

Project ECHO (extension for community health care outcomes), An online tool for residents' education: A pilot study

Dear Editor:

Project ECHO (extension for community healthcare outcomes) facilitates upskilling of health care workforce by interactive sharing of knowledge using an internet-based platform. This model originated at the University of New Mexico (UNM) Health Sciences Centre, USA in 2003, to address shortage of trained health care providers to treat hepatitis C across the rural regions of the state and a later study showed equally efficient care between the ECHO-trained care providers and UNM specialists.^[1] Currently ECHO programs have trained over 90,000 caregivers in 800 programs spanning 39 countries across the globe in various medical specialities.^[2]

This has been not been tried in ophthalmology residents education (Medline search). We used the ECHO platform with twin objectives of supplementing the current residency teaching in India and bridge the existing gaps between many teaching programs.^[3,4] The model consisted of a host, a tertiary super-specialty teaching eye institute, and the residents in several training programs. Every fortnightly session of one hour featured topics selected by the majority of participants from their curricula. All participation was voluntary and on informed consent.

The program started in April 2017 with 121 residents from 13 medical schools. We evaluated its utility in supplementing resident's teaching. This was an anonymous electronic survey and was approved by the Institutional Review Board (IRB; LEC 01-19-207). The questionnaire consisted of ten multiple-choice questions addressing the appropriateness of technology, the relevance of study topics, and meeting the requirements of the residents.

Fifty-three of 121 residents (43.8%) responded to the questionnaire. Outcomes of the self-reported degree of satisfaction are summarized in Fig. 1. Briefly, 80% of residents found it useful, 88% were comfortable in seeking clarifications from faculty and 96% recommended to other residents. The limitations of this self-reported study are a small sample size, self-bias, and poor response rate. Those not satisfied with the

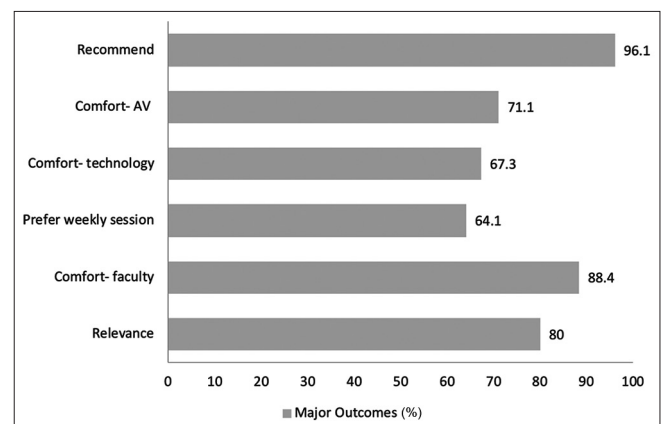


Figure 1: Degree of satisfaction with the ECHO model of teaching

program may not have responded. A distance education model may have limitations in the availability of certain faculty and students due to prior commitments.

While recognizing that the ECHO model is a good distance education tool in medicine (and ophthalmology) it does not replace bedside teaching, because an important component of medical training is physical examination of patients. ECHO is only a supplement to teaching and is not a replacement of age-old medical teaching methods. The Kirkpatrick's model recommends that reaction, learning, behavior, and results are effective means of analyzing a training program.^[5] The ECHO model compares favorably with regard to the components of reaction and learning at least in the short term.

Tele ECHO models of teaching provide a promising alternative in tele-teaching at a health related quarantine time (such as the COVID 19 now). The ECHO model shows a promising concept of teaching ophthalmology to a large number of residents across a wide geographic area.

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Conflicts of interest

There are no conflicts of interest.

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