

Impact of Educational Outcomes from a Patient-voice-informed, Multi-channel, Video-based, On-demand CME Activity on Adverse-event Management and Clinician Decision-making in Pediatric NF1-PN Care

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This activity was supported by an educational grant from SpringWorks Therapeutics, Inc.



INTRODUCTION

Neurofibromatosis type 1-associated plexiform neurofibromas (NF1-PN) are associated with substantial morbidity and negative impacts on patient quality of life. As NF1-PN can affect multiple organs/systems, a multidisciplinary approach to symptom management is key. With MEK inhibitor (MEKi) integration into NF1-PN care, clinician education on multidisciplinary treatment decision-making and adverse-event (AE) management is vital to optimizing outcomes for pediatric patients receiving these therapies. A targeted CME activity explored the pathogenesis and diagnosis of NF1-PN, the efficacy and safety of MEKi use, patient perspectives on NF1-PN and treatment, and optimization of therapy via multidisciplinary care.



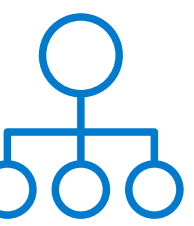
METHODOLOGY

Educational Program and Evaluation Details

Title: A Trifecta in the Management of Neurofibromatosis Type 1 Plexiform Neurofibromas: Patient Voices, Systemic Therapy, and Multidisciplinary Collaboration

Learning objectives:

- 1. Review the rationale and mechanism of action for MEKi therapies in NF1-PN
- 2. Evaluate efficacy data from practice-changing clinical trials on new and emerging MEKi therapies for inoperable NF1-PN
- 3. Discuss AEs associated with MEKi therapies and approaches to monitor and mitigate those AEs
- 4. Outline strategies to individualize treatment plans for patients with NF1-PN multidisciplinary care



Interventions

A certified, 1.5-credit, online-enduring CME activity was launched in March 2025 for medical oncologists, neuro-oncologists, dermato-oncologists, pediatricians, neurologists, surgeons, advanced practice providers, dermatologists, and geneticists involved in the management of pediatric and adult patients with NF1-PN. The activity was divided into three concise modules and incorporated the patient voice. Video vignettes were also shared with patient and caregiver audiences via educational partners' social-media channels. Micro-learning videos extended the reach to NPI-verified oncologists, neurologists, and pediatricians via IQVIA/LinkedIn.



Data Collected

A survey-based approach measured the impact of the CME as aligned with stated learning objectives via pre- and post-activity knowledge and competence questions developed in accordance with National Board of Medical Examiner guidelines,¹ as well as a post-activity evaluation (inclusive of intended practice changes: open-ended). Statistical tests of significance were applied to comparisons of individual questions (pre- vs post-activity).

