Chapter 6

**Comorbidity and delivery of services**

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**Introduction**

How to deliver treatment to people who have both a substance use disorder and mental disorder is a problem for all health services. Research on service delivery is scarce, turf wars are common, and people with comorbid mental disorders and substance use disorders often fall through the cracks in the separate service systems. Discussion papers from countries with health service structures as diverse as the United Kingdom, the United States of America, Australia, and The Netherlands all indicate that persons with co-occurring drug and alcohol and mental disorders are failing to access treatment or are being poorly treated by the current systems.

How does the service system respond? There is ill-defined literature regarding the implications of comorbidity on treatment and service provision. Very few studies have systematically and empirically reviewed treatment or service delivery options, although there is an increasing number of discussion papers (e.g., Bellack & Gearon, 1998; Gournay, Sandford, Johnson, & Thornicroft, 1997; Jerrell, Wilson, & Hiller, 2000; Kavanagh, 1995; Kessler, 1995; Mueser, Bellack, & Blanchard, 1992; Mueser, Drake, & Miles, 1997; Ries, 1992; Smith & Hucker, 1994).

These discussions of service delivery often focus on people with psychoses and substance use, usually cannabis use; those whose disorders cause obvious need for treatment, and those who the community cannot help but notice. Individuals with the more common depressive, anxiety and alcohol use disorders are often overlooked. Yet these disorders comprise some of the most prevalent mental disorders in our community and they cause considerable disability (see Chapter 3 by Andrews et al; and Burns & Teesson, 2002).

This chapter reviews the evidence for effective service delivery to people with comorbid disorders. It argues that if the burden of comorbidity is to be addressed, it is essential that research on service delivery is conducted and that services are delivered to those with the more common disorders, as well as those with the more affronting yet less common disorders. These disorders have different prevalence rates, treatment responses and require different service delivery responses. We first outline the impact of comorbidity on the course of illness and use of services.

**Impact of comorbidity on the course of illness and use of services**

Comorbidity is a common problem in the general community, but it is even more common in patients presenting in primary care settings and most common in specialist services (Callaly, Trauer, Munro, & Whelan, 2001; Wittchen, 1996). Estimates of the prevalence of comorbidity in these samples are variable due to differences in such factors as diagnostic criteria (e.g. DSM-III-R versus DSM-IV)
and time frames used. However, they all highlight the needs of comorbid groups and concomitant demands placed upon treatment provision. There is ample evidence from epidemiological surveys that treatment seeking is significantly increased where comorbidity is involved (e.g., Bijl & Ravelli, 2000; R. C. Kessler et al., 2001; Proudfoot & Teesson, 2002).

Common mental disorders

In reviewing the evidence from the National Comorbidity Survey in the United States, Kessler et al (1996) examined how the common mental disorders related to the course of comorbid substance disorder. They found that the presence of either a primary anxiety disorder or childhood conduct disorder and adult antisocial behaviour was associated with persistence of substance use disorders. In terms of exacerbation of symptoms, much of the literature is muddied by the lack of evidence regarding primacy of disorders as well as focusing on clinical samples which tend to not be representative of the relationship between comorbidity, illness course and service use.

A study carried out by Westermeyer et al; (1998) demonstrates the effects that having comorbid dysthymia has on substance abuse service usage. They identified those within a substance abuse treatment service who satisfied the criteria for an independent diagnosis of dysthymia and those who had a single substance use disorder. Of the 642 patients considered, only 39 were diagnosed with comorbid dysthymia. These were compared with those identified as having only a substance use disorder (N=308) in terms of their lifetime service use and the related costs. They found that those with comorbid dysthymia accessed psychiatric services no more than those with substance use disorders alone. Instead, the comorbid group accessed substance use treatment services more frequently and stayed in such treatment for longer periods than those with a substance use disorder alone. They estimated that, based on 1996 costs for treatment, those with comorbid dysthymia cost 4.7 times those with a substance use disorder only, in terms of substance use treatment dollars. Thus early detection and successful treatment of this disorder in individuals presenting at substance use services is likely to impact on future service usage and costs.

Recent evidence supporting the notion that the presence of substance use disorders makes the prognosis for other mental disorders worse comes from a study by Grant et al; (1996) based on the US Longitudinal Alcohol Epidemiologic Survey (NLAES). They found that those with comorbid alcohol and depression compared with those with lifetime major depressive disorder had a significantly earlier onset of major depression and were more likely to have more severe episodes of depression as measured by number of symptoms during their worst episode. They were also more likely to have a lifetime diagnosis of a drug use disorder.

Another study, by Hasin et al; (1996), also demonstrates the exacerbating effects of comorbid substance use disorders on affective disorders. They followed up 127 patients comorbid for alcohol dependence and major depression over five years and traced the patterns of remissions in both disorders. They found that irrespective of primary or secondary status, the risk of remission for depression was increased when alcohol dependence was also in remission. They did not find the converse, i.e., remission of depression did not affect remission of alcohol symptoms. This suggests that the substance use disorder serves to maintain depression where remission is
otherwise likely. The authors conclude that even where the depression exists independently of the substance abuse, it is likely that immediate treatment of the substance abuse can reduce depressive symptoms. They argue that future trials of interventions for depression and/or alcohol dependence should include comorbid patients and attempt to take aspects of both disorders into account.

Although the research is clear that there is an increased risk imposed by substance abuse on depression treatment outcomes, the evidence regarding the effects of depression on substance use treatment outcomes is equivocal (Lynskey, 1998). In his review of the literature, Lynskey states that comorbid females in alcohol abuse treatment have an increased risk of treatment failure, but the evidence regarding males is not conclusive. The Hasin (1996) study described above also suggests that there is no effect of the co-occurrence of a substance use disorder on remission for depression.

