

Resident Education to Improve Free Flap Monitoring: Evaluation of Online and In-person Learning Modules

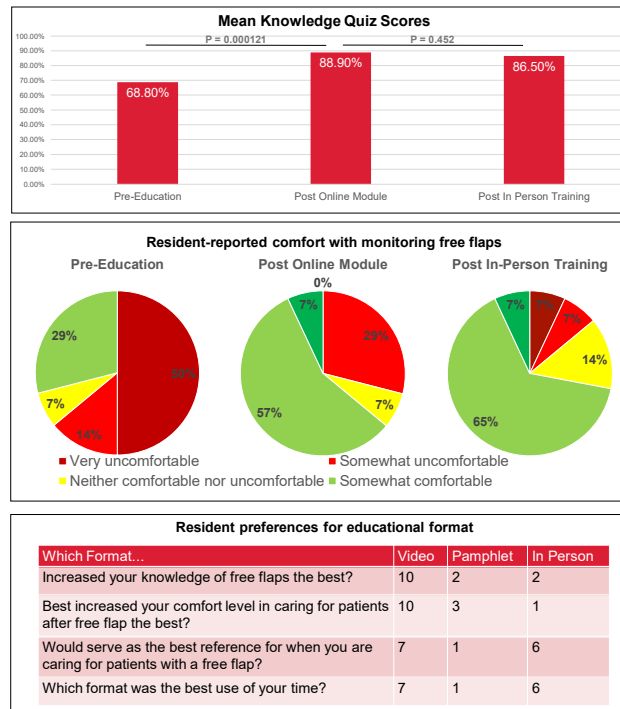
Hamzah Almadani, BS; Shelby Chun Fat, MD; Youssef Aref, MPH; Philip S. Brazio, MD
Cedars-Sinai Medical Center, Los Angeles, CA

Introduction

- Postoperative monitoring is vital to allow successful salvage of free flaps when complications arise
- Evaluation of free flaps, particularly overnight, may be performed by residents in programs other than plastic surgery
- We compare a succinct online learning module to in-person training for first-year residents

Methods

- Online Module
 - 2-page pamphlet and 11-minute video
 - Given to interns assigned overnight plastic surgery call at Cedars Sinai
 - Pre and Post module surveys and quizzes were given to assess comfort level and knowledge of free flap monitoring
 - Participants then took an in-person training
- In Person Training
 - PowerPoint presentation with a hand-on doppler workshop
 - Post training surveys and quizzes were given to assess comfort level and knowledge of free flap monitoring
- Data Collected
 - Scores
 - Participant background information
 - Feedback collected



Results

- 14 first year residents participated
- Mean quiz scores significantly increased compared to pre-education for both post-online module and post in-person trainings
- There was no difference in quiz scores for both post-online and post in-person training
- Resident-reported comfort monitoring free flaps increased
 - From 29% pre-education to 64% post online module
 - From 29% pre-education to 72% post in-person training
- All residents would recommend online training module; 93% would recommend the in-person training
- Open response feedback identified:
 - Need for higher-quality video
 - Higher quantity of video and images
 - Examples with different skin tones

Conclusion

- Both brief online and longer in-person training modules improve knowledge and comfort level among first-year residents
- The online module is preferred by residents over in-person training
- Education method did not have a difference in knowledge gained or comfort in monitoring free flaps
- Online modules have the potential to increase free flaps salvage rates through improved education, without undue time burden on trainees

*Statistically Significant $p < 0.05$