Lecture

Innovations in Mental Health Care Delivery

ISAAC MARKS

In serious mental illness (SMI) even good community care does not usually make a major impact on clinical or social function, but patients and relatives prefer community to hospital care, and it tends to be cheaper. Any gains are lost if the required community services are not resourced, coordinated, and maintained indefinitely. A few SMI patients continue to need asylum under one roof. CPNs see more anxiety/depression than SMI. Their patients come increasingly from GPs, and they tend to work in practices with less need. Their cost-effectiveness is uncertain, although nurse behaviour therapists are cost-effective in anxiety disorders in primary care. Such research is also needed into the work of other mental health professionals. Despite their effectiveness, there is a dearth of behaviour therapists among nurses and psychiatrists. Problem-orientated training is lacking for most professionals with most patients. Behavioural self-treatments have improved phobic disorders and non-severe depression in controlled studies. Gains were as great when self-treatment was guided by a computer or by a manual as by a clinician. Self-help can extend care delivery, with therapists acting as consultants. Computers can also aid clinical audit.

Our world is changing ever more rapidly. There is barely time to evaluate new developments before the scenario alters further. Many of these innovations are valuable. Others achieve less than one might hope. This second, downbeat, note sounds recurringly about the community care of serious mental illness (SMI) in a book recently published by the Royal College of Psychiatrists (Hall & Brockington, 1991). The book reported a conference marking the closure of mental hospitals in the Worcester Development Project and translocation of their functions into district general hospitals and other units in the community. Peter Hall, one of the book's editors, wrote (p. 43):

> "The wheel seems to have turned full circle from community care in the 17th century, through private asylums in the 18th, public asylums in the 19th, and community care again in the 20th century . . . I have no doubt that in the 21st century there will be another public asylum of some sort in Worcester."

John Wing was blunt, (p. 13):

> "There has been no major advance in the theory or practice of psychosocial methods of treatment, enabling, care or support during the past 30 years."

So was Robin Lawrence after an intensive analysis (p. 80):

> "Schizophrenia is much less responsive to environmental change (is less plastic) than is sometimes thought. . . . no matter how good the community service [some schizophrenics] will continue to need old-style asylum care in a sheltered, highly staffed environment."

And Sandy Robertson wrote (p. 131):

> "Madness cannot be abolished by relocating it, renaming it, or redefining it as social alienation, political oppression, or an idiosyncratic way of being in the world. Its effects can be modified by treatment but it is seriously distressing and disabling."

Affirmation of this sober note came in the final conference debate, summarised in the book. At the end the motion was carried that "This house recognises the continued need for asylum".

Research into community care for SMI

Sobriety rather than gloom seems the right response to recent findings. In north-east London 278 chronic SMI in-patients were followed up after discharge from Friern and Claybury Hospitals (movers) and compared with matched patients who remained in hospital (stayers) (Team for the Assessment of Psychiatric Services, 1990; Leff, 1991). The mean age of all patients was 54 years; movers were younger than stayers. Most patients had schizophrenia. At discharge, even after decades in hospital, many were still deluded and hallucinating, and most had poor hygiene, socially inappropriate behaviour, and few social contacts.

At one-year follow-up, movers and stayers had the same death rate. One mover committed suicide, one was imprisoned; 1% of movers were accused of violence, and 2% probably became vagrant. Younger chronic (new long-stay) patients accumulated in hospital at a rate of about 6 per 100 000

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population per year, especially in socially deprived districts. Compared with the stayers, movers showed no significant changes in psychiatric symptoms, physical health, social disability, and social networks. The chief gains were that the movers were in less restrictive accommodation, more wanted to remain in current accommodation and liked being able to choose how to spend their time, and the cost was up to 10% less than that of in-patient care.

A similar preference for remaining outside hospital was found in a follow-up of 120 chronic schizophrenic patients discharged from Shenley Hospital in north London (Johnstone *et al*, 1981). Although severe emotional, social and financial problems were commonplace, not one patient sought readmission, and few relatives favoured this course.

Social networks improved during prolonged home-based care in the Baltimore COSTAR (Community Support Treatment and Rehabilitation) programme for 97 younger patients with SMI (Thornicroft & Breakey, 1991). Their mean age was 44 years. Compared with patients who had shorter contact with COSTAR, those in contact for over a year were similar with regard to most symptoms and still had repeated admissions. However, especially by the third year, they had larger social networks, better social function, and less suspiciousness and odd conversation.

