Psychological First Aid Training for Health Professionals: the Development of an Interactive Educational CD-ROM

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INTRODUCTION

In 1996 the Royal Flying Doctor Service of Australia, Queensland Section (RFDS) appointed the first “flying psychologist” to its operational staff. The appointment followed a pilot project which looked at the feasibility of providing mental health services in conjunction with the RFDS. The project made recommendations under the headings of staff education and training, staff support, service delivery and further research.1

RFDS medical officers and flight nurses had always carried out mental health work, they would often be the first and only port of call for remote area residents experiencing mental health issues. However, RFDS staff had had varying degrees of training in the mental health field, with many relying on a common sense approach, often learning on the job.

Medical and nursing staff were certainly aware that there were mental health issues present, even if the primary presentation was a physical one. However, most staff were reluctant, for fear of opening a can of worms, to ask the question “…and how are things at home?” How would they deal with the answer to this question? What further questions could be asked? What should they look for? How would they recognise more subtle mental health presentations? How would they assist people to solve and manage their problems? Who should they refer to? Very often the easiest path was to avoid asking the question altogether.

These questions would be addressed by carrying out the staff education and training recommendations of the feasibility project. The recommendations were echoed in the RFDS national strategic document, “The Best for the Bush”.2 The drive to educate generalist health practitioners in mental health and psychological skills was gaining momentum throughout the health sector.3,4,5,6 It was recognised that these skills would increase the detection of mental health presentations, facilitate their management and referral and improve the practitioner patient relationship. The need for training in mental health was even greater for RFDS staff who served areas totally devoid of specialist mental health services.

The next challenge was to find a way to deliver training to staff within the RFDS environment. Operational staff work a complex shift system and are dispersed widely across Queensland. Face-to-face sessions were planned and delivered and videoconferencing was used to provide sessions to remote RFDS bases. However, little time was available for sessions, many staff were unavailable on the day due to roster
requirements, and last minute cancellations were made to videoconference sessions when the crew were called on an emergency flight.

A medium to deliver training was sought which would be portable, allow interactivity, encourage self directed learning and be accessible at any time. The medium should also be capable of incorporating a variety of media including text, audio and video to maximise interest, thereby achieving learning objectives. A CD-ROM would satisfy these requirements.

There was a growing body of literature examining the use of CD-ROMs in education. Pashen (1995) developed two training CD-ROMs covering ear, nose and throat procedures and tropical diseases. He adopted a “constructionist”, case-based approach to the topic areas but described the development of material as time consuming and often frustrating. The paper, however, gave a valuable overview of the process involved in CD-ROM production.

In 1997 a project was submitted for, under the Commonwealth Rural Health Support Education and Training program, to develop an interactive CD-ROM to train RFDS and other remote area health professionals in mental health and psychological skills.

AIMS

The overall aim of the project was to produce an interactive educational resource for rural and remote area health professionals in a CD-ROM format, covering the most relevant mental health topics and skills for remote area practice. The specific aims of the project were as follows.

♦ To determine the mental health training needs of RFDS staff and other remote area health personnel.
♦ To set learning objectives for the identified training needs.
♦ To develop training material, based on the learning objectives, in the form of a multi-media interactive CD-ROM.

METHOD

Training needs analysis

A series of focus groups were held with RFDS medical officers, RFDS flight nurses and nurses based in remote communities. Prompts to guide the focus groups centred on the kinds of mental health issues the health staff encountered in their work and the skills required to deal with them. The following prompts were used as a focus for discussion.

♦ What are the most common mental health presentations/issues in your practice?
♦ Do you think that doctors/nurses have a key role to play in the prevention, identification, assessment, management and referral of mental health presentations/issues?
In which groups of patients are mental health presentations/issues most common or difficult to manage?

What additional training/education would better equip you to deal more effectively with the mental health presentations/issues which you encounter in your work?

What teaching techniques would be most beneficial to acquire these skills?

There were many commonalities between the different professional groups, both in terms of the most frequently occurring mental health presentations and desired input on psychological skills. Whilst there were a diverse range of training needs, the key mental health presentations shared across all professional groups were identified as follows:

- depression;
- alcohol abuse;
- suicide;
- anxiety;
- general stress;
- psychological crisis.

