

The dissemination of innovative cognitive–behavioural psychosocial treatments for schizophrenia

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Abstract

There has been considerable research in recent years that has suggested that non-drug psychosocial interventions have considerable benefits to patients suffering from psychoses. These interventions include family interventions, individual cognitive–behaviour therapy and early signs monitoring. In spite of these research findings the dissemination of these interventions into routine practice has been slow and patchy. This paper briefly reviews these research studies and investigates reasons why dissemination of such evidence-based practice has not progressed. The absence of skills in the mental health workforce is one reason for the slow implementation of treatment innovations. The attempts to skill sections of the workforce are described and the relative success of the various training projects is described. The difficulties and limitations of these attempts are discussed.

Introduction

The question of how mental health services are improved is enigmatic. In theory, research should provide information about which new treatments are efficacious. These should then be disseminated into clinical practice and services be organised or configured to accommodate them and facilitate their delivery. However, the ‘provision of mental health services bears little relation to research’ whereas ‘psychiatry incorporates many commonly used treatments whose comparative effectiveness is equivocal at best.’ (Anderson & Adams, 1996). Why are empirically validated treatments not becoming

widely available while less well supported treatments remain common practice?

Historically, treatments for severe mental illness such as schizophrenia have been thought of as being solely a biological preserve. Over the last decade there have been very positive advances in the development of non-drug, or psychosocial treatments. Despite these developments the implementation of psychosocial treatments as routine within mental health services has been patchy. What then is necessary for these research-validated treatments to become established in clinical practice and be available to those who would benefit from them? There may be a number of barriers to this process such as: a lack of a

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partnership between researcher and clinician (Goldfried & Wolfe, 1996; Barlow, 1996), absence of appropriate knowledge and/or clinical skills within the relevant workforce (Lancashire *et al.*, 1996); characteristics of the organisation, institution or workplace in constraining such new developments (Bernstein, 1982; Corrigan & McCracken, 1995a, 1995b) or the fact that clinical techniques are more difficult to learn and implement than is generally realised (Wilson, 1997). Furthermore, the time allowed for post-qualification training in combination with problems in existing levels of theoretical understanding can result in staff only acquiring slight or partial knowledge of the complete treatment that has been validated by research. Partial knowledge and incomplete skills will be less resistant to these barriers to implementation. To progress from innovation to practice it is necessary that new treatments be seen as clinically relevant, be empirically validated, meet prioritised needs and can be taught in way that is accessible enough for staff to readily and faithfully acquire the knowledge and skills (Lieberman & Eckman, 1989).

In this paper we aim to review briefly the recent innovations in non-pharmacological treatments of psychotic disorders and the issues surrounding their dissemination into routine clinical practice. We will specifically deal with the area of training of professional staff as a method of dissemination and we will concentrate on the work of the Manchester group with which we have been involved.

Recent developments in psychosocial treatments of schizophrenia

Recent interest in psychosocial treatments for psychotic disorders has been the result of a number of different influences. These include: the wider acceptance of the vulner-

ability–stress model of schizophrenia; the research on Expressed Emotion (EE) of relatives and its effect on the course of schizophrenia; the failure of medication to totally eradicate psychotic symptoms and prevent relapse; and a general rise in the consumer movement in mental health and a desire for more needs led services (Tarrier & Barrowclough, 1990). Psychosocial treatments can be divided into three general categories which have a separate set of clinical procedures and aims. These are: (1) family intervention; (2) cognitive-behaviour therapy for psychotic symptoms; and (3) early signs monitoring and early intervention. Each of these areas and the empirical research supporting their efficacy will be reviewed briefly.

Family intervention

Family interventions were developed from the research on EE in which studies consistently reported that patients who returned to live with relatives rated as high on EE had a much greater relapse rate than those who returned to live with relatives assessed as low EE (Kavanagh, 1992). It was reasoned that, if EE, which was assumed to reflect behaviour of the relative towards the patient, could be changed through intervention then the risk of relapse would be reduced. Interventions were designed independently by a number of groups with the aim of reducing stress in the home environment. These interventions, although differing in some aspects, have many common features, such as including an educational component to provide the family with information about schizophrenia, adopting a practical problem oriented approach and assisting the family to better cope with the difficulties of living with a family member who has schizophrenia.

