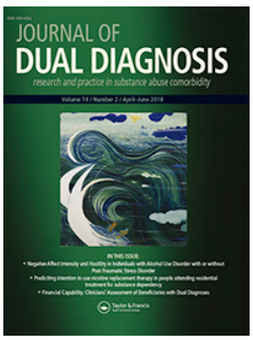

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Translating Evidence-Based Practice for Managing Comorbid Substance Use and Mental Illness Using a Multimodal Training Package

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ABSTRACT

Objective: Comorbid mental health and substance use problems are highly prevalent in substance use treatment settings and generally lead to poorer treatment outcomes. Pathways to Comorbidity Care (PCC) is a multimodal training program developed to encourage an integrated service approach to improve clinicians capacity to identify and manage comorbid substance use and mental health outcomes within public drug and alcohol treatment settings.

Methods: In this paper we describe the concepts underlying the PCC package and the use of implementation science to assess and overcome potential barriers, including clinicians preferences, knowledge about best practice, and professional culture.

Results: The training components include didactic seminars, group workshops run by a local clinical champion on relevant subjects such as motivational interviewing and cognitive behavioral therapy, individual clinical consultation, and feedback with a senior clinical psychologist. The PCC also includes an online portal containing comorbidity resources including manuals, guidelines, and booster webinars. Finally, we describe the evaluation of PCC implementation.

Conclusions: Drug and alcohol services need to be equipped to treat the majority of comorbid mental health conditions in their clients. We anticipate that this multimodal training package, which applies the principles of implementation science, will facilitate effective and integrated care for these vulnerable clients.

KEYWORDS
Comorbidity; substance use; mental illness; translation

Introduction

Comorbid mental health and substance use problems can occur in up to 90% of people in substance use treatment settings (Burns, Teesson, & O'Neill, 2005; Dore, Mills, Murray, Teesson, & Farrugia, 2012). This poses a significant challenge for drug and alcohol services in several respects. Individuals with comorbid mental health and substance use problems present with greater symptom complexity, reduced quality of life, and increased reliance on treatment services (e.g., Curran et al., 2008; Mark, 2003). Clinicians trained in provision of substance use interventions may not be trained in the identification or management of mental disorders or see this as part of their role. Service leaders, managers, and funding agencies may similarly see these roles as separate and may not foster integrated care. Consequently, current treatment provision is often organized into segregated mental health and substance use services, resulting in accessibility challenges for many (Teesson, Slade, & Mills, 2009). An integrated, stepped-care model, whereby clinicians are trained to specifically identify and provide evidence-based management for comorbidity among those who do not respond to a substance use–focused intervention may be effective (Marel et al., 2016).

Relatively little research has examined the adoption and implementation of evidence-based practices in the drug and alcohol sector. The Pathways to Comorbidity

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Care (PCC) package is a multimodal training program that has been designed for drug and alcohol workers to facilitate management of treatment for patients with comorbid mental health and substance use disorders within public treatment settings. The project is a collaboration among clinicians, clinical service leaders, academic clinicians, and research academics across the participating institutions. The PCC is currently being evaluated in a translational research study. This paper outlines the conceptual development of the PCC training program.

Principles of integrated care for comorbidity

The model of comorbidity care underpinning the PCC requires both the drug and alcohol use and mental health condition to be identified and assessed and a comprehensive management plan implemented that addresses both disorders. This treatment may be offered simultaneously by the same treatment provider or within the same service and thus avoids the physical barriers (i.e., services in separate locations) and noncohesive treatment plans that may occur with separated treatment. This model of care is preferred over other models due to the fact that there is a single point of entry for individuals, which lessens the chance of them being excluded from treatment due to the presence of comorbidity and subsequently "falling through the cracks." In cases in which substance use–focused treatment is not effective for a client, the next step is assessment for comorbidity; treatment for both disorders may then be provided by the same clinician, who is supported and cross-trained in treating both the mental health and the substance use problem within the same treatment location. In other cases, access to appropriate clinicians within the same service may be offered. Referrals to specialist mental health services may still be required in various circumstances (such as severity of disorder, treatment failure, or patient preference), yet the principles of an integrated and stepped model of care are still applied.

Currently the integrated and stepped-care model is considered best practice given the many reported advantages over other models of care (e.g., Deady, Teesson, & Brady, 2013; Mangrum, Spence, & Lopez, 2006). Many researchers have proposed specific strategies at the funding, organizational, service delivery, and clinical training levels in order to facilitate the delivery of integrated care into standard practice (e.g., Savic, Best, Manning, & Lubman, 2017). Patients in mental health settings with comorbid substance use also experience greater levels of disability than patients with mental illness alone (Carra et al., 2016). There are examples of effective integration among mental health services, such as the "no wrong door" policy in Victoria (Roberts & Maybery, 2014) and New South Wales, Australia. Under this policy, a patient with a substance use disorder and/or mental health condition will not be refused treatment from either type of service, making treatment more accessible and improving engagement.

