Asia Pacific Family Medicine 2003; **2**: 218–225

MEDICAL EDUCATION

Effective methodology for mental health training of general practitioners

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Abstract

***Aim*:** To undertake a review of general practitioner (GP) mental health training focusing on three teaching formats; lecture-based, skills-based, and multifaceted strategies.

***Methods*:** The databases of Medline, Educational Resources Information Centre, the Cochrane Database of Systematic Reviews, the Database of Abstacts of Reviews of Effectiveness were searched from the years 1980 to 2001. Search terms included general practice, family physician, family practice, mental disorders, quality of health care, professional education and combinations of these terms.

***Results*:** Lecture-based approaches combined with case discussion demonstrated improvements in GP performance. Improvements in patient outcomes were achieved using skills-based and multifaceted teaching strategies.

***Conclusion*:** More research into GP mental health training is necessary, as well as increased focus on better sampling of GPs, and measurement of GP and patient outcomes using standardized instruments.

Key words: family physician, general practice, mental disorders, professional education, quality of health care.

Introduction

Mental health problems such as depression, anxiety and substance abuse are prevalent in the community,[1] disabling[2] and often managed by general practitioners (GPs).[1] Depression is the fourth most frequent reason for visiting a GP.[3] Although GPs are often the first port of call for patients who suffer from mental illness, studies consistently report room for improvement in diagnostic[4] and management skills.[5] For GPs to successfully meet the needs of their patients with mental disorders, the development of effective mental health training is a high priority. The aim of the present paper is to summarize relevant published reports to assist educators to develop effective mental health training for GPs.

Consideration of the educational needs of GPs requires an understanding of the context in which they work.[6] Time is limited and there are many competing demands.[7] The GP is often juggling multiple roles as provider of acute care, preventive care and whole family care. Looking after patients with mental health issues in general practice raises particular difficulties such as longer consultations, confidentiality issues and more complex relationships with patients.

General practitioners also have particular educational needs. Adult learning principles, such as those described by Knowles are often applied to the case of GP education.[8] The development of suitable mental health education for GPs also needs to be informed by the accumulating body of literature for continuing medical education (CME). Evidence is emerging about the types of CME approaches that are most effective. A 1998 review of 100 randomised controlled trials of CME by Davis found that activities such as academic detailing, opinion leaders, practice-based methods such as reminders and patient mediated strategies appeared to be the most effective.[9] The same review found that 'audit' or dissemination of educational materials showed weaker outcomes, while formal CME conferences without additional support had relatively little impact. The review also found that combining a number of CME strategies was often an effective approach.

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Accepted for publication 4 August 2003.

Review process

The databases of Medline, Educational Resources Information Centre, the Cochrane Database of Systematic Reviews, the Database of Abstacts of Reviews of Effectiveness were searched from 1980 to 2001. A snowballing approach was used to identify papers cited in relevant articles, and existing reviews of mental health interventions.[10] Search terms included general practice, family physician, family practice, mental disorders, quality of health care, professional education and combinations of these terms. Inclusion criteria for studies included the involvement of GPs, an intervention that had a substantial mental health educational component involving depression or emotional distress, and a study design that involved either a randomized controlled design or pre/post design. In the present review, we focused on lecture-based, skills-based and multifaceted interventions. The present review did not include previously published reports that solely included interventions such as peer support,[11] routine administration of questionnaires[12] or academic detailing.[13] From a total of 187 identified relevant reports, we included 15 studies which met our criteria – three were lecture-based, five were skills-based and seven were multifaceted interventions (Table 1).

Program Formats

Lecture-based

Lectures have been the mainstay of CME, so it is of interest whether this approach to mental health training is effective. Most of the lecture-based programs incorporated some discussion of cases or videotape examples as part of teaching rather than a purely didactic lecture format.

