

therapeutic communities



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Editorial

- Straw Men: Exploring the Evidence Base and the Mythology of the
Therapeutic Community
Rowdy Yates, George De Leon, Rod Mullen and Naya Arbiter 95

Papers

- Juan Corelli (Parés y Plans): An Appreciation
David Turner 100
- Is the Therapeutic Community an Evidence-based Treatment?
What the Evidence Says
George De Leon 104
- Cost Benefits of Therapeutic Community Programming:
Results of a Self-funded Survey
James Pitts and Rowdy Yates 129
- Recovery We Can Afford:
An Analysis of a Sample of Comparative, Cost-based Studies
Rowdy Yates 145
- Therapeutic Communities in United States' Prisons:
Effectiveness and Challenges
Harry K. Wexler and Michael L. Prendergast 157
- Research on the Effectiveness of the Modified Therapeutic Community
for Persons with Co-occurring Substance Use and Mental Disorders
Stanley Sacks and JoAnn Y. Sacks 176

- Reviews** 212

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Editorial

Straw Men: Exploring the Evidence Base and the Mythology of the Therapeutic Community

Rowdy Yates, George De Leon, Rod Mullen and Naya Arbiter

The roots of the modern drug-free therapeutic community (TC) movement lie in the mutual-aid fellowship, Alcoholics Anonymous (Broekaert, Vandervelde, Soye, Yates & Slater, 2006; De Leon, 1997; Rawlings & Yates, 2001), which in its turn was the continuation of a long history of self-help recovery groups including the Washingtonians, the Jacoby Clubs and the Blue Cross (Fédération Internationale de la Croix-Bleue) (White, 2000; Yates & Malloch, 2010). Whilst, particularly in its early years, the TC attracted the interest and support of many medical practitioners and academics – and, in Europe in particular, this led to a merging of TC practice with the social psychiatry innovations of Jones, Laing, Clarke, Mandelbrote, Basaglia etc. (Kooyman, 1992; Ravndal, 2003; Rawlings & Yates, 2001) – it is equally true that it has continued to be viewed with some suspicion by many within mainstream medical addiction treatment (Best, 2010; Best, Harris & Strang, 2000). In part, this seems to be a natural consequence of a traditional, infection control-focused view of substance use disorders as a phenomenon to be managed and contained. But, in part also, it appears to stem from a concern that TCs have failed to establish evidential credentials in a field increasingly dominated by the demand for evidence-based treatments.

We believe that this mistrust is a fundamental misreading of the available evidence. In preparing this issue of the journal, it has been our intention to examine the oft-raised criticisms of the drug-free TC and consider what evidence there is to either support or refute those views. And the evidence is certainly there. Often it has been dispersed; published in journals relating to a variety of disciplines including psychology, psychiatry, criminology, sociology and the addictions. In the main, it is what Broekaert and colleagues (2010) have described as ‘practice-based evidence’; though this is by no means to suggest that it lacks scientific provenance.

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therapeutic communities, 31, 2, summer 2010
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Thus, this issue of the journal is a first attempt at drawing together what we know about addiction TC treatment interventions and what more we need to find out.

For many years, the randomised controlled trial (RCT) has been viewed as the gold standard of evidence. Whilst it is true that there is a compelling attraction to the apparent simplicity of the RCT in measuring and evaluating interventions (add this element, or medication and things get better; take it away or fail to add it and things get worse or at best, stay the same), the truth is that some interventions, like the TC, are so complex and involve so many interacting components that isolating a single element and identifying it as the 'what works' factor simply misses the point. Moreover, at its best, the TC represents a careful juxtapositioning of a series of interventions which, *in themselves*, have been tried and tested for many years and for which empirical support from contemporary behavioural and social psychological research is already persuasive (De Leon, 2000). Whilst much of the evidence regarding the efficacy of the addiction TC comprises outcome studies, the sheer number of these studies and the striking congruence of their findings provide a compelling argument for the efficacy of the drug-free TC.

For over 40 years, the drug-free TC has been studied and evaluated. The vast majority of this body of evidence suggests that drug-free TCs have a profound and long-lasting impact upon those drug users who present for and complete treatment. A significant number of studies indicate that even those who fail to complete treatment see improvements in a variety of areas including drug and alcohol use, self-esteem, employment, health care needs and offending (see in particular, De Leon in this issue).

TCs have often been criticised for a perceived high dropout rate, particularly within the first months of treatment. However, this is not a problem which is particular to TCs. Morris and Schultz (1992), in a review of the evidence on treatment retention and compliance appertaining to a range of disorders requiring long-term interventions (including diabetes, hypertension, asthma etc.), estimated treatment retention at around 50% and various authors (McLellan, Lewis, O'Brien & Kleber, 2000; O'Brien & McLellan, 1996; White, 2008) have argued that substance use disorders not only require similarly long-term focused treatment, but suffer from similar dropout rates across the board.

Whilst retention in substitute prescribing treatment is somewhat superior to other addiction treatment modalities in this respect, it is by no means immune to this problem. Simpson, Joe and Rowan-Szal (1997) in a study involving three methadone treatment programmes in Texas found that two-thirds had dropped out within the first twelve months, with one-third dropping out in the first twelve weeks. In Italy, D'Ippoliti and colleagues (1998) surveyed 1,503 heroin addicts entering either methadone maintenance therapy (MMT) or a naltrexone detoxification with a community-based (ambulatory) programme of group work and drug counselling. At the end of 12 months, 60% of the MMT clients had dropped out whilst, in the detoxification group, over 80% had left treatment.

In various studies of retention in TCs, Lewis and Ross (1994) have noted that the dropout rates differ very little from other addiction treatment modalities.

They argue that the bulk of dropouts occur within the first 12 weeks of treatment, with retention rates ranging from 60% to 70% and with a significant reduction in dropout thereafter. Ravndal and Vaglum (1994), in an 18-month study of a TC in Norway, found a retention rate of 25%. Broadly similar rates were reported by De Leon (1991), although De Leon notes that, at that time, retention rates had been improving in TCs throughout the 1980s.

It should be recognised in any comparative discussions that, traditionally, TCs have tended to provide services to an extremely chaotic treatment population (De Leon, 2000; Kooyman, 1992) and, where populations have been compared between treatment modalities (Gossop, Marsden, Stewart & Treacy, 2002; Yates, 2008), TC residents have been found to have significantly higher levels of dysfunction; and thus a significantly less hopeful treatment prognosis. For those who do complete TC programmes, the improvements in drug-free status, social functioning, crime reduction, employability etc. are impressive.

This is not, of course, to suggest that retention is unimportant. On the contrary, the available evidence has established a clear relationship between time spent within a TC treatment programme and successful outcome. Put simply, the longer the resident remains within the treatment programme, the better his/her chances of recovery. Thus retention – and enhancing retention – is a legitimate concern for TCs, as it is for all drug treatment modalities. But early dropout should not be confused with ineffectiveness of treatment. TCs are effective for those who remain in treatment long enough for treatment influences to occur.

In addition to the issue of retention, the research on treatment process and treatment improvement of Addiction TCs, are topics for future review. The focus of the papers in this special issue is on the effectiveness and cost benefit of TC treatment for various populations of substance abusers.

In the first article, De Leon examines the last three decades of the North American studies on TC outcomes. An evaluation of the strengths and weakness of this literature concludes that multiple sources of research provide compelling evidence that the TC is an effective treatment for substance abusers. However, a new generation of quantitative and qualitative research is needed to assure full acceptance of the TC.

This is followed by two articles, both considering the cost of TC treatment and its economic benefits to the wider community. First, Pitts and Yates present a review of comparative treatment costs studies and a presentation of results from a recent Australian study; then Yates sets out an exploration of the strengths and weaknesses of a random sample of cost-based comparative studies. TCs are established within correctional institutions in a number of countries. In their paper, Wexler and Prendergast review the literature on prison TCs and their impact on drug-using, re-offending and re-imprisonment. With TCs increasingly being modified for the needs of those drug users with complex coinciding mental health problems, Sacks and Sacks set out the results of a series of major studies mapping the successes and weaknesses of these modifications.

The review sections of journals generally concentrate on the most recent, relevant publications. For this issue, however, with its focus on drawing together the main sources of evidence, we felt it was appropriate to re-review a number of publications which, whilst no longer new, constitute a significant resource for the TC movement. Within this section you will find practitioner reviews of books by De Leon, Kooyman, and Rawlings & Yates, in addition to a review of the DVD collection of lectures by De Leon.

Finally, we wish to dedicate this issue of the Journal to the memory of Juan Pares y Plans (often known within the TC world as Juan Corelli), who passed away in Rome in October last year. Juan devoted much of his life to working for CeIS Roma, one of the early pioneers of the drug-free TC movement in Italy. Juan will be remembered for his charm and immense vitality and humanity. We are indebted to CeIS Roma and to David Turner for their generous permission to reprint David's appreciation of Juan, which was originally published in CeIS Roma's Newsletter. He will be remembered as one of the giants of our movement and we will miss him terribly.

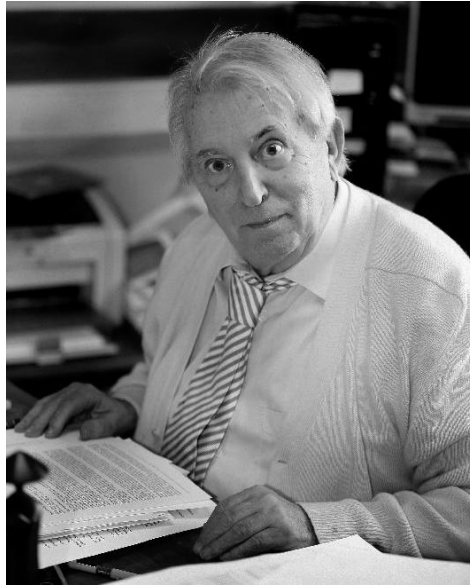
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Juan Corelli (Parés y Plans): An Appreciation

David Turner



In writing of the contribution Juan made nationally and internationally I am very conscious that many people may have longer or more direct experience. I can, therefore, only speak from what I know, have observed and experienced over a period of 30 years.

It was almost inevitable when Juan committed himself to work for CeIS that the organisation would not be confined to Rome or to Italy. His life from childhood, and especially in the world of classical dance and of film, had always been international. In many ways he was a nomad who, when he was settled, was unsettled and who roamed the intellectual and physical worlds in search of ideas, inspiration and experience.

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A first contribution which Juan made came directly from the earlier part of his life. The work of CeIS was becoming focused on drug dependence and how to give assistance to people with drug problems. There was limited experience in Italy and Juan started to search for ideas and information. Through the International Council on Alcohol and Addictions (ICAA) he learnt of new approaches which had begun in the USA and were now being introduced into Europe. He travelled to The Netherlands and the USA to look at the ways in which people with drug problems were being treated and rehabilitated and was introduced to the concept-based, or hierarchical therapeutic community (TC). People from other European countries had earlier made this same journey. Most had been medical doctors, usually psychiatrists, who were used to the idea of medical treatments being universally applicable. The genius of Juan, gained from his experience in many countries, was to recognise that ideas and programmes had to be embedded in the history and culture of a country and a locality. They could not just be imported and expected to work. This is now a standard assumption and generally recognised, but in the early 1970s it was new and radical.

A second and equally important early contribution was his strong belief that before you start a new programme you had first to be firmly grounded in the basic techniques required for that programme. This again came from his experience in the theatre. In ballet only through knowledge of – and competence in – classical techniques was it possible to experiment with new forms and more avant-garde choreography. So in working with people with drug problems, the first step was not to provide a direct service, not to learn on the job led by staff on loan from a programme in another country, but to establish a training institute to build skills and competence. And this became a major contribution to the development of TC programmes not just in Italy, but also in Spain, Argentina and subsequently in many other countries. It is still likely that you will meet people today who fondly remember the training they undertook with CeIS, inspired by Juan.

Wanting to draw on the ideas and experience of the leading figures in the field of dependencies, the next move Juan made was one of the most daring. In 1978 CeIS hosted the third conference of what was then the Therapeutic Communities Section of ICAA, although it had not yet opened its first community, San Carlo. The conference not only brought the leading figures to Rome but also gave CeIS an international profile and allowed it to continue drawing on experience from around the world for many years to come. With the opening of San Carlo, Juan continued to read widely drawing on the theories and practices of writers in psychology, sociology and philosophy, as well as on his own experience and observations. As CeIS developed its own philosophy – Progetto Uomo – drawing on the European traditions of solidarity and enlightened humanism, he felt the need to confront the two schools of TC. There was the American hierarchical model, which focused on treatment of dependencies, and the European democratic model, which was focused on responding to mental health problems.

Juan proposed that, in 1984, CeIS should not only host the eighth conference of the World Federation of Therapeutic Communities but that there should be an Institute with a more restricted attendance. The Institute would bring together experience from the two different traditions of TC and seek to explore their approaches and relevance to each other. That Institute is still talked about with awe by those who were present, and remains a major reference point in the development of TCs for addiction treatment. There have been efforts to replicate it but they have never managed the same impact. This may be in part because TCs are now firmly established and there are not the same opportunities for a radical challenge to practice and theory. But another major factor was the vision of Juan and his capacity to create the dynamics for challenge and change. That capacity was also reflected in the organisation of the conferences held in Rome. They were learning and networking occasions, but they were also theatre, staged and choreographed to allow CeIS and all the participants to get the greatest benefit possible. It was from these events that the lifelong commitment to CeIS of people such as Harold Bridger, Maxwell Jones, Don Ottenburg and George De Leon arose; and it was to Juan, with his gift for languages and his enquiring mind, that they turned.

Also at the national and international levels, Don Mario Picchi and Juan sought to create environments in which networking and learning could occur to assist in the development of services and in promoting effective treatment for problems of dependency. It was in this spirit that they became leading figures in the establishment of the Italian Federation of Therapeutic Communities, the European Federation of Therapeutic Communities and the World Federation and Therapeutic Communities. Juan was always very clear that CeIS should not manage services outside the territory of Rome, but was also clear that sharing and learning from others was essential to maintain a dynamic and committed therapeutic treatment programme.

In 1985, guided by Juan, CeIS gained consultative status with the Economic and Social Council of the United Nations. This status was important for CeIS to work with UN bodies, in particular the drug control agencies in Vienna. CeIS became and still is an active member of the Vienna NGO Committee on Drugs, currently providing the Chair. It also developed links with the United Nations Fund for Drug Abuse Control (UNFDAC) and through this was able to initiate work in Bolivia as well as support the development of organisations in many other countries. The developments in Bolivia offer a good example of the approach taken by Juan and his enormous influence. He recognised that social development was as essential to impact drug cultivation as it was to impact on drug consumption. The work in Bolivia was therefore focused on a range of projects designed to develop infrastructure, improve social and health conditions and respect the cultural and historical heritage of the people. This approach is now standard under the broad label of alternative development. In the 1980s there was no such comprehensive approach and crop substitution was the theme, without the markets or the means of transport to make other crops a viable source of income. Within the UN drug control agencies alternative development and ideas about how this might be achieved were initiated to a

large extent by the inspiration of the ideas coming from Juan and the enthusiastic support of the then head of UNFDAC, Giuseppe Di Gennaro.

Subsequently CeIS has been engaged in innumerable national and international activities and has been a point of reference for individuals and organisations around the world. It is difficult to attend a conference or meeting almost anywhere in the world where Juan could not offer contacts or where someone would not ask after him and recall meetings with him which had enthused them with new ideas or opportunities. He was – and he made CeIS – an intellectual explorer, always seeking the best, always offering ideas but never possessive or concerned by ownership, at least for himself. It was this quality perhaps, above all else, which made him so respected and so influential in a world of competing egos. He never sought the limelight but it was drawn to him by his personality, his intellect and his openness to what might be possible. And it is because of this that so many people around the world now mourn the loss of a mentor and friend.

Is the Therapeutic Community an Evidence-based Treatment? What the Evidence Says

George De Leon

ABSTRACT: Despite decades of Therapeutic Community (TC) outcome research critics have questioned whether the TC is an evidenced-based treatment for addictions. Given the relative lack of randomised, double-blind control trials (RCTs) it is concluded that the effectiveness of the TC has not been 'proven'. Such conclusions contain serious implications for the acceptance and future development of the TC. The purpose of this paper is to foster consensus among researchers, policy makers, providers and the public as to the research evidence for the effectiveness of the TC. Main findings and conclusions are summarised from multiple sources of outcome research in North America including multi-programme field effectiveness studies, single programme controlled studies, meta analytic statistical surveys and cost-benefit studies. The weight of the research evidence from all sources is compelling in supporting the hypothesis that the TC is an effective and cost-effective treatment for certain subgroups of substance abusers. However, full acceptance of the TC as a bona fide evidence-based approach will require a generation of studies that include RCTs as well as other quantitative and qualitative designs.

Introduction

Therapeutic communities (TCs) emerged as a mutual self-help alternative to mainstream medical and mental health treatments for substance abuse disorders. Over the past four decades a considerable scientific knowledge base has developed which documents impressive findings on success and improvements among samples of thousands of individuals treated in TCs worldwide. Nevertheless, critics have persistently questioned whether the TC is an evidence-based treatment. Given the relative lack of randomised control trials (RCTs) it is concluded that the effectiveness of the TC has not been 'proven'.

Such conclusions contain serious implications for the acceptance and future development of the TC. They can shape funding policy concerning the TC as a

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bona fide treatment for addictions. For example, as a long-term residential (LTR) treatment for serious substance abusers the TC is often viewed as not cost-effective, which has compelled significant reductions in the planned duration of residential treatment. This policy contradicts the well-established research finding that duration of treatment is the most consistent predictor of treatment outcomes.

Moreover, such conclusions can impede the advancement of TC research which, after all, must be guided by the status of the existing evidence. Challenging the evidence on *whether* TCs work can undermine support for research on *how* TCs work, knowledge that is necessary to improve the treatment itself.¹

Thus, the general purpose of this paper is to foster consensus, at least among researchers, as to the evidence for the effectiveness of the TC and to promote further development of a TC scientific knowledge base. In Part A, key findings and conclusions are summarised from multiple sources of TC research including field effectiveness outcome studies, meta-analytic statistical surveys and cost-benefit studies, as well as relevant behavioural and social-psychological literature. Parts B and C evaluate the weight of the evidence and discuss considerations for conducting RCTs involving TC programmes.

Evidence: some distinctions

There are meaningful distinctions concerning the term 'evidence'. Notably, evidence can be developed from research and non-research sources. In accordance with the general objective of this paper, the evidence examined is drawn exclusively from research studies on outcomes. However, not all research evidence carries equal value, a proposition that has guided the construction of various frameworks for defining levels of evidence. These rank the value of evidence based upon the method or design utilised to produce the evidence. A notable example is the Cochrane database that ranks studies in which the RCT is the design at the highest level, while the value of uncontrolled observational studies is ranked at the lowest level.

It is beyond the purview of this paper to debate the issue of levels of evidence. Basically, ranking the 'value' of evidence reflects a degree of certainty or confidence concerning conclusions about relationships or causality. For example, evidence from RCTs seems to provide more 'certainty' as to the efficacy of a particular treatment than does evidence from other designs such as field outcome studies that lack comparison or control groups. Nevertheless, there are penetrating scientific essays that provide alternative perspectives on the concept of hierarchical values of evidence (see, for example, Rawlins, 2008).

¹ For example, in the past decade the Center for Therapeutic Community Research at NDRI has submitted a number of research proposals to the National Institute on Drug Abuse (NIDA) to improve treatment in TCs. Peer reviews of these proposals often assert that TC effectiveness has not yet been demonstrated in controlled studies, which precludes undertaking new studies of treatment process or enhancement.

The approach in the present endeavour is to arrive at conclusions based upon the 'weight of the evidence' that emerges from *multiple* sources of research. Thus, rather than 'prove' that the TC is effective, the main objective is to answer the broader question of whether the TC is an evidence-based treatment for substance abuse disorders.

Method

An extensive literature on TC outcomes has evolved in the USA and to a growing extent in Europe and elsewhere over the past four decades. Numerous studies appear in scientific journals, book chapters, proceedings and monographs. Most of these studies report favourable post-treatment outcomes for substance abusers in TCs. However, the investigations vary widely in design, type of TC programmes evaluated, client profiles, and methodological and analytic sophistication.

A subset of this literature offers an accessible empirical base for deriving clear conclusions concerning the evidence basis for TC treatment. The subset consists of studies that have utilised similar methodology for evaluating outcomes involving 'standard' and modified TC programmes and have been published in peer review journals, book chapters and published reports, mainly after 1980.² (See reviews of the early outcome literature, e.g. Bale, 1979; Brook & Whitehead, 1980; Burt, Pines, & Glynn, 1979; De Leon, 1985; Holland, 1983; Kooyman, 1992; Winick, 1980).

The subset can be categorised into three main sources of research evidence: (1) field effectiveness studies that consist of the large-scale multi-modality surveys as well as uncontrolled 'case studies' of single programmes; (2) controlled/comparison studies of single programmes that also include TCs modified for special populations (e.g. criminal justice, mentally ill); and (3) published statistical meta-analytic studies involving TCs. Additionally, evidence is referenced from two other sources: cost-benefit studies and relevant behavioural and social-psychological research literature outside of TCs. The main findings and/or conclusions from each of these sources are summarised in text and tables.

Limitations

The present survey is not an exhaustive or critical review of all research on TC outcomes. The outcome literature surveyed is confined to the North American TCs for substance abusers (also labelled Addiction TCs). The studies in each category are those most frequently cited in the research literature, regardless of

² It has been argued that published studies report positive findings more often than do unpublished studies. This publication 'bias' has not been adequately assessed in the drug treatment effectiveness literature. Nevertheless, it is a hypothesis that will be tested in a planned review of the TC outcome studies worldwide.

their findings or conclusions. Thus they offer a fair representation of the published evidence from various sources.

It should be stressed, however, that it remains a later task to review the worldwide literature on the addiction TC programmes as well as TCs for personality disorder.

There are other features and limitations in this survey that should be noted. First, the programmes represent variants of the TC approach: standard and modified. Most were LTR programmes with a planned duration of treatment (PDT) of at least nine months but several were shorter term. Some programmes were modified to treat special populations in special settings. Second, TC effectiveness is based upon post-treatment outcomes on self-reported drug use, criminality and employment. However, corroboration analyses in these studies and in the general literature report acceptable correlations between self report and objective measures such as urine analyses and file records of arrests/convictions. Third, in a survey involving multiple sources of research there exists some overlap such that several studies are contained in more than one source. Finally, the focus on outcomes excluded TC research literature on treatment process, motivation, retention, clinical practice or treatment improvement. One exception is the reference to social-psychological literature as an indirect source of evidence supporting TC elements and principles that may underlie the TC treatment process and outcomes.

These caveats notwithstanding, the material surveyed provides a substantial empirical basis to address whether the TC is an evidence-based approach. Moreover, the material illustrates key conceptual and methodological issues to be considered in advancing a research agenda for TCs.

Part A

Multiple Sources: Summary of Key Findings and Conclusions

1. Evidence from field effectiveness outcome studies

The most extensive body of research bearing upon the effectiveness of Addiction TC programmes has amassed from field outcome studies. These all employed similar longitudinal designs that follow admissions to TCs during treatment, and at one and five years (and in one study up to twelve years; Simpson, 1986) after leaving the index treatment. Table 1 summarises the major findings from this research, expressed as 'Meta Estimates': the pooled information from the four major national multi-modality, multi-year evaluations. Also included in these estimates is the information from three notable uncontrolled 'case studies' of single community-based TC programmes.

Table 1: Multi-programme surveys and single programme studies

Sources	Description	Main research questions & findings
Multimodality/multiprogramme Studies	<p>➤Over five thousand admissions to community-based TCs in North America have entered into multimodality and single programme studies (1969-2000) and have been followed 1-12 years post-treatment.</p> <p>➤Studies have been conducted by different research teams, across different eras.</p> <p>➤Studies have assessed outcomes on multiple variables using similar methodology, e.g. assessment instruments, longitudinal follow-up designs and statistical analyses.</p> <p>➤Results are strikingly similar yielding 'lawful' findings with respect to profiles, outcomes and retention.</p>	<p>➤Who comes for treatment? <i>All studies show that TC admissions have poor profiles in terms of severity of substance use, social deviance, and psychological symptoms.</i></p> <p>➤What are the outcomes? <i>All studies show significant decreases in measures of drug use, criminality and psychological symptoms, and increases in employment and/or educational involvement. In studies, which utilise a composite index of favourable or successful outcome over 60% of the intent to treat, samples (dropouts and completions combined) show most favourable or favourable outcomes.</i></p> <p>➤Is there a relationship between treatment 'dosage' and outcomes? <i>All studies show that reductions in drug use, criminality and increase in employment are related to time spent in treatment. Those who complete the planned duration of residential TC treatment show the best outcomes; among dropouts, retention is highly correlated with outcomes.</i></p>
Drug Abuse Reporting Program (DARP) ¹		
Treatment Outcome Prospective Study (TOPS) ²		
National Treatment Improvement Evaluation Survey (NTIES) ³		
Drug Abuse Treatment Outcome Study (DATOS) ⁴		
Single Programme Field Outcome Case Studies (no comparison condition)		
Phoenix House ⁵		
Eagleville Residential Programme ⁶		
Gateway House ⁷		

¹ Simpson and Sells (1982).

² Hubbard, Marsden, Rachal, Harwood, Cavanaugh and Ginzburg (1989).

³ National Treatment Improvement Study (NTIES) (1996).

⁴ Simpson and Curry (1997).

⁵ De Leon, Wexler and Jainchill (1982); De Leon and Jainchill (1981-82).

⁶ Barr (1986).

⁷ Holland (1983).

Comment on the field effectiveness studies

The field effectiveness studies provided the empirical groundwork for advancing a scientific knowledge base on treatments for drug abuse. Their objective was to evaluate the status of the drug treatment system in the field. They evolved a sophisticated methodology for conducting large-scale, long-term follow-up investigation of clients up to 12 years post-treatment, and applied complex statistical strategies and multivariate analyses to clarify key findings. The striking replications across studies (though not shown, often within percentage points on some variables) leaves little doubt as to the reliability of the main conclusion from these studies; namely, there is a consistent relationship between retention and positive treatment outcomes in TCs.³

In addition to its strengths, the limitations of uncontrolled field research reveal two critical client selection issues that have clouded the interpretation of the effectiveness of TC treatment, self-selection and self-matching

Self-selection

Arguably, the major methodological issue in the field studies concerns client self-selection. The differential outcomes between dropouts and completers and the differences in outcomes obtained by time in programme among the dropouts may reflect client selection factors such as motivation. Therefore, conclusions about treatment effectiveness may reflect more about client differences than the impact of treatment.

An alternate perspective discussed in other writings (e.g. De Leon, 1998) views self-selection as a *pre-requisite* for treatment effectiveness. Research documents that factors such as client motivation and readiness are predictors of treatment-seeking, retention and participation (e.g. see a summary of TC motivation research in De Leon, Melnick & Hawke, 2000). Thus in the field studies effectiveness reflects an *interaction* between client selection factors and treatment activities. Indeed, effectiveness *depends* on self-selection in that clients *use* treatment elements to change themselves. Thus, treatments must cultivate or sustain selection factors such as motivation, and evaluations must assess their contribution to outcomes.

