Impact of Eptinezumab on Healthcare Resource Utilization in Patients With Migraine in the United States: A Retrospective Cohort Claims Database Study

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KEY POINTS

- Eptinezumab significantly reduced total medical cost, which was primarily driven by a reduction in inpatient cost and by patients with chronic migraine.
- Medical cost reduction was especially high among patients with opioid use or who received ≥4 infusions of eptinezumab.

CONCLUSIONS

- These results can inform payers of potential medical cost offsets with eptinezumab treatment in patients with migraine.

Introduction

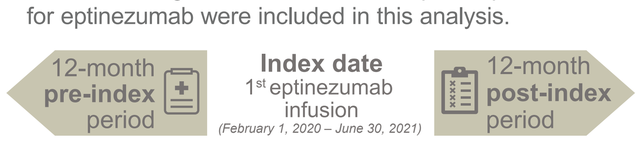
- Migraine is a common neurological disease associated with significant personal and economic burden.[1,2]
- Eptinezumab is an anti–calcitonin gene-related peptide monoclonal antibody indicated for the preventive treatment of migraine,[3] with safety and efficacy demonstrated in multiple large-scale clinical trials.[4-7]
- To the best of our knowledge, there is no evidence showing the effect of preventive migraine treatment with eptinezumab on healthcare resource utilization (HCRU) in patients with migraine.

Objective

- To estimate the real-world impact of eptinezumab on medical cost in patients with migraine

Methods

- This was an observational retrospective cohort study using data from the IQVIA PharMetrics Plus database.
- Adults with migraine who received ≥2 prescription claims for eptinezumab were included in this analysis.



- Primary outcomes were medical costs and counts, including outpatient visits, urgent care visits, ER visits, inpatient visits, and total medical cost. Costs reflect the sum of patient and insurer payments.
- Key inclusion criteria and sample size are shown in **Figure 1**.
- Differences in changes, pre- and post-index, in continuous variables were estimated using paired *t*-tests. To estimate the impact of outliers on cost distribution, Wilcoxon Sign tests and bootstrapping (5000 repetitions) sensitivity analyses were performed.
  - Results were stratified by the number of eptinezumab infusions received, opioid use, and migraine type.
- Note: The numerical figures presented in the abstract did not include onabotulinumtoxinA administration costs of surgical record type recategorized from medical to pharmacy costs. The numerical figures in this poster reflect this adjustment.