One widely quoted study conducted in Sweden on the Island of Gotland, demonstrated significant improvements in GP performance and patient outcomes.[14–16] Eighteen GPs undertook a 2-day course covering classification, etiology, and pathogenesis of depressive disorders, the treatment of the depressed patient, depression in old age, long-term treatment and prophylaxis for depressive disorder. Clinical videotapes were used and case reports were discussed. Improvements occurred in GP knowledge of depressive disorder, referral of depressed patients to the psychiatry department decreased, the number of sick days for depressive disorder decreased, inpatient days decreased and importantly, suicide rates decreased. The study also found that after the program GP prescription of psychotropic medications was more appropriate.[14]

Another program that provided support for a lecture-based approach was the 'Depression Awareness Recognition and Treatment Program' (DART) conducted in Iowa in 1988.[17] It involved 12 hours of lectures delivered by a multidisciplinary team over 2 days and resulted in measurable improvements in GPs' knowledge of depression. Videotape examples and clinical case material were used to illustrate clinical points. Participants also received a manual with a copy of the overhead slides and background reading material. Clinical psychologists addressed topics such as affective disorders, assessment of depression severity, psychological interventions, and depression in adolescents. A psychiatrist addressed differential diagnosis, genetic and biological models of depression, and somatic therapies. A nurse and a social worker lectured about depression in the elderly, case management, and management of depression in rural communities.

A London program for 21 GPs entitled, 'Depression in the elderly in primary care' involved a half day lecture and also showed some positive results.[18] This symposium, led by psychiatrists with a special interest in 'old age', covered epidemiology of depression, the use of screening tests as diagnostic aids, the initiation and maintenance of drug therapy, psychological treatments, risk factors and prognosis. The lecture was supplemented by open discussion with a panel. Using a questionnaire and responses to case vignettes, the program evaluation indicated improvements in GP knowledge of antidepressants, and a preference for cognitive behavioral strategies. Limitations of the study were self selection bias and a small number of participants.

Skills-based

Another approach is to engage GPs in role play exercises to rehearse specific consulting skills, such as problem-based interviewing.[19] This is often supplemented by providing feedback from videotaped or audiotaped consultations.

A study in Manchester using this approach for group teaching demonstrated improvements in GPs' interviewing skills.[20] Fourteen GPs were instructed in a problem solving model with training consisting of weekly sessions, each lasting 2 hours and conducted over 6 months. Videotaped consultations were used for group teaching with the tape being stopped intermittently for constructive criticism and discussion. The GP interviews were rated by reviewing the videotaped consultations using a checklist of desired consultation behaviors. The durability of the skills taught using this type of approach was also demonstrated by a follow up study that showed that improved interviewing skills were maintained for at least 18 months.[21] Gask and Goldberg also demonstrated that this approach could lead to better management practices and improved clinical outcomes for patients.[22]

Table 1 Mental health training of general practitioners: summary of studies

Author/Year/ Participants	Intervention	Outcome measures	Results	Critical comment
Lecture-based				
Rutz 1989 18 GPs on the Island of Gotland[14–16]	Two day program of lectures, discussion with accompanying written materials	Knowledge Performance Clinical outcome	Compared to before the program GPs' knowledge of depression improved, referrals of depressed patients to the psychiatric department decreased, decreased number of sick days for depression, decreased inpatient days, and decreased suicides	Small number of participants and not randomized controlled
O'Hara 1996 1221 physicians, psychologists, social workers and nurses in midwest rural America[17]	The Depression Awareness, Recognition and Treatment program consisted of 12 hours of teaching involving lectures, discussion videos and a reference manual	Satisfaction Knowledge	After the program, knowledge had increased and participants indicated their satisfaction with the program	The majority of participants were non-GPs
Butler 1997 21 GPs in London[18]	Half day face to face teaching	Knowledge Attitude	Compared to before the course, GPs knowledge about antidepressant treatment increased, as did preference for cognitive behavioral therapy	Only 15% of invited GPs attended
Skills-based				
Gask 1988 14 GPs from Manchester[20]	18 weekly 2 hour sessions based on problem based interviewing using small group video feedback	Performance	Compared to assessment of pre training consultations, improvements in detection and interviewing skills were detected immediately after training	Small number of participants and statistical significance level set at 0.10
Bowman 1992 9 GPs from Manchester[21]	18 weekly 2 hour sessions based on problem based interviewing using small group video feedback	Performance	Compared to assessment of pre training consultations, improvements in interviewing skills immediately after the training were maintained at 18 months and indeed, appeared to improve even further	Small number of participants
Gask 1993 14 general practice trainees[22]	Problem based interviewing	Performance Clinical outcome	Trained GPs were better at detecting patient's problems, gave more advice, gave more information about side-effects of drugs and recorded more information in the case notes. Patients of trained doctors were more likely to feel their problem was understood and had significantly better clinical outcomes	GPs and patients not randmomized

