Chapter 1

What does research tell us about assertive community treatment?

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Introduction

Assertive Community Treatment (ACT) is probably the most researched form of mental health service delivery. Over 90 randomised and non randomised trials have been published throughout the world over a timescale of more than 30 years, since its inception in North America (Marshall & Lockwood, 1998; Burns, 2007). There has also, particularly recently, been a good deal of qualitative research attempting to capture and examine the personal experiences of patients and families in an attempt to understand what it is about ACT that is attractive to many patients and leads to greater engagement.

It may be thought that this wealth of research has brought understanding and a degree of clarity to the area, but for a variety of reasons this has not been the case. The findings of much of the research have been contradictory or of sub optimal quality, reflecting the difficulty of this type of research and of assigning meaning to the findings. These issues are compounded by uncertainty about the terminology used, with Assertive Community Treatment (ACT) being used in the United States (US) and most of the research literature, and assertive outreach and intensive case management often being used interchangeably in the United Kingdom (UK) and the rest of Europe. More recently some consensus has begun to emerge about what may constitute the ingredients of successful care, judged in terms of acceptability and social and clinical outcomes. This chapter presents some of the most important research in the area and derives potential ways forward in both clinical practice and in research.

The rise of a new model

In the mid 1970s in Madison, in the Midwest of the US, a decision was made to close a psychiatric ward. The ward staff was trained to look after people in the community instead in a project labelled Training in Community Living (TCL). This was the first example of what has come to be called ACT. The programme aimed to address comprehensively the

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Table 1.1 Requirements for community tenure

1. Material resources such as food, shelter, clothing, and medical care. Community treatment programs must assume responsibility for helping the patient acquire these resources.
2. Coping skills to meet the demands of community life. These are skills we take for granted, such as using public transportation, preparing simple but nutritious meals, and budgeting money. Learning these skills should take place in vivo, where the patient will need and be using them.
3. Motivation to persevere and remain involved in life. A readily available system of support to help the patient solve real life problems, feel that he or she is not alone and feel that others are concerned is crucial.
4. Freedom from pathologically dependent relationships. To break the cycle of dependency community programmes must provide sufficient support to keep the patient involved in community life and to encourage growth towards greater autonomy.
5. Support and education of community members who are involved with patients. An important factor that influences patient behaviours and, thus, community tenure are the ways in which community members (family, law enforcement personnel, agency people, landlords, etc.) relate to patients.
6. A supportive system that assertively helps the patient with the previous five requirements. Chronically disabled patients are frequently passive, interpersonally anxious and prone to develop severe psychiatric symptoms. Such characteristics often lead these patients to 'drop out' of treatment, particularly when they are becoming more symptomatic. Hence the programme must be assertive, involve patients in their treatment and be prepared to 'go to' the patient … and actively ensure continuity of care.

(Stein & Test, 1980)

various factors that led to an inability to manage in the community that conventional care did not address adequately. These factors are shown in Table 1.1.

The fledgling service that was based upon these admirably clear principles was the subject of a randomised controlled trial (RCT), with 126 patients assigned either to TCL or hospital based care and rehabilitation. Patients were followed up for 14 months in the TCL programme and then for a similar period after it ended. The results were remarkable (Stein & Test, 1980). Rates of psychiatric readmission (to become the measure of choice in ACT studies) were 58% in the control group and 6% in the TCL group, with average time spent in hospital 20 and 9 days respectively. The TCL group also spent less time unemployed and more time in independent accommodation, and rated higher on measures of self esteem and activities. An economic analysis was favourable and an examination of family and community burden showed no increase in the TCL group. Most gains were lost when the subjects were followed up some months after the end of the programme, highlighting a need for ongoing or indefinite intervention in some cases. As might have been expected, these findings stimulated much interest in North America and overseas. The introduction of teams, however, was far from rapid.

In 1983, these results were replicated in a further RCT in Sydney, Australia (Hoult et al., 1983). The community treatment was home based and offered 24 hour availability from a multi-disciplinary team. It included medication, support, counselling, and social and life skills training along with family support and education. Again results were impressive, with highly statistically and clinically significant reductions in hospital use. Those receiving hospital based care spent on average 53.5 days in hospital over the course of a year compared with just 8.4 days in the project group. In addition to this, patients reported positively about their experience of the community intervention as compared to standard care and there were no significant differences in measures of community burden such as police involvement. A costing study found average direct and indirect treatment costs of A$4489 for intervention patients and A$5669 for control patients. The authors concluded that the majority of psychiatric patients could be treated more effectively and more economically outside hospital.