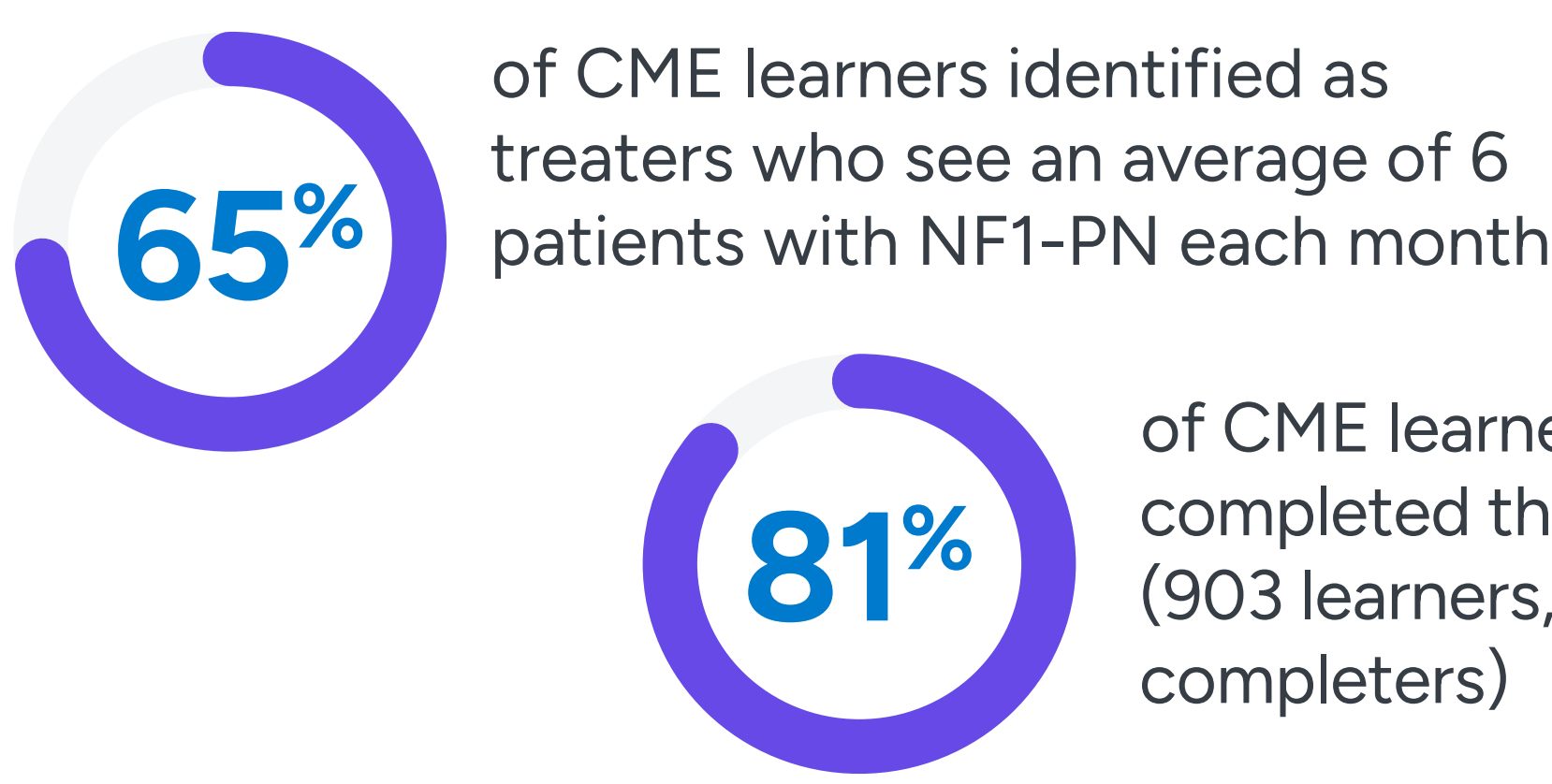
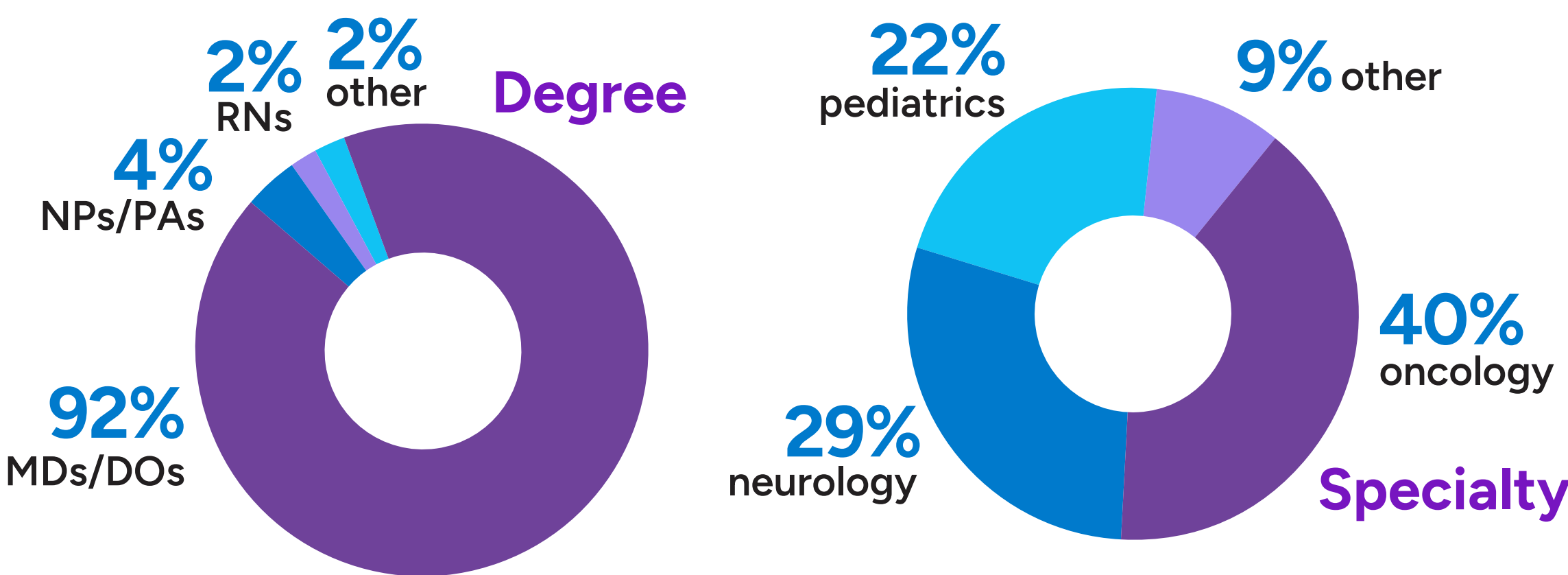
Reference:
1. NBME Item-Writing Guide. Constructing written test questions for the health sciences. Nov 2020.
www.nbme.org/item-writing-guide.