At the individual provider level, psychological approaches used by substance use clinicians in an integrated care approach include cognitive behavioral therapy (CBT) along with motivational interviewing (MI) techniques (SAMHSA, 2014). Specific CBT-based integrated treatments (individual delivery as opposed to whole of service model) have shown some efficacy for comorbid substance use and depression (Baker, Thornton, Hiles, Hides, & Lubman, 2012; Cleary, Hunt, Matheson, & Walter, 2009), anxiety (Simpson, Lehavot, & Petrakis, 2017), anxiety and depression (Morley et al., 2016), and posttraumatic stress disorder (for review, Roberts, Roberts, Jones, & Bisson, 2016, Simpson et al., 2017), but there is little evidence for the efficacy of integrated treatments for psychosis (Hunt, Siegfried, Morley, Sitharthan, & Cleary, 2013). Research in the area of integrated treatment for bipolar disorder is limited; however, the available research generally supports the use of integrated psychological and pharmacological treatments (e.g., Salloum & Brown, 2017; Weiss et al., 2007). Other treatment components such as residential treatment and assertive outreach have often been integrated into treatment for patients with bipolar or psychotic disorders (Cleary et al., 2009; Hunt et al., 2013). In this regard, comorbidity care is still considered to be integrated but is delivered "within team," rather than provided by one practitioner.

Implementation in mental health and substance use treatment

While past research has tended to focus on identifying evidence-based interventions (Proctor et al., 2009), such interventions may not be effective when applied outside of a research context (Weisz et al., 1995). Implementation becomes increasingly complex with regard to scalability in that the focus expands to include a broader range of clinicians, health service leaders, organizations, and health systems (Saunders, Kim, & McGovers, 2014). In light of this, it is important to note that many of the randomized controlled trials that have reported some effectiveness of integrated treatment for comorbid substance use and mental health disorders have involved utilizing independent and highly trained clinicians (e.g., Baillie et al., 2013; Morley et al., 2016; Sannibale et al., 2013). Essentially, in addition to identifying the most effective treatment, effective implementation

requires a distinct technology for translating those treatments into practice.

The substance use treatment field has tended to implement dissemination methodologies such as the distribution of practice guidelines and the provision of didactic training (Brown, 2000; Simpson, 2002). The utility of these methods is based on the assumption that change occurs through the uptake of information from concrete interventions that can be applied to any setting (NIH, 2010), despite the body of evidence suggesting that provision of information alone is an insufficient means of changing practitioner behavior (Azocar, Cuffel, Goldman, & McCarter, 2003; Azocar, Cuffel, Goldman, & McCulloch, 2001; Fine et al., 2003).

While workshops can be of assistance in conveying knowledge, there is considerable evidence that using multiple formats produces better translation. More substantial findings have been obtained from studies in which multiple methods of training have been employed. For instance, providing manuals and group training sessions including feedback was found to contribute to the improved uptake of a contingency management protocol (Andrzejewski, Kirby, Morral, & Iguchi, 2001). Similarly, a group training program with the addition of brief individual feedback significantly improved primary care providers' counseling skills, attitudes, and knowledge regarding high-risk and problem drinking (Ockene, Wheeler, Adams, Hurley, & Herbert, 1997). Although workshops have been found to provide superior MI training compared to the use of manuals and video training alone (Miller, Yahne, Moyers, Martinez, & Pirritano, 2004), the addition of coaching and feedback in using MI has been found to lead to significantly better uptake of the intervention (Miller et al., 2004; Schoener, Madeja, Henderson, Ondersma, & Janisse, 2005). Similarly, follow-up clinical supervision improved clinicians' ability to implement CBT (Sholomskas et al., 2005).