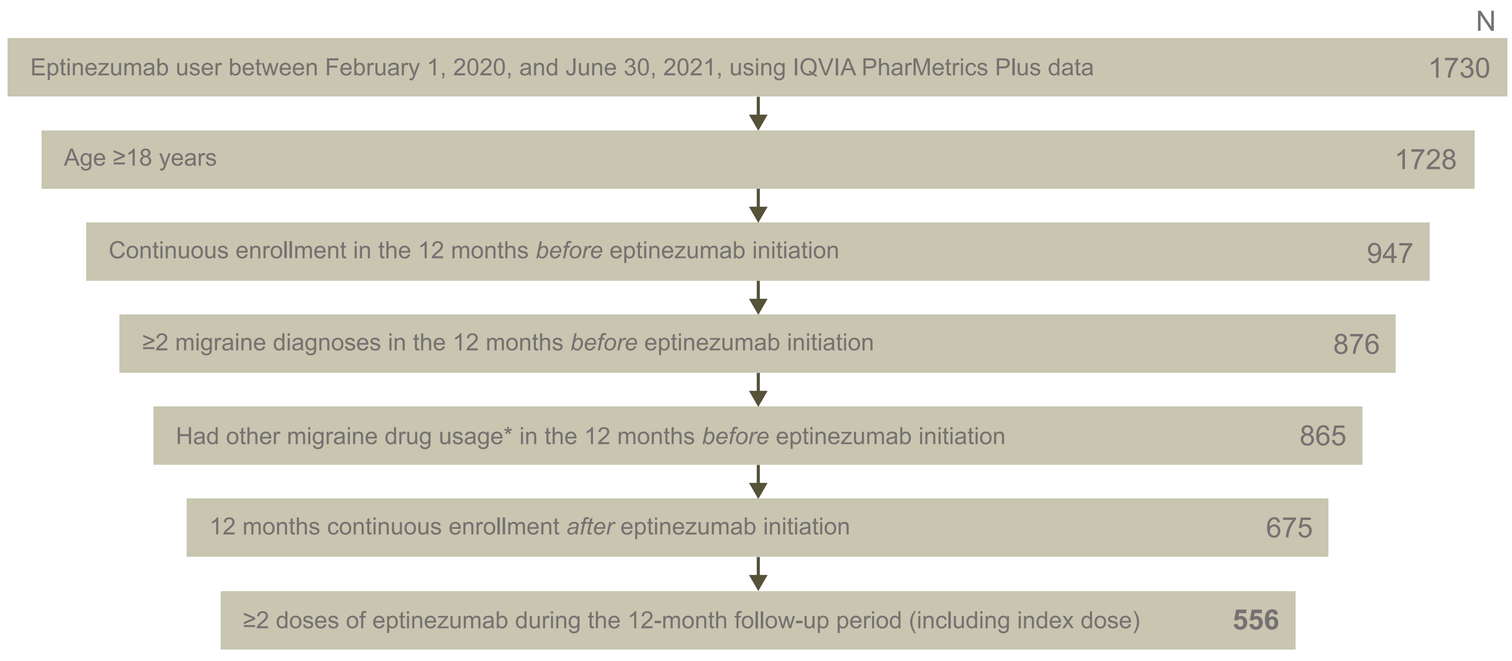
Results

- A total of 556 patients were included in this cohort (**Figure 1**). Patients were primarily female (87%) with a chronic migraine diagnosis (84%) and an average age of 45 years.
- Medical cost decreased from $21,942 in the pre-index period to $19,489 in the post-index period (change of -$2,454 [*P*<0.05]), which was primarily driven by a decrease in inpatient cost (**Figure 2**).
- The reduction in both total medical cost and migraine-related cost was greatest in patients with ≥4 infusions (**Figure 3**).
- Patients with pre-index use of anti–calcitonin gene-related peptide therapy or onabotulinumtoxinA experienced a mean reduction of $2,601 in medical costs (*P*<0.05) (**Figure 4**).
- A numerically large reduction in total medical costs was found in patients with chronic migraine compared to episodic migraine (**Figure 4**).
- Among patients with pre-index opioid use, the reduction in total medical cost was $7,850 (*P*<0.05).

Sensitivity analysis

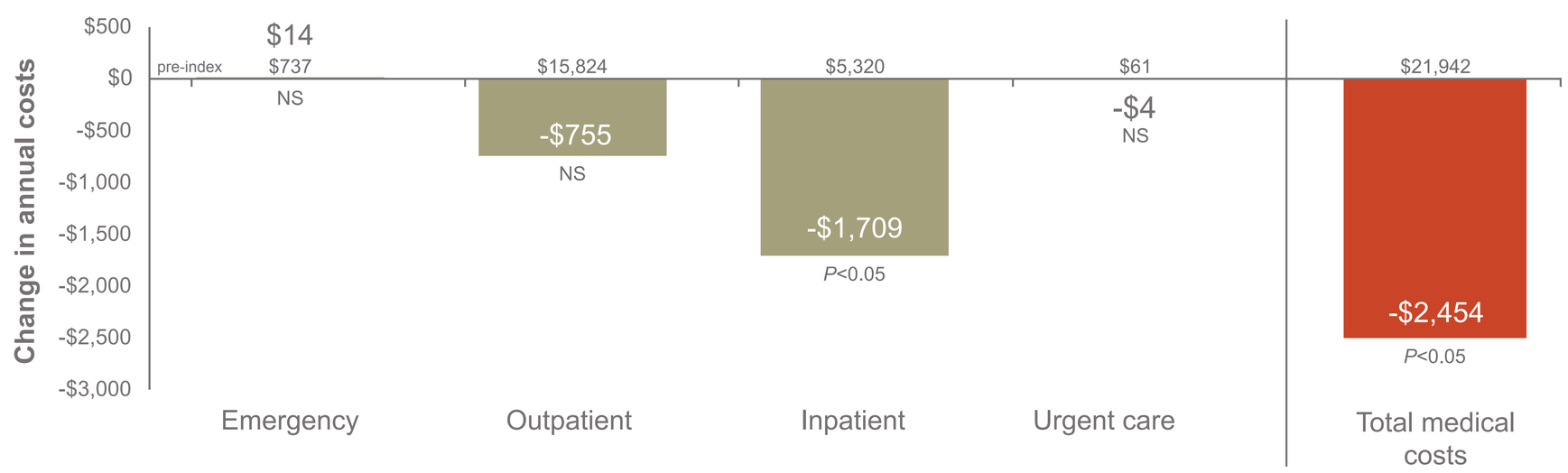
- Medical costs reduction was driven by inpatient costs. Reasons driving the inpatient costs reduction were not investigated; however, results were tested for various assumptions.
  - Bootstrapped confidence intervals reached similar conclusions.
- Cost reduction was driven by individuals with high medical costs.
  - When capping annual medical costs at $200,000, the results were not significant (*P*>0.05).