Staff involved in the focus groups requested skills training in the following areas:

- counselling;
- problem solving;
- cognitive behaviour therapy (CBT);
- brief intervention;
- motivational interviewing;
- crisis intervention.

A comprehensive literature search was conducted around the above content areas. The search focused on the field of medical education and on skills which could appropriately be added to the repertoire of the health professional. Material chosen for inclusion in the CD-ROM focused on evidence-based assessment and treatment approaches.\(^\text{10,11,12}\)

Learning objectives

A set of learning objectives was generated under the topic headings identified from the training needs analysis. This process was carried out in collaboration with an educational consultant who joined the project at this stage. An abbreviated set of learning objectives can be viewed in Table 1.

CD-ROM development

Educational material was developed to achieve the learning objectives for delivery in face-to-face and videoconference sessions. The next major task was to convert the educational material into a CD-ROM format. A reference group, composed of RFDS personnel and representatives from the mental health field, was formed to guide the project. The group met regularly throughout the project to review content material and provide feedback on various pilot CD-ROMs produced.
Table 1

<table>
<thead>
<tr>
<th>Topic</th>
<th>Learning objectives</th>
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<tbody>
<tr>
<td>Depression</td>
<td>♦ Develop skills to detect depression.</td>
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<td></td>
<td>♦ Utilise interviewing skills to detect symptoms of depression.</td>
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<td></td>
<td>♦ Name the best practice treatments for major depression.</td>
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<td></td>
<td>♦ Utilise relevant aspects of CBT to assist people with depression.</td>
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<td></td>
<td>♦ Identify appropriate roles for oneself in the management of depression.</td>
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<tr>
<td>Alcohol</td>
<td>♦ Identify strategies for the assessment, management, referral and follow-up of alcohol abuse problems.</td>
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<td></td>
<td>♦ Accurately assess alcohol consumption levels in an individual.</td>
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<td></td>
<td>♦ Conduct a brief intervention and understand the rationale of, and when to use, motivational interviewing.</td>
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<tr>
<td></td>
<td>♦ Identify relevant specialist alcohol services.</td>
</tr>
<tr>
<td></td>
<td>♦ Identify appropriate roles for oneself in the management of alcohol problems.</td>
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<tr>
<td>Suicide</td>
<td>♦ Describe general issues in the presentation of suicide.</td>
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<td></td>
<td>♦ Identify high risk factors in the presentation of suicide.</td>
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<td></td>
<td>♦ Recognise early warning signs in suicide presentation.</td>
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<td></td>
<td>♦ Outline the process to conduct an interview to assess suicidality.</td>
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<td></td>
<td>♦ Outline a plan of management for suicidal clients.</td>
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<td></td>
<td>♦ Identify possible referral points for suicidal clients.</td>
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<tr>
<td>Anxiety</td>
<td>♦ Accurately differentiate between the main types of anxiety.</td>
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<tr>
<td></td>
<td>♦ Conduct an interview to detect the main symptoms of anxiety.</td>
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<td></td>
<td>♦ Accurately match treatments to different types of anxiety.</td>
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<td></td>
<td>♦ Utilise relevant and applicable aspects of best practice treatments to assist people experiencing anxiety problems.</td>
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<td></td>
<td>♦ Identify appropriate roles for oneself in the management of anxiety.</td>
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<tr>
<td>General stress</td>
<td>♦ Differentiate between general stress and other mental health presentations.</td>
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<td></td>
<td>♦ List approaches for the management of general stress presentations.</td>
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<tr>
<td></td>
<td>♦ Conduct an interview to identify problems in general stress presentations.</td>
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<tr>
<td></td>
<td>♦ Utilise technique of “problem solving”.</td>
</tr>
<tr>
<td></td>
<td>♦ Identify appropriate roles for oneself in the management of general stress problems.</td>
</tr>
<tr>
<td>Psychological</td>
<td>♦ Make an assessment of the type and severity of a set of crisis cases.</td>
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<tr>
<td>crises</td>
<td>♦ Make assessments of the resources available to a person experiencing a psychological crisis.</td>
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<td>♦ Identify the core presenting problem for given crisis cases.</td>
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<td></td>
<td>♦ Utilise a six-step crisis management model.</td>
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<td></td>
<td>♦ Identify appropriate roles for oneself in the management of a crisis.</td>
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The first challenge was to engage a multi-media consultant to carry out the design and programming of the CD-ROM. It was fortunate that a consultant, with a background in film and video production, was available locally.