Adoption of the model

Because these two influential studies both found such clear benefit with an assertive community focussed treatment built on basic principles they led to widespread clinical and research replication in several countries. There was extensive commissioning of ACT teams in the US and the introduction of mobile treatment teams in Australia, run along very similar principles. The UK led their introduction in Europe, though initially this was mainly limited to large urban areas. Researchers in South London reported that an intensive community support programme, the Daily Living Project, showed encouraging results early on in terms of symptoms, functioning and hospital use but most gains were lost towards the end of the study period (Marks et al., 1994). The study was compromised by a high profile homicide by an experimental group patient. Control over hospital discharges was withdrawn in the experimental group as a result, diminishing its flexibility.

A large multi-centre study in the US (Rosenheck et al., 1995), the largest ever conducted with 873 participants, showed that intensive psychiatric community care (IPCC) programmes reduced bed use by 89 days (33%) over a 2-year period. In contrast to the earlier studies, they found intensive community care to be marginally more expensive despite the reductions in bed use. This study lent further support to the adoption of ACT as a mainstay of the community care of the severely mentally ill.

Two Cochrane Collaboration systematic reviews (Marshall et al., 1998 and Marshall & Lockwood, 1998) concluded that, while case management was not effective and actually increased admissions to hospital, ACT was clearly superior to standard care in maintaining contact with services and reducing hospital use, while improving satisfaction with services. They concluded that ACT was ‘a clinically effective approach to managing the care of severely mentally ill people in the community’ (Marshall & Lockwood, 1998: 2). There were also significant improvements in subjects’ accommodation and employment status.

These two reviews taken together had an important effect on policy makers and less than a year later ACT teams were specifically prescribed as an essential element of mental health services in the National Service Framework for England (Department of Health, 1999). Funding was provided to start up ACT services and NHS mental health trusts were penalised if they were not established. Targets were introduced for the size of teams and number of patients, but not the exact nature of practice or the quality of care (see Chapter 13).

The dawning of doubt

Despite their huge influence, there were significant limitations in the methodology of the Cochrane reviews that could have influenced their results. One problem was that the designation of what was or wasn't ACT or case management was largely based upon the description by the original study authors, rather than being determined independently. ACT teams were introduced in the UK through the 1990s. Around the time of the Cochrane review several studies were underway that would come to cast substantial doubt on the ability of ACT to improve symptoms and functioning while reducing hospital use.

The first of these to be published was the PRiSM study in London (Thornicroft et al., 1998), which attempted to differentiate between the efficacy and effectiveness of an assertive approach to managing those with severe mental illnesses. The authors defined efficacy as the measurable differences in experimental circumstances, and effectiveness as the usefulness in routine, large scale clinical services for real populations. The design was extremely ambitious and wide ranging and consequently some of the results are hard to interpret. PRiSM found a reduction in bed use in the experimental services compared to standard care, but of a much lower magnitude; their explanation was the dilution of research effects in real world settings with other pressures coming to bear. At the same time, a smaller RCT was conducted by Holloway in London which found no significant differences between standard and intensive case management (Holloway & Carson, 1998): however, numbers were probably too small to positively exclude an effect (35 patients in each group).

The UK700 study (Burns et al., 1999) was a large multi-centre study in which 708 patients in London and Manchester were randomly assigned to intensive case management (ICM, caseloads of 10–15) or standard case management (SCM caseloads of 30–35) and followed up for two years. The primary outcome measure, overall hospital use, was exactly equal in the two groups, a mean of 72 days over 2 years. The conclusion from the study was that reducing workers' caseloads to allow them to work more intensively with people did not affect outcome substantially. It was also suggested that the ability of ACT to reduce bed usage may not be as great in healthcare systems that were already community focussed and using relatively few hospital beds. These results were far from those expected by the authors and generated a vigorous debate.

