

## RESEARCH

# Acceptability of Videoconference Technology for the Delivery of Continuing Education to Rural Pharmacists

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## ABSTRACT

**Aim:** To investigate whether a rural continuing education (CE) program delivered by videoconference can enhance access to, and uptake of, CE among pharmacists and determine their satisfaction with videoconference for the delivery of CE.

**Method:** A postal survey was sent to 33 registered pharmacists in south-west Victoria and south-east South Australia who had attended at least one videoconference CE session organised in that region.

**Results:** Respondents worked in different areas of pharmacy, and 40% worked in more than one area of pharmacy. The use of videoconference facilities has increased access to and participation in CE generally, and most participants (88%) have found it to be an acceptable medium for delivery. Increased access to high-quality CE opportunities, and reduced travel time for CE were seen as the principal benefits of the medium. Negative aspects included technical glitches, organisational issues, and the time-lag in voice transmission. Overall, most participants were happy to receive a substantial proportion of their contact CE using this medium.

**Conclusions:** Videoconference technology is a valuable tool for the delivery of carefully structured CE sessions in rural and remote areas with an appropriate information technology infrastructure.

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## INTRODUCTION

The Pharmacy Boards of Victoria and South Australia underline the need for pharmacists to engage in continuing education (CE) and continuing professional development.<sup>1,2</sup> The Victorian registering authority stipulates that a substantial proportion (10 hours) of this should be undertaken as 'contact activity' which involves personal attendance or a fully supervised correspondence course.<sup>1</sup> Rural and remote pharmacists have fewer opportunities to access CE as a 'contact activity' than their urban or metropolitan counterparts, potentially creating difficulties in complying with these guidelines.<sup>3</sup> Often acting as sole practitioners, they are a geographically dispersed group with limited access to locum services. These factors reduce the ability of pharmacists to travel in order to access such CE opportunities and the viability of having regular individual sessions at many rural locations.

Emerging technologies, including CD-ROMs, satellite broadcasts, and online programs are being embraced throughout rural and remote Australia as a means of addressing these issues for pharmacists. Videoconference technology is also being increasingly used for education delivery to rural and remote pharmacists.<sup>4-7</sup> There is, however, a paucity of available peer-reviewed literature regarding the usefulness or acceptability of this medium for the delivery of CE to pharmacists.

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Limited recent international evidence available from other professions such as medicine, dentistry, nursing and multidisciplinary groups suggest that videoconference is viewed as an acceptable mode of CE delivery.<sup>8-14</sup> The benefits cited included cost savings, increased access and the reduction in travel time for participants and speakers. The drawbacks largely centred on difficulties relating to the audio and video quality, background noise, increased stress associated with its organisation, potential reductions in personal interaction, and difficulty coordinating suitable times for all locations. A local study in south-west Victoria echoed many of these sentiments in assessing the viability of continuing nurse education using videoconferences.<sup>15</sup>

A CE program delivered via videoconference commenced in September 2004 in south-west Victoria and south-east South Australia (an area known as the Greater Green Triangle) providing CE opportunity for an estimated 155 pharmacists. Evening CE sessions were simultaneously broadcast to pharmacists at five hospital locations in the region (Colac, Hamilton, Horsham, Mount Gambier, Warrnambool) with the speaker being situated at one of these locations. The format of each session consisted of a presentation followed by a moderated discussion.

The aim of this survey was to investigate whether a rural CE program delivered by videoconference can enhance access to, and uptake of, CE among pharmacists after the provision of three such education sessions (two from Warrnambool and one from Horsham, over a period of five months) and determine their satisfaction with videoconference for the delivery of CE.

## METHOD

A postal survey was sent to all pharmacists who had attended at least one videoconference CE session as part of this program, and who had supplied their name and address on the attendance register. In total, 33 registered pharmacists were mailed a short questionnaire along with their record of attendance for previous events. A reminder was issued at a subsequent CE event.

The questionnaire explored issues surrounding current access to CE involving personal attendance; levels of participation in contact CE; and satisfaction with videoconference technology for CE delivery. For the purposes of the questionnaire, 'contact CE' was defined as CE involving personal attendance and did not include supervised correspondence courses.