A concordant picture of community care producing more consumer satisfaction but not major clinical gains emerges from a different type of research design. In this design SMI patients facing emergency admission were randomised to either community care or standard hospital care. Most patients were aged 18–45. Two studies with this design were in Madison, Wisconsin (Stein & Test, 1980), and in Sydney, Australia (Hoult, 1986). In both studies, compared with standard hospital care, community care was more satisfying to patients and relatives, and cost slightly less. However, community care yielded fairly small gains in clinical and social function and in open employment. In Madison, when care was withdrawn after 14 months, the former community-care patients lost their gains. To maintain any gains community care must continue indefinitely, as in other chronic presently incurable disorders like rheumatoid arthritis. Another controlled study of this kind tested whether the results in smaller cities like Madison and Sydney could be repeated in a deprived area of inner London, with a different culture and care system. Preliminary results from London are broadly in line with the earlier ones. They deserve review to amplify relevant issues.

The London controlled study

This study, funded by the Department of Health for three years, and run by Drs Joseph Connolly, Matt Muijen, Robin Lawrence, and myself, is nearing its end. All patients came from the Bethlem-Maudsley Hospital catchment area of South Southwark, much of which is very deprived according to the Jarman indicators (Jarman, 1984). In the design, 189 SMI patients who were facing emergency admission were randomised to community care (called the Daily Living Programme, DLP) or to control standard hospital care. Their mean age was 34. Half the patients had a diagnosis of schizophrenia; the next most common diagnosis was major affective disorder.

The DLP patients were cared for by a key worker in a multidisciplinary team comprising a psychiatrist, nurses, an occupational therapist and a social worker. Most DLP care was given at home. As Dr Len Stein from Madison advised, patients were not kept out of hospital at all costs. Most DLP patients were admitted for a few days during a crisis, usually at entry to the study. The DLP cared for them even as in-patients and decided when to discharge to continued DLP care at home. The DLP team regularly visited patients at home, tried to persuade them to take medication, and liaised with relatives, employers, housing authorities and social services in order to keep patients functioning as well as possible. In a crisis, the DLP team might visit several times daily and remain with the patient for several hours if necessary. As the crisis resolved the frequency of visits dropped to once a week or less according to patient need.

Results are available so far for 9–12 months after patients entered the study (Muijen, 1991). Both patients and relatives were significantly more satisfied with DLP care than with control standard hospital care, although there were few relatives' ratings. This consumer preference for home care was not reflected by great enhancement of clinical and social status, which was slightly but not significantly better in DLP than control patients on most measures. DLP patients used 80% fewer bed days than the controls, despite some readmissions for a few days at some point. The admission door still revolved as it did for the controls, but in-patient stays were now less disruptive, being a brief part of ongoing DLP care with continuity of key worker and care plans. The 18-month and the cost–benefit analyses are due shortly. The effect of withdrawing DLP care from a randomised half of DLP patients is being evaluated by Dr Robin Lawrence.

Deaths resulting from SMI and ordeal by media

It has long been known that, especially in its acute phase, SMI is associated with suicide, despite

good community or in-patient care. In Madison, community care did not prevent unpredictable suicide (Cohen *et al*, 1990). In London, there have been six suicides in the cohort of 189 patients – 15 in the main 18-month study (3 DLP and 2 control cases), and one in Dr Lawrence's subsequent ongoing study, three months after discharge from DLP to standard control care. In addition, one of the DLP patients murdered a neighbour's daughter (at the time this tragedy was reported in a local newspaper). As each death on the DLP occurred the DLP staff reported it to the parent hospital with a detailed audit. These audits could find no change in practice that might have prevented the deaths. As with the suicides in Madison, the deaths came without warning, despite recent contact with staff.

The tragic deaths bring us to a hazard of innovation. New forms of care catch media attention, with the danger of a witch-hunt if anything goes wrong. That demoralises staff and can stop a study prematurely. An ordeal by media began towards the end of the DLP's second year just as, on schedule, it ceased to take in new cases. This media trial started while the parent hospital was debating wider integration of DLP-type community care into its practice, and some senior staff were opposed to this. Fully 14 months after the murder, the tragedy was suddenly blazoned on the front and inside pages of four national newspapers, and on television. This media coverage confused the DLP's aim with the different issue of the closure of mental hospitals for chronic patients. A parliamentary question asked when the Department of Health would withdraw its support from the experiment. The Maudsley Ethical Committee now demanded outcome data within three weeks, or the study would be disapproved. The Medical Executive Committee did its own audit of the DLP deaths but not of the deaths in the control group by then. This audit exculpated the DLP team and praised its work. The Ethical Committee too was satisfied and allowed the study to continue. Such exoneration notwithstanding, 15 months later suspicion of the DLP lingers in the parent hospital.

