

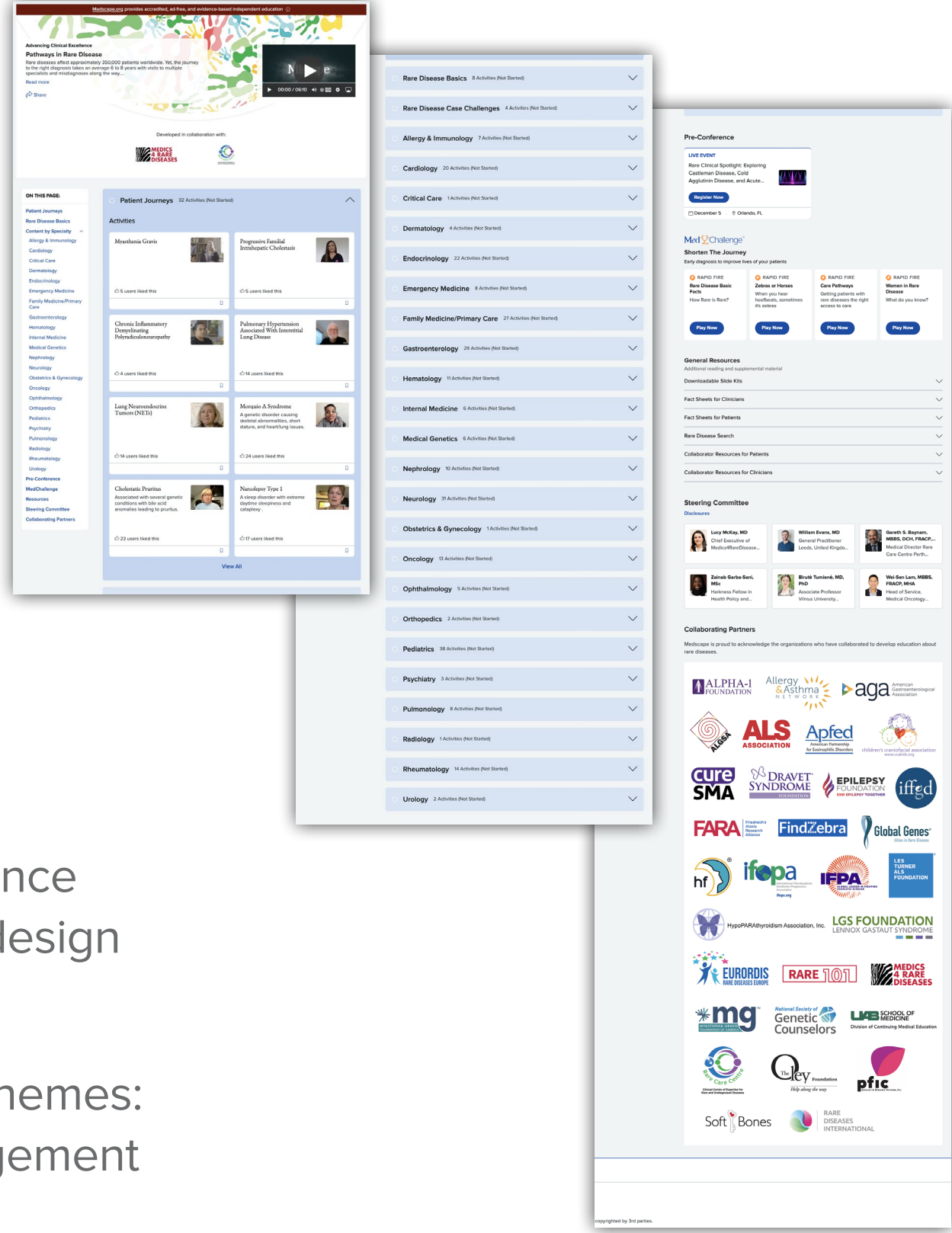
