Social and Economic Costs of Comorbid Substance Abuse and Mental Disorder

A Submission to the House of Representatives Standing Committee on Family and Community Affairs

Inquiry into Substance Abuse in Australian Communities

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Executive Summary

Substance misuse in mental disorders is very common. The risk is greatest in antisocial personality disorder and in psychotic disorders such as schizophrenia or bipolar disorder, but the numbers of affected people is greatest in anxiety and depressive disorders. Comorbidity substantially increases treatment costs, particularly in relation to hospital and other institutional services. It also affects access to treatment, treatment adherence and treatment effectiveness. The rate of symptom exacerbation and relapse is increased, and there are substantial impacts on personal and family costs. Functional outcomes including accommodation and employment are also affected. Impulsivity from substance use (especially relating to amphetamine use) also increases the risk of being both a perpetrator and victim of violence. Concern over the future impact of the high rates of injected drug use among young people with serious mental disorder is expressed.

Recommendations of the submission include the provision of training to primary care providers, voluntary services and staff of specialist services on the management of comorbidity. Communication between services assisting people with comorbid problems should also be improved. Consideration should be given to the continued separation of mental health and alcohol and other drug services, in view of the high rates of comorbidity and the inefficiencies produced by separation. Further research into the cost-effective management of comorbidity is also required.

Prevalence and risk factors

Substance misuse is very common in people with mental disorders. In a population-based study with over 20,000 people that was conducted in the USA in the 1980s (Regier et al., 1990), the lifetime risk of an alcohol disorder was increased 2.3 times in people with a mental disorder, raising it to 22.3%. Other drug problems were seen in 14.7%, or 4.5 times the rate in the general population. The increased risk was particularly high for people with bipolar or manic-depressive disorder (5.1 times for alcohol, 8.3 times for other drugs) and schizophrenia (3.3 times for alcohol, 6.2 times for other drugs). Overall, 56% of people with bipolar disorder had a substance use disorder at some time in their lives, as did 42% of people with schizophrenia.

The only similar study in Australia was conducted in 1998 with 10,641 people (National Survey of Mental Health and Wellbeing; Andrews, Hall, Teeson, & Henderson, 1999). It found that among men with a current anxiety disorder, 31% also had a current substance use disorder (ie over the last 12 months). The rate in affective or mood disorders such as depression was 34%. Substance use disorders were found in 14% of women with an anxiety disorder, and 15% of those with an affective disorder. An associated study of 980 people with psychosis (Jablensky et al., 1999) found that 42% of people with psychosis (depressive, bipolar or schizophrenia) had a lifetime diagnosis of a substance use disorder.

Cigarette smoking has not been included in many of the surveys, but its use is especially high in schizophrenia. In the Australian community psychosis study (Jenner, Kavanagh, McGrath et al., in preparation), 69% of people with psychosis smoked cigarettes (2.6 times the rate in the general population). While smokers with schizophrenia have a lower rate of respiratory cancers than do other smokers, this level of smoking is of significant concern.

The risk of comorbidity increases in groups that are at higher risk within the community. So, in the Australian psychosis study, younger people, males, and indigenous people were more at risk of both alcohol and other drug problems (Jenner, Kavanagh, McGrath et al., in preparation). This is highly consistent with overseas data (e. g. Mueser et al., 1990). Both substance use disorders and comorbidity are also more likely in people who are unemployed or of lower socio-economic status (Andrews et al., 1999; Mueser et al., 1990).

When we study people in treatment, particularly high rates can be seen. This is probably both because of the increased risk that the substance use poses, and because the two disorders increase the chance of service provision. So, the 6-month prevalence of substance abuse or dependence in an outpatient sample with schizophrenia from Newcastle, NSW in 1998 was 27%, and the lifetime prevalence was 60%. When inpatient samples also focus on high-risk groups, the rates increase even further. In a recent study of inpatients with an early episode of psychosis in Brisbane, 70% of the young people also had a current substance abuse disorder (Kavanagh et al., 1999).

A particularly disturbing feature of both this study and the larger population study of people with psychosis was the high rate of injected drug use. So, 25% of the young inpatient sample were using injected amphetamines in the previous 3 months. In the large community sample, there was an estimated 12.9 times the risk of heroin use in people with psychosis compared with the general population (Jenner, Kavanagh, McGrath et al., in preparation), and 3.1 times the rate of amphetamines (most of which were likely to be injected). This rate of injection in a sample that was prone to impulsivity and confusion is likely to result in significant exposure to medical risks.

