

Engaging Physicians and Improving
Patient Care through Case-Based Learning:

Moving Beyond the Didactic Presentation

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Background

Research on improving the quality of continuing medical education for physicians has demonstrated that the use of clinical vignettes increase learners' competence and ability to apply the strategies to various patient scenarios.^{1,2} A case-based presentation provides actionable information and applies learning at the level of patient management. Attendee participation in case-based learning requires critical thinking and clinical decision making, two key elements in effective patient care. Thus, as a key element of its educational content, the Pri-Med Access with ACP curriculum incorporates clinical vignettes into the core curriculum directed at management of real-life patients seen in the primary care setting.

Throughout the case-based sessions presented at the Pri-Med Access with ACP CME program, attendees are asked multiple choice questions

designed to assess both knowledge and competence in terms of their ability to apply the scenario to their primary care practice setting. Subsequent teaching provides learners with the education to validate the question response choices.

Objectives

Upon completion of this poster, participants should be able to:

1. Provide evidence that supports the hypothesis that case-based presentations are more effective than didactic lectures in application of information into clinician performance-in-practice
2. Demonstrate the differences in audience engagement levels using case-based presentations versus didactic lectures

AUDIENCE RESPONSE QUESTION:

In addition to the history already obtained, which fact is most likely to impact your next step in adjusting his therapy?

1. He developed edema on pioglitazone
2. He exercises for 30 minutes per day 3 days a week
3. He feels weak and shaky several times per week
4. He has not had angina since his CABG

FOLLOW-UP VISIT:

He was instructed on self-monitoring blood glucose (SMBG), and scheduled for follow-up 2 weeks later.

- He reports that during his weak/shaky periods, his blood glucose has been 50 – 70 mg/dL
- He generally eats regularly, but has hypoglycemic episodes on the days that he exercises

AUDIENCE RESPONSE QUESTION:

How would you address his hypoglycemic episodes?

1. Keep daily dose of metformin but change from BID to once daily with dinner
2. Reduce metformin dose
3. Reduce glimepiride dose
4. Reduce both metformin and glimepiride dose

TEACHING POINTS:

Sulfonylureas

Secretagogues

- Stimulate insulin release – during hyperglycemia and post-meal

Clinical use

- Inexpensive and commonly used, rapid glucose lowering
- Limited dose effect and limited “durability” of effect

Side effects

- Associated with weight gain and risk of hypoglycemia

Precautions and contraindications

- Associated with risk of severe hypoglycemia (elderly, renal disease)
- Highest risk of hypoglycemia with glyburide

Methods

Data were collected from fall 2011 Pri-Med Access with ACP program attendees:

1. Quantitative

- Onsite: Clinicians attending the Access program were polled using the Audience Response System (ARS) regarding their assessment of case-based CME versus didactic CME. They rated the case-based presentations on the effectiveness of the case-based format to learning and ease of applying learnings in their practice.
- Post-activity: Clinicians who had attended the Pri-Med Access with ACP programs received a 3-question survey via email to obtain feedback on specific elements of case-based CME that they thought provided more effective learning and that could be applied to care of patients.

2. Qualitative

- Onsite: Clinicians attending the programs were asked to provide written qualitative feedback via open-ended comment forms.

Conclusions

Clinicians attending Pri-Med Access with ACP programs prefer case-based education over didactic style education. They consider education that includes several patient vignettes and interactive management questions to be a highly effective method for learning about a specific disease. Additionally, clinicians feel the case-based format is very useful in its application to the care of their patients.