Self-matching refers to the fact that clients enter the treatment modality of their choice (though not necessarily among the legally coerced). This factor is particularly relevant to the issue of comparative effectiveness. For example, the multi-modality surveys concluded that positive outcomes were generally similar across the three main modalities, long-term residential (LTR) TCs, drug-free outpatient (DFO) and methadone maintenance treatment (MMT), and all were significantly better than detoxification alone.³

³ Although not the subject of this paper, the field effectiveness outcome studies also provided the basis for numerous investigations into related questions including retention, cost benefit, client predictors of outcome, co-occurring disorders, treatment process and organisational factors in delivery of treatment.

However, comparing effectiveness across the three modalities was confounded by differences in the *severity* of the client profiles assessed in terms of substance abuse, social deviance and psychological problems (De Leon, Melnick & Cleland, 2008). Admissions to LTR (high-intensity treatment) revealed highest severity, those entering DFO settings (low-intensity treatment) had the lowest severity, while admissions to MMT were in the middle, reflecting their lower social deviance compared to TC admissions.

Moreover, the multi-modality results showed that the most severe clients who did not enter LTR, but elected DFO, yielded the poorest outcomes (i.e. 'undertreated clients'). However, those who did enter LTR ('sufficiently treated') yielded positive outcomes comparable to those obtained for less severe clients in the other modalities (De Leon et al., 2008; Simpson, Joe, Fletcher & Hubbard, 1999). (Notably, the less severe clients who elected TCs, i.e. 'overtreated clients', also showed positive outcomes suggesting that TCs were effective for some less severe clients.)

Thus, the field studies established that the major modalities were similarly effective but each was serving different clients. Conclusions about the comparative effectiveness of the TC depend upon selection factors such as self-matching. What is clear, however, is that for the most severe clients the TC is the treatment of choice in producing positive outcomes.

2. Evidence from comparative/control studies

Table 2 summarises the outcome findings from eight studies that include a comparative condition. All but one are RCTs (De Leon, Sacks, Staines & McKendrick, 2000) used sequential assignment termed a minimum bias design). In addition to standard community-based TC programmes, these studies include TCs for special populations such as individuals with co-occurring psychiatric disorders and those in prison-based TCs. Additional reviews of the outcome research for these special populations are contained in this volume (see articles by Sacks & Sacks and Wexler & Prendergast).

Comment on controlled TC studies

In all of the controlled studies the TC sample showed improved outcomes. However, the conclusions from these studies concerning comparative outcomes depend upon the research question addressed and the comparative condition evaluated. For example, the four studies that included a non-TC comparison condition yielded significantly better outcomes for the TC condition (De Leon, Sacks, Staines & McKendrick, 2000; Martin, Butzin, Saum & Inciardi, 1999; Sacks, Sacks, McKendrick, Banks & Stommel, 2004; Wexler, Melnick, Lowe & Peters, 1999). The study that compared several TCs with methadone maintenance (Bale et al., 1980) reported difficulties in implementing the RCT, mainly client crossover to the different conditions. The results yielded mixed outcomes but, compared to MMT, better effects were obtained on illegal drug use for longer staying TC clients.

Table 2: Comparative/control case studies involving TCs

Investigators	Description	Findings
Bale et al. (1980)	Compared Methadone maintenance (MM) with three different TC programmes and Detoxification only group.	MM and longer stay TC clients had best outcomes. TC clients had less illegal drug use than MM. Conclusion emphasised considerable difficulty with the RCT.
De Leon, Sacks, Staines & McKendrick (2000)	Modified TC for homeless mentally-ill chemical abusers: treatment outcomes.	Treatment outcomes (drug use, criminality, employment and psychological status) significantly better than comparison group receiving treatment as usual (TAU). Best outcomes were those who completed the 12-month TC plus entered supported housing.
Guydish, Sorensen, Chan, Werdeger, Bostrom & Acampora (1999)	A randomised clinical trial comparing day and residential drug abuse treatment: 18-month outcomes.	Clients who were randomly assigned to residential or outpatient TC treatment improved at roughly the same rate, suggesting that it may be possible to extend TC principles to outpatient settings.
Martin, Butzin, Saum & Inciardi (1999)	Three-year outcomes of TC treatment for drug-involved offenders.	A multi-stage TC approach was effective in reducing drug relapse and criminal recidivism compared to controls.
McCusker et al. (1997)	Compared short- and long-planned duration of treatment (PDT) in two residential TCs (6 vs. 12 months) and separately in two relapse prevention programmes implemented in residential settings that were TC oriented (3 vs. 6 months).	No consistent differences by PDT but 12 month TC shows best employment outcomes and trends favour the TC programmes over the RPT programmes on other ASI outcome variables.
Nemes, Wish & Messina (1999)	Compared two configurations of planned duration of treatment PDT, abbreviated residence (6 months + 6 months outpatient) with standard residence (10 months + 2 months outpatient).	All completers did better than non-completers. No differences between the two configurations except that the longer residence (10 months + 2 months outpatient) completers had better employment outcomes.
Sacks, Sacks, McKendrick, Banks & Stommel (2004)	Compared a modified prison TC for inmates with co-occurring mental illness and substance abuse with those in an enriched mental health treatment in prison).	TC sample was significantly less likely to be reincarcerated and had better drug and psychological outcomes than those randomly assigned to the mental health programme.
Wexler, Melnick, Lowe & Peters (1999)	Three-year reincarceration outcomes for in-prison TC and aftercare.	Significantly fewer prisoners who had gone through a TC followed by an aftercare programme had recidivated versus the comparison condition.

In the remaining three RCT studies the comparison condition was another TC programme rather than a non-TC condition in order to address different research questions. One concluded that a day treatment TC could be as effective as a residential treatment TC (Guydish et al., 1999). Another compared short- and long-planned duration of treatment in two residential TCs, and separately in two relapse prevention programmes implemented in a residential setting that were TC oriented (McCusker et al., 1997). This study reported improved outcomes in all conditions but no consistent differences by PDT. The authors suggested that alternatives to lengthy residential treatment need to be explored.

The third RCT study compared two 12-month TCs with different configurations of residential (R) and outpatient (OP) durations (6 Months R+6 Months OP vs. 10 months R+2 months OP). The investigators concluded that completion of PDT (12 months) is the critical requirement for better outcomes for both combinations of residential and outpatient durations (Nemes, Wish & Messina, 1999).

In summary, all of the controlled studies reported improved outcomes for TC programmes. Notably, in the four studies with a bona fide non-TC comparison condition, the TCs showed significantly better outcomes than the comparison condition. For the three RCTs involving comparisons between TCs, conclusions varied depending upon the research question addressed.

Of particular importance is that all but one of the eight studies (i.e. Bale et al., 1980) argued for the feasibility of conducting controlled studies of TC programmes in the field. Despite randomisation, however, the challenge in implementing RCTs was also evident in this collection of studies. For example, various unmeasured factors that may have affected outcomes remain to be clarified, e.g. programme overlap, programme fidelity, influences of aftercare, adequate length of post-treatment follow-up. These and other factors are considered in Part C, which briefly outlines requirements for implementing RCTs involving TC programmes.

3. Evidence from statistical meta-analyses

Six published surveys utilised statistical meta-analytic techniques to assess the effectiveness of TC treatment relative to a comparison condition. These examined collections of studies that involved individual TC programmes that met certain selection criteria, mainly inclusion of a comparison or control condition. Most of the studies utilised randomised control designs. Thus, these meta-analytic surveys exclude all of the single and multiple programme field effectiveness studies cited in Table 1 as these did not meet the selection criterion of a comparison/control condition. Two of the single programmes contained in Table 2 above are re-included in these meta-analyses since they were controlled comparisons involving correctional TC treatment.

Table 3: Statistical meta-analyses surveys

Investigators	Description	Findings
Lees, Manning & Rawlings (2004)	Reviewed 29 studies including 8 randomised control trials, 11 Addiction TCs+ 18 TCs for personality disorder.	An overall statistically significant effect for TC treatment, with an overall summary log odds ratio of -.512 (95% confidence interval from -.598 to -.426). Concluded evidence supports the comparative effectiveness of the Addiction TC in prison settings vs. the non-Addiction TC.
Mitchell, Wilson & MacKenzie (2007)	Conducted a recent meta-analysis of treatment of incarcerated offenders.	Conclusion: at this point TCs have the strongest level of empirical support of any treatment aimed at this population.
Pearson & Lipton (1999)	Conducted a meta-analysis of seven prison-based TC programmes.	Six of the seven TC evaluations showed reduced recidivism to a statistically significant degree over the comparison groups.
Prendergast, Podus, Chang & Urada (2002)	Conducted a larger meta-analysis of drug treatments in general including TCs.	These investigator found an average effect size (adjusted for methods quality) of $g = 0.25$ (eight studies), which is equivalent to about a 12% difference between (TC) treatment and comparison conditions.
Smith, Gates & Foxcroft (2006)	Conducted a meta-analysis involving various different comparisons.	There is little evidence that TCs offer significant benefits in comparison with other residential treatment, or that one type of TC is better than another. Prison TC may be better than prison on its own or Mental Health Treatment Programmes to prevent re-offending post-release for inmates. However, methodological limitations of the studies may have introduced bias, and firm conclusions cannot be drawn due to limitations of the existing evidence.
Springer, McNeece & Arnold (2003)	Overview analysis examining what interventions work in assessing and treating substance-abusing criminal offenders.	The authors commented that methodological limitations do not permit them to conclude that TCs are more successful than other practice approaches in reducing recidivism.

Table 3 presents the main findings or conclusions in the six meta-analytic surveys. One survey reported mixed findings (Smith, Gates & Foxcroft, 2006). Depending upon the outcome variables, assessed TCs were either better, not significantly different, or in one case worse, than the comparison condition. The authors state that the seven studies they surveyed contained flaws rendering the conclusions as tentative. Another also asserted methodological difficulties in arriving at conclusions about TC effectiveness with criminal justice clients (Springer, McNeece & Arnold, 2003). In the four remaining meta-analytic surveys the authors concluded that the Addiction TCs yield significantly better outcomes than the comparison condition.

Comment on the meta-analytic surveys

There are relatively few evaluations of the TC in studies using experimental or quasi-experimental designs. The six meta-analytic surveys embrace most of these studies. Of these, two stated mixed or insufficient evidence for a firm conclusion while the remaining four surveys yielded significantly better outcomes for TCs. However, the magnitude of the effect size is small to moderate, yielding tentative conclusions concerning comparative effectiveness.

Overall, this modest set of statistical surveys yields conclusions that are consistent with those from the other sources. Clearly, however, there is a need for more meta-analytic surveys incorporating larger numbers of controlled/comparative studies involving TCs. Of special importance in meta-analytic evaluations is controlling for the type (standard, modified), as well as the comparative condition (e.g. non-TCs or other TCs) and the quality of the TC programmes (fidelity) as well as severity of client profiles. These sources of variance can minimise effect sizes yielding a less than accurate conclusion concerning the comparative effectiveness of the TC. Nevertheless, despite unmeasured sources of variability and a relatively small sample of programmes, the present meta-analytic findings were in the favourable direction with respect to TC effectiveness.

4. Additional evidence from econometric studies

Table 4 summarises the main findings from five published cost-benefit evaluations involving TC programmes. These include studies with and without comparison conditions. All studies report a significant and positive cost-benefit outcome for TCs. In comparative studies the TC shows relatively higher benefits, particularly as reductions in costs associated with criminal activity and gains in employment. This conclusion is consistent with those reported in reviews of cost-benefit studies contained in this volume (see the articles by Pitts & Yates and by Yates).

Table 4: Cost-benefit studies

Investigators	Description	Findings
McGeary, French, Sacks, McKendrick & De Leon (2000)	Service use and cost by mentally-ill chemical abusers: differences by retention in a TC.	The modified TC programme could be an effective mechanism to <i>reduce</i> the costs of service utilisation as well as <i>improve</i> clinical outcomes.
Griffith, Hiller, Knight & Simpson (1999)	A cost-effectiveness analysis of in-prison TC treatment.	Findings showed that intensive services were cost-effective only when the entire treatment continuum was completed, and that the largest economic impact was evident among high-risk cases.
McCollister, French, Prendergast et al. (2003)	A cost-effectiveness analysis of prison-based treatment and aftercare services for substance abusing offenders.	Consistent with previous findings, results indicate that aftercare is a critical component of the treatment process for criminal offenders.
McCollister, French, Prendergast, Hall & Sacks (2004)	Long-term cost effectiveness of addiction treatment for criminal offenders.	The results of the CEA suggest that in-prison treatment coupled with aftercare reduces reincarceration and, over time, costs less than incarceration.
French, Sacks, De Leon, Staines & McKendrick (1999)	Cost-benefit study of a modified TC for mentally-ill chemical abusers.	Results show significant cost benefits, particularly associated with crime reduction.

Comment on econometric studies

The econometric literature on substance abuse treatment is extensive, but contains a relatively small percentage of studies involving the cost benefits of TCs. Overall the present collection is representative of these studies and supports the conclusion that TC treatment provides significant cost benefits to society. This conclusion is consistent with those reported in large-scale reviews of the econometric literature (see, for example, Belenko, Patapis & French, 2005).

The *comparative* cost benefits of TCs remain to be more fully clarified. Though not reviewed in this paper, most surveys report positive cost benefits related to reduced drug use in the major treatment modalities, DFO, methadone maintenance and residential TCs (Belenko et al., 2005). However, as generally reported, the clients in the TC programmes have significantly worse profiles particularly with respect to criminal deviance and poor employment. While the TC cost benefits associated with drug use are similar to the other modalities, they tend to be greater with respect to employment and crime. This again highlights the need for equivalency of severity of client profiles in assessing comparative studies of effectiveness and cost benefit.

Several issues should be considered in the econometric models applied to TC studies. With the exception of prison-based TC studies, the cost estimates associated with treatment in TCs are not clearly separate from general custodial expenditures in residential settings such as housing and boarding as well as unreimbursed medical services for conditions other than substance abuse. Thus, inflated expenditures may underestimate the actual cost benefits of the TC treatment itself.

Secondly, benefit/cost results related to time in treatment must be cautiously interpreted. There are disproportionate administrative costs required at the admission stage of treatment. These are heavily weighted when assessing benefits for early dropouts. Thus, when factoring out 'up front' costs there may be economic gains associated with brief tenure in the TC even among clients who display only small improvements. Conversely, completers of long-term TCs accrue higher treatment costs that are associated with their longer programme tenure. However, completers also yield the best outcomes in terms of stability over longer post-treatment periods. Thus assessment of benefits relative to the costs of the treatment episode should be computed separately for completers and over all years of follow-up.

Finally, as noted, other than treatment costs there are virtually no social costs incurred through drug use or antisocial behaviours while clients are in residence. Thus, an accurate cost-benefit picture of residential TCs must include the accrued reductions in social/health costs while the client is in treatment, particularly in comparison with prisons, hospitals and other drug treatment modalities.

Table 5: Indirect evidence

Examples of TC programme and practice elements that are evidence-based in the behavioural and social-psychological research literature	
Social-Psychological Elements, Practices	Description
Peer Tutoring	TC mutual self-help grounded in peers as role models and mentors.
Therapeutic Alliance	Affiliation and participation in the programme depends upon the relationship between the individual and the community.
Motivational enhancement	Various forms of group process focus individuals on problem identification and encourage desire to change.
Behaviour modification	TC system of verbal correctives and affirmations as well as social sanctions and privileges for facilitating behavioural change.
Goal Attainment	The programme plan focuses on incremental learning, defined by specific stage and phase outcomes gradually leading to programme completion.

5. *Additional evidence from social-psychological research outside of TCs*

The TC for addictions emerged a-theoretically, outside of mainstream mental health and social science. Nevertheless, it has evolved a unique social learning approach captured in the phrase 'community as method'. The latter, however, contains familiar elements and practices that are supported by abundant behavioural and social-psychological research outside TCs (see Table 5). Similarly, behavioural training and social learning *principles* are evident, e.g. social role training, vicarious learning, social reinforcement. As discussed elsewhere, these principles are *naturalistically mediated* within the context of community living (De Leon, 2000, Ch. 24).

Comment on the indirect source

Theoretical writings offer a definition of community as method as: 'the purposive use of the community to teach individuals to *use* the community to change themselves' (De Leon, 2000, Ch. 6). However, most TCs routinely implement evidenced-informed strategies that evolved outside TCs, most commonly cognitive emotional therapy (CBT) and motivational interviewing (MI). These, however, are intended to *enhance, not substitute for*, community as method, the primary treatment approach.

Thus, TC theory, elements and practice gain empirical support from contemporary behavioural and social-psychological research. However, such evidence does not substitute for research needed that directly evaluates the TC as a distinct model and method.

Part B

Evaluating the 'weight' of the research evidence

Overall, the research surveyed from *all* sources is consistent and compelling in demonstrating that the TC is an *evidence-based treatment*. This conclusion, however, underscores a different but related question. Given the modest number of controlled studies, does the weight of the evidence support the *hypothesis* that the TC is an *effective* treatment for substance abuse disorder? To address this question, the findings and conclusions are re-ordered under six criteria drawn from a scientific framework (see Mausner & Kramer, 1985) employed in a similar evaluation of the evidence for the effectiveness of Alcoholics Anonymous by Kaskutas (2009).

1. Strength of association

This criterion refers to the size of the outcome effect, which is difficult to assess in field effectiveness studies without comparative conditions. In these studies, there are no 'effect' sizes that reflect differential improvements

between experimental and control conditions. Some idea of the strength of a treatment impact can be gleaned from the single programme studies, which show that most of the intent to treat samples improves at follow-up. For example, compared to pre-treatment baseline levels (pre-post change) 40-60% of the dropouts improve at one-year follow-up while over 90% of TC completers improve over baseline (e.g. De Leon, Wexler & Jainchill, 1982). In the statistical meta-analytic surveys, the significant effect size for TCs is moderate which, as noted earlier, may be suppressed by multiple sources of variability, particularly in programme fidelity.

2. *'Dose response' relationship*

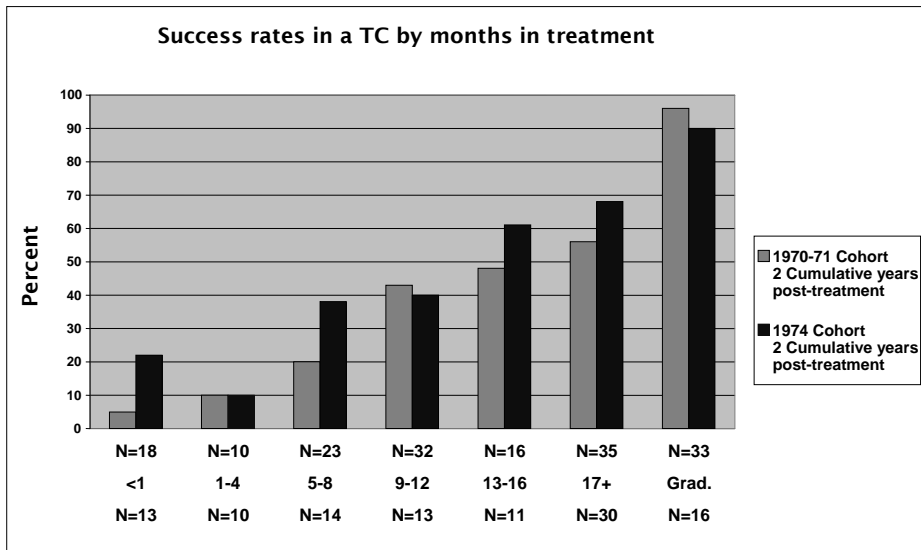
This criterion refers to a relationship between treatment amount (intensity) and therapeutic outcome, which is considered as strong evidence of causality in health research. Two considerations relate to this criterion. First, even without controls for selection factors, retention is a significant predictor of outcomes in all modalities. And, as reported above, in the multi-modality studies, the most severe clients show favourable outcomes only in the high-intensity programmes – the LTR TCs.

Second, for TCs, time in programme (TIP) is viewed as a *proxy* for treatment 'dosage'. That is, longer time in the programme is correlated with exposure to and participation in the multiple therapeutic and educational activities in the TC. The TC field effectiveness evidence surveyed documents that the proxy variable (TIP) is related to outcomes. Indeed, some of the published landmark studies involving single TC programmes (e.g. De Leon et al., 1982) replicated systematic relationships between time in treatment and post-treatment outcomes that are analogous to dose-response functions in pharmacologic treatments (see Fig.1).

Among the controlled studies in Table 2, findings provide partial support for the temporal-dose relationship. The completers showed consistently better outcomes than did dropouts, and in several of the studies better effects on some variables were reported for longer stayers among dropouts. The controlled studies of TCs modified for prisons and for the homeless mentally ill yielded best outcomes in those clients who completed both primary treatment and attended aftercare. These aftercare studies illustrate that time in programme (dosage) effects may accrue beyond primary residential treatment.

The dose-time effects are less clear in the two RCT studies evaluating PDT in community-based TCs. One study reported no consistent differences in outcomes between short and LTR treatment and recommended alternatives to LTR. The other concluded that best outcomes occur for those who complete the PDT (a fixed dosage of 12 months) regardless of the residential-outpatient configuration.

Figure 1: Success defined as no drug use and no criminal activity through all years of follow-up for primary opioid abusers*



* Abstracted from De Leon (1984).

Neither study provided analyses of length of stay in relation to outcomes among the dropouts, which would have clarified more about dosage. Indeed, rather than challenge the relevance of time in programme, these studies raise valid considerations as to how (dosage) duration of treatment is deployed across settings and intensities.

Overall, time in treatment is a useful proxy for hypotheses about treatment dosage. However, studies of actual dosage effects are needed. These must assess outcomes in relation to the amount/intensity of TC treatment, which are the time-correlated therapeutic and/or educational services, delivered and received.

3. Consistency of association

This criterion refers essentially to the replication of findings across studies. Though lacking comparison groups, the multi-modality and single programme field effectiveness studies in particular illustrate a striking uniformity of findings across eras as well as admission populations. Additionally, all but two of the meta-analyses conclude better effects for the TC programmes. Though not included in this survey, widely-cited studies outside the USA also yield the same findings as to time in programme and outcomes (e.g. Kooyman, 1992).

4. Temporally correct association

This criterion refers to the proximal association between presence and absence of treatment and outcome status. The field outcome evidence reviewed is consistent in showing proximal effects, in that outcome rates are temporally associated with time since separation from TC treatment. Compared to pre-treatment levels, positive outcomes were maximal in the first year post-treatment, then declined and levelled off in subsequent years.

That improvements are measurable years after the index treatment is impressive but not readily interpretable given the wide range of potential influences on client status associated with extended time since treatment. For example, some long-term outcome research underscores the contribution of non-treatment factors proximal to relapse (e.g. Flynn, Joe, Broome, Simpson & Brown, 2003; Simpson, 1986). That TC completers remain at significantly improved levels compared to dropouts after years of follow-up, however, is evidence that the initial treatment in the TC contributed to a continuing recovery process.

The focus on post-treatment outcome research has obscured the impact of TC treatment on clients while they were residents in programmes; that is, at maximal proximity to treatment. TC studies do not routinely report on client outcomes during treatment. However, the common clinical impression supported in most quantitative reports is that illegal drug use, alcohol use and criminality are near zero while clients are living in community-based residential TCs (e.g. De Leon, 1984). This is notable since these are not locked facilities such that access to substances is possible, as is opportunity to engage in crime.

Arguably, the remarkably low levels of drug use or crime during residential tenure are *prima facie* evidence for some treatment impact. Nevertheless, these 'outcomes' during residential treatment are rarely compared with outcomes during outpatient drug-free or pharmacological treatments. For example, in the multimodality field studies, TC outcomes at one year post-treatment are often compared with outcomes for clients who remained one year continuously in MMT. Such comparisons are invidious, since they assess outcomes of clients while they continue in MMT treatment with outcomes of clients after separation from TC treatment.

5. Specificity: experimental evidence

This criterion illustrates the issue of ranking of evidence discussed earlier. Evidence from controlled comparative studies such as RCTs provides more certainty as to the specific relationship between treatment and outcomes. All of the controlled studies reported improved outcomes for TC programmes but conclusions about specificity vary depending upon the research question addressed. The controlled studies comparing different TC conditions did not seek evidence for TC specificity (i.e. TC vs non-TC) but focused on *differential effectiveness* (e.g. short vs long TC, residential vs non-residential TC). Notably, however, the controlled studies involving a non-TC condition demonstrated TC

comparative effectiveness providing evidence for specificity. Again, however, research on process-outcome linkages would provide firmer evidence for the specific effects of TC treatment.

6. Coherence with existing knowledge

This criterion refers to whether TC evidence is consistent with the broader knowledge base of behavioural science. Though briefly discussed (Table 5), social-psychological research documents the validity of some essential TC elements and principles, which supports conclusions that the TC is an evidence-based treatment. Conversely, however, the unique contribution of the TC approach to the science knowledge base requires research that directly investigates the essential elements of 'community as method'. Empirical clarification of *how* social learning communities can be effective has obvious implications for applications in other social settings, e.g. schools, prisons, psychiatric hospitals, shelters, group homes etc.

Summary

The survey from multiple sources of research in Part A provides compelling evidence that the TC for addiction is an *evidence-based* treatment. Moreover, evaluation of the 'weight of the evidence' in Part B firmly supports the hypothesis that the TC is an *effective* treatment for substance abuse and related disorders.

Achieving a scientific consensus as to this conclusion, however, reprieves the issue noted in the introduction to this paper concerning the *value* of evidence. Simply stated, for some empiricists, evidence from research designs 'below the gold standard' of RCTs remains inferior. Therefore, universal acceptance of the TC as an effective, evidence-based approach will require a generation of studies that include more RCTs as well as other quantitative and qualitative designs. As noted earlier, conducting RCTs involving TCs in field settings, however, is a special challenge. This issue is briefly discussed in the final section below.

Part C

Considerations in implementing RCTs in TC field studies

The relatively small body of controlled studies of TCs reflects several themes. For example, the history of drug treatment in the USA reveals that, unlike other health problems, *research followed practice* (De Leon, 2004). Treatment programmes such as TCs were implemented in response to the demands in the field well before research could provide guidance, much less efficacy studies. Thus, research necessarily focused on field evaluation studies to provide evidence (or at least information) that treatments were working.

A more salient theme is the nature of the TC itself. Unlike pharmacological, or targeted behavioural approaches, the TC is a multi-interventional treatment,

a complexity that has discouraged undertaking research initiatives with rigorous designs. This conclusion is consistently underscored in the literature on TC research. For example, a study of the evolution of treatment effectiveness in the USA emphasised the difficulties of applying RCTs to complex dynamic milieu treatment such as TCs (Gerstein & Harwood, 1990). Similarly, Lees, Manning and Rawlings (2004), have discussed the full range of methodological difficulties in TC evaluation research along with recommendations for alternative research/evaluation strategies. A major conclusion from these discussions, however, also stresses the difficulties in implementing RCTs in TC field sites.

