



PSYCHOSIS WITH COEXISTING SUBSTANCE MISUSE

THE NICE GUIDELINE ON ASSESSMENT AND MANAGEMENT
IN ADULTS AND YOUNG PEOPLE

NATIONAL
COLLABORATING
CENTRE FOR
MENTAL HEALTH

PSYCHOSIS WITH COEXISTING SUBSTANCE MISUSE

ASSESSMENT AND MANAGEMENT IN ADULTS AND YOUNG PEOPLE

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1 PREFACE

This guideline has been developed to advise on the assessment and management of adults and young people (aged 14 years and older) with psychosis and coexisting substance misuse. The guideline recommendations have been developed by a multidisciplinary team of healthcare professionals, a service user, a representative from a service user organisation, a carer and guideline methodologists after careful consideration of the best available evidence. It is intended that the guideline will be useful to clinicians and service commissioners in providing and planning high-quality care for people with psychosis and coexisting substance misuse while also emphasising the importance of the experience of care for people with psychosis and coexisting substance misuse and their families, carers or significant others (see Appendix 1 for more details on the scope of the guideline).

Although the evidence base is rapidly expanding, there are a number of major gaps, and future revisions of this guideline will incorporate new scientific evidence as it develops. The guideline makes a number of research recommendations specifically to address gaps in the evidence base (see Appendix 12 for the recommendations that the Guideline Development Group [GDG] considered to be of high priority). In the meantime, it is hoped that the guideline will assist clinicians, people with psychosis and coexisting substance misuse and their families, carers or significant others by identifying the merits of particular treatment approaches where the evidence from research and clinical experience exists.

1.1 NATIONAL GUIDELINE

1.1.1 What are clinical practice guidelines?

Clinical practice guidelines are ‘systematically developed statements that assist clinicians and service users in making decisions about appropriate treatment for specific conditions’ (Mann, 1996). They are derived from the best available research evidence, using predetermined and systematic methods to identify and evaluate the evidence relating to the specific condition in question. Where evidence is lacking, the guidelines incorporate statements and recommendations based upon the consensus statements developed by the GDG.

Clinical guidelines are intended to improve the process and outcomes of healthcare in a number of different ways. They can:

- provide up-to-date evidence-based recommendations for the management of conditions and disorders by healthcare professionals
- be used as the basis to set standards to assess the practice of healthcare professionals
- form the basis for education and training of healthcare professionals
- assist service users and their families, carers or significant others in making informed decisions about their treatment and care

- improve communication between healthcare professionals, service users and their families, carers or significant others
- help identify priority areas for further research.

1.1.2 Uses and limitations of clinical guidelines

Guidelines are not a substitute for professional knowledge and clinical judgement. They can be limited in their usefulness and applicability by a number of different factors: the availability of high-quality research evidence, the quality of the methodology used in the development of the guideline, the generalisability of research findings and the uniqueness of individuals.

Although the quality of research in this field is variable, the methodology used here reflects current international understanding on the appropriate practice for guideline development (Appraisal of Guidelines for Research and Evaluation Instrument [AGREE]; www.agreetrust.org; AGREE Collaboration, 2003), ensuring the collection and selection of the best research evidence available and the systematic generation of treatment recommendations applicable to the majority of people with psychosis and coexisting substance misuse. However, there will always be some people and situations where clinical guideline recommendations are not readily applicable. This guideline does not, therefore, override the individual responsibility of healthcare professionals to make appropriate decisions in the circumstances of the individual, in consultation with the person with psychosis and coexisting substance misuse or their family, carer or significant other.

In addition to the clinical evidence, cost-effectiveness information, where available, is taken into account in the generation of statements and recommendations in clinical guidelines. While national guidelines are concerned with clinical and cost effectiveness, issues of affordability and implementation costs are to be determined by the National Health Service (NHS).

In using guidelines, it is important to remember that the absence of empirical evidence for the effectiveness of a particular intervention is not the same as evidence for ineffectiveness. In addition, and of particular relevance in mental health, evidence-based treatments are often delivered within the context of an overall treatment programme including a range of activities, the purpose of which may be to help engage the person and provide an appropriate context for the delivery of specific interventions. It is important to maintain and enhance the service context in which these interventions are delivered; otherwise the specific benefits of effective interventions will be lost. Indeed, the importance of organising care in order to support and encourage a good therapeutic relationship is at times as important as the specific treatments offered.

1.1.3 Why develop national guidelines?

The National Institute for Health and Clinical Excellence (NICE) was established as a Special Health Authority for England and Wales in 1999, with a remit to provide a

Preface

single source of authoritative and reliable guidance for service users, professionals and the public. NICE guidance aims to improve standards of care, to diminish unacceptable variations in the provision and quality of care across the NHS and to ensure that the health service is person centred. All guidance is developed in a transparent and collaborative manner using the best available evidence and involving all relevant stakeholders.

NICE generates guidance in a number of different ways, three of which are relevant here. First, national guidance is produced by the Technology Appraisal Committee to give robust advice about a particular treatment, intervention, procedure or other health technology. Second, NICE commissions public health intervention guidance focused on types of activity (interventions) that help to reduce people's risk of developing a disease or condition or help to promote or maintain a healthy lifestyle. Third, NICE commissions the production of national clinical practice guidelines focused upon the overall treatment and management of a specific condition. To enable this latter development, NICE has established four National Collaborating Centres in conjunction with a range of professional organisations involved in healthcare.

1.1.4 The National Collaborating Centre for Mental Health

This guideline has been commissioned by NICE and developed within the National Collaborating Centre for Mental Health (NCCMH). The NCCMH is a collaboration of the professional organisations involved in the field of mental health, national service user and carer organisations, a number of academic institutions and NICE. The NCCMH is funded by NICE and is led by a partnership between the Royal College of Psychiatrists and the British Psychological Society's Centre for Outcomes Research and Effectiveness, based at University College London.

1.1.5 From national guidelines to local protocols

Once a national guideline has been published and disseminated, local healthcare groups will be expected to produce a plan and identify resources for implementation, along with appropriate timetables. Subsequently, a multidisciplinary group involving commissioners of healthcare, primary care professionals, specialist mental health and other relevant healthcare professionals, service users and families, carers or significant others should undertake the translation of the implementation plan into local protocols taking into account both the recommendations set out in this guideline and the priorities in the National Service Framework for Mental Health (Department of Health, 1999) and related documentation. The nature and pace of the local plan will reflect local healthcare needs and the nature of existing services; full implementation may take a considerable time, especially where substantial training needs are identified.

1.1.6 Auditing the implementation of guidelines

This guideline identifies key areas of clinical practice and service delivery for local and national audit. Although the generation of audit standards is an important and necessary step in the implementation of this guidance, a more broadly based implementation strategy will be developed. Nevertheless, it should be noted that the Care Quality Commission will monitor the extent to which Primary Care Trusts, trusts responsible for mental health and social care, and Health Authorities have implemented these guidelines.

1.2 THE NATIONAL PSYCHOSIS WITH COEXISTING SUBSTANCE MISUSE GUIDELINE

1.2.1 Who has developed this guideline?

The GDG was convened by the NCCMH and supported by funding from NICE. The GDG included a service user, a representative from a service user organisation and a carer, and professionals from psychiatry, clinical psychology, general practice, nursing, pharmacy, social care, and guideline development.

Staff from the NCCMH provided leadership and support throughout the process of guideline development, undertaking systematic searches, information retrieval, appraisal and systematic review of the evidence. Members of the GDG received training in the process of guideline development from NCCMH staff, and the service user representatives and carer received training and support from the NICE Patient and Public Involvement Programme. The NICE Guidelines Technical Adviser provided advice and assistance regarding aspects of the guideline development process.

All GDG members made formal declarations of interest at the outset, which were updated at every GDG meeting. The GDG met a total of ten times throughout the process of guideline development. It met as a whole, but key topics were led by a national expert in the relevant topic. The GDG oversaw the production and synthesis of research evidence before presentation. All statements and recommendations in this guideline have been generated and agreed by the whole GDG.

1.2.2 For whom is this guideline intended?

This guideline will be relevant for adults and young people (aged 14 years and older) with psychosis and coexisting substance misuse and covers the care provided by primary, community, secondary, tertiary and other healthcare professionals who have direct contact with, and make decisions concerning the care of, adults and young people with psychosis and coexisting substance misuse.

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The guideline will also be relevant to the work, but will not cover the practice, of those in:

- occupational health services
- social services
- the independent sector.

1.2.3 Specific aims of this guideline

The guideline makes recommendations for the assessment and management of adults and young people (aged 14 years and older) with psychosis and coexisting substance misuse. It aims to:

- review the experience of care from the service user's perspective, and the perspective of their families, carers or significant others
- evaluate service delivery models
- evaluate the role of psychological/ psychosocial interventions
- evaluate the role of pharmacological interventions
- integrate the above to provide best practice advice on the assessment and care of people with psychosis and coexisting substance misuse throughout the care pathway
- promote the implementation of best clinical practice through the development of recommendations tailored to the requirements of the NHS in England and Wales.

1.2.4 The structure of this guideline

The guideline is divided into chapters, each covering a set of related topics. The first three chapters provide a general introduction to guidelines and the topic of psychosis with coexisting substance misuse, and to the methods used to develop this guideline. Chapters 4 to 9 provide the evidence that underpins the recommendations.

Each evidence chapter begins with a general introduction to the topic that sets the recommendations in context. Depending on the nature of the evidence, narrative reviews or meta-analyses were conducted, and the structure of the chapters varies accordingly. Where appropriate, details about current practice are provided. Where meta-analyses were conducted, information is given about both the interventions included and the studies considered for review. Further sub-sections are used to present GRADE (Grading of Recommendations: Assessment, Development and Evaluation) summary tables, clinical summaries, and health economic evidence. A sub-section called 'from evidence to recommendations' is used to explain how the GDG developed the recommendations from the evidence. Finally, recommendations (clinical and research) related to each topic are presented at the end of each chapter or sub-section. A list of research recommendations that the GDG thought were of high priority, with the rationale for this decision, can be found in Appendix 12. Further information about the evidence and the economic plan are provided in ten separate appendices on the CD-ROM (see Table 1 for details).

Table 1: Appendices on CD-ROM

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2 PSYCHOSIS WITH COEXISTING SUBSTANCE MISUSE

2.1 INTRODUCTION

This guideline covers the assessment and management of adults and young people (aged 14 years and older) who have a clinical diagnosis of psychosis with coexisting substance misuse.

The term psychosis is used to describe a group of severe mental health disorders characterised by the presence of delusions and hallucinations that disrupt a person's perception, thoughts, emotions and behaviour. The main forms of psychosis are schizophrenia (including schizoaffective disorder, schizophreniform disorder and delusional disorder), bipolar disorder or other affective psychosis. Substance misuse is a broad term encompassing, in this guideline, the hazardous or harmful use of any psychotropic substance, including alcohol and either legal or illicit drugs. Such use is usually, but not always, regarded as a problem if there is evidence of dependence, characterised by psychological reinforcement of repeated substance-taking behaviour and, in some cases, a withdrawal syndrome. However, substance misuse can be harmful or hazardous without dependence, especially among people with a coexisting psychosis.

Many people with mental health issues use substances, and in people with psychosis, problematic drinking and use of illicit drugs occur more frequently than in the general population (McCreadie, 2002; Regier *et al.*, 1990). For example, the Epidemiological Catchment Area (ECA) study in the US reported 47% and 60% lifetime prevalence rates of substance misuse among people with schizophrenia and bipolar disorder, respectively; in the general population, the rate was 16% (Regier *et al.*, 1990). Although there is still debate as to whether there is a causal link between illicit drug use and the development of psychosis, it is well established that the course of psychosis is adversely affected by substance misuse, resulting in a more prolonged and serious condition. Associated problems include non-adherence to prescribed medication, poor engagement with treatment programmes, increased risk of suicide, more inpatient stays, increased risk of violence and time spent in the criminal justice system, and poorer overall prognosis. However, many of these associations occur with substance misuse alone; the relationship between psychosis and substance misuse is complex.

While an understanding of the link between psychosis and coexisting substance use would greatly facilitate the development of treatment approaches, current knowledge is limited (Blanchard *et al.*, 2000). A consistency in the pattern of substance use in psychosis has been established in the UK (Weaver *et al.*, 2003), the US (Blanchard *et al.*, 2000) and Australia (Kavanagh *et al.*, 2004a): alcohol is the most common substance of misuse, cannabis the most common drug of misuse, and polysubstance

use frequently occurs. This pattern seems to be largely unrelated to service users' symptomatology (Brunette *et al.*, 1997) but, rather, is associated with the same demographic correlates as for the general population (Teeson *et al.*, 2000). This suggests that in a similar way to other people who misuse substances, it is the social context and availability of substances that most often dictates substance choices in people with psychosis (Kavanagh *et al.*, 2004a; Patkar *et al.*, 1999). The small literature on reasons for substance use in psychosis also suggests that people with psychosis do not differ from other groups, with reasons including response to negative affective states, interpersonal conflict and social pressures (Conrod & Stewart, 2005; Gregg *et al.*, 2009).

Since these key dimensions of substance use are shared with the general population, the indications are that the psychological processes determining and maintaining use in people with psychosis may be similar to those found for other people who misuse substances. Hence it would seem likely that the treatment approaches developed for people without psychosis will be of benefit to people with psychosis although they may need to be adapted to take account of psychosis-related issues. Service user reports indicate that situations and cues triggering use may be related, if not directly to psychotic symptoms, then to some of the negative consequences of the illness, particularly dysphoria (an unpleasant mood state) and distress (Blanchard *et al.*, 2000). Some people with psychosis describe using substances to try and counteract the side effects of antipsychotic medication, or as a preferred alternative to taking prescribed medication (Schneier & Siris, 1987). Motives for coping (Mueser *et al.*, 1995), poor problem-solving abilities (Carey & Carey, 1995) and restrictive lifestyles and limitations on obtaining pleasure in other ways may all reinforce learned expectancies of the positive benefits of substance use.

These vulnerability factors present considerable challenges in developing treatment programmes, and the functional aspects of substance use in psychosis may in part explain why motivation for reducing substance use in people with psychosis is usually low (Baker *et al.*, 2006; Barrowclough *et al.*, 2001; Martino *et al.*, 2002). Additionally, people with psychosis often have low self-esteem (Barrowclough *et al.*, 2003); thus, self-efficacy may be low, which may further decrease motivation since people with psychosis may feel unable to implement change. Moreover, psychosis is often associated with a range of complex problems and within this context the contributing role of substance use may not be salient to the service user. A related issue, and again in common with those who misuse substances who do not have a coexisting psychosis, is that the levels of substance use may not be excessive in terms of the person's peer group, making it less likely that the person will regard their substance use as problematic.

However, a number of psychosis-related issues increase treatment complexity. Engaging this group in treatment is often difficult and studies indicate that attrition rates are high, even for those agreeing to come into treatment (Drake *et al.*, 2004). Contributory factors may include a bias towards suspiciousness or paranoid interpretation of relationships arising from the psychotic symptoms and exacerbated by substance use, and a chaotic lifestyle along with concurrent problems that make scheduling appointments and engaging in structured work more difficult. Finally,

there are often pharmacological issues that are not helpful to the service user's mental state, either because they are not taking prescribed antipsychotics (Martino *et al.*, 2002) or the non-prescribed substances have rendered the prescribed medication less effective.

Reviewing the literature on psychosis and coexisting substance misuse presents significant challenges not least because of issues surrounding the definition of the terms involved. Substance misuse is differently defined within the diagnostic classifications – the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III, DSM-III-R, DSM-IV; American Psychiatric Association [APA], 1980, 1987, 1994) and *The ICD-10 Classification of Mental and Behavioural Disorders* (ICD-10; World Health Organization [WHO], 1992)—and operational definitions (generally scores above threshold in standardised measures of alcohol and drug misuse) employed in the contemporary literature. The literature also includes both studies relating to the coexistence between schizophrenia (as variously defined) and substance misuse and a broader concept of psychosis that includes bipolar disorder. There is an important distinction between use of substances (which is almost ubiquitous for alcohol) on the one hand and misuse (or harmful use) and dependence on the other. In the literature by definition use of illicit substances is 'abuse' and therefore problematic, although not necessarily representing harmful use or dependence on the substance.

2.2 INCIDENCE AND PREVALENCE

Epidemiological research in this area presents many challenges and the evidence it produces must be interpreted with a degree of caution. Substance misuse is common in the general population: the ECA study, carried out in the US, reported a life-time prevalence of substance misuse (including misuse of alcohol and drugs) of 16% (Regier *et al.*, 1990). In the Office for National Statistics' survey of psychiatric morbidity among adults living in private households in the UK, a quarter had a hazardous pattern of drinking during the year before interview, and overall, 13% of men and 8% of women aged 16 to 74 reported using illicit drugs in the preceding 12 months (Singleton *et al.*, 2000).

Schizophrenia has a wide range of comorbidities of which substance misuse is probably the commonest (Buckley *et al.*, 2009). The ECA study in the US found high levels of comorbidity (47% of people with schizophrenia had a lifetime substance misuse diagnosis: odds ratio [OR] 4.6) (Regier *et al.*, 1990). Analysis of a study from Sweden that focused on the relationship between schizophrenia and offending behaviour, which found that the statistical association between violent crime and schizophrenia was almost completely attenuated in the presence of coexisting substance misuse, identified comorbidity in 24.5% of service users (Fazel *et al.*, 2009a).

Community studies of people with psychosis are challenging to undertake, but results from the US, the UK and Australia have been fairly consistent. In Australia Kavanagh and colleagues (2004a) found lifetime rates of substance misuse or dependence of 39.8% (42.1% for people with schizophrenia), with alcohol misuse (27.6%)

and cannabis misuse (22.8%) the commonest. US data from the National Comorbidity Survey has provided ORs for coexisting substance misuse: non-affective psychosis and alcohol disorders 2.2; non-affective psychosis and drug disorders 2.7; bipolar 1 disorder and alcohol disorders 4.9; bipolar 1 and drug disorders 2.7 (Kessler *et al.*, 1994). Earlier data showed that 47% of respondents with schizophrenia met diagnostic criteria for lifetime substance misuse (including alcohol) (OR 4.6) (Regier *et al.*, 1990).

Studies of inpatients with mixed diagnoses identify high proportions of people being admitted to psychiatric units with current coexisting alcohol and substance misuse – from 30% in a US sample (Huntley *et al.*, 1998) to 48% in a UK sample (Sinclair *et al.*, 2008). Similar rates are to be found in studies of service users in contact with community mental health services. Weaver and colleagues (2003) found that 44% of service users of community mental health teams (CMHTs) in inner urban areas, where 75% had a diagnosis of psychosis, had coexisting problematical use of alcohol (25%) and/or drugs (31%). Alcohol and cannabis were the commonest substances to be misused and comorbidity was the norm. This was a multi-centre study and the authors noted higher levels of substance misuse in one centre (London) than the others (Nottingham and Sheffield). These are similar to findings from a study of the service users of a South London CMHT with ‘severe mental illness’ where the 1-year prevalence of substance misuse was 36% (alcohol misuse 31.6%; drug misuse 15.8%) (Menezes *et al.*, 1996).

Margoles and colleagues (2004) reported lower rates of current substance misuse among a cohort of service users with schizophrenia attending an outpatient programme in Canada (15%). However, they provide a telling rank order of misused substances: alcohol (10.1%); cannabis (8.2%); cocaine (2.9%); benzodiazepines (1.5%); amphetamines, stimulants and heroin (0.5% each). Substance misuse was also less common in a community cohort of service users with schizophrenia from Scotland – with 16% of service users experiencing alcohol misuse and 7% substance misuse (McCreadie, 2002). The Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) study, which looked at drug treatment for schizophrenia, identified 37% of participants as meeting diagnostic criteria for substance misuse (Swartz *et al.*, 2006).

