



# Treatments for headaches and migraines

May 22, 2024 | 2:00 – 3:00 p.m. ET



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# Presenters



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# Learning objectives

- 1 Scope of the problem
- 2 Headache classifications
- 3 Non-pharmacologic therapy
- 4 Pharmacologic therapy
- 5 Looking ahead in your claims



# Scope of the problem



## Headaches are.....

Responsible for

**3%**

of emergency  
department  
visits annually

**4th**

Most common  
reason for a visit  
to the emergency  
department



# Migraines are.....

Classified by the Global Burden of Diseases (GBD) as the

**2nd** world cause of years of life lived with disability (YLDs)

and the

**1st** cause of YLDs in under 50s in both genders

**At the highest peak of burden between the ages of 30 to 49 years old**



Steiner, T.J., Stovner, L.J., Vos, T. *et al.* Migraine is *first* cause of disability in under 50s: will health politicians now take notice?. *J Headache Pain* **19**, 17 (2018). <https://doi.org/10.1186/s10194-018-0846-2>



## Work-related statistics on headaches

38-39%

missed out on potential and opportunities respectively

29%

changed jobs to minimize likelihood of migraine

\$19.3B

Estimated total indirect cost associated with migraine in the United States.

*81% attributed to absenteeism*

- Majority of work-related impact statistics are based on migraines and absenteeism
- People with TTH tend to “work through” the headaches but with reduced productivity costs.

A company with 150,000 employees, the loss is estimated at **\$350M per year.**

*Ref ehstoday.com*

Missed work-related opportunities due to migraines among U.S. adults 2017. Published by [John Elflein](#), Jul 22, 2019. *Ref Statista.com* (Good charts graphics etc.)

# Casualty of headaches

- Trauma
- Orthopedic injuries
- Ergonomics
- Sleep disorders (shift work, i.e.)
- Environmental and/or chemical exposures
- Stress (physical and emotional)
- Side effect of medications
- Exacerbation of pre-existing medical condition

**Headaches are ratable – AMA Guide to the Evaluation of Permanent Impairment**

Ref -Article California WC published 2019 by Edward Singer Attorney. <https://www.workinjuryhelp.com/headache-injury-claims-what-to-know/>



# Headache classifications

# Primary types

MIGRAINE



TENSION (TTH)



CLUSTER



OTHER



# Tension-type headache (TTH)

- Most common type of headache
- Nonspecific symptoms
- Dull, pressure, “tight band”

## CLASSIFICATION

- Infrequent Episodic
- Frequent Episodic < 15 days/month
- Chronic >15 days/month
- Tension type can coexist with Migraine



**78%** of adults will  
experience a  
tension headache



# Migraines

- Symptoms:  
Unilateral, Aura +/-, N/V, complex migraines
- Hereditary component:  
Genetically 75% chance with parental migraines
- Hormonal component:  
2-3x more likely in women
- Incidence change during puberty, pregnancy, menopause

## CLASSIFICATION

- Infrequent Episodic
- Frequent Episodic < 15 days/month
- Chronic >15 days/month
- Tension type can coexist with Migraine



Migraines affect  
**13%** or **29.5M**  
Americans

## Secondary types

- Trauma
- Substances
  - Exposure
  - Medication side effects
  - Withdrawal/rebound headaches
- Head, eyes, ears, nose and throat (HEENT) disorders
  - Vascular
  - Non-vascular
  - Infection
  - Other
- Psychiatric disorders

## Category III: Neuropathies

Defined as neuropathic pain of the head caused by a lesion or disease

Examples:

- Trigeminal neuralgia
- Occipital neuralgia
- Post herpetic
- Central pain – multiple sclerosis or post stroke



# Non-pharmacological headache treatments

# Non-pharmacological treatment of headaches

- Symptoms: frequency, intensity and duration  
Pain diaries helpful for diagnosis, triggers and progress in treatment
- Always look for underlying cause
- Pharmacological Management

