Case management

In Britain case management is now seen as the core mechanism for transforming isolated episodes of care into coherently staged and comprehensive recovery and reintegration programmes, but engineering this transformation is complex and vulnerable to influences beyond the programme's control. An expert Euro-US collaboration has identified six key questions and trawled the literature for answers, clarifying what the different approaches can and can't be expected to achieve.

by Wouter Vanderplasschen, Richard C. Rapp, Judith Wolf & Eric Broekaert

Drs Vanderplasschen and Broekaert are from the Department of Orthopedagogics of Ghent University in Belgium; Professor Rapp is from the Center for Interventions, Treatment, and Addictions Research at Wright State University in Ohio, USA; Dr Wolf is from the Trimbos Institute and the Department of Social Medicine at the Catholic University of Nijmegen in the Netherlands.

Contact: Dr Wouter Vanderplasschen, Department of Orthopedagogics, Ghent University, H. Dunantlaan 2, B-9000, Ghent, Belgium, wouter.vanderplasschen@ugent.be

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SEEN AS ONE OF THE MOST important innovations in mental health and community care,[1] case management is a client-centred strategy to improve coordination and continuity of care, especially for people with multiple needs.[2] Despite controversy over effectiveness, it has a long history in the treatment of groups with different mental health needs in the United States, Australia, Canada and Europe.[3 4 5 6 7]

From the 1980s it was extended to substance use disorders[8 9 10] as these became recognised as multifaceted, chronic and relapsing conditions, requiring a comprehensive, continuous approach.[11 12] Increased need for substance misuse case management has also been attributed to the growing complexity of systems of care and of individuals' problems.[11 18] Though modelled after mental health examples, case management for substance use developed separately, reflecting the divide between these sectors.[13 14 15]

Lightfoot and colleagues were the first to show that this intervention could reduce attrition from addiction treatment and improve psychosocial and drug and alcohol outcomes.[16] Anticipating similar improvements, since the 1990s hundreds of programmes in Canada and the United States and some in Europe have implemented case management.[14 17]

DIVERSE APPLICATIONS, UNIVERSAL PRINCIPLES

There is no universally accepted definition of case management, and practice varies due to diverging aims, target populations, programme and system variables, and local concerns.[19 20 21] One of the first definitions saw it as "that part of substance abuse treatment that provides ongoing supportive care to clients and facilitates linking with appropriate helping resources in the community".[22] A more accurate characterisation lists its basic functions: assessment, planning, linking, monitoring and advocacy.[14]

But underneath this diversity are some broad principles applicable to almost every implementation. Case management is typically community-based, client-driven, pragmatic, flexible, culturally sensitive, offers a single point of contact, and aims to anticipate potential problems.

Given diverse practices, and given also that a coherent conceptual basis and robust implementation are powerful determinants of successful practice and outcomes,[6 21 23 24 25] we decided to review the literature on the implementation of case management for substance use disorders. Our goal was to derive insights into the dos and don'ts from experiences in the USA, the Netherlands and Belgium, loosely representing three points on a continuum.

This endeavour had its origins in a workshop on case management in March 2001, where researchers from these countries explored the similarities and dissimilarities between their national approaches,[26] leading to the joint identification of six key questions. These we took as our framework, elaborating on each by drawing on the available literature and empirical evidence published since the 1990s.

1 Which problems, objectives and target groups?

The observation that many problem substance users have other significant problems has been the main impetus for case management as an enhancement to substance-focused treatment.[27 28 29 30 31] Further incentives in the United States were the paucity and patchy accessibility of services, cost containment, and shortcomings in the quality of services including accountability, continuity, comprehensiveness, coordination, effectiveness, and efficiency.[14 18 19 32]

Implementation in the Netherlands was driven not merely by economic concerns, but also by the poor quality of life of many chronic addicts and the nuisance they cause in city centres.[31] In Belgium, the chronic and complex needs of many problem substance users and the lack of coordination and continuity of care were the main drivers.[30]

Compared to the United States, in Europe case management has not been widely applied among substance users. Reasons include greater availability and accessibility of services, less stress on cost containment, and conflicting findings on its effectiveness for mentally ill patients. However, in Europe too, recent reforms in substance use treatment have shifted the focus towards accessibility, continuity, cost-effectiveness, and efficiency, stimulating interest in case management.[15 33 34] Since 1995, over 50 projects have been developed in the Netherlands and in Belgium, between five and ten.[30 31]

In the United States, case management has successfully been implemented for enhancing treatment participation and retention among substance users in general,[35 36 37 38] and for populations with multiple needs experiencing barriers in accessing or keeping in touch with services, such as pregnant women,

mothers, adolescents, chronic public inebriates, and patients also suffering from mental illness or HIV infection.[11 39 40 41 42 43 44] Most programmes aim for abstinence, while in Europe case management adopts a harm reduction perspective.