Studies of people with first-episode psychosis demonstrate marked differences in the prevalence of substance misuse between sites, which will plausibly reflect local patterns of substance misuse. In a German study of people with a first episode, 23.7% had a lifetime history of alcohol misuse and 14.2% of substance misuse (Buhler *et al.*, 2002). In contrast, 43% of a cohort of people with a first episode presenting to a service in Cambridge, UK, were diagnosed with DSM-IV alcohol misuse and 51% with cannabis misuse or dependence (Barnett *et al.*, 2007). Although the percentages of individuals with coexisting disorders are markedly different, the ORs between service users and age-matched controls are not. Buhler and colleagues (2002) provided an OR for substance misuse against age-matched controls, which for both alcohol and drugs was 2.0 – very similar to the data reported by Barnett and colleagues (2007) for all substance misuse in the previous month (OR 2.2). In addition, McCreadie (2002) presented data showing that people with schizophrenia reported in the past year

significantly more alcohol dependence (OR 2.7) and problem use (OR 1.80), as well as drug dependence (OR 7.0) and problem use (OR 4.2), when compared with age- and gender-matched controls from the general population.

Two recent meta-analytic studies have brought together the literature on the relationship between alcohol misuse and schizophrenia, and cannabis use and schizophrenia – cannabis being by far the commonest misused substance – based on reliable sources (Koskinen, 2009a; 2009b). These provide estimates for prevalence of comorbidity and its correlating factors. The figures are somewhat lower in absolute terms than those identified above: current alcohol-use disorder 9% (inter-quartile range [IQR] 4.6–19.0) and lifetime 20.6%; current cannabis-use disorder 16% (IQR 8.6–28.6) and lifetime 27.1%. Cannabis use was commoner among people with a first episode, younger people and males rather than females (Koskinen, 2009b). Nevertheless, the prevalence and pattern of substance misuse among people with psychosis will vary between geographical locations in ways that are most likely to be explained by patterns of substance misuse in the local population; and that will be influenced by local supply and availability.

2.3 COURSE AND PROGNOSIS

In some cases, the course of coexisting substance use and psychosis may be determined by the way in which it has arisen. Four main routes (Lehman *et al.*, 1989) can be identified:

1. a primary diagnosis of psychosis with subsequent development of substance misuse
2. a primary diagnosis of substance misuse with the secondary development of psychosis as a manifestation of the substance misuse
3. concurrent presence of substance misuse and psychosis, the former exacerbating the latter
4. psychotic disorder exacerbating or altering the course of substance misuse.

Only the second of these has a brief course and good prognosis, at least in the short term. It has been suggested that the third group, in which the substance misuse and psychosis coexist, can be separated further into a group with better outcomes in which there is clearly no pre-existing psychosis, and a group with worse outcomes where psychosis clearly has been present in the longer term (Caton *et al.*, 2005, 2007). Several drugs of misuse can lead to psychotic reactions that are unequivocally a direct consequence of the drug taken. In such cases the drug is usually taken in large or repeated doses and the psychotic reaction is manifest shortly afterwards, often after only a few hours.

Opiates do not precipitate psychosis, but lysergic acid diethylamide (LSD) has been known to do so for many years, and perhaps is the only drug that has been incriminated in the development of long-term psychosis (Vardy & Kay, 1983). True cannabis psychosis, as opposed to schizophrenia-precipitated psychosis, is a toxic state with confusion and disorientation at times as well as clearly manifest delusions and hallucinations, but this only lasts for a few hours or days (Chopra & Smith, 1974;

Ghodse, 1986). Cocaine can also lead to a psychotic state with persecutory delusions and hallucinations, including the tactile hallucinations of formication (the feeling of insects crawling beneath the skin, sometimes called ‘cocaine bug’) (Ghodse *et al.*, 1998). The tropical plant, khat, although normally just acting as a mild stimulant when chewed, may also lead to brief psychotic episodes after continuous use (Alem & Shibbe, 1997). All these psychotic episodes can be regarded as toxic effects of the relevant drug and, with the possible exception of LSD, resolve without any long-term consequences.

Unfortunately, the first and fourth of the routes to psychosis and coexisting substance misuse detailed above tend to be associated with a long course and frequent relapse. There are a series of studies that demonstrate significantly worse outcomes in terms of hospital admission (Menezes *et al.*, 1996; Zammit *et al.*, 2008) and bed occupancy (Menezes *et al.*, 1996; Wade *et al.*, 2006), cost (McCrone *et al.*, 2000), ceasing antipsychotic drug treatment (Wade *et al.*, 2006; Zammit *et al.*, 2008), recurrence of depression and other disorders of mood (Turkington *et al.*, 2009), and the development of diabetes and early mortality (Jackson *et al.*, 2007).

Morbidity and mortality

People with a history of psychosis have substantially higher levels of morbidity and mortality than those without. Poor physical health and premature mortality are also seen among people with drug and alcohol misuse problems. It would therefore be expected that people with psychosis and coexisting substance misuse would have increased levels of morbidity and mortality and a large number of studies have found this to be the case.

People with severe mental illness and substance misuse are less likely to recover from a psychotic episode and more likely to experience relapse (Dixon, 1999). Most research has focused on the role of cannabis, which appears to increase the likelihood of psychotic relapse (Linszen *et al.*, 1994). Among those admitted to hospital, symptoms of psychosis are worse among people who use cannabis and the length of stay in hospital is greater (Isaac *et al.*, 2005). Rates of relapse in psychosis are also higher among those who misuse other drugs, especially stimulants.

The relationship between psychosis and coexisting substance misuse and social functioning is complex. There is evidence that, among people who develop psychosis, those with substance use have better social functioning and greater number of social contacts. However coexisting substance misuse can lead to social problems including impaired relationships with family members and reduced self-efficacy, and these may be responsible for adverse social outcomes such as housing problems and homelessness (Drake *et al.*, 1991; Salyers & Mueser, 2001).

The relationship between psychosis and coexisting substance misuse and violence is more straightforward. Among people with psychosis those with coexisting substance misuse are more likely to be involved in violent incidents (Cuffel *et al.*, 1994). Results from a recent population-based study in Sweden suggest that the relationship between psychosis and violence may largely be the result of higher rates of substance misuse among people with severe mental illness (Fazel *et al.*, 2009b). In this study people who had schizophrenia with coexisting substance misuse were over four

times more likely to be convicted of a violent crime than members of the general population. In contrast, levels of violent crime in those with schizophrenia but no substance misuse were similar to those among the general population. This study, and findings from others, provides strong evidence that any increase in levels of violence among people with psychosis is largely the result of higher levels of substance misuse in this group.

People with psychosis and coexisting substance misuse often have poor physical health. In addition to higher rates of cardiovascular disease and other conditions that are found more frequently, those who use intravenous drugs are at far greater risk of hepatitis C, human immunodeficiency virus (HIV) and other blood-borne viruses. Mortality rates are higher among people with psychosis, partly as a result of physical health problems, but also as a consequence of suicide. Among people with schizophrenia, coexisting substance misuse is an important risk factor for suicide with levels more than three times higher than would otherwise be expected (Hawton *et al.*, 2005).

2.4 AETIOLOGY

There is no single explanation for the high level of association between psychosis and substance misuse. These two disorders are usually regarded as separate diagnostic entities and therefore satisfy the strict criteria for comorbid disorders: the presence of ‘any distinct clinical entity that has existed or that may occur during the clinical course of a patient who has the index disease under study’ (Feinstein, 1970). Although neither substance misuse nor schizophrenia is uncommon, the frequency with which they present together is many times higher than would be expected by chance (see Section 2.2). It is far from clear why this is so, but several theories have been put forward for the association:

1. Substance misuse either precipitates the onset of, or is a direct cause of, psychosis.
2. Substance misuse is a common consequence of a psychotic disorder.
3. There is a common cause, or vulnerability, to both substance misuse and psychosis.

Substance misuse precipitates or causes psychosis

It has been known for over 40 years that substances like hallucinogens, stimulants and cannabis in high doses can be associated with or possibly cause psychotic states (Talbot & Teague, 1969). These drugs affect the dopaminergic and glutamergic systems in the brain, which have both been associated with psychotic symptoms such as hallucinations and delusions. However, psychotic symptoms induced by substances generally tend to be short lived in comparison with psychosis in schizophrenia, and the presentation is slightly different, with predominating agitation and confusion in psychosis following drug use.

There is a growing body of evidence showing that some substances, particularly cannabis and, to a lesser extent, alcohol, can precipitate psychosis in vulnerable people, so that the onset appears to be earlier than in those who do not take cannabis (Barnes *et al.*, 2006). Based on findings from prospective cohorts, it has been

suggested that cannabis is an independent risk factor for the development of psychosis (Andreasen *et al.*, 1987; Arseneault *et al.*, 2002; Van Os *et al.*, 2002), although the possibility that this association results from confounding factors or bias cannot be ruled out (Moore *et al.*, 2007). If cannabis causes schizophrenia in those who would not otherwise ever have the disease there should be an increasing prevalence of schizophrenia, but this does not appear to be the case, and a very large number of cannabis consumers (1300 to 2700) would have to be prevented from taking cannabis to prevent just one case of schizophrenia (Hickman *et al.*, 2009). The evidence to date suggests that cannabis, and to a lesser extent alcohol misuse, brings forward the onset of a psychosis that would have been likely to develop anyway.

Psychosis causes substance misuse

The most common hypothesis underlying this explanation is that people with psychosis self-medicate with substances to alleviate distressing and dysphoric symptoms of their illness. Respondents in many studies report that they use substances in order to alleviate their symptoms or negative emotional states. At the same time, it is also well documented that many people experience exacerbation of symptoms after substance use, and there is strong evidence that the presence of substance misuse provokes relapse and generally poorer outcomes than in those with psychosis alone (Wade *et al.*, 2006). Furthermore, if substances are used to alleviate symptoms, one would expect specific substances to be used to alleviate specific symptoms and substance misuse to increase with the severity of symptoms. Neither phenomenon has been demonstrated.

However, there is some evidence to suggest that substances may be used to alleviate a more general state of dysphoria. Individuals with psychosis are more vulnerable to experiencing low mood and anxiety, not only due to symptoms of their illness, but due to social factors surrounding their situation such as stigma, social exclusion, loss of functioning ability and financial difficulties. They are therefore more likely to use substances as short-term relief from the consequent unpleasant feelings (Phillips & Johnson, 2001).

There are further ways in which social factors may contribute to substance misuse in individuals with psychosis. This is a population in which educational and vocational failure, poverty, lack of social and recreational activity are common. Already at the margins of society, such people may feel more accepted and identify more with the drug-using population, and, because of their socioeconomic position, may be housed in neighbourhoods where drug misuse is commonplace.

It is also possible that antipsychotic medication may itself lead to an increase in substance misuse. These medications work by blocking dopamine receptors in the brain, including dopaminergic reward systems. People may attempt to counteract this effect by using substances.

A common cause for both disorders

It has been suggested that there may be a common genetic risk factor for both psychosis and substance misuse, particularly via the catechol-O-methyltransferase gene (COMT). This was initially suggested by Caspi and colleagues (2005), who postulated a gene-environment interaction as the cause of some episodes of

psychosis. However, this has not been confirmed and on present evidence (Hosák, 2007; Zammit *et al.*, 2007) the relationship is too non-specific to be causal. Several studies have shown that the presence of antisocial personality disorder independently increases the incidence of both psychosis and substance misuse. Furthermore, people with antisocial personality disorder also tend to develop both psychosis and substance misuse disorder at an earlier age. More evidence is required to establish the nature of this relationship and whether there is a causative element. Further research has proposed that abnormalities in the hippocampus and frontal lobes of the brain may cause symptoms of schizophrenia and these areas also provide positive reinforcement of drug reward and reduce inhibition of drug-seeking behaviour.

A similar framework to the above three categories has been used to understand the specific group of individuals with psychosis and cannabis use. Hambrecht and Hafner (2000) describe a ‘vulnerability-stress-coping’ model of people with schizophrenia and cannabis use, which divides this group into three categories:

1. The vulnerability group are those people who use cannabis years before developing psychosis. The authors explain that cannabis may reduce their threshold of vulnerability to developing schizophrenia, either by a biological, psychological or social process, as well as reducing their coping resources.
2. The stress group are those people for whom the onset of cannabis misuse and psychosis occurs around the same time. This group comprises individuals already vulnerable to schizophrenia for genetic, pre- or perinatal influences; cannabis promotes the release of dopamine and this stimulation of dopamine pathways can precipitate the onset of disease.
3. The coping group start using cannabis after the onset of psychosis and they self-medicate with the drug. The theory is that they learn to counterbalance the unpleasant hypodopaminergic prefrontal state of schizophrenia with the dopaminergic effects of cannabis.

This model has also to accommodate the evidence of a dose-response relationship between cannabis and psychosis, as the data suggest that people who consume the strongest forms of cannabis, particularly ‘skunk’, are more prone to psychosis (Murray *et al.*, 2007; Verdoux *et al.*, 2005).

In summary, there is still some doubt as to whether cannabis precipitates the onset of psychosis in people who are vulnerable to the condition and the precise mechanism whereby such an association is generated still remains open to many explanations.

2.5 DIAGNOSIS

The term ‘dual diagnosis’ is often used in both clinical practice and healthcare literature, and covers a wide spectrum of coexisting psychiatric disorders and substance misuse with complex inter-relationships and interactions. The coexistence of psychosis with substance misuse is commonly referred to as ‘dual diagnosis’ when it is defined narrowly, but as this term is also used to describe other forms of coexisting conditions (for example, mental illness and intellectual disability), it is best avoided or, if used, the coexisting conditions described specifically.

People with psychosis and coexisting substance misuse may have multiple (rather than two as implied by ‘dual’) diagnoses both in relation to mental illness (for example, schizophrenia and anxiety, depression, personality disorder) and substance misuse (for example, alcohol dependence and harmful use of another substance(s)).

In DSM-IV (APA, 1994), a distinction is made between independent (primary psychiatric comorbidity) and substance-induced (organic) psychiatric comorbidity and the category of expected symptoms of substance use or withdrawal (Abou-Saleh, 2004).

DSM-IV diagnostic criteria enable clinicians to distinguish ‘primary’, ‘substance-induced’ psychiatric disorders, and the ‘expected effects’ of intoxication and withdrawal (Samet *et al.*, 2004). A ‘primary’ disorder is diagnosed if ‘the symptoms are not due to the direct physiological effects of a substance’. Before diagnosing a ‘substance-induced’ disorder, a primary classification must first be ruled out (see Table 2 and Table 3)

There are four conditions under which an episode that coexists with substance intoxication or withdrawal can be considered primary:

1. Symptoms ‘are substantially in excess of what would be expected given the type or amount of the substance used or the duration of use’ (APA, 1994).
2. A history of non-substance-related episodes.

Table 2: Criteria for substance abuse (DSM-IV) and harmful use (ICD-10)

DSM-IV	ICD-10
1) A maladaptive pattern of substance use leading to clinically significant impairment or distress, as manifested by one (or more) of the following occurring within a 12-month period.	1) A pattern of psychoactive substance use that is causing damage to health; the damage may be to physical or mental health.
2) Recurrent substance use resulting in a failure to fulfil major role obligations at work, school, or home.	–
3) Recurrent substance abuse in situations that are physically hazardous.	–
4) Recurrent substance-abuse-related legal problems.	–
5) Continued substance abuse despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance.	–
6) Has never met the criteria for substance dependence for this class of substance.	–

3. The onset of symptoms precedes the onset of the substance use.
4. The symptoms persist for a substantial period of time (that is, at least a month) after the cessation of intoxication or acute withdrawal.

If neither ‘primary’ nor ‘substance-induced’ criteria are met, then the syndrome is considered to represent intoxication or withdrawal effects of alcohol or drugs

The ICD-10 (WHO, 1992) provides specified criteria to differentiate primary disorders and disorders resulting from psychoactive substance use for psychotic disorders. As in DSM-IV, ICD-10 excludes psychotic episodes attributed to psychoactive substance use from a primary classification.

Table 3: Criteria for dependence syndrome in DSM-IV and ICD-10

DSM-IV	ICD-10
Diagnosis of dependence should be made if three (or more) of the following have been experienced or exhibited at any time in the same 12-month period.	Diagnosis of dependence should be made if three or more of the following have been experienced or exhibited at some time during the last year.
Tolerance defined by either need for markedly increased amount of substance to achieve intoxication or desired effect or markedly diminished effect with continued use of the same amount of the substance.	A strong desire or sense of compulsion to take the substance.
Withdrawal as evidenced by either of the following: – the characteristic withdrawal syndrome for the substance or – the same (or closely related) substance is taken to relieve or avoid withdrawal symptoms.	Difficulties in controlling substance-taking behaviour in terms of its onset, termination, or levels of use.
The substance is often taken in larger amounts over a longer period of time than was intended.	Physiological withdrawal state when substance use has ceased or been reduced, as evidenced by either of the following: – the characteristic withdrawal syndrome for the substance or – use of the same (or closely related) substance with the intention of relieving or avoiding withdrawal symptoms.

Continued

Table 3: (Continued)

Persistent desire or repeated unsuccessful efforts to cut down or control substance use.	Evidence of tolerance, such that increased doses of the psychoactive substance are required in order to achieve effects originally produced by lower doses.
A great deal of time is spent in activities necessary to obtain the substance, use the substance, or recover from its effects.	Progressive neglect of alternative pleasures or interests because of psychoactive substance use and increased amount of time necessary to obtain or take the substance or to recover from its effects.
Important social, occupational, or recreational activities given up or reduced because of substance use.	Persisting with substance use despite clear evidence of overly harmful consequences (physical or mental).
Continued substance use despite knowledge of having had a persistent or recurrent physical or psychological problem that was likely to have been caused or exacerbated by the substance.	–

In ICD-10, psychotic disorders can be attributed to psychoactive substance use under three conditions:

1. The onset of symptoms must occur during or within 2 weeks of substance use.
2. The psychotic symptoms must persist for more than 48 hours.
3. The duration of the disorder must not exceed 6 months.

A psychotic disorder attributed to use of psychoactive substances can be specified as predominantly depressive or manic. However, unlike DSM-IV, ICD-10 does not provide a separate psychoactive substance-related category for any other type of psychiatric disorder. By definition, ICD-10's 'organic mental disorder' excludes alcohol or other psychoactive substance-related disorders. ICD-10's organic mood disorder and organic delusional disorder cannot be used to diagnose episodes coexisting with heavy psychoactive substance use. Thus, the DSM-IV concept of symptoms that are greater than the expected effects of intoxication and withdrawal is not included in ICD-10. The DSM-IV concept of 'primary' and 'substance-induced' syndromes, and the ICD-10 concept of 'psychotic disorders due to psychoactive substance use', support the notion that a psychiatric disorder warranting clinical attention can coexist with heavy substance use. However, these categories continue to present diagnostic challenges. Differential diagnosis of categories of depression, anxiety and psychosis often hinges on interpretation of the term 'in excess' of the 'expected'

effects of substance use, including people with chronic substance use who begin misusing at an early age. These expected effects are not clearly defined by either system and are therefore left to clinical judgement (Samet *et al.*, 2004).

2.6 TREATMENT AND MANAGEMENT IN THE NHS

A major problem in the treatment and management of psychosis and coexisting substance misuse is that services fail to recognise and detect both problems, hence the need for a comprehensive assessment and package of care.

