5-2021

Online Echocardiography Modules for Pediatric Cardiology Fellows

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BACKGROUND

Adequate echocardiographic (echo) education is integral to successful cardiology training. Online education is proven to be effective in other specialties, but pediatric echo training data are lacking. Our aim was to design and assess the role of a novel online module-based curriculum to enhance pediatric cardiology fellows' echo education.

METHODS

Four interactive modules, focused on principles and interpretation of a normal echo, were delivered to fellows. Content included high quality 2D and 3D echo clips (Fig 1) as well as interactive quizzes (Fig 2) and could be accessed from a phone, tablet, or computer. All fellows completed pre- and post-tests, validated by independent expert imagers, and surveys.

RESULTS

100% of fellows (n=7) participated in the pilot study. Test scores improved after completing the modules, and most fellows maintained a higher score at 4-weeks, suggesting good knowledge retention (Fig 3). Self-assessed confidence in echo knowledge and interpretation, as assessed on a numeric scale, also improved (Fig 4).

CONCLUSION

Online microteaching modules can provide a valuable adjunct to traditional echo education in cardiology fellowships. Our digital, phone-accessible curriculum was well received by fellows and was associated with an objective and subjective improvement in their understanding and interpretation of a normal echo. Further expansion of such modules will be beneficial in the evolving era of virtual education in the face of the COVID-19 pandemic.

DISCUSSION

Online educational resources fit the format of echocardiography reading, which is done online. Microteaching modules provide an opportunity for individual echocardiography training. Future modules will also include a wide range of pathologies, many of which are infrequently encountered, providing an opportunity for trainee exposure to a variety of cardiac diseases.

Online **microteaching** modules can be a valuable addition to **echocardiography training** in cardiology fellowships.

For more information, scan the QR code, go to ***https://rise.articulate.com/share/llOio7z3PiWEBVt2loQW98cA43jmA5zC*** **or email** ***scstudyvin@cmh.edu***

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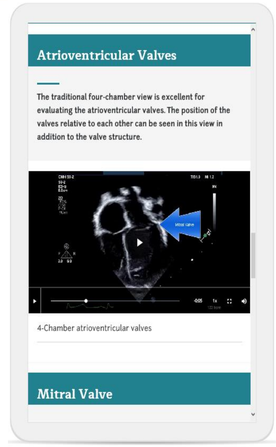
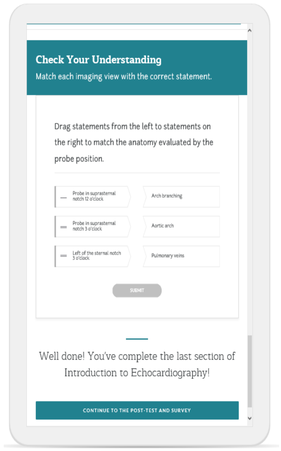
FIGURE 1



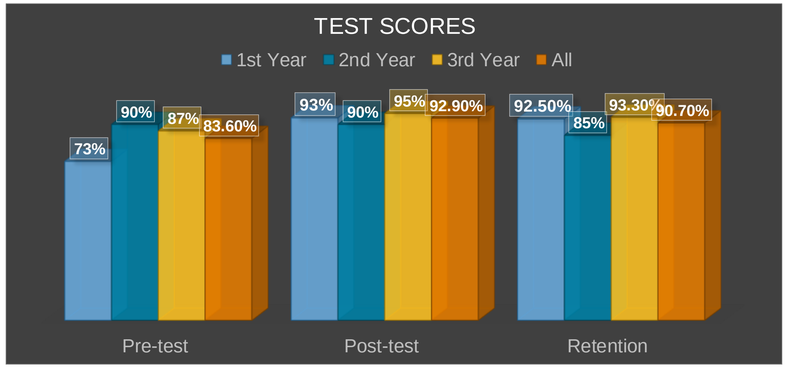
Clipped image of labeled echo sweep from modules.

FIGURE 2



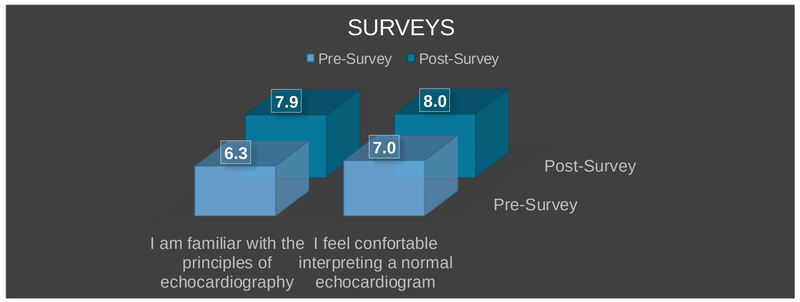
Clipped image of embedded quizzes.

FIGURE 3



Fellows evaluated in the pilot study increased echo interpretation skills as indicated on pre- and post-tests.

FIGURE 4



Surveys indicated improved confidence with echo interpretation after completing modules.

DISCLOSURE INFORMATION

No disclosures.