In the Netherlands, case management has mainly been directed at severely addicted people with multiple complications in their lives such as street prostitutes, mothers with young children, and people who are homeless or dually diagnosed, groups often served inadequately or not at all by existing services. Programme providers say this has contributed substantially to stabilising their clients' situations.[45]

In Belgium too, case management has mainly been reserved for substance users with multiple and chronic problems, improving both coordination of the delivery of services and drug-related outcomes.[46]

Related to a focus on the multiply problematic is the targeting of the *most* problematic clients. In mental health, such targeting has been associated with adverse outcomes,[6] but studies of substance users have shown it to be both beneficial and cost-effective.[16 40 52 53 54 55 56] It can, however, pose practical problems, such as the difficulty of long-term planning for these clients, burnout among case managers, and the risk of clients becoming reliant on case managers.[21 46 53 57]

Target populations may also include substance users involved with the criminal justice system, reportedly leading to increased use of services and reduced drug use and recidivism.[47 48 50] However, uncertainty remains about the degree to which coercion affects outcomes from case management.[49 51]

BUT DOES IT WORK?

Our review of recently published (1997–2003) peer-reviewed studies of case management with samples of at least 100, reveals that in the United States this intervention has been relatively successful in achieving several of the intended goals. Similar outcome studies have yet to be conducted in Europe ▸ *table*, p. 16.

Studies comparing case-managed clients with other similar clients have found that case management significantly increases treatment access, participation and retention, or service use.[36 37 58 59 62 63 65 66 67 68] However, studies differ on whether drug-related outcomes also improve. Generally, small to moderate improvements have been found relative to comparison groups,[58 60 64 65 67] but these tend to decline after nine to 12 months[38 59] or fail to significantly improve on those achieved by other interventions such as behavioural skills training or alternative models of case management.[44 62]

Finally, various studies have shown significantly improved outcomes compared to the baseline clients started from,[34 35 46 61] but without a comparison group, these improvements may wrongly have been attributed to case management.

2 Where does case management lie in the network of services and how can coordination be enhanced?

It's often argued that the success of case management largely depends on its integration in a comprehensive network of services.[8 21 69 70 71] Unless it is ultra-sensitive to potential system-related barriers such as waiting lists, inconsistent diagnoses, opposing views, and lack of housing and transportation, case management risks being just one more fragment of a fragmented system of services.[72]

In a US study, though it failed to produce results in the first 12 months, case management did improve outcomes after 26 months.[37] Researchers concluded that various system variables, such as how well the programme was implemented and the availability and accessibility of services, had exerted a strong influence. Recommendations included extensive training and supervision to foster collaboration, and pre-contracting of services to ensure availability.

Access to treatment can markedly improve when case managers have funds to pay for it.[58] In addition, formal agreements and protocols are needed to define the tasks, responsibilities and authorities of case managers and the other services involved, and to facilitate the use of common assessment and planning tools and the exchange and management of client information.[13 14 21 57 73]

CASE MANAGEMENT IS A CLIENT-CENTRED STRATEGY TO IMPROVE COORDINATION AND CONTINUITY OF CARE, ESPECIALLY FOR PEOPLE WITH MULTIPLE NEEDS

Case management can be implemented by or in association with an existing organisation such as a hospital or a detoxification unit, or as a separate, specific service organised jointly by several providers to link clients to their own and other services. The former structure has been widely applied in the United States to enhance participation and retention and avoid relapse, while the latter is frequently used in Belgium and the Netherlands to address populations at risk of falling through gaps in the system.

In Iowa, three types of case management which differed in where the service was located have been compared with a control condition.[63] The variant with case managers housed inside the drug treatment agency (rather than at another site or reached via the phone) significantly increased access to services, suggesting that the accessibility and availability of case management is a factor in its success.