These negative findings have continued to be replicated. The REACT study (Killaspy et al., 2006) found no reduction in bed use with ACT in standard UK settings. REACT randomly assigned 251 people with psychotic illnesses who were high users of inpatient care to ACT or continuation of Community Mental Health Team (CMHT) follow up and monitored outcome over an 18 month period. The authors concluded that standard UK community mental healthcare was generally capable of supporting people with severe mental illnesses, but that ACT may be better at engaging clients and may lead to greater satisfaction with services.

Further support for this now seemingly robust finding of no difference in bed use has come from a study examining bed usage in a large number of mental health trusts across the UK after the introduction of Crisis Resolution Teams (CRTs) and ACT teams (Glover et al., 2006). Admissions were compared over the time period 1998–2004. While the overall rate of admission declined in most areas (as would be expected) it fell significantly more in areas with early introduction of CRTs but not where these were introduced late. However, the introduction of ACT demonstrated no reduction in admissions. While there are clearly wider factors influencing bed use, the authors considered their findings robust enough to conclude that crisis services reduced bed use but that ACT did not. With the state of current findings it must be concluded (at least in a contemporary UK setting) that ACT does not reduce hospital bed use.

An alternative way of looking at ACT

While the UK700 study, along with the later studies above, found that ACT did not significantly affect outcome, it encouraged a different way of thinking about ACT (and indeed mental health services in general) in the UK. The key question seemed to be: If the overall service does not make a difference is it individual components of care, alone or cumulatively, that influence outcome? This prompted a second question: If this is the case, can we measure the effects of specific aspects of care in a robust and meaningful way?

These questions were not entirely new and in North America attempts to measure fidelity to the ACT model had been made for some years (McGrew, 1994; Teague, 1998). Such attempts were an explicit acknowledgement that specific components of care were important and that ACT teams were not uniform. Such variability is probably greater in the UK as contracting arrangements tend to be less specific. McGrew, in 1994, noted that both research in the field and the implementation of new programmes were being significantly hampered by a lack of information on ACT teams and what they did. He and colleagues were concerned that newly introduced services could ‘drift’ away from the original models in the successful early studies by Stein and Test and Hoult and, thus, not provide such effective treatment. His group attempted to identify the most important characteristics of ACT. They started by interviewing 22 recognised experts in the field and refined their answers to a list of criteria to judge fidelity. This Index of Fidelity of Assertive Community Treatment (IFACT) included such things as client to staff ratios, a psychiatrist on the team, daily team meetings, twenty four hour availability, home based care and a team approach. These could be operationalised and the score indicated fidelity to the theoretical model.

Later work by Teague and colleagues in New Hampshire (Teague et al., 1998) used a similar approach utilising expert opinion and literature reviews to identify potentially important components. Their final list of twenty-eight components comprised three domains, were operationalised and had a scoring system evolved. The three domains were the structure and composition of the team (H), its organisational boundaries (O) and the nature of what went on (S). They were made explicit to reflect the fact that important components lay in different areas. Table 1.2 shows the 28 final components of the Dartmouth ACT scale (DACTS) which has been widely used in service planning.

Despite general consensus amongst practitioners and researchers on the core elements of a successful assertive outreach service, variability persists in provision and in working practices. The Pan-London Assertive Outreach (PLAO) Study (Wright et al., 2003) undertook to characterise ACT teams across London, including measures of their fidelity to the models above. The PLAO study discovered wide variation in practice, particularly in services provided in the voluntary sector and those addressing groups such as the homeless or

Table 1.2 Dartmouth ACT scale (DACTS)

H1 Small caseload 10:1
H2 Team Approach
H3 Frequent programme meetings
H4 Practising team leader
H5 Continuity of staffing
H6 Programme operates at full staffing
H7 At least 1 full time psychiatrist per 100 patients
H8 At least 2 full time nurses per 100 patients
H9 Substance abuse specialist on staff
H10 Vocational specialist on staff
H11 Sufficient staff size to provide consistent cover
O1 Explicit entry criteria
O2 Low intake rate to maintain stable service
O3 Full responsibility for services (Housing, employment etc.)
O4 24 hour cover
O5 Responsibility for hospital admissions
O6 Responsibility for hospital discharge planning
O7 Time unlimited services
S1 In vivo services
S2 No dropout policy
S3 Assertive engagement
S4 Intensity of service high if needed
S5 High frequency of contact
S6 Work with support system with or without patient
S7 Individualised substance misuse service
S8 Dual diagnosis treatment
S9 Dual disorders model, considering interaction of illness and substance misuse
S10 Consumers of services on treatment team, providing direct services

(Teague et al., 1998)

those from ethnic minorities. They found that (out of 24 teams studied) four rated as ‘high fidelity’ and three as ‘low fidelity’ to the ACT model as measured by the DACTS, with the rest in between.

