

# A Pilot on Integrating Pre-Encounter Educational Videos within Electrophysiology Clinic

Bryan Swanson, Lukasz P. Cerbin, Syed Rafay A. Sabzwari, Matthew M. Zipse, Lohit Garg, Ryan G. Aleong, Ramona E. Davis, Emily Pascual, Christy Maxfield, Celene S. Tan, Mallory Swirka, Michael Rosenberg, Wendy S. Tzou, Alexis Z. Tumolo, University of Colorado, Aurora, CO, USA

## Introduction

- Patients often struggle to understand electrophysiology conditions and treatments, impacting satisfaction and adherence.
- Digital misinformation and complex medical language contribute to poor comprehension.
- Visual aids, such as videos, improve patient education and shared decision-making.
- Limited research exists on video-based education in electrophysiology.
- Prior studies in cardiology show videos reduce anxiety and improve patient engagement.
- This pilot study evaluates the impact of pre-visit educational videos on patient control and understanding.

## Methods

- 10-minute educational videos on atrial fibrillation (Afib) and supraventricular tachycardia (SVT) were shown to new patients with preliminary diagnosis of either condition.
- Patients completed pre- and post-visit surveys (Brief Illness Perception Questionnaire).
- Physicians assessed perceived patient comprehension and video effectiveness.

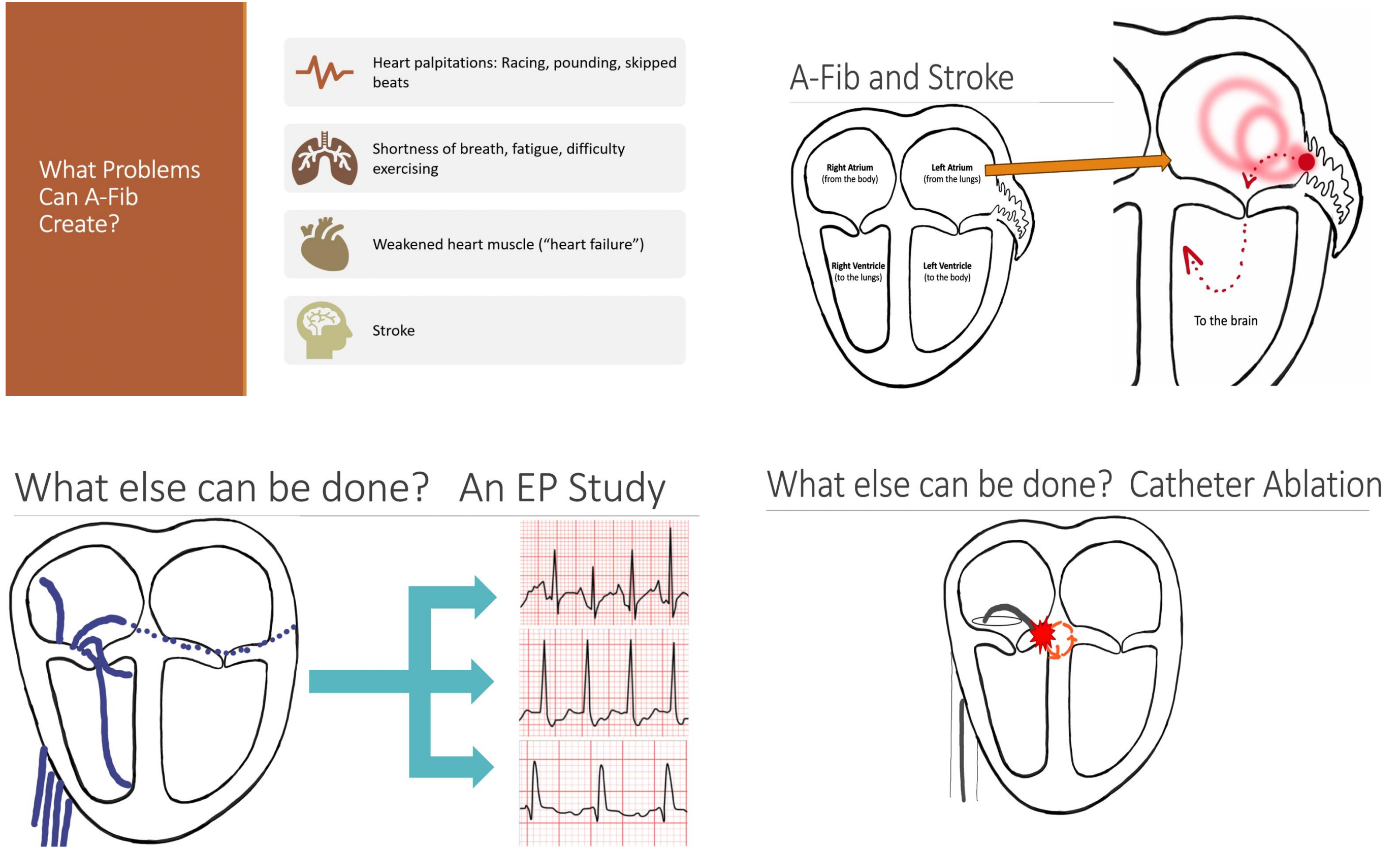


Figure 1: Photos from educational materials. A depicting consequences of A fib, B offering simplified image of stroke formation and embolization. C showing simplified “EP Study” differentiating types of SVT. D depicting AVNRT ablation.