Spurred by this audit, the number of suicides in the 480-bed Bethlem-Maudsley Hospital was examined among in-patients and newly discharged cases who were *outside* the DLP study. Suicide among these patients turned out to occur on average about once every six weeks. The frequency of these deaths had not been realised. Suicide also turned out to be common in the year after SMI patients were discharged from St Thomas' Hospital and in chronic SMI patients discharged in Torbay. Innovators are at

risk. Novelty attracts attention that can all too easily abort new work before it has been properly evaluated. It is only human to suspect new practices more than routine ones. Horrendous daily tragedies draw little attention if the cause is a car crash, smoking or alcohol, but any death that coincides with a new form of care easily becomes a headline. Interest is much less in a disaster that is so common an event that we have become used to it.

A change recommended after the Maudsley audit led to a natural experiment. With any DLP patients needing readmission, as happened at times, responsibility for their in-patient care was transferred from the DLP to the routine ward team. The ward now decided when to discharge. After this change in practice the duration of these few readmissions shot up. The boundary between in-patient and home care had become more rigid. More flexible care flows from an arrangement where the community team remains responsible for any brief in-patient phase too. This can be hard to arrange, but seems worth the effort.

The need for training in problem-orientated community care for SMI

When the DLP study began, no training programme or manual existed for community care of SMI. To learn how to do it, DLP team members visited the Madison team whose problem-orientated study was being replicated, visited the Sydney team, and made repeated exchange visits with Madison staff. In the DLP study staff noted the type, duration and purpose of every contact with patients, relatives and others, and worked out detailed care plans that were reviewed regularly. To make such care easier, a detailed training programme and manual for such problem-orientated community care is being planned in work with Professor Tom Craig and Dr Robin Lawrence.

Staff need to be taught realistic expectations from community care of SMI. If they expect too much, staff become discouraged. If expectations are too low, too little is done. Carers need to specify in advance what they realistically hope to gain from each contact with patients and others, and how that fits into the overall care plan. After each contact, appraisal is needed of what has been done and what to do next. Although obvious, this strategy may be neglected unless it is. spelled out and recorded. The approach lessens the danger of staff seeing patients with no clear goal in mind and wasting time and resources. Also instructive is the simple exercise of recording the duration and type of each contact. It concentrates the mind to add up the total

number of hours that staff have devoted to a patient's care by a given date, and then to match that therapeutic investment with the clinical gains it has achieved.

Staff loads with different clinical conditions

When the DLP matched the staff time invested with the clinical progress achieved, it highlighted a major point for planners and clinicians. In good community care, assertive outreach is mandatory for SMI patients who default. It is now accepted that if asylum functions are to be maintained in community care, key workers have to coordinate many different resources and regularly visit defaulters. Less written about is the heavy drain this makes on staff time. With unresponsive patients this load never stops. Some may need hundreds of hours of staff time a year. The number of hours a week required rises during a crisis and drops thereafter, but not to zero. A problem-orientated approach may reduce the time needed, but the burden on carers remains great in difficult cases.

The heavy load from SMI patients contrasts starkly with the far lighter demand on staff time made, say, by the behavioural treatment of anxiety disorders. This is not because all anxiety disorders are less severely disabling than SMI – far from it. Obsessive–compulsive disorder cripples many untreated patients and their families at least as much and as long as does schizophrenia. Terms like 'worried well', 'walking wounded' and 'minor psychiatric disorder' do a disservice to the often major handicaps of severe and chronic neurotic disorder.

The contrast in staff time needed stems, rather, from differences in the efficacy of current treatment methods across different conditions. With only 10–15 hours of clinician time, even when they are severe and chronic, most phobics and obsessive–compulsives show major and enduring improvement with appropriate behavioural treatment. This is not so with chronic SMI. Even in combination our best drug and psychosocial treatments yield only modest gains in chronic schizophrenia or manic–depressive illness, and these take a lot of staff time.

Compared with anxiety disorders treated with good behaviour therapy, chronic SMI in aggregate demands 10-fold or more staff time over a year or two, and still more as the years roll by. Using the best treatments available, with the same staff time and therefore cost we can help 10 times as many patients with severe anxiety disorders than with SMI. Furthermore, after stopping behavioural treatment, at long-term follow-up the gains usually continue for many years in anxiety disorders, whereas SMI tends to relapse when care is withdrawn.