Rigorous controlled trials of family interventions have been carried out (see Mari & Streiner, 1994; Penn & Mueser, 1996 for

reviews). Typically these studies have recruited families while the patient is experiencing an acute episode and the intervention commenced at hospital discharge and continued over a 9–12-month follow-up period with the principle aim of preventing relapse. Relapse rates are then compared between families who received the family intervention as an adjunct to routine care with those who received routine care alone. Routine care would include the use of prophylactic medication. The consistent finding of these clinical trials was that relapse rates were significantly reduced by family intervention over the follow-up period. Some studies have also indicated that after 2 years there was still a significant reduction in relapse rates. In our own trial in Salford, patients were followed up at 5 and 8 years; although relapses did accumulate in all groups over this period, patients who had received a 9-month family intervention still had a significantly lower relapse rate compared to the appropriate control group (Tarrier *et al.*, 1994).

The effects of family interventions on other outcomes beside relapse are less clear. There is some evidence from the studies by Falloon and colleagues and Tarrier and colleagues that significant but modest improvements in the patient's social functioning were achieved (Falloon *et al.*, 1984; Boyd & McGill, 1985; Barrowclough & Tarrier, 1990). Falloon *et al.* (1985) also reported a decrease in the burden of care of family members. The California and Salford studies also reported that family interventions result in a financial saving (Cardin *et al.*, 1986; Tarrier *et al.*, 1991).

In summary, there is good and consistent evidence from methodologically sound clinical trials that family intervention in conjunction with prophylactic medication reduces relapse rates in schizophrenia at least in the short and medium term when families are

recruited during an acute crisis. Attempting to recruit families while the patient is in remission and when the family has a reasonably stable situation may be more problematic (McCreadie *et al.*, 1991; Tarrier, 1991) with non-engagement rates of over 50% reported in service settings (Smith, 1992).

Cognitive-behavioural therapy for psychotic symptoms

A number of case studies and case series have been published over the last few decades on the use of various cognitive and behavioural interventions in the treatment of hallucinations and delusions but it was not until the late 1980s that there was a proliferation of research into the efficacy of cognitive-behavioural treatments for psychotic disorders (see Haddock & Slade, 1996; Haddock *et al.*, 1998 for reviews). These treatments were initially developed to treat patients suffering from a chronic psychotic condition, mainly schizophrenia, who were experiencing persistent delusions and hallucinations despite medication.

A number of methods have been described such as: cognitive therapy with a normalising rationale (Kingdon & Turkington, 1991); focusing (Bentall *et al.*, 1994); coping strategy enhancement (Tarrier *et al.*, 1993); and comprehensive cognitive-behavioural therapy (Garety *et al.*, 1994).

Three research groups in the UK have, or are in the process of, reporting results of large and rigorous controlled trials (Kuipers *et al.*, 1997; Kingdon, 1997; Tarrier, 1987; Tarrier *et al.*, 1998). So far these studies have produced considerable interest and optimism and there appears to be a consistent finding that chronic psychotic and affective symptoms can be reduced using cognitive-behavioural treatments. Their impact on reducing negative symptoms or improving social functioning has been limited, although Tarrier

and colleagues (Tarrier, 1987; Tarrier *et al.*, 1998) reported significant improvements in negative symptoms in patients receiving CBT. The available evidence from limited follow-up studies indicates that the clinical benefits are durable, at least in the short term of 12 to 18 months (Kuipers *et al.*, 1998; Tarrier *et al.*, 1999). Thus, the evidence for individual cognitive-behavioural treatments is currently weaker than for family interventions and the long-term benefits unknown.

A management problem being encountered increasingly is the dual diagnosis patient. These are patients diagnosed as suffering from a psychotic illness who also have a serious substance abuse problem. Although, a project is under way in Manchester evaluating a combination of psychosocial treatments, family intervention, cognitive-behaviour therapy and motivational interviewing, little can be said about the established effectiveness of these techniques at present (Barrowclough *et al.*, 1996).

Research into CBT for acute recent onset psychosis has been limited, although a recent study suggested that CBT could be effective in acutely ill patients by speeding recovery and reducing time spent in hospital (Drury *et al.*, 1996a; 1996b). The Manchester group failed to replicate this finding with the effect size and sample predicted from the Drury study (Haddock *et al.*, 1999).