Thus the research suggests that treating substance use disorders in individuals with the more common mental disorders may improve their outcome and remission rates. However, treating these comorbid psychiatric disorders has not been shown to impact on substance use outcomes.

**Psychoses**

The psychoses include schizophrenia, schizo-affective disorder, bipolar disorder and depression with psychotic features. Individuals with substance use disorders who are suffering from these psychotic disorders are considered to have special needs due to the severity of their symptoms and the general disorganisation, both psychologically and socially, that these symptoms can cause.

For people with schizophrenia, substance use disorders are particularly problematic as they are generally directly associated with a range of negative outcomes. Much US research has found that, compared with people who suffer from mental illness alone, those with concurrent substance use show increased levels of medication non-compliance, psychosocial problems, depression, suicidal behaviour, rehospitalisation, homelessness, have poorer mental health and place a higher burden on their families (see Bartels, Drake, & McHugo, 1992; Clark, 1994; Drake & Wallach, 1989; Drake et al., 1990; Osher et al., 1994; Pristach & Smith, 1990). Persons with both types of disorders have also been recognised as being more difficult to treat than those with mental disorders alone (Drake, Mueser, Clark, & Wallach, 1996; Lehman, Herron, Schwartz, & Myers, 1993).

Because much of this data is from studies conducted in the United States it is important to consider the impact of comorbidity in countries with different health care systems. A study conducted in the United Kingdom by Menezes et al., (1996) on a geographic sample of patients with psychotic illness found the average number of admissions to psychiatric hospitals was similar for both those with illness alone and those who also abused substances. However, those who abused substances attended the psychiatric emergency service 1.3 times as often, and spent 1.8 times as many days in hospital, as those with mental illness alone.

In a recent Australian study, Hunt and co-workers (2002) analysed the effects of substance abuse on medication compliance and four year survival outcomes. They found that those who abused drugs over the period were significantly more likely to
be re-admitted to hospital (median time to readmission 10 months) compared with those who did not abuse drugs (median 37 months). Even when patients were medication compliant, drug abuse tended to offset any advantages of this compliance. In another Australian study, Fowler et al., (1998) found that, for patients with schizophrenia identified in one geographical area, those with comorbid substance use problems tended to have increased rates of criminal behaviour, increased symptomatology and earlier age of onset of mental illness. However, they did not find the increased hospitalisation rates, suicide attempts and antipsychotic medication dosage reported elsewhere in the literature for this group. The disparity in findings regarding hospitalisation rates for these two Australian studies may be explained by the fact that the Fowler study had mobile teams available for extended hours to treat acute psychotic episodes in the home, which would have affected their hospitalisation rates. This model of treatment is based on the assertive community treatment approach to psychotic disorders which has been found to be superior to other models such as intensive case management (Issakidis, Sanderson, Teesson, Johnston, & Buhrich, 1999; Marshall & Lockwood, 2002; Rosen & Teesson, 2001). Even in a group as comorbid as the homeless, psychiatric outreach services based on assertive case management have been found to be effective in Australia (Buhrich & Teesson, 1996).

**Type of drug**

Findings from clinical studies and population surveys suggest that alcohol and cannabis are the most common substances of abuse for people with psychotic disorders (e.g., Cuffel, Heithoff, & Lawson, 1993; Drake et al., 1990; Lehman, Myers, Dixon, & Johnson, 1994; Menezes et al., 1996). The study by Fowler and colleagues (1998) discussed above, found similar results in a sample of patients with schizophrenia attending a community mental health service in Australia. Apart from tobacco and caffeine, alcohol, cannabis and amphetamines were the most commonly abused substances. This contrasts with the contribution made by high rates of abuse of cocaine found in the US (Shaner et al., 1995).

Internationally, high use of stimulants such as amphetamines and cocaine has been implicated in increases in positive psychotic symptoms and earlier onset of symptoms in comorbid patients (Fowler et al., 1998; Shaner et al., 1995). In a review of the evidence regarding the relationship between cannabis and psychosis, Degenhardt and Hall (2002) conclude that there is little evidence that cannabis use per se causes psychosis. However, they state that it is likely that it exacerbates the illness and that it may precipitate it in vulnerable individuals. They point to the confounding effect of stimulant use amongst cannabis users in the various studies cited. The elevated levels of amphetamine use amongst cannabis users in Australia may explain increased psychotic symptoms in this group. The even higher prevalence of cocaine use in the US may also explain different findings regarding hospitalisations and suicidality between the US and Australia.

However, the literature is sparse and more research is needed to explain just how substance use affects the course of psychotic disorders and related service usage. Similarly, more research is required on the effects of the common mental disorders on substance abuse history. In one of the rare studies in this area, Westermeyer et al; (1998) found no significant effect for type of drug when investigating the effects of comorbid dysthymia on service use for those with substance use disorders.
Because comorbidity of mental disorders and substance abuse is common and has significant impact within the health care system and society, one important issue to consider is service delivery which may affect the incidence of these problems. The next section discusses the importance of prevention and early intervention.

**Preventive programs**

**Common mental disorders**

In a review and analysis of multinational epidemiological surveys, Kessler (2001) found that overall approximately 50% of current drug dependence could be attributed to pre-existing mental disorders. The figure was slightly higher for men (54.7%) compared with women (47.8%). The contributing pre-existing disorders differed for the sexes with conduct or antisocial personality (ASPD) disorders being most salient for men (51.2% of risk) ahead of anxiety (17.5%) and mood disorders (9.6%). For women there was a more even spread of risk across conduct or ASPD (34.8%), anxiety (25.9%) and mood disorders (27.0%). As pointed out by Kessler, there are limitations to the findings from epidemiological surveys, but the finding that common mental disorders tend to precede substance abuse disorders is also corroborated in clinical studies (see also Chapter 4).