Permission was obtained to conduct the survey from Flinders University Social and Behavioural Research Ethics Committee.

## RESULTS

There were 25 responses from the 33 questionnaires sent to registered pharmacists (76% response rate); however, not all respondents answered every question. The majority of respondents (18, 72%) were either currently employed in community practice and/or worked in hospital pharmacy (11, 44%). Of the remainder, six (24%) undertook home medicines reviews, two (8%) were employed in another pharmacy-related capacity (e.g. home medicines review facilitator), and there was one retiree. Ten (40%) respondents indicated that they worked in more than one area of pharmacy.

In considering distances travelled to access a videoconference location there were 25 responses. Eighteen (72%) travelled less than 10 km and four (16%) travelled more than 20 km. The median distance the respondents were willing to travel in order to access CE in the evening was 40 km. There were widely varying distances reported by 23 respondents in terms of what is acceptable. Eight (35%) indicated maximum distances of 20 km or less, while another eight (35%) indicated a willingness to travel 100 km or slightly more; the remaining seven (30%) cited distances between 25 and 60 km.

Twenty-three respondents identified the number of sessions they attended—seven (30%) one session, six (26%) two sessions, and ten (44%) all three sessions.

A median of 22.5 hours (interquartile range 11.5–30.0) contact CE in 2004 was reported by 22 respondents. Three (14%) undertook less than 10 hours, five (23%) undertook between 10 and 19 hours, and 14 (64%) undertook 20 hours or more in that year. However, 12/24 (50%) respondents indicated that they can access 10 or more hours of relevant pharmacy-specific contact CE per annum within a distance that they considered to be reasonable.

Twenty-five participants responded to whether they felt that the provision of videoconferences in the region had actually increased their participation in CE (as opposed to being used as a substitute for other education opportunities). Twenty-two (88%) respondents indicated that it had, while one (4%) indicated that it had not and two (8%) were unsure. This view was supported with all 25 respondents indicating that they would like at least three videoconferences (3 x 90 minutes) per annum. A desire for five such sessions (7.5 hours) was expressed by six (24%) and eight (32%) would opt for six or more supplementary sessions (9 hours).

Twenty-two (88%) respondents agreed that videoconferences can provide a satisfactory medium for CE delivery. When asked to choose one of four statements that most accurately reflected how videoconference CE compared with having a live speaker present, 13 (52%), described it as 'very good—no real difference in benefit', and a further ten (40%) described it as 'acceptable—slightly better with speaker present at location'. The remaining two respondents opted for 'excellent—videoconference is better' or 'poor—videoconference is substantially worse'.

In comparing videoconference CE with a live speaker the main problems identified were the potential for technical glitches (delays caused by connection problems), organisational issues (non-availability of handouts at some locations) and a belief that discussion is hampered (due to time-lag in voice transmission and main presenter is not at the same location).

Concerns were expressed by only 7/24 (29%) respondents in relation to increasing the use of videoconference technology for their CE. These revolved around time commitments and also the 30 minute time difference between South Australia and Victoria. However, 14 (58%) were happy to receive in excess of 40% of their total contact CE using videoconference, with six (26%) happy to receive in excess of 60%. Two (8%) indicated that they would be happier to limit it to 0 to 20% of their annual contact CE. Comments suggest that the two main reasons for satisfaction with this medium are the increased access to presenters and materials not readily available in most rural locations, and reduced travel time for participants. Indeed a few respondents acknowledged that travel time would also be reduced for speakers, making such a rural CE program more sustainable.

## DISCUSSION

The results of this survey offer an insight into the perceptions of a small sample of rural and remote pharmacists in regard to access to CE and the merits of videoconference use. However, in considering these findings it is important to take into account the profile of the pharmacists who participated in the survey. The respondents were often engaged in more than one area of pharmacy, which perhaps necessitates a more diverse range of competencies and knowledge. They appeared motivated to undertake CE, with their average uptake of contact CE being well in excess of requirements stipulated by the Pharmacy Board of Victoria (no minimum recommended level of contact-based CE mandated by the Pharmacy Board of South Australia). Finally, they reported inadequate access to convenient contact CE due to their rural location. It remains to be seen how acceptable this medium would be for pharmacists who feel that their current educational needs are being met by other means.