Ironically, the argument that the complexity of the TC approach renders it inaccessible to rigorous control trials has not been convincingly supported by research itself. For example, all but one of the controlled studies in the present survey reported feasibility in implementing a randomised assignment. However, the problems and limitations of these efforts were underscored, necessitating a new set of controlled studies to ascertain not only feasibility but also the *utility* and *value* of the RCT paradigm itself for TC evaluations.

The design and implementation of RCT studies must be guided by issues and learned lessons from decades of field research involving TCs. In part, these lessons reflect the complexity of the TC approach (a multi-interventional treatment for a multidimensional disorder); the diversity of TC programmes (Standard, Modified and Oriented); and the challenge of managing controlled studies in field settings

As described elsewhere (De Leon, 2009), these issues can be organised into four broad categories, briefly outlined in Table 6: treatment fidelity, comparison/controls, special assessment, and analyses. It is beyond the scope of this article to discuss these in detail but they illustrate some requirements to be considered in a rigorous controlled design involving TC programmes. Meeting such requirements, however, is a quite different issue. Indeed, as discussed in earlier writings, assembling a rigorous RCT in field settings may yet prove to be unrealistic, or inappropriate (De Leon, Inciardi & Martin, 1995).

Nevertheless, efforts to implement RCTs are necessary in order to arrive at an *empirically-based consensus* that TC complexity may in fact defy these designs. Such a consensus would reaffirm what has been learned from the evidence thus far related to self-matching and the severity of client profiles. Namely, it is not *whether* TCs are more (or less) effective than non-TCs but *which* clients are most suitable for TC treatment. More importantly, such a consensus would liberate scientific resources to *improve* TC treatment. Enhancing retention or engagement in treatment, clarifying client-treatment matching, assessing appropriate duration, and intensity of treatment, are examples of important questions that can be studied with rigorous designs involving comparisons between TCs or experimental modifications within TCs.

Table 6: Considerations in implementing RCTs involving TC programmes

A. Fidelity issues	In the RCT the treatment models under comparative evaluation should be implemented with 'High Fidelity'.
Fidelity	For the TC condition fidelity assessment methods are required to determine the presence of essential elements and evaluate whether they are optimally delivered.
B. Comparative/control issues	The RCT design should achieve <i>equivalency</i> across conditions and minimise <i>overlap</i> between different conditions that influence the interpretation of treatment outcomes.
Equivalence	Severity of client profiles (e.g. substance abuse, social deviance, psychological problems); treatment settings (e.g. residential, non-residential, institutions) and environments (urban, rural); aftercare (availability, utilisation, and type). Planned Duration and Treatment Intensity: RCT comparisons of short- and longer-term TC programmes must achieve equivalency of treatment intensity. This actually refers to density – a ratio of a quantity of treatment/services activities to planned duration of treatment.
Overlap	The extent to which the TC and the comparative condition share common elements beyond setting and environment (mainly programme content). In comparisons between TC and non-TC programmes overlap should be minimal (near zero). In comparisons between TC programmes overlap should be maximal, with the exception of differences being tested (e.g. planned duration of treatment; or configuration of residential and outpatient components).
C. Special assessment issues	An RCT study is required to assess the contribution of self-selection factors to outcomes, and relate assessments to the goals of treatment.
Self-selection	Measures should be obtained of client motivation and readiness for treatment, preference for a particular treatment and acceptance of randomly assigned treatment condition.
Treatment goals	TC recovery goals include lifestyle changes which extend beyond substance use and may differ from the less complex goals of a non-TC comparison treatment, e.g. reduction in substance use. Both treatments may be equally effective in reducing substance use but TC effects may be evident on other domains.
D. Analytic issues	Issues relating to data analysis in RCT studies of TC modalities
Process	Linking outcomes to client change in relation to treatment activities to outcomes is direct evidence for effectiveness.
Required analyses	Intent to treat (dropouts and completers); retention rates, outcomes by retention, time out of programme, time at risk, follow-up retrieval rates, short-term and longer-term outcomes.

Conclusion

Decades of TC research have been extremely productive but not necessarily persuasive in furthering the acceptance of the TC among some scientific critics and policy makers. The present survey of outcome research from multiple sources categorically answers *yes* to the question posed at the outset. Namely, the TC is an evidence-based treatment approach. Moreover, while not *proof*, the evidence consistently confirms the *hypothesis* that the TC is an effective and cost-effective treatment for certain subgroups of substance abusers. This conclusion remains to be validated in subsequent evaluations of TC studies worldwide. Nevertheless, it provides a firm empirical basis for the next stage of research which must utilise appropriate quantitative and qualitative methods to advance the evolution of the TC.

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Cost Benefits of Therapeutic Community Programming: Results of a Self-funded Survey

James Pitts and Rowdy Yates

ABSTRACT: The paper explores the economic evidence base for residential rehabilitation in general and therapeutic communities (TCs) in particular, and describes in detail a small-scale, self-funded survey undertaken by member organisations within the Australasian Therapeutic Communities Association (ATCA) in order to better understand the lives and lifestyles of the typical TC population; their economic impact upon the communities in which they live prior to treatment; and any savings which might be achieved through treatment intervention. The study echoed previous research which suggested that treatment interventions of this kind can deliver significant savings to society even where no behaviour change is assumed and only time in treatment is measured against pre-treatment behaviour.

Background

Therapeutic communities (TCs) have operated in Australia since the mid- to late 1970s (Carr-Gregg, 1984). It is believed the first TC was We Help Ourselves (WHOS) in 1973. Odyssey House was established in 1977 in Sydney's south-western suburbs. Other TCs established within this same period were The Buttery, Karrilika, and Westmount Co-operative. There was little, if any, formal association between these programmes. A clear rationale for this would be speculative, but it would appear that a sense of mistrust, professional jealousies, and divergent applications of the TC model could all be cited as contributing factors. Due to this type of enmity the movement remained fragmented throughout this period. In 1985, at the Premier's Conference held

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in Melbourne,¹ a situation arose which would alter the situation and enable better understanding among TC administrators in Australia.

During the Conference, a number of workshops and discussion groups took place. Each group and workshop was defined by discipline. Thus, groups had been envisaged for psychiatrists, psychologists, doctors, social workers, and nurses of various specialisms but no provision had been made for TCs! Some attendees therefore requested – and were provided with – a facilitator. This resulted in the formation of a working party, which scheduled a follow-up meeting at Odyssey House in Melbourne. Through a series of meetings, which alleviated and dispelled many of the misconceptions about the philosophies of various programmes, an association was formally established in 1985. It was named the Australian Therapeutic Communities Association initially, although the name was subsequently modified in 1999 (becoming the Australasian Therapeutic Communities Association – ATCA) to reflect the broader geographical representation of its membership. The first National Conference ATCA was held in November 1986.

This article describes the positioning of TCs (both in Australia and internationally) within the broader treatment response armoury and examines efficacy and cost-efficiency evidence for this modality over the past 30 years.

The article describes in detail a small-scale, self-funded study undertaken by member organisations within ACTA to produce a snapshot of the TC client group in Australia and their economic impact upon society. These figures are compared to residential treatment costs in order to estimate any savings which might be made through this type of intervention.

Drugs misuse and associated costs

There has been recognition recently of the need for more extensive information regarding the economic impacts of illicit drug use and the relative costs of society's response arrangements in the form of repression, imprisonment and treatment. A cautionary note has been issued to researchers and policy makers to allow advances in the understanding of the economics of illicit drugs to better inform research and, consequently, policy formation. Bridges (1999) has argued that, unless this takes place, the prospects for developing more effective responses to the illicit drugs issue are seriously undermined.

A substantial body of evidence exists which demonstrates a strong link between illicit drugs and crime (Ball, 1986; Chaiken, 1986; Chaiken & Johnson, 1988; Hall, Bell & Carless, 1993; Inciardi, 1979; Wish & Johnson, 1986). The involvement in crime and the amount of crime committed during periods of addiction are far greater than during non-addicted periods (Ball, Shafer & Munro, 1983; McGlothlin, Anglin & Wilson, 1978; Nurco, Ball, Shaffer & Hanlon, 1985; Nurco, Hanlon, Kinlock & Duszunski, 1989). Two of the most frequent methods of criminal activity to obtain money to purchase drugs are through

¹ The 1985 Premier's Conference was the genesis of the National Campaign Against Drug Abuse.

acquisitive crimes involving theft or through drug dealing (Ball et al., 1983; Hammersley, Forsyth, Morrison & Davies, 1989).

There have been a number of studies which have sought to document the phenomena of the drug crime nexus and its economic impacts. Criminal behaviour and its relationship to drug use have been well established, although the causal mechanisms remain the subject of some debate. Goldstein (1985) proposed a tripartite conceptual framework that divides explanations for drug use and crime into three 'types': *psychopharmacological* – intoxication triggers crime; *economic-compulsive* – drug dependence leads to acquisitive crime; and *systemic* – illicit drug markets overlap with criminal activity, and marketing structures are enforced through crime and violence. Bennett and Holloway (2009) confirmed this analysis in an examination of the UK data, and noted that the three types will often overlap. Broadly similar findings were set out by Best, Sidwell, Gossop, Harris and Strang (2001) in a further UK study, although MacGregor proposed that a fourth type was also possible: that drug use and criminal activity have a common cause or co-exist within certain lifestyles (MacGregor, 2000, p. 311). Each of these 'types' contribute to an understanding of the association between drugs and crime but do not fully explain it (Best et al., 2001), since many other contributing factors have been highlighted within the research, including poverty, social exclusion, socio-economic and socio-demographic backgrounds (Bean, 2002; Seddon, 2006).

To effectively examine the costs associated with alcohol and other drug use, it is necessary to determine the extent to which such usage impacts on society in economic terms. There are considerable costs associated with drug use and criminal behaviour. Costs have been apportioned to: the value of merchandise stolen; the costs of medical care for crime victims; productivity losses for those who abandon the legitimate economy; costs for police protection; legal representation; adjudication; and maintaining convicted offenders in correctional institutions etc. These factors contributed to the \$80.7 billion dollars² estimated to be the cost of alcohol- and drug-related crime in the US in 1992 (Harwood, Foundation & Livermore, 1998).

Another study (Mark, Woody, Biday & Kleber, 2001) sought to determine the economic costs of heroin addiction in the US. They used the cost-of-illness methodology outlined by Hodgson and Meiners (1982), in which three types of costs can be included in studies of this type: direct costs, indirect costs and psychosocial costs. Direct costs included: 'medical care expenditures for diagnosis and treatment of the addiction and its medical sequelae as well as nonmedical expenditures occasioned by the illness, such as prison and law enforcement related costs' (Mark et al., 2001, p. 195). Indirect costs included: 'loss of earnings due to premature mortality, incarceration, and reduced human capital' (Mark et al., 2001, p. 195). The third cost domain was excluded in this study because such costs, 'though very important, are extremely difficult to quantify' (Mark et al., 2001, p. 195). This study estimated that heroin made up

² All costs provided here are presented in Australian Dollars (AUD) at current (2010) exchange rates.

approximately 29% of the social welfare costs of illicit drugs in the US. Using this figure, the authors estimated the total economic cost of heroin was in the region of \$25.86 billion in 1996; though they noted that the range could be as wide as \$23.15 to \$39.44 billion, depending on how the heroin-using population was estimated. Over half (52.6%) of these addiction costs were attributable to losses in productivity. Crime accounted for around a quarter (23.9%), with the remainder accounted for through health, social care and treatment (Mark et al., 2001).

This study was particularly relevant to Australian policy makers, given the estimated number of heroin-dependent persons; 74,000 in Australia (Hall, Ross, Lynskey, Law & Degenhart, 2000) at that time. For the fiscal year 1998-9, Collins and Lapsley (2002) estimated the total cost of drugs, alcohol and tobacco at \$34.43 billion with illicit drugs accounting for some \$6.08 billion (17.6%) of those costs. By 2008, the same authors estimated that the revised costs for 2004-5 had risen to \$55.2 billion, with illicit drugs responsible for some \$8.2 billion (14.6%) of this total (Collins & Lapsley, 2008).

Cost-based drug treatment studies

Residential treatment has been often criticised as to its effectiveness. Some observers point out it is difficult to establish a cause and effect relationship due to the length of residential programmes. They further point out that this makes residential programmes open to criticism as to their cost-effectiveness, compared to shorter options (Wever, 1990). TCs, in particular, have been criticised as to their effectiveness due to the lack of randomised controlled trials (RCTs); although the authors note that this criticism applies equally to most other forms of drug treatment.

Evaluation of treatment programmes shows treatment more than pays for itself through reductions in crime (Harwood et al., 1998). Cost-benefit analysis of publicly subsidised treatment programmes in California demonstrated economic benefits of treatment which outweighed the costs by a ratio of 7:1. Three-quarters of the cost benefits were attributable to reductions in crime (Hubbard, Marsden, Rachal & Fingburg, 1989). In the National Treatment Outcome Research Study (NTORS), Gossop, Marsden, Stewart and Treacy (2002) found that drug-selling crimes of clients from residential treatment agencies had been reduced to less than two-thirds of intake levels at a one-year follow-up and that this reduction was maintained at a two-year follow-up.

Other studies have shown residential treatment reduced the costs of criminal behaviour in comparison with other modalities, and that residential treatment was the most cost-effective, even though it was more costly to implement (Daley et al., 2000). Residential treatment was shown to have better outcomes on measures of psychiatric symptomatology and social problem severity when compared to day-care (Guydish et al., 1999). The Drug Abuse Reporting Program (DARP) study found that TCs were of considerable importance in the rehabilitation of substantial percentages of clients between 1969 and 1972 (Simpson & Sells, 1980).

Further study of the DARP data indicated opiate use dropped from 70% of clients using daily pre-treatment to 50% using daily in the first year post-treatment, and in 21% of the client sample there was no illicit drug use at all. Other dependence measures showed a general and statistical improvement in TCs, methadone maintenance, and drug-free outpatient treatment, with regard to employment, productive activity, and criminal behaviour.

There was a linear relationship between longer-staying clients and better post-treatment outcomes. For TCs, discernible effects of treatment were seen at 90 days, while for methadone the period was one year (Simpson & Sells, 1983). A number of other studies have evaluated the effectiveness of TCs. Positive outcomes were shown in the diminution of drug use and criminality and the increase of more socially-acceptable behaviour such as employment and/or educational involvement (Bale, 1979; Collier and Hijazi, 1974; De Leon, Wexler and Jainchill, 1982; Latukefu, 1987; Pitts 1991; Toumborou, Hamilton, Fallon, Scott & Skalls, 1994).

Cost-benefit analysis converts all the costs and benefits of a particular form of treatment into a common unit of measurement (usually money) and then confirms whether that form of treatment is economically efficient (Ernst & Young, 1996). In the alcohol and other drugs field, there has been a tendency to compare the cost benefit of treatment to the cost benefit of no treatment at all. Cost-effectiveness analysis compares the relative efficiency of two or more treatment methods in arriving at the same goal. Heather, Batey, Saunders and Wodak (1989) claimed that research evidence does not demonstrate any significant cost-effectiveness of residential treatment over non-residential treatment, while some claimed to have found a negative relationship between effectiveness and cost (Holder, Longabaugh, Miller & Rubons, 1991).

Harwood, Hubbard, Collins and Rachal (1988) calculated the crime-related costs of drug abuse to be 40% of the total of \$47 billion of drug abuse in America in 1980. In comparison, treatment and preventative costs amounted to 3% of the total costs. When they compared three modalities of treatment to determine the reduction on crime-related costs following residential treatment, outpatient drug-free, and methadone maintenance, they found that residential treatment appeared to have the greatest economic return of the three treatment modalities. However, they also noted that those treated in residential programmes had greater levels of criminal activity pre- and post-treatment than those treated in outpatient programmes. This fact should come as no surprise given the client profiles of those who are appropriate for residential care.

In the California Drug and Alcohol Treatment Assessment (CALDATA) General Report (Gerstein et al., 1994), researchers looked at the impact of treatment on participant behaviour, the costs of that treatment and the economic value of treatment to society. They surveyed four treatment types: residential; residential 'social model' programmes; outpatient drug-free programmes; and outpatient methadone maintenance. The sample (n=3,000) was taken between October 1991 and September 1992 of drug users/former drug users, either in treatment or recently discharged during that period. The sample size - which was felt to be representative of the 150,000 people in

treatment in California at that time – made it larger than any prior follow-up study. Phase 2 of the study sought to contact and interview a sample (n=1,850) from eighty-three agencies within nine months of clients leaving treatment. On average, follow-up interviews occurred 15 months after treatment. Key findings of the study were:

- the cost of treating 150,000 participants in the study sample in 1992 was \$249 million; the benefits received during treatment and in the first year afterwards were worth \$1.79 billion in savings to society, due mostly to reductions in crime;
- each day of treatment paid for itself on the day it was received, primarily through an avoidance of crime;
- the benefits of alcohol and other drug treatment outweighed the costs of treatment by ratios of 4:1 to greater than 12:1, depending of the type of treatment;
- the cost-benefit ratio for tax-paying citizens was highest for discharged methadone patients and lowest, but still economically favourable, for participants in residential programmes;
- total cost-benefits for society ranged from 2:1 to more than 4:1 of all treatment types except methadone treatment episodes ending in discharge, where there were net losses, mainly from earning losses to the treatment participants themselves.

In addition, criminal activity declined by two-thirds post-treatment from pre-treatment levels. The greater the length of time spent in treatment, the greater the percent reduction in criminal activity. Declines of approximately two-fifths occurred in the use of alcohol and other drugs before treatment to after treatment. There were reductions of around one-third in hospitalisations from before treatment to after treatment, and corresponding significant improvements in other health indicators. Those who stayed longer in treatment had better employment post-treatment. This finding was greater for those in residential and social model programmes and these post-treatment benefits persisted into the second-year follow-up, suggesting that lifetime benefits might be significantly higher than those calculated within the comparatively narrow timeframe of the study (Gerstein et al., 1994).

In 2001-02, an Australian study (ATOS) (Darke, Ross & Teeson, 2001) was undertaken which included a sample of 110 individuals drawn from three index treatment modalities: methadone or buprenorphine maintenance, withdrawal/detoxification services and residential rehabilitation services. Forty respondents (36.3%) were currently in residential rehabilitation (including TCs). Although this study was modelled upon the UK NTORS study, the authors did not attempt to measure the impact of the various treatment interventions, nor estimate comparative costs, but restricted the study to a natural history of a heroin-using cohort interviewed on commencement of treatment and re-interviewed at the 3- and 12-month stages. As with a number of studies (De Leon, Melnick & Cleland, 2008; Yates, 2008), the ATOS study noted that the residential rehabilitation cohort was somewhat more damaged than the rest of the sample. This sub-

group was more likely to have experienced suicidal ideation and slightly more likely to have been unemployed prior to treatment. Similarly, diagnoses of Borderline and Impulsive Personality Disorders were higher for this group than for the other treatment modalities.

Finally, an extensive study was undertaken of long-term residential rehabilitation outcomes in 1994-95, under the aegis of the National Drug Strategy Review of Long Term Residential Treatment for People with Alcohol and Other Drug Use Programs and conducted by Ernst and Young (1996). The authors noted:

The review team concluded that the provision of long term residential treatment for drug use problems, and for whom other treatment options are not effective or appropriate, has significant benefits for the community as a whole and for these individuals. (Ernst & Young, 1996)

The ATCA study

In light of this extensive research background and in an effort to demonstrate the quantifiable benefits of TC treatment models, a survey was conducted of the residents of the Australasian Therapeutic Communities Association (ATCA) membership. The survey was conducted on the same day, August 19, 2001, for all participants in the survey. The survey had been developed and piloted by Odyssey House McGrath Foundation and was designed to ascertain the costs of the respondents' drug use to the community in the year immediately prior to entering treatment. In addition, data was sought on the age of respondents, frequency of drug usage, age of onset of illicit drug use, and reasons attributed to the onset of illicit drug usage. Sixteen member organisations of the ATCA participated (55% of the total membership of 29).

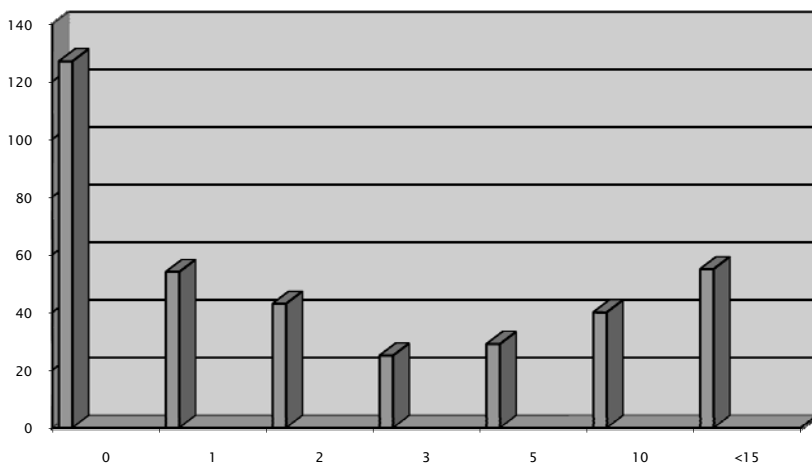
The various costs of respondents' drug use were calculated against the services supplied to them by society, largely as a result of that drug usage: legal services, medical services, welfare benefits etc. These costs were averaged out based upon the number of respondents. The costs were then adjusted using the formula developed by Ernst and Young (1996) to determine client retention rates for TCs and total savings to society based upon crime-free and drug-free days, accumulated while residents are in treatment at TCs. The assumption in both studies was that there is effectively no illicit drug use and no criminal activity while a resident is in treatment; an assumption bolstered by numerous earlier studies (see, for example, De Leon, 1984). The survey was self-administered under the supervision of a relevant clinical staff member in all participating programmes. A total of 433 responses were received from the 16 participating TCs.

The average age of all respondents was 23.6 years, with most (98%) using drugs on a daily basis prior to entry into treatment. Respondents (n=345) estimated their average daily spend on drugs in the 12 months prior to treatment at \$302.03 per day; or approximately \$110,242.00 per respondent per year. For the whole cohort, excluding the 2% who indicated that they used drugs on a

less than daily basis, the spend per year was thus in the region of \$46,742,608.00. Since the vast majority of this expenditure would have been funded through criminal activity, this figure is likely to be a serious underestimate of the overall costs to society. In the UK, Brand and Price (2000), using Home Office crime statistics, estimated that each burglary of a dwelling place costs a total of \$4,117.50, with the actual residual value of any property stolen contributing only 25% of this figure. Similarly, theft from a motor vehicle is estimated at a cost of \$1,038.30 per incident, with the value of the property stolen constituting approximately 34% of the total. Moreover, the residual value of any stolen item is likely to be significantly higher than its actual resale value as stolen goods.

Respondents were also asked to estimate the number of times they had attended court or sought the advice of a solicitor or barrister. Of those who responded (n=373), 66% reported at least one incident in the 12 months prior to entering treatment. Around 15% reported multiple incidents of 15 appearances or more. In all, respondents reported a total of 1,585 separate incidents (see Fig. 1).

Figure 1: Respondents (n=373) reporting court appearances (or contact with solicitor/barrister) in the 12 months prior to treatment



Jiggins (2005) estimated the average cost of law enforcement and indictment per drug offence in Australia to be \$6,500.00 in 1988. Even using these now outdated cost estimates, the cost to society of the enforcement response to this cohort could therefore be in the region of \$10,302,500.00 just for that year.

Respondents were also asked to estimate the number of days spent in hospital and the number of visits to a medical practitioner in the same 12-month period. Of those who responded to this question, 113 reported a total of 1,666 days in hospital (see Table 1), whilst 330 reported an estimated 19,281 visits to a doctor's surgery. The World Health Organisation (WHO) (2005)

estimates the cost of a hospital stay in Australia to be at least \$226.11 per day and the cost of a 20-minute health centre visit to be \$43.32. Thus, an estimated cost for health care services for this group per year would be in the region of \$1,211,952.00. It should be noted that these figures make no allowance for the cost of medications or the dispensing of those medications, both of which are likely to be considerable.

Table 1: Estimated days hospitalised in the 12 months prior to treatment

Period (weeks)	Number	Days
1	59	413
2	25	350
3	7	147
4	12	336
6	10	420
Total	113	1,666

A total of 387 respondents indicated that they had been in receipt of government welfare benefits during the 12 months prior to treatment, claiming a total of \$4,510,272.00 across all benefit types (see Table 2).

Table 2: Estimated cost of welfare benefits received during the 12 months prior to treatment

Benefit type	Ind. cost (\$) week	No. of respondents	Overall cost per annum
Pension	227.00	96	1,133,184.00
Youth	191.50	61	607,438.00
Newstart	225.50	165	1,934,790.00
Sickness	247.00	65	834,860.00
Total	891.00	387	4,510,272.00

Thus simply taking these four indices – drug purchasing (crime costs); enforcement and court costs; health care costs; and welfare benefits – the cost to society of this cohort in the year prior to presentation for treatment can be estimated at almost \$63,000,000.00 or \$144,959.20 per individual or \$397.15 per individual per day (see Table 3).

These estimates are necessarily somewhat conservative. No account has been taken here of possible housing costs, loss of employment earnings, cost of imprisonment etc. Nor has any attempt been made here to quantify the individual costs relating to the quality of life for the cohort surveyed. Indeed, this is a common feature of the vast majority of studies of this type, which rarely include any estimate for so-called ‘individual outcome values’: the

intrinsic value to the individual and those around him/her of achieving a more ordered and more personally-rewarding life. In discussing this drawback, Godfrey, Stewart and Gossop note that:

This is a major omission of such studies and is equivalent to suggesting that drug-misusing individuals have zero value. That is, drug treatments are offered to substance misusers only because of their potential value to the rest of society, whatever the consequences to the individual. (2004, p. 704).

Table 3: Estimated cost of all four indices during the 12 months prior to treatment

Cost Centre	Overall Cost per annum
Drug purchasing (crime costs)	46,742,608.00
Enforcement and Court Costs	10,302,500.00
Healthcare Costs	1,211,952.00
Welfare Benefits	4,510,272.00
Total	62,767,332.00

A more detailed cost analysis would have been beyond the purview of this small self-funded survey. What is clear, however, is that most if not all of these costs were saved during the cohort's time in residential rehabilitative treatment. Ernst and Young (1996) in their extensive study of the costs and benefits of treatment in long-term residential rehabilitation, estimated treatment costs to be \$14,093.00 per year, or approximately \$39.00 per day. The same study developed formulae for estimating retention/time-in-treatment through a standard resident profile which assumed that: 56% of residents at any one time would have been in treatment 30 days–3 months; 31% for 3–6 months; 9% for 6–12 months; and 4% over 12 months. Using this profile against the sample in the ATCA study and measuring at the mid-point for each domain produced an estimate of 50,265 treatment days. At a cost of \$39.00 per day (Ernst & Young, 1996) this would give a total treatment cost for the whole cohort of \$1,960,335.00.