To further evaluate the effects of cognitive-behaviour therapy used during an acute episode a multi-site trial of cognitive-behaviour therapy for recent onset schizophrenia, termed the SOCRATES Trial (Lewis *et al.*, 1996) is currently under way. This is to evaluate whether cognitive-behaviour therapy is superior to supportive counselling and routine care alone in speeding recovery and preventing subsequent relapse in recent onset schizophrenic patients hospitalised for an acute illness episode.

Early intervention

There has been considerable enthusiasm for the general principle of early intervention, with some service projects organised specifically for this purpose, notably the Buckingham project (Falloon *et al.*, 1966) and the EPPIC project in Melbourne (McGorry *et al.*, 1996). Clinical intervention implemented on the detection of prodromal signs of relapse with a view to preventing or aborting relapse has been described with schizophrenic patients (Birchwood *et al.*, 1989) with a reduction in relapse and re-hospitalisation (Birchwood, 1996). A similar strategy has been evaluated in a randomised controlled trial with patients suffering from manic depressive psychosis which resulted in significant benefits, especially in reduction of manic episodes and resultant days in hospital (Perry *et al.*, 1999). Although early intervention is a plausible strategy for relapse prevention, robust empirical evidence for its efficacy is currently lacking.

Dissemination and training in psychiatric rehabilitation

Innovations face many barriers to implementation. Dissemination through the traditional methods such as publication and professional meetings may have little impact upon practitioners. There is little evidence that attendance at professional meetings or short educational courses have resulted in any change in clinical practice or services (Lieberman & Eckman, 1989). There is considerable evidence to suggest that the acquisition of clinical skills requires active and practical training in those skills rather than lecture-style didactic teaching.

Bernstein, in her influential 1982 conceptual review of training, suggested a functional eco-behavioural framework for inves-

tingating training effectiveness in which a behavioural-analytical approach was integrated into a perspective which had social and ecological validity (Bernstein, 1982). She was interested in the dissemination of skills in behaviour modification in general, but many of the points she made have relevance to the implementation of new developments in schizophrenia. Bernstein suggests that the traditional interest in producing change in an individual patient was to focus on the staff who are in contact with the patient. Thus, the questions of interest were how to teach use of behavioural change skills or how to maintain use or generalisation of those skills. This assumes that the target staff could be taught those skills and would be able to implement them to a satisfactory standard. This approach also ignores the interaction with various ecological systems that would facilitate or inhibit the use of these skills. Difficulties arising from these issues are still faced in the area of staff training today and have been incompletely addressed. Bernstein proposed a model that would enhance the delivery of behavioural skills, termed the Behavioural Service Delivery Model. She examined the function of various roles through how they interacted with different parts of the ecological system. Functions such as 'programme implementers', 'programme designer' and 'trouble shooter/resource provider' could be described and assigned, although depending on the situation these different functions would not necessarily correspond with different individuals. The important aspect is that the system could be addressed at different levels so as to maximise the implementation of the programme. Dissemination of a particular procedure would be more probable if it was possible to negotiate access through the various systems. Thus to deliver a new psychological treatment to a patient suffering from psychosis requires not

just the ability to deliver that treatment but to be able to negotiate with those who will benefit from the treatment and those who work within the mental health service at all levels.

Milne (1984) addressed some of these issues in a short in-service course on behaviour therapy for psychiatric nurses on a long-stay ward. Paying attention to the ward environment as a setting event in which the newly acquired skills would occur, he attempted to compensate for particular difficulties in that environment that would impede the use of these skills. However, implementation rates at 26% were still disappointingly low.

A similar ecological theme can be seen in writing of Corrigan and colleagues (Corrigan & McCracken, 1995a, 1995b; Corrigan *et al.*, 1997) who distinguish between an educational and an organisational model of staff development. They provide evidence that skills based on social learning principles could be successfully taught to staff in psychiatric rehabilitation settings but that follow-up studies indicated that organisational barriers were impeding their introduction and maintenance. They propose a set of organisational development strategies to overcome these barriers. Although these strategies were aimed to change the organisation as a whole, the Corrigan group's main point appears to be that change to the practice of clinical teams is best assured by conducting training with the whole team. This training will most probably succeed if it targets methods the team perceives as relevant to their clinical goals, and there is good social support between members (Corrigan *et al.*, 1997).