Roter 1995 69 primary care physicians in Boston[23]	8 hours of face to face teaching on either emotion handling or problem defining skills comprising a lecture, simulated patients with rehearsal of microcounselling skills and audiotaped simulated and real consultations	Performance Clinical outcome	Compared to a control group, both emotion handling and problem defining groups demonstrated increased use of skills without increase in consultation length; increased reporting and management of emotionally distressed patients; improved proficiency in simulated consultations and reductions in emotional distress in patients	Self selection of participants
Howe 1996 19 GPs from Sheffield[24]	Self directed learning program including written material, analysis of own clinical video material and feedback on performance	Performance	Compared to a control group, the intervention group demonstrated increased detection of psychological distress	Highly motivated self selected GPs. Small improvement in detection rates
Multifaceted interventions				
Hannaford 1996 18 GPs in north-west England and Trent[25]	The 'Take Care' self directed learning package included a handbook, an aide memoir, HADS, patient leaflets and video, a practice poster and access to mental health nurse	Performance	The rate of missed cases of depressive illnesses compared to a HADS score decreased after the program	The 'Defeat Depression Campaign' occurring concurrently in the UK may have confounded the study Only 18 of 200 GPs contacted doctors volunteered. Only 13 particiants had both pre- and post data.
Katon 1996 22 GPs in Washington State[26]	The multifaceted intervention included a patient video and booklet, a didactic lecture for GPs, and structured support from clinical psychologists	Clinical outcome	Compared to a control group, in the intervention group patient satisfaction and adherence to treatment improved, and the severity of major depression decreased	This health maintenance organization setting is not easily transferable to other settings Patient level analysis only, not doctor level

Table 1 *Continued*

Author/Year/ Participants	Intervention	Outcome measures	Results	Critical comment
Katon 1995 GPs in Washington State[27]	The multifaceted intervention included a patient video, booklet and questionnaire, a half day lecture for the GP on antidepressants and behavioral treatment of depression, monthly case conferences, case by case advice from psychiatrists, increased frequency of visits, and scheduled psychiatrist visits between GP visits	Clinical outcome	Compared to a control group, in the intervention group – patient satisfaction and adherence to medications increased, and severity of depression decreased in those patients with major but not minor depression	This health maintenance organization setting is not easily transferable to other settings Only patients on antidepressants were included
Katzelnick 2000 163 primary care practices in three health maintenance organizations in the United States[28]	The 'Depression Management Program' included a 2-h GP training program including a treatment algorithm, patient education booklet and video, improved psychiatric support, and telephone based coordination of treatment	Clinical outcome	Compared to control groups, patients in the 'Depression Management Program'; filled more antidepressant prescriptions, experienced less depressive symptoms persisting at least 6 months after the intervention, experienced greater mental and social functioning for at least 12 months	This approach used in a health maintenance organization not easily transferable to other settings Only high utilizers of care were included
Lin 1997 22 primary care physicians in USA[29]	The 'Collaborative Care Program' included academic detailing, treatment guidelines, role play, patient education pamphlets and video, and a reference handbook	Performance Clinical outcome	Compared to a quasi experimental control group, in the intervention group there was no difference in antidepressant medication selection, dosage or duration Compared to preintervention surveys, post intervention surveys found – no difference in intensity of follow up; no difference in patient education delivery; no difference in patient satisfaction; no difference in depressive disorder outcomes	Small number of GPs, and highly motivated patients

Thompson 2000 60 primary health care practices in an English health district[30]	The 'Hampshire Depression Project' included a clinical guideline, 4 hour seminar and 9 months access to educators	Performance Clinical outcome	Compared to control group, in the intervention group, sensitivity to depressive symptoms determined on HADS score improved. No difference in patient outcomes were detected at 6 weeks or 6 months	Outcome measures based on depressive symptoms, not diagnosis of a depressive disorder
Naismith 2001 57 GP volunteers from around Australia[31]	The SPHERE project included a 12 hour training program over four seminars focused on depression and anxiety, plus clinical audit with patient and practice based feedback	Knowledge Attitude Performance	Compared to before the program GPs who completed the program had improved knowledge, improved confidence, improved diagnosis rate of mental disorders and increased provision of mental health treatments	No control group for comparison

GP, general practitioner; HADS, Hospital Anxiety and Depression Scales.