People in treatment for substance-related problems also have high rates of psychiatric comorbidity. For example, Ross, Glaser, & Germanson (1988) evaluated lifetime psychiatric disorders in 501 people who attended treatment for alcohol or drug misuse, and found that 84.2% also had a psychiatric disorder. Apart from antisocial personality disorder, the most common disorders were anxiety disorders (61.9%), and affective disorders (33.7%).

Problems with substance abuse emerge at much lower levels of intake in people with mental disorders than in the general community. For example in our early psychosis inpatient study, 4 cones of cannabis "head" per week or any use of amphetamines were associated with functional or symptomatic problems. The substantial difficulties posed by serious mental disorder and the high vulnerability to complications means that very little consumption is needed before problems emerge (Drake, Osher, & Wallach, 1989).

The risk of comorbidity is somewhat lower in anxiety and depression—for example, there was 1.5 times the risk of alcohol misuse and 2.5 times the risk of other drug abuse in anxiety in Regier et al. (1990). However, anxiety and depression are much more common than psychotic disorders. So, the largest number of people with comorbid mental disorders and substance misuse have anxiety or depression and alcohol-related problems. In the National Survey of Mental Health and Wellbeing in 1998, approximately 180k Australian men and 130k women had a substance use disorder and either an anxiety or affective disorder in the previous 12 months (using incidence rates provided by the authors).

Areas of Impact

I am aware of no Australian study that attempts to assess the overall economic impact of comorbid substance use and mental disorder, but there are indications that this cost is very high.

The Australian National Survey of Mental Health and Wellbeing demonstrated that days out of role and the use of health services substantially increase with comorbidity (Andrews et al., 1999), although the published report does not attach a cost to these variables or separately report on substance use plus mental disorders.

The remainder of this section focuses primarily on comorbid substance abuse and psychosis, although it is emphasized that this is only a part of the comorbidity problem. The overall costs of comorbidity in people with psychosis contributes to a staggering overall community cost from both schizophrenia (Rice, 1999) and bipolar disorder (Simon & Unuetzer, 1999)—costs that are out of proportion to the frequency of these disorders (Rice, 1999), and that reflect the high degree of medical and social support, the typically early onset of schizophrenia, and the frequent need for life-long support. Costs of managing comorbidity in these disorders is therefore very high (Kivlahan, Heiman, Wright, Mundt et al., 1991).

Symptoms and service provision. We should not strictly speak of comorbidity when either the mental disorder or the substance use disorder is secondary to the other disorder: in these cases, the additional problems are simply further complications of the single disorder. However, in some cases the comorbid disorder may be triggered by the initial disorder, and then takes on a life of its own. For example, psychosis can initially occur in the context of substance use, and then can continue from that time as a second, primary disorder. Conversely, substance use can begin during a period of depression, high anxiety or psychosis, and then can develop into a pattern of misuse or dependence. Substance misuse increases the risk of relapse of the mental health problem, and exacerbations of mental health problems increases the risk of renewed substance misuse (Dixon, 1999; Mueser & Kavanagh, in press).

People with substance misuse and serious psychiatric disorders are especially likely to be among the heavy users of psychiatric services (Kent, Fogarty, & Yellowlees, 1995a; Kent, Fogarty, & Yellowlees, 1995b), and the cost of their inpatient care is especially high. In 1995, a study in South Australia found that heavy users cost $13 598 pa to service, with most of this cost being due to the inpatient costs (Kent et al., 1995a). This study is consistent with a number of overseas studies that find increased rates of hospitalization and other institutionalization in people with both schizophrenia and substance abuse or dependence (Bartels, Teague, Drake, Clark et al., 1993; Gerding, Labbate, Measom, Santos, & Arana, 1999). In one US study (Kivlahan et al., 1991), the people with schizophrenia and recent substance use incurred 19% more costly health services in a year than those with schizophrenia alone (for those with a lifetime history of substance use problems, the increase was 11%).