How to allocate society's resources to different groups in need is always contentious. The use of measures like QALYs (quality adjusted life years) may make our decisions more explicit. However, when the QALY sums are equal across different disorders they do not help us adjudicate among, say, SMI and anxiety disorders, let alone among these, cardiac, and renal diseases.

Lessons from research into community care for SMI

Outcomes have largely been similar across many careful studies from three continents (see above, and Thornicroft & Bebbington, 1989; Marks & Scott, 1990). Both in the acute phase in younger patients and in older, very chronic cases, compared with usual hospital care, with community care: (a) SMI patients and their relatives are more satisfied, (b) clinical and social function tends to be a bit better, but great disability and dependence remains the rule, and (c) cost tends to be a bit less (unlike in mental handicap after the closure of Darenth Park Hospital (Wing, 1991)).

As noted above, even with good community care many SMI patients' need for asylum continues and has to be met by orchestrating diverse services from different sites rather than having them all under one roof in a mental hospital. There remains a small minority of patients who still seem better off in an asylum with all its functions under one roof. The case for community care of SMI does not rest on cure – its impact on psychosis is fairly small. Nor does it rest much on cost, which is only slightly lower if the community support that is so vital is given. Rather, the case rests mainly on the preference for care outside hospital expressed by patients and their relatives. Consumer satisfaction is an important consideration in planning services.

To 19th-century observers, the advent of mental hospitals may have seemed an advance on what had gone before. The asylums did not cure patients, but were a haven. They were built lavishly, involving the largest non-military expenditure ever made in Britain until that time (J. Stillwell, personal communication). At first the living conditions in the asylums were good for that era. In time those asylums were allowed to become overcrowded and run down, and their benefits dwindled. Similar deterioration easily happens in community care if it is neglected and under-resourced. A call could arise

to build mental hospitals again in some guise, albeit on a smaller scale than before.

Psychiatric nurses in the community

Most community care for psychiatric disorders is probably given by nurses and by general practitioners (GPs). The number of community psychiatric nurses (CPNs) has mushroomed in the UK. Research has addressed four questions about the work of CPNs with general adult (not elderly) patients. The questions could also be asked of any other care provider. First, what sort of patients do they see? A common idea is that CPNs' main clientele are SMI patients having depot injections. If this was ever true, it is so no longer. In Camberwell more patients seen by CPNs in 1990 had neurotic disorders than SMI (Muijen *et al*, unpublished). The same point was noted in a UK survey (White, 1991). It is reminiscent of a recent trend in the USA, where community mental health centres (CMHCs) failed to cater for patients with chronic SMI. The same trend appeared in data from a British CMHC (Sayce *et al*, 1991). Many UK CMHCs aim more at prevention and short-term care than at long-term support.

Neurotic distress deserves help just as much as SMI does. The question, however, is who can help what most efficiently, given the varying amounts of training and expertise of the different types of care provider? Should anxiety and milder depression be helped by nurses, psychologists, psychiatrists, social workers, counsellors, priests, citizens advice bureaux, or self-help groups?

A rational system is hard to devise, as rapid advances in treatment soon make much training out of date, professional rivalries abound, and institutions have inertia. No society has yet devised a system that efficiently matches the training of care providers to the problems they deal with after that training. Continuing education can help, but the initial period of professional training tends to imprint practices that last for a professional lifetime.

The second question about CPNs, related to the first, is who refers patients to them? In the UK, over five years, CPN referrals from psychiatrists have shrunk from 59% to 42%, and from GPs have risen from 23% to 36% (White, 1991). GPs rather than psychiatrists may soon be the greatest source of CPN referrals.

Third, where do CPNs work? The UK national survey (White, 1991) revealed that CPNs tend to work where their services are needed less – in practices where GPs are psychiatrically minded, psychiatric morbidity is lower, and other mental health carers already work. CPN placements are uncoordinated with respect to local need. Practices with the greatest need have the fewest CPNs.

The fourth question is whether the work of CPNs is cost-efficient? Evaluations have found varying outcomes. Paykel & Griffiths (1983) randomised neurotic in-patients who were at the point of discharge to receive follow-up support over 13 months either at home by a CPN or in an out-patient department by a psychiatrist. Compared with support by a psychiatrist as an out-patient, care by a CPN at home led to greater consumer satisfaction and was slightly less costly; outcome of the two groups did not differ regarding symptoms, social function, and family burden.