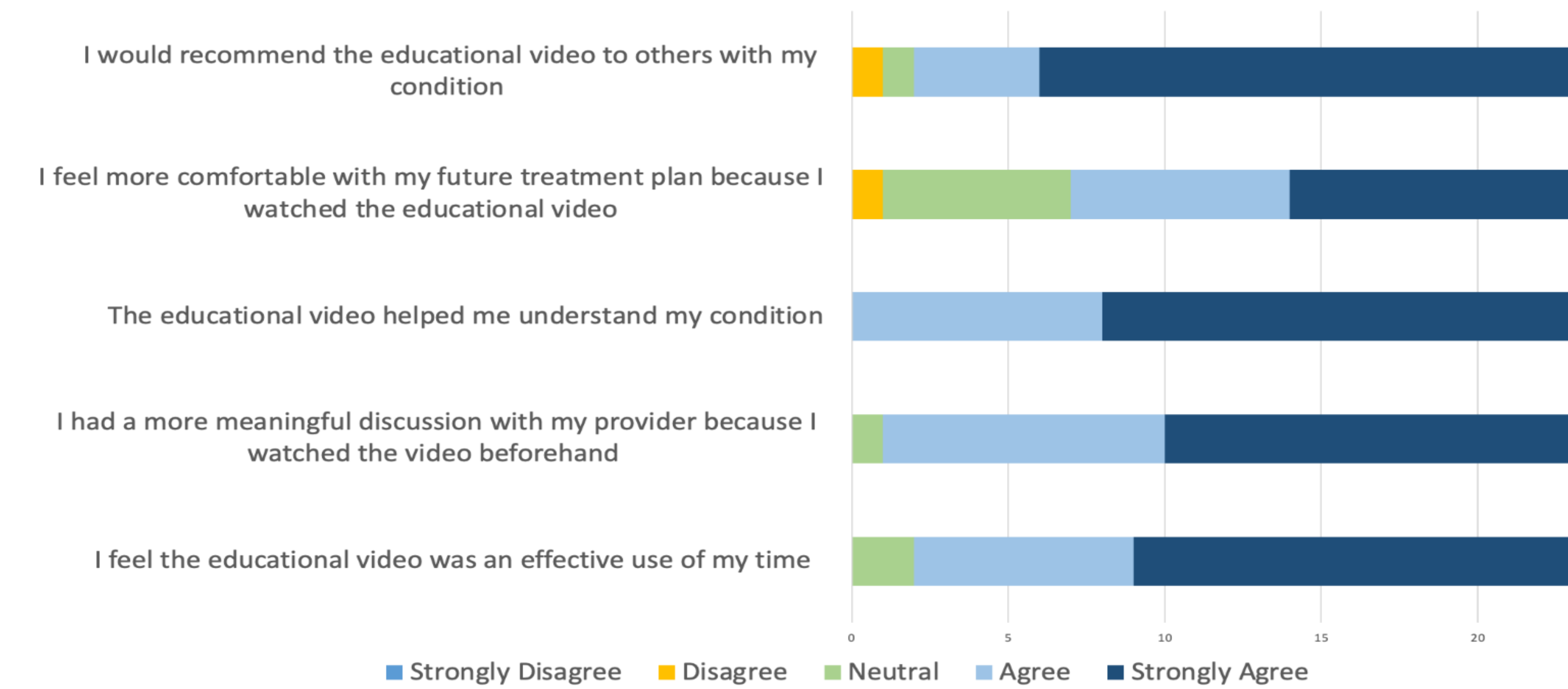


Figure 2: Post Video/Visit responses in Likert form to unique 5 question survey regarding the utility of educational video. X axis represents the number of patients.