Training in psychosocial interventions

There has been a long tradition in Manchester of developing programmes for train-

ing staff in behavioural methods and in evaluating the effectiveness of such programmes. For example, the Hester Adrian Research Centre at Manchester University had developed the EDY project to train educational psychologists to train teachers of people with learning disabilities in behavioural methods as a means of disseminating the behavioural approach (McBrien & Foxton, 1982). Similarly Barrowclough & Fleming have developed training packages for training staff working with elderly people (Barrowclough & Fleming, 1986a) and have undertaken evaluation of such training methods (Barrowclough & Fleming, 1986b). From this training tradition, programmes of psychosocial interventions for mental health professional staff developed in the Manchester area and an interest and a demand for training began to grow.

The Preston project

The first training programme was developed to train social workers in Preston in family intervention (Tarrier *et al.*, 1988). Experience has suggested that although the 'one-off workshop' may be a useful way of creating interest in a new therapeutic approach it would be ineffective in disseminating clinical skills and in changing clinical practice. Thus to maximise the acquisition of family intervention skills by the trainees the training programme was based on clinical supervision of case work. The initial training consisted of 5-day workshops over a 6-week period, with one-and-a-half days of follow-up sessions over the subsequent 2 months and 10 days over the subsequent 9 months, concluding with a 2-day summary workshop. A number of conditions were requested before trainees enrolled on the course; these were: (1) that each participant had a co-worker from the same workplace, so that all interventions were carried out in pairs; (2) that there be agreement from the managers of each

trainee-pair that the course case-work would be given high priority so that adequate time could be given to carry out the family intervention, hence avoiding the problem of pressure of work not allowing sufficient time for the intervention; (3) that each trainee-pair should have identified and attempted to engage a patient suffering from schizophrenia and their relative prior to the commencement of training; (4) that each trainee-pair informed their professional colleagues about the nature of the intervention so as to facilitate their support for their work.

The content of the training course was based on the Salford Family Intervention programme (see Barrowclough & Tarrier, 1992) and followed a modular format in which module training was followed by supervised practice. Training began with background material followed by instruction in the use of assessments with patients and families. Subsequent modules consisted of providing education and knowledge about schizophrenia, stress management, coping skills and goal setting with relatives and patients. Following each didactic module the trainees were required to implement that module in the clinical setting and present case material for supervision. Each module was taught through instruction and then role-play with attention given to the trainees presenting their case work and to using the larger trainee group as a process whereby issues and problems were discussed so as to generate solutions. No formal evaluation of the training was carried out but written feedback from trainees was generally very positive and families indicated that they had been helped and received benefit from the new approach being used by their social workers. We were sufficiently satisfied with the training course and the feedback that had been received to regard this as a good model for training programmes.

The Manchester community psychiatric nurse training programmes

Workers at the University of Manchester set up two training programmes of family interventions that were evaluated in more detail. The drift by community psychiatric nurses away from working with patients with serious mental illness towards treating patients with much more minor and transient conditions within a primary care setting was viewed as resulting from a feeling among CPNs that there was little that could be done psychotherapeutically for patients with schizophrenia (Brooker, 1990). Thus it was argued that helping CPNs acquire skills in family interventions might motivate them to return to working with patients with schizophrenia (Brooker & Butterworth, 1993).

In the initial study (Brooker *et al.*, 1992) nine CPNs were selected onto the training course, each was matched with a colleague at the same workplace on a number of variables including age, gender, length of experience as a CPN and post-basic training undertaken. The matched CPNs acted as a control group in a quasi-experimental design. All CPNs received training in assessments but only the experimental group received training in family interventions. Each CPN aimed to recruit three schizophrenic patients and their families into the study for which they would act as a key worker. Initially 87% of the target number of 54 families were recruited, although 17 families dropped out before the 1-year follow-up. The 30 families who completed the trial represented 64% of the required sample. Comparison of the sample with other English family intervention studies indicated that they were comparable. The study drop-outs had significantly more admissions and days in hospital than the study completers. Comparison between the patients of the experimental and those of the

control CPNs did not reveal significant differences in demographic or clinical variables nor were there differences between characteristics of their relatives. The training programme was delivered by Tarrier & Barrowclough and followed a similar but extended version of the Preston training programme.