Although the results from the epidemiological studies do not prove causation, they point to the likelihood that early intervention for common psychiatric disorders may have an impact on drug dependence rates at a later stage. The analysis by Kessler (2001) showed that only active, not remitted, disorders related to onset of drug use — a strong argument for early intervention for mental disorders. Much effort directed at preventing drug use in schools has met with little success (Ennett et al., 1994); yet studies have shown that large-scale interventions in childhood can affect the course of such common disorders as anxiety (Chapter 4) and depression (Cicchetti & Rogosch, 1999). There is also a tendency to focus on the more disruptive conduct disorders in school populations with much less interest in the internalising, anxiety and mood, disorders. This has particular relevance for females for whom the anxiety and mood disorders are much more likely to precede drug dependence. Furthermore, research suggests that treatment outcomes may be worse for women compared with men with common mental disorders and substance abuse (Lynskey, 1998), so that it may be particularly important that steps are taken to prevent the common disorders amongst women.

These data argue strongly for greater emphasis on screening and treatment of the common mental disorders in childhood with likely benefits to be found in the long-term reduction of numbers presenting as adults with single and comorbid substance use and mental disorders.

**Psychoses**

In a recent review Schaffner and McGorry (2001) explored developments regarding early detection and interventions for psychotic disorders. They concluded that there are promising treatments awaiting ethical approval which may significantly and positively change the prognosis for people suffering from psychotic disorders. Early interventions can be introduced at the prodromal or first psychotic episode phase; the former attracting considerable ethical debate as it requires antipsychotic treatment (and the stigmatisation associated with identification of such illnesses).
before onset of the illness. However, there is evidence of both biological and psychosocial damage resulting from the symptoms of the prodrome and first episode psychosis which provides a compelling argument for their prevention. Research on early interventions at first psychotic episode is less problematic ethically and such interventions have generally been regarded as beneficial (Wyatt & Henter, 2001).

In contrast to the continuing medicalisation of services, the work done on psychosocial interventions suggests that these can also improve outcomes and there needs to be a re-orientation of services so that staff are trained in the effective psychotherapeutic interventions now available for serious mental illness (Thornicroft & Susser, 2001). Psychotherapeutic interventions are far less controversial in this area because they do not pose the risks that antipsychotic medications do in terms of medical side-effects. Thus it is important that staff in psychiatric and substance abuse services are trained and funded to implement evidence-based practices for early intervention. Such practices need to be implemented across the board in psychiatric and drug and alcohol services in the form of standardised procedures, rather than waiting for individual service providers to decide to take up these effective practices.

The role of primary care

Another aspect of prevention emphasised in a recent review by Garraldo (2001), is that of GP identification of mental illness in children. The review found that although GPs did identify more of those seriously in need and refer them appropriately, they nevertheless identified very few children overall. Garraldo advocates greater training for GPs to assist them to recognise and treat mental illness in children. To assist with this she suggests development of standardised procedures for GPs to follow, to help identify and appropriately treat or refer mental illnesses in children.

Treatment services

People with severe mental disorders tend to present to psychiatric services whilst those with less severe but more common disorders are more likely to be found in substance-abuse treatment services (Kessler et al., 1996; Primm et al., 2000). Currently the needs of comorbid clients are not being met by either of these services. In most western health care systems there is an artificial separation of treatments for substance abuse and mental health disorders. There is pressure to place patients in one system or the other, by determining which disorder is primary for them. This can result in no treatment for the disorders not considered primary. Distribution of funding from the government level can ensure that the separation is jealously guarded by either service, the outcome being poor or no services for people with comorbid disorders (Kessler et al., 1996).

A first step towards appropriate service provision for persons with comorbid disorders is to ensure that, wherever they are present, be it in primary care, substance abuse services or psychiatric services, careful assessment of their presenting conditions is carried out.
Assessment

Well-documented deficiencies in assessment by treatment services are compounded in the treatment of those with comorbidity. Some common difficulties are that clinicians may fail to obtain a full history of substance use in people with a mental illness. Alternatively, people with a mental illness may deny, distort, or minimise their self-reported use of substances, particularly illicit drug use (Bryant, Rounsaville, Spitzer, & Williams, 1992; Drake & Mercer-McFadden, 1995; Mueser et al., 1997). So, despite high rates of substance misuse amongst those with mental disorders, it is under-reported in this population.

In substance treatment services the clinical picture is often unclear, because many patients seek help in a distressed condition and complain of a multiplicity of psychological symptoms. Reviewers have described the commonest of these symptoms which include anxiety, irritability, and feelings of sadness as transient, disappearing within seven days of abstinence both in young, healthy problem drinkers and in primary alcoholics (Schuckit & Monteiro, 1988). Thus assessment within this time period may produce spuriously elevated scores.

In their broad-ranging review of comorbidity of anxiety and depression with substance abuse, Scott and co-workers (1998) argue that there is a need for increased awareness by GPs as well as psychiatric and addiction service staff of the likely presence of comorbidity. They propose mandatory use of brief screening instruments for drug and alcohol abuse and for anxiety and depression as well as probes regarding self-harm. This will require increased training of staff in order that they can detect and treat comorbid disorders. In fact there is a need to incorporate into all services that deal with comorbid individuals effective assessment tools and procedures which take into account the special needs of these patients. As discussed in the following section, at the level of primary care, simple screening tools are available to assess both mental disorders and substance use disorders. Their use has been the exception rather than the rule in Australia and elsewhere (Drake, Rosenberg, & Mueser, 1996; Hickie, Koschera, Davenport, Naismith, & Scott, 2001).