More problematic results are emerging from a controlled study of the outcome of CPNs' adult patients who presented in primary care with relationship problems, anxiety and depression (Gournay & Brooking, unpublished). The patients were randomised to care from the GP or from a CPN. The drop-out rate was high – 52% of patients dropped out from contact with the CPNs. Surprisingly, more dropped out with CPNs who had passed the English National Board's CPN course than with untrained CPNs. Clinical improvement was the same with the GPs and the CPNs, and for patients in a waiting-list control group. The cost–benefit analysis seems unpromising. After treatment, the CPNs' patients continued to consume as many resources as before, *plus* the added cost of the CPN.

A more encouraging outcome in primary care was found in a controlled study of nurse therapists giving behavioural treatment, mostly for phobic and obsessive–compulsive disorders (Marks, 1986); a few cases were of sexual or habit disorders. The patients were randomised to have usual treatment from the GP or behaviour therapy from a nurse therapist. By the end of three months of treatment and also a year after study entry, improvement with the nurse therapist's behaviour therapy was highly significantly greater than with the GP's usual treatment. A year after study entry, unimproved GP-treated patients were crossed over to have behaviour therapy from the nurse therapist; those patients then improved highly significantly. Even if one sets aside this marked clinical improvement as an intangible gain, the benefits from nurse therapy in purely monetary terms exceeded costs if improvement continued for 2½ years, and much exceeded costs if gains continued longer, which assumption seemed likely from other evidence.

It is a paradox that CPNs have spread round the UK in advance of evidence of their work benefiting patients, yet there are still few nurse therapists in primary care, despite their cost-effectiveness in that

setting having been shown in a randomised controlled study published five years ago by the Royal College of Nursing (Marks, 1986). This illustrates the gap between research and policy. One reason why there are so few nurse therapists in primary care may be the funding arrangements. The gain from reduced use of health care resources by patients improving with nurse therapy would accrue as much outside as inside the practices where they would work and be paid. Budget holders are less interested in such an 'externality', as an economist might call it. Funding arrangements are similarly crucial for the success of community care for SMI.

Demand for behavioural psychotherapy exceeds its supply

The advent of nurse therapists has expanded the UK's capacity to offer effective behavioural treatment for disabling anxiety, habit, and sexual disorders. There are now about 200 trained nurse behaviour therapists in the UK. This number can meet only a fraction of the total demand for such treatment from patients who could benefit lastingly from it. Testifying to this suppressed demand are the continuing waiting-lists of disabled patients, and the growth in their numbers each time the media cover their plight. The extensive media coverage of anxiety disorders may itself reflect this demand. Unsolicited calls from the media reach me, colleagues and our patients several times a week. Based on calculations from primary-care research (Marks, 1986), if the demand for effective treatment of patients who are likely to improve with it were to be met by nurse therapists, the number of training centres would have to expand from the present three to at least ten. This involves capital expenditure even if that would be less than the cost of training a comparable extra number of psychologists or psychiatrists. A great advantage to a hospital running a nurse therapy training programme is the large number of patients whom trainees treat successfully as part of that programme.

The same four questions that have been asked of nurses deserve to be asked of all care providers, be they psychiatrists, psychologists, social workers or others. Which patients do they see, who refers their patients, where do they work, and is their work cost-efficient? Of the 114 consultant psychotherapists in the UK, merely two specialise in behavioural psychotherapy. This imbalance is grotesque given that behavioural psychotherapy has had its efficacy demonstrated time and again, more than any other form. To be efficient supervisors of behavioural psychotherapy, consultants have to have both a good behavioural training and a sound knowledge of general psychiatry. Supervision cannot be left to dynamic psychotherapists or to psychologists. The Royal College of Psychiatrists has no group representing this important area. This story shows yet again the chasm between research and policy in health care.

Self-help methods can enhance care delivery

Recent research suggests an intriguing way in which care capacity might be expanded cost-effectively. Care can be cloned by the dissemination of effective self-help technology. In anxiety disorders the treatment that produces the greatest and most enduring improvement is exposure (Marks, 1987). The effect size of exposure is about twice that of alprazolam and, unlike any drug effect, lasts long after the end of treatment (Marks & Swinson, 1990). A major recent finding is that therapist-accompanied exposure is redundant (see below). The key element, rather, is *self*-exposure, by the patient's own efforts.

This advance means that many patients with an anxiety disorder can now be helped with much less time from a clinician than before. The clinician's role is that of coach and monitor, guiding the self-exposure programme that the patient is executing. Together, the patient and therapist draw up a list of situations which evoke anxiety and avoidance, and rituals if the problem is obsessive–compulsive disorder. They then negotiate an exposure homework programme that the patient carries out between sessions. Exposure tasks should be done daily for at least an hour, until habituation begins. As the earlier tasks cease to be frightening the patient adds new ones. The patient records the self-exposure tasks that have been done in a daily exposure homework diary, brings this to the next session for discussion and problem solving, and negotiates further tasks. Relapse-prevention tasks are stressed.