## NON-PHARMACOLOGICAL STRATEGIES

- Relaxation techniques
- Proper sleep and diet habits
- Exercise
- Avoid behaviors or situations that may trigger an attack.
- Physical therapy (Exercise, traction, MFR, dry needling)
- Trigger point injections
- Biofeedback
- Acupuncture
- Massage



# “New” Medication class for treatment of migraine headaches

- In 2018, the first Calcitonin Gene-Related Peptide (CGRP) acting medications came to market
- First new therapy option for migraine treatment in ~15-20 years
- Novel acting – targeting a new protein involved with migraine episodes



## Injectables

- Aimovig (erenumab-aooe) – May 2018
- Emgality (galcanezumab) – approved September 2018
- Ajovy (fremanezumab) – approved September 2018

## Infusion

- Vyepti (Eptinezumab) – approved February 2020

## Oral

- Ubrelvy (ubrogepant) – approved December 2019
- Nurtec (Rimegepant) – Approved February 2020
- Qulipta (Atogepant) – approved September 2021

## Intranasal

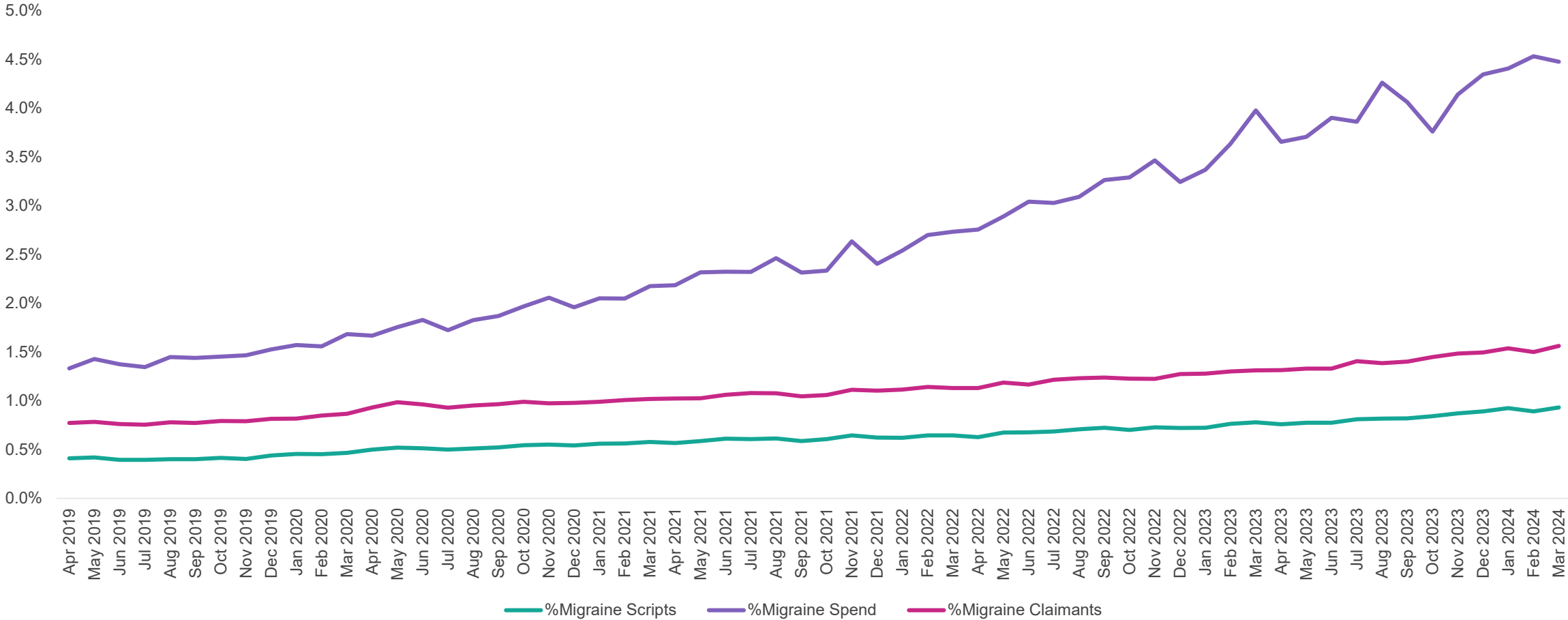
- Zavzpret (zavegepant) – approved March 2023

