Use of Technology in Vocational Training for General Practice

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2. CHECKUP – Computerised Home Evaluation of Clinical Knowledge Understanding and Problem Solving
3. Video Review of Consultations and Procedures

Introduction

I would like to welcome you to this session on “Distance Education Technology”. There are difficulties in bridging the gap between the learner in remote areas of Australia and educational resources which are usually based in larger centres.

The costs in conducting face-to-face educational activities for rural trainees are many times those encountered when running the same educational programme in a metropolitan or provincial centre. Resource persons need to be flown to country centres or country trainees need to travel to a larger centre. I would like you to consider the individual costs incurred in attending this conference with respect to conference fees, travel, accommodation, locum or replacement personnel and lost income.

This morning we are going to examine a number of technologies that are designed to assist bridge the gap between educational resources and the distant learner. I would ask you not to focus on the technology itself but on what it can do. The technologies demonstrated today are useful for specific aspects of distance education. They do not attempt to replace but to complement and enhance print based materials, audiotapes and other basic educational technologies.

1. Family Medicine Programme Aussat/Q-Net Satellite Broadcasts

The Family Medicine Programme (FMP) is the Royal Australian College of General Practitioners vocational training programme for general practice.

In Queensland a large percentage of FMP trainees live and work outside major centres. In 1983, with the assistance of Dr Roy Lundin from Kelvin Grove College of Advanced Education, FMP in Queensland introduced audio-teleconferencing to supplement existing local, regional and metropolitan based educational activities.

Following the success of audio-teleconferencing, FMP was successful in 1985 in obtaining Queensland State Government funding to trial satellite broadcasting as a means of providing
education programmes for trainees in country centres. The trial via satellite commenced in March 1986 and continued until December 1987.

An evaluation conducted in 1988 demonstrated the benefits of interactive satellite broadcasting. These included the acquisition of clinical skills not able to be gained in other ways, less professional isolation, less anxiety with clinical work and learning skills from other country centres.

At present over fifty (50) Queensland and northern N.S.W. centres are able to receive monthly television broadcasts originating from the Technical and Further Education (TAFE) TSN11 studio in Brisbane. Topics are chosen by country centres. The medium is suited to visual material e.g. dermatology and procedural material e.g. demonstration of cryotherapy techniques. A return audio link via a 008 telephone number allows interaction between the resource person in the studio and the participants in country centres.

2. CHECKUP- Computerised Home Evaluation of Clinical Knowledge Understanding and Problem Solving

Developed by RACGP Family Medicine Programme National Office (Drs Wes Fabb, Peter Fleming, Jack Marshall and Ms Jude Blackwood), this programme has been in use since August 1986. This national videotex based programme is used by 2 000 FMP trainees and 1 800 general practitioners in Australia. Over a million knowledge questions were undertaken on the system during 1990.

CHECKUP is designed to enable doctors training for general practice test their knowledge, understanding and problem solving skills and currently consists of three (3) parts:

- Knowledge Questions
- Diagnostic Problems
- Management Problems

CHECKUP is accessed on Telecom's videotex service "Discovery". ("Discovery" is a computer based information service which can be accessed on a videotex terminal or a personal computer.)

There are approximately 10 000 Knowledge Questions available on CHECKUP covering a large number of topics relevant to general practice. The questions help identify strengths and weaknesses. The correct answer coupled with feedback on each question assists with remediation.

The Diagnostic Problems provide feedback on clinical problem solving skills. The user requests information from history, examination and investigation and orders emergency and elective treatment in order to reach a final diagnosis.

The Management Problems provide an exercise in patient management. In these problems the user is given the diagnosis of a patient and asked questions about the management of the patient.

3. Video Review of Consultations and Procedures

Videotaping of consultations or procedures and subsequent review by a nominated supervisor is one method of providing supervision and feedback on clinical skills in rural practice. Consultations or procedures can be reviewed by the rural trainee using a supplied checklist.
as a means of self assessment. The videotape is then reviewed by a regional or metropolitan supervisor/educator to in order to identify strengths and weaknesses and to provide feedback on clinical skills. The purpose is to assist with the development of consultation and or procedural skills.

A portable camera with accompanying stand and blank videotape is freighted to the trainee with instructions to record a number of consultations or procedures.

Patients are asked for their consent to be videotaped either verbally, on videotape or in writing. The consultations are seen by the trainee and his/her nominated supervisor and then erased. Confidentiality of clinical information is ensured.

We ask the trainee to record 4-5 consultations and use the checklist provided to focus on areas such as history taking, problem identification, management of the problem, attitude to patient and follow up provisions.

The taped consultations are reviewed by the supervisor and feedback is given via telephone.

One other way of using this technology is to videotape experienced general practitioners or specialists consultations and send these to remote trainees as teaching tapes. Videoreview of consultations and procedures is a most useful educational tool in supervising trainees at a distance and providing feedback on clinical skills.