The patients in the experimental group showed significant improvements on four of the eight subscales of the KGV (Krawiecka *et al.*, 1977); depression, anxiety, delusions and psychomotor retardation at post-treatment and 1-year follow-up. Control patients showed a significant improvement at post-treatment only. There were significant improvements in social functioning, which were maintained at follow-up in the experimental group patients but no change in the control group patients. Comparisons between patients on medication dosage and admissions to hospital indicated no difference between the groups. Comparisons of variables associated with the relatives indicated that there were significant improvements in the relatives' satisfaction with the patient's personal functioning, improvements in the relatives' mental health and improvements in a measure of consumer satisfaction with services. No significant changes were found in any of these measures in families treated by the control CPNs. The relatives treated by the control CPNs indicated a significant decrease in their satisfaction with the emotional support provided by the CPNs.

In a second study, Brooker and colleagues (Brooker *et al.*, 1994) adopted a prospective quasi-experimental design in which each CPN acted as their own control. Ten CPNs were selected onto the training course of which two subsequently dropped out. Each CPN aimed to identify three experimental families and three control families. Initially a sample

of 60 families was anticipated but with the loss of two CPNs to training the potential sample size was reduced to 48. Forty-one families, 85% of the target sample were recruited to the trial of which 34 (83%) remained in the study until the 12-month follow-up. A within-subject design was used so that patients were assessed and then managed 'as usual' by the CPN for 6 months to provide a baseline period. After 6 months baseline the experimental group received family intervention while the control group continued to receive treatment as usual. After the study period of 12 months the control group were then offered family intervention. Of the 24 control families one had dropped out before the end of the 12-month study period and 15 of the remainder took up the offer of family intervention. The remaining eight constituted a control subgroup who never received family intervention. There were no significant differences between the control and experimental patients or their relatives. The training was organised by Falloon and his colleagues and follows their manual (Falloon *et al.*, 1984) and consisted of organising household meetings, family education, communication training and family problem solving. In a similar way to the first trial the training course was orientated towards acquisition of clinical skills which were taught through role play and clinical supervision.

The results indicated that during the baseline period there were no changes in positive or negative symptoms of psychosis. The experimental group showed a significant reduction of positive and negative symptoms over the time that they received family intervention. Similarly, the control group showed no change over the first 12 months of the study but those families who accepted family intervention at 12 months showed a significant decrease in both positive and negative symptoms at 12-month follow-up. A similar

pattern was seen in improvements in the measure of social functioning. In families in both the experimental group and the control group who went on to receive family intervention, there was a dramatic decrease in the mean number of days spent in hospital when the period that they did not receive family intervention was compared with the period that they did (experimental group: no-FI 18.4 days, FI 1.8 days; control group: no-FI 24.2, FI 3.1 days). In contrast the control subgroup that did not receive the offered family intervention showed a marked increase in mean days in hospital (23.5–73.5 days). It could be argued that the latter group was highly self-selected and their poor outcome owes more to some characteristic of treatment refusers rather than solely a result of not receiving family intervention. The poor outcome in this group of treatment refusers closely resembles those reported for treatment refusers in other family intervention studies (Tarrier, 1991).

Both these studies of the Brooker group suffer from considerable methodological shortcomings. There was neither blind nor independent assessment of patients or relatives; and families were not randomly allocated to treatment but could be selected into the study thus introducing a bias in favour of the experimental group. In neither of the studies did the statistical analysis adequately address the cluster design (Simpson *et al.*, 1995; Bland & Kerry, 1997). Moreover, in this second study it is assumed that CPNs would treat the control families in the usual manner while they learnt and implemented new treatments with the experimental families, thus ignoring the potential for transfer of benefit to the control families. Because of these severe methodological limitations these studies are better thought of as preliminary indications of the benefits of training rather than substantial supportive evidence.

