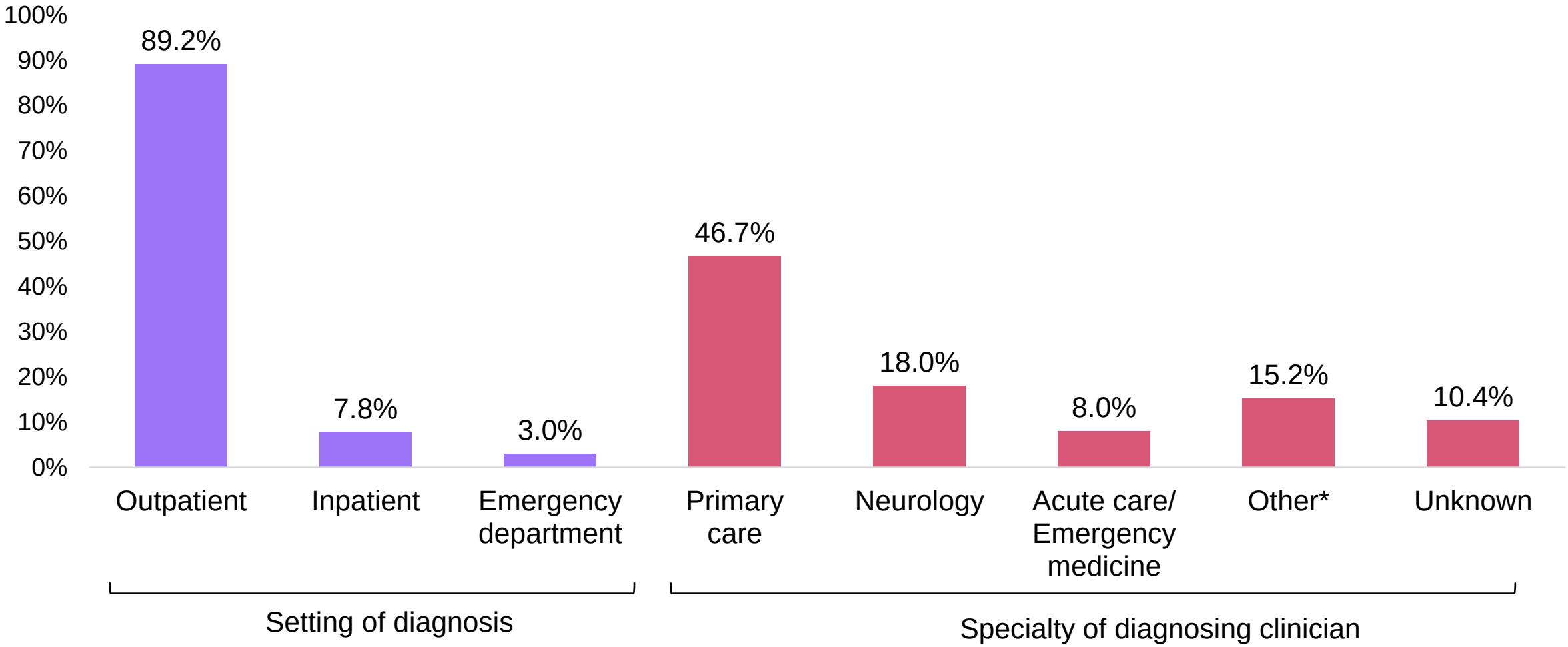
Nearly 20% of individuals had at least one absolute contraindication to triptans and nearly ¾ had a diagnosis of another pain condition



* Includes gastrointestinal ischemia, ischemic cerebrovascular or cardiovascular disease, peripheral vascular disease, or uncontrolled hypertension

Index Migraine Diagnosis

Most individuals were diagnosed in outpatient settings and by primary care providers

