

Tiered-skill, Targeted Education on Multiple Sclerosis: An Evaluation Study of Educational Impact

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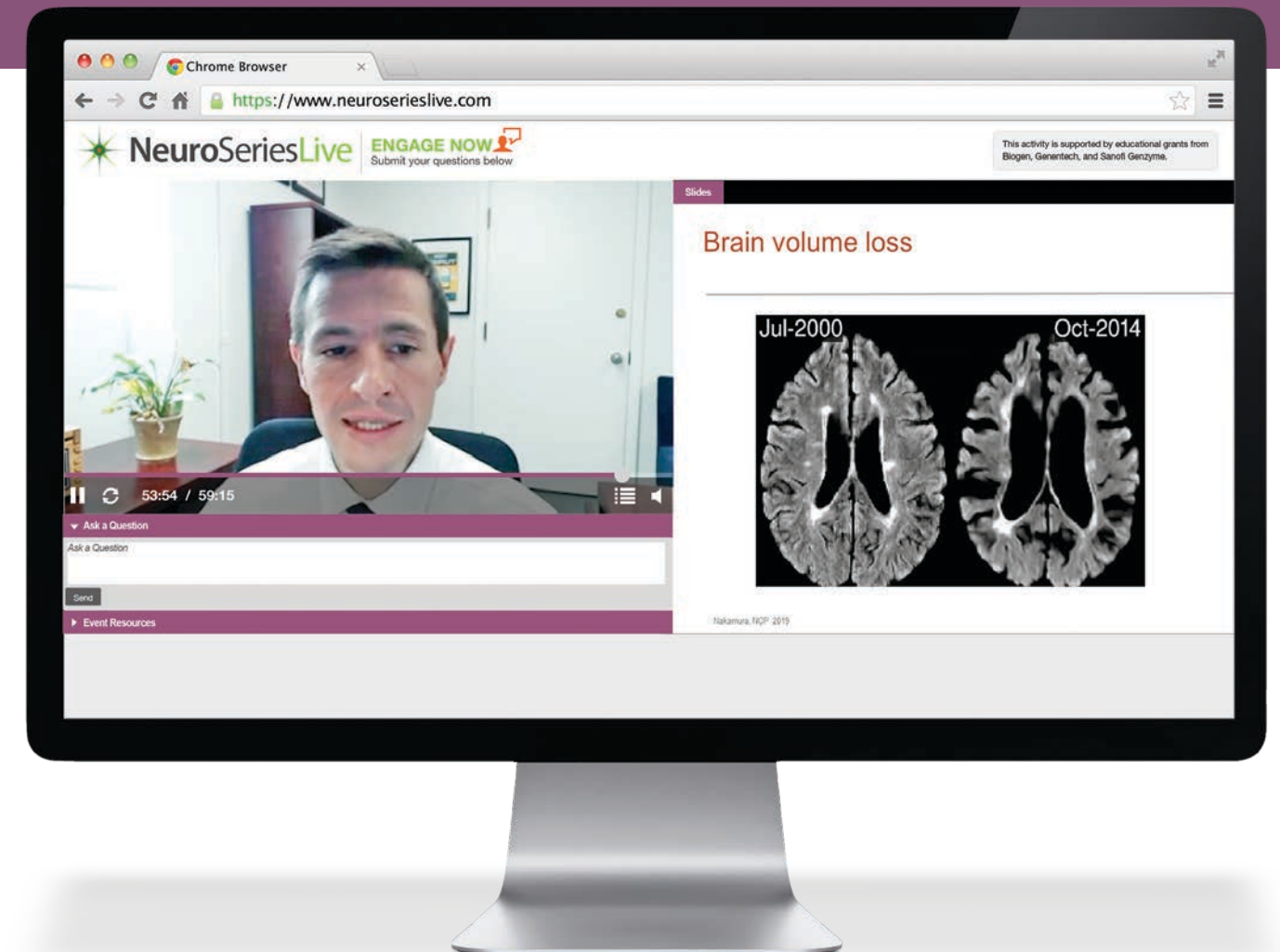
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INTRODUCTION

Multiple Sclerosis (MS) continues to pose a complex challenge for clinicians due to the highly variable nature among its presentations and progression, requiring regular disability progression monitoring and adjustments to disease-modifying therapies (DMT) throughout the disease course. Treatment personalization causes further complication, as many prognostic and clinical factors must be included when choosing therapy options.