The role of primary care

A major problem with service delivery for comorbid disorders is that most people do not seek help. In the recent Australian NSMHWB, only one-third of people with a mental disorder consulted any health care provider (Teesson, Hall, Lynskey, & Degenhardt, 2000). However, most people do see a GP for any disorder and this could provide an opportunity for moving comorbid patients towards treatment. However, as demonstrated below, currently GPs resist screening for either the common or psychotic disorders or drug use disorders.

In a series of articles appearing in the Medical Journal of Australia, Hickie and co-workers present findings from a survey of general practices in Australia involving 386 GPs who screened 46,515 patients in 1998 and 1999. In one of these articles they addressed the issue of comorbidity (Hickie, Koschera et al., 2001) and, of particular relevance, the likelihood that comorbidity will be identified in general practice. They found possible comorbidity in 12% of patients attending the surgeries, although diagnoses were based on a simplified classification system (ie., not DSM-IV or ICD-10), (Hickie, Davenport, Naismith, & Scott, 2001). Those classified as having comorbid mental and substance use disorders by this system...
were also found to be more likely to be assessed by GPs as having a psychological diagnosis and having greater health risk, and GPs were more likely to treat them or refer them on to a mental health service. However, only half of this group was actually diagnosed with any psychological disorder which reflects a missed opportunity for treatment for this vulnerable group. Although not a random sample of the population of practices and patients, the outcomes are likely to be indicative of the trend in GP practices across Australia.

Hickie argues that those with substance use disorders are more readily identified by GPs and GPs should be encouraged to proceed from such diagnoses to screen for comorbid psychiatric conditions. However, he points to the problem that GPs may be unable to treat all patients identified by screening because high prevalence rates would present too great a workload.

These sorts of concerns have also been addressed by Andrews (2001) who has argued that a strategy similar to that in the breast cancer field may be appropriate. This involves use of four concurrent strategies: identifying risk factors, using targeted population screening, producing widespread public understanding, and profession-wide acceptance of management guidelines. Such an approach should result in the number consulting being reduced by prevention and self-help strategies, and the number becoming chronic and needing continual help being reduced by effective treatment — so that overall the number needing to consult would be reduced. These suggestions tie in well with the discussion of prevention above.

It has also been argued that the workload of GPs may actually be reduced if patients with mental health problems were identified and treated; as this group tends to significantly overuse primary care services for physical health problems. Bebbington and colleagues (2000) reported that, in a recent household survey in the UK, patients identified as having a neurotic disorder were 40% more likely to consult a GP for any physical disorder than those with no neurotic disorder.

**Assessment in Substance Abuse Services**

Where assessment does take place, there exists the likelihood of misdiagnosis because of common symptoms amongst the various disorders. Under-diagnosis can result by assigning symptoms to one disorder to the exclusion of the other, whilst over-diagnosis can occur when symptoms are assigned to a second disorder when they can be fully accounted for by a single disorder. For example, many more people with substance use disorders present with depressive and anxiety symptoms than would be given a specific diagnosis of anxiety or depression. These symptoms are due to over-use and withdrawal from drugs and alcohol. Thus, further probing is necessary once the possibility of a particular diagnosis is identified through screening. This is a specialised procedure requiring trained treatment staff and should be regarded as the starting point for the positive therapeutic relationship needed for successful treatment (Drake, Rosenberg et al., 1996).

Where true comorbidity exists, it is important that it is recognised and treated appropriately. This is demonstrated in the study by Westermeyer et al, (1998) described above, where the presence of dysthymia correlated with much higher substance abuse service usage. Although it is difficult to identify dysthymia in those presenting at substance use disorder facilities, it is still feasible and supported by research evidence to date, to treat depressive symptoms at the same time as treating...
the substance abuse. It is less clear whether comorbid anxiety disorders should be treated at the same time as treatment for substance use disorders.

**Assessment in Psychiatric Services**

A study by Drake et al. (1990) on alcohol use in schizophrenia indicated that, as a group, people with schizophrenia were particularly vulnerable to the psychiatric and social complications of drinking. The authors suggest almost any alcohol consumption at all by people with schizophrenia should be identified as problem drinking. Consequently, applying standard definitions and diagnostic criteria in assessing those with psychotic illness may substantially underestimate the problem (Smith & Hucker, 1994).

The identification of substance abuse in the psychiatric services for those with psychotic disorders has been the subject of recent reviews (Carey & Correia, 1998; Drake, Rosenberg et al., 1996). These reviews focus on psychiatric services, as it is rare that patients with psychotic disorders are accepted into treatment in substance abuse treatment facilities (Primm et al., 2000). They highlight the fact that identification of comorbidity is made more difficult for those with psychotic disorders because many of the signs and symptoms of severe drug and alcohol abuse may be masked by symptoms of psychotic disorders, e.g., social isolation or dysfunction and cognitive dysfunction such as confusion, depression, anxiety and positive psychotic symptoms due to substance abuse (Carey & Correia, 1998).

Non-detection of concomitant substance abuse can lead to inappropriate treatments such as over-medication, and subsequent poor outcomes (Carey & Correia, 1998; Drake, Rosenberg et al., 1996).

As pointed out by Drake (1996), the assessment serves to inform and involve the patient in the treatment process. Diagnosis of comorbid disorders is but one aspect of the assessment process; but nevertheless essential if treatment is to proceed effectively. Assessment should reveal the severity of substance-related problems where they exist, the patient’s motivation to be involved in treatment for such problems, identification of the psychosocial variables encouraging ongoing use and explication of where best to direct treatments.