2.6.1 Pharmacological treatments

Treatments for psychosis

As part of a comprehensive package of care, a range of drug treatments can be recommended for people with psychosis and coexisting substance misuse. Most commonly, antipsychotic drugs are used to manage the symptoms of psychosis. The updated NICE *Schizophrenia* (NICE, 2009a) guideline provides a helpful framework to guide the use of these drugs. The range of treatments offered for people with psychosis and coexisting substance misuse may not be in line with treatments offered in other NICE guidelines, however, because there is significant local variation in treatments offered for this population.

With the exception of clozapine, all available antipsychotic drugs appear to be equally effective in controlling symptoms; therefore the decision to use a particular agent may be determined by the need to avoid particular side effects or other complications of treatment such as drug interactions.

Where possible, the choice of which antipsychotic to use can be guided by the informed view of the service user. Outcomes from previous treatments may help refine the choice. Oral formulations are generally preferable, but where covert non-adherence is problematic, a long-acting depot formulation may be advantageous.

Previous guidance has stated that doses above the licensed range or combinations of antipsychotics are problematic (NICE, 2002, 2009a; Royal College of Psychiatrists, 2006), and for the majority of service users few advantages have been found over the licensed dose of individual drugs. If treatment response is inadequate, despite the use of licensed doses of at least two antipsychotics over a fixed duration of time, one option for further treatment is clozapine.

Treatments for substance misuse

There are a number of pharmacological treatments for substance misuse, including replacement treatments (nicotine, opiates, and so on). These are commonly delivered within the context of psychosocial interventions, and the overall framework of a primary care setting and/or the specialist multidisciplinary team. Medications are available for the treatment of withdrawal, for stabilisation, for substitution and maintenance regimes, and for relapse prevention. For alcohol, medications for withdrawal

include chlordiazepoxide and diazepam, while for opiates, methadone and buprenorphine are prescribed. Relapse prevention is achieved by the use of naltrexone and acamprosate for alcohol dependence, and naltrexone for opiate dependence.

Additional treatment for nutritional deficiencies or physical illness, such as diabetes or hypertension, may be required as many people with psychosis and coexisting substance misuse will have physical illnesses (associated with, or independent of, their psychosis and substance misuse) that will require appropriate pharmacological interventions. There is a range of NICE clinical guidelines, technology appraisals and public health guidance that are related to the treatment of dependence and mental illness (see the NICE website: www.nice.org).

2.6.2 Psychological and psychosocial interventions

Similarly, there is a range of psychological and psychosocial interventions that are beneficial in the treatment of psychosis and coexisting substance misuse. In general, a non-judgemental and motivational style is considered appropriate to enhance engagement. In the course of such an approach, the person's appreciation and attitude to their illness can be elicited and further, more intensive psychosocial interventions commenced. These may include supportive counselling, behavioural and cognitive techniques with an individual, group or family, as well as contingency management and skills training. There is a wealth of self-help mutual aid groups that can provide sustained support.

In both the UK and the US consensus agreements have been reached on key elements of treatment approaches for assisting people with psychosis and coexisting substance use (Department of Health, 2002; Ziedonis *et al.*, 2005). It is proposed that effective treatment usually requires an integrated approach. Such 'integrated care', which combines elements of mental health and substance use approaches in one delivery system, was pioneered in the US in New Hampshire in the 1980s, and has been well documented (Mueser & Drake, 2003). The advantages of an integrated approach include ensuring that both problems are given due attention and that interaction between psychosis and substance misuse, as described above, can be formulated and addressed. There is further consensus agreement that interventions need to take account of people's motivation to address or reduce their substance use and there has been particular emphasis on applying motivational interventions, in particular motivational interviewing (Miller & Rollnick, 2002). Miller and Rollnick define motivational interviewing as 'a client-centred, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence'. Building intrinsic motivation for change involves the therapist selectively eliciting and reinforcing 'change talk', that is the service user's own arguments and motivations for change. Essentially this involves engaging the service user, offering information and feedback from assessments where appropriate, and exploring and resolving ambivalence in an affirming and non-judgemental way.

The additional element that has been used most commonly in recent psychological treatment approaches for psychosis and coexisting substance misuse is cognitive

behavioural therapy (CBT). CBT is one of the most commonly used therapeutic orientations in the field of substance-use disorders (Stewart & Conrod, 2005). Moreover, in recent years CBT has been recognised to be effective in reducing the symptoms of psychosis (Pilling *et al.*, 2002). The CBT approach for individuals with psychosis and coexisting substance misuse is guided by individual formulations and by Marlatt and Gordon's (1985) model of relapse prevention. Components may include:

- identifying and increasing awareness of high-risk situations or warning signs
- developing new coping skills for handling such high-risk situations or warning signs, with particular attention being paid to symptoms of psychosis and mental health-related problems highlighted in the formulation (for example, strategies for dealing with distressing voices or with depressed mood)
- coping with cravings and urges
- making lifestyle changes so as to decrease the need or urge for drugs and/or alcohol or to increase healthy activities or alternative options to substance use
- normalising lapses in substance use and developing strategies and plans for acting in the event of a lapse or relapse so that adverse consequences may be minimised
- cognitive restructuring around alcohol and drug expectancies.

Environmental factors also play an important part in the maintenance and persistence of drug misuse in psychosis. Many individuals in this group have lifestyles in which drug use is part of the daily fabric of existence and they cannot contemplate changes that are associated with cessation of substances that are regarded as essential requirements. Major environmental change is often regarded as desirable but very difficult to achieve. Exhortations to stop or reduce drug intake usually fail but concentration on changing the social and personal environment may be of value (Tyrrer *et al.*, 2011).

2.6.3 Service-level and other interventions

Three models of service provision have been identified for the care and treatment of people with psychosis and coexisting substance misuse: serial, parallel and integrated. In the serial model psychosis and substance misuse disorders are treated consecutively by different services. In the parallel model both are treated at the same time but by different services (mental health services address the psychosis and substance misuse services the drug and/or alcohol issues). In the integrated model, psychosis and substance issues are addressed at the same time, in one setting, by one team. This is the model that was advocated by the Department of Health (2002) building on work conducted in New Hampshire (US) (for example, Mueser & Drake, 2003).

In the UK service configurations, treatment philosophies and funding streams militate against integrated provision. Mental health and substance misuse services are separate. They are often provided by different organisations and even when both are provided by the same NHS trust they usually have different organisational and managerial structures. Furthermore staff within each service often lack the knowledge and skills for working with people from the 'other' group. There has been a tendency for people to be 'bounced' between services, each requiring the service user to deal with

the ‘other’ problem first (serial model). In some areas service provision has been enhanced by mental health and substance misuse services working together, with the mental health services focusing on care and treatment of the person’s psychosis, and the substance misuse service the substance misuse issues (parallel model). This is generally considered to be an improvement on the serial model but it still has weaknesses, for example: treatment in either system may be incomplete due to a lack of attention to the comorbid condition; each system can continue to provide standard treatment and not modify it to accommodate the comorbid condition; there is the potential for miscommunication and contradictory recommendations and it falls to the service user to integrate the two systems (Drake *et al.*, 1993, 1995). Moreover in the current UK drug treatment system the focus is on ‘problem drug users’ (heroin and crack cocaine) leaving gaps in provision for those using other substances.

The differing treatment philosophies for mental health and substance misuse services can also make it difficult for people to receive coherent treatment. If necessary mental health services can compel people to receive treatment under the provision of the Mental Health Act (1983; amended 1995 and 2007; Her Majesty’s Stationery Office [HMSO], 2007). Some services are also proactive in engaging and retaining vulnerable people with psychosis in treatment (in particular assertive outreach teams). Substance misuse services usually expect some level of readiness to change and the service user to attend a team base to receive treatment. Many people with psychosis and coexisting substance misuse do not see their substance use as problematic so are unlikely to access substance misuse services. If mental health services do not view the treatment of substance misuse as an integral part of mental health treatment, this aspect of the person’s needs is likely to be overlooked.

Given the high prevalence of substance misuse in people with psychosis, the fact that many do not see their substance use as a problem, and the negative impact substance use can have on mental health, it is inevitable that many service users in both community and inpatient mental health services will have psychosis and coexisting substance misuse. Yet evidence suggests that substance misuse often goes undetected in people with mental illness (for example, Barnaby *et al.*, 2003; Noordsy *et al.*, 2003). Even when it has been identified, the lack of competence in working with substance misuse in general mental health settings, and the sometimes negative attitudes of staff, may result in substance misuse needs not being addressed at all or, if they are, interventions not being delivered in line with best practice.

In some areas dual diagnosis practitioners and teams have been developed to support the delivery of more integrated care. Models vary in different localities but typically their work includes delivering staff training and supervision, and engaging in joint work with mental health colleagues.

People with psychosis and coexisting substance misuse often have multiple needs related to their psychosis and substance misuse, for example, physical health problems, financial difficulties, housing problems, difficulty in caring for their children and being involved in illegal activity. As a consequence they are likely to have contact with a variety of services, only some of which will be provided by the NHS. Not all the public services necessary for this group of people will therefore be covered by this guidance.

2.6.4 Forensic and justice system

Assessments for substance misuse history or problems in secure hospital units or prisons usually rely on good history taking rather than the use of research tools. Bloye and colleagues (2003) recommend a multi-assessment approach to enable a more comprehensive assessment of substance-use disorders within the forensic population.

In recently established personality disorder services funded by the Dangerous and Severe Personality Disorder (DSPD) Programme, the Violence Risk Scale (VRS; Wong & Gordon, 2006; Wong *et al.*, 2007) is routinely used. This is designed to integrate the assessment of risk, need, responsivity and treatment change in a single tool. It assesses the service user's risk of violence, identifies treatment targets linked to violence, and assesses the person's readiness for change and their post-treatment improvement on the treatment targets. The tool uses the stages of change model and integrates the presence of substance misuse histories and problems in the risk assessment and the formulation of treatment targets. It is important to note that some of the service users in these DSPD units have a history of coexisting psychosis and personality disorder, as well as substance misuse.

The treatment of prisoners identified as having mental illness with or without coexisting substance misuse problems can be provided in prisons for those who can give informed consent, including the use of medication. When a prisoner has been diverted the treatment takes place in NHS or other hospitals. For those service users who are remitted back to prison following a period of treatment in hospital, difficulties have been reported in providing specific substance misuse treatment programmes because the mental health inreach teams are not adequately resourced (Sainsbury Centre for Mental Health, 2008).

There has been a major expansion of drug treatment required to be provided by prisons in recent years, through the Integrated Drug Treatment System (National Treatment Agency for Substance Misuse, <http://www.nta.nhs.uk/prison-based.aspx>), with specific guidance on dual diagnosis published in 2009 (Department of Health & Offender Health, 2009). The impact of these developments on people with psychosis and coexisting substance misuse is not yet known.

Most hospital secure units have treatment programmes for substance misuse based on cognitive behavioural principles (Derry, 2008). Most of these programmes are offered on a group basis and incorporate elements of motivation to change work, understanding links between substance misuse, mental health and offending, relapse prevention and skills development. These treatment programmes are not specific to forensic settings and are similar to interventions offered to service users in non-secure inpatient settings and community services. There are no good controlled evaluations of these treatments in large sample sizes, however in a recent retrospective evaluation of an inpatient drug and alcohol treatment programme, Derry and Batson (2008) found some evidence to suggest that those who had completed a treatment programme were less likely to use drugs or alcohol after discharge. In addition, those who had completed a treatment programme spent a greater proportion of time in the community compared with those who did not complete the programme. Suggestions for future research included more objective assessments of drug use, the need to

control for treatment adherence, motivation to change, and incorporating a level of personal insight of mental health problems in studies using large sample sizes.

Within secure units, there is a common practice of considering discharge into the community after service users with a history of drug or alcohol misuse have remained abstinent, while utilising significant amounts of unescorted community leave. This practice can lead to extended detention long after mental health problems have been treated. Despite the significant impact this may have on length of stay, there is no good research evaluation of this practice and the impact on substance misuse post-discharge has not been described. The effect of banning service users from using illicit substances or alcohol as part of the conditions of discharge has also not been evaluated.

2.7 ECONOMIC COSTS

As stated above, the available epidemiological data from within the UK suggests that a significant number of people with psychosis have coexisting substance misuse (Menezes *et al.*, 1996; Sinclair *et al.*, 2008; Weaver *et al.*, 2003). However, evidence of the extent to which these people incur extra costs in terms of healthcare or lost productivity is very limited both within and outside the UK.

To date, only one UK study compared the service use and costs of individuals with a diagnosis of psychosis and coexisting substance misuse with those with a diagnosis of psychosis alone (McCrone *et al.*, 2000). Service use data, including core psychiatric services, general healthcare, social, education, employment and legal services, were collected over a 6-month period using the Client Service Receipt Interview (CSRI). Mean core healthcare costs (including psychiatric inpatient episodes, contacts with mental health staff and emergency and day care attendances) were significantly higher in service users with psychosis and coexisting substance misuse than in those with psychosis alone (£2,626 versus £1,060, respectively; $p = 0.038$). However, the difference in total mean costs (including supported accommodation, social and legal services) did not reach statistical significance between the two groups (£3,913 versus £2,903; $p = 0.271$).

A US-based study examined the costs of psychiatric treatment for seriously mentally ill people (diagnosed with schizophrenia, major affective disorder or other psychoses) with coexisting substance misuse in comparison with mentally ill people without substance misuse (Dickey & Azeni, 1996). Paid claims for psychiatric care, including hospital admissions, residential treatment, medical treatments and case management were collected for adult Medicaid beneficiaries in the state of Massachusetts. In this study, total annual mean costs (1992) were substantially higher in service users with coexisting substance misuse than in those without (\$22,917 versus \$13,930, respectively). Importantly, these cost differences were largely explained by greater inpatient psychiatric treatment while substance misuse treatment accounted for a small proportion of the extra cost.

Another US study compared the long-term patterns of service use and costs in people with a dual diagnosis of psychiatric and substance misuse disorders, with

Psychosis with coexisting substance misuse

those without a dual diagnosis. Of service users with psychosis and coexisting substance misuse, 46 to 48% had a primary diagnosis of schizophrenia or bipolar disorder (Hoff & Rosenheck, 1998). Data was analysed from longitudinal service use files that recorded all hospital and outpatient services provided by the Department of Veterans Affairs mental health system from 1990 to 1996. Costs were calculated for five types of healthcare: inpatient and outpatient psychiatric services, substance misuse and medical or surgical care. Separate analyses were conducted for people who were categorised either as inpatient or outpatient at the time of case identification. Overall, in the hospital sample, there was no significant difference in mean annual costs between those with coexisting psychiatric and substance misuse disorders when compared with those with a psychiatric diagnosis alone. However, in the outpatient sample, people with coexisting psychiatric and substance misuse disorders incurred substantially higher mean annual costs between 1990 and 1996, most of which were due to inpatient psychiatric and substance misuse care.

To date, no single UK study has attempted to estimate the combined total healthcare and societal costs of treating people with psychosis and coexisting substance misuse. In 2007, the total health service costs of severe mental illness (schizophrenia, bipolar disorder and related conditions) were estimated at £3.8 billion while the total costs of lost employment were estimated at £5.4 billion (McCrone *et al.*, 2008). Based on UK-based estimates of prevalence rates of between 36 and 44% for people with coexisting substance misuse (Menezes *et al.*, 1996; Weaver *et al.*, 2003), it is possible that the total annual health service and productivity costs of psychosis and substance misuse could be between £3.3 and £4 billion. However, further empirical research is required to assess the true economic burden of psychosis and substance misuse in the UK.

3 METHOD USED TO DEVELOP THIS GUIDELINE

3.1 OVERVIEW

The development of this guideline drew upon methods outlined by NICE (further information is available in *The Guidelines Manual* [NICE, 2009b]). A team of healthcare professionals, lay representatives and technical experts known as the Guideline Development Group (GDG), with support from the NCCMH staff, undertook the development of a person-centred, evidence-based guideline. There are six basic steps in the process of developing a guideline:

1. Define the scope, which sets the parameters of the guideline and provides a focus and steer for the development work.
2. Define review questions considered important for practitioners and service users.
3. Develop criteria for evidence searching and search for evidence.
4. Design validated protocols for systematic review and apply to evidence recovered by search.
5. Synthesise and (meta-) analyse data retrieved, guided by the review questions, and produce GRADE evidence profiles and summaries.
6. Answer review questions with evidence-based recommendations for clinical practice. The clinical practice recommendations made by the GDG are therefore derived from the most up-to-date and robust evidence base for the clinical and cost effectiveness of the treatments and services used in the treatment and management of psychosis with coexisting substance misuse. In addition, to ensure a service user and carer focus, the concerns of service users and carers regarding health and social care have been highlighted and addressed by recommendations agreed by the whole GDG.

3.2 THE SCOPE

Guideline topics are selected by the Department of Health and the Welsh Assembly Government, which identify the main areas to be covered by the guideline in a specific remit (see *The Guidelines Manual* [NICE, 2009b] for further information). The NCCMH developed a scope for the guideline based on the remit. The purpose of the scope is to:

- provide an overview of what the guideline will include and exclude
- identify the key aspects of care that must be included
- set the boundaries of the development work and provide a clear framework to enable work to stay within the priorities agreed by NICE and the National Collaborating Centre and the remit from the Department of Health/Welsh Assembly Government

Method used to develop this guideline

- inform the development of the review questions and search strategy
- inform professionals and the public about expected content of the guideline
- keep the guideline to a reasonable size to ensure that its development can be carried out within the allocated period.

An initial draft of the scope was sent to registered stakeholders who had agreed to attend a scoping workshop. The workshop was used to:

- obtain feedback on the selected key clinical issues
- identify which service user or population subgroups should be specified (if any)
- seek views on the composition of the GDG
- encourage applications for GDG membership.

The draft scope was subject to consultation with registered stakeholders over a 4-week period. During the consultation period, the scope was posted on the NICE website (www.nice.org.uk). Comments were invited from stakeholder organisations and the Guideline Review Panel (GRP). Further information about the GRP can also be found on the NICE website. The NCCMH and NICE reviewed the scope in light of comments received, and the revised scope was signed off by the GRP.

3.3 THE GUIDELINE DEVELOPMENT GROUP

The GDG consisted of: a service user, a representative from a service user organisation and a carer; professionals in psychiatry, clinical psychology, nursing, social work, and general practice; academic experts in psychiatry and psychology; and experts in guideline development. The guideline development process was supported by staff from the NCCMH, who undertook the clinical and health economic literature searches, reviewed and presented the evidence to the other members of the GDG, managed the process, and contributed to drafting the guideline.

3.3.1 Guideline Development Group meetings

Ten GDG meetings were held between May 2009 and October 2010. During each day-long GDG meeting, in a plenary session, review questions and clinical and economic evidence were reviewed and assessed, and recommendations formulated. At each meeting, all GDG members declared any potential conflicts of interest, and service user and carer concerns were routinely discussed as part of a standing agenda.

3.3.2 Service users and carers

Individuals with direct experience of services gave an integral service-user focus to the GDG and the guideline. The GDG included a service user and a representative of a service user organisation and a carer. They contributed as full GDG members to writing the review questions, helping to ensure that the evidence addressed their views and preferences, highlighting sensitive issues and terminology relevant to the

guideline, and bringing service-user research to the attention of the GDG. In drafting the guideline, the service user and carer representatives met with the NCCMH team on several occasions to develop the chapter on experience of care (Chapter 4). They also contributed to writing the guideline's introduction (Chapter 2) and identified recommendations from the service user and carer perspective.