Further support for review of recorded consultations came from two other studies. A Boston study of 69 primary care physicians taught counseling skills using simulated and real audiotaped cases, both of which were used to provide feedback. Skill development and improved outcomes were demonstrated for general practice patients who had participated in the education.[23] A second study of 19 GPs in Sheffield involved a self-directed program aimed at improving GP detection of emotional distress. The GPs were asked to assess their own performance on videotaped consultations using a checklist, and were provided with feedback on their performance and supplementary written materials. This study also demonstrated improvements in detection of psychological distress in patients, compared to a control group, although the improvement was small and unlikely to be clinically significant.[24]

Multifaceted interventions

A number of programs have supplemented GP training with the provision of patient education and organizational changes such as improved access to specialist mental health providers or structured follow-up of patients. Most of these programs have delivered improvements in GP performance, and some have also shown improved clinical outcomes.

The 'Take Care' program was launched in 13 practices in Northern England in 1993 and included a handbook, an aide memoir, patient questionnaires, patient leaflets, a videotape, a practice poster and access to a mental health nurse.[25] The handbook covered detection and diagnosis of depression, its initial and continuing management, and emphasized the value of a multidisciplinary approach. Using the Hospital Anxiety and Depression Scale as a gold standard, this study indicated improvements in detection of depression.

In Washington, Katon *et al*. delivered integrated depression management within Health Maintenance Organizations (HMO). One program incorporated education (didactic lectures covering antidepressants and behavioral treatments) with patient materials (written materials and video) and a highly structured treatment program involving four to six contacts with a clinical psychologist plus follow-up telephone calls to monitor patient progress. At 4 months, patients in the intervention group were more compliant with antidepressant medications, and had greater clinical improvement compared to the control group.[26] A similar study by this research group also demonstrated patient improvements using psychiatrists to support the GPs and review patients.[27]

The 'Depression Management Program' was also conducted in a HMO and focused on high utilizers of

medical care. It included GP education in the form of a standardized 2 hours education program about assessment and initiation of pharmacotherapy, the provision of patient resources ('Depression isn't just a mental problem' booklet and an educational video) and telephone-based coordination of treatment.[28] The education itself involved teaching primary care physicians to follow a specific pharmacotherapy algorithm. Compared to the control group, patients in the intervention group experienced a greater reduction in depressive symptoms and also experienced greater improvements in quality of life compared to controls.

However, not all evaluations of combined interventions have produced positive results and they appear to differ from the successful multiple intervention studies in their absence of significant changes to the process of health delivery. For example, Lin *et al.*'s study of 22 American primary care physicians involved in the 'Collaborative Care Program' failed to create change in domains of GP prescribing behaviors, patient follow up, patient satisfaction or clinical improvement.[29] The intervention comprised treatment guidelines, a reference handbook, teaching with role play, a patient education booklet and a video. Another multiple intervention study, the 'Hampshire Depression Project' incorporating a clinical guideline, a seminar and access to educators, also failed to demonstrate improvements in patient outcomes compared to controls at both 6 week and 6 month follow ups.[30] Again there was no significant change to the health delivery system.

