Introduction

Background to the project

Comorbidity of mental illness and substance use disorders is common, and comorbidity is reported by service providers as the expectation rather than the exception (Hall, Lysnkey, & Teesson, 2001). Many treatment service models are being used to treat this complex group in the alcohol and other drugs (AOD) and mental health (MH) sectors on a best-fit and situational basis. As AOD and MH services are administered and funded separately, there has been little incentive for examining and collaborating on good practice. Further, few studies have systematically reviewed service delivery in this context.

In acknowledging the prevalence and problems associated with comorbidity, the Australian Government launched the National Comorbidity Project in 2000, which brought together the National Drug Strategy (Australian Government, 2008a) and the National Mental Health Strategy (Australian Government, 2008b) coordinated by the National Drug and Alcohol Research Centre (Teesson & Burns, 2001). Areas for action were identified including greater interaction or collaboration between services and building the capacity of services to enhance their response to co-existing drug and mental health problems (Ministerial Council on Drug Strategy, 2004). Despite this and other state, territory and agency initiatives to minimise barriers to treatment and build strong partnerships between drug treatment and mental health services (Australian Health Ministers, 2003; COAG, 2006; DHS, 2007a, 2007b; NSW Health, 2000a, 2000b), recent findings indicated that people with a history of illicit drug use and co-occurring anxiety or depression are still not well-serviced by AOD and MH services in Australia (Holt et al., 2007; Treloar & Holt, 2008).

The Comorbidity Treatment Service Model Evaluation project was funded by the Australian Government Department of Health and Ageing, (DoHA) under the umbrella of the National Comorbidity Initiative.

The aims of the Comorbidity Treatment Service Model Evaluation project were to:

- Conduct necessary research to determine good practice, and thereby facilitate improved treatment outcomes for people with co-existing mental health and substance abuse problems.
- Increase understanding of the impact of service structure on comorbidity treatment outcomes, as well as develop good practice model(s) to ensure improvements in comorbidity treatment service delivery.

The project had three components:

- A literature review to determine the evidence base for different comorbidity treatment service delivery models.
- Development of a treatment service model evaluation tool to gather information on the impact of service delivery models on treatment outcomes.
- Evaluation of 17 comorbidity treatment service models with a focus on the service structure and diagnostic and treatment methods (the focus is not on the detail of methods of assessment, diagnosis, interventions, and client outcomes, unless these are related to the type of treatment service model).
Main findings from the literature review

Main findings from the literature review include: the identification of a multitude of methodological problems when comparing research; a lack of consensus on the definition of comorbidity; a lack of comparisons of different treatment models; and the resultant lack of evidence about what constitutes good practice in the provision of services to people with comorbid disorders.

Methodological problems

A number of methodological problems associated with comparing comorbidity research (also referred to as ‘dual diagnosis’) have been identified in the literature. These include the following:

- Definitions of comorbidity can differ.
- Criteria for diagnosis of mental illness and substance misuse can differ.
- Settings where studies take place differ.
- Definitions or descriptions of interventions delivered to a variety of groups can differ.
- Many different combinations of dual diagnosis populations and interventions are possible. The interventions may differ (e.g. pharmacological studies, psychological interventions).
- Substance-misuse clients and those with severe and enduring mental illness are often excluded from research studies.
- Primary or secondary focus on dual diagnosis research (this will affect the type of population being studied).
- The impact of changing and increasing prevalence; such as increased drug availability even when compared to ten years ago, cheaper prices, and different drugs being prominent. Increased tolerance of drug use, relaxation of seizure and arrest policies, variability of use and patterns across regions (local, national and international).
- Studies of dual diagnosis in one region may not reflect the situation in another.

(Crawford, Crome, & Clancy, 2003)

Definition of comorbidity

In general, comorbidity refers to the concurrent occurrence of more than one disease or disorder in one person. The National Comorbidity Initiative's definition of comorbidity, and the broad definition used for this project, is the ‘coexistence of substance use and mental health disorders’, where the disorders are assumed to occur concurrently (AIHW, 2005, p. 3). In the MH and the AOD sectors, the terms ‘comorbidity’, ‘co-occurring or co-existing disorders’, and ‘dual diagnosis’ can be used synonymously when referring to the dual occurrence or diagnosis of mental health and substance use disorders.

The literature review found a lack of consensus as to what defines comorbidity. Definitions are narrowly to broadly conceived (AIHW, 2005, p. 22). Narrow definitions commonly limit comorbidity to the co-occurrence of severe mental illness (e.g. psychotic disorders) with concurrent substance use (Sims, Iphofen, & Payne, 2003). Broad definitions can encapsulate all mental health disorders and any level and combination of substance use disorder. Not many conceptualisations of comorbidity include nicotine or caffeine abuse, but debate was noted around the wisdom of excluding tobacco when it is a major cause of morbidity for people with mental health issues (AIHW, 2005; Jane-Llopis & Matytsina, 2006; Ulrich, Meyer, Rumpf, & Hapke, 2004) and there are links between the use of tobacco and cannabis and between the use of cannabis and the development of schizophrenia (Kavanagh & Mueser, 2007).
Conceptualisations of comorbidity are often framed as having either mental health or substance use as the primary disorder. Definitions, conceptualisations, or classificatory frameworks for comorbidity can vary depending on the purpose and sector, and whether they are meant to guide research, clinicians or policy-makers.

How comorbidity is defined can impact on research, particularly on efforts to estimate the prevalence of comorbidity (Todd et al., 2004). The diversity of conceptual frameworks for comorbidity also has implications on the delivery of treatment programs. Agreement on definitions to suit researchers, clinicians, and policy-makers might enable greater comparability of research and understanding between service providers. However it is defined, the co-occurrence of mental health and substance use disorders is generally associated with complex mental, physical and psychosocial problems and needs, the expression of which may vary across different treatment settings (Manning et al., 2008).