## New class of migraine medications

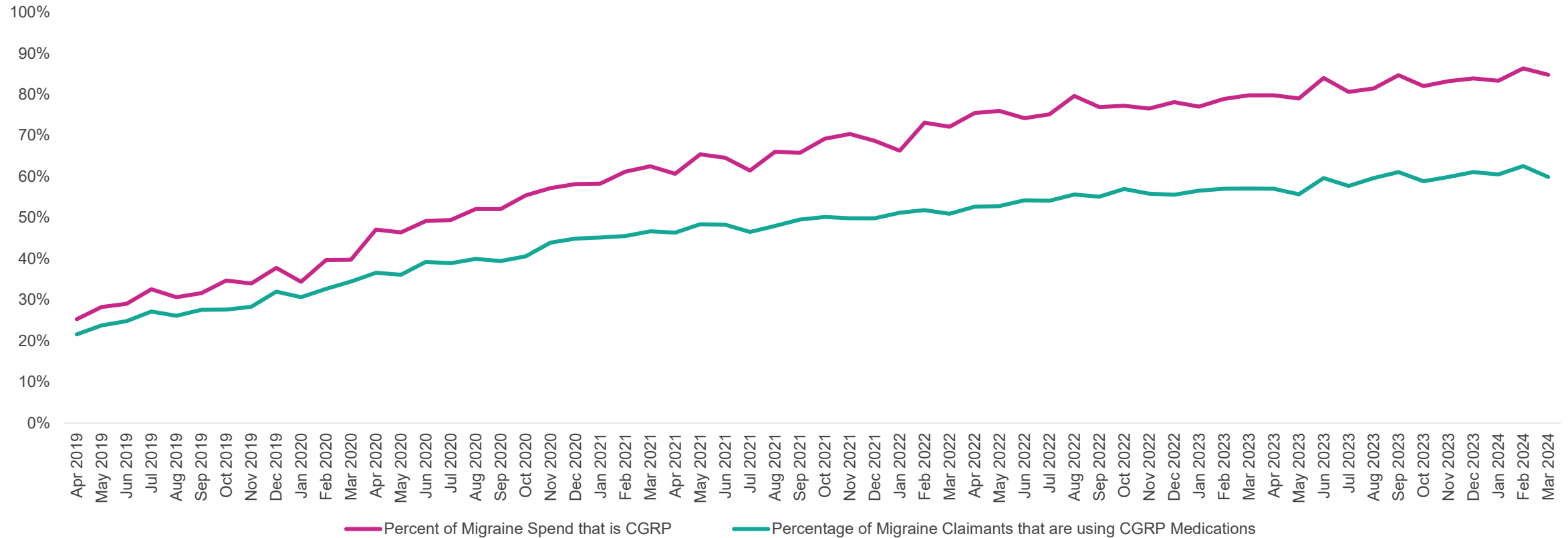
- Calcitonin gene-related peptide (CGRP) medications now comprise the majority of migraine medication spend and is approaching the majority of scripts
- Trend continuation is expected with this class of medications becoming more impactful to migraine claim cost