In Australia, 'SPHERE: a national depression project' comprised four components; a clinical practice audit, a 12-hour training program designed to improve the management of patients with depression and anxiety, a 12-month disease management program for use with patients with depressive disorders and ongoing education and practice support. In 1998–1999, 57 of 386 GPs who undertook a clinical audit also participated in training, and demonstrated improvements in knowledge, greater confidence in their management skills, higher diagnosis rates, and higher rates of providing mental health treatments.[31]

Conclusion

Caution is required in interpreting the present review of GP mental health training. Many of the studies involved small self selected samples of GPs, and few were randomized controlled designs. However, based on the limited evidence to date, we propose some general principles regarding GP mental health training and research. The present review did not support the value of lectures on their own, but they appear to be effective when combined with case discussions. The published reports support GP mental health training that incorporate rehearsal of specific consultation skills. Supplementing training with educational resources for the GP, and patient educational materials is also valuable. It is important that GP mental health training is accompanied by ongoing clinical and professional support.[32]

With the increasing profile of primary mental health care around the world[33,34] and specifically the central role of GPs, there is an urgent need for further research.[35] Sampling of GPs in genuine primary care settings is a challenge for future researchers, with specific attention to the self selection bias which confounds much research in this field. More long-term studies are required with adequate follow-up of participants. Research which promotes the use of standardized measures and which targets multiple outcome levels, including GP, patient, population health outcomes[36] and cost-effectiveness is necessary. In the long-term, this will allow meaningful international comparisons, and facilitate better GP training in mental health care.

Summary of implications for GPs

The present review provides general guidance for GPs who are seeking further mental health training. Effective teaching formats may include lecture programs that incorporate case discussions, and skills-based programs that facilitate rehearsal of specific consulting and psychological skills. The most effective training programs appear to be those that include educational resources for GPs and their patients and, incorporate ongoing clinical and professional support from specialist providers.

References

1 Australian Bureau of Statistics. *Mental Health and Wellbeing: Profile of Adults, Australia 1997*. Canberra: Australia Bureau of Statistics, 1998.

2 Mathers CD, Vos ET, Stevenson CE, Begg SJ. The Australian burden of disease study: measuring the loss of health from diseases, injuries and risk factors. *Med. J. Aust.* 2000; **172**: 592–6.

3 Britt H, Sayer G, Miller G *et al. General Practice Activity in Australia 1998–99 (General practice series no. 2)*. Canberra: Australian Institute of Health and Welfare, 1999.

4 Sartorius N, Ustun TB, Costa e Silva JA *et al.* An international study of psychological problems in primary care. Preliminary report from the World Health Organization Collaborative Project on 'Psychological Problems in General Health Care'. *Arch. Gen. Psychiatry* 1993; **50**: 819–24.