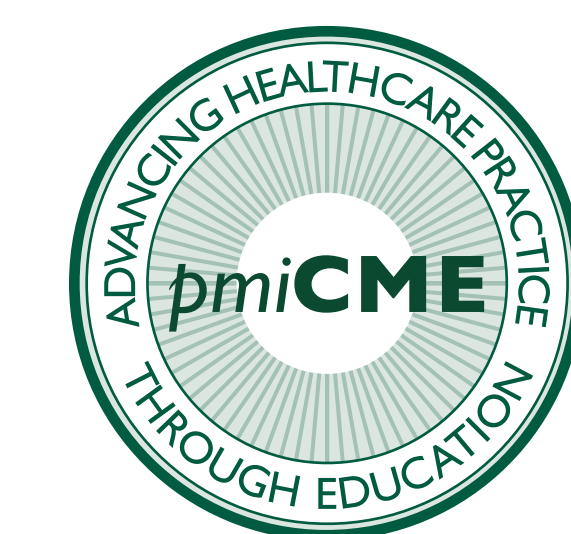
References

1. Kiessling A, Lewitt M, Henriksson P. Case-based training of evidence based clinical practice in primary care and decreased mortality in patients with coronary heart disease. *Ann Fam Med*. 2011;9(3):211-218.
2. Peabody JW et al. Measuring the quality of physician practice by using clinical vignettes: A prospective validation study. *Ann Intern Med*. 2004; 141:771-780.

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ONSITE EVALUATION

Higher average scores for case-based presentations versus didactic presentations demonstrate that attendees thought the case-based formats were more conducive to effective learning, and that material presented in a case-based format could be applied more directly to the care of their patients.

On a scale of 1 to 7, the degree to which attendees agree with the following statements:

	“The teaching format was conducive to learning”	“Material presented is directly applicable to my clinical practice”
Case-based		
Average score	6.62 out of 7	6.56 out of 7
Didactic		
Average score	5.81 out of 7	6.11 out of 7

Sample Attendee Feedback Relating to Case-Based Curriculum

(excerpted from onsite comment forms)

“Nice way of presenting data using case studies of diabetes, hypertension and recent data.”

“Excellent diabetes review and cases.”

“Easy to apply recommendations from clinical trials for daily problems in primary care.”

“Good patient case summaries - very close to patients I see in practice.”

“Superb and very practical presentation.”

“More of these [case-based CME] are needed for PCPs.”

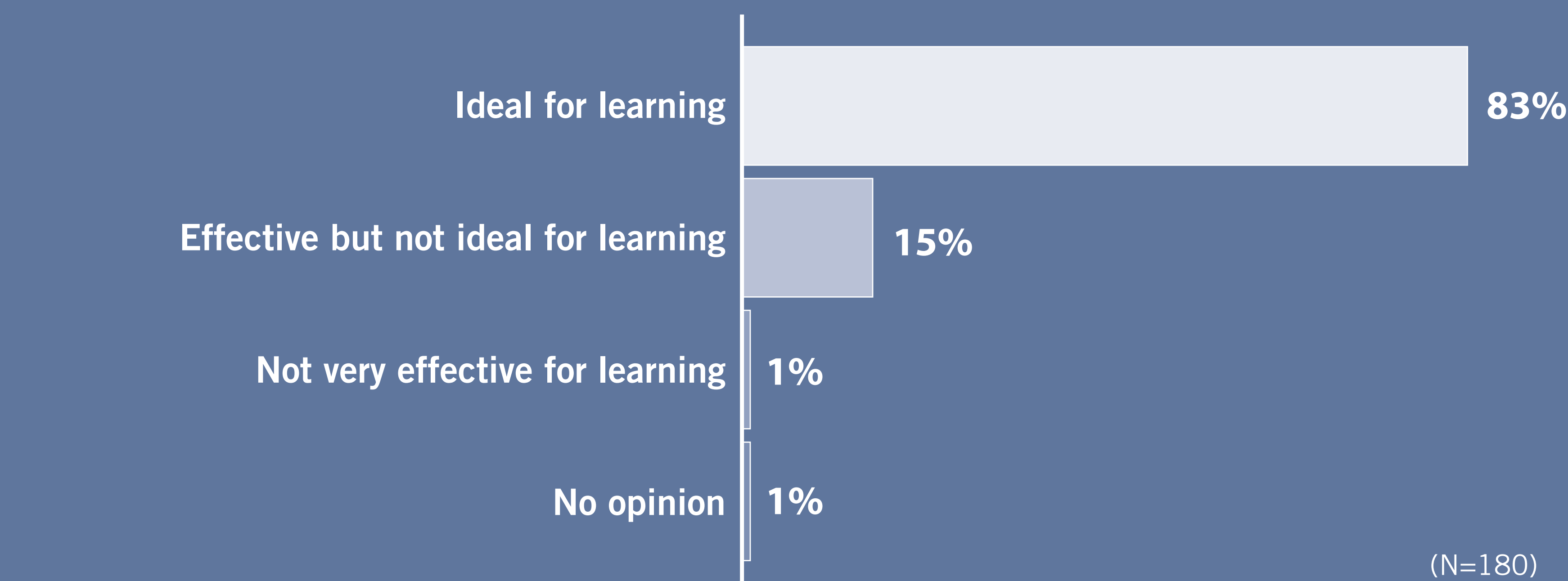
“Very informative....useful for primary care practice.”