# Claims using migraine medications has doubled and spend has more than tripled

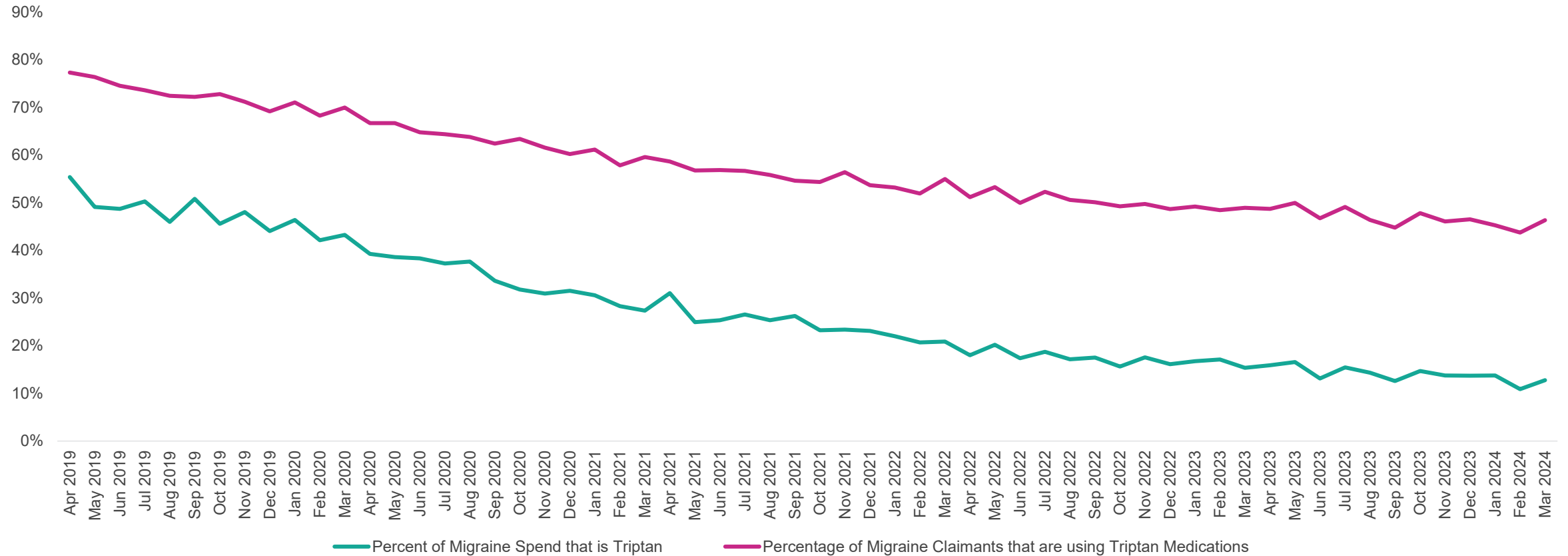


# CGRP medications have conquered the migraine medication class



- CGRP Medications went from less than ¼ of migraine medication spend to over 85%
- Claimants on CGRP medications went from less than ¼ to over 60%