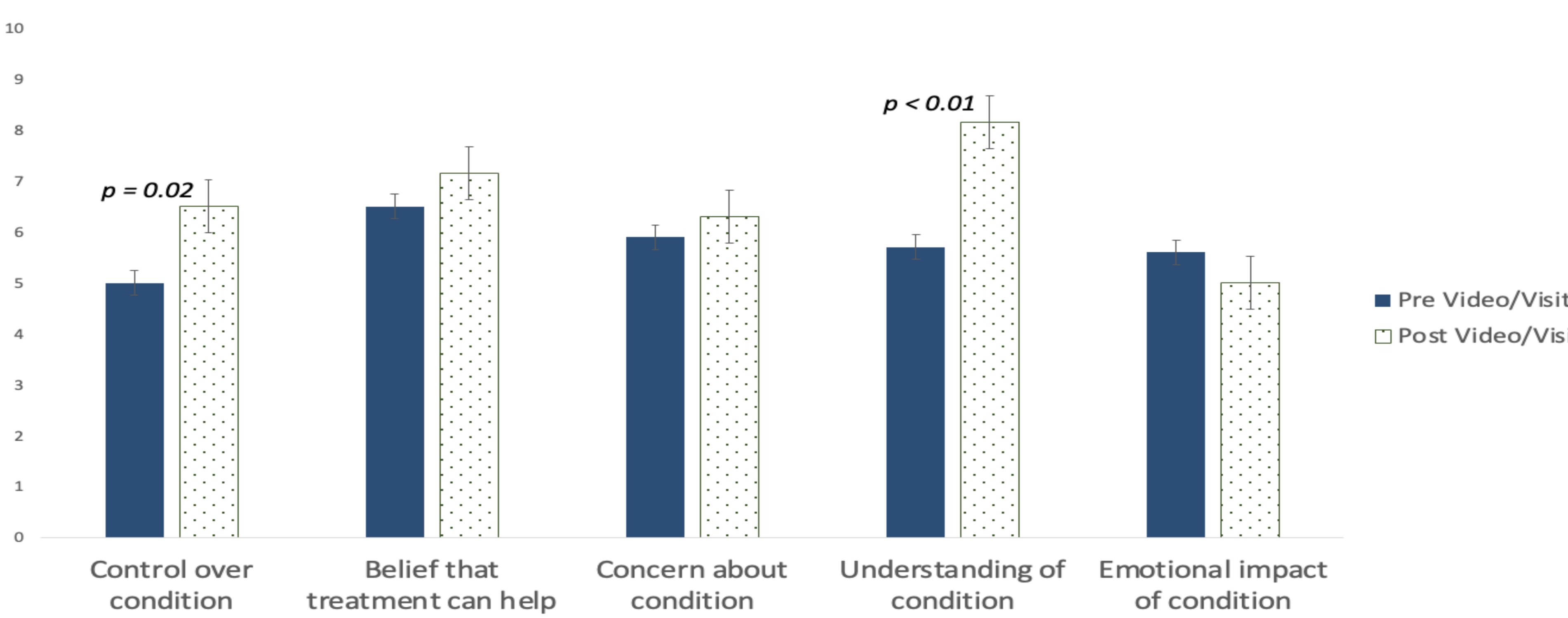


Figure 3: Pre vs Post educational video responses from patients to Brief Illness Perception Questionnaire regarding control, treatment, concern, understanding, and emotional impact.