“This is the absolute best format and most clinically relevant information yet!”

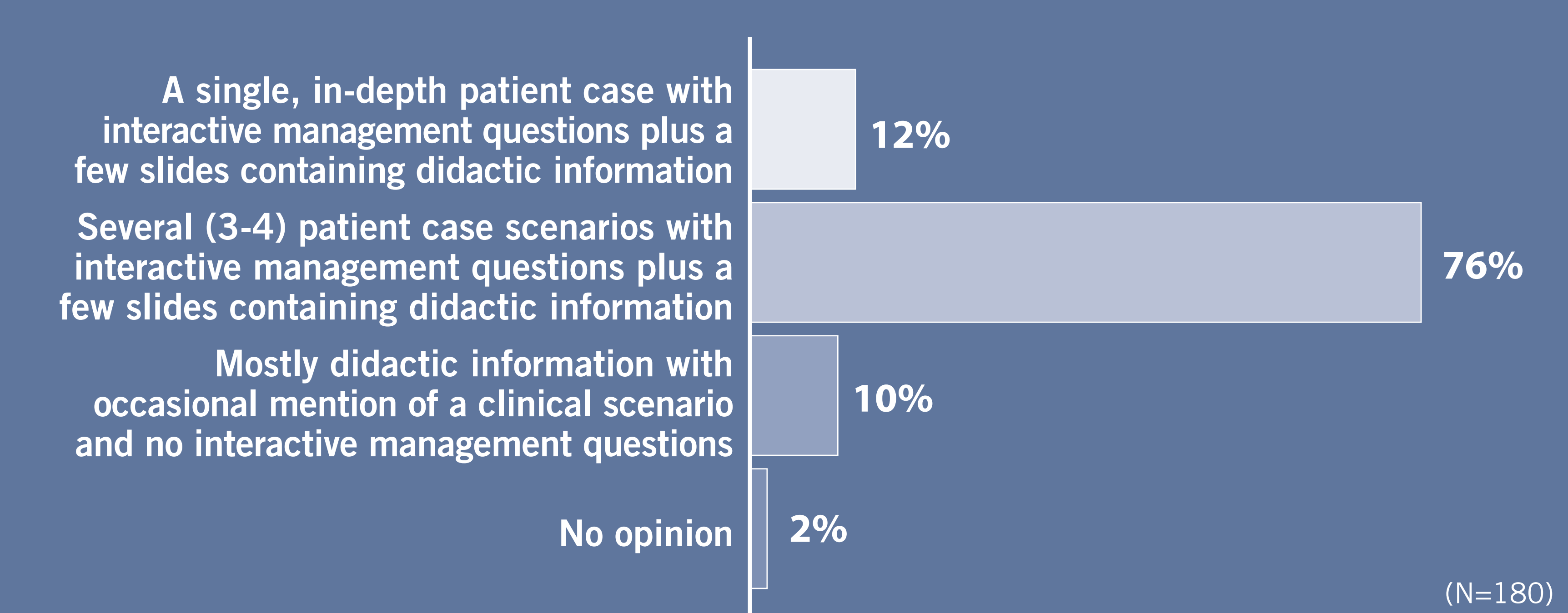
POST-ACTIVITY SURVEY RESULTS

Attendees of selected Pri-Med Access with ACP programs were polled post-activity to obtain their feedback on case-based education formats. A brief (3-question) multiple choice survey was emailed to attendees from five of the regional areas where the programs took place in the fall of 2011.