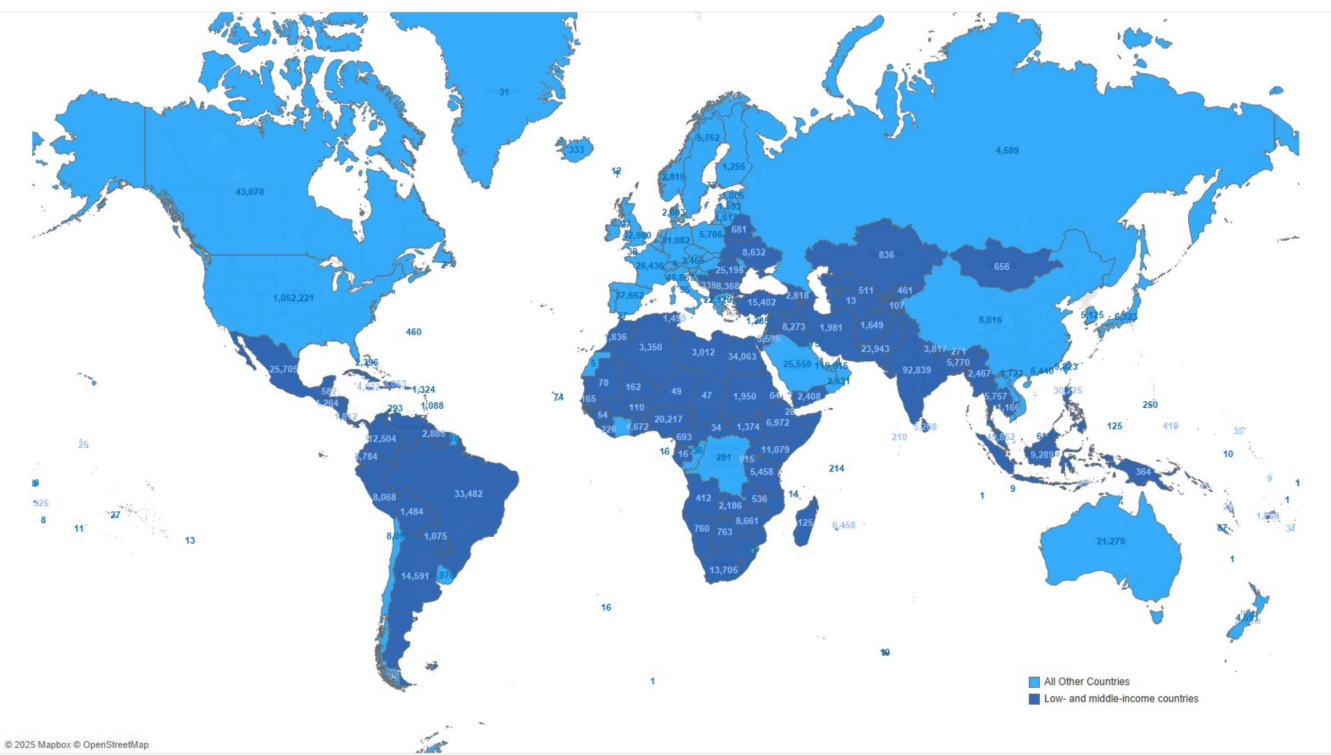
BACKGROUND