With regard to training related specifically to comorbid substance use and mental health disorders, workshops alone have been found to improve the uptake of dual diagnosis and therapeutic alliance interventions, but this was only the case when favorable attitudes toward the quality and relevance of training were present (Bartholomew, Joe, Rowan-Szal, & Simpson, 2007) or among staff from organizations with higher scores on clarity of mission, staff cohesion and communication, and openness to change (Simpson, Joe, & Rowan-Szal, 2007). Again, when multiple modes of training have been used, more favorable outcomes have been achieved. For instance, a cognitive behavioral integrated treatment training program for individuals with mental health and substance use problems included manuals, workshops, and a clinical champion and found that an integrated approach was being delivered at a fairly high standard and was being incorporated into clinical case notes at follow-up (Graham et al., 2006). Significantly higher clinician self-efficacy and dual diagnosis knowledge have also been obtained following the provision of a five-day training course in integrated dual diagnosis interventions, a treatment manual, and 18 monthly supervision sessions (Hughes et al., 2008). Furthermore, the delivery of both workshops and clinical consultation over the phone—for cognitive processing therapy—and workshops, a manual, consultation, and feedback—for prolonged exposure therapy—resulted in significant positive effects on clinician and patient outcomes. A particularly important determinant of this change was the structured and collaborative consultations that clinicians had with expert training consultants about actual cases (Karlin et al., 2010).

According to the implementation science framework, the success of our intervention is related not only to the quality but also to the extent to which it is disseminated and adopted (e.g., Bauer, Damschroder, Hagedorn, Smith, & Kilbourne, 2015). Implementation science is the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice (Eccles & Mittman, 2006). We particularly used the Consolidated Framework for Implementation Research (CFIR), which is an overarching typology constructed through the consolidation of published implementation theories (Damschroder et al., 2009). CFIR has been employed as a guiding framework in the PCC project as a whole for determining the specificities of the implementation context, evaluating the progress of the implementation, and providing data related to the outcome of the implementation (Damschroder et al., 2009). The CFIR enables researchers to match implementation strategies and evidence-based practices to the specific aspects of the sites for which they are intended (Sorensen & Kosten, 2011). The five major domains of the CFIR include the intervention (adaptability and packaging), outer setting (external policies and organization), inner setting (culture and learning climate), characteristics of the clinicians (self-efficacy, knowledge, and attitudes), and process (engaging local champions, engagement, and feedback). To this end, our research group is currently conducting a translational research project to evaluate the potential of the PCC to increase identification and management of comorbidity, enhance clinician knowledge and attitudes, and improve substance use and mental health outcomes.

The CFIR enables the researcher to match implementation strategies and evidence-based practices to the specific aspects of the sites they are intended for. Potential barriers to the implementation of this project include

clinicians' preferences, their access to information, the professional/clinical culture within their organizations, and the leadership within those organizations (Tansella & Thornicroft, 2009). Damschroder and Hagedorn (2011) provide a framework for using CFIR in substance use disorder settings. In this paper, they argue that future substance use disorder implementation research needs to focus on three objectives to promote dissemination: (1) differentiate core versus adaptable components, (2) develop methods to design implementation strategies across a broad context, and (3) design and test predictive models to assess the likelihood of effective implementation. Consequently, in this package we attempted to make the new information readily available, digestible, and presented through multiple formats. We also trained clinical champions to influence the clinical culture and worked with management in order to increase uptake. The more specific details of our package and its implementation are described below.

PCC multimodal training package

In light of the above findings, the training components of the PCC project involve multiple modes of training, along with the development and compilation of resources that form a training package. The PCC package involves didactic seminars, group workshops run by a local clinical champion, individual clinical consultation and feedback with a senior clinical psychologist, access to an online portal containing various comorbidity resources, and booster sessions to facilitate the consolidation of learning and enhance sustainability (Table 1). An important component to the package is the attitude and approach of the implementation staff (those delivering the training). Respect for the skills and experience of the clinical staff on the ground is a fundamental component of the project. Clinicians participating in the training package are encouraged to provide feedback on the package throughout implementation.

This program is delivered within the context of the Health System in New South Wales (NSW), Australia, which services 7.5 million Australians in urban and regional areas. NSW Health Services are taxpayer-funded, government-owned, and free of charge to Australian citizens. Health services are organized within districts. Drug and alcohol services provide counseling, withdrawal management, assertive outreach, opioid agonist treatment, and residential rehabilitation. In this regard, NSW Health Services share a number of similarities to those provided by the National Health Service in the United Kingdom. NSW Drug Health Services differ from those of the United Kingdom as most (but not all) operate separately to mental health services in NSW and are well integrated into general health services.

Online portal

A range of web-based resources related to the evidence-based treatment of comorbid mental health and substance use disorders have been incorporated into a website created specifically for the project (www.pccportal.org.au). Web-based portals have shown efficacy for delivering training content for other programs. This platform allows clinicians to have ready access to the course content. The content of the portal was established in consultation with clinicians working in the field and includes (1) up-to-date information regarding comorbidity and evidence-based treatments; (2) online manuals, materials, and assessment tools for screening, monitoring, and treating comorbidity; (3) filmed webinars on evidence-based treatments for comorbidity; (4) national guidelines, policy documents, and online tutorials regarding the treatment of comorbidity; (5) referral pathways; and (6) booster sessions relating to the seminar content of the PCC package.