Detection of drug and alcohol use can be facilitated through use of screening tools such as urine analysis, self and collateral reports and expert detection of the biological signs and symptoms of substance abuse. This would identify those who need to be subjected to more thorough-going diagnosis. When reviewed by Carey and Correia (1998), self-report measures such as the DAST, MAST and CAGE were found to be reliable in this population, although screeners which take into account the presence of a psychotic disorder are preferable. Carey and Correia refer to the DALI which was developed specially for this group and has shown promise. Also, where self-report is considered less reliable, such as during an acute psychotic episode, clinician rating scales have been developed which have been found to provide reliable information regarding substance use disorders of patients (Alcohol Use Scale — AUS and Drug Use Scale — DUS, (Drake, Rosenberg et al., 1996)).

Just as with the common mental disorders, an important factor affecting the non-detection of comorbid substance abuse in those with severe disorders is the lack of training of staff in the specialist mental health services so that they can identify comorbid substance use (Carey & Correia, 1998). Fowler et al., (1998, p 450), in a
study of substance abuse by people with schizophrenia in Newcastle, Australia commented that:

“…although there was reasonable agreement between case managers’ assessments and the research diagnoses, this did not reach the levels found in other studies (Drake et al., 1990; Carey et al., 1996), possibly because in the current study the case managers were not trained. Thus, efforts to train case managers and to heighten their awareness of substance use problems in their schizophrenic patients may be timely.”

Thus it is of paramount importance, before the process of treating comorbid patients can begin, to identify the presence of comorbid disorders in those presenting to the specialist services. Appropriate procedures include use of valid and reliable screening instruments as well as training of staff to be able to identify likely comorbid disorders.

**Treatment**

**Common Mental Disorders Comorbid with Substance Use Disorders**

(a) Anxiety

There is a common belief that the high rate of comorbidity between anxiety disorders and alcohol use is because the alcohol is used to reduce stress (the stress reduction hypothesis). But as Allan (1995) argues, evidence does not support the stress reduction hypothesis that alcohol users become more anxious with extended use; and that drinkers with many problems are realistically anxious. Thus in most patients, anxiety disappears when the alcohol use disappears. A small proportion of patients, perhaps as low as 10% (Brown, Irwin, & Schuckit, 1991), are then left with more persistent symptoms which may be an independent clinical disorder.

Recent reviews have argued that psychological interventions such as cognitive-behavioural therapy (CBT) are preferable to medication for comorbid anxiety and substance use disorders because of the potential misuse of anxiolytic medication, especially benzodiazepines (Allan, 1995; Scott et al., 1998). However a behavioural approach depends on the use of exposure as the main agent of therapeutic change, and, from a theoretical point of view, the regular use of a central nervous system suppressant such as alcohol would potentially reduce the effectiveness of this process. In fact, there is evidence that the use of alcohol acts to retard the process of desensitisation among clinically anxious patients (Cameron, Liepman, Curtis, & Thyer, 1987; Thyer & Curtis, 1984). So treatment for an anxiety disorder is likely to be ineffective if the person does not stop drinking.

This suggests that an attempt should be made to reduce or stop drinking before commencing treatment for anxiety and that simply integrating treatment might not be the best solution. This is illustrated in a recent study by Randall et al, (2001) who conducted a randomised controlled trial comparing CBT for alcohol alone with CBT for both alcohol and social phobia. While both groups improved on alcohol and social phobia measures after treatment, the group treated for both alcohol and social phobia had worse outcomes on three of the four alcohol use indices.

A further problem arises in that patients in psychiatric services tend to have a preference for having their anxiety and depression treated and are generally not interested in tackling their drug and alcohol use problems (Allan, 1995; Scott et al.,
This poses a difficulty for the therapist where it is clear that treatment of a substance use disorder may be sufficient to remove anxiety and depression symptoms. However such problems can be overcome with the establishment of a positive therapeutic relationship and the use of psychotherapeutic techniques such as motivational enhancement which have been found to be effective in moving patients towards recognition of the need for substance abuse treatment (Scott et al., 1998 and Kavanagh et al., Chapter 5).

(b) Depression

The confounding effects of multiple common symptoms of comorbid disorders makes decisions about treatment difficult. However, there is evidence that the comorbid disorders exacerbate each other, e.g., depression increases substance use, harm and poor treatment compliance. So the need to identify and treat a ‘primary’ disorder may be less important than removing the exacerbating effects of either disorder. As with anxiety disorders, many depressive symptoms are removed by abstinence from alcohol and other drugs (Grant, 1996; Hasin et al., 1996). Again, appropriate motivational counselling techniques can be used to encourage patients to have treatment for their substance use disorders (Lynskey, 1998; Scott et al., 1998).

Although it is unclear how severely the presence of depression affects outcomes in substance abuse treatment, there is a growing body of evidence which indicates that treating depression in comorbid individuals will improve outcomes for both disorders (Carroll, Nich, & Rounsaville, 1995; Lynskey, 1998). It should be noted that this is contrary to the evidence to date for treating comorbid anxiety and substance use disorders (see section on Anxiety above). In his review, Lynskey (1998) argues that the advent of SSRIs makes medical interventions for comorbid individuals more practicable. These tend to have fewer side-effects and are less toxic than the older tricyclic antidepressants. Research has found that use of the SSRIs reduces both depressive and alcohol dependence symptoms in those who are comorbid. (On the contrary, they appear not to be effective for those with alcohol dependence alone, i.e., where there are no depressive symptoms.) However, Lynskey warns that treatment with antidepressants should be accompanied by appropriate psychosocial support and that more research is needed to determine the safety of these medications when patients keep drinking. He points to the promising parallel developments in the use of cognitive-behavioural interventions for depression in alcohol dependent individuals and concludes that inclusion of efficacious treatments for depression can significantly improve the outcomes for both disorders.