# Triptans medications are the losers in the migraine medication class

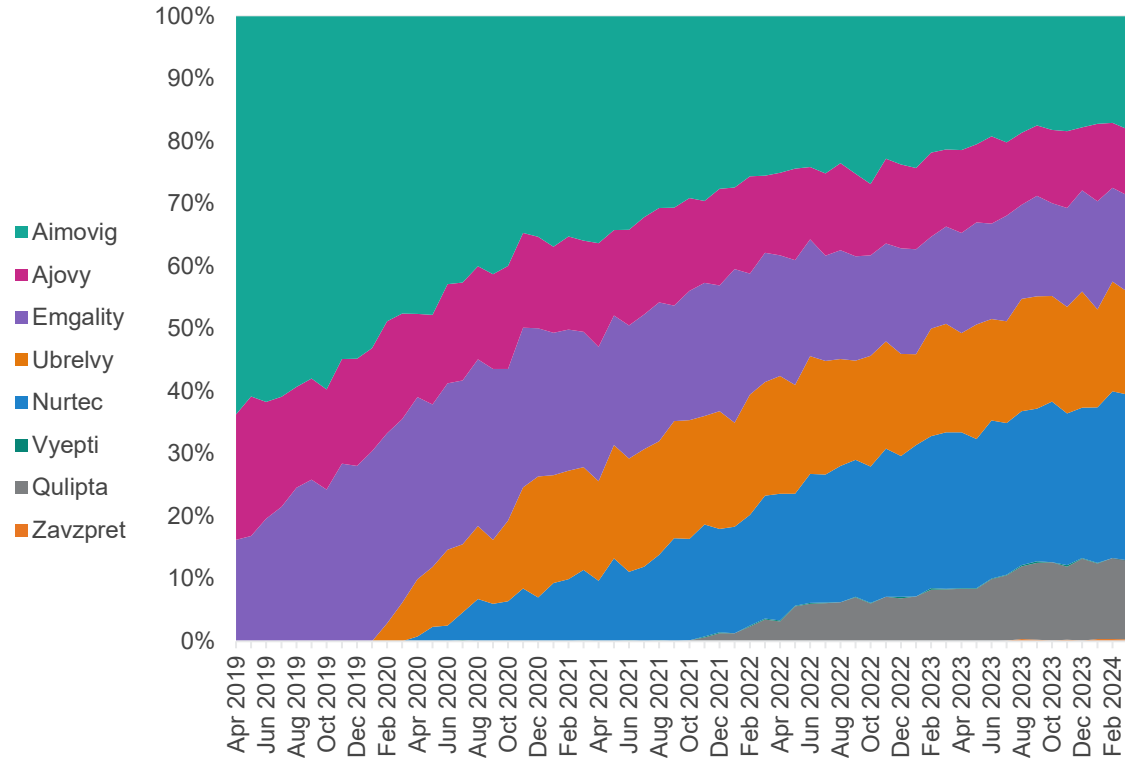


- Triptan medications went from greater than 55% of migraine medication spend to less than 15%
- Claimants on Triptans medications went from greater than 75% to less than 45%