RESULTS



9,577 Total Participants
1,239 CME enduring + 8,338 micro-learning

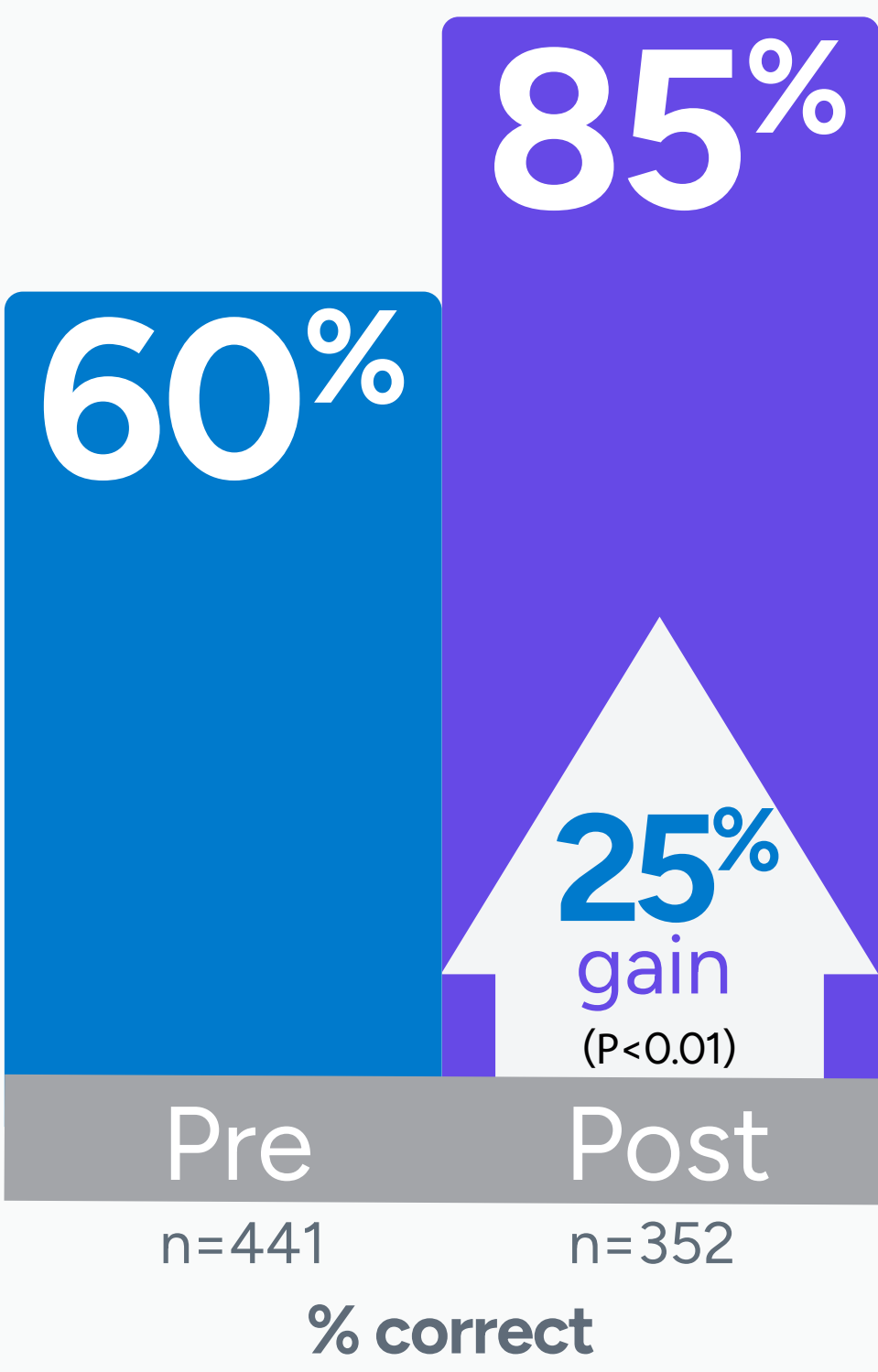
Micro-learning breakdown:
3,752 NPI-verified oncologist;
2,610 neurologist; and
1,976 pediatrician completions