Thus there are strong arguments for introducing drug abuse treatment into the treatment programs for those suffering from comorbid affective and substance use disorders in psychiatric services, and for introducing treatments for depression for those with comorbid disorders in substance abuse treatment services. In their informative review and discussion of the management of comorbidity, Scott et al., (Scott et al., 1998) conclude that staff in addiction treatment need to appropriate and implement the evidence-based skills used to treat psychiatric disorders, whilst those in psychiatric services should extend their use of such procedures to treat comorbid substance use disorders. However, in concert with most reviewers, they point to the dearth of research on treatment for comorbidity. Much research carried out to date tends to exclude people with comorbid disorders so that little is known about their specific requirements.
Conclusions regarding treatment for those with comorbid substance use disorders and the common mental disorders

The evidence suggests that treating any comorbid substance use disorder prior to treatment for anxiety or depression is more likely to lead to positive outcomes for anxiety and depression. Motivational enhancement techniques, which have been demonstrated to be effective, are needed to re-orient the patient towards controlling their substance abuse, prior to management of the comorbid disorder.

For those with both an affective disorder and a substance use disorder, there is an additional benefit on outcomes for both disorders, conferred by treatment for the affective disorder alone. This provides good support for the introduction of efficacious treatments for depression into substance abuse treatment facilities where both disorders can be treated at the same time. However, attempts to treat both anxiety and substance abuse contemporaneously have to date, proven counter-productive. Further research is needed on this issue.

Treatment for psychotic disorders and substance abuse

Comorbidity of psychotic disorders and substance abuse is common and has consistently been found to be more prevalent in treatment than non-treatment samples (Helzer & Pryzbeck, 1988; Kessler et al., 1996; Ross, Glaser, & Germanson, 1988). For people with a serious mental illness, the risk of developing a substance use disorder is of particular importance as they are especially vulnerable compared to people with other psychiatric disorders (Mueser et al., 1997).

Models of Service Provision

Because outcomes for comorbid patients tend to be poor within the systems designed to treat single disorders, there is increasing literature discussing possible interaction between the services (Kessler et al., 1996; Ries, 1993). Three models of treatment for those with serious mental illness and substance abuse have been widely discussed in the literature, and these are described below.

Serial treatment involves treating one disorder before treating the other. The tendency has been to treat acute presentations as primary and then refer to the alternative treatment system for treatment of the other disorder. Thus acute presentations of psychotic disorders tend to be treated before referral for treatment for co-occurring substance use disorders; and severe intoxication is treated before any consideration of co-occurring mental health problems. In non-acute cases, having two independent systems treating serially in this way means that many people with comorbid disorders “fall between the cracks”, being treated by neither system as neither sees it as their responsibility (Ries, 1993).

Although there are variations between international systems, there are elements of psychiatric services in most western nations which are common and which contrast with those of addiction treatment services. These include more academically qualified (especially medical) staff, use of diagnostic classification, eg, DSM-IV, and emphasis on medication to treat the core disorder. Substance abuse services differ from psychiatric services in providing more non-professional staff, often themselves with lifetime dependency problems, emphasis on confrontational interventions and self-help through 12-step programs, and an anti-drug preference. Thus the conflicting philosophies of the traditional drug and alcohol treatment services and
the mental health services mean that patients receive diverse and incompatible messages from this type of serial treatment provision, with little or no opportunity to reconcile the different messages.

**Parallel treatment** involves being treated for one disorder at the same time as receiving treatment for another. This is likely to be less confusing for the patient as it requires some direct interaction between the services and allows more opportunity to reconcile the different messages. It also permits a better understanding of both systems by treatment service staff who have to reconcile concurrent treatments to those they are administering — which should cause better integration of treatments (Ries, 1993). An example of parallel treatment is where a patient housed in a psychiatric unit is sent for treatment to a substance abuse facility on a regular basis. This does present the risk of putting considerable stress on the patient who is already in a vulnerable state and consequently may prove counter-productive. The stress may be in the form of upsetting a routine established in in-patient care, forcing them to travel unaccompanied, or merely trying to accommodate a doubled treatment regime.

Although parallel treatment may be useful for a particular sub-sample of comorbid patients, those with psychotic disorders in particular are unlikely to be satisfactorily treated using this model because of the criticisms listed above.

The treatment response to drug and alcohol and mental disorders in many developed countries has been dominated by parallel systems. That is, drug and alcohol disorders have been treated by one co-ordinated, funded, and planned service whilst mental disorders have been treated in parallel by a separate, unconnected service. A wide range of problems have been noted with using this method to treat comorbid substance use and psychiatric disorders (Bellack & Gearon, 1998; Ridgely, Goldman, & Willenbring, 1990). There is a wealth of evidence documenting the fact that the traditional methods for treating substance use do not work for clients with psychiatric disorders (McLellan, Woody, Luborsky, O’Brien, & Druley, 1983; Rounsaville, Dolinsky, Babor, & Meyer, 1987; Woody, McLellan, & O’Brien, 1990). It is likely that this lack of success has resulted partly from the mental health and substance use services offering only separate, parallel treatment programs (Ridgely et al., 1990). However it is also likely due to traditional treatments for substance abuse not being particularly effective in themselves (Proudfoot & Teesson, 2000).