Healthcare practitioners (HCPs) experience various barriers in diagnosing and managing patients with rare diseases, which may be associated with nonspecific and heterogeneous presentations, knowledge of referral pathways, lack of training, and access to treatment. Medical education aims to increase HCPs’ ability to recognise, diagnose, and manage patients with rare diseases, but the large-scale impact of this education is unknown.



METHODS

We evaluated 2,359,127 learner engagements globally, which included 1,522,862 physicians and 836,265 allied HCPs across all specialties.

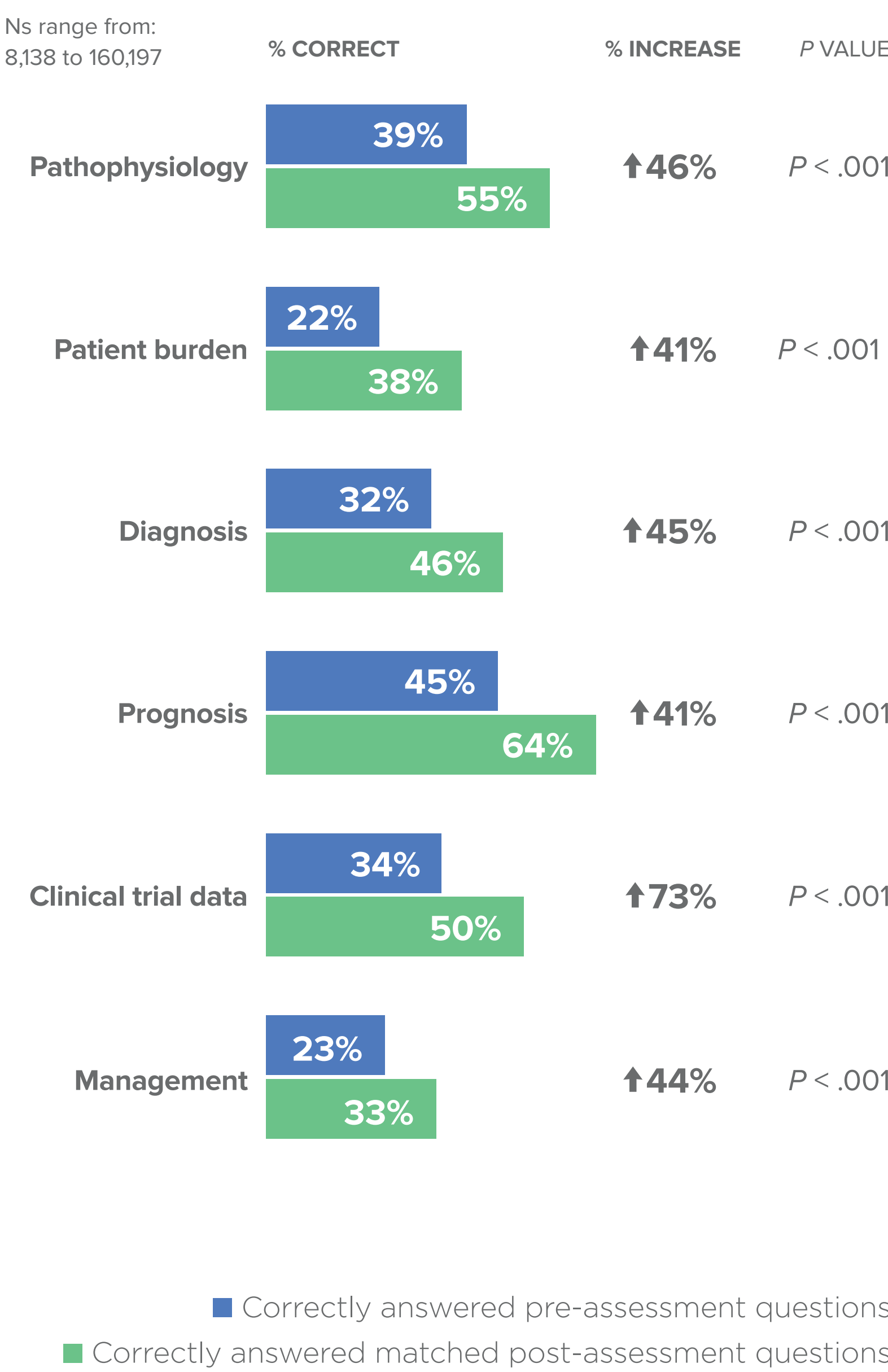


- A theme-based summative analysis across a group of 331 rare disease educational activities available between June 2020 and September 2025 was conducted
- Effects of the education for each program on knowledge, competence, and confidence were assessed by using a repeated pairs, pre-assessment/post-assessment study design including an average of 4 questions per activity
- For the aggregate analysis, each question was tagged with one of six educational themes: pathophysiology, patient burden, diagnosis, prognosis, clinical trial data, and management