Knowledge Gains

Evaluating efficacy data from practice-changing MEKi trials for inoperable NF1-PN

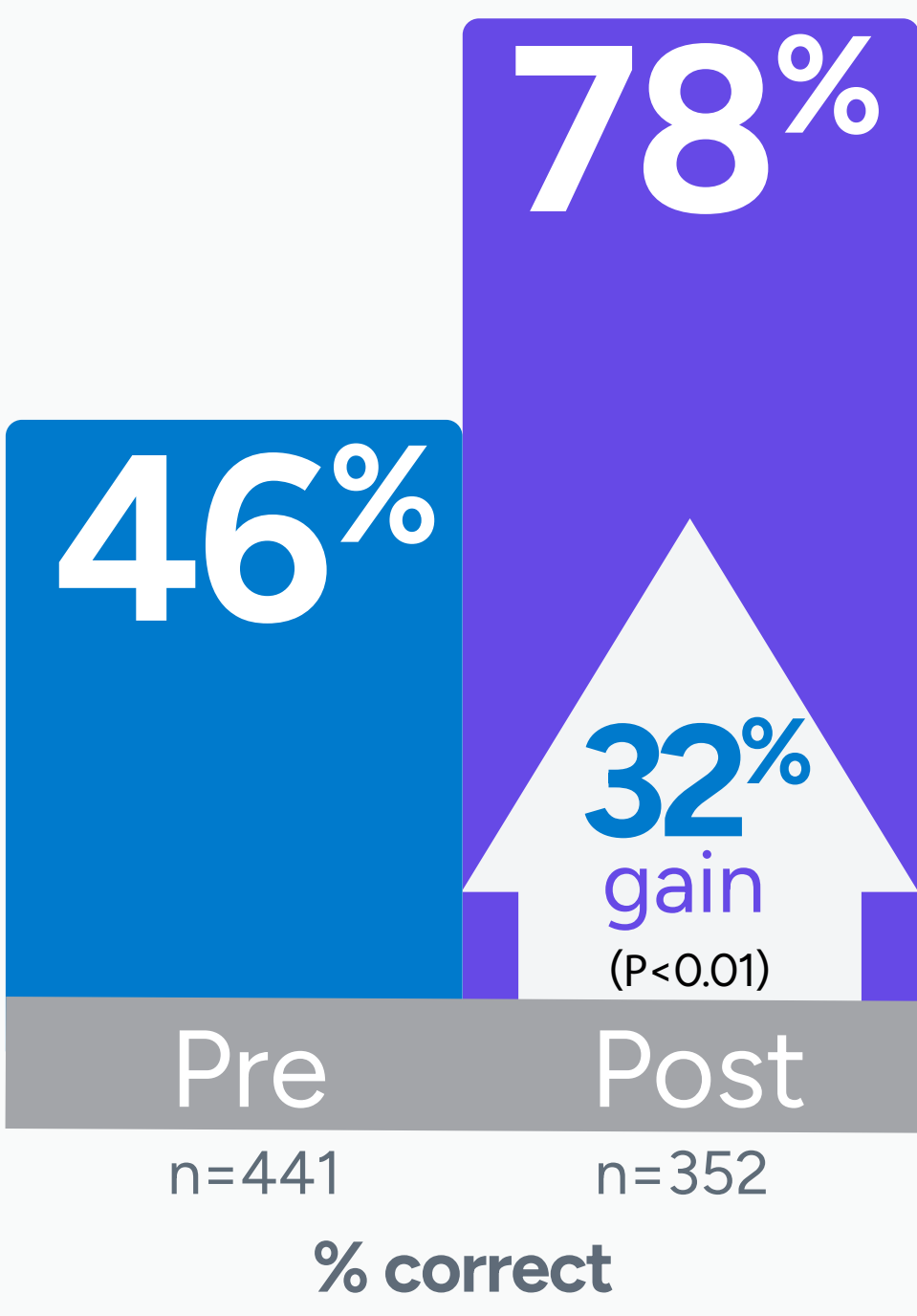
Improved knowledge of ReNeu trial data on confirmed, durable response to mirdametinib in children with NF1-PN