**Comorbidity service delivery models**

The literature usually describes comorbidity service delivery models as sequential, parallel, or integrated. A ‘flexible fit’ model and the no wrong door approach were also identified. These models were described as follows:

- **Sequential**: Treatment is provided by different clinicians in different settings. One disorder is treated in isolation, followed by treatment for the second disorder.
- **Parallel**: Treatment is provided concurrently by different clinicians in different settings. There may or may not be some communication between providers.
- **Service/system level integration**: Categorised by coordination, collaboration or linkages between service providers, particularly between MH and AOD providers, to facilitate integrated treatment for the individual at a local level.
- **Single-sector integration**: Either the AOD or MH sector as the primary provider of integrated treatment for individuals with comorbidity (may be limited to a particular type or level of comorbidity).
- **Client/program level integration**: Categorised by the coordinated treatment of both mental health and substance use disorders by a single treatment agency or clinician. Clinicians are either trained across both MH and AOD disciplines or work in multidisciplinary teams. This model accommodates a ‘third tier’ of service delivery in addition to conventional single service MH and AOD providers.

While there is abundant literature available about comorbidity, few controlled studies compare comorbidity service system approaches to provide evidence of their effectiveness or to explain how they work. Further, no agreed framework for service delivery was apparent internationally or at national levels. However, despite limited evidence, there was broad (but not total) support for integrated models of service delivery.

**Evidence for good practice**

The complexities associated with comorbidity and methodological challenges have resulted in little rigorous or generalisable evidence being generated on which to base decisions about comorbidity treatment service delivery. Between and among researchers, clinicians and policy-makers in the AOD and/or MH sectors, there appears to be little general consensus on the definition of comorbidity or integrated treatment. See Appendix 2 for a summary of literature and systematic reviews for comorbidity treatment.
While co-occurring mental health and substance use disorders have attracted increasing attention from various levels of government and independent bodies, it is recognised in the literature as an area that still lacks a cohesive or comprehensive framework from which to address the issues of prevention, awareness, screening, assessment, treatment, and ongoing support for those with co-occurring disorders.

It could be argued that the complexity of the problems around comorbidity service delivery, and their high resistance to resolution, places consideration of comorbidity service delivery within the broader theoretical and conceptual arenas of management complexity, trans-disciplinary approaches, and ‘wicked’ problems. Wicked problems—issues highly resistant to resolution—are of particular interest because the Australian Government already recognises the concept, the challenges they present, and what is involved in tackling them (Australian Public Service Commission, 2007). According to the Australian Public Service (APS), highly complex problems that go beyond the capacity of any one organisation to respond to—and disagreement about the best way to tackle them exists—are sometimes referred to as wicked problems. Comorbidity fits the criteria characterising wicked problems.

It is acknowledged that wicked problems are difficult to tackle using traditional techniques, which involve linear progression from problem definition, data gathering and analysis, determination of preferred solution and the implementation of the ‘solution’. It is said that wicked problems require holistic rather than linear thinking, the capacity to comprehend the bigger picture, including interrelationships between the full range of causal factors and policy objectives. Avoidance of a narrow approach, using innovative and flexible approaches, working across organisational boundaries, reviewing accountability and effectively engaging stakeholders are areas highlighted by the APS as needing particular attention. Strategies for tackling wicked problems, involving multiple stakeholders, are usually focused around a collaborative approach to overcome conflicting policy or program objectives (Australian Public Service Commission, 2007). In tackling this complex problem, there is no single solution. A comprehensive and collaborative approach is required.

**Evaluation approach**

A program logic approach was adopted for the evaluation of the Comorbidity Treatment Service Model Evaluation project. The program logic proposes a theoretical causal pathway where desired outcomes such as improved client health and wellbeing are presumed to depend on the generation of certain impacts such as achievement of treatment goals. These impacts are presumed to be caused by certain processes or structures being in place within treatment services, such as clear policies, processes and practices for intake, treatment, and referral. In turn, the development of improved policies, processes and practices for intake are enabled by inputs, such as funding, workforce, and service links. These chains of inputs and effects occur within a wider geographical, social and political context in which treatment services are located.

**Development of program logic for the Comorbidity Treatment Service Model Evaluation**

Commonly, the first step in developing any program logic framework is to describe the strategic program or initiative and identify key activities, aims and objectives. For the present evaluation, there is no single policy or program document that applies to the provision of services to people with comorbid disorders. The treatment services that were evaluated are largely funded under different state/territory and/or Commonwealth programs. However, relevant Australian Government policies such as the National Drug Strategy (Australian Government, 2008a) and the National Mental Health Strategy (Australian Government, 2008b) were reviewed, a literature review was undertaken, and key informants (i.e. individuals with high levels of expertise in the areas of comorbidity, mental health, substance misuse, rural/metropolitan health care settings, and service delivery design) were consulted to confirm the findings of the literature review and address any gaps that were identified in the review.
Based on the analysis of the policy documents and the literature review a list of domains for measurement was developed. The Comorbidity Treatment Service Model Evaluation program logic map includes six domains:

- Context
- Inputs
- Service system I (policies and procedures)
- Service system II (practices)
- Client impact
- Outcomes.

The domains and sub-domains are outlined in the figure below.

**Figure 2: Comorbidity Treatment Service Model Evaluation program logic map**

From the program logic map, a list of broad questions was developed. These are outlined in the figure below.