3.3.3 National and international experts

National and international experts in the area under review were identified through the literature search and through the experience of the GDG members. These experts were contacted to recommend unpublished or soon-to-be published studies to ensure up-to-date evidence was included in the development of the guideline. They informed the group about completed trials at the pre-publication stage, systematic reviews in the process of being published, studies relating to the cost effectiveness of treatment and trial data if the GDG could be provided with full access to the complete trial report. Appendix 5 lists researchers who were contacted.

3.4 REVIEW QUESTIONS

Review (clinical) questions were used to guide the identification and interrogation of the evidence base relevant to the topic of the guideline. Before the first GDG meeting, an analytic framework (see Appendix 6) was prepared by NCCMH staff based on the scope and an overview of existing guidelines, and discussed with the guideline Chair. The framework was used to provide a structure from which the review questions were drafted. Both the analytic framework and the draft review questions were then discussed by the GDG at the first few meetings and amended as necessary. Where appropriate, the framework and questions were refined once the evidence had been searched and, where necessary, sub-questions were generated. Questions submitted by stakeholders were also discussed by the GDG and the rationale for not including any questions was recorded in the minutes. The final list of review questions can be found in Appendix 6.

For questions about interventions, the PICO (Patient, Intervention, Comparison and Outcome) framework was used (see Table 4).

In some situations, the prognosis of a particular condition is of fundamental importance, over and above its general significance in relation to specific interventions. Areas where this is particularly likely to occur relate to assessment of risk, for example in terms of behaviour modification or screening and early intervention. In addition, review questions related to issues of service delivery are occasionally specified in the remit from the Department of Health/Welsh Assembly Government. In these cases, appropriate review questions were developed to be clear and concise.

To help facilitate the literature review, a note was made of the best study design type to answer each question. There are four main types of review question of relevance to NICE guidelines. These are listed in Table 5. For each type of question, the

Table 4: Features of a well-formulated question on effectiveness intervention – the PICO guide

Patients/ population	Which patients or population of patients are we interested in? How can they be best described? Are there subgroups that need to be considered?
Intervention	Which intervention, treatment or approach should be used?
Comparison	What is/are the main alternative/s to compare with the intervention?
Outcome	What is really important for the patient? Which outcomes should be considered: intermediate or short-term measures; mortality; morbidity and treatment complications; rates of relapse; late morbidity and readmission; return to work, physical and social functioning and other measures such as quality of life; general health status?

Table 5: Best study design to answer each type of question

Type of question	Best primary study design
Effectiveness or other impact of an intervention	Randomised controlled trial (RCT); other studies that may be considered in the absence of RCTs are the following: internally/externally controlled before and after trial, interrupted time-series
Accuracy of information (for example, risk factor, test, prediction rule)	Comparing the information against a valid gold standard in a randomised trial or inception cohort study
Rates (of disease, service user experience, rare side effects)	Prospective cohort, registry, cross-sectional study

best primary study design varies, where ‘best’ is interpreted as ‘least likely to give misleading answers to the question’.

However, in all cases, a well-conducted systematic review (of the appropriate type of study) is likely to always yield a better answer than a single study.

Deciding on the best design type to answer a specific review question does not mean that studies of different design types addressing the same question were discarded.

3.5 SYSTEMATIC CLINICAL LITERATURE REVIEW

The aim of the clinical literature review was to systematically identify and synthesise relevant evidence from the literature in order to answer the specific review questions developed by the GDG. Thus, clinical practice recommendations are evidence-based, where possible, and, if evidence is not available, informal consensus methods are used (see Section 3.5.6) and the need for future research is specified.

3.5.1 Methodology

A stepwise, hierarchical approach was taken to locating and presenting evidence to the GDG. The NCCMH developed this process based on methods set out by NICE (*The Guidelines Manual* [NICE, 2009b]), and after considering recommendations from a range of other sources. These included:

- *British Medical Journal* (BMJ) Clinical Evidence
- Clinical Policy and Practice Program of the New South Wales Department of Health (Australia)
- The Cochrane Collaboration
- GRADE Working Group
- New Zealand Guidelines Group
- NHS Centre for Reviews and Dissemination
- Oxford Centre for Evidence-Based Medicine
- Oxford Systematic Review Development Programme
- Scottish Intercollegiate Guidelines Network (SIGN)
- United States Agency for Healthcare Research and Quality (AHRQ).

3.5.2 The review process

Scoping searches

A broad preliminary search of the literature was undertaken in January 2009 to obtain an overview of the issues likely to be covered by the scope, and to help define key areas. Searches were restricted to clinical guidelines, Health Technology Assessment (HTA) reports, key systematic reviews and RCTs, and conducted in the following databases and websites:

- BMJ Clinical Evidence
- Canadian Medical Association (CMA) Infobase [Canadian guidelines]
- Clinical Policy and Practice Program of the New South Wales Department of Health (Australia)
- Clinical Practice Guidelines [Australian Guidelines]
- Cochrane Central Register of Controlled Trials (CENTRAL)
- Cochrane Database of Abstracts of Reviews of Effects (DARE)
- Cochrane Database of Systematic Reviews (CDSR)

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- Excerpta Medica Database (EMBASE)
- Guidelines International Network (G-I-N)
- Health Evidence Bulletin Wales
- Health Management Information Consortium [HMIC]
- HTA database (technology assessments)
- Medical Literature Analysis and Retrieval System Online (MEDLINE)/MEDLINE in Process
- National Health and Medical Research Council (NHMRC)
- National Library for Health (NLH) Guidelines Finder
- New Zealand Guidelines Group
- NHS Centre for Reviews and Dissemination (CRD)
- Organizing Medical Networked Information (OMNI) Medical Search
- SIGN
- Turning Research Into Practice (TRIP)
- United States Agency for Healthcare Research and Quality (AHRQ)
- Websites of NICE and the National Institute for Health Research (NIHR) HTA Programme for guidelines and HTAs in development.

Existing NICE guidelines were updated where necessary. Other relevant guidelines were assessed for quality using the AGREE instrument (AGREE Collaboration, 2003). The evidence base underlying high-quality existing guidelines was utilised and updated as appropriate. Further information about this process can be found in *The Guidelines Manual* (NICE, 2009b).

Systematic literature searches

After the scope was finalised, a systematic search strategy was developed to locate all the relevant evidence. The balance between sensitivity (the power to identify all studies on a particular topic) and specificity (the ability to exclude irrelevant studies from the results) was carefully considered, and a decision made to develop highly sensitive strategies to identify as complete a set as possible of clinically relevant studies. Searches were conducted in the following databases:

- CENTRAL
- Cumulative Index to Nursing and Allied Health Literature (CINAHL)
- EMBASE
- MEDLINE/MEDLINE In-Process
- Psychological Information Database (PsycINFO).

The search strategies were initially developed for MEDLINE before being translated for use in other databases/interfaces. Strategies were built up through a number of trial searches and discussions of the results of the searches with the review team and GDG to ensure that all possible relevant search terms were covered. In order to assure comprehensive coverage, search terms for psychosis were kept purposely broad to help counter dissimilarities in database indexing practices and thesaurus terms, and imprecise reporting of study populations by authors in the titles and abstracts of records. Following the advice of the GDG, search terms for substance misuse were limited to the main drugs associated with the term. The search terms for each MEDLINE search are set out in full in Appendix 7.

Reference Manager

Citations from each search were downloaded into Reference Manager (a software product for managing references and formatting bibliographies) and duplicates removed. Records were then screened against the inclusion criteria of the reviews before being quality appraised (see below). The unfiltered search results were saved and retained for future potential re-analysis to help keep the process both replicable and transparent.

Search filters

To aid retrieval of relevant and sound studies, filters were used to limit a number of searches to RCTs, observational studies and qualitative research. The RCT filter is an adaptation of a filter designed by the CRD and the Health Information Research Unit of McMaster University, Ontario. The observational studies filter and qualitative research filter were developed in-house. Each filter comprises index terms relating to the study type(s) and associated text words for the methodological description of the design(s).

Date and language restrictions

Systematic database searches were initially conducted in July 2009 up to the most recent searchable date. Search updates were generated on a 6-monthly basis, with the final re-runs carried out in May 2010 ahead of the guideline consultation. After this point, studies were only included if they were judged to be exceptional by the GDG (for example, if the evidence was likely to change a recommendation).

Although no language restrictions were applied at the searching stage, foreign language papers were not requested or reviewed, unless they were of particular importance to a review question. Date restrictions were applied for searches for qualitative research for the period from 1995 onwards, and for updates of published reviews. No date restrictions were imposed for the remainder of the searches.

Other search methods

Other search methods involved: (a) scanning the reference lists of all eligible publications (systematic reviews, stakeholder evidence and included studies) for more published reports and citations of unpublished research; (b) sending lists of studies meeting the inclusion criteria to subject experts (identified through searches and the GDG) and asking them to check the lists for completeness, and to provide information of any published or unpublished research for consideration (see Appendix 5); (c) checking the tables of contents of key journals for studies that might have been missed by the database and reference list searches; (d) tracking key papers in the Science Citation Index (prospectively) over time for further useful references.

Full details of the MEDLINE search strategies and filters used for the systematic review of clinical evidence are provided in Appendix 7.

Study selection and quality assessment

All primary-level studies included after the first scan of citations were acquired in full and re-evaluated for eligibility at the time they were being entered into the study

Method used to develop this guideline

information database. More specific eligibility criteria were developed for each review question and are described in the relevant clinical evidence chapters. Eligible systematic reviews and primary-level studies were critically appraised for methodological quality (see Appendix 10 for methodology checklists). The eligibility of each study was confirmed by at least one member of the GDG.

For some review questions, it was necessary to prioritise the evidence with respect to the UK context (that is, external validity). To make this process explicit, the GDG took into account the following factors when assessing the evidence:

- participant factors (for example, gender, age and ethnicity)
- provider factors (for example, model fidelity, the conditions under which the intervention was performed and the availability of experienced staff to undertake the procedure)
- cultural factors (for example, differences in standard care and differences in the welfare system).

The GDG decided which prioritisation factors were relevant to each review question in light of the UK context and then decided how to modify recommendations. In each case where this was done, further detail can be found in the relevant ‘from evidence to recommendations’ section.

Unpublished evidence

The GDG used a number of criteria when deciding whether or not to accept unpublished data. First, the evidence must have been accompanied by a trial report containing sufficient detail to properly assess the quality of the data. Second, the evidence must have been submitted with the understanding that data from the study and a summary of the study’s characteristics would be published in the full guideline. Therefore, the GDG did not accept evidence submitted as commercial in confidence. However, the GDG recognised that unpublished evidence submitted by investigators might later be retracted by those investigators if the inclusion of such data would jeopardise publication of their research.

3.5.3 Data extraction

Study characteristics and outcome data were extracted from all eligible studies, which met the minimum quality criteria, using Review Manager 5 (Cochrane Collaboration, 2008).

In most circumstances, for a given outcome (continuous and dichotomous), where more than 50% of the number randomised to any group were lost to follow-up, the data were excluded from the analysis (except for the outcome ‘leaving the study early’, in which case, the denominator was the number randomised). Where possible, dichotomous efficacy outcomes were calculated on an intention-to-treat (ITT) basis (that is, a ‘once-randomised-always-analyse’ basis). Where the GDG advised that those participants who ceased to engage in the study were likely to have an unfavourable outcome, early withdrawals were included in both the numerator and denominator. For example, for the outcome of relapse of psychotic symptoms, in

studies that did not use an ITT analysis, participants who left the study early were counted as relapsing. Adverse effects were entered into Review Manager as reported by the study authors because it is usually not possible to determine whether early withdrawals had an unfavourable outcome. Where there was limited data for a particular review, the 50% rule was not applied. In these circumstances the evidence was downgraded due to the risk of bias.

Consultation with another reviewer or members of the GDG was used to overcome difficulties with coding. Data from studies included in existing systematic reviews were extracted independently by one reviewer and cross-checked with the existing dataset. Where possible, two independent reviewers extracted data from new studies. Where double data extraction was not possible, data extracted by one reviewer were checked by the second reviewer. Disagreements were resolved through discussion. Where consensus could not be reached, a third reviewer or GDG members resolved the disagreement. Masked assessment (that is, blind to the journal from which the article comes, the authors, the institution and the magnitude of the effect) was not used since it is unclear that doing so reduces bias (Berlin, 2001; Jadad *et al.*, 1996).

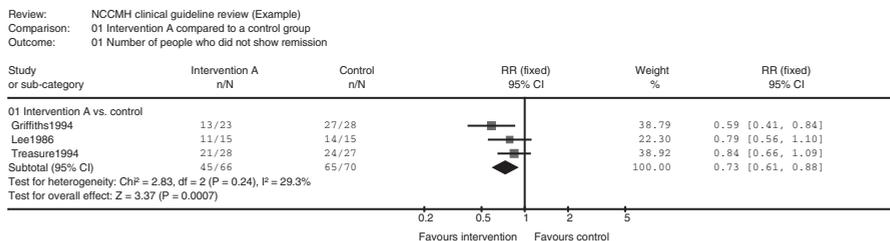
3.5.4 Synthesising the evidence

Meta-analysis

Where possible, meta-analysis based on a random-effects model (DerSimonian & Laird, 1986) was used to synthesise the evidence using Review Manager. If necessary, reanalyses of the data or sub-analyses were used to answer review questions not addressed in the original studies or reviews.

Dichotomous outcomes were analysed as relative risks (RR) with the associated 95% confidence interval [CI] (for an example, see Figure 1). A relative risk (also called a risk ratio) is the ratio of the treatment event rate to the control event rate. An RR of 1 indicates no difference between treatment and control. In Figure 1, the overall RR of 0.73 indicates that the event rate (that is, non-remission rate) associated with intervention A is about three quarters of that with the control intervention or, in other words, the RR reduction is 27%.

Figure 1: Example of a forest plot displaying dichotomous data



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The CI shows a range of values within which we are 95% confident that the true effect will lie. If the effect size has a CI that does not cross the ‘line of no effect’, then the effect is commonly interpreted as being statistically significant.

Continuous outcomes were analysed using the mean difference (MD), or standardised mean difference (SMD) when different measures were used in different studies to estimate the same underlying effect (for an example, see Figure 2). If reported by study authors, ITT data, using a valid method for imputation of missing data, were preferred over data only from people who completed the study.

Heterogeneity

To check for consistency of effects among studies, both the I^2 statistic and the chi-squared test of heterogeneity, as well as a visual inspection of the forest plots were used. The I^2 statistic describes the proportion of total variation in study estimates that is due to heterogeneity (Higgins & Thompson, 2002). The I^2 statistic was interpreted in the following way:

- > 50%: notable heterogeneity
- ≥ 30 to ≤ 50 %: moderate heterogeneity
- < 30%: mild heterogeneity.

Two factors were used to make a judgement about importance of the observed value of I^2 : (1) the magnitude and direction of effects, and (2) the strength of evidence for heterogeneity (for example, p value from the chi-squared test, or a CI for I^2). Where heterogeneity was judged to be important, an attempt was made to explain the variation by conducting sub-analyses to examine potential moderators.

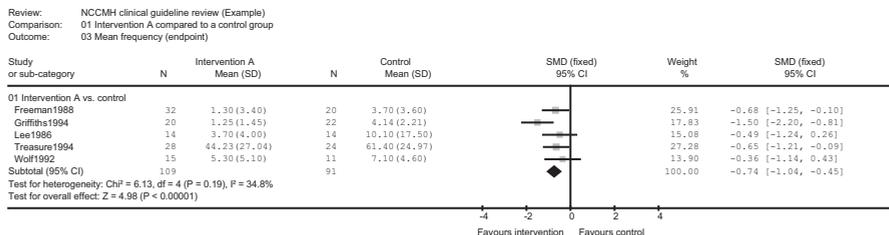
Publication bias

Where there was sufficient data, the intention was to use funnel plots to explore the possibility of publication bias—symmetry of the plot would be taken to indicate possible publication bias and investigated further. However, due to a paucity of data, funnel plots could not be used.

3.5.5 Presenting the data to the GDG

Study characteristics tables and, where appropriate, forest plots generated with Review Manager were presented to the GDG.

Figure 2: Example of a forest plot displaying continuous data



Where meta-analysis was not appropriate and/or possible, the reported results from each primary-level study were included in the study characteristics table (and where appropriate, in a narrative review).

Evidence profile tables

A GRADE¹ evidence profile was used to summarise both the quality of the evidence and the results of the evidence synthesis (see Table 6 for an example of an evidence profile). The GRADE approach is based on a sequential assessment of the quality of evidence, followed by judgement about the balance between desirable and undesirable effects, and subsequent decision about the strength of a recommendation.

For each outcome, quality may be reduced depending on the following factors:

- **study design** (randomised trial, observational study, or any other evidence)
- **limitations** (based on the quality of individual studies)
- **inconsistency** (see section 3.5.4 for how consistency was assessed)
- **indirectness** (that is, how closely the outcome measures, interventions and participants match those of interest)
- **imprecision** (based on the CI around the effect size).

For observational studies, the quality may be increased if there is a large effect, plausible confounding would have changed the effect, or there is evidence of a dose-response gradient (details would be provided under the ‘other’ column). Each evidence profile also included a summary of the findings: number of service users included in each group, an estimate of the magnitude of the effect, and the overall quality of the evidence for each outcome.

3.5.6 Method used to answer a review question in the absence of appropriately designed, high-quality research

In the absence of appropriately designed, high-quality research, or where the GDG were of the opinion (on the basis of previous searches or their knowledge of the literature) that there were unlikely to be such evidence, an informal consensus process was adopted. This process focused on those questions that the GDG considered a priority.

The starting point for the process of informal consensus was that a member of the GDG used expert opinion about good practice and any relevant papers identified by GDG members to draft a narrative review. The draft was revised in light of comments from the GDG and used as the basis of a discussion at one or more meetings.

3.5.7 Forming the clinical summaries and recommendations

Once the GRADE evidence profiles relating to a particular review question were completed, summary evidence tables were developed (these tables are presented in

¹For further information about GRADE, see www.gradeworkinggroup.org

Table 6: Example of GRADE evidence profile

Quality assessment		Summary of findings										Quality
		No. of service users					Effect					
No. of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other	Intervention	Control	Relative (95% CI)	Absolute		
Outcome 1												
6	Randomised trial	No serious limitations	No serious inconsistency	No serious indirectness	Very serious ^{1,2}	None	8/191	7/150	RR 0.94 (0.39 to 2.23)	0 fewer per 100 (from 3 fewer to 6 more)	⊕⊕○○ LOW	
Outcome 2												
6	Randomised trial	No serious limitations	No serious inconsistency	No serious indirectness	No serious imprecision	None	120/600	220/450	RR 0.39 (0.23 to 0.65)	30 fewer per 100 (from 17 fewer to 38 fewer)	⊕⊕⊕⊕ HIGH	
Outcome 3												
3	Randomised trial	No serious limitations	No serious inconsistency ³	No serious indirectness	Very serious ^{1,2}	None	83	81	–	MD –3.51 (–11.51 to 4.49)	⊕○○○ VERY LOW	
Outcome 4												
3	Randomised trial	No serious limitations	No serious inconsistency	No serious indirectness	Serious ¹	None	88	93	–	SMD –0.26 (–0.50 to –0.03)	⊕⊕⊕○ MODERATE	
Outcome 5												
4	Randomised trial	No serious limitations	No serious inconsistency	No serious indirectness	Very serious ^{1,2}	None	109	114	–	SMD –0.13 (–0.6 to 0.34)	⊕⊕○○ LOW	

¹ Optimal information size (OIS) (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

² The CI includes both (1) no effect and (2) appreciable benefit or appreciable harm.

