

Continuing Medical Education Increases Knowledge, Competence, and Confidence Related to the Use of Non-Oral Acute Migraine Therapies Among Neurologists

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BACKGROUND

The availability of many acute migraine therapies has made the management of migraine more complex but at the same time allowed for individualization of treatment to meet each patient's specific needs.¹ Gastroparesis, which results in reduced systemic absorption of orally administered medications, can occur in patients with migraine headache.² Clinicians may be overlooking the connection between gastroparesis and its effect on migraine therapeutics.³ There is a need for clinicians to recognize the role of gastric emptying in migraine management, especially when patients have symptoms of nausea, vomiting, and/or abdominal pain and do not achieve relief of migraine symptoms from oral abortive treatment.³ A study was undertaken to evaluate the effectiveness of an online educational intervention to improve knowledge and confidence among neurologists regarding non-oral acute pharmacotherapies for the management of migraine.



METHODS



Neurologists
(n = 94)



This online educational activity was presented in a 30-minute video-based discussion format between 3 clinician headache experts on the topic of non-oral acute pharmacotherapies for migraine. Data were collected between March 23, 2022 and May 4, 2022.⁴



Neurologists
(n = 94)

How to Read the Linked Learner Assessment

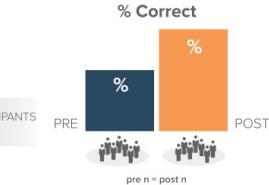
OUTCOMES COMPLETERS

Each individual completed BOTH the pre and post-education questions

SAME individuals pre and post-education



SUMMARY STATISTICS FOR PARTICIPANTS WHO PROVIDE COMPLETE DATA



LINKED LEARNER

Each individual tracked pre and post-education

Learners serve as their own controls

BY QUESTION

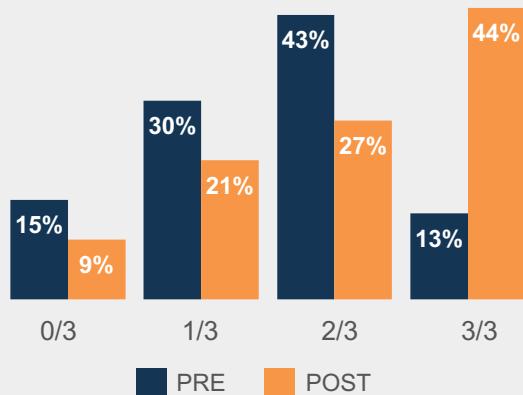


OVERALL
IMPROVED answers at least one more question correctly
REINFORCED answers the same number of questions correctly pre/post
NEED EDUCATION answers no questions correctly at post or fewer than at pre

RESULTS

Neurologists (n = 94)

TOTAL CORRECT RESPONSES



MCNEMAR'S CHI-SQUARE TEST

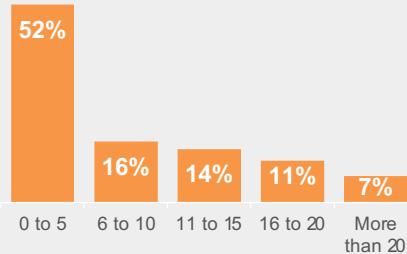
P <.001

COHEN'S d

0.51

EFFECT SIZE	EDUCATIONAL IMPACT
< .20	MODEST
.20 - .49	SMALL
.5 - .79	MODERATE
≥0.80	LARGE

PATIENT LOAD



How many patients with migraine do you see monthly who use nonoral therapies for the management of their headaches?

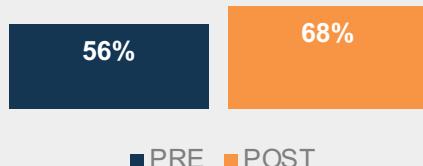
RESULTS (continued)

QUESTION 1 RESULTS

Greater ability to interpret results from common migraine-specific questionnaires

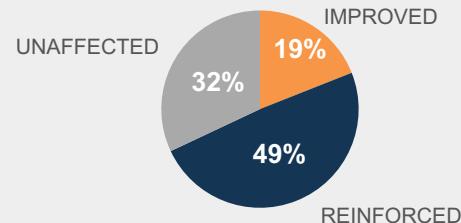
Neurologists (n = 94)

AGGREGATED RESULTS



$P < .05$

LINKED LEARNING RESULTS



Which of the following best describes a Migraine Disability Assessment (MIDAS) score of 12 for a patient with episodic migraine (reports 4 out of 30 headache days per month)? (Correct answer: Moderate disability)

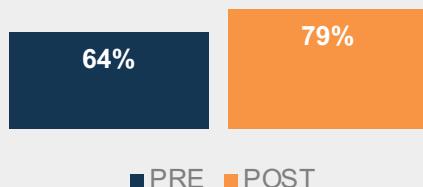
RESULTS (continued)

QUESTION 2 RESULTS

Clinicians have a greater understanding of the relationship between gastroparesis and response to orally administered migraine medications