Figure 1. Key inclusion criteria and sample size



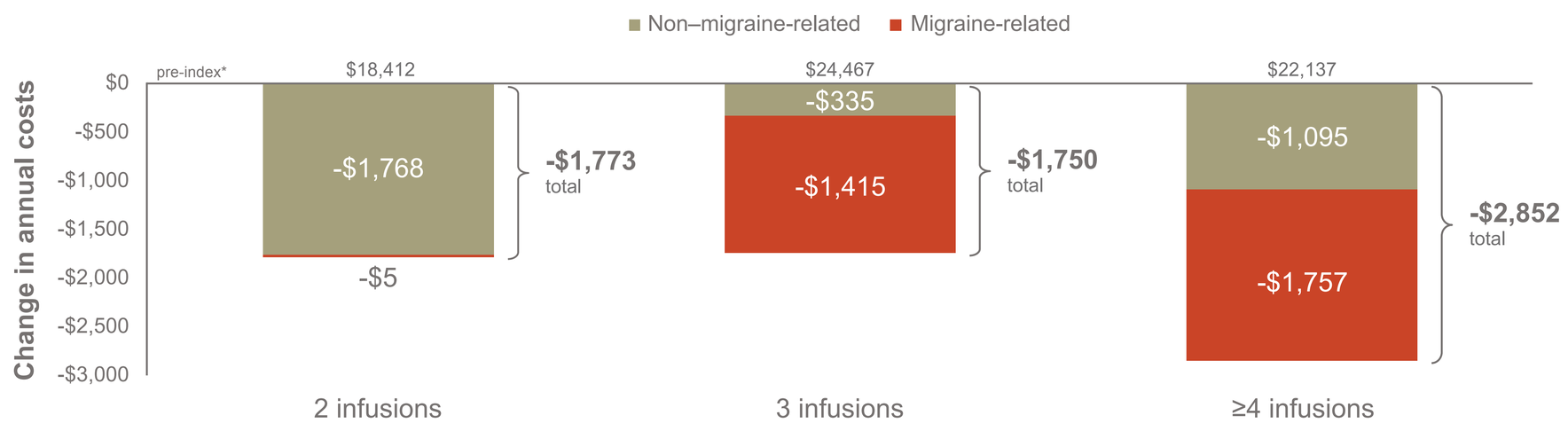
*Other migraine drug usage included an acute medication, an oral non–anti-CGRP preventive medication, a subcutaneous CGRP monoclonal antibody, oral CGRP preventives (atogepant or rimegepant), or onabotulinumtoxinA. CGRP, calcitonin gene-related peptide.

Figure 2. Change from pre-index to post-index in medical costs in the total population



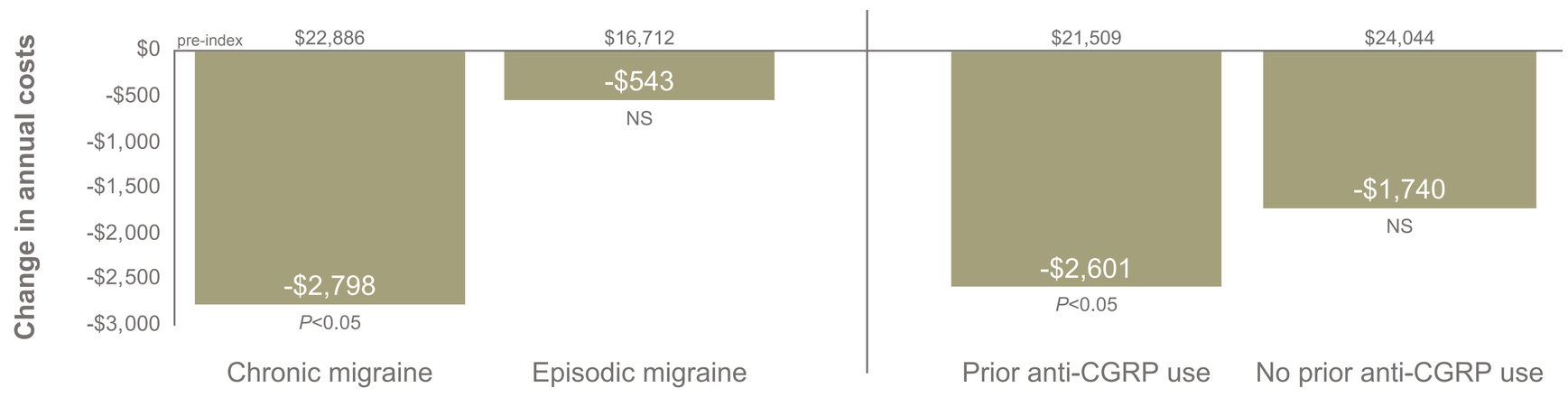
Values may not sum the total due to rounding. NS, not significant.

Figure 3. Change from pre-index to post-index in total and migraine-related medical costs by number of eptinezumab infusions



*Pre-index cost is a sum of migraine-related and non-migraine related cost.

Figure 4. Change from pre-index to post-index in total medical costs by migraine diagnosis and prior anti-CGRP use



Anti-CGRP, anti-calcitonin gene-related peptide; NS, not significant.

References

1. Ashina M. *N Engl J Med.* 2020;383(19):1866-1876.
2. Ashina M, et al. *Lancet.* 2021;397(10283):1505-1518.
3. Vyepti [package insert]. Bothell, WA: Lundbeck Seattle BioPharmaceuticals, Inc.; 2022.
4. Ashina M, et al. *Cephalalgia.* 2020;40(3):241-254.
5. Lipton RB, et al. *Neurology.* 2020;94(13):e1365-e1377.
6. Kudrow D, et al. *BMC Neurol.* 2021;21(1):126.
7. Ashina M, et al. *Lancet Neurol.* 2022;21(7):597-607.

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