³ Considerable heterogeneity.

the evidence chapters). Finally, the systematic reviewer in conjunction with the members of the GDG produced a clinical evidence summary.

After the GRADE profiles and clinical summaries were presented to the GDG, the associated recommendations were drafted. In making recommendations, the GDG took into account the trade-off between the benefits and downsides of treatment as well as other important factors, such as economic considerations, social value judgements², the requirements to prevent discrimination and to promote equality³, and the GDG's awareness of practical issues (Eccles *et al.*, 1998; NICE, 2009b).

Finally, to show clearly how the GDG moved from the evidence to the recommendations, each chapter has a section called 'from evidence to recommendations'. Underpinning this section is the concept of the 'strength' of a recommendation (Schunemann *et al.*, 2003). This takes into account the quality of the evidence but is conceptually different. Some recommendations are 'strong' in that the GDG believes that the vast majority of healthcare professionals and service users would choose a particular intervention if they considered the evidence in the same way that the GDG has. This is generally the case if the benefits clearly outweigh the harms for most people and the intervention is likely to be cost effective. However, there is often a closer balance between benefits and harms, and some service users would not choose an intervention whereas others would. This may happen, for example, if some service users are particularly averse to some side effect and others are not. In these circumstances the recommendation is generally weaker, although it may be possible to make stronger recommendations about specific groups of service users. The strength of each recommendation is reflected in the wording of the recommendation, rather than by using labels or symbols.

Where the GDG identified areas in which there are uncertainties or where robust evidence was lacking, they developed research recommendations. Those that were identified as 'high-priority' were included in the NICE (short) version of the guideline, and in Appendix 12.

3.6 HEALTH ECONOMICS METHODS

The aim of health economics was to contribute to the guideline's development by providing evidence on the cost effectiveness of interventions covered in this guideline. This was achieved by:

- systematic literature review of existing economic evidence
- economic modelling, where economic evidence was lacking or was considered inadequate to inform decisions.

Systematic reviews of economic literature were conducted in all areas covered in the guideline. Economic modelling was planned in areas with likely major resource implications, where the current extent of uncertainty over cost effectiveness was significant and economic analysis was expected to reduce this uncertainty, in accordance

²See NICE's Social Value Judgements: Principles for the Development of NICE Guidance: www.nice.org.uk/aboutnice/howwework/socialvaluejudgements/socialvaluejudgements.jsp

³See NICE's equality scheme: www.nice.org.uk/aboutnice/howwework/NICEEqualityScheme.jsp

Method used to develop this guideline

with *The Guidelines Manual* (NICE, 2009b). Prioritisation of areas for economic modelling was a joint decision between the health economist and the GDG. The rationale for prioritising review questions for economic modelling was set out in an economic plan agreed between NICE, the GDG, the health economist and other members of the technical team. The economic plan is presented in Appendix 19. The following review questions were selected as key issues that could potentially be addressed by further economic modelling:

- Cost effectiveness of integrated models of care (usually involving the model of assertive community treatment [ACT]) in people with psychosis and coexisting substance misuse
- Cost effectiveness of specific psychological/psychosocial interventions (delivered within an integrated service model) in people with psychosis and coexisting substance misuse including:
 - individual interventions
 - group interventions
 - family interventions
 - contingency management
 - residential treatment (with/without recovery model)
 - combined interventions.

In addition, literature on the health-related quality of life of people with psychosis and coexisting substance misuse was systematically searched to identify studies reporting appropriate health state utility scores that could be used in potential cost-utility analysis.

The rest of this section describes the methods adopted in the systematic literature review of health economic studies. Methods employed in any economic modelling undertaken are described in the respective sections of the guideline.

3.6.1 Search strategy for economic evidence

Scoping searches

A broad preliminary search of the literature was undertaken in January 2009 to obtain an overview of the issues likely to be covered by the scope, and help define key areas. Searches were restricted to economic studies and HTA reports, and conducted in the following databases:

- EMBASE
- HTA database (technology assessments)
- MEDLINE / MEDLINE In-Process
- NHS Economic Evaluation Database (NHS EED).

Any relevant economic evidence arising from the clinical scoping searches was also made available to the health economist during the same period.

Systematic literature searches

After the scope was finalised, a systematic search strategy was developed to locate all the relevant evidence. The balance between sensitivity (the power to identify all studies

on a particular topic) and specificity (the ability to exclude irrelevant studies from the results) was carefully considered, and a decision made to utilise a broad approach to searching to maximise retrieval of evidence to all parts of the guideline. Searches were restricted to economic studies and health technology assessment reports, and conducted in the following databases:

- CINAHL
- EconLit (the American Economic Association's electronic bibliography)
- EMBASE
- HTA database (technology assessments)
- MEDLINE/MEDLINE In-Process
- NHS EED
- PsycINFO.

Any relevant economic evidence arising from the clinical searches was also made available to the health economist during the same period.

The search strategies were initially developed for MEDLINE before being translated for use in other databases/interfaces. Strategies were built up through a number of trial searches, and discussions of the results of the searches with the review team and GDG to ensure that all possible relevant search terms were covered. In order to assure comprehensive coverage, search terms for psychosis were kept purposely broad to help counter dissimilarities in database indexing practices and thesaurus terms, and imprecise reporting of study populations by authors in the titles and abstracts of records. Search terms for substance misuse were limited to the main drugs associated with the term at the advice of the GDG.

For standard mainstream bibliographic databases (CINAHL, EMBASE, MEDLINE and PsycINFO) search terms for psychosis and substance misuse were combined with a search filter for health economic studies. For searches generated in topic-specific databases (EconLit, HTA, NHS EED) search terms for psychosis and substance misuse were used without a filter. The sensitivity of this approach was aimed at minimising the risk of overlooking relevant publications, due to potential weaknesses resulting from more focused search strategies. The MEDLINE search terms are set out in full in Appendix 9.

Reference Manager

Citations from each search were downloaded into Reference Manager (a software product for managing references and formatting bibliographies) and duplicates removed. Records were then screened against the inclusion criteria of the reviews before being quality appraised. The unfiltered search results were saved and retained for future potential re-analysis to help keep the process both replicable and transparent.

Search filters

The search filter for health economics is an adaptation of a pre-tested strategy designed by the CRD. The search filter is designed to retrieve records of economic evidence (including full and partial economic evaluations) from the vast amount of literature indexed to major medical databases such as MEDLINE. The filter, which comprises a combination of controlled vocabulary and free-text retrieval methods, maximises

Method used to develop this guideline

sensitivity (or recall) to ensure that as many potentially relevant records as possible are retrieved from a search. Full details of the filter is provided in Appendix 9.

Date and language restrictions

Systematic database searches were initially conducted in July 2009 up to the most recent searchable date. Search updates were generated on a 6-monthly basis, with the final re-runs carried out in May 2010 ahead of the guideline consultation, which ran from 10 August to 5 October 2010. After this point, studies were included only if they were judged by the GDG to be exceptional (for example, the evidence was likely to change a recommendation).

Although no language restrictions were applied at the searching stage, foreign language papers were not requested or reviewed, unless they were of particular importance to an area under review. All the searches were restricted to research published from 1994 onwards in order to obtain data relevant to current healthcare settings and costs.

Other search methods

Other search methods involved scanning the reference lists of all eligible publications (systematic reviews, stakeholder evidence and included studies from the economic and clinical reviews) to identify further studies for consideration.

Full details of the MEDLINE search strategies and filter used for the systematic review of health economic evidence are provided in Appendix 9.

3.6.2 Inclusion criteria for economic studies

The following inclusion criteria were applied to select studies identified by the economic searches for further consideration:

- No restriction was placed on language or publication status of the papers.
- Only studies from Organisation for Economic Co-operation and Development countries were included, as the aim of the review was to identify economic information transferable to the UK context.
- Selection criteria based on types of clinical conditions and service users as well as interventions assessed were identical to the clinical literature review.
- Studies were included provided that sufficient details regarding methods and results were available to enable the methodological quality of the study to be assessed, and provided that the study's data and results were extractable.
- Full economic evaluations that compared two or more relevant options and considered both costs and consequences (that is, cost–consequence analysis, cost-effectiveness analysis, cost–utility analysis or cost–benefit analysis), as well as costing analyses that compared only costs between two or more interventions, were included in the review.
- Economic studies were included if they used clinical effectiveness data from an RCT, a cohort study, or a systematic review and meta-analysis of clinical studies. Studies that had a mirror-image design were excluded from the review.
- Studies were included only if the examined interventions were clearly described. This involved the dosage and route of administration and the duration of treatment

in the case of pharmacological interventions; and the types of healthcare professionals involved as well as the frequency and duration of treatment in the case of psychological interventions. Evaluations in which drugs were treated as a class were excluded from further consideration.

3.6.3 Applicability and quality criteria for economic studies

All economic papers eligible for inclusion were appraised for their applicability and quality using the methodology checklist for economic evaluations recommended by NICE (NICE, 2009b), which is shown in Appendix 18 of this guideline. The methodology checklist for economic evaluations was also applied to the economic models developed specifically for this guideline. All studies that fully or partially met the applicability and quality criteria described in the methodology checklist were considered during the guideline development process, along with the results of the economic modelling conducted specifically for this guideline. The completed methodology checklists for all economic evaluations considered in the guideline are provided in Appendix 18.

3.6.4 Presentation of economic evidence

The economic evidence considered in the guideline is provided in the respective evidence chapters, following presentation of the relevant clinical evidence. The references to included studies as well as the evidence tables with the characteristics and results of economic studies included in the review, are provided in Appendix 11. Methods and results of any economic modelling undertaken alongside the guideline development process are presented in the relevant evidence chapters. GRADE economic evidence profiles for all economic studies included in the review are provided in Appendix 17.

3.6.5 Results of the systematic search of economic literature

The titles of all studies identified by the systematic search of the literature were screened for their relevance to the topic (that is, consideration of health economic issues and health-related quality of life in people with psychosis and coexisting substance misuse). References that were clearly not relevant were excluded first. The abstracts of all potentially relevant publications (82 references) were then assessed against the inclusion criteria for economic evaluations by the health economist. Full texts of the studies potentially meeting the inclusion criteria (including those for which eligibility was not clear from the abstract) were obtained. Studies that did not meet the inclusion criteria, were duplicates, secondary publications of one study, or had been updated in more recent publications were subsequently excluded. Overall, six economic evaluations were identified as being eligible for inclusion and were appraised for their applicability and quality using the methodology checklist for economic evaluations. The findings of these studies were considered when formulating the guideline recommendations.

3.7 STAKEHOLDER CONTRIBUTIONS

Professionals, service users, and companies have contributed to and commented on the guideline at key stages in its development. Stakeholders for this guideline include:

- service user and carer stakeholders: national service user and carer organisations that represent the interests of people whose care will be covered by the guideline
 - local service user and carer organisations, but only if there is no relevant national organisation
 - professional stakeholders' national organisations that represent the healthcare professionals who provide the services described in the guideline
 - commercial stakeholders: companies that manufacture drugs or devices used in treatment of the condition covered by the guideline and whose interests may be significantly affected by the guideline
 - providers and commissioners of health services in England and Wales
 - statutory organisations, including the Department of Health, the Welsh Assembly
 - Government, NHS Quality Improvement Scotland, the Care Quality Commission and the National Patient Safety Agency
 - research organisations that have carried out nationally recognised research in the area.
- NICE clinical guidelines are produced for the NHS in England and Wales, so a 'national' organisation is defined as one that represents England and/or Wales, or has a commercial interest in England and/or Wales.

Stakeholders have been involved in the guideline's development at the following points:

- commenting on the initial scope of the guideline and attending a scoping workshop held by NICE
- contributing possible review questions and lists of evidence to the GDG
- commenting on the draft of the guideline
- highlighting factual errors in the pre-publication check.

3.8 VALIDATION OF THE GUIDELINE

Registered stakeholders had an opportunity to comment on the draft guideline, which was posted on the NICE website during the consultation period. Following the consultation, all comments from stakeholders (see Appendix 3) and experts (see Appendix 4) were responded to, and the guideline updated as appropriate. The GRP also reviewed the guideline and checked that stakeholders' comments had been addressed.

Following the consultation period, the GDG finalised the recommendations and the NCCMH produced the final documents. These were then submitted to NICE for the pre-publication check where stakeholders are given the opportunity to highlight factual errors. Any errors were corrected by the NCCMH, then the guideline was formally approved by NICE and issued as guidance to the NHS in England and Wales.

4 EXPERIENCE OF CARE

4.1 INTRODUCTION

This chapter provides an overview of the experience of people with psychosis and coexisting substance misuse, and the experience of their families, carers or significant others. First, in Sections 4.2 and 4.3, are first-hand personal accounts written by people with psychosis and coexisting substance misuse, and their families, carers or significant others. These sections provide an insight into the experience of being diagnosed, accessing services, receiving treatment and caring for someone with psychosis and coexisting substance misuse. It should be noted that these accounts are illustrative only.

Section 4.4 presents a review of the qualitative literature of the experience of people with psychosis and coexisting substance misuse, while Section 4.5 comprises a qualitative analysis of transcripts of people with psychosis and coexisting substance misuse from seven websites. The themes emerging from the website transcripts and the literature review are summarised in Section 4.6, which provides a basis for the recommendations that follow.

4.2 PERSONAL ACCOUNTS

4.2.1 Introduction

The writers of the personal accounts from people with psychosis and coexisting substance misuse were contacted through representatives on the GDG and through various agencies that had access to people with psychosis and coexisting substance misuse. The people who were approached to write the accounts were asked to consider a number of questions when composing their narratives. These included:

- When did you first seek help for your psychosis and coexisting substance misuse and whom did you contact? Please describe this first contact.
- What helped or did not help you gain access to services? Did a friend or family member help you gain access to these services?
- Do you think that any life experiences led to the onset of the problem? If so, please describe these if you feel able to do so.
- In what ways has psychosis and substance misuse affected your everyday life (such as education, employment and making relationships) and the lives of those close to you?
- What possible treatments were discussed with you?
- What treatment(s) did you receive? Please describe any drug treatment and/or psychological therapy.
- Was the treatment(s) helpful? Please describe what worked for you and what didn't work for you.

Experience of care

- How would you describe your relationship with your practitioner(s) (for example, your general practitioner [GP], psychologist or other)?
- Did you use any other approaches to help your psychosis and substance misuse in addition to those provided by NHS services, for example private treatment? If so please describe what was helpful and not helpful.
- Do you have any language support needs, including needing help with reading or speaking English? If so, did this have an impact on your understanding of your diagnosis or on receiving treatment?
- Did you attend a support group and was this helpful? Did family and friends close to you or people in your community help and support you?
- How has the nature of the problem changed over time?
- How do you feel now?
- If your psychosis and coexisting substance misuse has improved, do you use any strategies to help you stay well? If so, please describe these strategies.

Each author signed a consent form allowing the account to be reproduced in this guideline. Two personal accounts from people (both male) with psychosis and coexisting substance misuse were received in total. They offer different perspectives of their experience of illness and treatment, but despite the differences some common themes do emerge. Each person speaks of the isolation he felt at various stages of his illness and treatment and the challenges in finding employment after a long period out of work. In terms of treatment, the service users valued staff who were 'empathic', 'helpful', 'motivated' and 'keen', and understood mental health and substance misuse issues. Lack of planned care, gaps in their treatment and treatment being stopped abruptly (especially for the person being released from prison) were deemed unhelpful.

The service users identified a range of helpful and unhelpful treatments. Person A found that in prison CBT, group work, and creative and educative activities were helpful and, out of prison, a local alcohol service provided support better suited to him than Alcoholics Anonymous (AA); self-help (delivered in prison) was considered to be unhelpful because the service user felt it was not properly explained to him. Person B was very positive about the treatment he received from his dual diagnosis practitioner which included writing a drug diary and a feelings notebook, and identifying and managing the risks and triggers.

Both men identified that support from assertive outreach teams and other workers to enable them to re-enter society and find employment (either paid or voluntary) was vital in building self-esteem and restoring confidence.

4.2.2 Personal account A

I was born in 1961 in London, and my parents came from Jamaica. I had a very successful career until 2003. From this time I would go days without sleep, having detailed nightmares, hallucinations and I wouldn't go out in the daytime or answer my phone. As time went on my mood swings got worse and I had no control over them. I thought the world was against me and everyone wanted to do me harm.

I was drinking a lot and socially smoking weed. I lost my job, wife, family and home in 2004 and ended up in prison. In 2005, I was diagnosed with severe depression and personality disorder with agoraphobic, paranoid and psychotic features by a clinical psychiatrist.

In August 2005, I was arrested and remanded in custody. My lawyer had a good understanding of the prison system and talked me through the booking-in process and what was best to say and do. At my booking-in, I advised them of my mental health and all of my issues. I was interviewed the next day and I was told that the services I needed would be provided as soon as possible.

The doctor gave me four sleeping tablets (one per night) to keep me stable until I could see the CMHT. The staff that I met in the first 48 hours showed empathy and concern about my well-being, but the service provided didn't always live up to their promises. The action plan was good, and the full-time staff were helpful, motivated and keen, but the specialist team of a clinical psychologist, psychiatrist and counsellor didn't keep their appointments and this led to me having relapses in my mental health. On a couple of occasions, the staff forgot to open my cell door or were late in doing so and I missed my appointment. To address this problem, I was given stronger medication or larger doses. I never missed taking my medication because if you did you were escorted to the nurse and your mouth was checked after.

I took olanzapine and diazepam daily, and if I was having a bad night I might get temazepam to help me sleep. I was offered lots of meaningful activities to do during the day, such as focus groups, arts and crafts, games and education. This did keep my mind occupied and help me feel better. I was also taught CBT and I started self-help treatment but it didn't entirely work because it wasn't fully explained to me; however it did show me what I could do to help myself and how to handle my relationship with my family and friends, and my problems with drink and drugs.

One of the good things that came out of my prison stay was when we got the governor to change the day centre from being located in a mental health unit to a multicultural mental health day centre. This was my first taste that service user involvement works.

I was released on bail straight from court without any medication and ordered to stay with my family until my court date. My GP was in another town so to get treatment I had to lie and say I still lived there. The paperwork took a while to get to my GP and I was not given any antidepressants, only a referral to the CMHT and sleeping tablets.

On my return to court, the judge gave me probation as long as I followed the guidelines without fail. These included taking my medication and attending anger management, literacy and numeracy classes, in addition to attending all sessions recommended by the CMHT and my probation officer. The CMHT and my probation officer put together an action plan for me without my input. Six specialists were assigned to me. Again, the plan was good, but the services I needed were not available to start at the same time. At first this was not a problem but as time went by my mental health and drinking issues were not dealt with—the services looked at what they could provide and not what I needed. The clinical psychiatrist I saw was very good at her job, knowledgeable and showed lots of empathy and people skills.

Experience of care

However, after seven sessions she advised me she was going on honeymoon for 6 weeks and my treatment would be put on hold until her return. Again, as I was making progress, my treatment was put on hold. I had to rely on the CBT I had been taught in prison, and on drink and pills to get through any crisis I may come across.

I had to use drink to get through the hard days; by the time I got help for my drinking it had become a bigger problem. Alcoholics Anonymous did not work for me because it was not holistic and I was always very depressed after AA meetings. I was asked to leave because I wasn't engaging correctly.