Such differences do not always seem to reflect the deliberate adherence to or deviation from a theoretical model but are more naturalistic and dependent upon external factors. There are variations in size of team and whether there is direct medical input, in working practices such as availability outside of standard office hours, the use of the team approach and the thorny issue of responsibility for inpatients. There are significant variations in the availability of support work, psychological input and family intervention between teams. It appears that, if anything, this variability is increasing with time in the UK. The reasons for this are unclear, but may reflect the fact that individual health trusts are more autonomous than previously and also that ACT services are less important for their ratings so that more flexibility of approach is permitted. This will lead to innovative solutions to local issues in some places but there is a danger that drift from successful models may reduce clinical effectiveness.

A way forward

It is perhaps more useful to consider the elements of ACT that may make it successful rather than focussing on the services, with all their heterogeneity. The IFACT and DACTS were first steps on this path, but more recent empirical work, both qualitative and quantitative, has advanced our knowledge further.

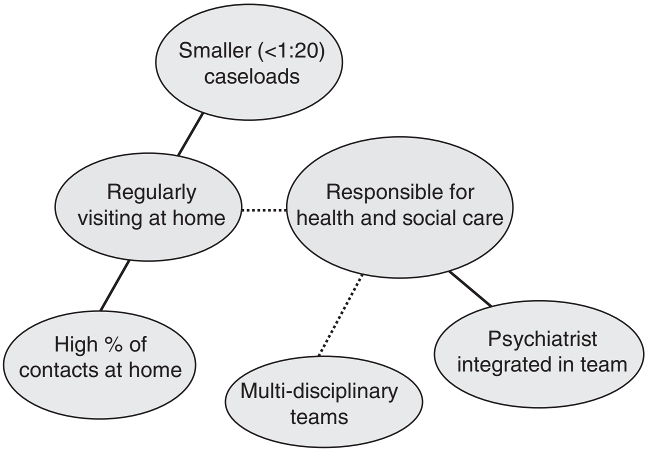

Figure 1.1 Components of care. Continuous lines represent statistically significant association ($p < 0.05$), broken lines association at trend level ($p < 0.10$).
Wright et al., 2004. Reproduced under the terms of the Click-Use Licence.

A Health Technology Assessment (HTA) for the Department of Health (Burns et al., 2001) and a systematic review by Catty and colleagues (Catty et al., 2002) examined the evidence for home treatment as a whole in contrast to the reviews by Marshall and Lockwood, which discriminated between different models prior to analysis. Marshall's approach could theoretically generate 'purer' results, but ran the risk of misidentifying services given the lack of evidence for their classification. By avoiding this potential pitfall, Catty and colleagues could examine a large body of evidence and investigate which components of care were most common and test which might make a difference (Wright et al., 2004). Hospital use, the most consistently reported outcome measure, was used as the benchmark for comparison. The analysis showed a group of related factors that characterised home treatment services and (using cluster analysis) their association (see Figure 1.1).

Using regression analysis the study demonstrated that there was a significant association between visiting patients at home and having joint responsibility for health and social care and reduced hospitalisation. Interestingly, the six components that were found to be associated did not reliably distinguish between service model labels, but were adopted to a greater or lesser extent in all types of home based care. This could both explain much of the heterogeneity in research findings and identify a way forward for service planning and further research.

All these potentially beneficial factors make sense. If we spend more time with our patients and attend to more of their needs (particularly those that cause them worry such as financial or housing problems) we will forge better relationships and be able to help more. Few probably doubt such an argument, yet we still don't really have the evidence to support it. This lack of evidence from research is compounded by the finding that only about a quarter of the experimental teams survived in their original form after the trials were over (Wright et al., 2004). Such findings cast further doubt as to how reproducible the effects are in routine clinical practice, particularly over the prolonged time periods that are often needed to help individual patients make lasting changes to their lives.