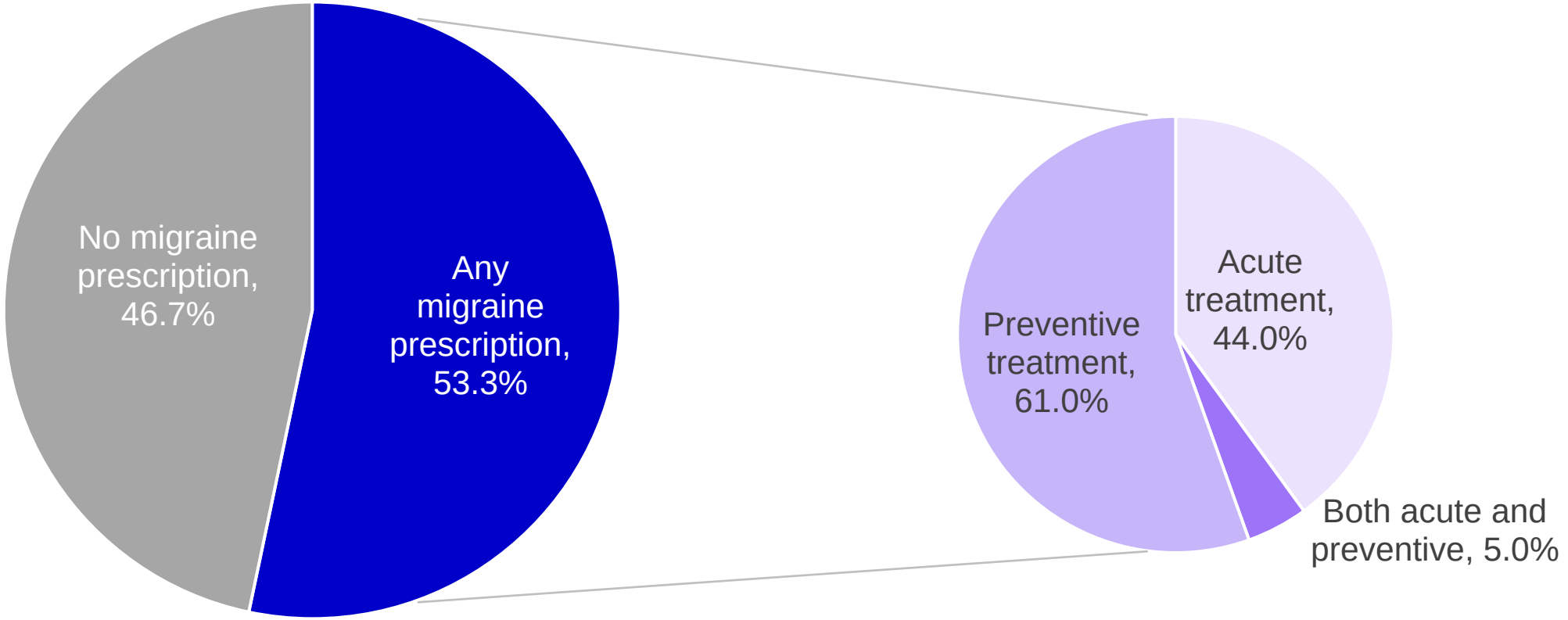


* Most common Other specialties were ophthalmology (2.2%), chiropractic (1.5%), and anesthesiology (1.1%)

Initial Migraine Prescription Medications

During the 3-year follow-up period, nearly half of individuals received no migraine prescription medications

Of those receiving any prescription, the first prescription was preventive in the majority of individuals