Seminars

The purpose of the seminars is to disseminate the evidence supporting the approach, describe the clinical approach, and facilitate discussion regarding barriers and enablers to implementation of the clinical approach. Recorded seminars are provided by experts in the following five topics: (1) alcohol and anxiety

Table 1. Structure of the PCC package.

Component	Mode of Delivery	Format
Online portal	Web-based	Ongoing access to the online PCC portal, which provides resources, online manuals, materials, and webinars
Seminars	Recorded and face-to-face	30 mins recorded seminar per content area, placed in a 1–2 day face-to-face block symposium provided by a senior clinical psychologist
Clinical champion	Face-to-face	Individual clinician nominated by local team to advocate for project and provide point of contact; 2-hour training session preceding group workshops plus ongoing consultation when required
Group workshops	Face-to-face	45–60 mins per fortnight over 12 weeks provided by clinical champion
Individual clinical supervision	Telephone	1 case per client presented for supervision over 12 weeks

Note. PCC = Pathways to Comorbidity Care.

disorders, (2) depression and alcohol misuse, (3) trauma and substance use, (4) bipolar disorder and substance use, and (5) psychosis and substance use. Each seminar is approximately 30 minutes in duration and provides up-to-date information on the evidence-based approach for the assessment and treatment of each of these five comorbidities. These seminars are replayed as part of a full-day (or two half-day) face-to-face session delivered by a senior clinical psychologist with extensive experience in clinical training and dual diagnosis. Following each seminar, the senior clinical psychologist facilitates group discussion on the content and also exploration of main barriers experienced or anticipated regarding the approaches presented in the seminars.

The interventions described in all of the seminars combine MI techniques with cognitive behavioral treatments using an integrated treatment framework (for guidelines, see Marel et al., 2016; for treatment manuals and handbooks see, for example, Back et al., 2014, Baillie et al., 2013, Baker & Velleman, 2007). More specifically, the seminar on comorbid anxiety and alcohol and drug misuse includes strategies on how to recognize anxiety, understanding anxiety in the context of drug and alcohol use, and specific treatments (e.g., psychoeducation regarding the relationship between anxiety and substance use, examination of core beliefs of anxiety and substance use and cognitive restructuring, managing avoidance with graded exposure therapy, behavioral experiments and relapse prevention). The seminar on managing depression and drug and alcohol misuse focuses on components of effective CBT and MI treatment such as managing negative thoughts and thought challenging, coping with drug and alcohol cravings, mindfulness skills, problem-solving skills, managing high-risk situations, alcohol refusal skills, assertiveness skills, psychoeducation (e.g., regarding the relationship between mood and alcohol use), and relapse prevention. Strategies for case formulation and monitoring mood and substance use are also discussed. Key components of the seminar on trauma and substance use include screening for trauma, creating a safe and nonjudgmental attitude with clients, psychoeducation regarding the relationship between trauma symptoms and substance use, managing trauma symptoms with progressive muscle relaxation, abdominal breathing, grounding techniques, in vivo exposure, and imaginal exposure (in the context of substance use). The main elements of the seminar on bipolar disorder and substance use include the effect of substance use on bipolar disorder (e.g., bipolar symptoms and self-medication), the role of pharmacotherapy and strategies to increase medication compliance, psychoeducation on the relationship between bipolar and substance use, the role of the sleep–wake cycle, MI, cognitive restructuring, and relapse prevention. Treatment strategies discussed in the psychosis seminar include MI, CBT skills, and the role of pharmacotherapy (e.g., treatment efficacy and strategies for using antipsychotic drugs to treat psychosis, as well as their side effects).

Group workshops

One clinician per site is nominated to take on the role of clinical champion. To our knowledge, there is no published definition of clinical champion available in the addictions or mental health literature. In this study, the clinical champion's role was described to participants, based on the available literature on clinical champions in health care, as one who was willing to advise, motivate, and support colleagues in the implementation of evidence-based practice, build positive relationships, help navigate barriers, and serve as a contact point with the central PCC team (Soo, Berta, & Baker, 2009). Furthermore, when nominating a clinical champion, participants are asked to consider the following attributes: clinical proficiency in the delivery of evidence-based treatments for comorbidity, commitment to ongoing training and education in the field, motivation to support this project, and appropriate interpersonal skills to work with colleagues.