My brother paid for me to have four private sessions with a clinical psychiatrist, but he was only willing to help develop my CBT and coping skills. I was referred to Mind for counselling by my GP but failed a risk assessment (my local Mind only had female staff, small interview rooms and no security). At this stage of my recovery journey, I got housed by an organisation for the homeless, and accessed their services. I was given a keyworker, who was very knowledgeable and showed a lot of empathy and a willingness to help me address all my issues and support me to reach my aims and goals. We drew up an action plan together with targets and rewards for hitting them. We met with my GP and had my medication reduced and sorted out some meaningful activities for me to do. I had interviews with the mental health and substance abuse team at the homeless organisation and was put on their self-help programme; the service provided was excellent and empowered me to aim higher and believe I could recover. However, just as I was feeling the benefit and moving on leaps and bounds the service came to an end due to lack of money.

I attended my local alcohol counselling services for my drinking problems; this service suited me better than AA and sorted out my drinking. The counsellor asked me to keep a diary, account for my drinking and look for the triggers that caused it. Then we worked with my keyworker and clinical psychologist to find ways for me to cope.

The service provided by the CMHT came to an end because my probation was up and not because I was ready to rejoin the community or because I had fully recovered. Ultimately I found the service patchy; it was full of great intentions but they failed to deliver what they had promised.

I also attended a programme that helped me to prepare for the moving back into the community. The homeless organisation's resettlement officer helped me sort out my housing benefit, got my gas and electricity turned on, and hired a removal van, a bed and cooker for me. She also gave me advice on paying my bills. The system would not give me a community or crisis loan because I was not on Jobseeker's Allowance or Income Support. I only had the bare minimum in my flat. This did not help my mental health or empower me to keep on going.

Now it was time to look for full-time work. Trying to get employment with a criminal record and mental health issues was near on impossible. I had a lot of interviews but even more excuses why people were not employing me. I was appointed a floating support worker to help me with my move from supported housing back into the community. His caseload is large and the length of time his support will be available to me relies on funding; however, the service provided was good because he works in an holistic way, always returns my calls within 2 hours, keeps all of our

appointments, treats me as a person at all times, and provides a professional, honest and reliable service.

All the services helped me in different ways but because they didn't all start at the same time the process was slow and put a lot of pressure on me and my ability to cope. This led to relapse, binge drinking, and withdrawal from the community. I think my recovery journey is going well but I know my hardest tests are still to come.

4.2.3 Personal account B

I am 33 years old and have a history of paranoid schizophrenia and substance misuse.

In 1994 after I finished my A levels I started to hang out with the 'trendy guys' who lived in my town and spent many hours smoking cannabis spliffs (rolled tobacco cigarettes laced with cannabis resin) and bongs (water pipes which would cool down the cannabis smoke). In the following autumn, I went to university. I thought that students should spend most of their time getting stoned and living the life of a 1960s' hippie. That was the plan and that's what I did. I not only continued to smoke cannabis but also became experienced with other substances: speed (amphetamine), ecstasy, LSD and magic mushrooms.

Initially, much of my university work was of a high quality. However, as the year progressed and I became more involved with drugs, I began to feel more self-conscious about my existence. I would feel uncomfortable walking to the campus and developed a dread about my course. A feeling of helplessness and a sort of isolation developed and my academic work began to suffer. I changed courses the following year—I didn't feel so anxious but I was smoking one to two ounces of cannabis resin a week and taking a variety of other drugs.

I finished my degree (with a third class) and found an office job. However, I found the job tedious and in 1999 decided to do a master's degree. I continued to use drugs every weekend (ecstasy and cannabis and occasionally cocaine and magic mushrooms). The amount of cannabis I was using led to lung problems.

During the new year celebrations of 2000, I decided to take about ten ecstasy tablets in about 45 minutes. That new year's party may have changed my whole life. During the next term my tutor was concerned that I had very dull eyes. I thought nothing of it. Then as the year went on I started thinking that a DJ was talking to me through the radio and the walls contained mini-microphones and cameras. My body felt more and more intense, and not in a good way. My behaviour became more angry and irrational. I accused people of ridiculous things (for example, I thought that my flatmate had broken into my room and removed a bit of my printer to stop it working). Nevertheless I continued to see my old university friends every weekend and my pattern of drug use continued.

I felt uncertain as to what was happening to me. My feelings became more and more intense. My friends kept telling me that instead of the smiles which I had initially met them with, I looked angry and depressed. My mood deteriorated and I became more isolated. I thought that I should get some help, so I went to the university student services. I got to the front door, felt very self-conscious and walked away.

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Despite my continued drug use and deteriorating mental health I completed my master's degree. I found an interesting job but as I walked through the factory and heard Radio 4 talking about me, that was it. How would I be able to do a job well if I thought that a national radio station was talking about me?

I wanted to get treatment but had heard (incorrectly) from a GP that the only way a doctor in the UK would treat me was if I posed a serious risk to myself or others and that would mean putting me on a section of the Mental Health Act.

My parents became worried about my mental health and accessed a neurologist in the United States (which is where we come from). We were concerned that I might have more than just mental health problems and there could be some underlying physiological problem. After seeing the neurologist I was referred on to a psychologist. By the end of it they had identified that I was psychotic and referred me to a psychiatrist who gave me drugs to stop those symptoms.

I returned to England and lived with my parents for about 10 months. My GP referred me to the local psychiatrist and I accessed a community psychiatric nurse, who was very helpful, and a mental health support worker who helped me get out of the house and do things like play badminton and have lunch at the seaside. I was in some form of recovery at this stage but still felt that I was functioning at a much lower level than I was capable of. I would describe my mental state as 'gormless'. I did not feel very sharp in my thinking. Looking back I'm not sure if this was a reflection of my mental state, the medication I was being prescribed, or a combination of both.

Eventually, I acquired some voluntary work, still feeling gormless, but better able to get things done. This was negotiated through an employment company for disadvantaged people who were able to persuade them that I would be an asset to the team. I was assigned a support worker, which worked out well. I was able to get out of the house and be a part of society at some level, which was better than staying in, watching telly and eating junk food on my own. Indeed, I was even provided with a reference, which helped me get work subsequently.

I decided to move to London and find paid work. I knew a guy who was renting out cheap rooms and I managed to get a job. Initially I was socially isolated but eventually my old friends from my university days contacted me. I was glad to have friends again but we were soon back smoking skunk—about 20 to 30 joints over the weekend. I began to feel gormless again and my behaviour became weird. I could no longer undertake simple tasks at work and this along with other things, such as being slightly smelly, being late to work, spending more time smoking cigarettes than doing the job, led to my dismissal.

Still getting stoned on skunk, I went from one job to the next, each being progressively worse than the former. I just wasn't able to do my job properly. Nevertheless, I continued to smoke weed. Soon, I got to the stage where I would sit at home all day, in my smelly unwashed clothes, eat biscuits for dinner and defer bill payments.

I needed to change my life. My main social contact was a middle-aged artist who would convince me that I should give him money to buy cannabis. Most of my friends had moved away and I did not get on very well with my family. I could not maintain any kind of employment and I had little or no money. I had lost control of my own life and the people who did have control of it were mostly dealers and 'friends'.

I began to get scared just walking down my road. Every year I would watch my life go no further than the previous one. And most of all, I was very vulnerable and truly out of control. I wanted my life back. Desperately.

Throughout this period I saw my psychiatrist every 6 months and I would tell him how smoking weed ruined my chances of having a real life. After 2 or so years, he put me in touch with a dual diagnosis practitioner. For me, it was very important to stop using cannabis. I would probably not have been able to do this on my own but by accessing the dual diagnosis service it was much easier.

I met with my dual diagnosis practitioner every 3 weeks. One area of work I did with her was identify the triggers that stimulated me to smoke spliffs. The triggers would range from spending time with the artist or my old friends to watching films alone on television (strong spliffs and funny movies go together like strawberries and cream for me). We identified that the artist posed a real danger to my recovery. Every time I stopped smoking weed I would go and see him and the habit would restart.

We also identified that the addiction to cannabis is strong and psychological, that my brain craves that 'lovely' tetrahydrocannabinol (THC – the chemical in cannabis which makes the feeling of using so pleasant) and that it would manipulate me to score by changing my thinking patterns. I would think, 'the artist has a book that I want back'; that is the THC addiction sending me to the artist to smoke that crafty spliff. A tool to combat this is to 'know your enemy'.

My dual diagnosis worker helped me to identify and overcome the triggers and armed me with tools to fight the cravings. One tool I use is to picture traffic lights. If I want a joint I look at a picture of a traffic light on my wall. The traffic lights act like a reminder, or a prompt, challenging me to think about whether I really want this and/or how smoking cannabis affected me in the past. Red is the first warning. This alerts me to ask myself: Do I really want to get stoned? Remember your history. Do I want to be that smelly, unkempt, poor drug user again? Remember that it was hard enough coming off the weed and would be just as easy to get back onto the 'addiction wagon'. Yellow is 'well why not, life is pretty bad', like getting sacked from my job and my family disowning me. Yellow is considering the threat that using cannabis would have and the consequences which would come from smoking it. In this case, I may think that there is little else to lose and having a joint wouldn't hurt. This may be the case, but considering my history of cannabis addiction the threat would be significant. And the bottom line would be 'do I really want to go through that all over again?' This would refer me back to the red traffic light. Then there is the green light, which is 'nuclear holocaust'. Everything that could possibly go wrong has and is getting worse. In that case, going out, scoring a draw and getting obliterated might not be so bad. I haven't got to green yet!

For about 9 months, the THC addiction was still strong. I felt that by writing stories and feelings in a notebook, I could manage these very intense feelings, which included blaming everyone except me for the failures of my life (such as 'I was poor because my brother introduced me to smoking cannabis'). In real life, I could not blame anyone for my substance misuse. Often feelings of social isolation would come out in my notebook. Using cannabis had masked these feelings and would make me less lonely. Harboured unpleasant thoughts and not being able to express them, especially

Experience of care

during rehabilitation, could lead to mental anguish. By writing these thoughts on paper and being able to look back on them, I felt emotionally liberated. I could release the mental tension and feel better. It was like popping a blister.

I also found that smoking tobacco in 'rollies' was a great substitute for smoking joints, in terms of the process of preparing the rollies, the act of smoking, and doing something with my hands. Over time I reduced the rollies and, recognising the harms tobacco itself can cause, I now smoke one herbal cigarette a day.

I was spending long periods at home watching television and thinking about how much I would like to smoke a joint and feeling lonely and socially isolated, so my dual diagnosis practitioner and I identified that activity was the best way forward. I looked at every possible opportunity to get involved with as much as possible. I volunteered to do things that interested me. I considered working as a support worker with people with learning disabilities or in the office of my housing association, or befriending an old lady. None of these activities came to much, but just the 'doing' helped to stop that lonely feeling which comes with social isolation. I felt that involvement with society would be the best way ahead in terms of recovery from substance misuse. It would also help me to regain my confidence by proving that I can do jobs successfully even though I have a history of mental health issues.

The changes I have made to my drug use and lifestyle have brought about wider benefits too. I have re-established good relationships with my family again and recently spent about a month with them. I am training to be a drugs worker through work I am involved in at a local substance misuse service. I have also taken part in delivering dual diagnosis training and been a service user link worker to an acute psychiatric ward.

I also run a social club, which is proving to be very successful. It provides hot meals to people who may have issues with substance misuse, mental health and/or learning disabilities. We aim to reintegrate people with these issues back into society at their own pace, by providing opportunities such as fun classes, which may inspire them into mainstream education, or making new social networks or joining the management committee. From my own perspective, running this club has enabled me to regain a huge amount of confidence and I am keen to start these clubs more widely. My vision is for each club, under the umbrella of the wider social club organisation, to be run independently – they would choose their own activities and food (within reason). By providing this responsibility, it may help others in their recovery journeys.

My status has improved, as well as my mental health. Since I have accessed the dual diagnosis service my medication dose has dropped by 25%. Two years ago, I was frightened of a 30-minute bus ride to visit my friends but I am not scared on buses any longer or even walking the streets of London at night. I have made new friends and these friendships are blossoming. I have found a new kind of respect for myself and am truly looking forward to a future without limits.

From my point of view, de-stigmatising treatment for mental health is vital to promoting early diagnosis and recovery. An approachable practitioner who empathises and understands mental health and substance misuse issues is also vital. It's important for professionals to plan treatment in conjunction with the service user,

taking account of the person's readiness to change. Mental health professionals need to maintain an open mind and sense of optimism about what the service user can achieve, rather than limiting options through low expectations. This can help to develop the person's self-esteem. Reducing or stopping substance misuse altogether may reduce medication doses. When a person is in recovery, social support from the NHS, family members and other social systems, is crucial. When addressing substance misuse, tools such as a drug diary, feelings notebook, and traffic lights, can be useful to enable the person to identify and manage the risks and triggers. Distraction techniques (such as volunteering and fun classes) can help them to start rebuilding their lives and returning to work is important because that is part of the person's identity. Ideally the work should be something that is suited to the person's skills and/or wishes. It's important for the service user to feel a sense of achievement and involving others can help them develop important connections and make new friends.

4.3 PERSONAL ACCOUNTS—FAMILIES/CARERS

4.3.1 Introduction

The methods used for obtaining the carers' accounts were the same as outlined in Section 4.2.1, but the questions included:

- In what way do you care for someone with psychosis and substance misuse?
- How long have you been a carer of someone with psychosis and substance misuse?
- In what ways has being a carer affected your everyday life (such as schooling, employment and making relationships) and the lives of those close to you?
- How involved are/were you in the treatment plans of the person with psychosis and substance misuse?
- Were you offered support by the person's practitioners (for example, their GP, psychologist, or other)?
- How would you describe your relationship with the person's practitioner(s)?
- Have you and your family been offered help or received assessment or treatment by a healthcare professional?
- Did you attend a support group and was this helpful?
- Did any people close to you help and support you in your role as a carer?

Three accounts from carers of people with psychosis and coexisting substance misuse were received, which offer different perspectives of being a carer. Two of the carers are parents (one mother, one father) and one is a grandmother. Many of the common themes from the personal accounts in Section 4.2 are echoed in the carers' accounts, including the lack of continuity of care, which may impact on carers as well, who have to fill in the gap. The accounts below reveal the difficulties of caring with someone who has psychosis and coexisting substance misuse, such as challenging behaviour and, in the case of drug misuse, contending with the drugs world, including dealers and other users. All of the families/carers spoke of providing practical

Experience of care

support to their family members/friends, which ranged from helping them with their shopping, taking their medication, finding appropriate housing and employment, and managing money and benefits. For carer B a significant financial burden was placed on the family. As all of the accounts below demonstrate, carers value support from healthcare professionals and other workers, and appreciate it when they recognise that they, the carers, have valuable knowledge about their family member's illness and substance problem which can help adherence to treatment and prevent relapse. What is clear from the accounts is that carers have very different individual needs: some may require more support from healthcare professionals than others, who may prefer to cope within their family environment, rather than attending support groups. However during a crisis, all of the carers expressed that they would like to know whom to contact and to be able to access help quickly.

4.3.2 Family/carer account A

It is difficult to know where to begin to summarise what it has meant to see myself as the carer of my son Jack. Did it all begin 20 years ago when, aged 18, he had the first episode that could be deemed to be psychotic? Or was it much earlier when he was having difficulties at school and was labelled dyslexic, although one teacher said that she wondered whether he was a genius?

In some ways we were fortunate in being able to pay for him to see educational psychologists and Jack went through various tests and attended special schools that were supposed to meet his needs and help to prepare him for life in the world outside the safety of his family.

However, as I discovered much later, some of the boys at his specialist day school had access to marijuana and what began as a prank led to him self-medicating because of his worries about not 'fitting in' and not being able to keep up at school.

Jack is the youngest of three siblings and his older brother and sister were high achievers at school and university and are both married with children. This has highlighted Jack's feelings of inadequacy and fuelled his anger at what he feels to be an unfriendly world.

In his late teens Jack began experimenting with LSD, which led to his first admission to a private psychiatric hospital. It soon became apparent that we would not be able to afford long-term private treatment and he was transferred to an NHS hospital under the care of the same psychiatrist.

The nightmare began. There were times when he seemed quite mad—he grew his hair and a beard and my beautiful, funny and happy little boy turned into a frightened and frightening stranger. We went through outpatients, then he was sectioned and spent a few weeks in one major teaching hospital. The psychiatrist said to me at the time that there was nothing they could do to stop people bringing in 'ganja', so while heavy medication (haloperidol, called the 'liquid cosh' by the patients) was being administered the patients were smoking dope on the patios! As I am a psychotherapist and had a lot of support, I battled the system at a time when parents were not told which drugs were being prescribed. This meant that when one's child was sent home,

the family had no idea of the possible side effects and what to do about them. We had one terrifying Sunday when Jack went into spasms and his face and jaw locked until we managed to get the antidote pill through a private doctor.

I became involved in what was then the National Schizophrenia Fellowship where there was some support and a bit of information for what were mostly the mothers of children with a similar diagnosis to Jack. By then he was labelled as schizophrenic, although this has now been removed and replaced by 'possible Asperger's'.

As Jack became more alienated from us, things got worse. He was picked up by the police, once while wandering along the underground railway line and once while climbing on a statue in a park. He broke things in the house, and although he never attacked me or stole money I was often frightened as he crashed about upstairs.

Things came to a head when he was sectioned for the second time and spent 10 weeks in a locked ward. Although dope was still available there his medication was changed and he gradually improved. We were lucky to have an excellent and understanding social worker and for the first time I felt supported by the system to some degree.

The next stroke of luck was that Jack was offered a place on a rehabilitation programme so that when he came out he was monitored by a team under an exceptional psychiatrist who was the first who appeared to see his patients as human beings. Although very overworked, this doctor took the time to consider each patient individually and agreed to gradually reduce Jack's medication. Jack also managed to stop using dope in order to be allowed to come home from his half-way house.

Fast forward about 10 years and Jack has been off neuroleptic drugs but still needs antidepressants and gets very bad headaches. He is not happy—he leads an isolated life and has had a couple of strange, seemingly psychotic episodes, over the last year. We need support, but the services are underfunded and understaffed; only last week Jack kept an appointment with his social worker (a different one sadly to our earlier helper) and no one told him that they had been called out on an emergency. He felt let down and angry that he was just left to wait rather than being told. Three close friends of ours have had sons of a similar age who have committed suicide, and this never leaves my mind especially when I hear Jack feeling let down and undervalued.

I struggle with my sadness, wondering what I could have done differently in Jack's early life. Sometimes it is unbearable. Jack's father and I separated 22 years ago—how much was this a factor?

The family and my relationship with Jack's very patient step-father is affected. The ache in my heart is always there due to living with a son who wishes that he was not alive. I suffer for him and I suffer for myself. I am lucky in many ways in that Jack has a decent small flat and is able to drive his car; he also studies a lot and practises martial arts when he has the energy. But there are days when he stays in bed all day, and he is sometimes angry and unapproachable and leaves a mess in the kitchen and fills our non-smoking household with his cigarette fumes. He has not used 'recreational' drugs for many years and hardly drinks alcohol, but he is very self-deprecating and bitter and very much into the occult as a way of escaping the reality of everyday life. This can lead to some dangerous practices.

Experience of care

My experience with the mental health services has been that there is no awareness of the need for continuity—the staff in our centre seem to change almost monthly. The one psychiatrist is overworked and so only crises are dealt with promptly. Most of the social workers are very friendly and well meaning, but don't seem to have much in the way of counselling or psychological training or support for themselves.

We have been offered a consultation for a diagnosis of Asperger's, but nothing has come of this. Basically Jack is not ill enough to get real help or well enough to lead a 'normal' life. We continue to do our best to manage in a kind of limbo, but it is not a comfortable place for Jack, or those who love him.