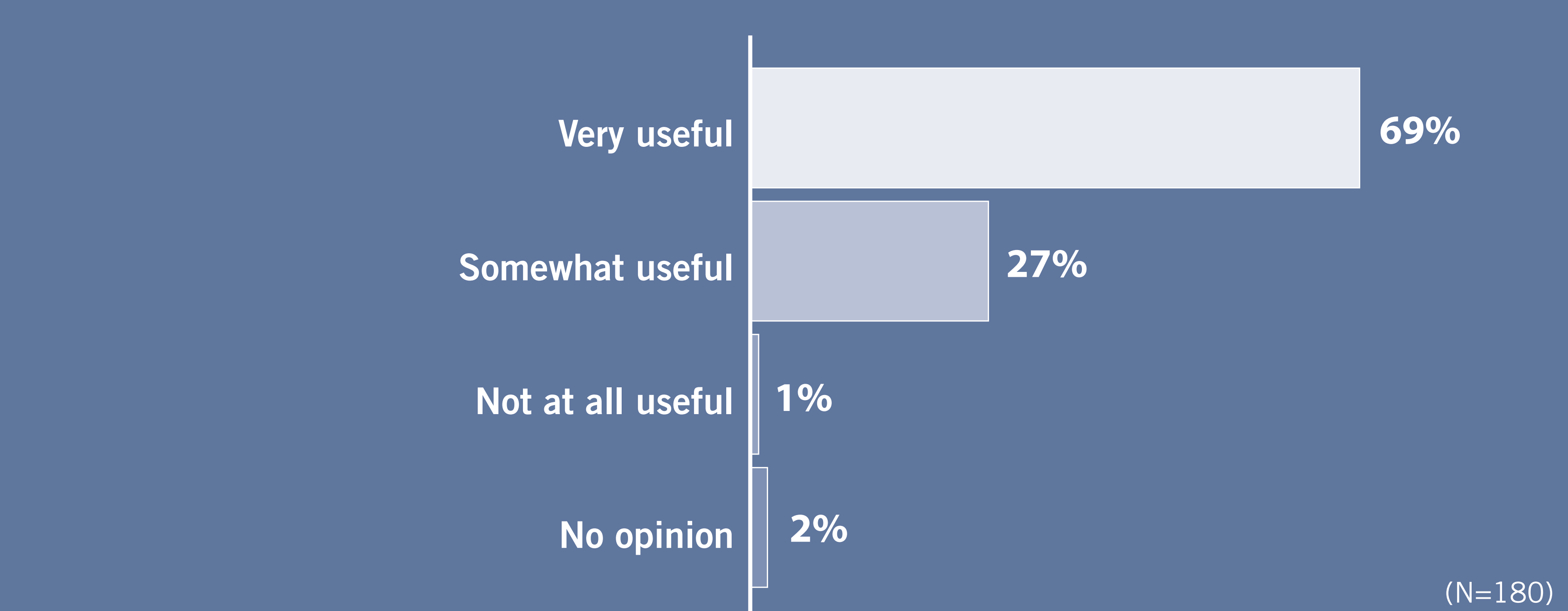
Education that is case-based, ie, includes patient scenarios and interactive questions about clinical management of a specific condition/disease is:



Elements of case-based education that are most effective for learning about a specific condition/disease:



How would you rate Access' case-based sessions with respect to their impact on care of your patients with a specific condition/disease?



SURVEY FINDINGS

The vast majority (83%) of respondents agree that a case-based format that includes patient scenarios and interactive questions is ideal for learning. In learning about a specific disease or condition, three out of four (76%) respondents prefer several patient case scenarios over a single patient case or a didactic format. The respondents rate the Access case-based sessions as very useful (69%) or somewhat useful (27%) with respect to care of patients with a specific disease or condition.