Competence Gains

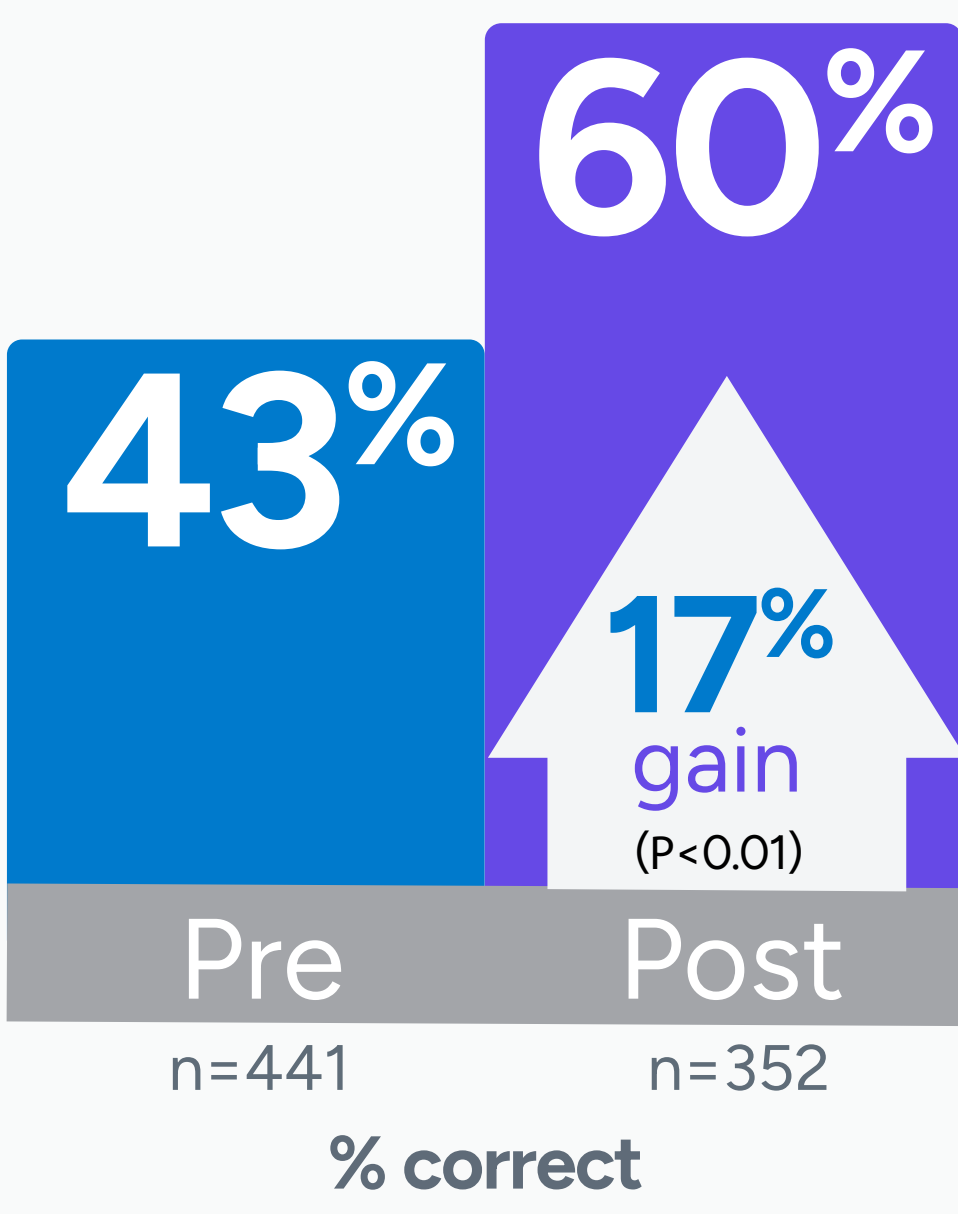
Identifying MEKi-associated AE management strategies for adolescent patients with NF1-PN