Qualitative research

The research examined above identifies what may help in improving outcome, but has not attempted to consider why. Such questions are extremely difficult to pose, never mind answer. However, over recent years there has been a substantial increase in the amount and sophistication of qualitative research in ACT, providing us with interesting and important information that underpins findings from the quantitative studies.

A good example is a study by Priebe and colleagues (Priebe et al., 2005) that explores the views of engagement and disengagement held by ACT patients. Forty selected patients were interviewed in depth. The sample purposively included a disproportionate number from African-Caribbean backgrounds known to be less satisfied with conventional services. There was a wide variety of views, but some themes were clearly identifiable, and these are shown in Table 1.3. The first column shows the most common reasons given by patients for their initial disengagement from mainstream services and the second column shows the reasons cited by them for their better engagement with ACT teams.

These results resonate with Stein and Tests' initial proposal that patients value being treated as individuals with a depth of character and some personal worth. This is perhaps not surprising, but may well be the most important factor in the increased engagement and retention in care of this disenfranchised group. Some quotes from those interviewed illustrate the point:

> *I felt like they never listened to me and they were just making choices for me and if they listened to me a bit more then I might have felt a bit more like I was. I just felt that my life was out of control and I didn't have a say in what I was doing.* (28 year old man talking about previous therapeutic relationships)
>
> *I talk to him about films and theatre and books and arts, and which balances it out because I don't really want someone coming to my flat making me feel mad.* (39 year old woman talking about relationship with an assertive outreach worker)
>
> *You don't talk to them purely about how I have taken my tablets and this. I mean it is broader than that.* (48 year old woman talking about lack of focus on medication)

Such quotes do not constitute evidence of causality, but they do back up the empirical evidence regarding engagement and have high face validity; such sentiments are commonly expressed by patients in clinical practice. Very few practicing clinicians in the field will not have heard something very similar. As the authors identify, however, this is not necessarily a 'win-win' situation in ACT. Not infrequently we are in a position where we have to choose between respecting our patient's wishes and accepting a course that may lead to relapse or alternatively following established evidence which can entail conflict with patient wishes. In the current risk averse climate, these dilemmas can be especially acute for individual practitioners and teams.

Table 1.3 Engagement and disengagement

Disengagement from mainstream services		**Engagement with ACT services**	
Theme	**n (sample = 40)**	**Theme**	**n (sample = 40)**
Desire to be an autonomous and able person.	26	Time and commitment (of staff).	22
Lack of active participation and poor therapeutic relationships.	22	Social support and engagement without a focus on medication.	31
Loss of control due to medication and its effects.	15	Partnership model of therapeutic relationship.	11

(Priebe et al., 2005)

Is there a consensus on the place of assertive community treatment?

The answer to this question is not a straightforward yes or no. However, it is becoming apparent that clinicians and researchers in the field can reach consensus on a number of points:

1 ACT does not harm people.
2 It does not significantly reduce bed use in contemporary UK systems.
3 It is neither cheaper nor more expensive than standard care.
4 It improves the engagement of hard to reach people.
5 It is appreciated by patients and their carers.

As regards what it is that may make it work, some themes are emerging from the meta analyses and qualitative work of recent years. The following five features are significantly associated with high quality home based care:

1 Multi-disciplinary working.
2 Smaller caseloads.
3 Responsibility for both health and social care.
4 A dedicated psychiatrist on the team (if possible dedicated in approach as well as availability!).
5 High rates of home visiting (rather than office contacts).

High rates of home visiting and responsibility for health and social care are associated with reduced bed usage even if the overall model is not, and it is worth considering all five features briefly in turn.

1. Multi-disciplinary working

Multi-disciplinary working is now established practice in most countries with developed healthcare systems. It is widely accepted to be the most effective way to provide support to the severely mentally ill. It is the bedrock of all UK community mental health services, albeit with some variability. The research evidence and practical experiences have taken us to the point where we no longer question it; it simply seems the right thing to do. However, it is important to keep trying to ascertain what it is about multi-disciplinary working that is successful; it is here that qualitative work has provided such valuable insights.