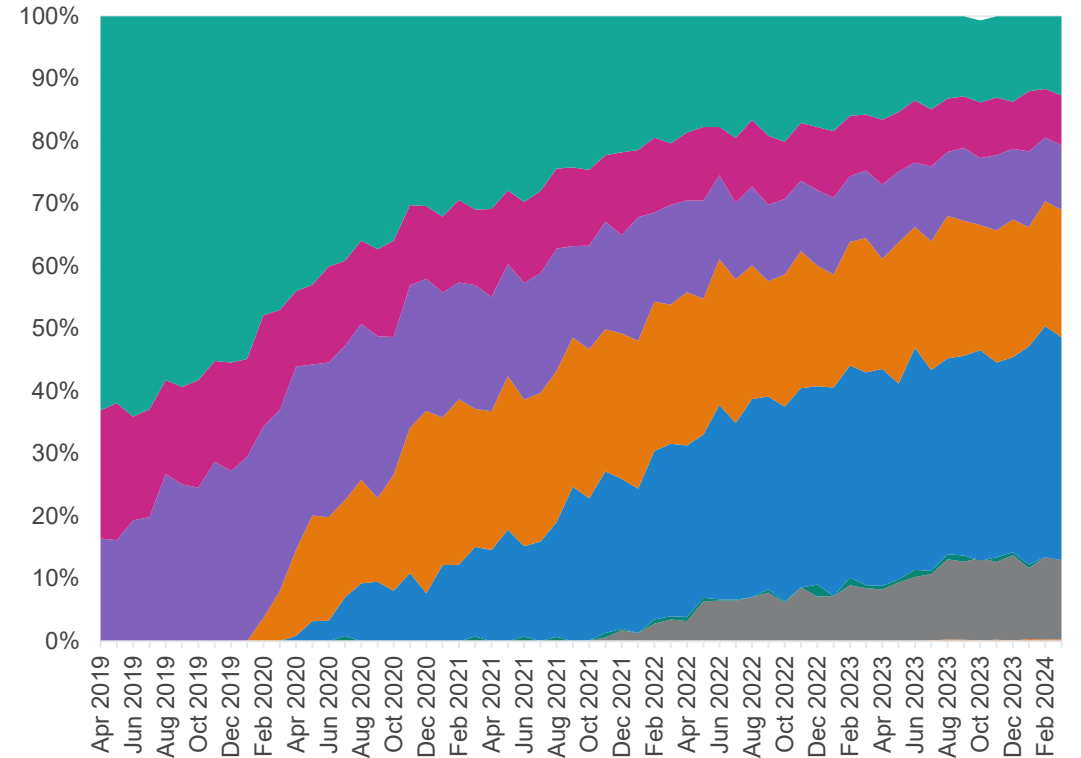


# Nurtec is the class leader in spend in scripts

CGRP Class Breakdown by Scripts



CGRP Class Breakdown by Spend



- Nurtec represents greater than 26% of CGRP scripts and 36% of CGRP Spend
- Emgality, Ajoovy and Aimovig are not far behind



# Pharmacological treatments for headaches and migraines

# Treatment of acute headaches and prevention



# Acute migraine treatment

Goals of treating acute migraines include:

- Quick and sustained freedom from pain and other symptoms (i.e. nausea, photophobia)
- Restoring ability to function
- Reducing need for repeat dosing or use of rescue medications
- Improved self-care and reducing the need for Emergency Room visits, clinician or ambulatory infusion center visits
- Treatment has few or no adverse events
- Cost considerations

Poor control of acute symptoms is associated with higher migraine-related disability and risk of disease progression

<https://headachejournal.onlinelibrary.wiley.com/doi/10.1111/head.14153>

# Migraine medications – Acute migraine treatments with established efficacy

Non-Specific		Migraine-Specific			
Over-the-counter Analgesics	Non-steroidal Anti-inflammatory Drugs (NSAIDs)	“Ergots”	“Triptans”	5-HT1F Receptor Agonist	CGRP Receptor Blockers “Gepants”
<p><b>EXAMPLES</b></p> <ul style="list-style-type: none"> <li>• Aspirin</li> <li>• Advil, Aleve (OTC NSAIDs - ibuprofen, naproxen)</li> <li>• Excedrin Migraine (acetaminophen/ aspirin/caffeine)</li> </ul>	<p><b>EXAMPLES</b></p> <ul style="list-style-type: none"> <li>• Cambia (diclofenac powder for oral solution)</li> <li>• Naprosyn (naproxen)</li> <li>• Motrin (ibuprofen)</li> <li>• Elyxyb Soln (celecoxib oral solution)</li> </ul>	<p><b>EXAMPLES</b></p> <ul style="list-style-type: none"> <li>• D.H.E 45 injection (used IV or SubQ)</li> <li>• Migranal nasal spray, Trudhesa nasal spray (Dihydroergotamine)</li> <li>• Ergomar (Ergotamine sublingual tablets)</li> <li>• Cafergot tablets (Ergotamine-caffeine)</li> <li>• Migergot suppositories (Ergotamine-caffeine)</li> </ul>	<p><b>EXAMPLES</b></p> <ul style="list-style-type: none"> <li>• Imitrex, Onzetra Xsail (nasal powder), Tosymra (nasal solution), Zembrace SymTouch injectable (sumatriptan)</li> <li>• Maxalt, Maxalt MLT (rizatriptan)</li> <li>• Axert (Almotriptan)</li> <li>• Relpax (Eletriptan)</li> <li>• Frova (Frovatriptan)</li> <li>• Amerge (Naratriptan)</li> <li>• Zomig, Zomig ZMT, Zomig nasal spray (Zolmitriptan)</li> <li>• Treximet (sumatriptan and naproxen combination)</li> </ul>	<p><b>EXAMPLES</b></p> <ul style="list-style-type: none"> <li>• Reyvow (Lasmiditan)</li> </ul>	<p><b>EXAMPLES</b></p> <ul style="list-style-type: none"> <li>• Nurtec ODT (Rimegepant)</li> <li>• Ubrelvy tablets (Ubrogepant)</li> <li>• Zavzpret Nasal spray (Zavegepant)</li> </ul>

# Preventative migraine treatment

Preventing migraines:

- Goal is to reduce migraine frequency, intensity, duration, and disability from migraine headaches
- ~40% of migraine sufferers would benefit from preventative therapy
  - Those with diagnosis of episodic migraine (with or without aura) with 4 to 14 monthly migraine days (MMD) with at least moderate disability
  - Those with a diagnosis of chronic migraine (with or without aura) with greater than or equal to 15 migraine headache days

Migraine preventative therapy should reduce the number of migraine headache days, but acute medications are often still needed to address acute symptoms

<https://headachejournal.onlinelibrary.wiley.com/doi/full/10.1111/head.14692>

# Migraine medications – Migraine headache prevention

Non-Specific				Migraine-specific	
Anticonvulsants	Antihypertensives	Antidepressants	Botulinum Toxins	CGRP Blocking “monoclonal antibodies”	CGRP Receptor blockers “Gepants”
<p><b>EXAMPLES</b></p> <ul style="list-style-type: none"> <li>• Topiramate</li> <li>• Divalproex sodium/valproate sodium</li> </ul>	<p><b>EXAMPLES</b></p> <ul style="list-style-type: none"> <li>• propranolol</li> <li>• metoprolol</li> <li>• timolol</li> <li>• Atenolol</li> <li>• nadolol</li> <li>• candesartan</li> </ul>	<p><b>EXAMPLES</b></p> <ul style="list-style-type: none"> <li>• Amitriptyline</li> <li>• Nortriptyline</li> <li>• Venlafaxine</li> <li>• Duloxetine</li> </ul>	<p><b>EXAMPLES</b></p> <ul style="list-style-type: none"> <li>• Botox (OnabotulinumtoxinA)</li> </ul>	<p><b>EXAMPLES</b></p> <ul style="list-style-type: none"> <li>• Aimovig Injection (Erenumab)</li> <li>• Ajovy injection (Fremanezumab)</li> <li>• Emgality injection (Galcanezumab)</li> <li>• Vyepti Infusion (Eptinezumab)</li> </ul>	<p><b>EXAMPLES</b></p> <ul style="list-style-type: none"> <li>• Nurtec ODT (Rimegepant)</li> <li>• Qulipta tablet (Atogepant)</li> </ul>



# Guidelines for use of new migraine therapies - CGRP

American Headache Society Consensus – released in 2021 [summarized]:

- Acute migraine therapy – treat with a triptan [i.e. Imitrex (sumatriptan), Maxalt (rizatriptan)] first, trial two different triptans before moving to newer CGRP medications unless patient has a contraindication or medical reason triptans cannot be used.
- Preventative migraine therapy – for frequent migraine attacks or attacks that significantly impact daily routines or cause some or severe disability. Use of newer CGRP prevention medications recommended after two, 8-week trials of traditional preventative therapies (i.e. amitriptyline, topiramate, propranolol, venlafaxine, etc) resulting in an inadequate response or inability to tolerate side effects. Also recommend reserving use in some cases until after two quarterly injections (6 months) of onabotulinumtoxinA (Botox) have been tried and not been tolerated or resulted in an inadequate response.

**Updated AHS Consensus as of March 11, 2024 – Updated guidelines now place CGRP preventative medications as a *first line treatment option* due to evidence of efficacy, safety, and tolerability**

<https://headachejournal.onlinelibrary.wiley.com/doi/10.1111/head.14153>

[Calcitonin gene-related peptide-targeting therapies are a first-line option for the prevention of migraine: An American Headache Society position statement update - Charles - Headache: The Journal of Head and Face Pain - Wiley Online Library](#)