Whilst expenditure of almost \$2,000,000.00 on a treatment intervention is by no means modest, it should be borne in mind that had this cohort continued to live according to the pre-treatment lifestyle they described in this survey then the costs to society would have been considerably higher. Using these time-in-treatment figures against our earlier estimates of no-treatment, no-change expenditure – \$397.15 per individual per day – produces a figure of \$19,962,744.80. Thus, it seems likely that the TC intervention in respect of this cohort may have resulted in net savings of some \$18,002,409.80.

Table 4: Estimated cost of TC treatment received using the Ernst and Young formula

Time in treatment	%	Number	Mid-point (days)	Estd. treatment costs
30 days–3 months	56	243	45 (10,935)	426,465.00
3–6 months	31	134	135 (18,090)	705,510.00
6–12 months	9	39	270 (10,530)	410,670.00
12 months +	4	17	630 (10,710)	417,690.00
Total	100	433	1,080 (50,265)	1,960,335.00

Discussion

The findings presented here were based upon a small, self-funded survey of ATCA residents in 2001. The intention of the survey was to provide demographic information regarding the pre-treatment lives and lifestyles of a representative group of residents and their likely cost to society. The aims of the study were therefore fairly modest and did not seek to include an examination of the effectiveness of TCs, nor to undertake an extensive and time-consuming cost-benefit analysis which would have been well beyond the purview and financial capabilities of the organisations involved. There are obvious limitations to this study, not least the relatively small sample size and the reliance on cost information from different years. However, the difference in projected costs between treatment and non-treatment states, even allowing for incremental and inflationary changes and possible natural remission of a small percentage of the cohort, seems so significant that we can only conclude that a treatment intervention utilising TC methodology represents a cost saving to society, *even when only time in treatment is considered*. Further, more detailed research would be required to produce more definitive estimates and these would need to include possible cost savings through lifestyle change as a result of treatment intervention.

The results obtained from the questionnaire were interesting in that they did not only provide information on the social costs of addiction but shone a light also into the lives of a sub-set of young men and women caught up in drug misuse in Australia.

Agings ranged from 17 to 62 years of age, with the average age at 23.6 years. This contrasts with other contemporary surveys, which tend to report rather higher age ranges. For instance, Topp et al. (2002) in a 2001 survey of 951 injecting drug users for the Illicit Drugs Reporting System (IDRS) recorded a mean age of 29.9 years. Five years later, O'Brien et al. (2007) in the equivalent 2006 survey were reporting a mean age of 34.5 years and, by the time of the 2009 report, the mean age had risen to 37 years (Stafford & Burns, 2010). However, these were national surveys drawn from both treatment and non-treatment populations. It is possible, therefore, that the population within the

ATCA memberships' catchment area is younger for some reason or that the non-treatment population element of the IDRS survey samples are older. A more compelling possibility is that this is simply further evidence of earlier observations (De Leon et al., 2008; Holt et al., 2002; Yates, 2008) that TC populations are generally more damaged. Further evidence for this may be found in the mean age recorded in the sample for initiation into illicit drugs. In the ATCA survey, this was reported at a mean of 12.5 years, significantly lower than the age ranges reported by Miller and Draper (2001) in the Australian national survey the previous year (mean age of initiation for inhalants = 17.5 yrs; for hallucinogens = 18.4 yrs; for cannabis = 18.8 yrs; and for cocaine = 22.2 yrs). Earlier initiation into illicit drug use is recognised as predictive of later drug problems and a broad range of other personality and social disorders (Kokkevi, Nic Gabhainn & Spyropoulou, 2006) and would generally mean a longer history of dependence on presentation for treatment.

Another indicator that this may be a significantly more damaged population than that seen by community-based drug treatment services, is the extraordinarily high number of reported health service visits. Within this sample, 113 reported a total of 1,666 days in hospital and 330 reported an estimated 19,281 visits to a doctor's surgery. Even had the remaining (non-respondent) 103 members of the sample genuinely not been to visit a doctor in the 12 months prior to treatment, those who did respond had made an average of 58.4 visits each. Moore (2005) estimated that the average methadone-maintained patient would visit their doctor 14.3 times per year, once adjustments had been made for early dropout within the first year (estimated at 50%). This estimate is less than a quarter of the rate reported within the ATCA survey for an apparently similar drug-dependent population.

In spite of this difficult population, TCs have consistently been shown to have provided an environment whereby significant numbers of programme completers will remain drug-free and enter full-time employment. Indeed, Berg and Anderson (1999), in a cost-based study of Norwegian TCs, found that those who successfully completed their rehabilitative programme and re-entered the labour market provided contributions to tax revenues which more than repaid the cost of their rehabilitation within a relatively short time period.

Within this context, TCs have demonstrated cost benefits equal to and, in some cases, superior to other treatment interventions. These benefits have been documented in some of the largest independent studies undertaken to date. TCs provide substantial cost benefits to the community and to the residents who utilise their services. Not only are the cost benefits substantial, but gains are made in other domains as well. The costs saved through the utilisation of this model of treatment not only justify the method of service delivery, but warrant a review of the levels of funding given to programmes of this type based upon their cost savings.

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Recovery We Can Afford: An Analysis of a Sample of Comparative, Cost-based Studies

Rowdy Yates

ABSTRACT: This paper describes a brief literature search and analysis of cost-related studies which compared the total costs (expenditure and benefits) of residential and non-residential treatments for addiction. Despite the widespread assumption in the field that community-based treatments 'must' be cheaper, the number of studies actually located was surprisingly small and their findings were less than definitive. Most studies support the view that treatment interventions save society money overall. Most also recognise that the population seen by drug-free therapeutic communities is more damaged than those presenting to other modalities, but few studies actually weight their findings for this significant difference. Few studies are conducted over a long enough time period to demonstrate the real, relative achievements of the various modalities in delivering permanent (cost beneficial) change to a disturbed and disturbing section of the population.

Background

Whilst there has been a great deal of progress regarding the evidence base for various types of addiction treatment intervention, the field remains characterised perhaps more by what we do *not* know than what we *do*. More succinctly, most of the evidence indicates that treatment works but very little is known about how it works or who it works best for. Of the more extensive studies, Project MATCH (Godfrey, 1999; Project MATCH Research Group, 1997a; Project MATCH Research Group, 1997b; Project MATCH Research Group, 1998), shows that one of the major issues yet to be understood is how best to direct specific individuals to the treatment modalities best suited to them. Similarly, whilst both DARP (Simpson & Sells, 1980; Simpson & Sells, 1983) and DATOS (Etheridge, Craddock, Hubbard & Rounds-Bryant, 1999; Franey & Ashton, 2002. Hubbard, Craddock, Flynn, Anderson & Etheridge, 1997; Joe, Simpson & Broome, 1999) show that self-help and engagement with the chosen (or selected) treatment modality – and retention within that modality for long enough to allow it to have an impact – can deliver long-term improvements, the optimal mix of such elements (and how to deliver them and to whom) remains something of a mystery.

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It is perhaps, therefore, not entirely surprising that many treatment-plan decisions are, in practice, based more upon individual beliefs and assumptions than upon any scientific evidence. Traditionally, residential rehabilitation in general and TCs in particular, have been seen as effective but expensive interventions; suitable only for a minority of clients whose failure to comply with the requirements of other treatments deemed less expensive warrants the additional expense. As a result, TCs are generally found to cater for a significantly more damaged group of clients (De Leon, Melnick & Cleland, 2008; Gossop, Marsden, Stewart & Treacy, 2002; Holt, Ritter, Swann & Pahoki, 2002; Yates, 2008) than corresponding populations in non-residential treatment modalities.

The assumption that residential rehabilitative treatments are more expensive than other types of provision is rarely challenged, despite a number of studies in the UK (Unell & Vincent, 1994), which have suggested that this is more a result of research design (particularly timeframe) than an actuality. Indeed, one Norwegian study (Berg & Andersen, 1993), which estimated the cost of residential treatment over a longer period and, unusually, took into account probable tax income for recovered addicts restored to full-time employment, estimated that residential treatment would more than pay for itself and argued that a full cost analysis over anything less than six years would fail to take account of important variables over time.

McKeganey and colleagues (2006), reporting on the Drug Outcome Research in Scotland (DORIS) study, argued that the significantly higher long-term abstinence rates they found amongst former addicts who had been selected for residential rehabilitation would make this type of intervention more economical over time than other community-based treatments.

A number of issues appear to sustain the belief that residential rehabilitation is the more expensive option. Firstly, there is the issue of the timeframe over which the calculations are made. Clearly, for a treatment methodology which is predicated upon a residential programme of 9–12 months (as would be the case in most European drug-free TCs), studies which use 12 months or less to estimate cost-benefit are unlikely to identify any real savings other than those related to time-in-treatment (see Pitts & Yates elsewhere in this issue). Secondly, since numerous studies have found significantly higher levels of dependence and psychological and physiological ill-health amongst residential treatment populations, any accurate comparative study would need to adjust its findings to reflect a different baseline population. Thirdly, since a number of studies have shown that high percentages of treatment populations in all modalities are in receipt of some form of housing benefit or subsidy, an accurate comparative study would need to ensure that the cost to the state of housing provision is accounted for in both/all cases.

The sample of studies reviewed for this article were all measured against these criteria in order to estimate their validity as measures of treatment (and comparative treatment) costs.

Understanding cost-based studies

In broad terms, most cost-related studies fall into one of five categories (French & Drummond, 2005): cost studies, financing studies, economic benefits studies, cost effectiveness analyses and benefit-cost analyses. In addition, general methodological developments in instrument design, methodological approach etc. may have a varied impact upon all five categories and, as a result, were considered as a sixth category in French and Drummond's (2005) overview.

Cost studies generally calculate straightforward accounting costs, ignoring the more accurate but less easily calculated 'opportunity' costs, although recently more rigorous instruments such as DATCAP (Drug Abuse Treatment Cost Analysis Program) (Salomé, French, Miller & McLellan, 2003) have been introduced to improve the calculations regarding these cost items.

Financing studies concentrate entirely upon the cost of actually providing specific types of service by the provider, often exploring ways in which these costs might be reduced.

Economic benefits studies are designed to measure any fiscal benefit derived – either wholly or in part – from the application of a particular intervention. These benefits in terms of substance misuse treatments are usually measured in terms of reduced offending, reduced use of health resources etc. Theoretically, the list of benefits may also include more intangible improvements such as quality of life measures; although, in practice, this is actually very rarely the case (Godfrey, Stewart & Gossop, 2004).

Cost-effectiveness analyses (CEAs) are designed to measure the costs of implementing a particular intervention (often the additional costs associated with an enhancement of an intervention) against a set of specific, desired outcomes. However, as Sindelar and colleagues have stressed (2004), such analyses tend to be more suitable for interventions which have single desired outcomes. With substance misuse treatment interventions, there are often multiple outcomes which will not necessarily improve at a uniform rate, or even at all.

Benefit-cost analyses (BCAs) are the most sophisticated and, arguably, the best-suited designs for substance misuse treatment programmes (French, 2000). BCAs calculate the opportunity costs of an intervention against the total benefit, rendering both in standard monetary units. However, it should be noted that some costs (and benefits) are difficult to calculate in monetary terms and the potential multiple outcomes of any addiction treatment intervention make a comprehensive study of this type an extremely difficult and time-consuming undertaking.

In this current analysis, no distinction was made between these different approaches to estimating the costs and benefits of various drug treatment interventions. However, it is important to consider the impact of such variations in approach before reaching any definitive conclusions on the basis of a comparison of more than one study (for detailed guidance on categories of cost-related studies see French & Drummond, 2005).

Methodology

The sample used in this study was drawn from a comprehensive literature review to examine national and international studies comparing the costs and relative efficacy of treatment interventions for drug misuse. The initial review was undertaken during the first few weeks of the study, although it was subsequently augmented with additional material as new sources came to light or new literature was published. The following search terms were used (both individually and in various combinations):¹

- drug treatment costs
- cost benefit drug treatment
- drug treatment economy
- addiction treatment economic benefits
- cost of recovery
- therapeutic community
- residential rehabilitation costs
- addiction treatment costs
- comparative costs
- costing addiction services
- addiction treatment costs
- addiction services budgets
- drug treatment accounts
- residential rehabilitation price
- community drug treatment price.

The following databases were searched: Alcohol Concern On-line Library; Alcohol Studies (Rutgers) Database; British Educational Index; Drug Misuse in Scotland (ISD) Publications Database; Drugscope On-line Library; DrugText; Executive Summaries On-line; Fagibliotek om rus; Ingenta; Lindesmith Center; Medline; National Criminal Justice Reference Service; National Drug Strategy Unit (Australia) On-line Library; NHS Scotland e-Library; NIDA Database; PsycInfo; Rapid Assessment and Response Archive; Robin Room Archive; Schaffer Library of Drug Policy; Science Direct; Scottish Addiction Studies On-line Library; Social Science Information Gateway; Web of Science; and the WHO Substance Misuse Database.

In addition, the following journals were searched: Addiction; Addiction Abstracts; Addictive Behaviours; Addiction Today; Alcohol; Alcohol Research and Health; American Journal of Drug and Alcohol Abuse; British Journal of Criminology; British Medical Journal; Drug and Alcohol Dependence; Drug and Alcohol Professional; Drug and Alcohol Review; Druglink; Drugs Prevention, Education & Policy; European Addiction Research; International Journal of Drug

¹ The list of terms provided here is not exhaustive. A number of other terms were used in various combinations and specific search terms were used to locate publications by known treatment initiatives with similar approaches or objectives.

Policy; Journal of Drug Issues; Journal of Substance Abuse; and Findings; Pharmacoeconomics.

Secondary searches were undertaken on articles referenced in original source documents. Finally, requests for information on relevant studies were posted on the following specialist, addiction-related discussion lists: Addiction Medicine; Addict-L; Alcohol Misuse; Apolnet; Drug Day Programmes; Drug Misuse Research; Drugtalk; European Working Group on Drugs Oriented Research (EWODOR); Gambling Issues International; Kettel Bruun Society; Scottish Addiction Studies; Therapeutic Communities; Therapeutic Communities Open Forum (TC-OF); Update.

The search was restricted to full text articles in English published between 1999 and 2009. Over 350 articles and other publications (monographs, short works, book chapters etc.) were examined. The decision to limit the search to post-1999 documents was taken because, at least in Europe, significant changes have taken place in terms of the funding of addiction treatment in the past decade and it was important that the review reflected a contemporary picture.

Of the 350 or so articles studied, 55 met the original search criteria: that they reported on cost-related studies and had been published after 1999.

Exclusions

To further narrow the search, a series of additional exclusion criteria was applied to the remaining 55 studies. Since the intention was to examine the reporting of studies which compared the costs of residential rehabilitation in general – and drug-free TCs in particular – with other, community-based, drug treatment interventions, studies which addressed costs relating to single treatment modalities were excluded. A series of studies examined the costs of methadone maintenance treatment, both with and without other treatment enhancements, including intensive counselling (Olmstead, Sindelar, Easton & Carroll, 2007), cognitive behavioural therapy (Olmstead et al., 2007; UKCBTMM Project Group, 2004) or case management (Saleh et al., 2006). Others compared different approaches in substitute prescribing with methadone maintenance being compared to heroin (Dijkgraaf et al., 2005), buprenorphine (Harris, Gospodarevskaya & Ritter, 2005) and observed versus unobserved administration of buprenorphine (Bell et al., 2007). In some studies, a range of pharmacotherapeutic approaches were compared, including methadone or buprenorphine maintenance and both inpatient and outpatient detoxification (Mattick et al., 2001; Shanahan et al., 2006).

Since most, if not all, drug-free TCs prioritise the use of illicit street drugs and, in Europe, TC methodology is rarely used for the treatment of alcohol dependence, studies which were wholly about this treatment group (Gibson & Shanahan, 2007; Grønbaek & Nielsen, 2007; Holder et al., 2000; UKATT Research Team, 2005) were excluded, even where these included a comparison of residential to non-residential treatment costs.

A number of the articles reviewed (Belenko, Patapis & French, 2005; French & Drummond, 2005; Marsden, Ogborne, Farrell & Rush, 2000; Ogborne, 2000) were effectively literature reviews of the current evidence base or guidance documents for conducting and/or interpreting cost-related studies of various kinds. Whilst these were of significant interest and in some cases did provide comparative (residential to non-residential) costings, these were generally for illustrative purposes only and were therefore excluded from the final analysis. Some were further evaluations of the cost-related data arising from larger studies conducted some time before 1999; including Project MATCH (Holder et al., 2000). These were also excluded as a result of the initial criteria.

Findings

Applying the exclusion criteria, described above, to the fifty-five articles initially selected for review, resulted in a significant reduction to seven articles. All the articles in the final review selection were published in peer-reviewed journals since 1999 and included significant sections comparing residential to non-residential treatment modalities.

The articles were examined to estimate whether they genuinely compared like-with-like in terms of baseline population, housing costs, and a sufficiently lengthy timeframe to capture long-term changes in behaviour and lifestyle.

Flynn, Kristiansen, Porto and Hubbard (1999) examine the data from DATOS to compare the costs and benefits of long-term residential and outpatient drug-free treatment for cocaine dependent clients. They examined data on 502 clients in 10 US cities between 1991 and 1993. Post-treatment reductions in criminal activity were noted in both groups, with the greatest reductions being found within the residential treatment populations: who had exhibited significantly higher levels of offending on entry into treatment. Flynn and colleagues argued that, given this higher level of offending (and far greater reduction post-treatment), cost-benefits were similarly greater for the long-term residential interventions. However, of course, these relative levels of benefit would not be sustained if residential rehabilitation facilities were extended to meet the needs of a less damaged clientele, nor did the study examine other potentially equally important outcomes such as drug-using activity, health care utilisation etc.

French, Sacks, De Leon, Staines and McKendrick (1999) examined the costs and outcomes of a modified TC for mentally-ill chemical abusers (MICAs) and compared them to those for a standard service ('treatment-as-usual') condition. As with the Flynn et al. study, they found greater changes amongst the residential treatment population across two outcome domains: criminal activity and psychological dysfunction. They also noted slightly better outcomes in terms of self-esteem and re-employment status. Finally, they estimated that the TC population cost slightly less than the treatment-as-usual population due to their lower use of other community-based services during their residence.

French et al. (2000) examined a small sample of drug and alcohol users presenting for treatment in Washington State. The study compared the costs

and benefits of a 'full continuum' (FC) of care (including a period of residential or inpatient treatment followed by intensive outpatient and aftercare services) with an 'outpatient only' (PC) response. As with Flynn et al. (1999) the study noted higher levels of dysfunction and dependence amongst the FC group and a corresponding greater decrease in criminal activity and drug/alcohol use. They estimated that the cost-benefits of the FC intervention were greater, mainly due to a greater use of other services by the PC group. However, this was a relatively small-scale study (n=163), conducted over a short timeframe (nine months) and the authors warned that these factors could affect the overall cost-benefit levels.

Godfrey, Stewart and Gossop (2004) used data from the UK National Treatment Outcome Study (NTORS) to compare the costs and benefits of treatment in a range of residential and non-residential treatment settings over a two-year period. The intention of this study was to estimate whether four index treatment types – inpatient, residential rehabilitation, methadone maintenance treatment and community methadone reduction programmes – were cost-effective. Thus, whilst treatment costs were compared, with residential rehabilitation reported as significantly more expensive than other modalities, no modality-based benefits were presented. This meant that it was not possible to consider whether the apparent additional outlay on residential treatment was worthwhile. In calculating the costs of the four modalities, the authors excluded travel costs for the two community-based modalities and made no mention of housing costs. Interestingly, this study also estimated the cost of non-index treatments both before and after index treatment. The authors noted that these were so extensive as to make it impossible to associate the estimated benefits with the various index treatment modalities.

Healey, Knapp, Marsden, Gossop and Stewart (2003) also used the NTORS data to assess the incremental cost-effectiveness of drug treatment intervention against crime reduction outcomes. The authors note that all four treatment modalities were significantly more effective in reducing offending amongst non-injectors than amongst injectors. As with Godfrey et al. (2004), no attempt is made to do other than demonstrate that the range of treatment modalities all deliver significant cost benefits. However, the authors do note that:

Based on estimated mean costs, residential rehabilitation programmes would require a substantially greater commitment of resources compared to an expansion of DDUs (drug dependency units) or community-based methadone prescribing.

(Healey et al., 2003, p.141)

Having made this claim though, the authors also concede that methadone maintenance may involve a 'longer-term resource commitment'.

Schackman, Rojas, Gans, Falco and Millman (2007), in a somewhat limited survey of 'highly-regarded' treatment programmes for adolescent substance misusers, conducted through a programme of three in-depth telephone interviews over six months, concentrated upon simple accounting costs. Although they concluded that on this basis residential programmes were more expensive, they

also asserted that, unlike non-residential services for this group, higher costs appeared to equate to better and more effective services.

Finally, Zavala et al. (2005) presented provisional guidelines for undertaking cost-related analyses of adolescent treatment programmes and included an illustrative study comparing a residential and an outpatient service for adolescent substance misusers. Whilst this study – as with a number of others selected – included no housing costs in respect of the non-residential option, this might be a reasonable assumption since, presumably, most of the adolescents involved were normally resident with their parents with these costs being accounted for in a number of ways, including state subsidy. Whilst total annual economic costs were significantly higher for the residential option, on a treatment episode basis, the residential option was less expensive as a result of the higher intensity input and corresponding shorter duration.

A brief summary version of the main issues and domains is set out in the table below.

Lead Author	Other Identifier	TCS vs. Non-resids.	Exclusions	Time (months)	Population (baseline)	Housing	Notes
Flynn	DATOS	✓	Cocaine only	24	✓	✗	More cost benefits from residential services
French	(1999)	✓	MICA only	24	✗	✓	Residential option found to be marginally less expensive
French	(2000)	✓	N/A	9	✓	✓	More cost benefits from residential services
Godfrey	NTORS	✓	N/A	24	✗	✗	No modality-based cost estimate but expenditure on residential services noted as higher
Healey	NTORS	✓	N/A	24	✗	✗	No modality-based cost estimate but expenditure on residential services noted as higher
Schackman	N/A	✓	Adolescents only	6	✗	✗	No modality-based cost estimate but expenditure on residential provision is estimated to deliver higher quality
Zavala	N/A	✓	Adolescents only	12	✗	✗	Annual unit costs were reported as higher, but treatment episode costs were lower

Conclusions

Whilst it was somewhat surprising to find so few studies which directly compared residential and non-residential treatment interventions in terms of their cost-benefits, it was not entirely unexpected. It is of course possible that this was due to problems with the methodology, although there is no reason to believe that the final selection for review was in any way unrepresentative. It is tempting to conclude that there have been so few comparative studies undertaken simply because it is assumed that 'common sense dictates' that residential provision is significantly more expensive than non-residential options. If nothing else, this brief analysis has shown that the picture is a great deal more complex than this.

All the studies reviewed agreed that treatment of almost any type delivered cost-benefits to society in terms of reduced criminality and, in some studies, reduced drug use and consequent health service utilisation. A number confirmed previous study findings that the population presenting for treatment in residential rehabilitation (including TCs) was generally liable to be more damaged. None of the studies reviewed met the timeframe criteria (six years) suggested by Berg and Andersen (1993) as necessary to estimate total costs, taking into account relapse, tax contributions through employment etc.

Clearly, a more detailed analysis of the evidence to date is required. There seems little doubt also that further, more extensive benefit-cost analyses are required and over a significantly longer period. There is no bottomless purse for addiction treatment, nor should there be. But, with the impacts of drug dependence felt throughout almost every aspect of social welfare and community safety, it is clearly important to have a more detailed picture of the possibilities than at present. The days of faith, smoke and mirrors are long gone. We can no longer afford to simply purchase drug treatment services on short-term costings and assumptions. As the old TC saying goes: 'Never Assume Anything!'

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Therapeutic Communities in United States' Prisons: Effectiveness and Challenges

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ABSTRACT: The therapeutic community (TC) has become widely accepted and utilised throughout the US criminal justice system and is considered the treatment of choice for the more difficult to treat prison inmates (Prendergast & Wexler, 2004). The acceptance and proliferation of TCs in prisons, which are highly coercive environments and have been historically resistant to rehabilitation, is an intriguing story that may provide useful lessons for other countries interested in providing effective prison treatment for substance abusers. Research has played a central role through federally-funded rigorous evaluations of multiple prison TCs that have consistently demonstrated significant reduction in recidivism, for some studies up to five years post-prison TC treatment followed by aftercare. This report provides a brief history of correctional TCs, including a review of research findings with a focus on several classic studies, a discussion of enhancing correctional TCs in the current environment that increasingly requires 'evidence-based' treatment. Finally, lessons learned and recommendations will be offered for future research and practice

Historical overview¹

As of year-end 2007, about 7.3 million Americans were under criminal justice supervision (jail or prison, probation or parole); 2.3 million of these were incarcerated in jail or prison (Glaze & Bonczar, 2009; West & Sabol, 2008). The Bureau of Justice Statistics (Mumola & Karberg, 2006) report that, in 2004, 83.2% of inmates in state prisons reported having ever used an illicit drug and 69.2% reported regular use (at least once a week for at least a month). Over half (53.4%) reported experiencing symptoms in the 12 months prior to incarceration that are consistent with a diagnosis of abuse or dependence. Over four-fifths (84%) of inmates diagnosed with abuse or dependence had a prior offense and 53% reported three or more sentences. Moreover, almost half (48%) of state

¹ The historical review relies extensively on an earlier article, Prendergast & Wexler (2004).

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prisoners with an abuse or dependence diagnosis were on some form of criminal justice status (probation, parole, or escape) at the time of their arrest.

Despite the prevalence of drug use, persons incarcerated in state prisons and jails are unlikely to receive adequate substance abuse treatment. Although it is estimated that about 70% of persons in state prisons need treatment, the National Criminal Justice Treatment Practices Survey, conducted as part of the National Institute on Drug Abuse's (NIDA) Criminal Justice Drug Abuse Treatment Studies cooperative, found in a nationwide survey of prisons that the most common substance abuse service provided is drug education (by 74.1% of prisons). The second most common service was group counselling of less than four hours per week (54.6%). Of the prison surveyed, 19.5% provided therapeutic community (TC) treatment in a facility segregated from the general population, and 9.2% in a non-segregated facility (Taxman, Perdoni & Harrison, 2007).

Approximately 600,000 state and federal inmates are released to the community each year (Committee on Law and Justice, 2007). Research to date suggests that most of these inmates will again commit crimes; about 67% will be re-arrested within three years (Langan & Levin, 2002). The low number of substance abuse treatment programmes in prison is believed to contribute to this high rate of recidivism.