2. Smaller caseloads

There have been substantial shifts in our understanding of this issue, with the early landmark studies showing huge apparent differences with reduced caseloads but later (primarily UK based) research showing that ICM with resulting smaller caseloads did not reduce the need for inpatient care. The much vexed question of caseloads is less settled, with the initial clear advantages of intensive (10–12 cases per worker) over standard (30–35 cases) case management becoming very much reduced with improved research. However, more recent studies, notably that of Wright and colleagues, have found good evidence that defined caseloads (<1:20) are an important feature of good quality home based care. This is an important finding as it shifts the focus of attention to something very practical and measurable, which is partly independent from the broad model of service delivery employed. For instance, a CMHT could be allowed to develop capacity for some staff to have a reduced caseload and work with people assertively, rather than pass people on to another service. Such an arrangement would be similar to the old ‘bolt-on’ ACT services, which by popular agreement were not felt to work well at the time, although some recent Dutch work does suggest they may have a place. Any move in this direction would require careful consideration.

Currently there are three types of service or ‘team’ that broadly fit into an assertive approach and that have reduced caseloads. These so-called ‘modernisation teams’ were prescribed by the National Service Framework (Department of Health, 1999) a decade ago and are now available in most areas of the UK. They are ACT, Early Intervention, and Crisis and Home Treatment Teams. All differ in their target population but all have limited caseloads and aim for an assertive and personalised approach to the care of the severely mentally ill. Caseloads in the UK vary between 10 and 20 for each care coordinator in ACT and early intervention teams, with more variability amongst crisis teams.

Defined caseloads allow a more individualised approach and it is this which patients and their families appreciate. They allow both practitioner and patient to develop a realistic expectation of the level of contact which is no longer entirely crisis driven. This in turn may lead to greater engagement and retention in treatment. Where the boundary lies is uncertain in day to day practice. Some workers appear able to offer highly individualised support with fairly large caseloads while others are unable to do so even with limited caseloads. This may stem as much from the personality and drive of the worker, and from their appreciation of the others’ feelings, as from any model of service delivery. It is a reminder of the need for effective management and supervision of all staff, along with a framework in which to do it (Burns & Firn, 2002).

3. Responsibility for both health and social care

Teams responsible for the broad range of care for individuals appear to be more effective at improving outcomes for their patients. The evidence supports a reduction in bed use and greater engagement and retention in treatment when the same core team can provide both health and social care. This may be due to their offering far greater continuity of care than traditional services where people are passed from team to team. Most generic mental health teams now operate along similar principles with attempts to provide care and support ‘in house’ first. This may include social support, occupational therapy or psychological input among other things. It reduces delays in help being given and inefficiency through repeated assessments. Both are often reported as being very frustrating for patients (and often staff!) and can lead to disengagement.

It makes common sense that disenfranchised people with adverse experiences of care in the past are far more likely to accept interventions from people they know and have worked with than if they are expected to attend appointments in far off buildings for further ‘assessments’ prior to anything being done. Effective interventions, such as family therapy for people with psychosis, improve outcomes and should, resource imperatives withstanding, be available in the team itself or be very easily accessible.

This principle also applies beyond the team in service level arrangements for resource allocation and structuring. Conflicting demands upon health trusts and social services departments may create an impasse that is not in the best interests of the patient. Progress requires that the barricades are taken down. Combined health and social care is experienced as holistic care by patients, they experience themselves being treated as ‘people’ rather than just ‘patients’. The team attends to various needs in a coordinated way rather than focussing on a narrow spectrum of interest to professionals. Priebe’s work (Priebe et al., 2005) strongly supports this view.

4. Dedicated psychiatric input

In some ways this may be the most vexed issue at a local level with much variability in practice. This is despite the research evidence and the commonly reported difficulties in ACT teams who have to relate to a number of different psychiatrists, many of whom have different ways of doing things. These psychiatrists will also have different levels of interest in, and commitment to, the ACT service and those under its care as they balance their differing priorities.