Most services for people with comorbid substance abuse and mental disorder are provided by separate mental health and alcohol/drug services, which produces significant problems for service provision (Ridgely, Goldman, & Willenbring, 1990). A recent survey of professional staff across Queensland (Kavanagh et al., 2000) found that the separation of services produced a range of problems in co-ordination of treatment, information exchange and access to specialist services for people with comorbidity. The problems appear to be more severe for staff of alcohol and other drug services, because of difficulties in obtaining consultations for people with mental health problems who do not meet criteria for serious mental disorder. We know from outcome trials that integrated treatment for comorbid disorders is more effective than parallel or sequential treatment (Drake, Mercer-McFadden, Mueser, McHugo, & Bond, 1998), so these service delivery problems are of significant importance in terms of maximising effectiveness and minimizing delivery costs.

Adherence and response to treatment. A significant challenge for services, and one reason for high relapse rates, is a reduced rate of treatment compliance in dual disorders (Drake & Wallach, 1989). This applies both to medications and to attendance at community centers or rehabilitation programs (Hipwell, Singh, & Clark, 2000)

The use of substances also reduces the effectiveness of interventions: For example, alcohol abuse reduces the effectiveness of antidepressant medication (Mueser & Kavanagh, in press), and nicotine increases the required treatment dosage of typical antipsychotic medication (Goff, Henderson, & Amico, 1992). Psychological interventions that require intact attention and memory are affected by intoxication or withdrawal from substances.

Medical risks. People with substance abuse and mental disorder have an increased risk of illness and injury (Cottrol & Frances, 1993), contributing substantial costs from associated medical treatment (Dickey, Azeni, Weiss, & Sederer, 2000). They have an increased risk of HIV and other infection, and may often show nutritional problems. People who abuse cannabis or alcohol are also more prone to serious neurological side effects from antipsychotic medication (Dixon, Weiden, Haas, Sweeney, & Frances, 1992; Zaretsky, Rector, Seeman, & Fornazzari, 1993).

Increased costs and burden for families. Mental disorders place substantial financial and social burdens on families. The burden is particularly high for relatives of people with comorbid substance abuse and mental disorder (Clark, 1994), although this area requires much more research attention than has been given to date.

Personal costs. For people with comorbid substance abuse and mental disorder, options for accommodation and employment are reduced, and they are often excluded from rehabilitation or treatment programs (Kavanagh, 1995). The financial cost of obtaining the substance is often

crippling to individuals, who then lose other options for recreation and objective quality of life. It is important to recognize that the low income of many people with mental disorders means that only a relatively small amount of substance use will have significant financial effect, and that this occurs most commonly with alcohol and cigarettes.

The impulsivity of many comorbid patients and the changing availability of substances means that their financial and functional status is often unstable unless they have substantial supports. They are particularly prone to housing instability and homelessness.

Violence. Substance use is associated with higher rates of violence. In a study by Cuffel, Shumway, Chouljian, and Macdonald (1994), the risk of violence in schizophrenia was increased 12 times by the use of multiple substances. The risk is particularly high for drugs such as cocaine or amphetamines. Adjusting for age, sex and race, Cuffel et al. (1994) estimated that 31% of people with schizophrenia who used substances other than alcohol and marihuana would exhibit violent behavior in the next 3 months, as against 8% of those who did not use the substances. The risk is especially high for family members of the person (Estroff, Swanson, Lachicotte, Swartz, & Bolduc, 1998). Comorbid substance use also increases the risk of being a victim of violence.

Possible responses

Remarkably, there is very little research on the prevention (Dadds, 2000) or the effective management of comorbidity (Kavanagh, 2000), especially in relation to comorbidity of substance abuse and anxiety or depression. A study is currently underway on the application of brief intervention techniques to people with psychosis and substance abuse that can be applied in

busy treatment services (Kavanagh et al., 2000). Preliminary data on the intervention appears very promising (Kavanagh et al., 1999).

Recommendations

1. Research into the cost-effective prevention and management of comorbid mental health and substance misuse disorders should be undertaken.
2. Training should be provided on the effective management of comorbidity, to primary care providers (including general practitioners), staff of voluntary services and staff of specialist mental health and alcohol/drug services.
3. Problems of information transfer and collaboration between mental health and alcohol and other drug services should be addressed as a matter of urgency.
4. Consideration should be given to the continued separation of mental health and alcohol and other drug services, in view of the high rates of comorbidity and the inefficiencies produced by separation.

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