



INNOVATIVE USE OF TECHNOLOGY TO ENHANCE POINT OF CARE ULTRASOUND EDUCATION

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Title: Innovative Use of Technology to Enhance Point of Care Ultrasound Education

Purpose/problem statement:

The Hands-On Ultrasound Education (HOUSE) Program is a well-established, travelling point-of-care ultrasound (POCUS) program for rural physicians in British Columbia (BC). When the COVID-19 pandemic disrupted the delivery of in-person courses, we were challenged to continue delivering real-time POCUS education. We saw this as an opportunity to enhance the program with available technology including videoconferencing platforms and handheld ultrasound machines.

Approach

We piloted a two-day virtual HOUSE course in a remote BC community in Fall 2020. Course instructors attended the session virtually via Zoom, and the rural physicians participated in-person from their community hospital. The introduction of technology allowed us to continue teaching POCUS skills and enhance the learning experience by offering individualized virtual follow-up sessions using the community's handheld ultrasound machines.

Findings/discussion

Although we undertook a literature search and conducted key informant interviews on best-practices for virtual education, there is little evidence to guide virtual real-time POCUS instruction. Given this, we documented lessons learned throughout the process. We determined that two cameras are required to show instructors both the learner's ultrasound screen and probe placement. It is also important to have strong information technology (IT) support for both the instructors and learners. The virtual follow-up sessions improved learning by offering longitudinal support; previously we were challenged by significant geographic distances between instructors and learners.

Barriers/facilitations

Barriers to running this pilot included limited access to broadband wireless internet in the rural community hospital and limited to no information on virtual POCUS instruction best-practices. This pilot was facilitated by province-wide access to videoconferencing technology, increased availability and uptake of handheld ultrasound machines, and strong system-level IT support and expertise.

Impact/relevance to the advancement of the field of CME/CPD

Real-time virtual POCUS education is feasible and enhances some aspects of learning. Advantages include, decreased travel time and costs, enhanced longitudinal education support, and increased access to high-quality POCUS education, especially in very remote communities.