3 What models should be used and what are their crucial constituents?

Although most real-world examples only vaguely resemble pure versions of these models, in respect of substance use disorders, four models of case management have usually been distinguished:[14 19]

- the brokerage/generalist model;
- assertive community treatment or intensive case management;
- the strengths-based model; and
- clinical case management.

Model selection should be dictated by the services already available, objectives and target populations, plus (if available) empirical evidence on what is likely to work best.

TRACK RECORDS OF DIFFERENT MODELS

Assertive community treatment and especially intensive case management focus on a comprehensive, team approach, and on directly providing assertive outreach and counselling services, features used in the United States to help reintegrate prisoners and other populations.[24 47 49]

In the USA, a randomised study of 135 parolees, half of whom received case management, found little differential effect on

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GOLDEN BULLETS Key points and practice implications

- Case management aims to match the multifaceted, chronic, nature of substance use disorders with similarly multifaceted services and continuity in the form of the case manager(s).
- Target populations are typically those with multiple and severe needs.
- Research generally finds modest improvements in treatment access and participation and in use of ancillary services, but studies differ on whether drug-related outcomes also improve.
- Successful initiatives have stayed close to recommended models, been robustly implemented, provided extensive training and supervision, had administrative support, adopted a team approach, and integrated case management within a comprehensive network of services.
- Formal agreements are needed to define the tasks, responsibilities and authorities of case managers and the other services involved.
- Protocols and manuals and the identification of key features of the different models should contribute to a more consistent application.

Overview of main results of recently (1997-2003) published studies in peer-reviewed journals about case management for substance abusers with over 100 subjects

Study	Place	Type of study	N	Target population	Type of interventions	Results		
						Treatment access and participation	Use of other services	Drug-related outcomes
Conrad et al, 1998[59]	Hines, Illinois, USA	Randomised and controlled trial	358	Homeless addicted male veterans	CM residential care v. 21-day hospital programme with referral to community services	CM group stayed about 3 months longer in residential treatment	Both groups used substantial amounts of services	Both groups improved significantly. CM group had significantly better medical, alcohol, employment and housing outcomes after 6 and 9 months, but these differences disappeared after 12 and 24 months
Cox et al, 1998[52]	King County, Seattle, USA	Randomised and controlled trial	298	Homeless chronic public inebriates	Intensive CM v. standard treatment		CM group received significantly higher number of substance abuse treatment and other services	Both groups improved over time (18 months), but CM group had significantly fewer days of drinking (11.3 v. 15.3), more nights spent in own place (25.4 v. 21.7), and increased total income from public sources ($358 v. $269)
Drake et al, 1998[60]	New Hampshire, USA	Randomised and controlled trial	223	Dually diagnosed substance abusers	Assertive community treatment v. standard CM		No difference in number of days hospitalised	Assertive treatment group improved significantly more on some measures of substance dependence and quality of life, but there were no significant differences in improvements in relation to number of days of living in the community (171 v. 168), remission (43% v. 35%) and psychiatric symptoms after 36 months
Evenson et al, 1998[61]	Saint Louis, Missouri, USA	Retrospective study	280	Substance abusers in a comprehensive treatment and rehabilitation programme	Community programme including intensive CM	Non-significant association between longer length of stay and more favourable outcomes	High degree of satisfaction with services received (32% satisfied and 62% very satisfied)	Significantly improved functioning in 11 domains such as global functioning (GAF score fell 17 points), drug use, productivity, legal problems, and distress, and compared with baseline, 30% more were living independently
Godley et al, 2002[65]	Illinois, USA	Randomised and controlled trial	114	Adolescent substance abusers in short-term residential treatment	Assertive continuing care including CM v. usual continuing care	No differences in length of stay and treatment completion status	CM group significantly more likely to initiate and receive continuing care services (92% vs. 59%)	CM group significantly more likely to be abstinent from cannabis (52% v. 31%) and fewer days of alcohol use (4.5 v. 8.1) 3 months after discharge
Huber et al, 2003[68]	Johnson County, Iowa, USA	Randomised and controlled trial	598	Substance users seeking treatment in a rural area	Strengths-based CM based either inside the treatment facility, outside at a social service agency, or conducted over a computerised voice mail system (telecommunication) v. a control condition	Clients who actively participated in CM were less likely to have legal problems (30% v. 43%) and experienced fewer days of family problems (3.1 v. 4.6), but were more likely to have a chronic medical status (32% v. 22%)	Clients in the telecommunication condition received significantly greater breadth and frequency of services, but duration was longer in outside CM condition	CM dosage was significantly related to more severe legal and family problems after 12 months
McLellan et al, 1999[37]	Philadelphia, USA	Controlled study but not randomised	537	Substance abusers in outpatient treatment	Clinical CM v. standard outpatient treatment		Significantly more of the CM group received alcohol (87% v. 68%), medical (58% v. 36%), employment (75% v. 39%) and legal services (39% v. 27%)	Both groups improved significantly in most life areas after 6 months, but the CM group showed significantly greater improvements in alcohol, drug, psychiatric, employment, and medical domains
Mejta et al, 1997[56]	Chicago, USA	Randomised and controlled trial	316	Injecting drug users seeking treatment through a centralised intake facility	Generalist CM v. control condition with limited referral information	CM group was significantly more likely to access treatment (98% v. 57%), to enter treatment rapidly (after 17 v. 188 days), and to stay in treatment (27 v. 14 months)		CM group had better treatment outcomes, including reduced drug and alcohol use
Rapp et al, 1998[62]	Dayton, Ohio, USA	Randomised and controlled trial	444	Veterans with substance abuse problems seeking treatment	Strengths-based CM v. standard primary and aftercare treatment	Significant positive relationship between length of post-primary treatment contact and case management		CM reduced drug use severity at 6-month follow-up. Rather than doing so directly, it did so by improving aftercare retention
Saleh et al, 2002[38]	Johnson County, Iowa, USA	Randomised and controlled trial	662	Substance users seeking residential treatment in a rural area	See Huber et al, 2003			Across the 12-month follow-up no clear differences between groups in substance abuse reductions except that the 'outside' CM group had a significantly greater reduction than the control group at 3 months. The same was true of psychiatric problems at 3 and 12 months. At 3 and 6 months the 'inside' CM group had improved significantly more than the controlsl in legal status and at 12 months in employment problems