The author, responsible for content of the CD-ROM, together with the educational and multi-media consultants set about the difficult task of designing the virtual learning environment. From the start the idea that the CD-ROM should be both an information resource and learning package was prominent. This would allow the operator to move easily around the environment to locate specific information, as well as cover the key learning objectives in a consistent manner.
The overall matrix of the environment could be conceived of as consisting of six separate modules, one for each of the topic areas identified in the training needs analysis. The next stage in production was to develop a pilot module in CD-ROM format which would act as a template to be used for the other five modules.

Depression was chosen and the module template was developed to include a page providing information on depression, with definitions, text, references and Internet links. A case scenario was developed which included assessment, treatment, referral and follow-up sections and a few related skills pages were developed in outline form.

The case scenario was constructed to illustrate the material required to address the learning objectives for depression. A script was written for doctor and patient demonstrating the skills necessary for recognising depression and those which would be useful in treatment. A script was also written for scenarios involving incorrect or less beneficial responses. The case scenario was shot on location and RFDS staff were used to play doctor and patient.

The CD-ROM pilot was distributed to reference group members for comment. On the basis of feedback received from members, modifications were made to the template. Some areas were cut back and others expanded.

Over the next six months the five other case scenarios were completed. This involved writing scripts for doctors, nurses and patients, filming on location, writing the content for information and skills pages and developing educational tests such as quizzes and other innovative features. It was sometimes a process of trial and error as the capabilities of the CD-ROM technology were explored. A further pilot was produced for feedback from the reference group.

A final edit was made of the CD-ROM with proof reading of all text files and a review of technical programming. The CD-ROM contains over 60 separate video clips and over 200 text segments. The proof reading phase was very time consuming. A user’s manual was also prepared to accompany the CD-ROM which included information on computer requirements, directions for navigation of the CD-ROM and other user information. The CD-ROM was launched in September 1999 and initially 500 copies were produced for distribution.

RESULTS

The CD-ROM employs the latest technology to create an innovative learning environment, enabling the user to select information on a particular topic or skill or to work through a series of learning modules to gain professional development credits.

CD-ROM general overview

The CD-ROM can be used for two major activities, as an information resource and as an interactive learning package.
Information resource
As an information resource the CD-ROM most closely matches the concept of a first aid kit. The operator can access anywhere in the CD-ROM from the information resource screen by selecting from the sections: practitioner issues; psychological topics; case scenarios; community types and psychological skills.

The following figure shows the information resource screen.

Interactive learning package
The interactive learning package groups the material included in the CD-ROM into six independent interactive learning modules. It allows the operator to work through the modules, which follow the six main topics covered: depression; suicide; alcohol; anxiety; general stress and psychological crises.

Module contents
The modules provide:

♦ information about the topic including definitions, text, references and Internet links;
♦ examples of different mental health presentations using case scenarios;
- demonstration and practice for a range of counselling skills across the process skills of assessment, treatment, referral and follow-up;
- information about, and examples of, best practice approaches in each of these different steps;
- opportunities to select options for best practice in the counselling skills and the process skills;
- tutor’s comments that provide the rationale for how the interview is progressing and more information about best practice for a particular topic;
- skills pages which cover specific skills in more detail; and
- quizzes that allow the operator to test understanding and application of the material being learnt.

The following figure gives an example of the skills for alcohol page from the alcohol module.

Figure 2
Types of quizzes
There are a number of different types of quizzes throughout the CD-ROM to test the operator’s knowledge.

- Solve the jigsaw: Correct answers to questions move sections of the jigsaw to make it complete.
- Select the recommended treatment: For a range of case vignettes the operator selects the required treatment or procedure. For the correct response a rationale is given.
- Select the correct practitioner response: When given options the operator makes a selection. Incorrect responses are given a nasty noise and instructions to try again.
- Indicate what you have seen: When asked in a case scenario whether the operator has observed certain responses they are asked to tick the appropriate box.

The CD-ROM contains text, video footage, Internet links, key references, skills practice sections and educational quizzes to inform, advise, question, challenge and reward the user. It provides a stimulating and informative learning experience.