**Integrated treatment** has been proposed as the likely solution to some of the problems presented by the older models of parallel and serial treatment. Integrated treatment in various forms has been the subject of study and review and the definition of such treatment has been refined over time (Bellack & Gearon, 1998; Carey, 1996; Drake, Bartels, Teague, Noordsby, & Clark, 1993; Minkoff, 1989). A range of integrated treatment models has been developed which abide by the following principles (Mueser et al., 1997):

1. The same individual, team, or service, provides both mental health and substance abuse treatments simultaneously.
2. Behavioural strategies are utilised to help clients resist social pressures and urges to use substances.
3. Close involvement is maintained with the patient’s family.
4. Treatment is approached in stages to ensure optimal timing of clinical interventions.
Research Findings

Much of the research has been carried out in the United States where substance abuse treatment programs tend to be rigidly abstinence-oriented and there is considerable emphasis on AA-oriented self-help groups. The authoritarian and often anti-medication stance of such programs tend to clash with the regimens in place in the mental health areas dedicated to treating severe psychotic illness. As a consequence, maintaining these separate services to treat both illnesses is considered to be particularly counter-productive for comorbid patients (Bellack & Gearon, 1998).

Various research institutions and hospitals have proposed and instituted integrated models of treatment for this particularly disabled group. Research on their effectiveness is now becoming available with the completion of several randomised controlled trials. However, as the discussion below indicates, much more needs to be done to clarify best practice in service provision. In particular, broad-based implementation of ‘ideal’ but costly integrated programs where there is a high level of staff training and involvement and high staff-patient ratios, may not be justified if benefits are only minimal or limited to sub-groups of the patient population (Hall & Farrell, 1997).

In their review of integrated treatments, Drake et al., (1998) summarised the historical development of integrated approaches from simply adding an outpatient substance abuse treatment group to usual care, to approaches which involved ‘multiple interventions daily, for several hours each day, over a period of weeks or months’ (Drake et al., 1998 p 593). These could be in an outpatient, in-patient or residential setting. Currently understood best practice for interventions for patients with comorbid substance use and psychotic disorders has been summarised by Drake et al., in their review. This approach includes elements of assertive case management as well as evidence-based interventions for substance abuse treatment. Table 1 opposite, reproduced from this review (Table 1, p 591), provides a broad description of their approach. This review also summarised the research on integrated services until 1998 and concluded that although many of the studies have been poorly executed, there is some evidence that their comprehensive integrated outpatient treatment programs are effective. However, the conclusions drawn may be considered somewhat optimistic considering the quality of the studies reviewed and a later review carried out for the Cochrane Collaboration (Ley, Jeffery, McLaren, & Siegfried, 2000.

Bellack & Gearon (1998) provide a thoughtful discussion of the particular needs of those with schizophrenia and substance use disorders and conclude that there is little firm empirical support for integrated treatment programs to date. The meaning of ‘comprehensive, integrated treatment’ has varied across studies and Bellack and Gearon ask the important question: Which aspects of the treatments reviewed by Drake et al., really add substance to treatment? For example, they point out that the most important influence on substance abuse, found in the only study that compared specific interventions (Jerrell & Ridgely, 1995), was the behavioural program which was non-specific and not particularly intensive (one session per week).

The study by Ho et al., (1999) also raises questions about exactly which aspects of integrated programs work. This team performed a sequential analysis on consecutive intakes to a treatment facility for those with psychosis and substance use disorders.
Table 1: Drake et al., model of integrated treatment for dual disorders

- The patient participates in one program that provides treatment for two disorders — psychotic disorder and substance use disorder.
- The patient’s mental and substance use disorders are treated by the same clinicians.
- The clinicians are trained in psychopathology, assessment, and treatment strategies for both mental disorders and for substance use disorders.
- The clinicians offer substance abuse treatments tailored for patients with severe mental illness. These tailored treatments differ from traditional substance abuse treatment.
  - Focus on preventing increased anxiety rather than on breaking through denial.
  - Emphasis on trust, understanding, and learning rather than on confrontation, criticism, and expression.
  - Emphasis on reduction of harm from substance use rather than on immediate abstinence.
  - Slow pace and long-term perspective rather than rapid withdrawal and short-term treatment.
  - Provision of stage-wise and motivational counselling rather than confrontation and front-loaded treatment.
  - Supportive clinicians readily available in familiar settings rather than being available only during office hours and at clinics.
  - 12-step groups available to those who choose and can benefit rather than being mandated for all patients.
  - Neuroleptics and other pharmacotherapies indicated according to patients’ psychiatric and medical needs rather than being contraindicated for all patients in substance abuse treatment.
- Some program components specifically address substance use reduction as a central focus of programming. Components focus especially on integrated treatment.
  - Substance abuse group intervention.
  - Specialised substance abuse treatment.
  - Case management.
  - Individual counselling.
  - Housing supports.
  - Medications and medication management.
  - Family psychoeducation.
  - Psychosocial rehabilitation.

The facility practised ‘integrated’ treatment which was evolving, with the quality and intensity of treatment increasing over the years of the study (1994 to 1996). They found significant improvements over time in engagement and retention rates, hospitalisation rates and level of abstinence from abused substances. There were several factors which the authors identified that may have led to these improvements. These include more case managers, addition of a special substance abuse module in relapse prevention, addition of a community re-entry module, a lunch program and a relaxation group.
Bellack and Gearon (1998) suggest that because of the cognitive deficits commonly associated with schizophrenia, treatments for this group must be designed to minimise demand on cognitive capacity. To this end they point to the promise of contingency management. They also highlight the tendency of this group to be unmotivated to change and agree that a more realistic goal is reduction in drinking rather than abstinence, and that treatment needs to be directed at raising the levels of motivation of this group. One further area that they suggest should be emphasised is social skills to assist them to develop relationships with people who do not abuse drugs.