5 Hickie IB, Davenport TA, Naismith SL, Scott EM, Hadzi-Pavlovic D, Koschera A. Treatment of common mental disorders in Australian general practice. *Med. J. Aust.* 2001; **175**: S25–S30.
6 Stone L, Blashki G. Integrating counselling into general practice. *Aust. Fam. Physician* 2000; **29**: 231–5.
7 Blashki G, Parsons J, Morgan H, Hickie IB, Davenport TA. Providing psychological treatments in general practice. Rationale and practicalities. *Aust. Fam. Physician* 2003; **32**: 625–30.
8 Knowles M. *The Adult Learner - A Neglected Species*. Houston: Gulf Publishing, 1990.
9 Davis D. Does CME work? An analysis of the effect of educational activites on physician performance or health care outcomes. *Int. J. Psychiatry Med.* 1998; **28**: 21–39.
10 Kroenke K, Taylor-Vaisey A, Dietrich A, Oxman TE. Interventions to improve provider diagnosis and treatment of mental disorders in primary care: a critical review of the literature. *Psychosomatics* 2000; **41**: 39–52.
11 Jackson-Bowers E, Holmwood C. *General practitioners' peer support needs in managing consumers' mental health problems: a literature review and needs analysis*. Adelaide: Primary Mental Health Care Australian Resource Centre 2002, 1–43.
12 Gilbody SM, House AO, Sheldon TA. Routinely administered questionnaires for depression and anxiety: systematic review. *BMJ* 2001; **322**: 406–9.
13 Soumerai SB. Principles and uses of academic detailing to improve the management of psychiatric disorders. *Int. J. Psychiatr. Med.* 1998; **28**: 81–96.
14 Rutz W, von Knorring L, Walinder J. Effects of an educational program for general practitioners on Gotland on the pattern of prescription of psychotropic drugs. *Acta Psychiatr. Scand.* 1990; **82**: 399–403.
15 Rutz W, Walinder J, Eberhard G *et al*. An educational program on depressive disorders for general practioners on Gotland: background and evaluation. *Acta Psychiatr. Scand.* 1989; **79**: 19–26.
16 Rihmer Z, Rutz W, Pihlgren H. Depression and suicide on Gotland: an intensive study of all suicides before and after a depression-training programme for general practitioners. *J. Affect. Disord.* 1995; **35**: 147–52.
17 O'Hara MW, Gorman LL, Wright EJ. Description and evaluation of the Iowa Depression Awareness, Recognition, and Treatment Program. *Am. J. Psychiatry* 1996; **153**: 645–9.
18 Butler R, Collins E, Katona C, Orrell M. Does a teaching programme improve general practitioners' management of depression in the elderly? *J. Affect. Disord.* 1997; **46**: 303–8.
19 Lesser AL. Problem based interviewing in general practice: a model. *Med. Educ.* 1985; **19**: 299–304.
20 Gask L, Goldberg D, Lesser AL, Millar T. Improving the psychiatric skills of the general practice trainee: an evaluation of a group training course. *Med. Educ.* 1988; **22**: 132–8.
21 Bowman FM, Goldberg DP, Millar T, Gask L, McGrath G. Improving the skills of established general practitioners: the long-term benefits of group teaching. *Med. Educ.* 1992; **26**: 63–8.
22 Gask L, Goldberg DP. Impact on patient care, satisfaction and clinical outcome of improving the psychiatric skills of general practitioners. *Eur. J. Psychiatry* 1993; **7**: 203–18.
23 Roter DL, Hall JA, Kern DE, Barker LR, Cole KA, Roca RP. Improving physicians' interviewing skills and reducing patients' emotional distress: a randomized clinical trial. *Arch. Intern. Med.* 1995; **155**: 1877–84.
24 Howe A. Detecting psychological distress: can general practitioners improve their own performance? *Br. J. Gen. Pract.* 1996; **46**: 407–10.
25 Hannaford PC, Thompson C, Simpson M. Evaluation of an educational programme to improve the recognition of psychological illness by general practitioners. *Br. J. Gen. Pract.* 1996; **46**: 333–7.
26 Katon W, Robinson P, von Korff M *et al*. A multifaceted intervention to improve treatment of depression in primary care. *Arch. Gen. Psychiatry* 1996; **53**: 924–32.
27 Katon W, von Korff M, Lin E *et al*. Collaborative management to achieve treatment guidelines: impact on depression in primary care. *JAMA* 1995; **273**: 1026–31.
28 Katzelnick D, Simon G, Pearson S *et al*. Randomized trial of depression management program in high utilizers of medical care. *Arch. Fam. Med.* 2000; **9**: 345–51.
29 Lin EH, Katon WJ, Simon GE *et al*. Achieving guidelines for the treatment of depression in primary care: is physician education enough? *Med. Care* 1997; **35**: 831–42.
30 Thompson C, Kinmonth AL, Stevens L *et al*. Effects of a clinical-practice guideline and practice-based education on detection and outcome of depression in primary care: Hampshire Depression Project randomised controlled trial. *Lancet* 2000; **355**: 185–91.
31 Naismith SL, Hickie IB, Scott EM, Davenport TA. Effects of mental health training and clinical audit on general practitioners' management of common mental disorders. *Med. J. Aust.* 2001; **175**: S42–47.
32 Blashki G, Hickie IB, Davenport T. GP delivered psychological treatments: How will it work? *Med. J. Aust.* 2003; **179**: 23–5.
33 Hickie I, Groom G. Primary care-led mental health service reform: an outline of the *Better Outcomes in Mental Health Care* initiative. *Australas. Psychiatry* 2002; **10**: 376–82.
34 Tylee A. The Primary Care Programme of the National Institute for Mental Health in England (NIMHE). *Primary Care Mental Health* 2003; **1**: 1–3.
35 Blashki G. GP provision of counselling - more research is necessary. *Aust. Fam. Physician* 2003; **32**: 67–8.
36 Hall WD, Mant A, Mitchell PB, Rendle VA, Hickie B, McManus P. Association between antidepressant prescribing and suicide in Australia, 1991-2000: trend analysis. *BMJ.* 2003; **326**: 1008.