# Migraine case study #1 – prior authorization request received for Ubrelvy™ 100mg



Image changed to protect injured worker's identity

- 47-year-old female, injured in December 2021 by heavy cartons falling from shelf onto head/neck area
- Diagnosed with concussion, disc disorder/cervical spine with myopathy, cervical fusion performed, migraine headaches noted post cervical fusion
- Migraine attacks were initially treated with naproxen and sumatriptan with no response. Rizatriptan was then utilized and was helpful for about 6 months, then stopped working on migraine attacks. Rizatriptan 10mg #5/month with a cost ~\$165^
- Injured worker newly diagnosed with high cholesterol and hypertension; coronary artery disease as comorbid conditions not related to work injury, however, are contraindications for triptan therapy noted in medical records
- Injured worker prescribed Ubrelvy (ubrogepant) 100mg, #10/month as needed for migraine headache. Monthly cost is ~\$1,240^, prior authorization request received

## Review

- Migraine headache related to workplace injury
- Initial treatment with adequate trials of triptan therapies (sumatriptan and rizatriptan) noted
- Comorbid conditions not related to workplace injury but do make it medically necessary to utilize a different therapy for acute migraine treatment
- Ubrelvy is approved for acute migraine therapy

## Comments

- Ubrelvy annual cost is ~\$14K compared to rizatriptan therapy which was ~\$2K annually. Change to Ubrelvy was medically indicated and appropriate. Adjust claim reserves and authorize.
- Monitor claim for increased frequency of use of Ubrelvy which could indicate decreased response or need to add preventative therapy.

^Redbook, AWP pricing accessed May 2024

# Migraine case study #2 – prior authorization received for Aimovig®



Image changed to protect injured worker's identity

- 30-year-old female, injured in March 2023
- Injury was a slip and fall injury to shoulder, tendinitis/bursitis
- Previous medications filled were naproxen 500mg #14 after injury in March, followed by a one-month supply of celecoxib 100mg in April.
- First migraine medication to present on claim was in November 2023 for Aimovig (erenumab-aooe) 70mg, ~\$903<sup>^</sup>
- No medical records from prescriber for Aimovig

## Review

- Is Migraine headache related to workplace injury? Do they have a history of migraine headaches?
- Aimovig is an injectable for migraine prevention not acute migraine.
- Anti-inflammatory medications were filled shortly after initial injury, then a gap in prescriptions, now a request for a preventative CGRP migraine medication? No acute migraine medications needed?
- No medical records to assess relatedness, possible comorbid conditions, or history of migraines. Is this an authorized prescriber?

## Comments

- Aimovig is a preventative therapy with no prescription history of acute migraine medication needed on claim.
- Obtain medical records from prescriber and determine if migraine is related to workplace injury. Where were previous acute migraine medications filled?
- Request a letter of medical necessity for preventative migraine medication if determined migraine compensable on claim.



# Ongoing research in migraine management

# Looking ahead in workers' comp claims

## Neurostimulation

## Nerve Blocks

## Working from home (WFH) – pandemic and beyond

[https://www.osha.gov/SLTC/etools/computerworkstations/wkstation\\_enviro.html](https://www.osha.gov/SLTC/etools/computerworkstations/wkstation_enviro.html) eTool for workstations through OSHA addressing ergonomics, workstation components, and environment including lighting, glare, ventilation.

## EMF exposures increasing and being looked at as occupational related illnesses

- Common electromagnetic field or EMF sources: Radio-frequency radiation (RF) (3 MHz to 300 GHz) is emitted from radio and TV broadcast antennas, Wi-Fi access points, routers, and clients (e.g. smartphones, tablets), cordless and mobile phones including their base stations, and Bluetooth devices.
- Emerging electromagnetic hypersensitivity (EHS) is more and more recognized by health authorities, disability administrators and case workers, politicians, as well as courts of law. Common EHS symptoms include headaches, concentration difficulties, sleep problems, depression, a lack of energy, fatigue, and flu-like symptoms.

Belyaev I, Dean A, Eger H, Hubmann G, Jandrisovits R, Kern M, Kundi M, Moshammer H, Lercher P, Müller K, Oberfeld G, Ohnsorge P, Pelzmann P, Scheingraber C, Thill R. EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses. Rev Environ Health. 2016 Sep 1;31(3):363-97. doi: 10.1515/reveh-2016-0011. PMID: 27454111.

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