We sought to meet these educational gaps through online education, and subsequently assessed the impact of the targeted continuing medical education (CME) through survey-based evaluation.



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METHODS

Educational Program and Evaluation Details

Title

Grasping Precision Medicine in Multiple Sclerosis: 2020 Education Series for Beginners, Mid-Level, and Experienced Clinicians (A Continuation of 2018-2019 Novice-to-Expert Education Series)

Format

- 3, 1-hr CME sessions produced & broadcast live-online, and placed on-demand 12 mos.
- Downloadable slides, panel discussions, live polling, pre-program and live Q&A
- **Content:** To meet the needs of clinicians with varying MS skill levels, tailored education was designed for varying levels of MS knowledge and competence on personalized medicine, polypharmacy, and neuropathology:
 - Session 1: Foundational learning; novice clinicians
 - Session 2 and 3: Deeper-dive into learning objectives for intermediate to expert-level clinicians

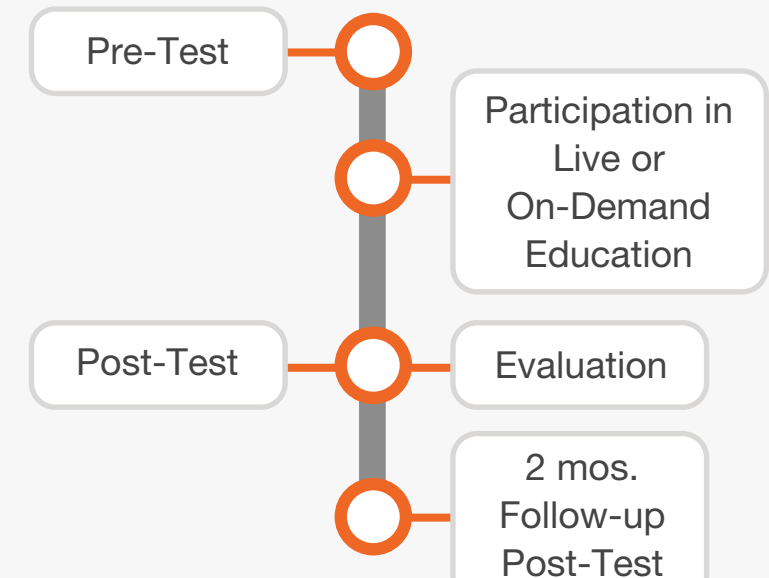
Learning Objective Summary

- Personalized medicine for MS diagnosis/management; drug interaction minimization
- Current biomarkers data for MS differentiation
- Algorithms and predictive models for MS management
- MS biomarkers and their role in treatment decisions
- Biomarker association with disease development/progression, differences in symptoms, and treatment response
- Long-term treatment outcomes with high-efficacy DMTs in patients with relapsing forms of MS
- High-efficacy DMTs appropriateness in consideration of disease activity and patient factors
- Clinical trials and registry analysis evidence that may inform treatment decisions

Accredited Provider

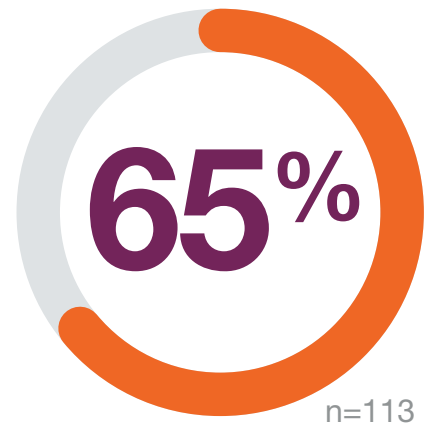
Consortium of Multiple Sclerosis Centers

Educational Impact Measurement



RESULTS

Positive Impact on Patient Outcomes

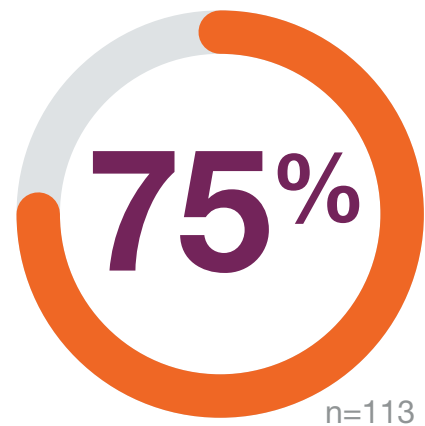


learners reported the activity positively impacted patient experience/outcomes

Fewer side effects.