Sarrazin et al, 2001[64]	Johnson County, Iowa, USA	Randomised and controlled trial	494	Substance users seeking residential treatment in a rural area	See Huber et al, 2003			CM had a significantly beneficial impact on perceptions of family relations and parental attitudes after 6 months, but not on perceptions of partner abuse. No such effects were found after 3 and 12 months. All 4 groups experienced significant improvements in substance abuse
Scott et al, 2002[66]	Chicago, USA	Randomised and controlled trial	692	Substance abusers contacting a centralised intake facility	Brokerage CM v. no CM	The CM group was significantly more likely to show up for treatment (79% v. 72%). No differences in length of stay	Significantly more CM clients were referred to ancillary services (9% v. under 1%). No differences in number of services received	
Shwartz et al, 1997[35]	Boston, USA	Retrospective cohort study	21207	Substance abusers discharged from 4 types of treatment	Generalist CM v. no CM	CM group stayed 1.6 to 3.6 times longer in treatment and there was a significant correlation between length of stay and improved outcomes	CM group 1.7 times more likely to enter follow-on treatment after detoxification	CM group 25% to 30% less likely to be readmitted for detoxification, indicating a reduced relapse rate
Siegal et al, 1997[38]	Dayton, Ohio, USA	Randomised and controlled trial	313	Veterans with substance abuse problems assigned to CM	Strengths-based CM v. standard primary and aftercare treatment	Positive relationship between treatment retention and improved outcomes. Without CM, another third of the sample would have dropped out after primary treatment		At 6-month follow-up, fewer subjects retained well in both CM and aftercare had used cocaine than those who had dropped out of aftercare or both (25% v. 33% and 47%) and more had recently attended self-help groups (82% v. 70% and 48%). Significantly fewer of the clients retained in CM but not in aftercare had been involved in illegal activities during the past 30 days (9% v. 18% and 24%) and more were in steady employment (69% v. 59% and 53%). Overall, clients who dropped out of both CM and aftercare had the worst outcomes
Siegal et al, 2002[67]	Dayton, Ohio, USA	Randomised and controlled trial	453	Veterans with substance abuse problems	Strengths-based CM v. standard primary and aftercare treatment	CM was significantly associated with longer retention in post-treatment aftercare		Subjects who reported new arrests had significantly fewer weeks of aftercare services (6 v. 9). Longer stays in aftercare were related to less severe legal problems at follow-up
Sorenson et al, 2003[44]	San Francisco, USA	Randomised and controlled trial	190	Substance abusers with HIV/AIDS	Brokerage CM v. intensive CM		No significant differences in service use	Equally significant decreases in problems after 6 months in both groups, but no significant pattern of change after 12 and 18 months. Significantly greater sexual risk index among brokerage group
Vaughan-Sarrazin et al, 2000[63]	Johnson County, Iowa, USA	Randomised and controlled trial	287	Substance users seeking residential treatment in a rural area	See Huber et al, 2003		Significantly more clients from 'inside' CM group used medical and substance abuse treatment (but not mental health) services during first two trimesters. Face-to-face CM significantly increased service use. Use of treatment services declined steadily over the 12-month follow-up period	