'Nothing Works'

The field of prison substance abuse treatment was largely defined by the slogan 'nothing works' with the publication of Lipton, Martinson and Wilks' review of prison treatment literature (Lipton, Martinson & Wilks, 1975). Martinson's famous 'Nothing Works' article in *Public Interest* (1974), followed by his widely-viewed appearance on the 60 Minutes TV show, struck a chord with the public and many policy makers. These events coincided with the exceedingly violent prison riots in the New York State maximum-security prison in Attica. Those riots shocked the public, and drew together liberals and conservatives in a common mistrust of the criminal justice system. Liberals and conservatives agreed that judges and parole officials were not to be trusted with making decisions on sentence length and release to the community (Cullen & Gilbert, 1982). The widespread enactment of determinant sentences was the policy response that contributed to a loss of judicial discretion and longer prison terms. Finally, the drug epidemic of the late 1960s and throughout the 1970s led to tougher drug laws, which together with determinant sentencing led to the extraordinary rise in prison population throughout the 1990s.

Antecedents of 'Prison Substance Abuse Treatment Works'

Several forces combined to move prison-based substance abuse treatment forward. An important influence was the proactive role of the judiciary itself that found that a number of state departments of correction were places of cruel and unusual punishment needing reform under the supervision of court appointed 'Masters'. The drug epidemic anxiety along with 'tough-on-crime' policies and prison overcrowding contributed to a political landscape that set

the stage for receptivity to prison drug treatment programmes. The early positive treatment outcomes of the Cornerstone TC programme in Oregon (Field, 1985) and the Stay 'n Out TC substance abuse treatment programme in New York (Wexler, Falkin, & Lipton, 1990) stimulated considerable interest and some optimism among correctional administrators and policy makers.

Expansion of prison substance abuse treatment

In the late 1980s, two technology transfer initiatives at the federal and state levels began to address the problem of the severe demands on the criminal justice system caused by the increasing numbers of adjudicated substance-abusing offenders. Two major technical assistance efforts, Project REFORM, funded by the Bureau of Justice Assistance, and later Project RECOVERY, funded by the Center for Substance Abuse Treatment (CSAT), provided assistance to 20 states in planning implementation programmes for prisoners with substance abuse problems (Wexler, 1997). The National Drug Control Strategy, prepared annually by the Office of National Drug Control Policy (2009), has consistently recommended the development of prison treatment and rehabilitation services. The Residential Substance Abuse Treatment for State Prisoners Formula Grant Program (RSAT), funded by the US Department of Justice since 1994, authorised multi-year funding to states to develop residential drug treatment in isolated units utilising the TC model for substance-abusing offenders. Over the years, most state prison systems established residential prison substance abuse programmes, and in 2001 RSAT funds became available for re-entry services. However, the percentage of inmates receiving treatment remains low and needs to be expanded.

Over time, increasing attention has been focused on the importance of continuing care in the community following prison-based treatment (often called aftercare). Aftercare's contribution to increasing and maintaining reduced recidivism has been reported by studies conducted in Delaware (Inciardi, Martin, Butzin, Hooper & Harrison, 1997; Martin, Butzin, Saum & Inciardi, 1999), Texas (Knight, Simpson, Chatham & Camacho, 1997; Knight, Simpson & Hiller, 1999), California (Wexler, Melnick, Lowe & Peters, 1999), and among federal inmates (Pelissier, Gaes, Camp, Wallace, O'Neil & Saylor, 1998). These studies consolidated the realisation that effective substance abuse treatment during and following incarceration could be an important strategy to ensure public safety.

The prison TC model

Research played a central role in the development of the prison TC model by providing information that influenced policy makers to support prison substance abuse treatment for the purposes of improving public safety and public health. Beginning in the 1970s, with the development of the Cornerstone and Stay 'n Out programmes, and continuing into the 1990s, the community TC model was modified and adapted to correctional environments, where it became the primary

approach for treating substance abuse among inmates (Wexler, 1986, 1994; Wexler, Blackmore & Lipton, 1991; Wexler & Lipton, 1993; for other, usually short-lived, TCs or TC-like programmes developed in the 1970s, see Lipton, 1998). The rationale for TC-based treatment in prisons is that most inmates have long histories of drug use and dependence requiring high-intensity treatment designed to restructure attitudes and thinking. Unlike shorter, less intensive treatment programmes, the TC model is based on the belief that drug abuse is primarily a symptom of a disordered personality (De Leon, 2000). The therapeutic goal of the TC is a global change in lifestyle involving abstinence from illicit substances, elimination of antisocial activities, and development of employment skills and prosocial attitudes and values. To facilitate these global changes, the therapeutic process includes all of the activities and interactions between the individual and the peer community (Bell, 1994; De Leon, 1995, 1996, 2000; De Leon & Rosenthal, 1989; De Leon & Ziegenfuss, 1986; Kooyman, 1993; Sugarman, 1986; Wexler & Williams, 1986). Increasingly, prison TC programmes are designed to be followed by community aftercare in order to reinforce and consolidate the gains that the parolee made during participation in the prison programme (Inciardi, 1996). Surveys of the membership of the Therapeutic Communities of America (TCA) (Melnick & De Leon, 1999) and the residential TC programmes in the Drug Abuse Treatment Outcome Survey (DATOS; Melnick, De Leon, Hiller & Knight, 2000) show high levels of agreement among TCs as to the nature of the essential treatment elements of TCs, including the treatment approach, the role of the community itself as a therapeutic agent, the use of educational and work activities, and the TC process.

Of all the treatment models, TCs are the most complex to implement and operate in a prison, and require the highest level of commitment from the prison administration and staff. While residents must take responsibility for their own recovery process, treatment staff, including ex-offenders, act as role models and provide support and guidance. Individual counselling, encounter groups, peer pressure, role models, and a system of incentives and sanctions form the core of treatment interventions in a TC. Residents of the community live together, participate together in groups, and study together. In the process, inmates learn to manage their behaviour, to become more honest with themselves and others, to develop self-reliance, and to accept responsibility for their actions.

Prison TC research

Since the 1980s, six major evaluations of prison-based TC treatment have been published, as well as several smaller studies. The main programme evaluations have been those conducted at Cornerstone in Oregon (Field, 1985, 1989), Stay 'n Out in New York (Wexler et al., 1990), KEY/CREST in Delaware (Inciardi et al., 1997; Inciardi, Martin & Butzin, 2004; Lockwood & Inciardi, 1993; Martin et al., 1999), New Vision in Texas (Knight et al., 1997; Knight et al., 1999), Amity in California (Wexler et al., 1999; Wexler, De Leon, Thomas, Kressler, & Peters, 1999; Prendergast et al., 2004) and the Federal Bureau of Prison programmes

(Pelissier et al., 1998; Pelissier et al., 2000; Pelissier, Camp & Motivans, 2003). Positive results have generally been found at 12, 24, 36, and 60 months, but differences between the treatment and comparison groups tend to converge at 36 months except for the groups that have aftercare. Overall, the findings have been taken as supportive of the effectiveness of providing treatment in prison, particularly when combined with community treatment following release to parole (for recent reviews of the literature on prison-based treatment, see MacKenzie, 2002 and Prendergast & Wexler, 2004).

Data from the Stay 'n Out, KEY/CREST, and Amity evaluations provide a sense of the outcomes that have impacted policy and secured the role of TCs in US corrections.

The Stay 'n Out study was the first major prison TC recidivism outcome study funded by NIDA. Inmates were randomly assigned to the TC or control groups, and several other convenience samples were analysed, including an adult Milieu group and a young adult (18-21) Counselling group (see Figure 1). Among the most important findings was that the percentage of TC males rearrested (27%) was significantly lower than for the no-treatment control (41%) and for the two comparison treatment groups (35% for the milieu group, 40% for the counselling group). Similarly, the percentage of TC females re-arrested (18%) was significantly lower than the no-treatment control group (24%) and counselling group (30%). The research also found a strong relationship between time in programme and treatment outcomes, with an optimum treatment duration of 9-12 months. For male inmates who participated in Stay 'n Out, the percentage of those who had no parole infractions during community supervision rose from 50% for those who remained less than three months to almost 80% for parolees who were in the programme between nine and twelve months. Similar findings were obtained for the females, although the percentages of those discharged positively from parole were higher than for their male counterparts (79% for females in treatment less than three months, 92% for the 9-to-12-month group). Based upon the Stay 'n Out results, most correctional TCs in the US have been placed in isolated prison units and with durations of 9-12 months.

A second major evaluation of the use of the TC with substance-abusing inmates was that of the KEY/CREST programme in Delaware (Martin et al., 1999). This study tested the effects of enhancing prison TC treatment (KEY) with transitional treatment under community supervision at a community-based work-release programme for men and women (the CREST Outreach Center), followed by further community-based TC participation (see Figure 2). The researchers examined three groups of CREST participants: CREST dropouts (n=109), CREST completers not receiving community TC treatment (n=101), and CREST+TC completers receiving TC community treatment (n=69). Although overall effects declined from earlier follow-up periods (Inciardi et al., 1997), 69% of the CREST+TC group had not been arrested in the three years since their release, whereas only 28% of CREST dropouts and 55% of CREST completers had not been arrested. Likewise, while 35% of the CREST+TC group remained drug-free at three years' post-release, only 17% of dropouts and 27% of completers were drug-free. A five years' post-release assessment (Inciardi et al., 2004)

showed similar results, with treatment completers who entered tertiary aftercare being less likely to recidivate or resume drug use compared with the no-treatment group, and slightly more likely when compared to completers who did not enter tertiary aftercare.

Figure 1: Arrest outcomes from the Stay 'n Out evaluation

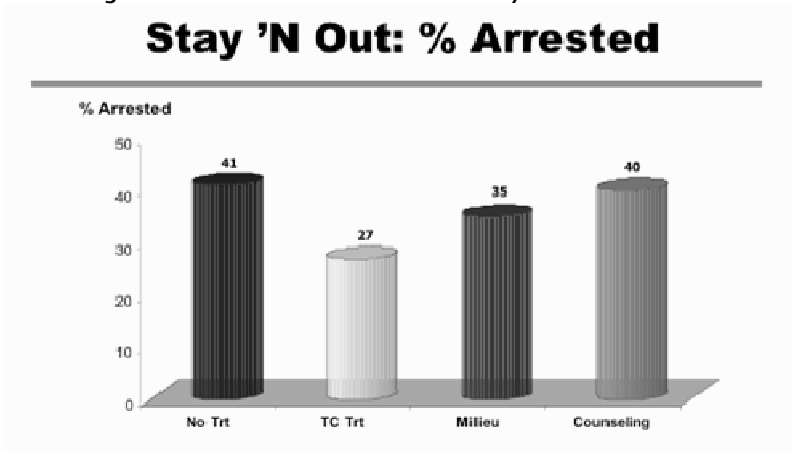
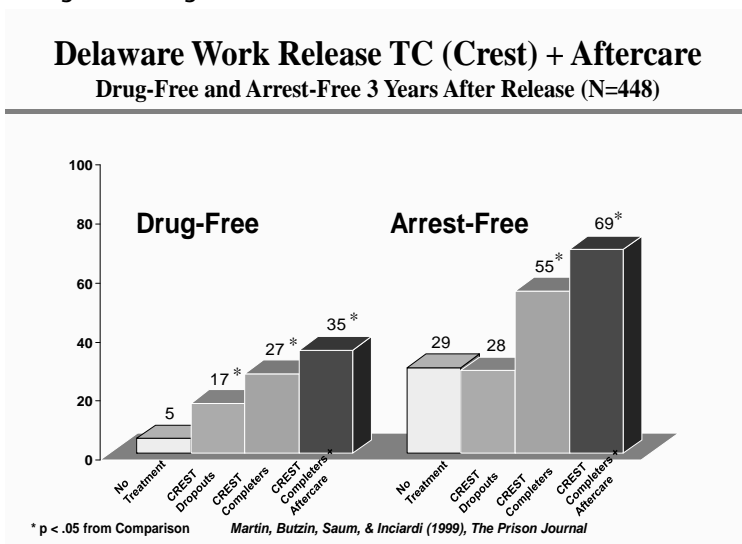


Figure 2: Drug and arrest outcomes from the Crest evaluation



The Amity study was especially important because it was one of the first systematic evaluations of a prison TC followed by aftercare. The study utilised an intent-to-treat design with random assignment and with a one-year follow-up. There were two NIDA-funded follow-up studies at one year (Wexler et al., 1999) and five years (Prendergast et al., 2004) post-prison, shown in Figures 2 and 3. At one year the experimental group had a 16% significantly lower recidivism rate. Based on that significant difference, the experimental group was divided into prison TC dropouts and completers and aftercare dropouts (left programme within 30 days or less) and completers, with the only significant and very large difference found for the aftercare completers who had a very small (8%) recidivism rate. These first findings were highly influential in gaining acceptance for the TC in California prisons.

Figure 3: Return-to-custody outcomes from the Amity evaluation at one year

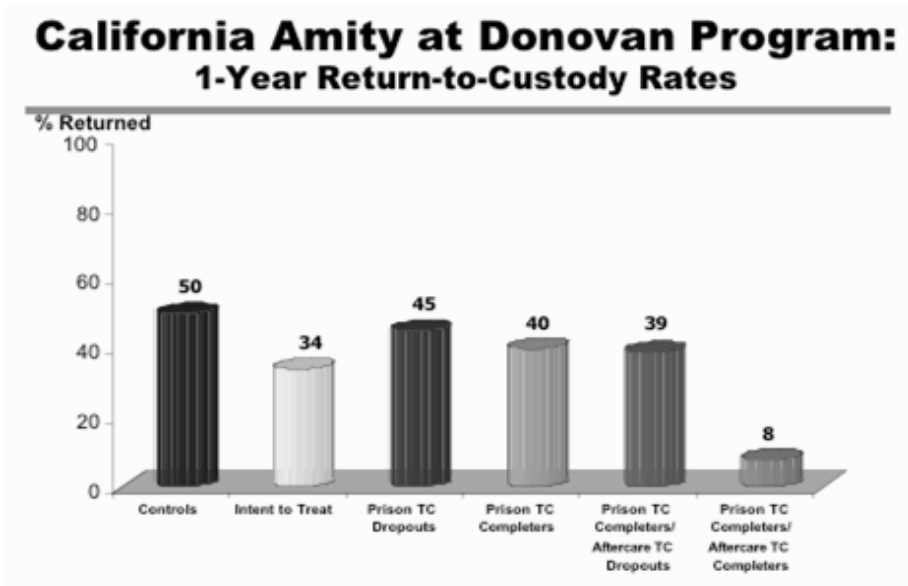
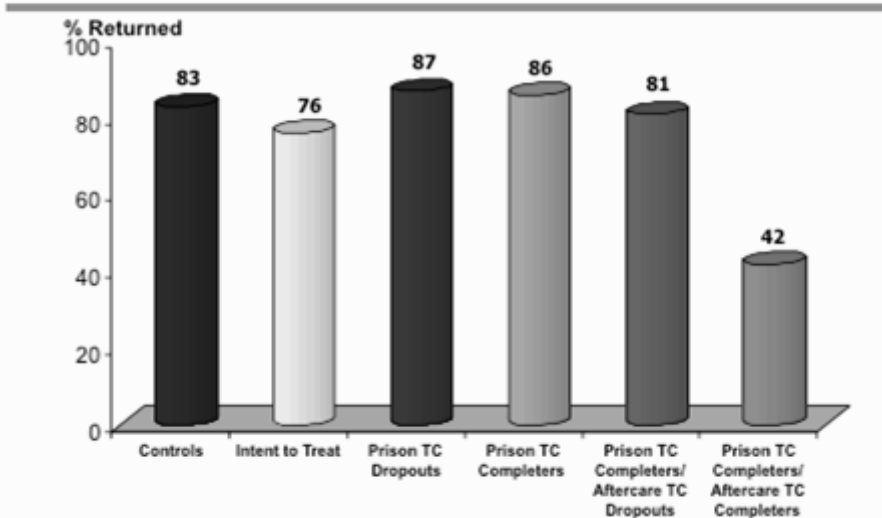


Figure 4 shows the same pattern of findings for the five-year outcomes, but all the groups have greater levels of recidivism over the additional time-at-risk. The 7% experimental/control difference was significant, and again the major finding was the very low aftercare recidivism rate of 42% for the aftercare completers, which was significantly lower than that of the other groups. The groups also differed significantly in employment during the year prior to follow-up, with employment being reported by 72% of the aftercare completers, 40% of the prison TC dropouts, and 56% of the prison TC completers.

Figure 4: Return-to-custody rates in the Amity evaluation at five years

California Amity at Donovan Program: 5 Year Return-to-Custody Rates



The Amity studies were highly influential in California and, largely based on the Amity findings, until recently the California Department of Corrections and Rehabilitation (CDCR) has had a network of over 12,000 treatment slots in 44 prison TCs located in 21 prisons and an extensive aftercare network (California Department of Corrections and Rehabilitation, 2009).²

The research on aftercare has been robust and replicated but limited. As Prendergast and Wexler (2004) note, the research on aftercare to date contains several critical methodological limitations: (1) lack of unbiased assignment to aftercare conditions; (2) confounding of the separate effects of treatment duration and aftercare and their interactions; and (3) lack of a TC aftercare condition for parolees who do not have prior in-prison TC treatment. Research is needed to remedy the identified weaknesses of earlier studies by random assignment to TC and non-TC aftercare; by rigorously investigating the separate and combined effects of differential treatment duration and aftercare; and by providing TC and other types of aftercare to inmates who did not receive in-prison treatment. The following questions should guide the next generation of research regarding aftercare: Is aftercare alone capable of significantly reducing recidivism and relapse to drug use following prison? What is the effect of shorter-term prison treatment (i.e. less than six months) with and without

² Due to a severe budget crisis in California, the TC treatment capability has been radically reduced but remains operational.

aftercare?³ What is the optimum combination of duration of in-prison and aftercare treatment? What treatment models are best suited to deal with the inherent geographic dispersion of offenders after their release from prison? What are the costs and cost-benefits of prison treatment and aftercare?

Acceptance and challenges of correctional TCs⁴

As discussed above, research has played a very important role in the acceptance of correctional substance abuse treatment. However, if TCs were unacceptable to correction systems the research would have been little more than of academic interest. Prisons are designed to remove adjudicated offenders from the public and to maintain them in secure custodial environments, and interventions that interfere with this primary mission are not allowed in prison. Within prisons, inmate identities are essentially reduced to numbers, and custodial regulations tightly control most aspects of their behaviour and are generally repressive of creativity and individuality. In addition, prison inmates in the general population are typically careful not to share personal feelings and open up about intimate and often painful life experiences. Thus, it is somewhat curious that TCs, fundamentally dedicated to rehabilitation that includes personal exploration, self-disclosure and individual growth, have been widely accepted in US prisons. Some of the reasons are presented below.

Primacy of public safety

The acceptance of treatment by the criminal justice system has required that treatment providers have acknowledged the primacy of safety and security within the prison setting. Criminal justice supervisory and monitoring requirements take precedence and must be adhered to for clinicians to have client access. Once an individual enters the criminal justice system, substance abuse and mental health considerations recede and become important secondary issues. 'Prisons are not hospitals' is an important reminder for clinicians who want to maximise their effectiveness and ability to work safely and cooperatively with correctional personnel.

Personal accountability and compatibility of substance abuse treatment and correctional practices

TCs are largely based on self-help notions of acceptance of responsibility for substance abuse and related antisocial behaviour, and rely on group and individual counselling (along with peer influence) to achieve the goals of harm reduction and long-term abstinence. Substance abuse treatment providers and

³ California budget reductions have forced CDCR to reduce in-prison TCs' duration from 9–12 months to 3 months and to decrease aftercare availability, creating conditions to test some of these questions.

⁴ These arguments have been presented previously (Wexler, 2003).

criminal justice professionals generally agree on the antisocial nature of substance abuse and the need for appropriate consequences. They also agree on the need for inmates to take responsibility for their behaviour and to work hard on learning pro-social behaviours needed for sobriety and recidivism reduction. Based on a number of shared values, over the years, resolution of differences between the systems has usually been successfully achieved. For example, offering inmates roles of authority in programmes based on their progress is problematic. Inmates are not usually allowed to directly supervise other inmates, although this is common in the hierarchical community-based TC model. Prison TC operators have responded to this difference in orientations by having advanced residents serve as role models and teachers who guide and inform instead of supervise.

Treatment benefits for prison administration

The acceptance and expansion of prison treatment was facilitated as prison administrators realised their operational benefits. Well-run prison treatment programmes help stabilise prison units and create more humane environments for inmates, as well as for treatment and custody staff. This is especially true for self-help-oriented TCs that require high levels of respectful behaviour for staff and peers (Wexler & Williams, 1986). Observers of prison treatment programmes have noted that programme units are the preferred job choices for custody staff, who often request to be assigned to programmes. There have been reports of few negative behavioural incidents on programme units and of reports of low levels of stress and fewer sick days among correctional officers (Deitch, Koutsenok & Ruiz, 2004; Prendergast, Farabee & Cartier, 2001).

System-wide TC implementation challenges

Researchers who have studied prison-based TCs (Farabee, Prendergast, Cartier, Knight, Wexler & Anglin, 1999), as well as correctional officials (Cate, 2007), have identified a number of problems that can limit their effectiveness. These include: 1) prison procedures such as 'lock downs' that interfere with hours of programme operation; 2) hours of programming often limited to four hours per day, with no programming on weekends, making it difficult to maintain a TC environment; 3) mandating assignment to treatment without balancing incentives for participation; 4) use of limited or inappropriate criteria to determine eligibility for TC admissions; 5) difficulty in hiring and keeping trained staff for low paying positions; 6) frequent turnover in correctional staff undermines support for and continuity in programming; 7) ongoing struggles to maintain treatment beds in the face of overcrowding; and 8) competition between contractors for securing contracts decreases the beneficial sharing of information. Any large prison system interested in developing networks of prison TCs will need to consider these and other challenges and develop ongoing system improvement approaches.

Future direction for Prison TCs

The success of the TC model in prisons has led to its application to special populations including women (Sacks et al., 2008), inmates with co-occurring disorders (Sacks, Banks, McKendrick & Sacks, 2008), and inmates in maximum security prisons (Wexler, Burdon & Prendergast, 2005). There have been discussions regarding developing prison TCs to address the needs of youthful and elderly inmates.

TC research paradigm considerations

Is the TC an evidence-based practice?

The term 'evidence-based practice' has become a buzzword in health services' research and particularly in discussions of substance abuse treatment. United States' federal and state agencies that fund substance abuse treatment programmes in the community and criminal justice system now regularly require that applicants include evidence-based treatments from specified lists.⁵ Although there is considerable controversy about the meaning of 'evidence-based', more rigorous definitions specify a minimum of three components: 1) results must be based on studies that utilise clinical trials methodology (random assignment and intent to treat analyses; 2) replication across studies by different research teams; and 3) availability of a manual for disseminating and replicating the protocol (e.g. Blueprints for Violence Prevention). As reported above, the TC has clearly passed the first two hurdles; however, there is not a single universally accepted manual for either community or prison TCs. While there have been many efforts to develop TC standards including the prison TC (American Correctional Association, 2005), the closest document to a manual is an excellent book by De Leon (2000) that is affectionately known in the field as the 'Red Book'. Although De Leon provides an excellent description of TC theory, structure, and processes, it is a 400-page document and not a manual suitable for dissemination of an evidence-based protocol. Currently, there are efforts underway with the World Federation of Therapeutic Communities (WFTC) to create an internationally accepted basic manual that describes essential TC elements, and guides the process of programme implementation (Wexler, personal communication, 2009).⁶

Appropriate TC research methodology?

Consideration of appropriate TC research methodologies raises the question of defining and clarifying the TC phenomenon in terms of science, medicine, social services and education. Each realm has different research methodologies, and

⁵ The Substance Abuse & Mental Health Services Administration (SAMHSA) maintains a web site 'A Guide to Evidence-Based Practices (EBP) on The Web', <http://www.samhsa.gov/ebpwebguide/index.asp> with links to generally accepted EBP lists.

⁶ Currently, the first author is in conversations with the WFTC to create an approved TC manual.

requirements for membership and funding. For example, to obtain treatment reimbursement or federal funds for programme development and evaluation, the TC must present itself as essentially a medical treatment for substance abuse.

The applicability of experimental research methodology for evaluating the TC has been debated in the field over the years. Some have argued that the TC model is a teaching community (e.g. 'community as method', De Leon, 2000) rather than a specific protocol designed for the treatment of a single dysfunction;⁷ as a result, clinical trials research methodology may not be the best way to empirically study the modality (De Leon, Inciardi & Martin, 1995). Few would question the value of schools that provide education and skills development for students, so perhaps the more important issue may be how to best develop and deliver an effective curriculum within the TC learning community. For example, instead of experimentally comparing the TC to a cognitive behavioural intervention, an alternative approach might be to use the TC to house and compare different symptom-targeted approaches like Relapse Prevention Therapy (Marlatt, Parks & Witkiewitz, 2002) and Individual Cognitive-Behavioural Therapy (Carroll, 1998) that appear on the University of Washington's list of 'Evidence-Based Practices for Substance Use Disorders'.

Exploring the notion of the TC as a general treatment structure that can house a variety of discrete interventions moves us away from the medical model of specific treatment protocols for defined dysfunctions toward a model of socialisation and education. These considerations are reminiscent of the TC roots as a self-help phenomenon operated by people who were not adequately served by traditional medically oriented treatment and who formed communities to help themselves (e.g. Jones, 1954). At this juncture, it may be time to study the TC as a community using more modern approaches such as the emerging science of social networks (Christakis & Fowler, 2009) that studies behavioural influences through the connections between people, membership groups, and extended groups over time. The study of social networks offers opportunities to explore basic rehabilitation questions of how persons move from criminal cultures through treatment communities (e.g. TCs) into non-criminal cultures.

Conclusions and recommendations

Interest in implementing prison TCs has been growing around the world, creating a need for guiding information in addition to the demonstration of successful outcomes.⁸ Based on 35 years of experience in the US, a number of lessons have emerged that lead to recommendations.

⁷ De Leon (2000) offers the TC perspective that drug abuse is a disorder of the whole person who has problems with socialisation and cognitive and emotional development.

⁸ An indication of international interest is that the senior author was invited to present historical overviews of US prison TCs at three international conferences in 2009.

First and most important, programme operators need to realise that prisons are not hospitals or treatment programmes but they are custody environments where safety and security is of the utmost importance. Once programme designers accept that they are 'guests' operating in another's 'house', the process of communication and negotiating programme space is considerably advanced. Based on the early prison TC research (Wexler, Falkin, Lipton & Rosenblum, 1992), there is general acceptance that a TC needs to be placed in an isolated unit, be of 9–12 months duration, and work with inmates immediately prior to release. To accomplish these demanding conditions (prisons are often overcrowded, so space is of a premium), there needs to be strong support from correctional leadership ranging from the head of the corrections department to the warden and on down the chain of command. Unless the message of acceptance and support is very clear, programmes can be sabotaged at every level; for example, getting through security gates and 'strip searches' can be exceedingly time consuming and deleterious to programme staff morale. An important guiding notion is to form partnerships between programme and custodial staff at all levels and maintain a steady flow of information to avoid misunderstandings and perceived threats to security.