Patients received new options for treatment as a part of clinical trials.

Positive outcome with DMT conversations.



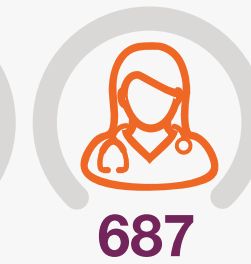
learners reported the activity positively impacted clinical practice

Offering most recent approved drugs for the treatment of MS with better clinical outcome and less side effects.

Thoroughly check with comorbid conditions and/or drug-drug interactions when a DMT is started.

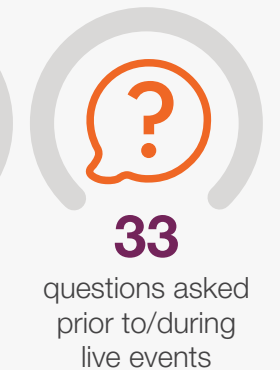
Better utilization of MRI biomarkers and McDonald criteria in making a diagnosis of MS.

Learner Demographics



Target Audience: Neurology, Primary Care

Learner Engagement

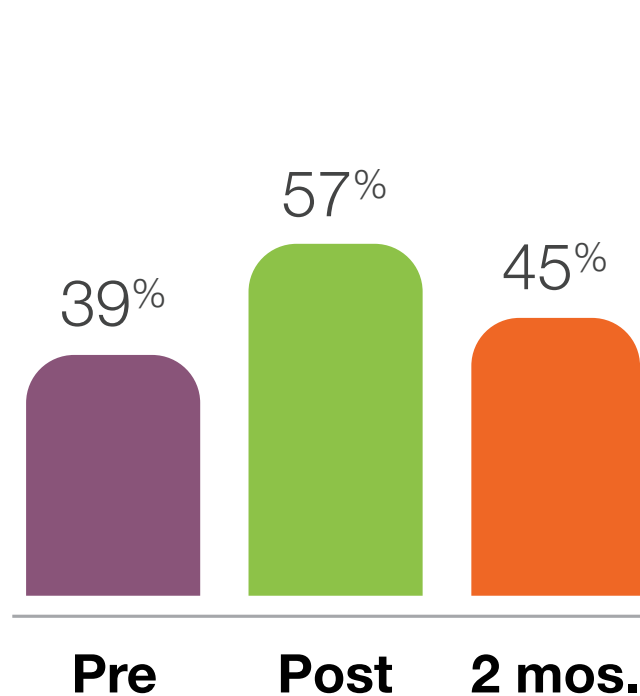


RESULTS

Changes in Knowledge/Competence

18% & 6% increase over pre-test

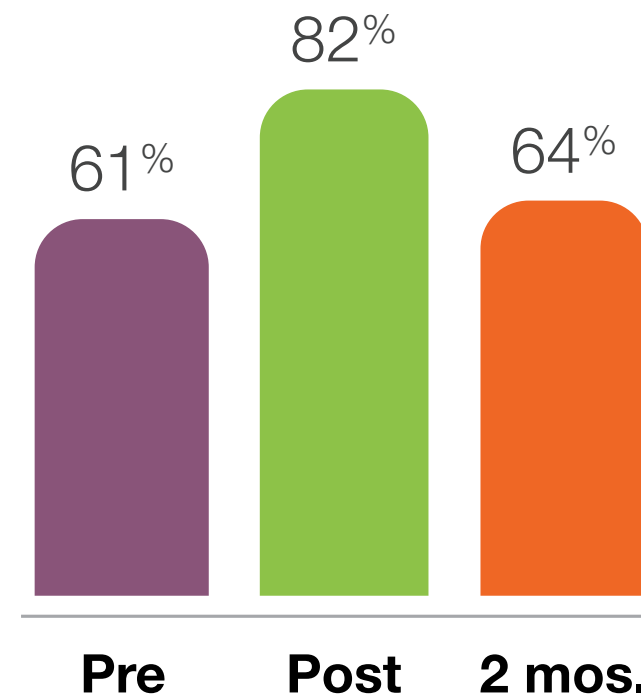
in competence concerning induction therapy agents