Improvement after exposure therapy has lasted to the end of the 3–7-year follow-up carried out in the UK, Holland, Greece, and the USA (O'Sullivan & Marks, 1991). With shorter follow-up, the efficacy of self-exposure has been shown repeatedly. In a randomised controlled study (Ghosh et al, 1988) the marked improvement that was obtained in 80 phobics and lasted to the end of six-month follow-up was as great when self-exposure instructions were guided by a manual (*Living with Fear*; Marks, 1978) or by a computer as by a psychiatrist. This was as true for agoraphobics as for specific and social phobics.

Further evidence testifying to the value of self-exposure comes from another randomised controlled

study (Marks *et al*, 1988), of severe obsessive–compulsive disorder. Self-exposure led to substantial improvement; this was not enhanced by adding therapist-accompanied exposure, which fruitlessly consumed 500% more staff time. Gains vanished if patients had 'anti-exposure' instructions instead of self-exposure instructions. All these groups had clomipramine too, which had only a minor and transient effect. In Stanford, California, patients with agoraphobia/panic who were on imipramine only improved if they had exposure, not 'anti-exposure', instructions (Telch *et al*, 1985). In London, phobics who did self-relaxation homework did not improve, whereas those who did self-exposure improved, as much as phobics who also had therapist-accompanied exposure, which needed twice as much therapist time (Alkubaisy *et al*, 1992). Treatment by telephone-guided homework yielded more gains when the instructions were to carry out exposure rather than relaxation (McNamee *et al*, 1989). Other studies in the Netherlands by Emmelkamp and by Hoogduin, also pointed to the centrality of self-exposure (reviewed by Marks, 1987).

Self-exposure can be effectively guided in groups run by lay leaders. One such group is in Bath. Called TOP (Triumph Over Phobia), the group is run by a woman who overcame her flying phobia by following the self-exposure approach outlined in *Living with Fear*. She then taught sufferers the same structured self-exposure principles by which she had helped herself. Her self-exposure group has now helped several dozen phobics. After attending about 13 weekly TOP meetings, sufferers reported impressive fear reduction, confirmed by ratings on the Fear Questionnaire (Bonham-Christie & Marks, unpublished). Much energy and organisational skill are needed to set up and run a self-exposure group that actually improves phobias. An ex-patient is running another TOP group in Liverpool, and ex-patients have just begun two more, in Kidderminster and Jersey.

Two kinds of self-help group can be distinguished – therapeutic and palliative. Therapeutic groups try to reduce pathology lastingly. Examples are TOP self-exposure groups and Alcoholics Anonymous. Their ambitious aim is often achieved, with phobics becoming ex-phobics, and alcoholics attaining lasting sobriety. Much more needs to be known about how to run such therapeutic groups effectively.

The second, palliative, kind of self-help group is common. It has the more limited but still laudable aim of offering information and support. Both kinds of self-help group are needed. However, groups which actually reduce pathology probably have more value in the long run than those which just help sufferers adjust to a continuing handicap.

Computers as aids in care delivery

Computerised self-help

The work of both therapeutic and palliative self-help groups, and of professional care providers, could be facilitated by effective computerised self-help programs. The one by Ghosh *et al* (1988) that helped phobics was noted earlier.

Depressives, too, have responded to computerised self-help, in Madison, Wisconsin (Selmi *et al*, 1990). People with non-severe depression were randomised to stay on a waiting-list or to have cognitive–behaviour therapy instruction by a clinician or by a computer. At the end of six weeks' treatment both treatment groups had improved significantly more than the waiting-list group, and they maintained their gains at 15-week follow-up, two months after treatment. The computer-instructed group did slightly, but not significantly, better than the clinician-treated group. On careful analysis, cognitive change reflected improvement in mood, whereas reduction in depression did not reflect cognitive change; the cognitive component of the cognitive–behaviour therapy appeared redundant. Thus non-severe depression did at least as well with cognitive–behaviour therapy given by a computer as by a clinician.

A further study is needed to contrast cognitive–behaviour therapy for depression with a non-cognitive, problem-orientated approach. In the multicentre study of depression by the National Institute of Mental Health, interpersonal therapy did at least as well as did cognitive therapy at the end of treatment and of follow-up; both treatments shared a problem-solving approach. Controlled studies of the ingredients of treatment can now be not only speeded up by using computerised treatment packages, but also be made more scientific, because standardised potentially active therapeutic ingredients can be added to or subtracted from computerised packages more reliably than is the case with clinician-delivered treatments.