An excellent procedure that fosters partnering and support used in many US prisons that host programmes is 'cross training' where programme and custodial staff train each other. Prison personnel train all programme staff in security procedures and the TC staff often use an immersion method to orient correction officers to the TC. A TC immersion training may last for 3–5 days where participants are placed in a mock TC and participate in TC activities (e.g. morning meetings, encounter groups, seminars, etc.) to get an experiential sense of the modality. The TC trainings often help create lasting bonds and a sense of respect and trust between the two groups of staff members.

It is especially useful for prison systems to identify recruit providers with successful community TCs with a proven track record and if possible prior prison experience. The advantages of a community TC contractor include a working knowledge of TC procedures, the availability of recovering staff, and community treatment beds that are a critical component of successful prison TC treatment. Based on informal surveys of the authors over many years and in many states, TC programmes run by outside experienced contractors are generally superior to those operated by the correctional system. The employment of recovering staff needs to be emphasised because they contribute to the integrity and credibility of the programme. Using his or her own life as an example of what is possible for an inmate with a substance abuse history, the recovering staff member provides credible role modelling that is highly impactful.

Another recommendation is to establish relationships with researchers who can help evaluate how programmes are actually operating and whether they are effective in achieving their goals. One suggestion is to engage a researcher or research team that has a track record of successful grant writing and

completion of evaluation projects, and is committed to dissemination through conferences and published articles.⁹ A corollary is to engage research assistance to capture programme processes through observation and qualitative interviews and client progress through validated clinical assessment instruments administered at admission, during treatment, and upon completion and, when possible, collection of post-treatment outcome data. The ability to produce empirical data about programme function, population treatment, and outcomes is extremely useful for ongoing funding in these days of evidence-based treatment.

Prison TC research would benefit if staff and programme participants were to be part of the research process through orientations and ongoing presentation of findings. Maximising staff and client engagement in the research process would help to improve the quality of studies and to interpret findings prior to public dissemination. During the early Amity research when researchers were spending time in the programme-collecting baseline and process data, a series of meetings with staff and residents where preliminary data were presented elicited many questions and comments that helped clarify what the numbers meant and enriched interpretations.

Finally, the Internet has become a most useful tool for all research endeavours, and two organisations that provide especially helpful research and programme improvement online resources are The Institute of Behavioral Research at Texas Christian University and NIATx. The TCU research group offers a number of client and programme assessment instruments for prison and community programmes, and NIATx offers information and strategies for programme improvement.

Currently the recession has caused major budgetary problems across the US, halting the expansion of prison drug treatment and leading to the closure of many prison programmes and reduction of aftercare services in many states. Severe budgetary shortfalls have led to the deconstruction of respected state-wide prison TC systems most evident in California. The closing of well-developed programmes and reduction of a skilled TC workforce will take considerable dedication and significant time to rebuild. As the recession passes, it is reasonable to expect that expansion of prison drug treatment based on the TC model will resume based on the large body of research and its general acceptance as an evidence-based practice. An important effort to concentrate on during these difficult years will be the development of an international accepted prison TC manual that will guide the rebuilding efforts as economies revive worldwide in the future.

⁹ When the Amity programme was starting in 1990, programme founders Rod Mullen and Naya Arbiter contacted the first author based on his experience of evaluating the Stay'n Out prison TC in New York and asked him to develop a NIDA grant to evaluate the new Amity prison programme in California.

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Research on the Effectiveness of the Modified Therapeutic Community for Persons with Co-occurring Substance Use and Mental Disorders

Stanley Sacks and JoAnn Y. Sacks

ABSTRACT: This paper reviews the development of the modified therapeutic community (MTC) as an integrated approach to the treatment of co-occurring disorders. Four research studies are presented, each of which examined the effectiveness of the MTC within a particular population and a particular setting; all 902 volunteer subjects had mental disorders (most of these were serious disorders) co-occurring with substance use disorders, and all four studies were undertaken by the same investigative team. Significantly better outcomes were observed for the MTC group in every study, but the measures and domains in which differences were detected varied from study to study. A quantitative synthesis (using meta-analysis) detected significant improvements in outcomes for the MTC group in five of six outcome domains (substance use, mental health, crime, employment and housing); no significant differences were detected in HIV-risk. The review of research concludes with brief summaries of preliminary findings from two current studies. The paper then transitions to a closing discussion of staff training, aftercare services, and future directions for research related to the MTC. The substantial base of research supporting the efficacy of the MTC approach for persons with co-occurring disorders that has accumulated should encourage programme and policy officials to consider using MTC programmes for populations with co-occurring disorders.

Keywords

Co-occurring disorders, substance use, mental disorder, dual disorder, modified therapeutic community (MTC).

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Background

The therapeutic community (TC)

The effectiveness of community-based TCs in achieving positive outcomes for drug use, criminality, and employment has been documented in a number of single-site (e.g. Aron & Daily, 1976; Barr & Antes, 1981; Brook & Whitehead, 1980; De Leon, 1984, 1987, 1989; De Leon & Rosenthal, 1989) and multi-site studies employing pre-post designs (Hubbard, Rachal, Craddock & Cavanaugh, 1984; Hubbard, Craddock, Flynn, Anderson & Etheridge, 1997; Simpson & Sells, 1982). Studies of TC programmes have also clarified the contribution of retention to the ultimate effectiveness of TC treatment, finding lower rates of drug use and criminal behaviour, along with higher rates of employment, for clients who stayed in programmes for longer periods of time (Bale et al., 1980; De Leon, 1984; Hubbard et al., 1989).

Three national, multi-site, longitudinal evaluations have made particular contributions to an understanding of the effectiveness of community-based TCs, the Drug Abuse Reporting Program (DARP; 1969 to 1972), the Treatment Outcome Prospective Study (TOPS; 1979-1981), and the Drug Abuse Treatment Outcome Study (DATOS; 1990s). Two of these, DARP and TOPS, documented large decreases in opiate use and criminal involvement following treatment (Hubbard, Marsden, Cavanaugh, Rachel & Ginzburg, 1988; Hubbard et al., 1989; Sells & Simpson, 1980; Simpson, 1981; Simpson & Sells, 1982, 1990). Findings from DATOS, the most recent and comprehensive of the three evaluations, showed major reductions in all types of drug use for TCs and for other residential programmes, independent of length of exposure to treatment; specifically, reductions of 66% in cocaine and heroin use, of 50% in weekly or more frequent alcohol or marijuana use, of 60% in predatory illegal behaviour, and of 50% in suicidal thoughts and/or attempts were documented at one-year post-treatment (Hubbard et al., 1997). Even larger reductions were evident for those who stayed in treatment three months or longer, and those who successfully completed treatment in a TC had significantly lower levels of: cocaine, heroin, and alcohol use; criminal behaviour; unemployment; indicators of depression relative to their functioning prior to entering treatment – improvements that were maintained five years later (e.g. Grella, Joshi & Hser, 2003; Hubbard, Craddock & Anderson, 2003; Simpson, 2003). A recent National Institute on Drug Abuse (NIDA) Research Report reviewed three decades of TC treatment research, which included baseline data from over 65,000 individuals, and found that participation in a TC was associated with several positive outcomes (NIDA, 2002).

The demonstrated improvement in psychological wellbeing (De Leon & Jainchill, 1981-82; De Leon, Wexler & Jainchill, 1982; Jainchill & De Leon, 1992; Sacks & De Leon, 1992) and self-concept (Biase, Sullivan & Wheeler, 1986) following traditional TC treatment provided the rationale for modifying the TC to respond to the multiple needs of individuals with co-occurring substance use

and mental disorders. As TCs began adapting to clients with co-occurring substance use and mental disorders (then known as dual disorders; today, commonly called 'co-occurring disorders'), three models emerged: an 'inclusive' model, in which community-based TCs admitted a small number of clients with co-occurring disorders, often developing a specialised track within the programme for such clients; an 'ancillary service' model, in which clients with co-occurring disorders functioned within the traditional TC, and received enriched mental health services concomitant to their TC programming; and an 'exclusive' or 'stand-alone' model designed specifically for co-occurring disorders, wherein the treatment environment and most of its accompanying interventions are modified to incorporate features that address both substance abuse and psychiatric symptoms, treating both disorders as equally important. The ancillary model, developed in consultation with De Leon and his colleague, Allen Bernhardt (McLaughlin & Pepper, 1991; Rahav & Link, 1995; Rahav et al., 1994, 1995), was significantly more effective than (non-TC) community residences in improving substance use, psychiatric symptoms, and general functioning among homeless men with co-occurring disorders during 12 months of treatment (Nuttbrock, Rahav, Rivera, Ng-Mak & Link, 1998). The 'exclusive' or 'stand-alone' model (Sacks, Sacks & De Leon, 1999) is the focus of this paper.

The modified therapeutic community (MTC)

Over time, TCs adapt to changing needs and populations, to different settings, and to advances in research and practice. In the early and mid-1990s, the modified TC (typically abbreviated as 'MTC'), described here, was developed from the theoretical framework of the traditional TC model, as detailed in the definitive text, entitled *The Therapeutic Community: Theory, Model & Method* (De Leon, 2000), adapted to treat individuals with co-occurring disorders (De Leon, 1993; Sacks, De Leon, Bernhard & Sacks, 1997a; Sacks, Sacks, De Leon, Bernhard & Staines, 1997b; 1998; Sacks et al., 1999). The use of 'modified TC', or 'MTC', in this report is intended to capture those adaptations of the TC model designed to serve substance-abusing individuals with co-occurring mental disorders, most with *serious* (i.e. schizophrenia and other psychotic disorders, bipolar disorders and major depression) mental disorders (Sacks et al., 1997b).

The TC principles and methods of particular relevance to co-occurring disorders include: a highly structured daily regimen; coping with life's challenges with personal responsibility and self-help; using the peer community as the healing agent within a strategy of 'community-as-method' (the community provides both the context for and mechanism of change); assigning role models and guides from within the peer group; viewing change as a gradual, developmental process, wherein clients advance through stages of treatment; emphasising work and self-reliance through the development of vocational and independent living skills; and adopting pro-social values within healthy social networks to sustain recovery.

The MTC model¹ retains, but reshapes, most of the central elements, structure, and processes of the traditional TC, so as to accommodate the many needs that accompany co-occurring disorders, particularly psychiatric symptoms, cognitive impairments, and level of functioning. The MTC for co-occurring disorders alters interventions and activities to produce more flexibility, less intensity, and more individualisation. Specifically, the MTC is more adaptable and responsive to developmental needs, with reduced time spent in any given activity, less confrontation, increased emphasis on orientation and instruction, fewer sanctions, more explicit affirmation for achievements, and increased sensitivity to individual differences, all of which maximise opportunities for social learning. Still, the MTC, like all TC programmes, promotes a culture wherein self-help advances learning and promotes change, both in the individual and in others. In other words, the community becomes the agent of healing. Thus, this variant of the TC also shares certain features with the psychiatric (Democratic) TC (Jones, 1956) that emerged in England and elsewhere in Europe.

Organisation of the paper

The major focus of this paper is to summarise and synthesise research on the MTC. A single investigative team conducted the four studies synthesised in this article; each study targeted a particular population of persons with co-occurring disorders² within a particular setting³ in examining the effectiveness of MTC treatment. Because the MTC was formulated to accommodate the multiple problem areas that those with co-occurring disorders manifest, research reports included findings from six outcome domains (substance use, mental health, crime, HIV-risk, employment, and housing).

In the 'Methods and Findings' section, the report distinguishes each of the four studies according to the defining characteristic of its co-occurring disorders population (i.e. homeless persons, offenders, outpatients, and persons living with AIDS). In each case, the study summary describes the programme(s) (including any adaptations incorporated for the particular population or treatment environment), research design and methods, retention and retrieval, and findings. The article then moves to the 'Quantitative Synthesis' section,

¹ A complete description of the MTC for clients with co-occurring disorders, including treatment manuals and guides to implementation, can be found elsewhere (e.g. De Leon, 1993; Sacks et al., 1997a, 1999; Sacks, De Leon, Bernhardt & Sacks, 1998).

² Terminology changes over time. When research into the MTC began, clients with co-occurring substance use and mental disorders were described variously as having 'MICA' (*mental illness and chemical abuse*), or 'MISA' (*mental illness and substance abuse*) disorders: this article follows contemporary conventions for professional audiences in using 'co-occurring disorders' throughout (lay and consumer audiences use 'co-occurring conditions' when referring to this population, as 'disorders' may carry some negative connotations outside professional circles).

³ For a descriptive synthesis of the studies, refer to Sacks, Banks, McKendrick and Sacks, 2008a; for a quantitative synthesis using meta-analytic techniques, refer to Sacks, McKendrick, Sacks & Cleland, 2010b.

which provides a discussion of an analytic approach that uses meta-analytic tools to synthesise findings from studies of a single investigator or investigative team; in this case, findings from six outcome domains across three studies and four comparisons were examined. 'Two Brief Reports' follows the meta-analytic section, and provides preliminary findings from two new studies of persons with co-occurring disorders; one study was conducted among incarcerated women, the other among male offenders leaving prison and re-entering the community. The article continues with a 'Discussion' section, which summarises research findings, then reviews 'Training and Technical Assistance' recommendations for staff. The next section contains a discussion of 'Continuity of Care', which opens with a rationale for and the purpose of a continuum of care, and continues with descriptions of various 'Treatment Approaches' (aftercare and outpatient services, as well as other models of care). Finally, a section on 'Clinical Research' offers some suggestions for a future agenda, and the 'Conclusion' gives a brief summary of the status of the MTC.

Methods and findings

Description of the four studies

Our research into the effectiveness of the MTC began in 1991 with a series of four studies that are presented below. In advance of the narrative descriptions, Table 1 displays some programme features and participant characteristics and the research design for each study.

Study 1– Homeless

The first study into the effectiveness of the MTC for co-occurring disorders was conducted among homeless persons, referred from psychiatric hospitals and shelters to residential substance abuse treatment facilities in the community. The homeless individuals who participated in Study 1 had diagnoses of serious mental disorders as well as substance use disorders. Study 1 was conducted in two phases; the first phase was to develop, implement, and document MTC treatment for this population (Sacks et al., 1997a, 1998), while the second phase was to assess the effectiveness of the MTC versus a control (treatment-as-usual, or 'TAU') condition (De Leon, Sacks, Staines & McKendrick, 2000a).

The programme

The MTC was developed to be a highly structured, comprehensive residential programme, consisting of multiple interventions, with a planned duration of 12 months. As described earlier, the basic MTC programme incorporates three fundamental alterations: it is more flexible, less confrontational, and more individualised. Compared to the traditional TC, the MTC allocates less time to each activity, stresses orientation and instruction, affirms achievements more explicitly, imposes sanctions infrequently, and accommodates individual

Table 1: Programme features, participant characteristics and research design for each study

	Study 1 Homeless	Study 2[†] Offender	Study 3 Outpatient	Study 4 AIDS
Study duration	October 1991 – May 1997	October 1995 – October 2002	October 2000 – October 2004	September 1998 – September 2004
Location and setting	New York, NY – <i>Community Residential</i>	Pueblo, CO – <i>Prison & Community Corrections</i>	Philadelphia, PA – <i>Community Outpatient</i>	Philadelphia, PA – <i>Community Residential</i>
Staffing	SA & MH professionals; staff-client ratio 1:6	SA, MA, & criminal justice professionals; staff-client ratio 1:8	SA & MH professionals; staff-client ratio 1:10	SA, MH, & medical/nursing professionals; staff-client ratio 1:8
Length of stay	12 months	12 months	12 weeks	6 months
Axis I substance abuse/dependence	95% lifetime	87% lifetime	100% lifetime	100% lifetime
Axis I serious mental disorder	60% lifetime	62% lifetime	n/a	74% lifetime
Any (Axis I or Axis II) mental disorder	81% lifetime	83% lifetime	n/a	100% lifetime
Research design	Sequential assignment into two E (MTC) or C (TAU)	Random assignment into E (MTC) or C (MH services)	Random assignment into E (MTC) or C (standard services)	All subjects MTC residential; random assignment into E (MTC) or C (standard) aftercare
Baseline sample and Study tx group	183 E MTC-Moderate 93 E MTC-Low 66 C TAU	92 E MTC 93 C MH tx	126 E MTC 114 C SA outpatient tx	res 135 MTC (no control) aft 42 E MTC-A aftercare 34 C aftercare

MTC=modified therapeutic community; TAU=treatment as usual; E=experimental condition; C=control (comparison condition); SA=substance abuse; MH=mental health; tx=treatment; res=residential treatment; aft=aftercare treatment

[†] Study 2 (Offender) 12-month follow-up was measured from inmates' release from prison (i.e. to a non-controlled environment) so that the residential status of all subjects would be comparable in terms of risk for relapse.

Adapted from Sacks, Banks, McKendrick and Sacks (2008a).

differences and special developmental needs, all of which serves to maximise social learning opportunities. The set of MTC interventions developed in Study 1 became the core components upon which later MTC programmes were based. These core interventions were employed in other MTC programmes either as is or as adapted for specific treatment circumstances (unique needs of a special co-occurring disorders population, or the unique demands of the particular environment). Earlier writings provide a complete description of the MTC programme (Sacks et al., 1997a, 1998), and its implementation (Sacks et al., 1999).

Study 1 examined two variants of the MTC programme, MTC-Moderate and MTC-Low. The two MTC programmes were similar in planned length of stay (12 months), stages, and array of interventions. In general, the MTC-Low variant was less demanding than the MTC-Moderate. Specifically, clients in MTC-Low: (1) attended a day treatment programme offered in the community, rather than attending activities exclusively within the residential facility; (2) were assigned fewer duties related to facility operations, which reduced their peer work responsibilities; and (3) attended a lower number of activities.

Research design

Study 1, conducted in a community residential setting, sequentially assigned (Staines, McKendrick, Perlis, Sacks & De Leon, 1999) homeless men and women (n=342) with co-occurring disorders to one of two experimental (E) MTC groups (MTC-Moderate or MTC-Low) or to a control (C) condition that received typical services or treatment-as-usual (TAU).

Retention and retrieval

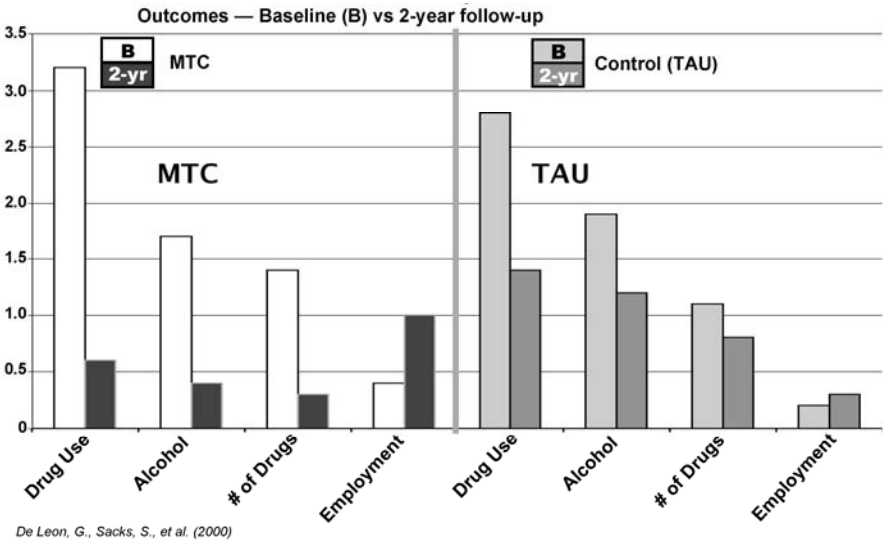
Only 34% of the subjects assigned to MTC-Moderate were retained for 12 months of residential treatment, compared to 56% of the MTC-Low subjects. The retention for both of the MTC groups compared favourably to 12-month retention rates reported in the literature, where a review of seven traditional TC programmes found between 9% and 15% retained (De Leon & Schwartz, 1984), while a more recent study found between 33% and 36% retained (De Leon, Hawke, Jainchill & Melnick, 2000b). In an intent-to-treat analysis of all study entrants, follow-up interviews were obtained at 12 months post-baseline for 65% of MTC-Moderate, 70% of MTC-Low, and 73% of TAU clients.

Findings

In general, greater treatment effects emerged for MTC-Low, which had lower demands and more staff guidance, versus the more structured and stringent MTC-Moderate. Outcomes for several measures of substance abuse and employment showed significant improvements for MTC-Low compared to the control (TAU) group (see Figure 1), while MTC-Moderate differed significantly only on employment. Although differences from the control group were not significant for either MTC group on measures of mental health, crime, or HIV-risk

behaviour, the pattern of findings (indicating an advantage for the MTC groups) was maintained. Economic analyses from these studies revealed the total and average cost of MTC treatment was similar to the cost of standard services (French, Sacks, De Leon, Staines & McKendrick, 1999; McGeary, French, Sacks, McKendrick & De Leon, 2000), and calculated \$5 of benefit for every dollar spent on MTC treatment (French, McCollister, Sacks, McKendrick & De Leon, 2002). De Leon, S. Sacks and colleagues (2000a) reported results from this study, documenting the first evidence of the comparative effectiveness of the MTC approach and, more particularly, of a less demanding version of the MTC model.

Figure 1: Homeless persons with co-occurring disorders



Study 2 – Offender

Having found positive results for the MTC for co-occurring disorders in the community, the investigative team decided to test the effectiveness of the MTC approach within the criminal justice system, where few (if any) treatment options for offenders with serious mental disorders co-occurring with substance use disorders were available. Effective treatment for this steadily growing subgroup was badly needed to counteract the extreme demands their conditions place on the criminal justice system and society as a whole, as well as on the affected individuals and their immediate families. The Colorado Department of Corrections (DOC) provided the setting for Study 2, at the San Carlos Correctional Facility, which houses all inmates with serious mental illness and substance use disorders.

The programme

The programme developed for the criminal justice co-occurring disorders population of Study 2 began with the core set of elements established in the MTC programme of Study 1 (Homeless), incorporating various adaptations and additional elements to respond to criminal aspects of the population and to operational requirements of the setting. Adaptations included: (1) an emphasis on criminal thinking and behaviour; (2) recognition and understanding of the interrelationship of substance abuse, mental illness, and criminality (triple recovery); (3) operational adjustments to comply with facility security guidelines; and (4) an expanded treatment team, which incorporated staff members from security and other correctional units (Sacks, Sacks & Stommel, 2003a).

Research design

Incarcerated men with co-occurring disorders were randomly assigned to either the MTC programme (the E condition) or to a control condition (a mental health treatment programme). As in Study 1, the MTC had a planned duration of 12 months; the planned treatment duration for those offenders assigned to the control condition was variable (a more extensive programme description can be found in Sacks et al., 2003a).

Retention and retrieval

Almost all (95%) offenders assigned to the MTC stayed in treatment for six months, compared to 69% of those in the control (mental health) treatment condition. This pattern was maintained at 12 months, with 71% of those in the MTC programme retained, versus only 30% of those in the control condition. On their release from prison, all of the offenders who received treatment in prison were required to enrol in some type of community aftercare treatment; 57% of prison MTC completers elected to continue their community treatment in a residential MTC aftercare programme. Follow-up interviews, conducted 12 months after their return to the community, retrieved 82% of those in the MTC group and 69% of those in the control condition.

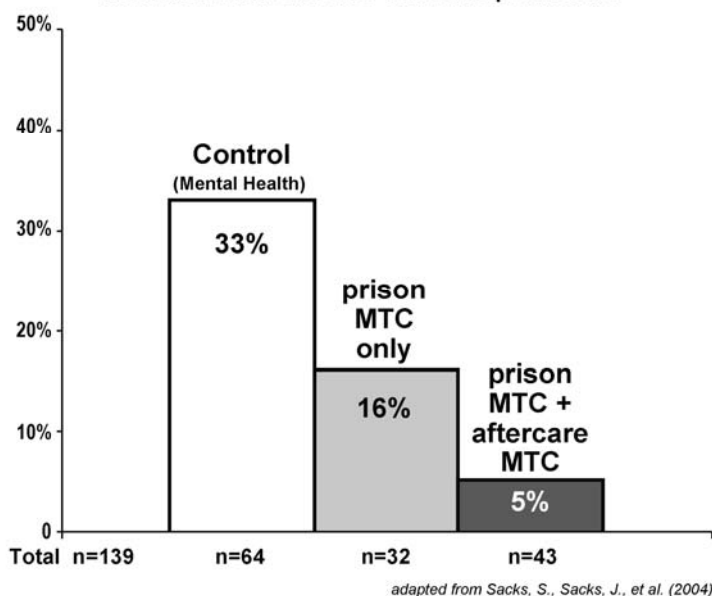
Findings

In an intent-to-treat analysis of all study entrants 12 months after being returned to the community, as shown in Figure 2, offenders who received MTC treatment in prison and in aftercare (MTC+Aftercare) had significantly lower reincarceration rates (5%) than offenders in the control condition (33%). Corresponding significant differences were also found across a variety of crime measures (i.e. any criminal activity, and alcohol- or drug-related criminal activity); these differences remained when an array of threats to validity (e.g. initial motivation, duration of treatment, exposure-to-risk) were considered (Sacks, Sacks, McKendrick, Banks & Stommel, 2004). Significant differences that maintained the MTC+Aftercare advantage were likewise observed for substance use outcomes (i.e. drinking to intoxication, using illegal drugs; Sullivan,

McKendrick, Sacks & Banks, 2007a), and for selected mental health measures (i.e. medication compliance and service use; Sullivan et al., 2007b). Reincarceration rates for those who received MTC treatment only while in prison (16%) were significantly better compared to the control condition (33%) and provided some support for the effectiveness of prison MTC alone (see Figure 2). Despite limitations of potential selection bias (i.e. differences in motivation on entry into aftercare), Study 2 findings overall favoured the MTC and were congruent with other studies of TC programmes for offenders with substance use disorders in prison and in aftercare programmes, such as work release (Butzin, Martin & Inciardi, 2002; Inciardi, Surratt, Martin & Hooper, 2002; Martin, Butzin, Saum & Inciardi, 1999) and the post-prison TC (Griffith, Hiller, Knight & Simpson, 1999; Hiller, Knight & Simpson, 1999; Knight, Simpson, Chatham & Camacho, 1997; Wexler, Melnick, Lowe & Peters, 1999). Recent TC studies have reported that treatment effects reducing the rate of reincarceration can persist for as long as five years (Prendergast, Hall, Wexler, Melnick & Cao, 2004).

Figure 2: Offenders with co-occurring disorders

Reincarceration outcomes 12 months post release



Study 3 – Outpatient

Treatment for substance abuse occurs most frequently in outpatient settings and typically includes counselling (individual and group) with referral to appropriate community services. As the MTC was evolving, it became apparent that outpatient substance abuse programmes, by virtue of their wide availability and their provision of services to the largest proportion of addicted clients,

would need to incorporate services for the segment of their clientele with co-occurring disorders. The substance abuse outpatient programme selected for Study 3 was well established in a substance abuse treatment facility, operated by Gaudenzia, Inc., and located in Philadelphia, PA.