Improved competence in managing mild rash and paronychia without interrupting selumetinib therapy



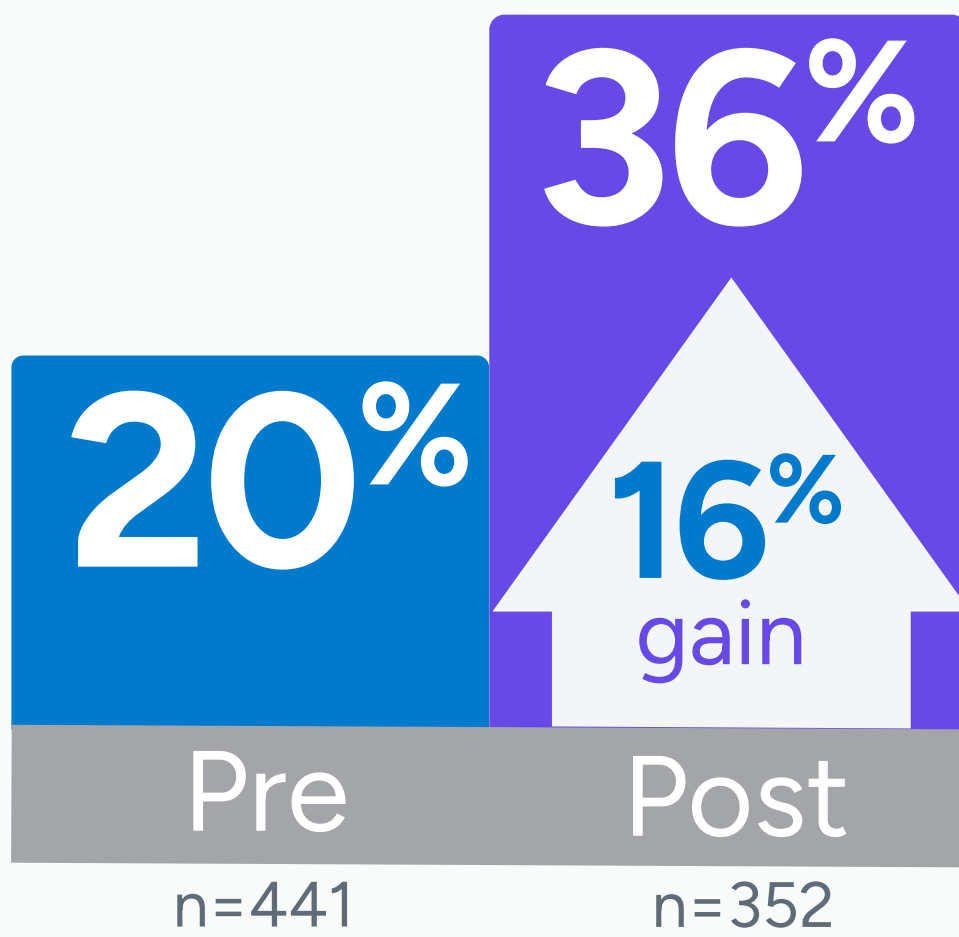
Defining tailored, multidisciplinary, coordinated care plans via tumor board consultation for MEKi therapy initiation in pediatric NF1-PN

Improved competence in engaging the tumor board — oncology, pulmonology, surgery, and genetics — to individualize MEK inhibitor initiation



Confidence Gains

Confident* in ability to treat patients with NF1-PN



*Rating of 4 or 5 on 5-point scale

Target specialty learners: hematology/oncology, neurology, surgery, dermatology, pediatrics, or genetics