The New South Wales study

It is worth examining another study carried out in Australia by Kavanagh and his colleagues (Kavanagh *et al.*, 1993) which had a very different outcome to the Brooker studies. Kavanagh trained mental health workers in the Sydney area in a cognitive-behavioural approach to family intervention. However, despite considerable effort by the training team the training appeared to have little impact upon clinical practice with few of the trainees actually attempting to engage families for any length of time. Trainees received didactic and workshop training of approximately 30–35 hours duration after which they were asked to participate in a controlled evaluation of family intervention by acting as trial therapists. Initially, 160 therapists received training but only 44 of these elected to take part in the treatment trial and 28 of these saw only one family. In fact, 57% of the families in the study were seen by only six of the therapists. Therapists reported particular difficulty in integrating the family work with their other duties and interests. In an evaluation of the training programme only 4% of the sample reported that their knowledge of cognitive-behavioural approaches was a significant problem, but in a written test most therapists failed to demonstrate even the minimum recall of the material they had been taught (Kavanagh *et al.*, 1993). They conclude: ‘as a demonstration that the structured family intervention could be disseminated into routine community health practice, the project clearly was of limited success’. This suggests that skills in psychosocial treatments may be considerably more difficult to acquire than was anticipated and that ‘front-line staff’ may be unaware of the complexities of what they are being taught.

Beside the possible differences in attitude and practice between Manchester and NSW there are two possible reasons why the train-

ing programme of Kavanagh and colleagues yielded such poor results. Successful training requires continuity and progressive clinical supervision, and time-limited didactic and workshop teaching is unlikely to result in skill acquisition in the absence of guided practice. It is probable that without supervision within a structured teaching programme trainees will very quickly abandon the new approach, failing either to acquire the skill or not perceiving it as priority for meeting important clinical goals. The second important factor is the necessity for management commitment for the training and practice of the new approach. In Kavanagh’s programme there appears to have been little in the way of management commitment to the reorganisation of workloads so that family intervention could be given a high priority. It appears that for most trained therapists in this study family work was just one more activity that they had to compete in an already overloaded schedule. It is perhaps not surprising that very few therapists attempted to implement what they had been taught without management prioritising of their family work, and clinical supervision to shape their practice.

The Thorn Nurse Training Project

In 1991 the Sir Jules Thorn Charitable Trust commenced supporting specialist mental health nurse training in London and Manchester. The broad aim of the project was to train CPNs in problem oriented psychosocial and psychological interventions with the seriously mentally ill. The project was funded by the Trust for 3 years and subcommittees were constituted to cover the development of the curriculum and to carry out an evaluation of the effectiveness of the training. The content of the course followed a broadly similar content at both sites with the reflection of local strengths and interests. At the end of the 3-year period funding was secured

from health service sources and at the time of writing a tendering process for training in psychosocial interventions was under way. There was also considerable interest from other professions besides nursing and since 1994 the training has become open to trainees from other professional backgrounds and there has been a general move to multi-disciplinary training. In the next section the Thorn training at Manchester will be described in greater detail.

Thorn training in Manchester

The University of Manchester Thorn training consisted of a 1-year diploma course which covered three main subject areas: case management and assessment, cognitive-behavioural family interventions and individual cognitive-behavioural interventions. Trainees received 36 whole days formal teaching over the year and carried out equivalent number of days in clinical practice with selected patients who suffer from serious mental illness and their families. The first module, case management, consists of: literature and government legislation surrounding case management; an up-to-date review of the literature relating to schizophrenia and other forms of serious mental illness; training in assessment of the multiple needs of psychotic patients and their families and monitoring of medication and its side effects. Modules follow this on family and individual cognitive-behavioural interventions, which run concurrently. Teaching includes didactic teaching, group work and clinical supervision.

The Thorn project has been subject to evaluation since its inception. Initial results showed that trainees increased their knowledge and skills during training and patient outcome improved following the Thorn intervention (Lancashire *et al.*, 1996). However, this evaluation is limited in that patients were

selected by trainees for the intervention and their assessment was neither independent nor blind. In this published report there was no comparison or control group with which to contrast the patients receiving the trainees' intervention. However, these limitations are understandable in what was an evaluation of professional training and not a clinical trial.

Further, analysis of audio-taped therapy sessions indicated that cognitive-behaviour therapy skills improved over training but did not change over time in a control group of psychiatric nurses who did not receive training. However, the level of skill achieved in the nurses who did receive training was still quite modest (Haddock *et al.*, submitted).