Having a psychiatrist on the team achieves a number of seemingly important objectives, both in terms of the care of individual patients and in a wider organisational context. Working as part of the team, attending meetings and talking with the other members regularly, the psychiatrist can easily keep abreast of the lives of patients. This enables them to take a much more personalised and knowledgeable approach when they see patients, often at times of great difficulty. It also enables them to get to know the team members well and respond to their requests intelligently. Care coordinators can have very different attitudes towards risk (for example) necessitating very different responses to seemingly similar requests. It is hard for an outsider to gain this type of knowledge and work in such a way with a team. The embedded psychiatrist fits well with the general principle of the team doing as much as possible and only out-sourcing when absolutely necessary, usually for some kind of specialised therapy or intervention or for physical healthcare.

Organisationally, a consultant can help to give the service a voice. This can provide security and help to maintain and develop the service. Rightly or wrongly it is much harder for a non-medical team leader to influence decisions as effectively. Assuming the psychiatrist is a reasonable individual, their presence usually improves working practices and relationships reducing turnover and burn out.

5. High rates of home visiting

In Stein and Test's original TCL programme home visiting was considered important on the grounds that psychotic patients had impaired transfer of skills learning. It has survived because of its impact on engagement. Visiting people at home increases contact. They might otherwise not come to appointments, either because they are too disorganised or because they lack understanding of their need for treatment. This can increase engagement and allow effective interventions. You cannot really help a person with their social anxiety or day to day budgeting, or persuade them to take medication, if you aren't seeing them consistently because they don't turn up. This holds whatever the reason for poor attendance and the remedy seems to be the willingness to go to the person physically, alongside the willingness to approach them as an individual with strengths as well as difficulties (Ryan & Morgan, 2004).

The evidence shows a significant association between home visiting and better outcome, but it could simply be that high rates of home visiting is a proxy measure for better quality services. Such services may have more motivated staff or increased investment and priority in local healthcare systems. It is unlikely that these factors could explain the research findings, but findings such as Glover's with crisis teams (Glover et al., 2006) remind us to consider them.

Where does all this leave us?

The effectiveness of ACT, as measured by careful research, depends on the criteria used to judge it. Using the fairly narrow criteria of hospital bed use and symptom levels, the early studies in the US and Australia showed striking improvements but these have not been replicated recently. There may be several reasons for this, but the contribution of improved standard care is fairly compelling. More broadly, the evidence from a number of studies (regardless of location) shows improvements in engagement and satisfaction, reductions in victimisation and improved social functioning in ACT teams. A recently published observational study in the Netherlands (Bak et al., 2007) demonstrated an increased probability of 'transition to remission' (getting substantially better) in ACT patients as opposed to those receiving standard care (31% versus 19%). However, there was also an associated reduction in hospital bed use which raises questions about the quality of standard care.

ACT is now well established as one of the cornerstones of community care for those with severe mental illnesses. It is likely to be around for some considerable time in the

UK. Interestingly, this is not the case across the rest of Europe, even in comparatively well funded mental health systems. UK services are now maturing and diversifying to meet local need. It is more important than ever for those involved in services, whether as clinicians or planners, to consider the evidence, in terms of what has been shown to improve patient outcome but also practices which are not supported by evidence.

It is likely that research will continue to focus on the individual elements of care to refine practice further. The days of large head-to-head trials are probably now over in the UK and US, but studies focusing on social and clinical outcomes may be of continuing use in service planning and delivery. In mainland Europe, where ACT services (and multidisciplinary working generally) are less developed new trials may still provide important insights for UK practice. Perhaps the most important lesson from the rapid development of ACT, both in clinical practice and in research, is that to be successful it must take note of both international and very local issues. Above all it must be an interaction between individuals based upon clear and easily understandable principles that are effective in real world situations.

References

Bak, M., van Os, J. & De Bie, A. (2007) An observational, 'real life' trial of the introduction of assertive community treatment in a geographically defined area using clinical rather than service use outcome criteria. *Social Psychiatry and Psychiatric epidemiology*, **42**, 125–130.

Burns, T., Creed, F., Fahy, T., Thompson, S., Tyrer, P. & White, I. (1999) Intensive versus standard case management for severe psychotic illness; a randomised trial. *The Lancet*, **353**, 2185–2189.