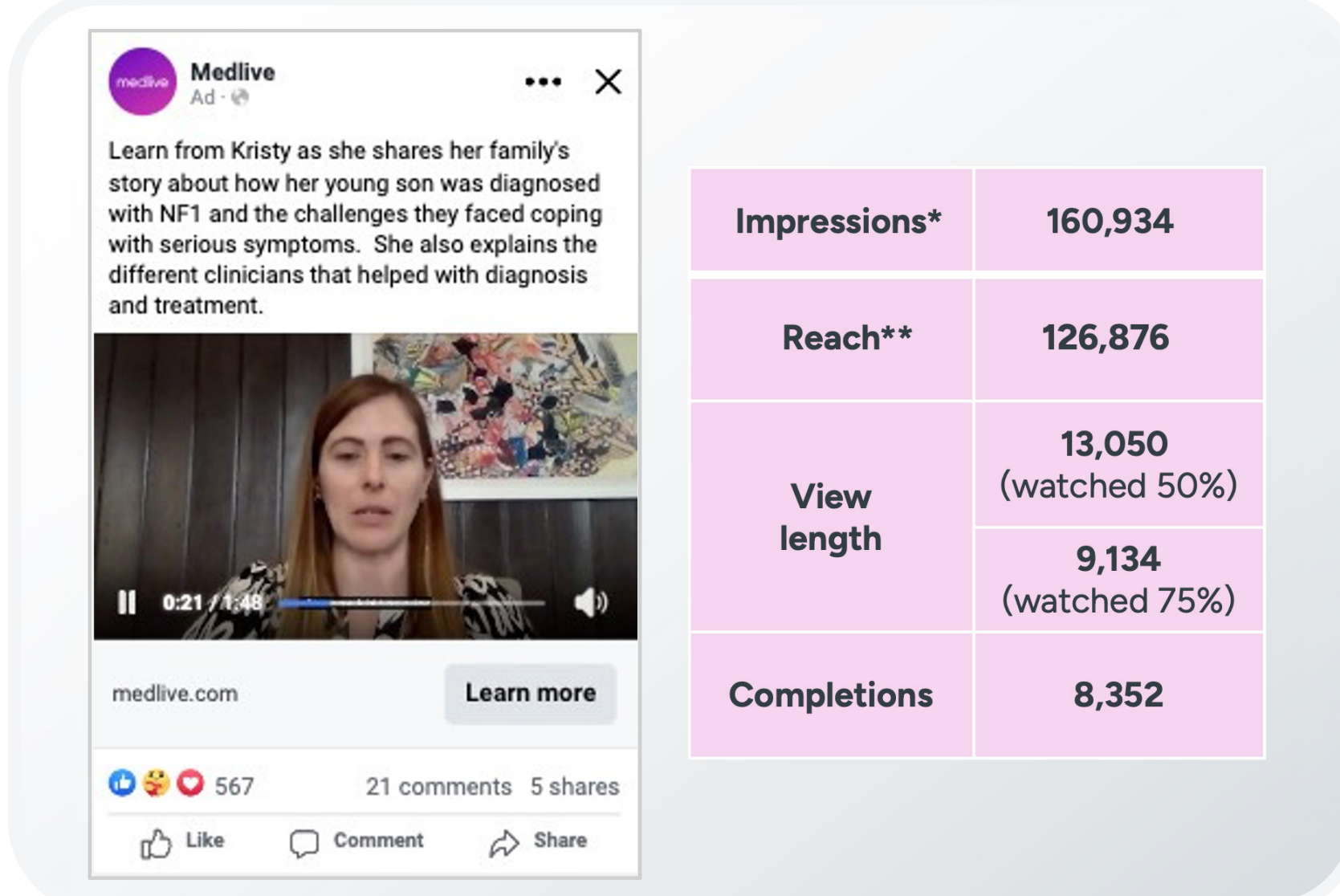
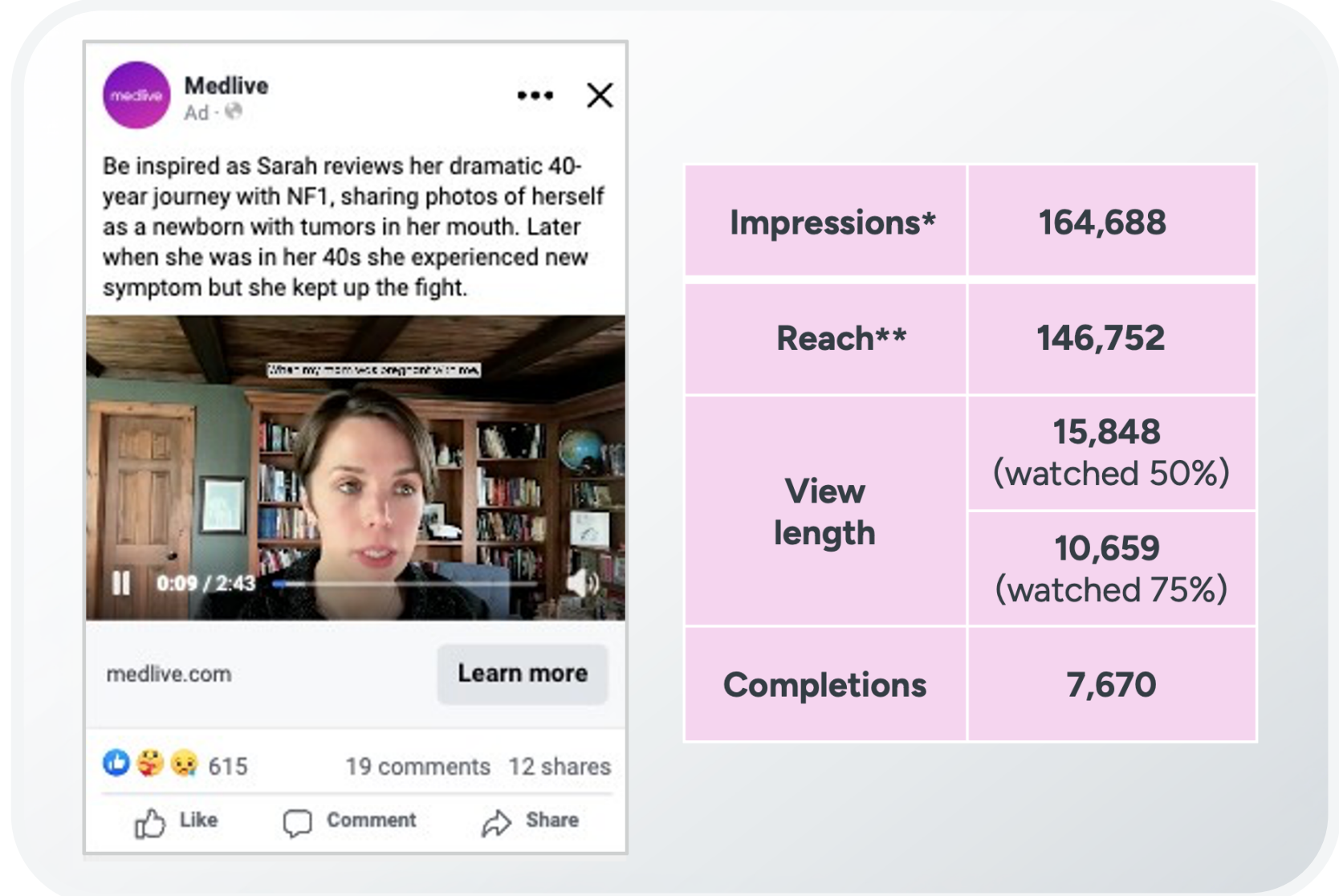
Barriers

Challenges in multidisciplinary care (select all that apply) (all completers, n=731)

Barriers	Percentage
Coordination among multiple specialists involved in NF1-PN care	74%
Timing and sequencing of multimodal treatments, particularly between surgery and systemic therapies	53%
Limited consensus on who should be the lead clinician managing patients	47%
Lack of communication among multidisciplinary team	37%

Patient Voice

Videos capturing patient perspectives and shared on social media suggested the expanded reach of this initiative, with 308,145 total views and 16,022 view completions.



*Impressions: The total number of times the post was displayed in users' feeds, irrespective of clicks.
**Reach: The total number of unique users who viewed the post at least once on their feed during the reporting period.

CONCLUSION

This multi-channel CME activity improved clinician knowledge of MEKi efficacy and competence in AE management and multidisciplinary treatment decision-making for pediatric NF1-PN. However, persistent challenges related to coordination across multiple specialists, treatment sequencing, and leadership of patient management highlight ongoing gaps in multidisciplinary care. These findings suggest the need for additional clinician education informed by the patient voice to further broaden the educational reach and potential impact of similarly designed educational activities to ensure continuity of multidisciplinary, collaborative, pediatric NF1-PN care.