The programme

Study 3 was designed to determine the effectiveness of an outpatient treatment track, Dual Assessment & Recovery Track, or 'DART', enhanced with MTC features (e.g. community meetings) and three targeted MTC interventions, compared to unembellished services; treatment for both tracks was planned to extend over twelve weeks (three months). DART, the MTC (experimental) condition, was intended to bolster treatment effectiveness for those with co-occurring disorders; the unembellished substance abuse outpatient programme was the control (C) condition. DART incorporated MTC features designed to strengthen identification with the community (i.e. community meetings), and added three other elements considered to be critical components of effective treatment. The three added elements, which were included in earlier MTC programmes in a somewhat less codified form, were designed: (i.) to improve clients' understanding of mental illness (e.g. Jerrell & Ridgely, 1999; Sciacca, 1987-88, 1992), i.e. Psycho-Educational Seminar; (ii.) to help clients discuss issues of addiction and recovery, and cope with past and present trauma (Harris & Fallot, 2001; Harris et al., 2001; Sacks & Sacks, 2005), i.e. Trauma-Informed Addictions Treatment; and (iii.) to teach clients skills necessary to manage their own treatment (Brown et al., 2001; Brown, O'Grady, Battjes & Farrell, 2004), i.e. Case Management. In delivering DART programming within the outpatient programme, DART (MTC) elements replaced some of the regular outpatient individual and group activities, while remaining within the 12-week programme activity schedule (i.e. nine hours of programme activities each week, or three hours of activities on each of three days).

Research design

On their admission to the outpatient substance abuse programme, men and women were screened to identify those with psychological symptoms; of this group, 240 volunteered to participate in Study 3, and were randomly assigned either to the enhanced DART track (the experimental condition, n=126) or to the control group (standard programme services without enhancements, n=114) (Sacks, McKendrick, Sacks, Banks & Harle, 2008b).

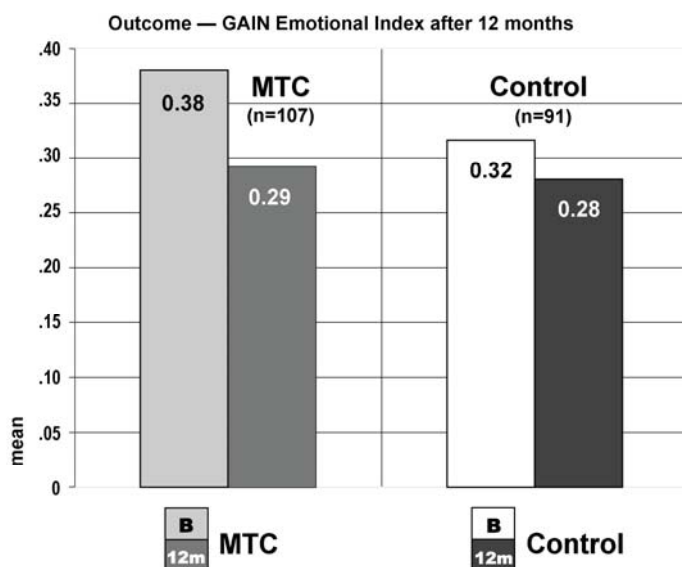
Retention and retrieval

About half (51%, n=64) of study subjects who were assigned to the DART track completed 12 weeks of treatment, while over two-thirds (69%, n=79) of those in the control group stayed for the full term. Follow-up interviews at 12 months post-treatment retrieved 85% (107) of DART subjects and 80% (91) of control group clients for an intent-to-treat analysis of all study entrants.

Findings

As expected, at follow-up 12 months post-treatment, compared to the control condition, the DART group had significantly better outcomes on measures of psychological symptoms (i.e. the GAIN Emotional Index (Dennis, 2000), shown in Figure 3) and on a key measure of housing stability, 'lived where paid rent', which indicated a more permanent housing situation. These results are qualified because the study lacked an 'untreated' or 'low treatment' control group, and findings were observed for only a few variables. Still, the improvements in substance use and trauma detected for the DART group were similar to reports of other studies (Morrissey et al., 2005a, 2005b), and between-group differences were found in outcome domains associated with the added interventions. The findings also suggest that a limited array of targeted, time-restricted interventions, when added to outpatient substance abuse treatment, can improve outcomes (Sacks et al., 2008b).

Figure 3: Outpatients with co-occurring disorders



Sacks, S., McKendrick, K., Sacks, J.Y., Banks, S., & Harle, M. (2008)

Study 4 – AIDS

A federal government initiative in the late 1990s targeted a subgroup of persons living with AIDS, those who also had co-occurring disorders (Center for Mental Health Services, 1998; Sacks, 1998). At that time, advances in the treatment of AIDS (e.g. anti-retroviral combination therapy including protease inhibitors) effected substantial improvements in outcomes, particularly the survival of those afflicted with the disease (Palella et al., 1998). An extended

lifespan implies a concomitant extension of the use of continuing services, not only to meet medical/mental health and substance use needs, but also to support employment, housing, and reintegration to community living.

The programme

Gaudenzia, Inc., which supplied the outpatient setting for Study 3, also provided the facility and programmes for the AIDS project, Study 4⁴ (Sacks, McKendrick, Vazan & Sacks, 2010a). According to eligibility criteria, on entering the programme, the 135 subjects who volunteered to participate in the AIDS initiative (residential and aftercare phases, each with a planned duration of six months) were AIDS symptomatic and physically ill. The physical condition of these triply-diagnosed (i.e. AIDS symptomatic, with both mental and substance use disorders) individuals was stabilised as quickly as possible, and their treatment programmes (residential and aftercare) included services for all three conditions, physical, mental, and addiction. All study subjects began with six months of residential treatment in the core MTC programme, to be followed with six months of aftercare (outpatient) services. Alterations to the core residential treatment were made in response to the physical and mental health problems of the clientele; the resulting MTC residential programme integrated medical, nursing, and psychiatric care with services for addiction, ensuring that all aspects of this triply-diagnosed population were considered and all treatment needs were met.

Those who completed the core MTC programme, then enrolled in a six-month course of outpatient aftercare services, either an MTC aftercare programme delivered at the Gaudenzia residential facility, or standard aftercare services delivered at other facilities elsewhere in the community. Gaudenzia staff continued to monitor the latter group for ninety days (three months), primarily to encourage their compliance in adhering to the medical (including prescribed medication) and services plan that was developed prior to their discharge from the residential facility. Those clients who continued their MTC aftercare treatment at the Gaudenzia facility received an integrated package of outpatient services, which contained several groups and activities, specifically: a Health and HIV/AIDS Self-Management Group; a Re-Entry Group with a concentration on self-management; a Peer Advocacy Group with other related activities; support groups (e.g. family/significant other); case assistance and skills development; and peer community meetings and activities.

⁴ The investigative team's AIDS project, Study 4, included both the residential and aftercare phases of treatment. This report focuses on the aftercare phase of treatment, although residential and aftercare programmes are both described. The study contained no alternate- or no-treatment control condition.

Research design

One hundred and thirty-five subjects with AIDS and co-occurring disorders entered the core residential MTC programme; seventy-seven men and women (57%) completed the six-month MTC residential programme. Completers, on entering the six-month aftercare phase, were randomly assigned to one of two groups, MTC-Aftercare (MTC-A) or a control (C) condition consisting of standard aftercare; because the records for one subject were incomplete, that case was omitted from aftercare data analyses, bringing the total sample to seventy-six. Those subjects assigned to MTC-A (n=42) continued their outpatient MTC treatment at the Gaudenzia residential facility. Those in the control group (n=34) were referred outside the residential facility, and attended outpatient aftercare activities elsewhere in the community; Gaudenzia staff monitored their compliance with prescribed medical, medication, addiction, and other services for 90 days.

Retention and retrieval

Of the 135 study volunteers who entered the core MTC residential programme, 77 (57%) stayed in residential treatment for the full 6-month term; because the record for one completer was incomplete, 76 subjects were available for subsequent analyses. Of the 76 participants with complete records who were randomly assigned to the MTC-A or control conditions, follow-up interviews conducted at 12 months (post-baseline for dropouts, or post-residential treatment for completers) retrieved 72% (n=55); of these, 34 (81%) were from the MTC-A condition and 21 (62%) were from the control condition.

Findings

While Study 4 findings indicated that both aftercare groups achieved significant improvements on measures across all outcome domains (i.e. drug use, crime and HIV-risk), additional analysis found that these improvements occurred predominantly during the residential phase, then decreased and stabilised during aftercare. Thus, these data offer some support for the effectiveness of the MTC model – particularly for residential MTC treatment – among those with co-occurring disorders who are living with AIDS (Sacks et al., 2010a). To control for potential group differences due to differential retrieval for follow-up interviews, a propensity model was used to isolate the effects of aftercare treatment.

Propensity analysis

A statistical technique that equates groups, propensity analysis is commonly used to arrive at more accurate estimates of treatment effects (Rubin, 1997). In this case, the propensity model apportioned the retrieved aftercare sample (MTC-A, n=34; control, n=21) into high, medium, and low strata; two strata were established, High and Low/Medium, each of which contained the two aftercare groups in roughly equal numbers. The two groups in each stratum

were then tested. No differences were found in the High stratum, indicating that the treatment groups had been re-balanced; however, a significant difference was found for the Low/Medium stratum, indicating that this combined stratum had not re-balanced the two treatment groups, a fact that should be kept in mind when interpreting results.

No differences in adherence to prescribed medications were apparent. MTC-A subjects in the Low/Medium stratum reported improved physical health but poorer psychological functioning, whereas MTC-A subjects in the High propensity stratum reported stable physical health and improved psychological functioning. At six months, High stratum MTC-A clients had greater improvement overall and for substance use and mental health than control clients in the same stratum. In contrast, control clients in the Low/Medium stratum had more favourable outcomes overall and for substance use than their MTC-A counterparts. In other words, those subjects who had better psychological functioning and stable health when they began treatment benefited more from aftercare services. Because AIDS is a progressive disease, future research should monitor physical and mental health status during treatment (and take steps to control for changes in subsequent analyses) so that any potential influences can be considered.

Quantitative synthesis

Rationale

This quantitative synthesis of four comparisons⁵ of MTC treatment for clients with co-occurring disorders was conducted to determine the consistency of results across six outcome domains and, if consistent, to calculate the size of the effects. Because data were available across the studies, meta-analytic tools could be used to examine the uniformity of the findings. Nothing about the underlying mathematics of meta-analytic tools requires more than two effect sizes for synthesis. In general, the synthesis of a small number of studies from a single investigator will have limited generalisability, but will encourage other investigators to study any effects of interest, ultimately leading to greater generalisability in the future.

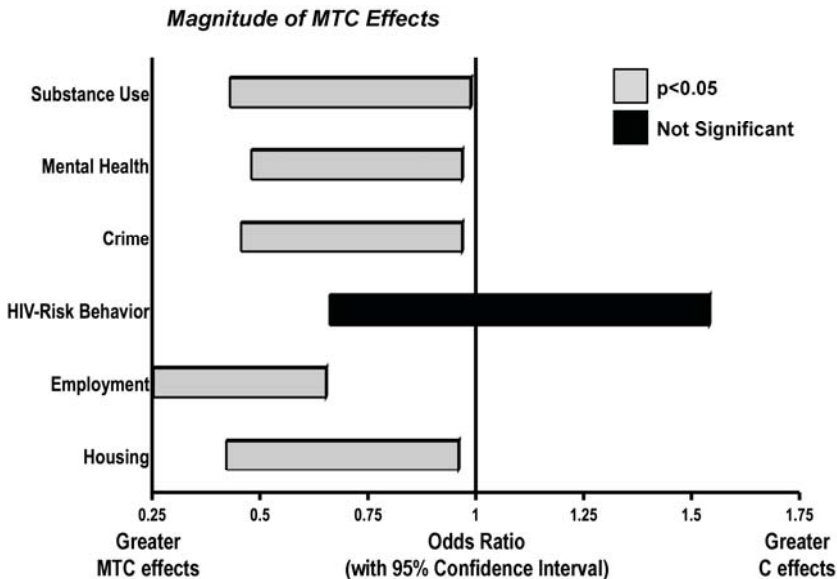
While many research studies report positive effects on a single definitive measure or a limited array of measures, research in the area of co-occurring disorders is different, and assessments tend to examine multiple measures in several outcome domains. This approach is valuable because (i.) co-occurring disorders is a condition that involves many problems in multiple domain areas;

⁵ The meta-analysis examined four comparisons resulting from the first three studies (Study 1, Homeless; Study 2, Offender; Study 3, Outpatient). Study 1 contained two comparisons (i.e. two MTC conditions, each of which was compared to the control condition), while Studies 2 and 3 each contained one comparison. Study 4, AIDS, was not included in the meta-analysis because it did not have a residential comparison comparable to the other three studies. The AIDS study did provide data used in the sensitivity analyses of the meta-analytic findings.

(ii.) the MTC approach was designed to respond to the multi-dimensional problems of persons with co-occurring disorders; and (iii.) the inclusion of multiple measures and domains produces a more complete and coherent picture of treatment effectiveness.

As indicated in the descriptive portion of this article, the four comparisons included in the meta-analysis considered co-occurring disorder populations with substantial sample sizes and a variety of client characteristics and environments (Sacks, McKendrick, Sacks & Cleland, 2010b). MTC treatment effects, determined from the magnitude of the pooled effect (odds ratios and 95% confidence intervals), for five of six outcome domains were moderate and significant; I^2 values indicated consistency of effects across comparisons and outcomes within each domain (see Figure 4). The MTC produced consistent effects in all six domains, as indicated by I^2 values at or close to zero, and Q tests for heterogeneity that do not reach statistical significance: substance use ($I^2=39.98$; $p=0.172$), mental health ($I^2=0$; $p=0.567$), crime ($I^2=0$; $p=0.462$), HIV risk behaviour ($I^2=2.23$; $p=0.381$), employment ($I^2=52.76$; $p=0.096$), and housing ($I^2=0$; $p=0.946$). The MTC produced significantly greater improvements in five domains: substance use (odds ratio=0.65), mental health (odds ratio=0.68), crime (odds ratio=0.66), employment (odds ratio=0.40), and housing (odds ratio=0.63); only HIV-risk behaviour failed to show significant treatment effects (i.e. odds ratio=1.01) (Sacks et al., 2010b).

Figure 4: MTC meta-analysis of four comparisons from three studies



Sensitivity analyses

Effects remained strong in all sensitivity analyses, which included: exclusion of the best measures; addition of measures with no effects; and inclusion of another study (the analyses added separately both a hypothetical study with no effects, and an actual study that did not have a control condition for comparison; neither affected the overall results). Because persons with co-occurring disorders have extensive and complicated needs, which the integrated services of the MTC are designed to meet, the results from these sensitivity analyses have considerable clinical significance. (A detailed description of the sensitivity analysis is available in Sacks et al., 2010b.)

Two brief reports

Women's prison MTC: preliminary findings at 12-month follow-up

This random assignment study was initiated to explore the growing population of substance-using women in prisons. The study compared women in a prison MTC programme (the experimental condition; $n=235$) with those in a cognitive-behavioural intervention (the control condition; $n=192$). This population of substance-abusing women had a high incidence of co-occurring mental disorders, with more than two-thirds receiving a lifetime diagnosis of a serious mental disorder; virtually all reported exposure to trauma, and nearly one-half were diagnosed with post-traumatic stress disorder (PTSD) (Sacks et al., 2008c, 2008d).

A linear mixed model analysis at 12-months' post-prison release ($n=427$) found significantly better outcomes ($p<0.05$) for the MTC group on three standard measures of mental health: the Beck Depression Inventory, 2nd Edition (BDI-II; Beck, Steer & Brown, 1996), the Brief Symptom Index (BSI; Derogatis, 1993), and the Posttraumatic Stress Symptom Scale (PSS; Foa, Cashman, Jaycox & Perry, 1997). For example, BDI-II scores for the MTC group fell from 18.7 ($SD^6=11.5$) at baseline to 12.0 ($SD=12.2$) at 6 months post-prison release, and 12.4 ($SD=11.9$) at 12 months post-release. In contrast, BDI scores for the control group were 18.2 ($SD=11.9$), 14.2 ($SD=12.2$), and 12.4 ($SD=11.8$) at baseline, 6 months post-release, and 12 months post-release, respectively.

These findings suggest the effectiveness of prison MTC treatment in improving mental health symptoms for female offenders with substance use disorders, and underscore the importance of adapting treatment to address mental health.

⁶ SD=standard deviation.

Re-entry MTC: preliminary findings at the 12-month follow-up

This study is examining the critical point of transition occurring when inmates leave the institutional context of prison and return to the community, where continued treatment helps to sustain and solidify gains accruing from treatment while incarcerated. On their return to the community, male offenders with co-occurring disorders were randomly assigned either to the Re-entry MTC (experimental) condition, or to 'Parole Supervision and Case Management', the control condition.

Regression analyses revealed significant differences favouring the Re-entry MTC condition for two measures of reincarceration, rate of reincarceration and days until reincarceration. Conducted 12 months after entering aftercare treatment,⁷ official DOC records revealed that offenders in the Re-entry MTC group (n=71) were less likely to be reincarcerated for a new offence than those in the control group (n=51); specifically, 20% of offenders in the Re-entry MTC group were reincarcerated compared to 39% of those in the control condition (OR=0.385; $p<0.05$). Cox regression was used to assess the number of days until reincarceration, which also revealed a significant difference; offenders in the Re-entry MTC group had a mean of 155 days until reincarceration, compared to 177 days for the control condition (Hazard OR=0.490; $p<0.05$). Another significant group difference was detected for a self-reported measure of criminal activity (OR=0.403; $p<0.05$), with offenders in the Re-entry MTC group (n=65) less likely (41%) to engage in criminal activity than those in the control group (n=44; 64%). Significant differences were not found for the number of days until criminal activity.

Although preliminary and not published, these findings point to the effectiveness of the MTC as a re-entry strategy for offenders with co-occurring disorders, thereby helping to expand the treatment options available to such clients once they have been returned to the community.

Discussion

Summary of MTC research

In summary, this series of studies examined the effectiveness of the MTC approach in comparison with alternative treatments for different populations with co-occurring disorders in a variety of treatment settings. In each of these studies, the MTC programme was refined to accommodate both the population and the setting, while retaining core features and TC elements. While the specific measures and domains varied somewhat from study to study, significantly better outcomes were detected for the MTC group in every study (reported in De Leon et al., 2000a; McKendrick, Sullivan, Banks & Sacks, 2006;

⁷ Admission to aftercare treatment coincides with the offender's release from prison; in a few cases, a day or two may intervene between release from prison and aftercare entry.

Sacks, De Leon, McKendrick, Brown & Sacks, 2003b; Sacks et al., 2004, 2008b, 2010a; Sullivan et al., 2007a, 2007b). Specifically, significant MTC treatment effects emerged for substance use and employment in Study 1 (Homeless), for substance abuse, crime, and mental health in Study 2 (Offender), and for psychological functioning in Study 3 (Outpatient). In Study 4 (AIDS), a sub-sample of clients with better functioning showed significantly greater improvement overall and for substance use and mental health (Sacks et al., 2010b). Early in 2009, SAMHSA's National Registry of Effective Programs and Practices (NREPP) reviewed the MTC and the research evidence for its effectiveness; subsequently, the MTC was included in NREPP's listing of programme models (SAMHSA, 2005b).

The availability of data across all four studies enabled meta-analytic tools to be used to examine the uniformity of the studies' findings. This single investigator meta-analysis (Sacks et al., 2010b) of results from four comparisons, encompassing a sizeable and varied co-occurring disorders population, found significant MTC treatment effects, which were similar and moderate, for five of six outcome domains: substance abuse, mental health, crime, employment, and housing; I^2 values indicated the effects were consistent across domains.

Training and technical assistance

Staff

To accommodate clients with co-occurring disorders, drug treatment staffing should include both mental health specialists and psychiatric consultation, as well as access to on- or off-site psychopharmacologic consultation. All treatment staff should have sufficient understanding of substance use and mental disorders to implement the treatment programme. Ideally, the staffing pattern would include mental health clinicians with master's level education, strong diagnostic skills, and substantial experience with clients who have co-occurring disorders. These clinicians could provide direct treatment services and a link to psychiatric services as well as consultation on other clinical activities within the programme. It is important that staff members function as an integrated team that incorporates cross-training, clinical team meetings and, most important, a treatment culture stressing teamwork and collaboration, which can often foster staff cooperation.

Unfortunately, substance abuse treatment programmes today are unlikely to have funding, organisational structures, or staffing sufficient to meet the needs of persons with serious mental disorders co-occurring with substance use disorders. Still, these programmes may well be able to cope with all severities of substance use disorders combined with any degree of mental disorder severity, apart from the most severe (Flynn & Brown, 2008). Another recent single-state survey of substance abuse treatment facilities (McGovern, Xie, Segal, Siembab & Drake, 2006) explored co-occurring disorders, barriers to the delivery of services, as well as practices currently in use. The report stated that, while a wide array of mental disorders was found state-wide, the proportion of serious

mental conditions (including schizophrenia) was low; further, that those with the most severe mental problems tended to be referred to the mental health system, while the larger proportion (with less severe mental disorders) were placed in substance abuse treatment where they received integrated treatment for both conditions (McGovern et al., 2006).

Training in co-occurring disorders

Staff trained exclusively either in mental health or in substance abuse treatment models often have difficulty accepting the other's view of the person, the problem, and the approach to treatment. An integrated model of treatment for clients with co-occurring disorders, such as the MTC, requires each treatment team member to have substantial competency in both fields. All mental health and substance abuse treatment staff require training, cross-training, and on-the-job training to adequately meet the needs of clients with co-occurring disorders. In addition, counsellors in MTC treatment settings must have training in five areas:

1. recognising and understanding the symptoms of the various mental disorders;
2. understanding the relationships between different psychiatric symptoms, drugs of choice, and treatment history;
3. appreciating the interactions of both conditions and the effects on the person and his/her treatment outcomes;
4. individualising and modifying approaches to meet the needs of specific clients and to achieve treatment goals; and
5. accessing services from multiple systems and negotiating integrated treatment plans.

Cross-training and open discussion of different viewpoints and challenging problems can help staff to reach a common perspective and approach for the treatment of clients with co-occurring disorders within each agency or programme setting. Treatment Improvement Protocol (TIP) 42 Substance Abuse Treatment for Persons with Co-Occurring Disorders (Center for Substance Abuse Treatment, 2005) and its associated curriculum (Substance Abuse Treatment for Persons with Co-Occurring Disorders Inservice Training; Center for Substance Abuse Treatment, 2007) provide a comprehensive review of the literature and a training curriculum for counsellors working with co-occurring disorders populations.

Training and technical assistance in the MTC

A four-stage system of training and technical assistance has evolved over the many years that the MTC has been studied. The format outlined here has been effective in advancing staff capabilities and in implementing MTC services for clients with co-occurring disorders. Training and technical assistance begins with 'Immersion Training', a series of didactic lessons that provide background and formal instruction, which can be delivered over several weeks, or

compressed into a short (several days) period of intensive instruction; these sessions often incorporate site visits that permit participants to observe existing programmes. A sample curriculum is presented in Table 2. On-site practical sessions follow ('On-site Technical Assistance'), where staff members learn through participation in each activity, with guidance and leadership from the Training and Technical Assistance Specialist(s). Briefing and de-briefing sessions bracket each activity to preview the training, its goals and objectives, and to summarise the activity, reinforcing the experience and the skills gained. Over several months, staff members gradually assume leadership responsibilities, and their reliance on the Specialist's input declines; regular telephone conferences ('Off-site Technical Assistance') are used to manage the various questions and issues that are encountered. Staff-led activities continue to be monitored, usually for several more weeks, until staff competency is unequivocally demonstrated. Subsequently, as part of a system of 'Continuous Quality Improvement', reviews are conducted each quarter to ensure continued competency and fidelity of the programme as delivered to the programme model. (For additional training and resource materials see Sacks et al., 1998 and Sacks, 1999.)

Continuity of care

Rationale

The evidence available suggests that co-occurring substance use and mental disorders, especially serious mental disorders, have chronic features that require extended residential treatment followed by a period of community-based support (i.e. continuing care) to solidify the successes achieved with MTC.

Continuity of care implies coordination of care as clients move across different service systems, and is characterised by three features: 'consistency' among primary treatment activities and ancillary services; 'seamless transitions' across levels of care (e.g. from residential to outpatient treatment); and 'coordination' of present with past treatment episodes. Because both substance use and mental disorders typically are long-term, continuity of care is critical; the challenge in any system of care is to institute mechanisms to ensure that all individuals with co-occurring disorders experience the benefits of continuity of care.

Table 2: MTC for co-occurring disorders – sample training and technical assistance curriculum

What is a Therapeutic Community (TC)?	describes the theory, principles, and methods of the TC presents the TC perspective of four views: person, disorder, recovery, and 'right living' describes the fundamentals of the TC approach with an emphasis on community-as-method; i.e. the community is the healing agent
What do we know about the treatment of co-occurring disorders?	reviews the literature on the increased prevalence of co-occurring disorders in the mental health, drug treatment, and criminal justice systems presents a selected review and classification of treatment approaches and principles provides a review of the research literature and its implications for practice describes research establishing the effectiveness of the MTC for co-occurring disorders
What is a Modified TC (MTC)?	describes the seven main alterations of the MTC for co-occurring disorders elaborates key changes in structure, process and interventions of the MTC for co-occurring disorders
How do we assess/ diagnose co-occurring disorders?	describes the main signs and symptoms of serious mental disorder (schizophrenia, bipolar, major depression) presents critical differences between Axis I and Axis II disorders and their implications for programme design discusses medication typically prescribed for various mental disorders and the role of pharmacotherapy in treatment for co-occurring disorders describes the ten main characteristics of addict populations presents three clinical instruments for assessing mental illness and substance abuse presents empirical data on profiles of clients with co-occurring disorders
How do we start/ implement the programme?	presents six guidelines for successful programme implementation provides practical advice on how to recruit, select, and initially evaluate emphasises how to establish the TC culture describes six techniques for engaging the client in treatment presents empirical data from studies of change develops a sequence for implementing the core MTC elements
What are the main interventions/ activities of the MTC?	provides a complete list and brief discussion of all MTC interventions in four areas; community enhancement (e.g. morning meeting) therapeutic/educative (e.g. conflict resolution groups, interpersonal skills training), community/clinical management (e.g. learning experiences; and work/other (e.g. peer-work hierarchy) delineates the interventions for both the residential and aftercare components uses illustrations to teach three main interventions
How do clients change?	presents the stages and phases of TC programmes describes the domains and dimensions of change describes an instrument for measuring change presents empirical data from the staff studies on the process of change
What is the role of the staff?	describes the staffing patterns and job responsibilities of MTC staff discusses the role of mental health and substance abuse uses exercises to establish teamwork and esprit de corps provides the major cross-training experiences
What is it like to be in an MTC?	discusses the 'nuts and bolts' of MTC operations provides a description of a typical day in the life of MTC residents demonstrates a typical schedule for a day/week in the MTC addresses the concerns/issues of non-MTC trained staff

Recovery

The primary purpose of continuity of care is to support and sustain recovery. Conceptual developments and research in both the substance and mental health field support a continuity of care model. In the substance abuse field, such support is rooted in three well-established concepts: (1) recovery models derived from the prototypical Alcoholics Anonymous disease-and-recovery model, which perceives addiction as a progressive illness characterised by the permanent inability to control alcohol use, and where the recovery component is comprised of a self-constructed programme centred on peer support (Cook, 1988; Yalisove, 1998); (2) the recovery perspective, which acknowledges recovery to be a long-term process of internal change that proceeds through various stages (De Leon, 1996; Prochaska, DiClemente & Norcross, 1992); and (3) the chronic care model, which emphasises the similarities between substance use disorders and other chronic medical conditions (type 2 diabetes mellitus, hypertension, and asthma), and suggests that treatment should shift from acute illness to long-term care approaches (McLellan, Lewis, O'Brien & Kleber, 2000).