The number of computer treatment programs is growing. They may become as common as self-help books, but few self-help texts have been well tested like those noted for phobics and for depressives. Effective self-help texts can extend mental health care delivery. They can help sufferers understand their problem better, cope with or reduce their problem, and cooperate better with clinicians. We can expect

a continuum of self-help capability among sufferers. Some will complete the job just with appropriate instruction by a computer or a manual, without any therapist. Others will also need a little help from a clinician. A few patients will require extensive help.

Good self-treatment texts complement the clinician's role rather than threaten it. Many phobics have written that they overcame their problem themselves by following the instructions in *Living with Fear*, yet my unit's waiting-list still grows. There is a huge demand for helpful information, as Professor Benny Sacks (personal communication) found with relatives of the mentally handicapped. The Royal College of Psychiatrists has had requests for tens of thousands of its recent information leaflets on anxiety and on depression (Professor Andrew Sims, personal communication). In child care, Dr Spock helped countless parents and eased the lot of many hard-pressed doctors.

The dynamic marketing of a range of effective self-help texts, audio- and videotapes, and computer programs could benefit many sufferers who get no help at present. Proven self-help materials could be made available in mental health clinics, GPs' surgeries, and directly to sufferers. They could not only benefit sufferers. Profit from effective self-help products could ultimately match that from drugs. Pharmaceutical companies expanding into this niche could add to the value of their current products rather than suffer from competition.

Computer aids to audit

Another role for computers in care delivery is in clinical audit. When we buy a car we expect to know its cost, petrol consumption, top speed, etc. Our patients get little comparable data about their treatments. Such information can be collected by pen and paper, which takes a discouraging amount of time. This time can be cut down by using an appropriate computer program. It allows more rapid collection of information about a treatment's cost-efficiency for individual patients and for groups of patients whose progress the clinician wishes to track.

Such a computerised method is now in routine use in some units at the Maudsley Hospital. At intervals in a brief computer interview each patient rates and is rated on the main problems being treated, the targets being achieved, mood, work and social adjustment, number of hours spent with clinicians, and number of in-patient days. The program prints out: (a) graphs of clinical progress that look like temperature and blood pressure charts, and (b) the approximate cost of care. It is instructive to match the clinical progress of a given patient with the

number of therapist hours and other costs incurred to produce that improvement.

As data are accumulated on cohorts, it is becoming possible to quickly print out the clinical outcome of not just one patient but also, say, of the last 40 depressed women in-patients aged 50–65 who received tricyclics, or the last 30 obsessive–compulsive out-patients aged 17–65 who had self-exposure therapy, and the total cost of obtaining such outcomes. Norms are generated that match outcome with well specified types of treatment and patients. We are becoming able to specify better what our treatments are achieving in routine practice. Provided the data are collected carefully with respect to relevant features, more meaningful conclusions can be drawn than has been possible until now from knowing just the number of patients seen, their diagnoses, and demographic features. The computerised clinical audit system will be made available for general use.

Conclusion

Patients with SMI and their relatives prefer good community to hospital care. Good community care yields only slightly more symptom reduction and social gains, and tends to cost slightly less than hospital care. Community care must be available indefinitely if benefits are to continue, as it does not cure SMI. CPNs treat fairly few SMI patients. Better problem-orientated training is needed for most mental health carers. Care of SMI consumes far more staff time than does behavioural psychotherapy for anxiety disorders, which yields greater and more enduring gains. Nurse therapists were cost-effective in giving behaviour therapy to anxiety disorders in primary care. Despite their efficacy, behaviourally trained nurses and psychiatrists are still far fewer than is warranted by the demand for their services from disabled patients who could benefit. Self-help technology is a promising way of extending service delivery. Computers can help with this and also with meaningful clinical audit.

References

ALKUBAISY, T., MARKS, I. M., LOGSDAIL, S., *et al* (1992) The role of exposure homework in phobia reduction. *Behaviour Therapy* (in press).

COHEN, L. J., TEST, M. A. & BROWN, R. L. (1990) Suicide and schizophrenia: data from a prospective community treatment study. *American Journal of Psychiatry*, **147**, 602–607.

GHOSH, A. MARKS, I. M. & CARR, A. (1988) Therapist contact and outcome of self-exposure treatment for phobias. *British Journal of Psychiatry*, **152**, 234–238.

HALL, P. & BROCKINGTON, I. F. (1991) *The Closure of Mental Hospitals*. London: Gaskell.