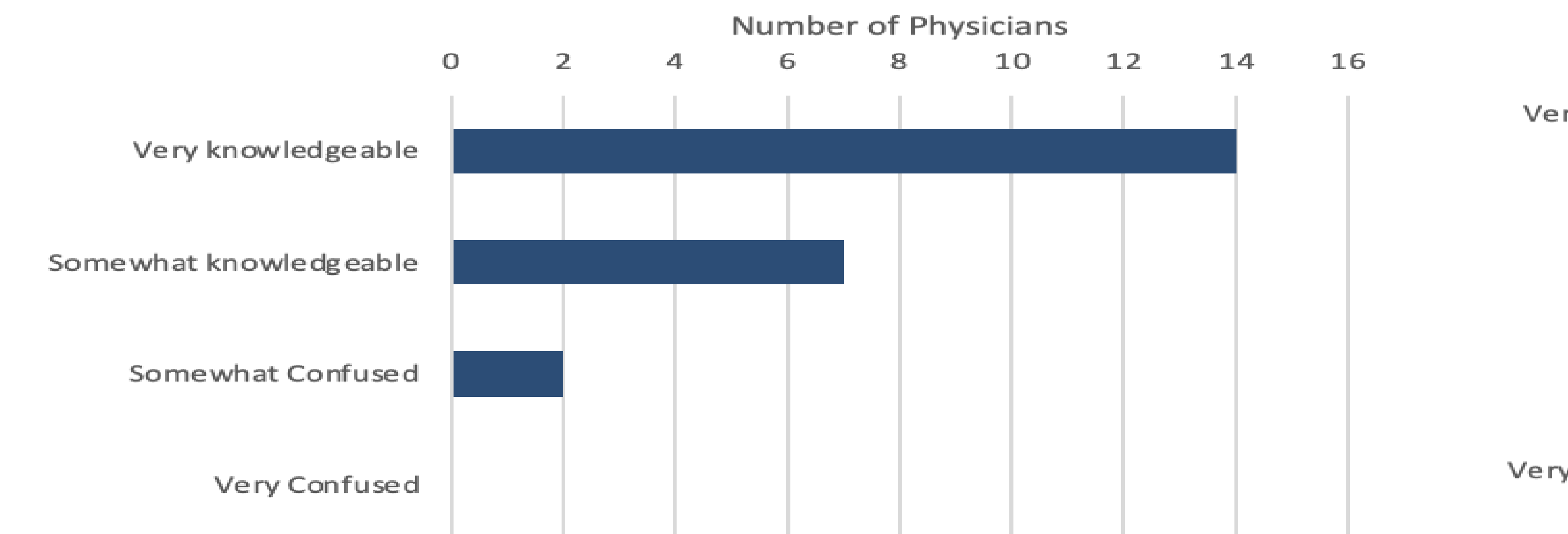


Figure 4: Physician perceived patient understanding of disease process and treatment options after watching the video

## Results

- 23 patients completed surveys (Afib: 19, SVT: 4).
- Significant improvements in patient-reported understanding (5.83 → 8.30,  $p < 0.01$ ) and control (5.17 → 6.61,  $p = 0.011$ ).
- Physicians rated videos as effective in improving discussions (mean = 4.39, 5 = “very effective”) and patient comprehension (56% “extremely well,” 26% “somewhat well”).

## Conclusions

- Pre-visit educational videos enhance patient understanding, confidence, and provider-patient discussions.
- Videos streamline clinic efficiency by reducing repetitive education.

## Next Steps

- Expand content to include other cardiology conditions and procedures.
- Develop multilingual versions for greater accessibility.
- Integrate videos into EHR for simplified patient access.

## Acknowledgments

This project received multiple rounds of review and feedback from the entire department of Electrophysiology, including APPs and physicians

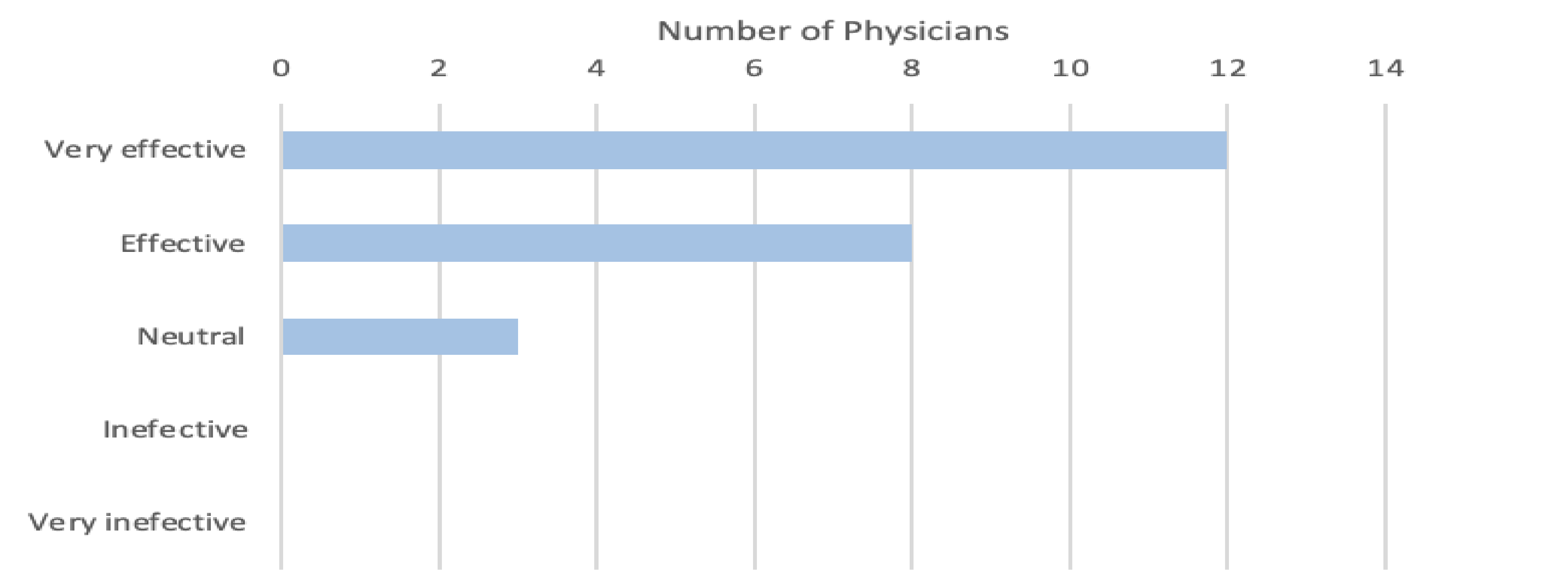


Figure 5: Physician perceived effectiveness of educational videos in facilitating fruitful discussions with patients