Webinar: An Initial Experience with Web-based Real Time Interactive Clinical Seminars for Japanese Medical Students

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**OBJECTIVE:** To demonstrate the feasibility of webinars, web-based real time interactive seminars, for geographically distant medical students and their tutors.

**METHODS:** Six participants from 5 medical schools in Japan were self-selected 3rd to 6th year medical students. A North American medical educator served as their webinar tutor. The students and tutor used home computers to participate in the webinar.

**RESULTS AND CONCLUSIONS:** A total of twelve webinars were held, 4 with a tutor and 8 without the tutor. Unstructured tutoring formats included symptom-related differential diagnoses, role-play and patient case discussions. We suggest webinar is a feasible technology to supplement the clinical training of medical students at medical universities.
INTRODUCTION

Clinical training of Japanese medical students lacks emphasis in part because of prior Japanese legislative restrictions and lack of adequately trained clinical faculty. In attempts to remedy this situation, some medical schools have invited international medical educators to assist with clinical staff development.

Other medical schools have appointed Japanese physicians trained abroad in clinical skills to educational leadership positions. Evans and Suzuki et al have also reported another approach using trans-national text thread web-based learning to teach clinical genetics.

More recently, a group of medical students affiliated with the medical student section of the American College of Physicians, Japan Chapter (ACP-JC), organized and instituted ‘webinar,’ a series of real time video-audio seminars with a geographically distant international medical educator to supplement their clinical thinking skills. In this article, we report the first feasibility of Japanese medical students using webinars to discuss clinical problems.

Methods

Participants

We recruited 6 medical students in their 3rd to 6th year (final) of medical school from 5 geographically distant medical schools in Japan. They were all student members of the American College of Physicians, Japan Chapter, and all were able to communicate in English. Webinar sessions were held weekly over a 4-month period (April to July, 2009). The tutor of the webinar was a North American medical educator. All sessions were conducted in English.

Technical Aspects

The students and tutor used their own home computers compatible with either the Windows or Macintosh operating system. All webinar sessions were conducted from the participants’ homes, using ‘Skype’, a free downloadable Internet application, and high speed Internet access. A 5th year Japanese medical student coordinated the webinar schedule. Due to a system limitation of Skype, we held video-audio webinars when 2 students attended the session; when 3 or more students attended the session, we held audio only webinars.

Webinars were held weekly for one hour on Saturdays at 8 PM Japan Time (Saturdays at 9 AM North American Eastern Daylight Time). Additional webinar sessions were arranged when the tutor was absent.

Results

A total of twelve sessions were held. No technical problems occurred during these sessions. Two students participated in the video-audio webinars, and up to 5 students participated in the audio only webinars. There were 3 video-audio sessions and 9 audio only sessions. The number of participants in the audio only sessions varied from 3 to 6 by self-selection. One student participated in all 12 sessions (student coordinator); 2 students participated in 6; and 3 students participated in 1 sessions. Three tutoring formats were used in the webinar. These included: 1) interactive symptom-related differential diagnoses for dyspnea, chest pain and fever; 2) role play, whereby the tutor ‘played the patient’ while guiding the students in history taking and differential diagnoses; and, 3) medical-student-led patient case discussions of their own patients with kidney stones, heart failure, and dementia. The tutor led the 4 sessions on symptom-related differential diagnoses and role-play. The medical student who served as a coordinator of the webinar led 8 sessions on patient case presentation.

During and after each webinar session, students were asked to provide feedback on their learning experiences in the webinar. At the end of the 4-month webinar series, all medical students stated that the webinar was very useful in improving their clinical problem solving skills. Students also stated that they would participate in the webinar if it were
offered in the future.

Discussion

In our report, we described the application of webinar for Japanese medical students to improve their clinical problem solving skills. Webinar permitted real time medical education with interactive case discussions among geographically distant medical students and their tutor. We also reported the feasibility of conducting webinar in various tutoring formats, with and without the tutor. The medical students expressed enthusiasm for this opportunity to develop patient focused clinical reasoning skills, an area that has only recently been promoted in Japanese medical universities. The seminar mode permits the students to develop and practice their individualized patient-specific clinical analysis skills, while the web technology permits communication among geographically distant students and their tutors.

Additionally, the webinar is an inexpensive and efficient way of providing medical education because participants used their own home computers and high-speed internet. There were no other direct costs required to participate in the webinar.

Medical literature search disclosed several uses of the webinar, yet none were found for training medical students in clinical thinking. For example, Behar-Horenstein et al used webinar to enhance dental school faculty development. Weninger et al reported webinar to teach students a module on child psychiatry. Daley et al employed webinar to improve global understanding linking North American and United Kingdom nursing students. Campbell et al (2007) reported the efficacy of webinar for advanced nursing research training. Our study on webinars for Japanese medical students adds knowledge to the current medical literature that webinar is a feasible format for teaching Japanese medical students clinical thinking.

Limitations of this brief report were that the sample size of this pilot project was small (n=6), and there was an absence of pre- and post webinar tests. Also, the use of 3 tutoring formats, interactive symptom-related differential diagnoses, role play and patient case discussions, did not permit comparative assessments of these formats. English language bias likely skewed the participants’ understanding of case discussions during the sessions.

In conclusion webinar may be an acceptable tutoring modality to address the current deficiencies in clinical training of Japanese medical students. Further descriptive webinar studies with a larger sample size, conducted in Japanese, are needed to provide audio-visual recording of webinar to be reviewed by Japanese clinical educators to augment their clinical teaching methods with the aim of improving medical student clinical thinking.

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Declaration of interest

The authors report no conflict of interest. The authors alone are responsible for the content and writing of this article.

References