The majority of pharmacists had travelled a relatively short distance to access this CE. This is probably a reflection of the fact that many pharmacists live and work in or near the towns where videoconference facilities are located. It is possible that other pharmacists did not attend the videoconference CE because they considered the distance to be too far. The survey results suggest a widely varying attitude to what constitutes an 'acceptable' distance that would be travelled to attend. This may be explained by a number of issues including varying time constraints and other commitments, hazardous terrain in certain rural/remote areas and personal motivation to attend CE. Overall, it does appear that access to CE is generally facilitated by the use of videoconference locations.

The Pharmacy Board of Victoria requires that at least ten hours of CE be carried out through personal attendance or through 'fully supervised' correspondence courses.<sup>1</sup> This may be subject to change as the Pharmacy Board of Victoria (and other jurisdictions) begins to introduce a new professional development program in 2006 based on the ENRICH program in use in South Australia.<sup>2</sup> It is nonetheless worrying that half of the pharmacists in the survey felt unable to access even ten hours of CE involving personal attendance within a reasonable distance of where they live. A perceived shortfall in current levels of access to education is underlined by the expressed desire for regular supplementary CE delivered via videoconference units. The advent of continuing professional development activities is likely to create demand for a broader range of educational opportunities for pharmacists if they are required to develop individualised education plans in response to personal needs assessments. Videoconference technology is a suitable means of improving such access in rural areas.

There were a number of concerning comments regarding the quality and reliability of videoconference transmission. These were in keeping with the experiences documented from previous studies.<sup>9,11,14,15</sup> It is important to note that, owing to band width limitations at one of the videoconference locations used, this program was only able to provide a basic standard of transmission (128 kbps) and yet the medium was still largely seen to be quite satisfactory. The expanding capacity of regional networks should dramatically reduce the incidence of connection difficulties and time-lags in voice transmission. To date, the program has comprised clinical updates relating to areas of clinical practice. The communication difficulties may pose more of a problem for CE where a greater degree of interaction is necessary. Most other difficulties cited are easily corrected through changes to protocols currently guiding the organisation of events.

The results from this survey of rural and remote pharmacists suggests that there is sufficient satisfaction and demand, to justify the development of further videoconference programs for CE delivery to this group. Videoconference programs may be used to increase the level of access to contact CE for these pharmacists, and also acts as a means of allowing experts a more convenient way to present and interact with a dispersed pharmacist population. While pharmacists are happy to embrace this medium, there are current technical and network limitations in many geographical areas that may restrict the delivery of CE that requires a high degree of interaction between those in attendance at different locations. More widespread availability of high-quality infrastructures in rural and remote areas, and further investigation of videoconference for CE delivery are required before its full potential can be exploited.

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**Competing interests:** The author has an active role in the organisation of videoconference CE for the pharmacists surveyed.

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Grants closing soon	Value	Closing date
DBL Development Fund (third round)	\$40 000 over 12 months	30 September 2006
Merck Sharp & Dohme Pharmacy Postgraduate Study Grants	\$20 000 over 12 months	
DBL Development Fund (fourth round)	\$40 000 over 12 months	31 December 2006
Sanofi-Aventis Research Grant*	\$10 000	TBA

\*this grant listing is subject to change without notice please refer to the SHPA web site for all of the latest news

### CONGRATULATIONS TO THE RECENT RECIPIENTS OF SHPA GRANTS

Grant	Recipient	Purpose	Value
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DBL Development Fund	David Maxwell	Attendance at the International Society for Quality in Health Care 23rd International Conference, Westminster, UK	\$2000
DBL Development Fund	13 recipients	Travel assistance for the 5th Biennial SHPA Clinical Conference, Melbourne	\$4200

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