RESULTS

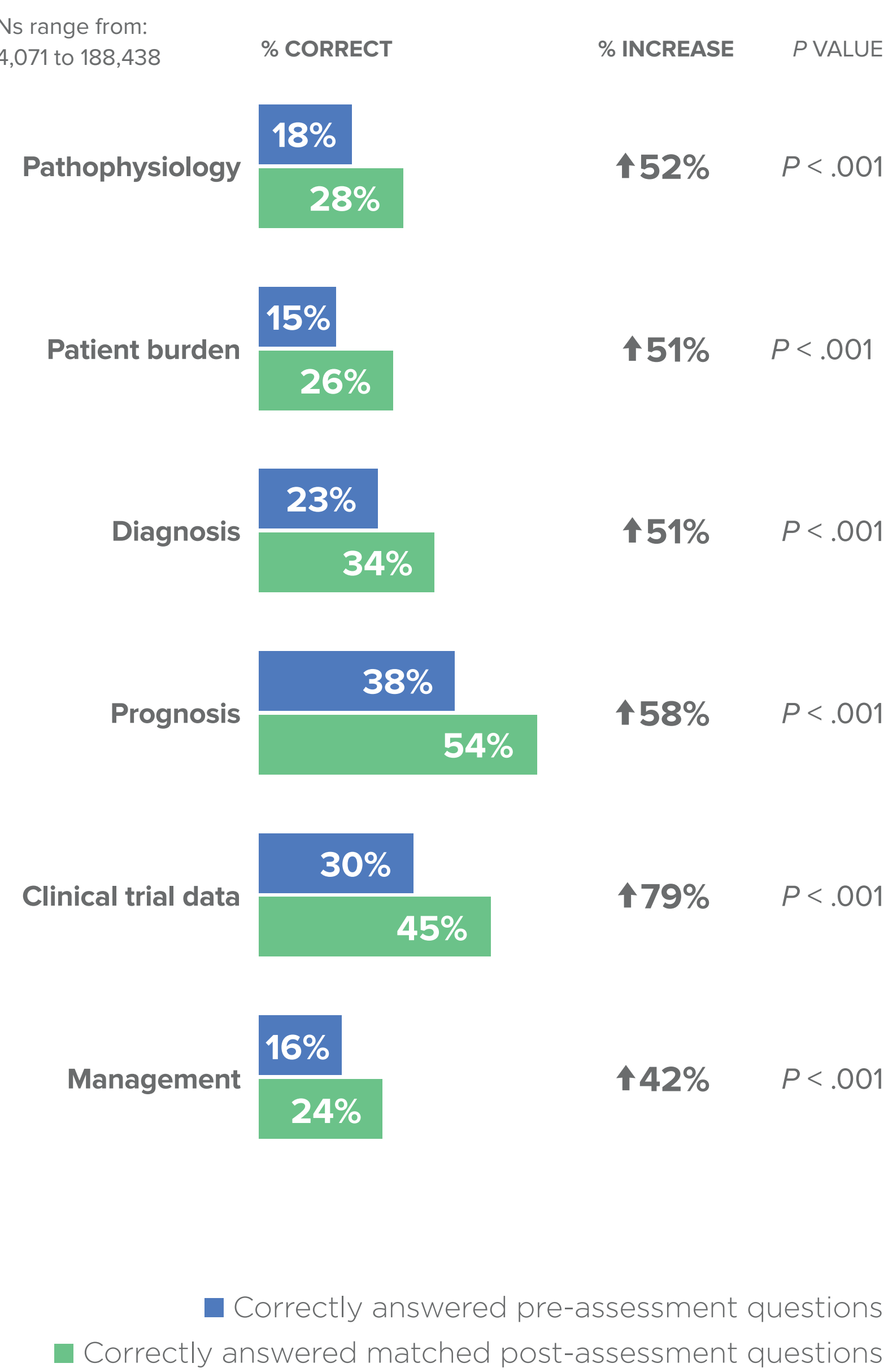
IMPROVEMENTS IN KNOWLEDGE AND COMPETENCE AMONGST PHYSICIANS

Significant improvements were shown across all 6 themes. It is encouraging to see highest rates of correct answers for questions about prognosis, which provides the basis for understanding why it’s so important to diagnose rare diseases. Interestingly a poor understanding of patient burden was also shown.