HOULT, J. (1986) Community treatment of the acutely mentally ill. *British Journal of Psychiatry*, **149**, 137–144.

JARMAN, B. (1984) Underprivileged areas. Validation and distribution of scores. *British Medical Journal*, **289**, 1587–1592.

JOHNSTONE, E., OWENS, D., GOLD, A., *et al* (1981) Institutionalisation and the defects of schizophrenia. *British Journal of Psychiatry*, **139**, 195–203.

LAWRENCE, R. (1991) The impact of community care on the course of schizophrenia in Kidderminster. In *The Closure of Mental Hospitals* (eds P. Hall & I. Brockington), pp. 76–81. London: Gaskell.

LEFF, J. (1991) Evaluation of the closure of mental hospitals. In *The Closure of Mental Hospitals* (eds P. Hall & I. Brockington), pp. 25–32. London: Gaskell.

MARKS, I. M. (1978) *Living with Fear*. New York: McGraw-Hill.
—— (1986) *Psychiatric Nurse Therapy in Primary Care*, Research Monographs in Nursing Series. London: Royal College of Nursing.
—— (1987) *Fears, Phobias and Rituals*. New York: Oxford University Press.
——, LELLIOT, P., BASOGLU, M., *et al* (1988) Clomipramine, self-exposure and therapist-aided exposure for obsessive–compulsive rituals. *British Journal of Psychiatry*, **152**, 522–534.
—— & SCOTT, R. (1990) (eds) *Mental Health Care Delivery: Innovations, Impediments and Implementation*. Cambridge: Cambridge University Press.
—— & SWINSON, R. (1990) Alprazolam and exposure for panic disorder with agoraphobia: summary of London/Toronto results. *Journal of Psychiatric Research*, **24** (suppl. 1), 100–101.

McNAMEE, G., O'SULLIVAN, G., LELLIOTT, P., *et al* (1989) Telephone guided treatment for housebound agoraphobics with panic disorder: exposure vs relaxation. *Behavior Therapy*, **20**, 491–497.

MUIJEN, M. (1991) A controlled community care study in serious mental illness. PhD Dissertation, University of London.

O'SULLIVAN, G. & MARKS, I. M. (1991) Long-term followup of phobics and obsessive compulsives. In *Handbook of Anxiety*, Vol. 4, (eds R. Noyes, M. Roth & G. Burrows), section 5, pp. 87–108. Amsterdam: Elsevier.

PAYKEL, E. S. & GRIFFITHS, J. H. (1983) *Community Psychiatric Nursing for Neurotic Patients: the Springfield Controlled Trial*, Research Monographs in Nursing Series. London: Royal College of Nursing.

ROBERTSON, J. A. (1991) A debate. In *The Closure of Mental Hospitals* (eds P. Hall & I. Brockington), pp. 131–132. London: Gaskell.

SAYCE, L., CRAIG, T. K. J. & BOARDMAN, A. P. (1991) The development of community mental health centres in the UK. *Social Psychiatry and Psychiatric Epidemiology*, **26**, 14–20.

SELMI, P. M., KLEIN, M. H., GREIST, J. H., *et al* (1990) Computer-administered cognitive–behavioral therapy for depression. *American Journal of Psychiatry*, **147**, 51–56.

STEIN, L. & TEST, L. U. (1980) Alternative to mental hospital treatment. *Archives of General Psychiatry*, **37**, 392–397.

TEAM FOR THE ASSESSMENT OF PSYCHIATRIC SERVICES (1990) *Better Out Than In?* London: North East Thames Regional Health Authority.

TELCH, M., AGRAS, W. S. & TAYLOR, C. B. (1985) Imipramine and behavioural treatment for agoraphobia. *Behaviour Research and Therapy*, **23**, 325–335.

THORNICROFT, G. & BEBBINGTON, P. (1989) Deinstitutionalisation – from hospital closure to service development. *British Journal of Psychiatry*, **155**, 739–753.
—— & BREAKEY, W. (1991) The Costar Program. I: Improving patients' networks. *British Journal of Psychiatry*, **159**, 245–249.

WHITE, E. (1991) *Community Psychiatric Nursing: A Research Project*. London: Hyman.

WING, J. (1991) Vision and reality. In *The Closure of Mental Hospitals* (eds P. Hall & I. Brockington), pp. 10–19. London: Gaskell.

Isaac Marks, MD, FRCPsych, *Professor of Experimental Psychopathology, Institute of Psychiatry and Bethlem-Maudsley Hospital, London SE5 8AF*