The disease-and-recovery model has been tempered and expanded with recent conceptualisations, such that 'recovery from addiction' is more precisely defined to be 'a voluntarily maintained lifestyle characterised by sobriety, personal health, and citizenship' (Betty Ford Institute Consensus Panel, 2007, p. 222), with a substance use disorder diagnosis being prerequisite (one cannot recover from a condition that never existed). Recovery, then, is more than sobriety, which, while a necessary component of recovery, is not in itself sufficient; other contributing components and characteristics include three main ideas (Betty Ford Institute Consensus Panel, 2007): (1) recovery depends on health and social conditions, which are not only important in preventing relapse, but also contribute to recovery for affected persons, their families and friends, and society as a whole; (2) recovery is an individual achievement, typically attained through multiple methods, and not dependent upon any specific approach – no one path leads to recovery for all; (3) recovery, while an impermanent condition, is not confined to a particular moment; rather, recovery status may change without active management to sustain it, which is expressed through the use of phrases such as 'in recovery' or 'recovering'.

In mental health, a similar and detailed recovery model has evolved, deriving impetus from the contemporary view that recovery from mental illness is possible for more than a few, and perhaps for most (Davidson & Roe, 2007; Green, 2004). Recovery is to be approached from the person's (not the professional's) perspective, considering the role that treatment plays in recovery, rather than the role that recovery plays in treatment (Davidson, O'Connell, Tondora, Styron & Kangas, 2006, p. 643); the contemporary model of recovery from mental illness depends upon the transferral of 'agency' from the clinician to the individual, or 'consumer' (i.e. the consumer becomes the director, the person who orchestrates the course of treatment). The ultimate objective of recovery is to achieve a self-defined 'meaningful and satisfying life', which encompasses the potential of problems or symptoms recurring. Today,

recovery is framed as each person's unique journey of healing and transformation, undertaken to construct a life beyond illness, using 'helping relationships' with professional, peer, and family partners to establish an identity removed from disability, with a concomitant transferral of agency from the clinician to the consumer (Green, 2004; SAMHSA, 2005a; Shepherd, Boardman & Slade, 2008).

In late 2004, the US government gathered 110 experts to arrive at a national consensus of mental health recovery; their consensus statement defines mental health recovery as '... a journey of healing and transformation enabling a person with a mental health problem to live a meaningful life in a community of his or her choice while striving to achieve his or her full potential' (SAMHSA, 2005a, p. 1). Ten 'fundamental components' were presented to support their consensus statement (i.e. self-direction; individualised and person-centred; empowerment; holistic; non-linear; strengths-based; peer support; respect; responsibility; hope; SAMHSA, 2005a), which are professionally accepted and promoted in the US (e.g. National Association of Social Workers, 2006), and congruent with those structures promoted outside the US (e.g. Brown & Kandirikirira, 2007; Scottish Recovery Network, 2008; Shepard et al., 2008).

Treatment approaches

MTC residential aftercare models

These programmes retain the core features of the MTC but add elements specific to the co-occurring disorders population being treated and necessary for reintegration with mainstream living. Thus, in Study 1 (Homeless), the aftercare programme was conducted in supported housing facilities, and consisted of community meetings (located in the supported housing facility), with continued treatment and support groups held in an associated day treatment programme (located outside the supported housing facility). In addition to co-occurring disorders treatment and support, Study 1 aftercare emphasised housing and employment (Sacks et al., 2003b). In Study 2 (Offender), the aftercare programme, housed in a Community Corrections apartment-like facility, consisted of community and peer support meetings with certain treatment services provided at local treatment facilities. Along with co-occurring disorders treatment and support, the Study 2 aftercare programme incorporated elements related to criminal thinking and behaviour, as well as employment (Sacks et al., 2003a). Both of these aftercare programmes contained elements to foster reintegration with mainstream society. In general, quasi-experimental studies (Study 1, Homeless; Study 4, AIDS) suggest that aftercare programmes sustained the gains of the more intensive residential MTC facilities (Sacks et al., 2003b, 2010a).

Modified TC outpatient models

Many clients entering outpatient substance abuse programmes have co-occurring mental problems, despite the fact that these programmes are not

typically equipped to provide services for mental conditions, let alone the accompanying health and social problems.

The MTC orientation of the DART outpatient programme track (Study 3, Outpatient), described in this article, was intended to accommodate persons with co-occurring disorders within an addiction treatment setting. The MTC features imported to the DART track and incorporated with the standard TC programme elements were designed: to strengthen identification with the community (i.e. community meetings); to teach clients about mental illness in a Psycho-Educational Seminar (e.g. Jerrell & Ridgely, 1999; Sciacca, 1987-88, 1992); to assist clients to cope with trauma within the context of addictions and recovery using the Trauma-Informed Addictions Treatment approach (Harris & Fallot, 2001; Harris et al., 2001; Sacks & Sacks, 2005); and to expand clients' ability to negotiate health and social services agencies using case management skills, imparted through a Case Management component (Brown, Farrell & Voskuhi, 1999; Brown et al., 2001; Brown et al., 2004). In Study 4 (AIDS), the MTC outpatient aftercare programme was developed within a specialised programme facility of the provider agency that operated the residential MTC programme. Along with treatment and support groups, the Study 4 outpatient aftercare programme included interventions to encourage adherence to antiretroviral medication and to promote general health.

Other models significant to continuing care

Community lodges

To provide continuing support to individuals leaving mental institutions, Fairweather and colleagues developed a programme that combined peer support and assistance with self-supporting small business enterprises in democratically-run residential housing (Fairweather, Sanders, Maynard & Cressler, 1969). Staff served as consultants to lodges that were self-supporting (organising businesses that included gardening and janitorial services), and that were found to be more effective in maintaining individuals in the community than the standard care typically provided to mental patients (Fairweather, 1978).

Oxford Houses

First organised in 1975, Oxford Houses offer abstinence support and accommodation in the community to former addicts who are willing to live together (Molloy, 1990; O'Neill, 1990). Oxford Houses are democratically operated facilities in which all members share expenses, household tasks, and decision making (options are presented at regular business meetings). Residents employ 12-step principles and are expected to attend AA/NA meetings, but the programme is not affiliated with AA or NA. At two-year follow-up, Oxford House participants, including those with co-occurring disorders, were found to have remained abstinent at rates greatly exceeding those achieved with treatment alone (e.g. Jason, Davis & Ferrari, 2007).

Telephone-based follow-up

In an effort to provide extended continuing care while containing costs, McKay and colleagues (2004) developed a programme that, after an initial face-to-face session, used weekly 15-20 minute telephone calls. The calls reviewed behaviours over the preceding week, and assessed progress toward one or two goals that the client and counsellor together had chosen. While access to a mutual support group was encouraged for the first month (or longer, if appropriate), the programme core consisted of brief counselling in conjunction with monitoring. Follow-up reports of findings cited lower levels of cocaine and alcohol use for those receiving telephone counselling than for control groups (McKay et al., 2004; McKay, Lynch, Shepard & Pettinati, 2005a; McKay et al., 2005b).

Clinical research

The reports and synthesis discussed in this article confirm individual study findings favouring MTC programmes over comparison conditions among different co-occurring disorder populations and treatment settings. The authors acknowledge that residential treatment is expensive and, at the same time, that revenues are constrained. Within such an environment, three areas of inquiry are recommended.

- (a) Studies that target those clients who are more likely to benefit; for example, persons 'with more severe problems at intake [are] more likely to benefit from longer care in residential services [TC and MTC], affirming the importance of maintaining long-term intensive care as a treatment option' (Simpson, Joe, Fletcher, Hubbard & Anglin, 1999, p. 513).
- (b) Studies into aftercare models and that identify the relative contribution of residential and aftercare models, since continuity of care is recognised to be essential for the treatment of co-occurring disorders. For instance, a potential study would use a randomised design with crossover features to assign subjects either to an MTC or to a comparison condition for primary treatment, after which all subjects (completers and dropouts) would be assigned to aftercare programmes, either MTC or an alternate treatment condition.
- (c) Studies that export components of residential MTC treatment to outpatient treatment programmes to clarify whether or not benefits of residential MTC programmes will translate to less controlled outpatient situations; if residential MTC elements are determined to be portable, the capacity to deliver effective services will be substantially increased.

Conclusion

The findings from these studies and syntheses augment the research base of support for the effectiveness of MTC treatment for clients with co-occurring substance use and mental disorders. The development of aftercare models and

the clarification of the relative contributions of primary and aftercare treatment are imperatives, particularly when considering the importance of continuity of integrated care for those with co-occurring disorders. The MTC approach has, to date, accumulated sufficient support to encourage policy and programme planners to consider its application for persons with co-occurring disorders in a variety of settings.

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Reviews

The Therapeutic Community: Theory, Model and Method

George De Leon (2000)

Springer Publishing Company, New York

The book, *The Therapeutic Community: Theory, Model and Method*, is a publication which in a broad and yet informative way describes the content and essential elements of the model itself, whilst at the same time illustrating these different elements in an understandable and recognisable way.

De Leon begins with a historical overview of the history of the therapeutic community (TC) for addictions. This leads into an informative and helpful section which examines the nature of addiction and sets out the TC view of substance use disorder (SUD) as a disorder of the whole person. There follows an in-depth description of the treatment process from beginning to end, explaining the theoretical and practical basis for each element or stage of the model. In the final section, De Leon reflects upon the nature of change and the implications of this for the TC model.

Each chapter of the book is developed so that, as the reader discovers the different elements, these elements build upon each other in a way that leads the reader through the whole treatment process in a logical and coherent journey. De Leon provides concrete examples, research information and conclusions at the end of each chapter. This is an excellent tool for the reader, helping to promote understanding of a complex method of treatment.

The book is a highly sought after tool for people who are engaged in and interested in the TC for addictions and for those who work at different levels within that model. Indeed, we have found it valuable for the education of community members in treatment themselves. In addition, the publication also provides a valuable insight for other professionals working within the field who may not be aware of this model and method of treatment.

As Dr De Leon describes in this publication, historically much of the knowledge in the TC had been transmitted orally. Thus, this publication is an invaluable resource, codifying and explaining a process, which has been in danger of

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therapeutic communities, 31, 2, summer 2010
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misinterpretation and dissolution, through a meticulous and painstakingly thorough description of the theory, the model and its methodology. This work provides both an informative description of the generic TC for addictions and a solid foundation upon which to consider and evaluate the essential elements. With the TC for addictions severely marginalised within the treatment service approaches in Europe, a detailed framework explaining the scientific basis of the model is critical. With this publication as a basis, the reader can understand the need to retain fidelity to the model and make modification without risking the weakening of its potential.

Many colleagues in European TCs use *The Therapeutic Community: Theory, Model and Method* within staff training, as a guide alongside the training compendium *The Therapeutic Community Curriculum*, published by the US Department of Health and Human Services.¹ At Phoenix House Haga, we find that both the book and the training curriculum, when used together, provide us with an excellent combination of training tools and information for people working in TCs.

However, the contents of the publication are not always directly adaptable to every country, due to various regulatory and cultural differences. For example, in Norway, the use of sanctions and privileges is not always possible to implement as described in the book, due to treatment legislation. Regarding the generic description of the cardinal rules, this also challenges some TCs and perceptions regarding (for example) sexual relationships. It is often debated that a sexual relationship which does not involve misuse of power or manipulation cannot be seen in the same context as direct violence, and some will feel uncomfortable at their grouping together in this volume. That said, a truly pivotal publication will always both provide us with information and knowledge in a detailed and coherent way and simultaneously challenge our preconceptions.

This publication, when combined with practical experience, provides a remarkable description of the TC. On behalf of the community, staff and residents of Phoenix House Haga, we strongly recommend this book to all who are interested in substance abuse treatment and especially to those who work within the field.

¹ *The Therapeutic Community Curriculum* is available as a free download in PDF format, from the Scottish Addiction Studies Online Library: <http://www.drugslibrary.stir.ac.uk/>

The Therapeutic Community

DVD (2005), Presented by: George De Leon, Directed by: Rod Mullen,
Produced by: Amity Foundation, Distributed by: psychotherapydvds.com

This three-disc set of lectures, with an overall playing time of 177 minutes, effectively takes De Leon's book, *The Therapeutic Community: Theory, Model and Method* and presents it as a series of lectures interspersed with illustrative footage from therapeutic communities (TCs) in practice. The set has been directed and produced by Rod Mullen and other staff at Amity Foundation, a well established and highly regarded TC in the USA. Thus the issues are approached with great sensitivity born of an integral understanding of the material. Illustrative footage is always pertinent and to the point. The whole is well edited and professionally shot.

The first disc (*Volume I: The Therapeutic Community Perspective*) examines the TC view of the substance use disorder as a disorder of the whole person. De Leon explains how this view fits with current scientific knowledge and how the sequelae of the disorder are addressed within a therapeutic environment which is structured in order to encourage change of the whole person and not simply to alter drug-taking behaviour.

The subsequent disc (*Volume II: Community as Method*) details the theory behind TC practice and the use of the community itself as a treatment method to bring about the required change in the individual and his/her peers.

The final disc (*Volume III: Components of a Generic Therapeutic Community*) provides a thorough and immensely helpful explanation of the various components of the TC, how they work, what they are intended to deal with and how they fit together within the whole.

All in all, this is a well-crafted and comprehensive training package that can provide an extremely useful input either to formalised staff training or as a short seminar for TC residents. I have used clips from the DVDs for some years now in our online course, *Certificate in Drug and Alcohol Studies*. The illustrations from practice are particularly helpful, though I recognise that they might pose problems in countries or organisations where there is strict policy regarding clients-on-camera.

De Leon is a thoughtful and insightful presenter and this series offers an opportunity to hear an acknowledged expert on the drug-free TC speaking with both authority and passion about the principles of TC methodology.

My only minor criticism is that there is no contents-listing with the package. Some form of small booklet in each disc case setting out the content and running order (perhaps including running time for each item) would have been helpful. As it stands, the viewer has to load each disc before they can find an indication of content. But I accept that this is really a very minor niggle and one which will probably not bother many purchasers.

As a training aid, the discs work well alongside the book on which they were based. With a little imagination, I envision they could be used together with the training curriculum manual, published by the US Department of Health and Human Services (see the review of *The Therapeutic Community: Theory, Model and Method* by Slater and Hafstad elsewhere in this section).

Oddly, this set of discs is not very well known in the TC world. A shame, since it is clearly an extremely useful resource for those involved in the training and development of the drug treatment workforce in whatever capacity and would be a valuable aid in encouraging TC residents to broaden their understanding of the programme(s) they are involved in.

The Therapeutic Community for Addicts: Intimacy, Parent Involvement and Treatment Success

Martien Kooyman

(1993), Swets & Zeitlinger, Lisse

In the book of Ecclesiastes the Teacher famously remarks: 'What has been will be again, what has been done will be done again; there is nothing new under the sun.' Phoenix Futures, with five Adult therapeutic communities (TCs) and two Family services, has recently been considering our 'Residential Strategy'. The findings are remarkably similar to Kooyman's and demonstrate that the Teacher's principle rings true. This book, which was published in 1993, should be an essential read and could have saved Phoenix Futures some time in research!

Kooyman summarises the main theories about addiction, about treatment, and then how the TC addresses each addiction and treatment theory. This is a neat and eloquent summary of how the TC works within the theories: systems, behavioural, social and so on. As the author says, it works without the resident needing to know why, and the essentials are contained in the philosophy which most TCs have adopted from Daytop Village: 'We are here because there is no refuge, finally, from ourselves ...' Kooyman recognises though that the TC approach is not for everyone, and provides a useful synopsis (on p. 135) of the indications and contra-indications for treatment in a TC, both absolute and relative.

Chapter 2 describes the evolution of TCs in Europe, starting with Maxwell Jones and then moving to the Phoenix House model, with the baton passed from TC to TC, usually by ex-staff or ex-residents. We must ask ourselves who are the keepers

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therapeutic communities, 31, 2, summer 2010
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of the baton, now that the original pioneers are moving on. This chapter is a humbling history lesson for those of us without the personal experience – surely a diminishing number. Kooyman does not limit his historical narrative to the general. He describes the evolution of Emiliehoevre in The Hague in Chapter 10, followed by a chapter on evaluating its success.

Treatment success is a central theme of the book and Kooyman brings together much of the literature regarding outcomes from Europe and the US. By nature of the book's timeframe, though, this is largely from the 1970s and 1980s, so any modern reader would need to add recent knowledge to this useful foundation stone.

The book is not without its drawbacks. It lacks a central thread, possibly trying to cover too much ground in terms of intimacy and parent involvement. From the subtitle you would assume that there is a long discourse about parents, family, and carers, but this seems to be more a by-product of the outcomes research than a particular focus of the book. The research is startling in its conclusions about parental involvement helping clients to stay in treatment and thus obtain better outcome results: in Emiliehoevre nearly 65% of clients who had parents participating in the groups were successful compared to 25% without this support. It also cites other studies and particularly the development of CeLS in Rome where the whole community evolved with parental involvement as a centrepiece. Parental involvement is no doubt still important, but, as the study does point out, in the UK, Germany and Sweden, families tend to live further from the TC. This is one example though of how the book needs to be viewed in the context of its time. Nowadays we can address barriers like this through technology such as video conferencing, which could enable what was not possible in the past.

Maybe there is something new under the sun. Whilst the issues are not new, the solutions and approach can be. This book is an invaluable aid to the background of TCs, the research foundation, and parental involvement up to the 1990s. The context of parental involvement has changed – with rising divorce rates and social mobility. The approach now may need to be once more of carer involvement, and about defining who carers are. With the 'Friends' generation, sometimes friends are more significant to the client than siblings or even parents. Kooyman's book is a good starting place for looking at such issues and, nearly 20 years on, it generates valuable questions both from what it says and doesn't say.

Therapeutic Communities for the Treatment of Drug Users

Barbara Rawlings and Rowdy Yates (Eds.)

(2001), Jessica Kingsley, London

Therapeutic Communities for the Treatment of Drug Users by Rawlings and Yates is a useful book for anyone engaged in residential drug and alcohol treatment. Not only does the book provide a number of historical and current perspectives, it provides a real flavour of the complexities of working and living in a therapeutic community (TC).

An excellent historical context of the TC movement by the editors provides a clear overview of the structure of the book. In Part 1, Eric Broekaert and Salvatore Raimo provide a fascinating insight into the inner workings of TCs, describing the generic structure as well as the key differences between the concept-based model and the democratic model. The comparison of a hypothetical resident in a concept-based TC with the real experiences of an actual resident in the more evolved, democratic version is especially useful for the practitioner wanting to integrate aspects of the TC model in modern residential treatment.

Despite some overlaps between the chapters, Part 2 of the book, which describes the TC situation worldwide, provides a fascinating view of TCs in Europe, the USA and Australia. In my view, the overlaps are slightly repetitive but not irritating and simply provide the different authors' perspective on an international therapeutic phenomenon. For the practitioner, the chapter by George de Leon is especially useful, since it provides a detailed overview of the Community as Method as well as the generic components of the TC model. The chapter clearly shows De Leon's vast experience of the subject matter and motivates the reader to delve deeper into the subject. He also adds a useful section on the efficacy of TCs.

Part 3 of the book provides an intriguing insight into life in a TC, and Alan Woodham's chapter especially brings the theoretical concepts explained in earlier chapters to life. Keith Burnett's lessons for practice are again hugely useful for the practitioner and his experience that residents are generally keen to participate in research that will lead to improved outcomes should be taken on board by all those working in TCs. The questions raised by staff of the Ley Community about their transition from resident to 'professional staff' have left me thoughtful about the mechanisms used by executive staff in TCs to facilitate this process, and is something that probably warrants more thought and research.

Part 4 of the book, which describes some of the modifications developed for TCs, raises some of the most important questions in the current TC movement and again provides answers based on empirical research. The chapter by Mason, Mason and Brookes describes a piece of sound research and offers clear recommendations to all those involved in the Prison system.

The view of Yates and Wilson in Chapter 10 that 'to be radical is to go to the roots' is wholeheartedly supported by this reviewer as a clear message for the practitioner to engage in constant action research and critical renewal if we want to stay relevant to constantly emerging social challenges.

The topic of re-integration within the community has been neglected for too long and Paul Goodman and Karen Nolan give a frank view of the challenges of resettlement in Chapter 10.

The final chapters on evaluation are an overview of the evidence provided for the efficacy of TCs supported by an outcome study in Norway showing a methodology which others could well copy if they wish to remain financially sound.

I would recommend this book to anyone interested in both the theoretical and practical aspects of TCs for the treatment of drug users.

*[Exclusion advertisement on this page please.
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Guidelines for Contributors

Therapeutic communities were born out of the radical and creative forces that established alternative forms of mental health care, from the 1950s to the present day. Therapeutic environments, influenced by the ideas developed by this movement, exist in psychiatric settings, social work or penal institutions, in community schemes, in projects for the homeless, in the drug and alcohol fields, and in educational and industrial settings. The Journal aims to build upon this creative legacy by stimulating a continual critical re-thinking of the possibilities for developing therapeutic and relational potential, within whatever communities readers work and live. It aims to provide a forum in which those engaged in developing, managing and sustaining therapeutic cultures can communicate their experiences, the effects of political and social policy on their own settings, their ideas, developments and findings; and can disseminate good practice and explore what happens when things go wrong.

The Journal publishes academic papers, case studies, empirical research and opinion. The Journal is interested in publishing papers that critically and creatively engage with ideas drawn from a range of discourses: the therapeutic community movement and other related professional practice, psychoanalysis, art, literature, poetry, music, architecture, culture, education, philosophy, religion and environmental studies. It will be of value to those who work in health services, social services, voluntary and charitable organisations, and for all professionals involved with staff teams, service users and experts by experience in therapeutic communities, therapeutic environments and supportive organisations.

General Guidelines

Original contributions that fall within the scope of the Journal are welcomed, including articles on current issues, practice, theory and research (academic papers), case studies of particular communities or organisational environments, and personal contributions arising from the experience of the author. The Editorial Collective uses different criteria to assess contributions in these categories, and the following guidelines are provided. It will assist us in assessing papers if authors indicate which guidelines they have followed.

Final articles for publication should be typed in double spacing and submitted in Word format as an email attachment to Ginette Taylor, the Journal Manager (ginette.taylor@nottshc.nhs.uk). All articles are submitted for peer review by anonymised assessors drawn from the Editorial Collective, the International Editorial Advisory Group, and a panel of assessors. Authors will receive acknowledgement of their submissions.

Note: For authors submitting an article where English is a second language, it is recommended that the article be proofread by a fluent interpreter prior to sending, in order that intended meanings can be checked in the translated article.

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The Editorial Collective aims to ensure that all articles published in the Therapeutic Communities Journal report on work that is morally acceptable. To this end, the Journal will appraise the ethical aspects of any submitted work that involves human participants and will ensure that authors obtain informed consent from any participants included in their research.

Academic Papers

These can include reports of original research, papers developing original links between theory and practice, review articles and critiques of current practice. The normal

conventions of academic papers should be observed, with a brief abstract (up to 150 words), followed by a review of the relevant literature, statement of the problem, method, findings, discussion and conclusion. References should follow the APA 5th style. Academic papers should normally not exceed 5,000 words excluding references (articles over 8,000 words in length will not be considered for inclusion and will be returned to the author unread).

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These describe examples of practice, innovation, action research or evaluation in the practitioner's own unit. They should include: a brief description of the setting, of the piece of work undertaken and the reasons for doing it; a clear account of the process and findings with relevant data in easy to read tables or graphics; a brief conclusion with discussion of the findings and their implications for practice within the unit and perhaps more widely. A small number of relevant references may be included, following the APA 5th style, but no literature review is needed. Case studies should normally not exceed 2,500 words.

Commentary/Response

The Journal would welcome short papers (up to 2,000 words), which address topical issues. These issues may arise from recent themes or views addressed within the papers in the Journal, from within therapeutic communities, they may emanate from strategic developments within the Association of Therapeutic Communities (for example the issues of accreditation of communities and training), or be generated by national and international policy initiatives that have an effect on therapeutic practice, or the way in which it is thought about or conducted. We are seeking relevant commentaries, which are reflective and thoughtful, yet critical and perhaps at times controversial; and views and opinions which will stimulate debate, provoke thoughtfulness and hopefully new ideas, with which to approach contemporary issues.

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We would welcome short letters (up to 200 words) from readers picking up on issues raised within the Commentary/Response section that develop and debate issues further.

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Readers are invited to send in personal accounts of some aspect of their work that may be of interest to others. The intention of such contributions is to share experience and problems, raise questions and encourage discussion. These may describe an event or situation involving the writer, occurring at the individual, group or organisational level. Contributions from experienced practitioners as well as novices are welcomed. The account should begin with a brief description of the setting, participants and background, followed by details of the particular event or situation and, if appropriate, the responses of the writer and others involved. No literature review, theoretical exposition or references are needed. Confidentiality should be maintained by disguising the identities of individuals or organisations, and authors may request that contributions are published without attribution. Personal contributions should normally be limited to 1,500 words. With the author's permission comments may be sought from practitioners with relevant experience to appear alongside personal contributions.

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therapeutic communities

31, 2, summer 2010

Editorial

Straw Men: Exploring the Evidence Base and the Mythology of the Therapeutic Community

Rowdy Yates, George De Leon, Rod Mullen and Naya Arbiter

Papers

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David Turner

Is the Therapeutic Community an Evidence-based Treatment? What the Evidence Says

George De Leon

Cost Benefits of Therapeutic Community Programming: Results of a Self-funded Survey

James Pitts and Rowdy Yates

Recovery We Can Afford: An Analysis of a Sample of Comparative, Cost-based Studies

Rowdy Yates

Therapeutic Communities in United States' Prisons: Effectiveness and Challenges

Harry K. Wexler and Michael L. Prendergast

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Stanley Sacks and JoAnn Y. Sacks

Reviews

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