N = number of subjects
CM = case managed or case mangement

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drug use, but some improvements in risk behaviour and recidivism.[24] In another randomised study of almost 1400 arrestees, compared to two other interventions, assignment to intensive case management increased treatment participation and led to declines in drug use and crime.[49]

Intensive case management has also been successfully applied to other substance using populations with complex and severe problems, such as those who are homeless or who suffer from mental illness.[40 42 52 53 60 61] It is the dominant model in Belgium and the Netherlands, where it has been associated with the delivery of more comprehensive and individualised services and improved outcomes.[31 46]

Two large studies in Ohio and Iowa have applied strengths-based case management with substance users entering initial treatment. This model focuses on the client's strengths, abilities and assets, and puts them in control of setting goals and obtaining the resources to achieve those goals.

The Ohio study found improved employment functioning and treatment retention, which in turn improved drug use and criminal outcomes.[36 62 67 74 75] Clients said retention was promoted by the client-driven nature of goal setting and by the case managers' assistance in teaching clients how to set goals.[76]

A COHERENT CONCEPTUAL BASIS AND ROBUST IMPLEMENTATION ARE POWERFUL DETERMINANTS OF SUCCESSFUL PRACTICE AND OUTCOMES

The Iowa study found increased use of medical and substance abuse services and moderate, but fading effects on legal, employment, family, and psychiatric problems.[32 38 63 64 68]

Brief approaches such as brokerage models limited to putting clients in contact with services have usually failed to produce greater benefits than among non-case managed control groups.[77 78] However, recent studies have reported positive impacts on service use and access to treatment[66] and that these approaches can be just as effective as intensive case management.[44] Generalist or standard case management has also been associated with significant positive effects on treatment participation, retention and relapse prevention.[35 58]

Clinical case management, combining the resource acquisition role of case management with directly delivering clinical services such as counselling, has rarely been applied to substance users, but was successful in at least one study.[37] Other commentators feel that combining these roles is problematic because it dilutes both aspects of the programme.[24]

In summary, compared to case management for mentally ill clients,[3 6 79 80] we know little about which features of the different models are crucial for specific substance abusing populations or their relative effectiveness.

4 What qualifications and skills should case managers have and what support should be provided?

It's commonly argued that for case managers, work experience, training, knowledge of health and social welfare systems, and communication and interpersonal skills, are at least as important as formal qualifications.[14 31 34] Indeed, a few programmes have employed recovered addicts as case managers.[81]

While we have no information on the relative impacts of professionals or peers, we do know that the individual case manager makes a difference. They do so partly through the quality of the client-case manager relationship, identified as crucial for promoting participation and related outcomes. Adopting a strengths-based approach can also stimulate client involvement.[34 46 74 76]

Another way the individual can affect outcomes is via differences in how they implement case management, particularly the degree to which they fulfil the intended programme ('fidelity'), shown to vary widely between case managers within and across services.[13 14 25 35 44 68] Poor fidelity and non-robust implementation have been associated with worse outcomes, but can be minimised by extensive initial training, regular supervision, administrative support, application of protocols and manuals, treatment planning, and a team approach.[13 25 37]