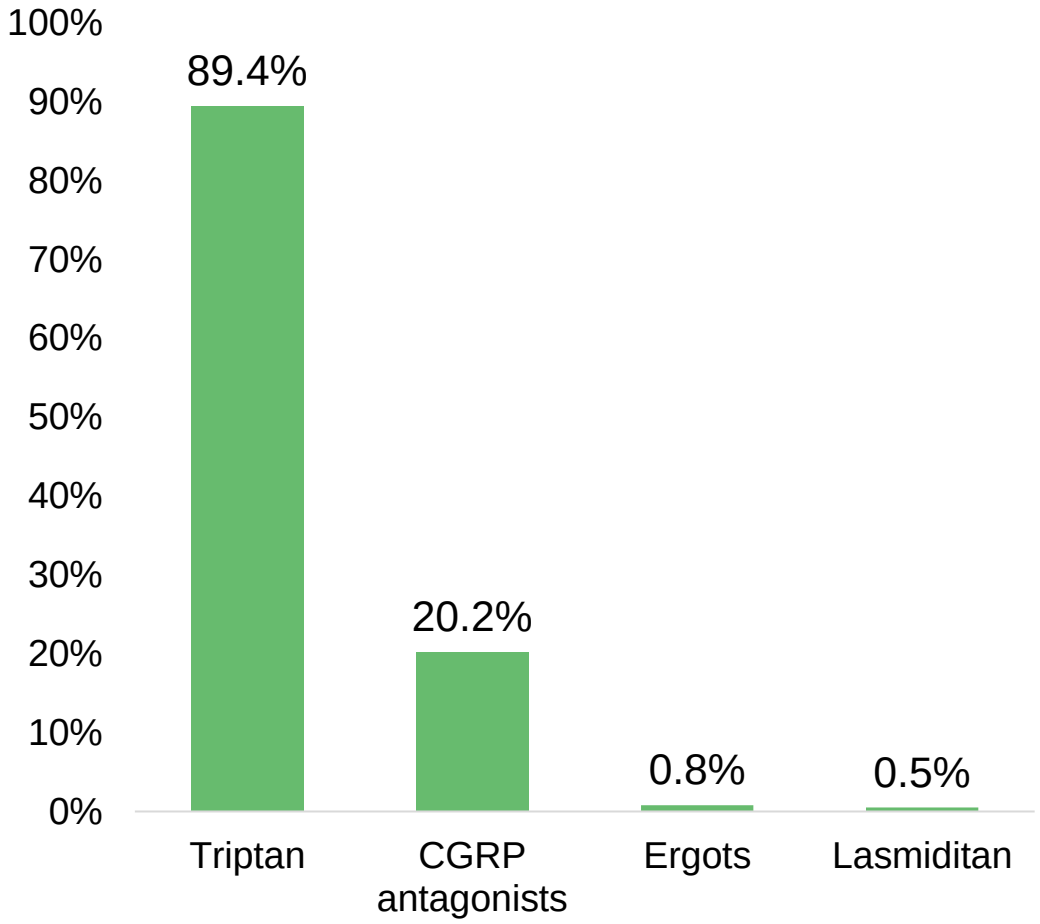


Preventive medications: oral CGRP antagonists, CGRP monoclonal antibodies, ACEi/ARBs, anticonvulsants, beta-blockers, memantine, OnabotulinumtoxinA, SNRIs, TCAs

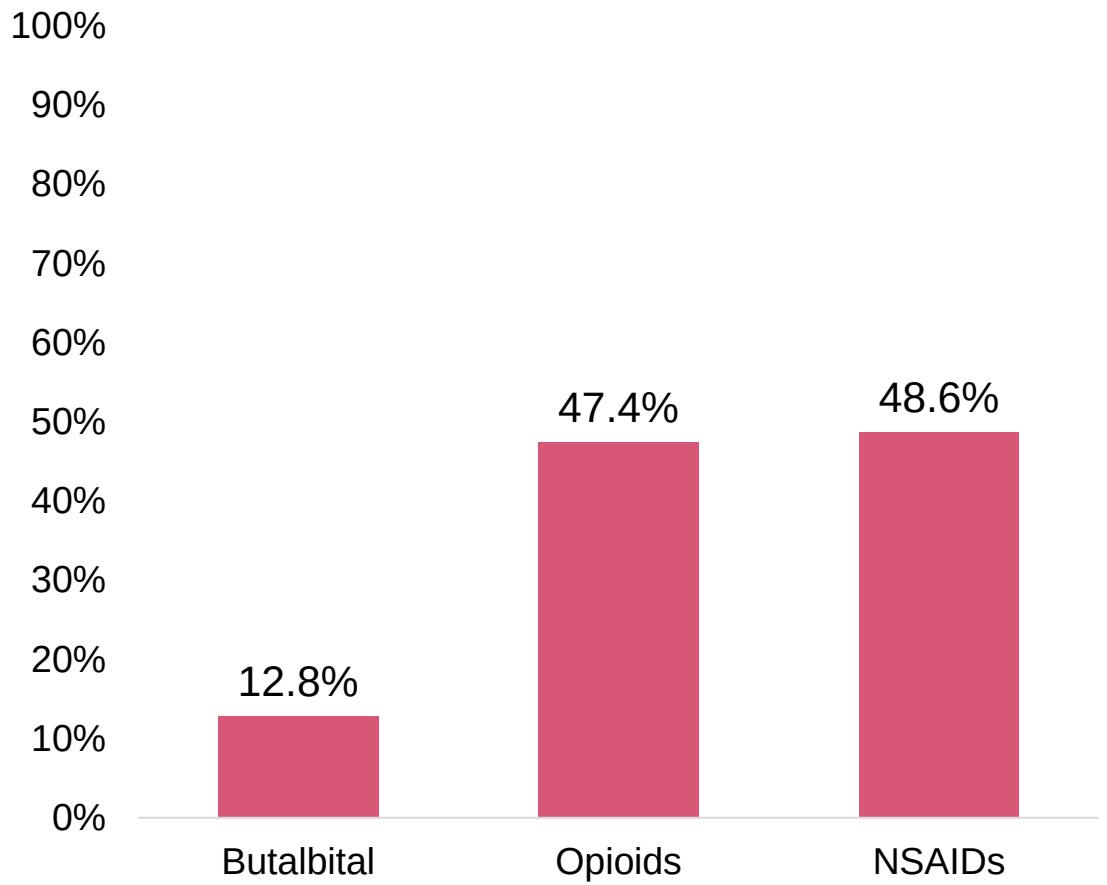
Acute migraine medications: triptans, oral CGRP antagonists, ergots, lasmiditan

Use of Acute Treatments and Analgesics During Follow-up

During the 3-year follow-up period, 30.4% (n=50,229) of individuals received at least one acute migraine medication



Nearly half of all individuals (N=165,281) received an opioid or a prescription NSAID during follow-up