Training *in situ*

There are considerable advantages of formal and structured training courses such as Thorn, such as disseminating research into clinical practice and creating a better trained and relevantly skilled workforce. However, there are also a number of weaknesses in this mode of training where the majority of the teaching takes place away from the work place. Not the least of these is that staff receiving training have to leave their work place to attend the training thus requiring that their service input is somehow covered or not replaced. The argument is that this is a short term loss which must be balanced by the long-term gain of better-trained personnel who will be able to implement interventions that will improve clinical and social outcomes and reduce service costs. Moreover, although the personnel who become trained have increased skills there may be impediments to them utilising these skills such as change in jobs, increased seniority resulting in more administration and less clinical time; and varying clinical and business priorities.

An alternative method of dissemination is

to investigate the patient and carer needs rather than the needs of the general workforce. We are currently carrying out an evaluation of this method of dissemination in Manchester (Barrowclough *et al.*, 1995). The project attempts to address the general question of whether empirically validated family interventions can be delivered in a service setting. Can research be translated into practice? The project aims to assess the psychosocial intervention needs of families of schizophrenic patients, to appraise how far these needs are being met by existing services and to identify the shortfall. To achieve this Barrowclough *et al.* (1998) have developed the Relatives Cardinal Needs Schedule, based on the methodology for patients needs assessment (Marshall *et al.*, 1995), to assess the psychosocial needs in carers of schizophrenic patients. Relatively unskilled assessors can use the schedule reliably and there are data supporting its concurrent validity (Barrowclough *et al.*, 1998). Once needs have been identified an intervention can be delivered mainly through existing key workers who receive training in this through supervision, instruction and workshops. Thus training is given in specific skills to meet the individual needs of a patient and carer with the assumption that these will generalise to their work with other families. This is in contrast to a structured training programme such as Thorn, which works from the general to the specific. A randomised controlled trial of this individualised training approach has demonstrated its effectiveness. Relapse outcomes were superior for patients in families treated in this way compared to standard care (Barrowclough *et al.*, 1999).

Conclusions

It is clear that the issue of translating research into clinical practice will be with us

for a long time and it is an issue that is likely to be attributed increasing importance and attention. It is also clear that it is a complex issue and difficult to resolve. We have attempted to discuss how to improve mental health services to patients who have psychotic disorders by making available to them new innovative psychosocial treatments. This has raised issues concerning whether these new treatments have been validated sufficiently, how is the best way to teach them and how should training be organised, how can training be assessed and evaluated and be considered good value for money? It is essential that new interventions be evaluated properly before they are disseminated and become established clinical practice. Reference to the early part of this paper will indicate that insufficient evaluation has been carried out in some areas, for example the treatment of dual diagnosis or acutely ill patients.

If time and money is invested in training programmes how can we assure that a skilled workforce implements these skills to the benefit of the patient and their carer and that these skills do not fall into disuse or that organisational factors conspire against their use? At present our understanding on these topics is patchy and the methodology for investigating them undeveloped. There has also been some lack of clarity in the goals of dissemination. Originally training in cognitive-behavioural psychosocial interventions was prosecuted with the aim of generally improving knowledge and skills within the workforce, mainly CPNs, to encourage them to work with psychotic patients. Other than the appraisal requirements of the training courses there was no clear idea of the level of knowledge and skills which dissemination would make available. An easily extrapolated view was that training and dissemination would produce a workforce of adequately qualified

and independent practitioners of these therapeutic methods. This latter view is clearly different from the former and may not be warranted. If cognitive-behaviour therapy is the application of cognitive and behavioural sciences to clinical problems then it would be unrealistic to expect those who do not have a thorough grounding and education in the cognitive and behavioural sciences to be independent and unsupervised practitioners of these clinical applications. It may be that too much has been expected. The limitations of the dissemination of psychosocial treatments in schizophrenia need to be highlighted. The methodological quality of the evaluation of training in psychosocial management is such that we must be cautious in our interpretations. Further high quality evaluation is clearly necessary. Notwithstanding, developments have been made and that there has been a generation of interest in these topics and an encouraging willingness to address the difficulties.

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