Burns, T., Knapp, M., Catty, J., Healey, A., Henderson, J., Watt, H. & Wright, C. (2001) Home treatment for mental health problems: a systematic review. *Health Technology Assessment*, **5**(15), 1–139.

Burns, T. & Firn, M. (2002) *Assertive Outreach in Mental Health, a Manual for Practitioners*. Oxford University Press, Oxford.

Burns, T., Catty, J., Dash, M., Roberts, C., Lockwood, A. & Marshall, M. (2007) Use of intensive case management to reduce time in hospital in people with severe mental illness: systematic review and meta-regression. *British Medical Journal*, **335**(7615), 336–340.

Catty, J., Burns, T., Knapp, M., Watt, H., Wright, C., Henderson, J. & Healey, A. (2002) Home treatment for mental health problems: a systematic review. *Psychological Medicine*, **32**, 383–401.

Department of Health (1999) *The National service framework for Mental Health; modern standards and service models*. Department of Health, London.

Glover, G., Arts, G. & Babu, K.S. (2006) Crisis resolution/home treatment teams and psychiatric admission rates in England. *British Journal of Psychiatry*, **189**, 441–445.

Holloway, F. & Carson, J. (1998) Intensive case management for the severely mentally ill. *British Journal of Psychiatry*, **172**, 19–22.

Hoult, J., Reynolds, I., Charbonneau-Powis, M., Weekes, P. & Briggs, J. (1983) Psychiatric hospital versus community treatment: the results of a randomised trial. *Australian and New Zealand Journal of Psychiatry*, **17**, 160–167.

Killaspy, H., Bebbington, P., Blizard, R., Johnson, S., Nolan, F. & Pilling, S., et al. (2006) The REACT study: randomised evaluation of assertive community treatment in north London. *British Medical Journal*, **332**, 815–818.

Marks, I.M., Connolly, J., Muijen, M., Audini, B., Mcnamee, G. & Lawrence, R.E. (1994) Home-based versus hospital-based care for people with serious mental illness. *British Journal of Psychiatry*, **165**, 179–194.

Marshall, M., Gray, A., Lockwood, A. & Green, R. (1998) Case management for people with severe mental disorders (Review). *The Cochrane Library* 2009, issue 1.

Marshall, M. & Lockwood, A. (1998) Assertive community treatment for people with severe mental disorders (Review). *The Cochrane library* 2008, issue 4.

McGrew, J.H., Bond, G., Dietzen, L. & Salyers, M. (1994) Measuring the fidelity of implementation of a mental health program model. *Journal of Consulting and Clinical Psychology*, **62**(4), 670–678.

Priebe, S., Watts, J., Chase, M. & Matanov, A. (2005) Processes of disengagement and engagement in assertive outreach patients: qualitative study. *British Journal of Psychiatry*, **187**, 438–443.

Rosenheck, R., Neale, M., Leaf, P., Milstein, R. & Frisman, L. (1995) Multisite experimental cost study of intensive psychiatric community care. *Schizophrenia Bulletin*, **21**, 129–140.

Ryan, R. & Morgan, S. (2004) *Assertive Outreach, a Strengths Approach to Policy and Practice*. Churchill Livingstone, Edinburgh.

Stein, L. & Test, A. (1980) Alternative to mental hospital treatment. 1. Conceptual model, treatment program, and clinical evaluation. *Archives of General Psychiatry*, **37**, 392–397.

Teague, G.B., Bond, G.R. & Drake, R.E. (1998) Program fidelity in assertive community treatment: development and use of a measure. *American Journal of Orthopsychiatry*, **68**(2), 216–232.

Thornicroft, G., Wykes, T., Holloway, F., Johnson, S. & Smzukler, G. (1998) From efficacy to effectiveness in community mental health services; PRISM psychosis study 10. *British Journal of Psychiatry*, **173**, 423–427.

Wright, C., Burns, T., James, P., Billings, J., Johnson, S. & Muijen, M., et al. (2003) Assertive outreach teams in London: models of operation. Pan-London assertive outreach study, Part 1. *British Journal of Psychiatry*, **183**, 132–138.

Wright, C., Catty, J., Watt, H. & Burns, T. (2004) A systematic review of home treatment services; classification and sustainability. *Social Psychiatry and Psychiatric Epidemiology*, **39**, 789–796.