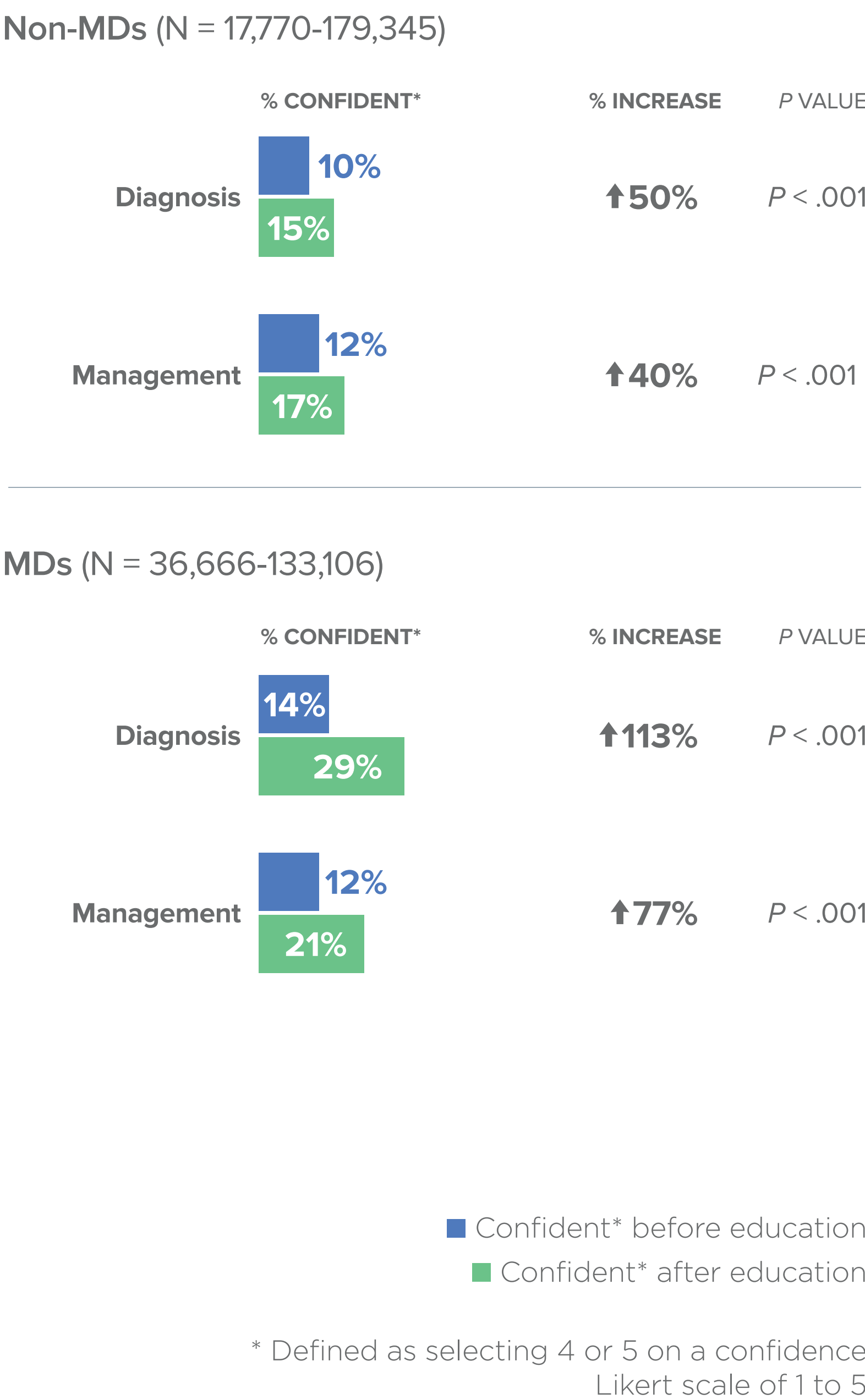
IMPROVEMENTS IN KNOWLEDGE AND COMPETENCE AMONGST ALLIED HCPs

Trends for allied HCPs follow similar trends as for physicians, with slightly lower percentages of learners selecting correct answers. This shows a high need for education of this crucially important network of non-physician healthcare providers.



CONFIDENCE SHIFTS FOR PHYSICIANS AND ALLIED HCPs

After participating in education, the average overall confidence in rare disease diagnosis increased for physicians by 113% and for allied HCPs by 50%; and confidence in rare disease management increased for physicians by 77% and for allied HCPs by 40%.



CONCLUSION

This study demonstrates the success of online accredited education in improving knowledge, competence, and confidence in rare disease. This can lead to earlier recognition and diagnoses of rare diseases and earlier management, with potential benefits on patient and family burdens, as well as healthcare system burdens.



MEDSCAPE'S RARE DISEASE LEARNING CENTER

https://www.medscape.org/advances/rare-disease-2025a100013m

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