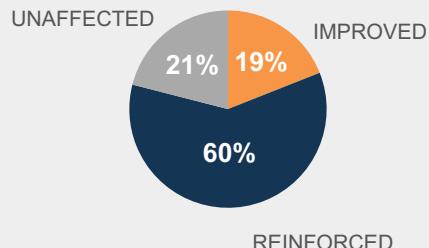
Neurologists (n = 94)

AGGREGATED RESULTS



$P < .01$

LINKED LEARNING RESULTS



Which of the following best explains why an individual with migraine may not experience symptom relief despite using a previously effective oral acute therapy? (Correct answer: Gastroparesis)

RESULTS (continued)

QUESTION 3 RESULTS

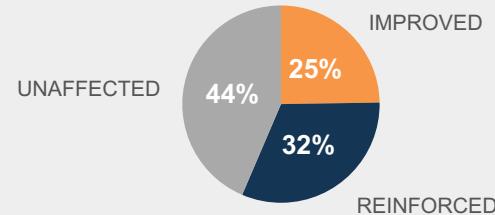
Greater competence in identifying patients who may benefit from a nonorally administered migraine therapy

Neurologists (n = 94)

AGGREGATED RESULTS



LINKED LEARNING RESULTS

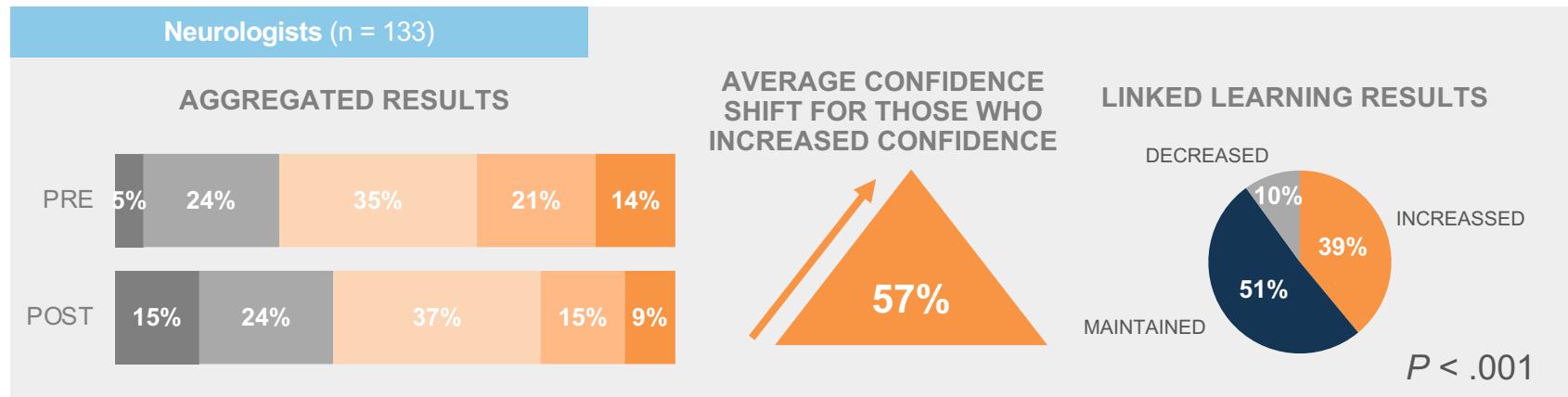


$P <.001$

A 34-year-old woman with a 5-year history of migraine presents with wake-up headache, describing the pain as severe in intensity and almost always associated with nausea and, sometimes, vomiting. She tells you that she has missed 8 days of work since these headaches began approximately 3 months ago. The patient takes rizatriptan for her wake-up headaches, but it fails to relieve her pain even after a second dose. When it does relieve her pain, she frequently experiences pain recurrence a few hours later. Based on clinical evidence, which of the following medications would be the best treatment option for this patient?
(Correct answer: Dihydroergotamine [DHE] nasal spray)

RESULTS (continued)

SELF EFFICACY RESULTS



How confident are you right now in your ability to personalize the selection of nonoral acute therapies for your patients with migraine? (Select ranking from 1 [Not confident] to 5 [Very confident])

CONCLUSIONS

Neurologist participation in this online 3-faculty CME-certified program on the use of non-oral therapies for the acute management of migraine was successful in improving measures of knowledge and competence. In particular, the program was successful in achieving the following:

- The interpretation of a commonly used questionnaire used to assess migraine-specific disability
- Awareness of the gastrointestinal consequences of migraine
- The identification of patients who are optimal candidates for nonoral acute migraine therapies
- Greater confidence in the clinical use of non-oral acute pharmacotherapies for migraine

The low pre-education confidence in the use of non-oral acute pharmacotherapies indicated that this is a topic where continued education is necessary. Future education should review the comprehensive management of migraine, including the use of non-oral pharmacotherapies and case-examples demonstrating how to select between the available non-oral options.

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2. Parkman HP. Migraine and gastroparesis from a gastroenterologist's perspective. *Headache*. 2013;53 Suppl 1:4-10.
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