Evaluation
The CD-ROM was submitted for Continuing Medical Education (CME) points through the national Royal Australian College of General Practitioners. The CD-ROM was awarded two points per hour for a total of 18 CME points. The CME process required the preparation of comprehensive pre and post evaluation questionnaires, based on the CD-ROM learning objectives, which will be utilised in a formal evaluation. Informal evaluation of the CD-ROM has been highly positive.

Distribution
The CD-ROM has been disseminated widely to the following range of organisations:

- RFDS bases in Queensland;
- RFDS sections throughout Australia;
- Rural Health Training Units;
- University medical schools;
- Divisions of General Practice;
- Royal Australian College of General Practitioners;
- Australian Association of Rural Nurses;
- Council of Remote Area Nurses of Australia; and
- University psychology departments.

Expressions of interest in the CD-ROM have also been received from ambulance officers, carer and consumer organisations, mine occupational health and safety officers, teachers and many others.

The CD-ROM achieved recognition by being awarded the 1999 Queensland Information Technology and Telecommunications Health Award for excellence and
was a finalist in two national competitions — 1999 Australian Interactive Multimedia Industry Awards — best reference or information title and the 1999 Australian Educational Publishing Awards — technological showcase section.

DISCUSSION

Developing an interactive educational CD-ROM is a rewarding, creative endeavour which resulted in an information and training resource well received by the target audience of rural and remote area health professionals. The CD-ROM contains information and skills training also relevant for the urban-based practitioner. The tight-knit group of content specialist, educational consultant and technical expert formed a productive team who worked well together.

The CD-ROM has enabled health professionals, disadvantaged by isolation, to be able to access training materials, the only requirement being a suitable computer and a degree of computer literacy. These computer requirements are not always met, however access to computers is improving and “technophobia” is on the decline.

The CD-ROM environment contains opportunities for interactivity not found with other mediums, such as audio or video, with one reviewer describing it as the closest thing to a “medical video game”. The CD-ROM is most suited to individual private study however, it can be used in the classroom setting with groups observing case scenario videos and participating in quizzes and tests. Material can be printed from the CD-ROM to be used as class handouts.

The CD-ROM does not cover every mental health presentation encountered in the medical context, nor does it cover all age groups, however it does deal with the “bread and butter” mental health problems encountered by health practitioners every day in the primary health care setting.

Overall feedback on the CD-ROM has been very positive with a lot of interest shown in the technology and the innovative delivery of the material. The CD-ROM has to be seen because it is three dimensional. There are movies to see, Internet links to be made, quizzes to be completed, pictures to look at and challenges to engage in.

CONCLUSION

The paper reports on the development of an interactive, self-directed information resource and learning package in a CD-ROM format. The resulting product demonstrates the use of computer technology to enhance the learning process and enable material to be accessed from any geographical location. It is of particular benefit to rural and remote practitioners isolated from professional educational opportunities.

The CD-ROM psychological first aid kit will ultimately improve the mental health of those people who live in rural and remote locations, as their health service providers will be better able to detect, manage, refer and follow-up mental health problems.
REFERENCES

1. Williams R. “Breaking the mind barrier”: the feasibility of providing mental health services in conjunction with the Royal Flying Doctor Service. Commonwealth Department of Health and Aged Care, Canberra, 1996.


AUTHOR

Robert Williams qualified as a clinical psychologist in 1985 and has worked in the field of mental health, primarily in rural Australia, since that time. He has held positions in Beechworth, Victoria, Alice Springs in the Northern Territory and Cairns, in far north Queensland. In 1995 he carried out a federally funded project to look at the feasibility of providing mental health services in conjunction with the Royal Flying Doctor Service (RFDS). This was a unique project, which charted new territory and resulted in the RFDS (Queensland Section) creating a position for a psychologist, a first in Australia. As the RFDS psychologist Robert was involved in staff education, staff support, service delivery to remote locations and service research and development. He was responsible for carrying out various projects, including the production of an interactive education CD-ROM to train rural and remote health practitioners in psychological skills and the development of an electronic mental health service database. Since July 2000 Robert has held the position of Senior Allied Health Officer with the RFDS, being responsible for developing and overseeing a range of allied health programs, including mental health, Indigenous health liaison and health promotion.