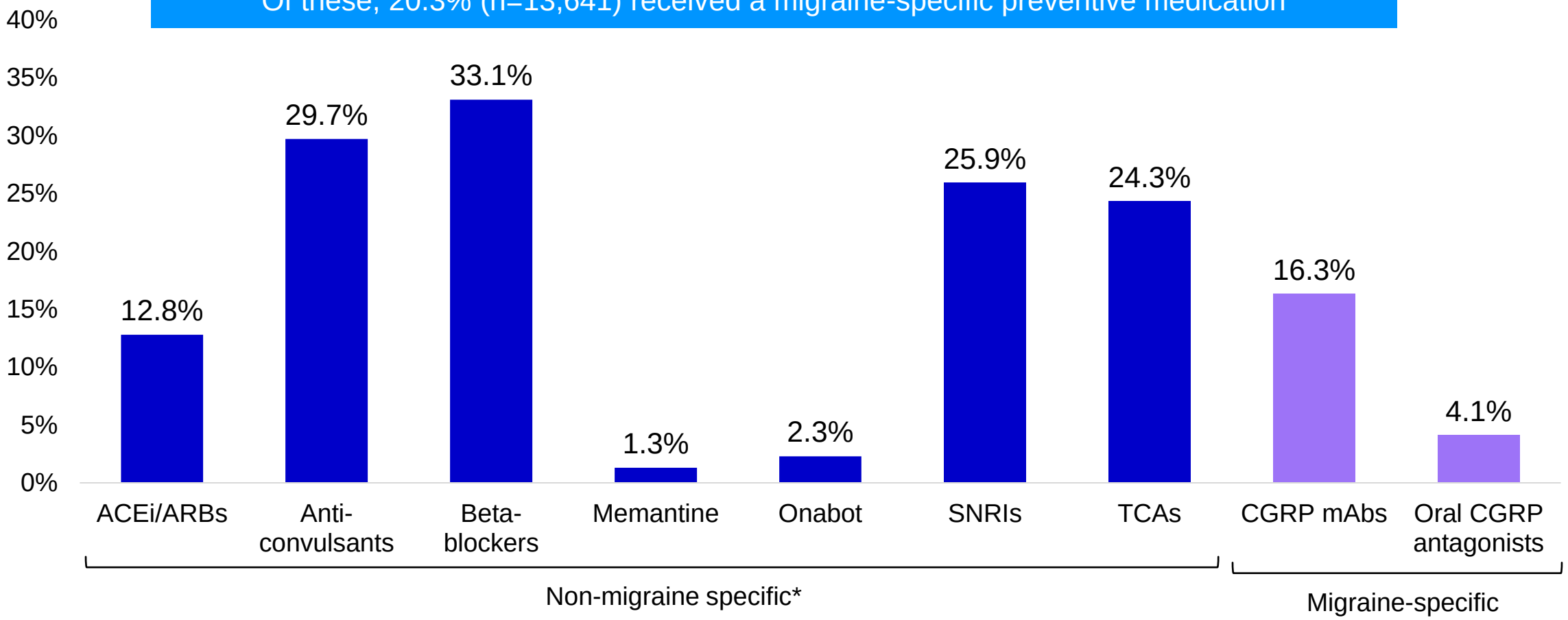


CGRP, calcitonin gene-related peptide; NSAID, non-steroidal anti-inflammatory drug

Use of Preventive Treatments During Follow-up

During the 3-year follow-up period, 40.6% (n=67,169) of individuals initiated at least one migraine preventive medication

Of these, 20.3% (n=13,641) received a migraine-specific preventive medication



* Defined as a filled prescription for medications after migraine diagnosis and no use prior to migraine diagnosis

ACEi, angiotensin converting enzyme inhibitor; ARBs, angiotensin receptor blockers; CGRP, calcitonin gene-related peptide; mAbs, monoclonal antibodies; Onabot, onabotulinumtoxinA, SNRIs, serotonin norepinephrine reuptake inhibitors; TCAs, tricyclic antidepressants

Limitations

Diagnoses of migraine and comorbid conditions relied on ICD-10-CM diagnosis codes and may not reflect true clinical diagnoses (for example, rule-out diagnoses)

Prescription data in pharmacy claims do not indicate whether the medication was consumed or taken as prescribed

Pharmacy claims data do not include over-the-counter medications or those not billed to insurance providers

Non-migraine specific preventive medications may have been prescribed for other reasons (for example, ACEi/ARBs and beta-blockers for hypertension)

ICD-10-CM, International Classification of Diseases, 10th Revision, Clinical Modification

Conclusions

New diagnoses of migraine were most often made by PCPs and in outpatient settings

Pain comorbidities, behavioral comorbidities, and cardio- and cerebrovascular conditions were common

Nearly half of individuals newly diagnosed with migraine received prescription medications within 3 years of diagnosis.

Prescribing non-migraine specific medications is common, with newer, migraine-specific drug classes used infrequently.

PCPs: primary care providers

Acknowledgements

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