4.3.3 Family/carer account B

I am the carer of my son who is 32 years old and currently has a dual diagnosis. He has been ill for 12 years, originally with the diagnosis of schizoaffective disorder, but over the past few years this has changed to dual diagnosis, though his condition and substance misuse behaviour have been much the same throughout. His main drug is cannabis (skunk), but he has used most of the other commonly available recreational drugs. Initially, and before he was ill, these were mainly ecstasy, amphetamines and alcohol. He still uses these but crack, cocaine and heroin (smoked) have become regulars.

When my son was first ill he was 200 miles away at university. The first indication of problems was a call from a friend with whom he shared student accommodation, who expressed some concern about his behaviour. I then received a call from my son about money problems. When I suggested I visit to help sort things out, my son readily agreed. I found him pleased to see me but quite agitated, and exhibiting some paranoia, but the most disturbing issue was his 'pressure of speech'. I assumed it was problems with his studies, though he denied it. I then managed to meet with his professor who said he was coping well, the only concern being a lack of actual work being submitted. He suggested I speak to student welfare. They felt that his behaviour suggested mental health problems and suggested talking to the university GP. She referred me to a visiting psychiatric nurse at the end of the week. The intervening few days convinced me that the problems were serious as my son's paranoia and pressured speech became more apparent. I also became aware of the heavy cannabis use of my son and his fellow students, almost at the level of ordinary tobacco use – my presence in the house only inhibited them slightly. The psychiatric nurse became quite alarmed and arranged an immediate meeting with a psychiatrist, who wanted to admit him to hospital but, given the distances involved for me, agreed to my request that we returned home. A consultation with our GP at home resulted in my son being admitted to hospital under a Section 3.

Over the next 4 years my son was in hospital several times, mainly under section. For the rest of that period he lived in the family home. He was then encouraged by the assertive outreach team to move into independent accommodation on the rather spurious grounds that a young man of 24 needed his independence. While he was able to live independently with only limited support, his drug use accelerated due to his lack of ability to control his social circumstances. The flat became the hangout for

both his old friends, who were still living at home and therefore had their illegal activities restricted, together with, more unfortunately, members of the drug community (fellow users and suppliers), who in effect made use of him. This situation has persisted since, being relieved slightly by a period in a council hostel and other short periods when he effectively moved back home.

Approximately 7 years ago during another Section 3 enforced period in hospital he was put on depot injections of Clopixol, which has kept his illness under control but means he is quite debilitated for a few days after the fortnightly injections and generally claims that, in part, his drug use (particularly cannabis), is necessary to relieve side effects of the medication.

My life has been affected in several ways. There is the normal disruption suffered by all carers of somebody with a serious mental health condition such as daily visits when he was in hospital, urgent calls at any time of the day or night for support during periods of paranoia or stress, and highly charged, emotionally stressful situations dealing with illogical and delusional arguments and accusations. The drug misuse adds financial and safety concerns. Encounters with drug suppliers have not only been stressful, they were also probably dangerous. In the early days I had to settle drug debts running to several hundred pounds. Currently we have a fairly stable relationship, with small loans usually being repaid the following week from benefits, though arguments still arise when it is obvious that all of the week's benefits have been spent within a few hours and I am expected to fund the whole week; it also stressful to be called in the early hours of the morning for money. I am not sure that my financial support is in my son's best interests – while it ensures he does not go without, it does not encourage him to be independent and I suspect drug suppliers have been happy to advance credit to him because he has me to bail him out when debts get too high.

Initially treatment for my son was only offered for his mental health problems, indeed, his first consultant said that his admitted use of cannabis was not a problem so long as it was not excessive. Times have changed. Various antipsychotic drugs were tried, including clozapine, but none was really very successful until the Clopixol depots. Very little other treatment has been offered. During the second detention in hospital an assessment was carried out by a clinical psychologist and although he felt sessions could be helpful, the consultant insisted that it was too early. I did not feel I was involved in any real sense in forming treatment plans at this time but anyway they amounted to little more than prescribing medication. Just as importantly I was not asked about my views on my son's history and therefore several things were recorded as delusions that were in fact true. Although he was definitely ill, the assumption that most of his stories were untrue still rankles with my son and means he distrusts the medical team.

During the central period of his illness I had a good relationship with his key worker on the assertive outreach team and was invited to CPA [Care Programme Approach] reviews. My son was generally uncooperative at these due to the build up of stress at the situation causing problems, but the outcome was that little was offered apart from continuation of the medication; even variation of the dosage to reduce side effects was never seriously discussed. Since that particular key worker moved on 3 years ago I have had little contact with his care team, and only when initiated by me.

Experience of care

Initially my son's drug misuse was almost ignored. He was encouraged to go to the drug and alcohol service but having eventually got him there, they decided he was not ready for treatment as his mental state was not stabilised. The main reason for this attitude was his lack of interest in stopping his drug use (he still maintains his stance on cannabis though he does accept that other drugs, especially crack, cause him financial problems). Following a change in the structure of the drug and alcohol service and the emergence of dual diagnosis as a label, my son did start regular meetings with a counsellor. Although these went on for several months they appeared to have little effect, floundering again on the belief of my son that cannabis use is not a real problem. At the time of writing his only treatment is medication though he has been relatively stable and open to other possibilities.

My view is that the traditional approach to substance misuse is not really suitable for dual diagnosis sufferers since it relies heavily on the premise that there is a desire to stop using drugs that needs to be supported. My experience with my son and his peers is that they have little interest in stopping their drug use and their mental health problems mean they are not open to the normal logic. This is especially true of cannabis use where there is a strong belief in the general population that use is not a problem anymore than responsible drinking is.

At the start of my son's illness a family counsellor came to our home. She spent most of the time talking to my wife, although she did little to reassure her and offered little in the way of advice on dealing with our son's delusions. His drug use was ignored other than suggesting that we were over-controlling in trying to stop it. I do not remember much about her visits, except that I was unimpressed, especially when she criticised me for putting pressure on my son to take his medication; shortly afterwards he was re-admitted after relapsing because of non-compliance. She completely ignored my daughter, who had great difficulty coming to terms with her 'big brother's' problems. My daughter still has reservations about contact with him but these are now largely over fears for her young family and his social situation.

In an attempt to understand more about the illness and the help available we became involved with Rethink (then the National Schizophrenia Fellowship). This was helpful in a social sense but only to a limited extent since nobody else appeared to have drug misuse concerns. From this I became involved with the PCT [primary care trust] advisory group, NIMHE [National Institute for Mental Health in England] and the National Forum for Assertive Outreach. From these I gained more insight into services but, unfortunately, what I learnt primarily was how little there was to offer someone like my son. Most interventions I have seen relate to injectors (for example, needle exchanges, substitution programmes) and are not relevant to cannabis and crack smokers. More structured activities would help as at least part of the problem is boredom and emptiness.

Generally people I was in contact with were sympathetic but were unable to offer much help. As a civil servant my managers were quite helpful in allowing time off for visiting, consultations and meetings. Over time most non-professional support fell away including my wife, who appeared to lose hope as time went on and things did not seem to be improving. Others, such as his neighbours, have had almost no sympathy

for my son's situation. The council housing department were particularly lacking in understanding for his condition and how it affected his ability to obey their rules. Housing has been a particular problem and the caring team seemed unprepared to engage with the issue, despite the obvious effects it had on his illness (he reacts particularly badly to stressful situations). However, the police were generally very helpful and understanding in their contact with him, largely as a victim.

4.3.4 Family/carer account C

I have been the main carer of my grandson for nearly 15 years. Jim is now 30 and has a diagnosis of schizophrenia and an alcohol problem. He started living with me when he was 15 after things became increasingly difficult for him while living with his step-father and mother, who also has mental health problems.

When Jim started living with me he was taking drugs and drinking. At that time I had no idea about the drug use but did know that he was drinking with his friends at weekends. He was unhappy and quite isolated. He got some work with his father (my son), but his behaviour started becoming a bit strange and he would say odd things. We knew there was something wrong and his father paid for him to go to a private hospital; he did not receive a diagnosis at this time.

Not long after that first admission he was admitted to another hospital near to where his mother lived. Around 2000 Jim became increasingly unwell and we had our first contact with our local mental health services. A consultant psychiatrist and nurse came to see him at home. They thought he might have a drug-induced psychosis. They were both good: they listened, provided advice and gave us information. Jim was started on medication for the psychosis but it made little, if any, difference and he got worse. He would be agitated and suspicious and think things had special meanings for him. He was not offered any help for his drug use.

Sometimes he could be very scary and on one occasion he smashed up my house and attacked me. I had to call the police. Jim ended up being taken to hospital under a section of the Mental Health Act. As well as the police, there was an ambulance, doctor, social workers. I hadn't realised that was how it would be.

Jim has had several admissions to hospital, the longest of which was for 18 months. During that admission he spent a long time on the psychiatric intensive care unit as well as time on other wards. The hospital was a terrible place. Most of the staff – doctors and nurses – were awful. They were disrespectful and not interested in the patients. I wrote a letter of complaint about one of the wards but did not get any response. The one exception was the manager of the intensive care unit. He was gentle and calm and would always explain what was going on and the reason for things. Although Jim hated it there he did not want me to complain as he was afraid it would have negative consequences for him. He used to spend most of his time in his room so that he could keep out of the way of the other patients and staff.

When he was in hospital I visited Jim every day – including Christmas day. I took him food and cigarettes. After one of his admissions Jim was placed in a hostel. It was dirty and the staff were awful. It was just dreadful. I couldn't let him stay there.

Experience of care

Despite being tried on lots of different medications Jim didn't really get any better. When he was on the open wards he would abscond, often to go out drinking. I used to go out looking for him, but he would often end up back at my house.

It wasn't until one of his mental health review tribunals that a doctor asked why he had not been tried on clozapine. After that he was started on it and it made a difference straight away. Since being discharged from that admission he hasn't been re-admitted to hospital – that's about 6 years now. Clozapine has been a lifesaver for him.

After his discharge Jim was put under the care of the assertive outreach team. I've got nothing but praise for them. Over the years he has had a number of care co-ordinators and two support, time and recovery (STR) workers. The consultant psychiatrist responsible for his care is the one we met during our first contact with local services. The dual diagnosis nurse specialist has also been involved over quite a few years now. Having continuity, where you can build up a strong relationship with someone, has been really helpful. All the assertive outreach staff have been very good and they're always reliable. I've been given their mobile phone numbers so I can contact them if I need to. They always take any concerns I have seriously and recognise that I know Jim really well and can spot when things aren't right at an early stage. When there have been times when Jim's mental health has deteriorated they have responded quickly and, when necessary, have visited him at home every day. The STR workers have bent over backwards to get Jim out and doing more social things. They'll phone, pick him up and do things like going to the gym, meeting up for coffee or going shopping. They've all been really flexible and helpful. I always attend the CPA meetings and these have been arranged at times that are convenient for me – I still work a few hours each week.

Over the years I've provided Jim with a lot of practical support, like doing his washing, ironing and shopping, making sure he's managing his money and not getting behind with his bills, liaising with his bank and the utility companies, and taking him up to the mental health team to have his blood taken, or to collect his medication. Although he's lived in his own flat for a long time now, he always comes to stay with me overnight once or twice a week – and sometimes has stays for longer periods. When he does that I know he's had a decent meal. I set limits on his drinking. I won't let him drink strong lagers in my house. He knows I don't like him drinking and am worried about the effect it has on him. I'm sure he would make more progress if only he could stop. I phone him every day to remind him to take his medication – even when I'm away on holiday.

I have been offered a carer's assessment and been given information about carers' groups but they're not my sort of thing. I get a lot of support from my partner, who gets on well with Jim, and other family members provide support too.

Over the years Jim has gradually made changes: he can live on his own, manage his money, take his medication (with reminders from me), do some shopping, travel on public transport on his own, and visit his brothers and Mum and stay over with them. He stopped taking drugs a long time ago and has had a few periods when he has stopped drinking but he keeps going back to it. Jim has often talked about courses or getting some voluntary or paid work but hasn't been able to follow through on his ideas yet. His assertive outreach team offered to do things with him but he always declines. Left to his own devices he will often stay in bed all morning. I think he lacks

confidence. If only he had a bit more self-belief he could achieve more. I think it's difficult for him because his Dad and brother have been very successful. I think his Dad is a bit embarrassed and disappointed by him and he feels that.

I strongly believe that whatever happens to Jim it is up to me and my family to deal with it. I'll continue to keep supporting him as long as he needs me.

4.4 REVIEW OF QUALITATIVE RESEARCH

4.4.1 Clinical review protocol (qualitative research)

The review protocol, including the review questions, information about the databases searched and the eligibility criteria used for this section of the guideline can be found in Table 7.

A systematic search for qualitative studies, observational studies and reviews of qualitative studies of the experience of psychosis and coexisting substance misuse was undertaken. The aim of the review was to explore the experience of care for people with psychosis and coexisting substance misuse and their families, carers or

Table 7: Clinical review protocol for the review of qualitative studies

Component	Description
Review question(s)	1.5.1 For people with psychosis and coexisting substance misuse, what are their experiences of having problems with psychosis and coexisting substance misuse, of access to services and of treatment? 1.5.2 For families, carers or significant others of people who have psychosis and coexisting substance misuse, what are their experiences of caring for people with psychosis and coexisting substance misuse, and what support is available for families, carers or significant others?
Electronic databases	CINAHL, EMBASE, MEDLINE, PsycINFO, HMIC, PsycEXTRA, PsycBOOKS
Date searched	Database inception to 25.06.2010
Study design	Systematic reviews of qualitative studies, qualitative studies
Population	People with psychosis and coexisting substance misuse
Critical outcomes	None specified – any narrative description of service user experience of psychosis and coexisting substance misuse

significant others in terms of the broad topics of receiving a diagnosis, accessing services and having treatment. Reviews were sought of qualitative studies that used relevant first-hand experiences of people with psychosis and coexisting substance misuse and their families, carers or significant others.

4.4.2 Studies considered

Based on the advice of the GDG, this review was focused on qualitative research only as it was felt it was most appropriate to answer questions about the experience of care of those with psychosis and coexisting substance misuse. As good-quality qualitative research exists, quantitative and survey studies were excluded.

The search found 21 qualitative studies which met the inclusion criteria (Alvidrez *et al.*, 2004; Bradizza & Stasiewicz, 2003; Carey *et al.*, 1999; Charles & Weaver, 2010; Costain, 2008; Dinos *et al.*, 2004; Hawkins & Abrams, 2007; Healey *et al.*, 2009; Johnson, 2000; Lobban *et al.*, 2010; Loneck & Way, 1997; Padgett *et al.*, 2008a, Padgett *et al.*, 2008b; Penn *et al.*, 2002; Pollack *et al.*, 1998; Strickler *et al.*, 2009; Todd *et al.*, 2002; Turton *et al.*, 2009; Vogel *et al.*, 1998; Wagstaff, 2007; Warfa *et al.*, 2006) and 20 were considered for the review but did not meet the inclusion criteria. The most common reasons for exclusion were because quantitative or survey methodology had been used or because the people included in the research did not have psychosis and coexisting substance misuse. The characteristics of all the studies reviewed in this section, and references to excluded studies can be found in Appendix 13. The references to included studies can be found in Chapter 12.

Once qualitative studies were assessed for methodological quality, themes from each study were extracted and narratively synthesised. The studies have been categorised under five main headings: (1) experience of psychosis and coexisting substance use and effects of substance use, (2) access and engagement, (3) importance of social networks, (4) experience of treatment, and (5) employment.

4.4.3 Experience of psychosis and coexisting substance misuse and effects of substance use

Eight studies (Alvidrez *et al.*, 2004; Bradizza & Stasiewicz, 2003; Carey *et al.*, 1999; Charles & Weaver, 2010; Costain, 2008; Healey *et al.*, 2009; Lobban *et al.*, 2010; Warfa *et al.*, 2006), four of which were conducted in the UK, looked at the effects of substance use in a population of participants with psychosis and coexisting substance misuse. The main themes that emerged relating to substance misuse included using substances to manage symptoms of psychosis, triggers leading to substance use, and the physical and psychosocial consequences and effects of substance use.

Carey and colleagues (1999) and Alvidrez and colleagues (2004) interviewed participants about positive and negative aspects and consequences of substance misuse and abstaining. Both studies identified interpersonal problems and alienation from social networks (especially substance using social networks) as a negative

aspect of abstaining from substance use. One positive aspect of substance use mentioned by the participants was improved social skills and less social inhibition.

While some participants felt that their drug use caused their mental health problems (*'It activates...it triggers the mental illness'*), the majority of participants believed that drug use had both beneficial and negative effects on their psychiatric symptoms (Alvidrez *et al.*, 2004). In a more recent study by Charles and Weaver (2010), five out of 14 participants perceived their substance use to directly influence development of their mental health problems, while five others felt that substance use made their psychiatric symptoms worse. Additionally, seven people acknowledged that substance use contributed to relapse and worsened their mental health after the onset of psychosis.

Seven studies found that substances were commonly used by people with psychosis for managing their symptoms. Charles & Weaver (2010) found that participants did not self-medicate, but did use substances to prevent the effects caused by their antipsychotic medication (for example, drowsiness). Bradizza and Stasiewicz (2003) found that experiencing symptoms of psychosis triggered alcohol and drug urges, because such substances helped people to cope with psychotic episodes: *'that's why I kept using heroin. I mean, my paranoia was bad. I thought everything and everyone was after me'*.

For people with schizophrenia, substance use relieved negative symptoms (for example, lack of motivation and energy) but exacerbated psychotic symptoms (for example, paranoia). Participants described the cyclical nature of their mental illness and drug misuse. Psychiatric symptoms trigger substance use, which acts as a catalyst for additional symptoms that precipitate further substance use:

The worst problem in my life right now is this vicious cycle that I've been in for the past seven years, which is battling substance abuse and then how the substance abuse impacts my depression, my self-esteem and the paranoia... (Alvidrez *et al.*, 2004)

It's like you know something really isn't no good for you, but at the same time, you want the results of an escape from reality temporarily, so you go ahead and do it. (Alvidrez *et al.*, 2004)

Positive aspects of abstaining consisted of improved living skills, better physical health, getting off the streets and away from crime, regaining trust from others and engaging in social activities. Fears and negative perceptions of abstaining from substance use included anticipating the physical effects of withdrawal, loss of relationships with substance-using friends, and the cycle of relapse.

Despite the perceived positive aspects of substance use, participants had insight and awareness about the dangers of using substances to alleviate symptoms:

[Alcohol] has a tendency to make a person think that his problem is less severe than it might be. It kind of clouds an image of what's really going on and will cause continual problems. (Alvidrez *et al.*, 2004)

Cannabis was most often mentioned for helping with delusions, controlling symptoms, and ‘normalising behaviour’ (Costain, 2008). Participants in Costain’s (2008) study also perceived improvement in cognitive functioning from cannabis, as well as increased levels of energy and reduced psychological distress. Costain points out that this may influence adherence to treatment for service users with schizophrenia, and that clinicians must be aware of the phenomenological expressions and beliefs of service users with schizophrenia. Costain argues that ignoring this issue may have an impact on the development of a therapeutic relationship. Additionally, service users with bipolar disorder would often use substances because they had a desire to feel normal without the sedative effects of their medication, or to attempt to recapture how they felt pre-diagnosis (Healey *et al.*, 2009). Substances used to help people relax were most often alcohol or cannabis (Wagstaff, 2007). Warfa and colleagues (2006) also found cannabis was used by participants to have a ‘good impact’ or feeling of being ‘strong’.

