# 78th AAN ANNUAL MEETING ABSTRACT

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**EMBARGOED FOR RELEASE UNTIL 4:00 P.M. ET SUNDAY, MARCH 1, 2026**

**Abstract Title:** GLP-1 Receptor Agonists and Chronic Migraine: A Real-World Cohort Study of Healthcare Utilization and Preventive Escalation

**Press Release Title:** GLP-1 drugs associated with reduced need for emergency care for migraine
*Drugs also related to lower use of drugs to stop, prevent attacks*

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**Objective:** To compare healthcare utilization, triptan use, and preventive-treatment escalation following initiation of a glucagon-like peptide-1 receptor agonist (GLP-1RA) compared with topiramate in adults with chronic migraine (CM).

**Background:** GLP-1RAs, widely used for metabolic disorders, exert anti-inflammatory and neurovascular effects that may influence migraine pathophysiology. Despite growing interest, no randomized controlled trials have assessed their preventive efficacy in migraine. To address this gap, we examined whether real-world data could reveal clinical benefits of GLP-1RA initiation compared with a standard first-line migraine preventive.

**Design/Methods:** We performed a real-world, active-comparator cohort study using TriNetX. Adults with CM initiating a GLP-1RA (liraglutide, semaglutide, dulaglutide, exenatide, lixisenatide, or albiglutide) within 12 months of diagnosis were compared with topiramate initiators, excluding prior use of the opposite class. Cohorts were 1:1 propensity-score-matched for demographics, BMI, comorbidities, and prior preventive use (β-blockers, TCAs, SNRIs, valproate, CGRP mAbs/gepants, Botox). Outcomes over 12 months included ED visits, hospitalizations, nerve-block procedures, triptan prescriptions, and new preventive initiation. Patients with prior use of each preventive were excluded from its respective outcome analysis. Risk ratios (RR) with 95% CIs were estimated.

**Results:** After 1:1 matching, 10,997 patients per cohort (mean age 48 years; 87.8% female) were analyzed. Baseline characteristics were balanced (SMD <0.1). Compared with topiramate, GLP-1RA initiators showed lower RRs for ED visits (0.90, 0.86-0.94), hospitalizations (0.86, 0.81-0.91), nerve blocks (0.87, 0.78–0.97), and triptan use (0.87, 0.84–0.91). They also showed reduced RR for initiation of TCAs (0.65, 0.55–0.77), valproate (0.52, 0.40–0.68), gepants (0.77, 0.69–0.85), CGRP mAbs (0.58, 0.52–0.65), and SNRI (0.80, 0.64–0.995). There were no significant differences in beta-blocker initiation.

**Conclusions:** In CM, GLP-1RA initiation compared with topiramate was associated with lower acute-care utilization and less escalation to additional preventives, despite similar baseline profiles. These findings suggest a potential role of GLP-1RAs in migraine management and warrant prospective evaluation.