In the United States, varying practice has prompted attempts to standardise and provide guidance. The National Association of Alcoholism and Drug Abuse identified case management as one of eight counselling skills,[82] and commonly recognised case management functions have been incorporated in to the referral and service coordination dimensions of descriptions of addiction counselling competencies.[83]

In the Netherlands, a Delphi study aimed to secure a broad consensus on case management's core features, resulting in a manual that will serve as a touchstone for future development, implementation and evaluation.[31 84] Through a series of surveys sent to selected experts, the Delphi method first elicits their individual views then feeds these back to the participants, enabling views to be refined and hopefully to converge towards a consensus on best practice.[85]

Case managers' caseloads vary, but usually do not exceed 15 to 20 clients when providing intensive contacts to substance abusers with multiple and complex problems.[13 21 34 41 52] A team approach helps cater for large and difficult caseloads, extends the availability of the service, and safeguards the case managers.[34 86] In the mental health sector, more intensive interventions are not necessarily associated with better outcomes. Similarly, in respect of substance use, most researchers have found that intensity appears to have little effect,[6 35 44] others that outcomes are better or sometimes worse.[34 68]

5 How are projects best financed and continuity guaranteed?

Burgeoning interest in managed care financing structures caused an explosive growth of case management in the United States in the 1990s.[32] Most programmes were set up as experiments. Despite positive results, few were integrated on a long-term basis into the system of services. On the other hand, with few indications about whether they were effective, programmes in the Netherlands soon became integral to the service network,[31] illustrating that continued funding might have little to do with the success or failure of the intervention itself.

Developing projects should be given sufficient time (three to five years) to realise their objectives; research has shown that it can take two years before case management generates the intended outcomes.[37]

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Case managers' activities often depart from traditional treatment interventions, so where health insurance governs access to services, alternative or flexible forms of reimbursement need to be negotiated with the relevant companies.[87] In addition, a budget for occasional client expenses such as child care, clothes, and public transport, can facilitate case management.[37 43 57]

Ultimately, continued funding should be based on a thorough evaluation of whether the programme is achieving its goals.

Against which standards should case management be evaluated?

Effectiveness needs to be evaluated according to scientific standards, but the requirements of commissioners and funders should also be taken into account.[14]

Evaluation should start from an accurate account of what the intervention consists of.[23] As well as outcome indicators, process data should be collected which describes the degree to which the planned intervention is actually delivered and the impact of other factors. Without such information, it is impossible to say whether the observed outcomes can be attributed to case management or how they came about.[14 47]

Among the 'confounding' factors which influence the impact of case management, researchers have identified the personality of the case manager, client characteristics such as motivation and legal status, and the degree to which they participate in and are retained in treatment.[25 36 52 61 62 67 88 89] Differences in the contexts within which case management operates further complicate attempts to evaluate its impact.

More randomised and controlled studies of large samples are needed, especially in Europe. There is also a need for long-term follow-up. Qualitative research focusing on specific aspects of case management, and on how these affect the processes underlying outcomes, could provide further insights into how this intervention works, and clues to how to make it work better.

CONCLUSION: SUCCESS FACTORS

In the United States and in Europe, case management is seen as an important supplement to substance abuse services, but compared with case management for the mentally ill, little evidence is available about effectiveness, a lack possibly due to the different contexts, target populations, and objectives, to less of a tradition of community care, and to unrealistic expectations of effectiveness.

What we do know is that while case management for substance use disorders is no panacea, it can enhance the delivery of services and help to stabilise or improve the lives of people with complex needs. Findings from the United States, the Netherlands and Belgium, suggest several factors which make for successful implementation and beneficial outcomes: integration in a comprehensive network of services; accessibility and availability of the case management function; directly providing services; a team approach; a strengths perspective; intensive training; and regular supervision.

Nevertheless, the variety of practices within and across programmes remains a major concern. Development of protocols and manuals and the identification of key features of distinct models should contribute to a more consistent application.

Finally, although case management for substance users has evolved somewhat independently, there are similarities with mental health approaches. Developments in mental health should be closely monitored and may be particularly useful in identifying the crucial features of case management. Moreover, cross-sector comparisons may reveal unique aspects which enable us to optimise practices for mentally ill patients with secondary substance use disorders, for substance abusers, and for people suffering from both types of disorder.

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