Improving motivation to change has been investigated for this group. Addington and colleagues (1999) found that persons with schizophrenia in the later stages of Prochaska and DiClemente's (1986) stages of change, had better substance abuse and treatment outcomes. Another study suggests that the effect seems to be on adherence. A brief motivational interview at hospital discharge from an in-patient unit led to enhanced treatment attendance rates during the first three months after hospital discharge, and lower rehospitalisation rates (Swanson, Pantalon, & Cohen, 1999).

The effectiveness of integrated treatment for those with comorbid substance misuse and psychotic disorder has been the topic of an ongoing review on the Cochrane Collaboration database. Included studies had to meet minimum standards of methodological rigour with systematic cross-checking amongst reviewers. The most recent review (Ley et al., 2000) found six studies that met criteria for inclusion but concluded on the basis of various outcome criteria that there was no evidence that programs which incorporated substance abuse treatment were superior to standard psychiatric care provided for the psychotic illness. The studies were not considered of particularly high quality and the reviewer suggested that better research needs to be carried out in this area.

Although the review took some trouble to establish methodological standards, it was not made clear whether efficacious treatments for substance misuse were used (Proudfoot & Teesson, 2000). In fact it appears that no standard or manualised interventions were used across the studies. Thus it is not likely that standard care will be improved upon if interventions are added which have no evidence of effectiveness. We must agree with the reviewers who consider that simple, well-designed controlled trials are feasible and indeed necessary if we are going to progress in treating this severely ill group.

The preceding discussion emphasises the need for clear definition of treatments used and faithful implementation of treatment programs. These are significant issues when it comes to drawing conclusions from the research literature and from reviews of the literature. For example, in a recent Cochrane Collaboration report Marshall et al., (2002) conclude that there is a need to define treatment approaches in a much more rigorous fashion in order that they can be better assessed. In addition, Jerrell and Ridgely (1999) highlight the importance of implementation of treatment programs when comparing outcomes from ‘robustly’ and ‘non-robustly’ implemented interventions.

Two further studies serve to demonstrate that clearly specified (manualised) and implemented interventions based on cognitive-behavioural therapy can have positive outcomes for both substance abuse and psychological symptoms. Both could be
considered as integrated programs, with one using group treatment for comorbid substance abuse and personality disorder (Fisher & Bentley, 1996), and the other integrated motivational interviewing, CBT and family intervention for comorbid substance abuse and schizophrenia (Barrowclough et al., 2001). Subject numbers in the studies were small, but both found significant improvements in outcomes for those receiving the manualised CBT-based intervention compared with usual care. Although in need of further replication, such studies increase confidence that more reliable estimates of the effectiveness of interventions are possible, and importantly that some integrated treatments for comorbid disorders are effective.

Conclusions which can be drawn from the above review of the literature are that:

1. persons with a dual problem of schizophrenia and substance use disorders are a particularly vulnerable subgroup with complex service needs;
2. at present comorbid schizophrenia and substance use disorders are less than optimally recognised and managed; and
3. the evidence for effective treatment options for this group is less than compelling. However, with improved definition and implementation of effective components, integrated treatments warrant further investigation.

Areas of future research have been highlighted by the preceding discussion. These include consideration of the effect on outcome of adding or removing aspects of integrated treatment as well as ensuring fidelity of implementation of interventions. Aspects warranting further research include: assertive community treatment, motivational enhancement, manualised interventions to assist with compliance with treatments and to ensure standard treatments for substance abuse, psychosocial support variables and contingency management.

**Conclusions**

The above review has several important points to make with regard to the provision of services to prevent and treat comorbid drug and alcohol and psychiatric disorders. Firstly, the evidence suggests that it is feasible to prevent the onset of both psychiatric and substance abuse disorders if early intervention and prevention strategies are implemented during childhood and adolescence. It suggests that large-scale screening and brief interventions for young people may offset some of the costs that individual and comorbid disorders later impose on our health care system.

Another fact emphasised by this review is that this highly disabled group is not served particularly well within current service systems. Because the drug and alcohol and psychiatric services are administered and funded separately, there is generally little incentive for each to assess and treat comorbid conditions. Furthermore comorbidity is often used as an excluding factor in research carried out in either area. Thus not only are these people poorly served, but there is little research pushing for improvements in services provided to them. Yet the evidence, from epidemiology as well as clinical research, is clear that comorbidity contributes an inordinate amount to the work of the services. Those with comorbidity are over-represented in both primary and secondary treatment centres suggesting the additional disability that having both types of disorder confers, as well as suggesting that implementation of assessment and appropriate evidence-based interventions to deal with comorbid disorders may alleviate the pressure on services overall.
Yet, there are many barriers to effective change in service provision and one is the lack of sufficient well-designed research needed to specify best practice for the treatment of comorbidity. However, data is emerging which provides some general guidelines which ultimately would lead to improvements in service provision. Services which receive Government funding should be required to screen for comorbid disorders and to ensure best practice is implemented for both unitary and comorbid conditions. This requires ongoing training for service staff in order to update their knowledge and skills to ensure best practice and to help them commit to best practice. It also requires provision of standardised and manualised intervention packages at both primary care and within specialist services to assist implementation of best practice.

References


Clark, R. (1994). Family costs associated with severe mental illness and substance use. *Hospital and Community Psychiatry, 45*(8), 808–813.


**Chapter 6: Comorbidity and delivery of services**


