## **EPH** 222

# Real World Objectively Measured Productivity Losses of Employees with Migraines and the Use of Calcitonin Gene-Related Peptide Inhibitors (CGRPis) in United States Employees

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## **Background**

- Persons with Migraine (PwM) headaches have increased workplace absences.
- Calcitonin gene-related peptide inhibitors (CGRPi):
  - Aim to reduce the impact of migraines
  - Often require prior authorization based on a diagnosis (Dx) and migraine frequency
  - Are given to people with higher frequency of migraines for prevention
- We explored US employees' annual PwM diagnoses, CGRPi use, prescription costs, and short-term disability (STD) utilization.

## **Objectives**

To characterize migraine diagnoses, prescriptions and short-term disability (STD) claims of employees with migraines and those initiating a CGRPi between 2017 to 2022.

## **Study Population**

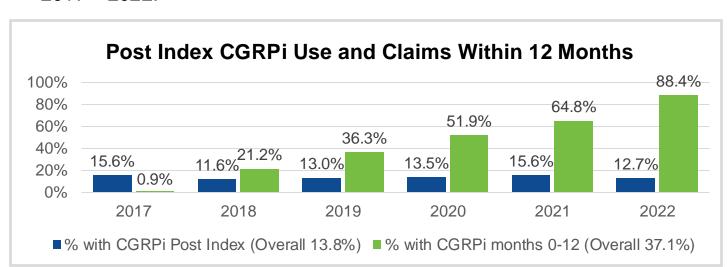
- US employees within the Workpartners Research Reference Database (RRDb) from 2001 to present, covering all US states:
  - Medical and pharmaceutical claims for over 5.5 million employees and dependents with enhanced employee demographics (including race and marital status) and job-related information (salary, job-type, full-/part-time)
  - Absence durations and payments for employees using STD=1.3 million, Long-term Disability=1.2 million, and Workers' Compensation=2.8 million
- Workpartners RRDb has been used for research on the impact on:
  - Employees with Bipolar disorder, 1,2 rheumatoid arthritis, 3 cancer, 4 diabetes,<sup>5</sup> eye disorders,<sup>5,6</sup> and multiple sclerosis<sup>7</sup>
  - Caregivers of major depressive disorder with and without suicidal ideation,8 pediatric asthma,9 epilepsy,10 cancer11 and multiple sclerosis12
- See online supplemental materials for additional RRDb information.

#### Methods

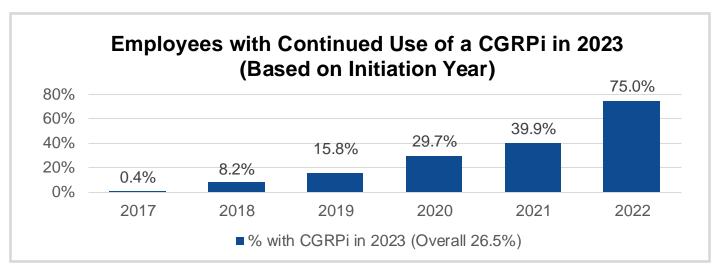
- Retrospective analysis of WorkPartners' RRDb of employees.
- All subjects received an initial migraine Dx (ICD-10 G43.x) between 2017 and 2022.
- All employees had ≥1 year eligibility post-Dx with continuous data into 2023.
- Persons with Migraine (PwM) were reported based on their initial Dx year.
- Outcomes included:
  - Direct (plan plus employee medical and prescription) costs
  - Indirect costs (inflation adjusted to December 2023) and lost days due to STD claims (with a migraine Dx) anytime following their index date
  - Initial and use of CGRPi in 2023

#### Results

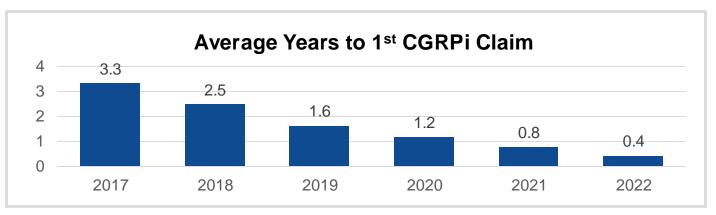
- 16,588 Persons with Migraine (PwM) were identified with:
  - ≥77.9% females in each year and
  - An average of 13.8% had CGRPi claims
- Overall migraine Short-term Disability claims anytime post-index Dx annually decreased from 2.4% to 0.7%.
- Of the persons with migraines on a CGRPi, the percentage of members from 2017 – 2022.



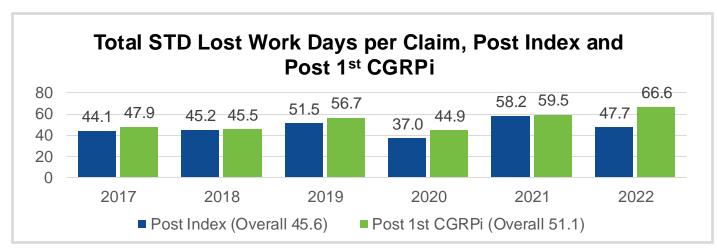
## Results (cont.)



Mean time until the first CGRPi claim has decreased, suggesting that access to these drugs have improved



- The precent of employees with STD claims overall:
  - Post-index was 1.4% and decreased from 2.4% to 0.7%
  - Post-CGRPi was 2.7% and decreased from 3.7% to 1.4% before a slight increase in 2022
- STD leave durations and costs are higher for those with a CGRPi, which may indicate a more severe disease state.
- Overall migraine STD claims anytime post-index Dx annually:
  - Mean claim durations ranged from 37.0 to 58.2 lost days/claim
  - Mean costs/claim ranged from \$6,368 to \$12,370



#### **Conclusions**

- The rate at which people are put on a calcitonin gene-related peptide inhibitor (CGRPi) has increased significantly since their inception.
- Access to CGRPis has improved despite their high cost and prior authorization requirements.
- Persons with migraine headaches and frequent headaches may open Short-term Disability (STD) claims, however the claims per employee appear to be decreasing with time.

### References

- 1 Gardner HH, et al. J Clin Psychiatry. 2006;67(8):1209-18.
- 2 Brook RA, et al. Am J Manag Care. 2007;13(4):179-86.
- 3 Kleinman NL, et al. J Occup Environ Med. 2013;55(3):240.
- 4 Brook RA, et al. J Oncol Res Ther. 7: 10142.
- 5 Brook RA, et al. *Postgrad Med.* 2015 Jun;127(5):455-62.
- 6 Brook RA, et al. Am Health Drug Benefits. 2023 [Web Exclusive]. 7 Hersh CM, et al. *J Med Econ*. 2021;24(1):479-486.
- 8 Kuvadia H, et al. Prim Care Companion CNS Disord. 2021;12;23(4):20m02893.
- 9 Kleinman NL, et al. Ann Allergy Asthma Immunol. 2009;103(2):114-20.
- 10 Brook RA, et al. *Am Health Drug Benefits*. 2018;11(8):396-403.
- 11 Brook RA, et al. J Oncol Res Ther. 7: 10143.
- 12 Hendin B, et al. J Health Econ Outcomes Res. 2023 Apr 13;10(1):91-101.