Following the delivery of the seminars, each clinical champion is provided with an individual 2-hour training session conducted by the senior clinical psychologist in the delivery of group workshops. Issues covered in the training include detailed understanding of the project aims, rationale, and methods; motivating staff; dealing with staff resistance; encouraging group feedback and problem solving; ethical issues; awareness of the relevant professional codes of conduct; confidentiality and breaches of confidentiality; as well as practical issues such as documenting and disseminating feedback obtained during the workshops.

Approximately 12 weeks following the presentation of the seminars, six group workshops (45–60 minutes) are run on a fortnightly basis over a period of 12 weeks. All participants are required to attend the workshops at their site led by the site clinical champion. The purpose of the workshops is to encourage clinicians to adopt an `integrated care model when treating comorbidity in individuals. Each clinician is required to present at least one clinical case of an individual with comorbid conditions they have treated to their fellow clinicians during the workshops over the 12-week period. A written case

presentation outline developed by the senior clinical psychologist is used to facilitate case presentations delivered during the workshops. All participants are encouraged to provide constructive feedback to the presenting clinician on how to provide integrated care to enhance treatment outcome.

Individual clinical supervision and feedback

Regular individual supervision sessions with the senior clinical psychologist are conducted by telephone for a period of 12 weeks, running in parallel with the group workshops. The main principles of clinical supervision are based upon those recommended by the Substance Abuse and Mental Health Services Administration for counselors working in substance use treatment (SAMHSA, 2009). Each participant will be required to present during supervision at least one comorbid clinical case in which they have adopted the PCC package principles. Participants are required to present a case not previously presented during the group workshops. In addition to discussions about individual comorbid cases, clinical supervision also aims to include discussions surrounding broader integrated care implementation issues, such as barriers to implementing integrated care. It is not intended that the supervision will focus on general clinical skills, as it is assumed that all participating clinicians demonstrate broad clinical competencies.

Evaluation of PCC

The evaluation for this project involves measuring the adoption and implementation of the skills learned through clinician report and examining clinical notes. Clinicians will also complete standardized measures of their attitudes, knowledge, and self-efficacy. For example, they will complete measures of their attitudes toward evidence-based practice (Evidence-Based Practice Scale; Aarons, 2004) and their attitudes toward dual diagnosis (Dual Diagnosis Attitudes; Hughes et al., 2008). In addition, we will measure clinicians' perceptions of their organizations' readiness for change. For example, we will measure the organization's motivation, adequacy of resources, staff attributes, and staff access to training (Organizational Readiness for Change; Lehman, Greener, & Simpson, 2002). This measure assesses constructs according to CFIR. A detailed cost analysis of the project will be calculated according to Unit Costs of Health and Social Care to determine the total cost of the project (Curtis, 2014). We will use item-level costings on all activities associated with transfer of learning. These costs will include costs for trainers, lecturers, travel, and webinar development. In addition, we will measure barriers to adoption of this approach, including organizational issues (time and resources), philosophical barriers (using manuals or attempting new treatments), patient-related barriers and clinician-related barriers (perceived self-efficacy). We will also survey the acceptability and feasibility of the multimodal program, examining factors such as the design and packaging of the workshops, access to supervision, and delivery styles. Measurements will be conducted quarterly over a 12-month period.

Conclusion

There are strong arguments for integrated care in treatment of mental disorders in the context of substance use, in that it has been shown to provide better engagement and service provision from a single provider. We used the principles of implementation science to assist adoption of evidence-based treatment for comorbidity. Possible barriers to the implementation of integrated care include practitioners' preferences and the prevailing clinical and professional culture. We propose that using clinical champions, making resources readily available, gaining the support of management, and providing multimodal training will overcome these barriers. Future evaluation of the success of the project will be garnered from clinician self-report, notes from their daily practice, as well as a cost analysis to determine the uptake, feasibility, and impact of this approach. The multimodal training package described in this report has been uniquely tailored for drug and alcohol workers with an aim to balance the provision of training in sufficient depth with that of cost, feasibility, and potential for further scalability. This package has been developed recognizing that provision of information alone is unlikely to change clinical practice. The package does provide information in several relevant and accessible formats but also provides advocacy, agency, individualized training, and long-term support. We anticipate that the PCC training package will improve access to quality evidence-based health care for individuals with substance use disorder by enhancing the identification, assessment, and management of comorbid conditions.

Disclosures

None of the authors report any conflict of interest. Professor Teesson is director of Climate Schools Pty Ltd., which is a company established to distribute evidence-based drug and alcohol resources to schools.

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