n = 420 pre; 201 post; 56, 2-mos. follow-up

21% & 3% increase over pre-test

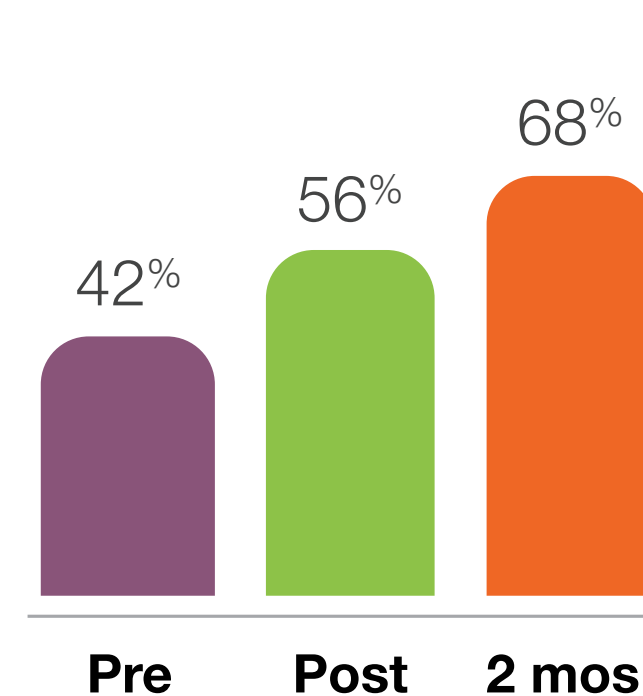
in knowledge regarding predictors of inflammatory disease activity in MS



n = 414 pre; 203 post; 56, 2-mos. follow-up

14% & 26% increase over pre-test

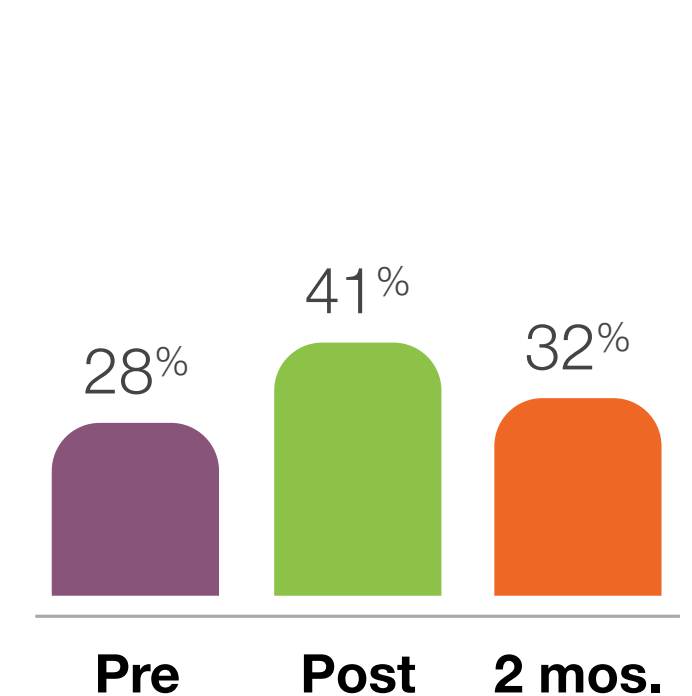
in knowledge regarding conditions associated with AQP4-IgG positivity



n = 475 pre; 250 post; 57, 2-mos. follow-up

13% & 4% increase over pre-test

in knowledge regarding impacts of deep gray matter volume loss



n = 414 pre; 203 post; 56, 2-mos. follow-up

CONCLUSIONS & FUTURE EDUCATIONAL TARGETING

Quantitative testing and surveying supported the positive impact of CME focused on improving knowledge and competency concerning MS neuropathology and biomarkers, high-efficacy DMTs, personalized medicine, and polypharmacy for MS. Ongoing education is advised on:

Management of MS:

- The future of biomarkers - serum, genetic
- Emerging pipeline for progressive MS
- MRI strategies for monitoring disease activity
- Induction or escalation
- Managing MS during COVID-19
- Strategies for DMT-refractory patients with MS

MS - the Disease :

- Are DMTs equally efficacious among ethnic populations with similar presentation?
- Differentiating those at low- vs high-risk for disability