Feelings of anger and loneliness were most often expressed as emotions leading to substance use. In relation to this, participants with bipolar disorder felt that substance use was a way of controlling and managing mood states, particularly mania and depression (Healey *et al.*, 2009), though many realised that this was not a reliable method of controlling mania. Anxiety, depressive symptoms and relieving pressure were also cited as reasons for substance use (Alvidrez *et al.*, 2004; Carey *et al.*, 1999; Healey *et al.*, 2009). Most participants experimented with alcohol and drugs before receiving a diagnosis of psychosis or in the early course of their illness. The substance misuse then became out of control, either because they were unaware of their mental disorder, or did not understand the effects the substances had on their mood. In this experimental phase with substances, dependency is often established.

Additional triggers leading to substance misuse were feelings of being stressed or overwhelmed by life events. These issues could stem from poor housing, unemployment, family relationships and legal problems (Bradizza & Stasiewicz, 2003; Carey *et al.*, 1999). In some instances, previous traumatic life events served as a trigger for substance use (Charles & Weaver, 2010).

4.4.4 Access and engagement

Having a diagnosis of psychosis and coexisting substance misuse can significantly affect a person’s ability to access and engage in services and in treatment. This can be due to a myriad of factors including stigma, ethnicity, socioeconomic status, gender, and perception of services. Several themes emerged under the broad heading of ‘access and engagement’ to services for those with psychosis and coexisting substance misuse, including the factors that may act as barriers to accessing treatment services, such as external and internal stigma, ethnicity and gender. This review also identified ‘reasons for seeking help’ as a theme emerging from the included studies. There were seven studies from which themes of access and engagement emerged (Dinos *et al.*, 2004; Johnson, 2000; Loneck & Way, 1997; Padgett *et al.*, 2008b; Penn *et al.*, 2002; Todd *et al.*, 2002; Warfa *et al.*, 2006).

Dinos and colleagues (2004) interviewed service users in community mental health services and day hospitals in London in an attempt to describe the relationship of stigma to mental illness and the consequences of stigma for the individual. One significant theme that emerged for participants with psychosis and coexisting substance misuse was anxiety surrounding managing information regarding both their illnesses, and issues of disclosure (whether to disclose their diagnosis or condition to friends, family and employers). Overt discrimination from others was experienced by most of the participants in this study, typically in the form of verbal or physical harassment, or through actions such as damage to property. Those with a coexisting mental illness and substance misuse reported having been verbally abused and patronised more frequently than those with other diagnoses. People with psychotic disorders experienced physical violence, as well as reduced contact with others. They also felt that they had been discriminated against in that they had not been selected by educational institutions or employers because of their diagnosis. As a result, most participants felt fearful, anxious, angry, and depressed, as well as isolated, guilty and embarrassed. These feelings resulting from stigma were a significant hindrance to recovery and a barrier to seeking help:

It makes you feel bad.. it makes you feel even worse... when people don't trust you and think you're going to do something to someone.

On the other hand, many participants reported positive aspects to having a mental illness, expressing relief that they had a proper diagnosis and appreciating their treatment:

I feel that if I survive it I've been through a very privileged experience and that I can actually make something of it...

Interestingly, no participants who were drug dependent expressed this positive view of their illness. It is evident that for this study population, stigma was a pervasive concern for the majority.

Black and minority ethnic groups and socioeconomic status

One UK study (Warfa *et al.*, 2006) looked at drug use (specifically cannabis and khat⁴) in black and minority ethnic (BME) groups. For East African communities the use of khat was cultural, and for black Caribbean populations cannabis use was connected with various spiritual and religious practices. Some participants in the study mentioned that their clinics or clinicians exhibited cultural awareness, while others felt that there needed to be increased cultural and religious sensitivity within services in the UK (Warfa *et al.*, 2006).

Johnson (2000) interviewed families in the US caring for a family member with psychosis and coexisting substance misuse. The association of differences in

⁴Khat is a plant native to East Africa and the Arabian Peninsula, and when chewed, acts as a stimulant.

Experience of care

socioeconomic status to access and engagement in care emerged as a significant theme. Upper middle class European–American families felt a greater sense of individual and organised support compared with families of a lower socioeconomic status. In contrast, upper middle class families from an ethnic minority were most difficult to identify as they did not access care as frequently. They were very rarely connected with an organised support group and therefore were less visible to services compared with other socioeconomic groups. The lower middle class families were found to have a more extensive family network although this did not seem to facilitate management of family members' illnesses.

Families of individuals with psychosis and coexisting substance misuse from all ethnic and socioeconomic status groups felt disregarded or dismissed by mental health professionals with whom they engaged, feeling that their knowledge and opinions were rarely taken into account by mental health professionals (especially staff at crisis centres, hospitals, and psychiatrists in all settings). The experience of stigma for middle class families differed from the lower class families, in that those in the upper middle class were often embarrassed that a family member was ill and therefore not functioning to their own or their social network's standards, and consequently felt distanced from other families in their network. The low and lower middle class families felt stigmatised mostly when dealing with professional mental health and legal professionals. Surprisingly, only 25% of the families interviewed had been involved in an organised support network (for example, a family group or self-help group). One suggestion the authors make is that there needs to be greater knowledge of other families struggling with an ill family member and information about community groups to go to for support.

Gender

Penn and colleagues (2002) examined treatment concerns for women with mental illness and coexisting substance misuse. The women interviewed emphasised how a person-centred approach facilitates treatment, especially when the clinician embodies traits such as empathy, honesty, and being encouraging and direct. All participants identified that negative staff attitudes or changes in the service significantly hindered their treatment progress (for example high staff turnover, lack of coordination between services, or feeling judged). Childcare services were mentioned as necessary for women accessing treatment, as was support that specifically accounted for women's needs.

Reasons for seeking and accessing help

Many people with psychosis and coexisting substance misuse do not come to treatment until the pattern of illness is well established (Vogel *et al.*, 1998). Similarly, Padgett and colleagues (2008b) interviewed psychiatric service users with psychosis and coexisting substance misuse who used to be homeless and found that people typically entered treatment once symptoms of mental illness became overwhelming (for example, more frequent hallucinations):

I got to a point.. I can't take it no more. I'm going to the hospital.

Another key reason for reducing or stopping substance misuse was a change in personal life goals, for example an increase in the perceived value of health, income and social relationships (Lobban *et al.*, 2010). In addition, the desire to be accepted within a certain social milieu can play a part in both initiating drug use and in terminating it. A significant event can lead to a dramatic change in behaviour and to becoming abstinent (Lobban *et al.*, 2010).

4.4.5 Importance of social networks

There were eight qualitative studies addressing the effect of social networks on people with psychosis and coexisting substance misuse (Bradizza & Stasiewicz, 2003; Carey *et al.*, 1999; Charles & Weaver, 2010; Hawkins & Abrams, 2007; Lobban *et al.*, 2010; Padgett *et al.*, 2008a; Turton *et al.*, 2009; Wagstaff, 2007). All the studies highlighted that individuals often feel isolated from their social networks and do not have many people with whom to socialise. Given the pervasiveness of their illness, many found it difficult to make new friends and often relied on substance-misusing friends for support (Bradizza & Stasiewicz, 2003). Other participants highlighted the need for support and having contact with others who have experienced similar mental health and substance problems (Turton *et al.*, 2009):

most of the counsellors there were ex-addicts themselves and I could relate to them, and the things they said because they've been through it.

Both Hawkins and Abrams (2007) and Padgett and colleagues (2008a) examined the social networks of those with psychosis and coexisting substance misuse who were homeless. Social networks were perceived to be smaller, primarily because many members of their social networks died prematurely (homeless service users with stressful environments were at a higher risk of mortality), or service users withdrew or pushed others away. Many participants had witnessed a death of a loved one; and death appeared prominently in all of the narratives in this study. When social networks diminished, some participants reacted by attempting to rebuild their network, even if this involved negative social interactions with strong substance-use triggers, while others reacted by isolating themselves further to escape social pressures. Many participants adopted 'loner talk' and wanted privacy, which arose from negative life experiences or distrust of those around them.

Social benefits were also frequently cited as reasons for substance misuse. Lobban and colleagues (2010) differentiated between internal and external attributions for ongoing drug-taking behaviour. Participants who made internal attributions for substance use described seeking out information and weighing up advantages and disadvantages of taking drugs in order to make their decisions. This was also found in Carey and colleagues' (1999) study, where participants made a 'decisional balance' before using substances. Substance use was found to have a positive effect on interpersonal relationships in helping people 'fit in' and facilitating connections with others. Furthermore, drug use could reduce social anxiety.

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Social networks were seen as a way to experiment with substances in order to gain experience, providing the person with ‘social currency’, which further encourages substance misuse (Charles & Weaver, 2010). A study by Vogel and colleagues (1998) confirms this finding, in that participants felt that using substances elicited feelings of confidence and ‘belonging’, which often promoted more substance use.

Many participants talked about how drug use in their community was the ‘norm’ (Lobban *et al.*, 2010). Participants who attributed their substance use to those around them found that their social networks grew around drug-using communities, and also increased their level of detachment from non-drug using networks. Socialising in drug-using communities reinforced not only shared experiences, but also facilitated the accessibility and consumption of drugs (Charles & Weaver, 2010; Lobban *et al.*, 2010).

Therefore, the social aspect of belonging and acceptance plays a part in both initiating and terminating drug use, and is fundamental in increasing motivation to use substances. When the social networks are associated with drug-using behaviour or triggers, this is a hindrance to promoting and maintaining abstinence. Young people in particular identified that their social networks were very important to them, and much of their substance use was linked to social activities. Thus, they felt that they would require drastic changes to their social networks and surroundings in order to reduce their substance use.

Evidently, social inclusion is important to this population in terms of building relationships (and re-building social capital post-treatment), and influencing substance use.

4.4.6 Experience of treatment

The experience of treatment for people with psychosis and coexisting substance misuse varied widely. Central themes appeared to be ambivalence towards medication, ceasing medication, the importance of self-help and mutual support groups, having a key worker, and cultural sensitivity integrated within services. Eight studies highlighted the experience of treatment for people with psychosis and coexisting substance misuse (Costain, 2008; Johnson, 2000; Loneck & Way, 1997; Pollack *et al.*, 1998; Todd *et al.*, 2002; Vogel *et al.*, 1998; Wagstaff, 2007; Warfa *et al.*, 2006).

Experience of assessment and referral from the staff perspective

Loneck and Way (1997) and Todd and colleagues (2002) looked at how to assess service users with psychosis and coexisting substance misuse from a staff perspective, refer them to appropriate services, and keep them engaged in the care plan. In the study by Loneck and Way (1997), healthcare professionals working in a US accident and emergency ward emphasise that for service users with schizophrenia, a more supportive approach to engagement must be employed, whereas those with substance use disorders are more receptive to a style that is more directive and, if necessary, confrontational. The approach advocated by these healthcare professionals for service users with psychosis and coexisting substance misuse is a combination of supportive and directive styles, and is confrontational only when necessary. Support was

characterised by listening and assessing needs, whereas a directive approach meant having a structure and steps in order to move service users into appropriate services. If service users were resistant to the supportive approach and unwilling to accept referrals, persuasion and motivational techniques could be adopted to motivate service users to accept more appropriate referrals to services. Lastly, healthcare professionals identified that the therapeutic alliance is crucial to successfully engaging with service users with psychosis and coexisting substance misuse. The most important factors to ensure a strong therapeutic alliance were: agreement about goals and tasks, and strengthening the service user-clinician bond. Todd and colleagues (2002) found that the essence of optimal care was the provision of a comprehensive assessment and a care plan that addresses both urgent and non-urgent issues related to both illnesses. The care plan should be integrated across services, and make sense to the service user such that it encourages engagement and motivation to change, and is readily accessible. However, staff feared that this proposed integrated assessment and care plan would further strain the system and increase workload.

Experience of therapeutic relationship

When participants were asked about their most positive experience of services in the UK, they highlighted having a key worker (for example, a social worker) with whom they have a good relationship, in addition to accessing local counselling services or alternative treatment options (for example, spiritual services or specific cultural support groups) (Warfa *et al.*, 2006). These services and options were seen as integral to their progress in treatment.

One limitation cited by many participants was the lack of cultural awareness and sensitivity in mental health services. They also mentioned that meetings with healthcare professionals were not long enough, and there was not enough attention being paid to social activities (Warfa *et al.*, 2006). Participants emphasised that alcohol or drug dependence made service engagement extremely difficult.

Emotional support and time investment by service providers were important across all cultural groups with psychosis and coexisting substance misuse (Warfa *et al.*, 2006). This, therefore, highlights the importance of developing an active therapeutic relationship with a service user, fostering trust and confidence and addressing all of the person's identified needs.

Treatment options

Once service users were in treatment, many were frustrated at the lack of individual talking therapies. Conversely, some participants had positive views about services, particularly the atmosphere and amenities, the sense of privacy, and staff who were warm and humane (Warfa *et al.*, 2006).

Medication adherence and effects

Service users in the study by Warfa and colleagues (2006) found that medication for their psychosis worked for them and generally improved their mental health. However, in other studies, non-adherence to medication was a common theme, although the reasons for it varied. The Wagstaff (2007) study found that the usual

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reason for participants to cease taking their psychotropic medication was that they did not perceive themselves as requiring medication in the first place. Costain (2008) found that many participants had side effects from antipsychotic medication, and when participants also had anxiety symptoms, they stopped taking their medication and increased their cannabis use. Many felt that adherence to medication would not enable them to have control over their symptoms (for example, delusions). As in the Wagstaff (2007) study, others did not perceive they had a mental illness and therefore the medication was irrelevant (Costain, 2008).

Pollack and colleagues (1998) found that participants cited symptom improvement as the most compelling reason for adhering to their medication, however the side effects and potential to be stigmatised because of the need for medication were a concern:

So actually, when you say you're suffering because of your side effects, it's not only the physical part, but how you think you're perceived by other people.

Other service users suggested that therapists should address ambivalence towards medication (Warfa *et al.*, 2006).

Relapse was also associated with discontinuing medication treatment because of wanting to avoid the stigma of 'needing medication':

*I've realised the medication is doing a lot for me, but at the same time, it's going back and grabbing that security blanket again and that feeling, or that high, that desire, that craving... (Pollack *et al.*, 1998)*

All of these factors highlight the notion that the relationship between adherence to medication and substance use is complex. In terms of improving medicine adherence or aftercare attendance, participants highlighted family influences as the most positive, especially in providing support or initiative.

Self-help groups

Many participants interviewed by Vogel and colleagues (1998) mentioned that a mutual support programme was extremely beneficial in enabling people with psychosis and coexisting substance misuse to share similar experiences and providing a non-judgemental atmosphere in which they could discuss problems. The support group increased participants' optimism, brought them some comfort and changed their attitudes towards taking their medication (Vogel *et al.*, 1998).

Pollack and colleagues (1998) interviewed inpatients with psychosis and coexisting substance misuse about the factors that affected their attendance in an aftercare programme. Self-help meetings (for example, AA) were easier to attend because of the flexible timing and the fact that they facilitated social activities:

Just being around the other people, you know, I've pretty much alienated everyone due to my drug addiction and alcohol...so it provides me the opportunity to...generate a new relationship.

I found that it was a joy to go and share my daily achievements with a group of people that knew my condition because their own condition was so similar.

On the other hand, attending AA meetings that were not designed for those with psychosis and coexisting substance misuse was unhelpful and perceived as contributing to relapse. As the meetings were tailored to people with alcohol and drug use disorders, one participant felt that they were treated differently because of their other diagnosis, leading them to seek other meetings.

Experience of treatment from the carers' perspective

One prominent theme that emerged from the interviews conducted by Johnson (2000) with carers of people with psychosis and coexisting substance misuse was the effect of medication on their family member or friend. Most families had noticed a significant improvement in functioning when their family member was on medication. However, many service users replaced their prescribed medication with street drugs, leading to deterioration in functioning and to rehospitalisation. Family members who cared for people with psychosis and coexisting substance misuse felt excluded from mental health services and considered that their efforts were largely ignored by mental health practitioners (Johnson, 2000).

It was emphasised that greater knowledge of, and contact with, other families struggling with the same problem would be beneficial, as would more emotional support from extended social networks. Support groups, led by professionals, specifically for people with psychosis and coexisting substance misuse and their families and carers were also mentioned by families and carers as being beneficial (Johnson, 2000).

4.4.7 Employment

Two studies highlighted the issue of employment for people with psychosis and coexisting substance misuse (Bradizza & Stasiewicz, 2003; Strickler *et al.*, 2009).

The people with psychosis and coexisting substance misuse interviewed by Strickler and colleagues (2009) perceived their diagnoses as a prominent barrier to gaining and maintaining employment; the most frequently cited barriers were the psychiatric symptoms themselves (such as manic episodes, delusions, anxiety and 'stress'). Both Strickler and colleagues (2009) and Bradizza and Stasiewicz (2003) found that regular employment was difficult to obtain for those with psychosis and coexisting substance misuse. Furthermore, the longer the period of unemployment, the more the difficulty of finding and sustaining employment increased. As a result, there was often an extended period of unemployment with little money available to engage in activities, which could, in turn, encourage substance use. Employment itself was of therapeutic value:

*Work was really kind of helpful. I didn't have as many symptoms because I was too busy working. (Strickler *et al.*, 2009)*

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It helps my mental illness. It gives me structure. (Strickler et al., 2009)

Employment helped to reduce substance use and keep participants away from drugs or alcohol. It occupied the service user and kept their daily living skills intact (for example, maintaining daily hygiene at a level suitable to attend work). The regular use of, or dependence on, substances made consistent employment significantly more difficult. Employment, therefore, was of positive structural value to participants, providing them with an additional sense of belonging and contributing to society:

When I am working I feel like I am contributing. I don't feel isolated.(Strickler et al., 2009)

4.4.8 Summary

The evidence from the narrative synthesis of the qualitative studies provides some important insights into the experience of people with psychosis and coexisting substance misuse and their carers. First, substance misuse appears to stem from a range of environmental and social factors including the management of psychiatric symptoms and/or social situations that encourage and exacerbate substance use. The reasons for substance misuse were cited in nearly every qualitative study included in this review. For the most part, service users highlighted the positive and negative drawbacks to substance use and its direct effect on their psychosis.

Perhaps the most central theme of the reviewed literature was the importance of social networks, both the positive and negative aspects. A positive social support network could influence the ability to seek treatment and maintain positive change, and decrease vulnerability to relapse. On the other hand, negative social networks typically grew around drug-using communities and reinforced substance misuse.

People with psychosis and coexisting substance misuse were often stigmatised by others and faced discrimination. Many also felt internal stigma, which made them hesitant to disclose their diagnosis or 'edit' it. Awareness of stigma can often be a hindrance to recovery and a barrier to seeking help in this population. People from minority ethnic groups also felt that the cultural context of their substance use was not taken into account by healthcare professionals. From the carers' perspective, families from ethnic groups and groups of lower socioeconomic status felt disregarded by mental health professionals. As a group, women felt that they faced additional barriers to treatment in the form of social stigma, and the need for childcare while seeking and undergoing treatment. In addition, women felt that they received less support from treatment providers, and would benefit from a more empathic and therapeutic approach. The studies focusing on women emphasise that a person-centred and non-judgemental atmosphere is necessary in order to foster openness and willingness to change. Unsurprisingly all participants highlighted that negative staff attitudes hindered their treatment progress.

An inability to access services easily, combined with negative interactions with healthcare professionals, highlights the importance of an appropriate assessment and referral process, which takes into account both the psychosis and the substance misuse. The literature indicated that a good assessment, which is direct in nature, should be employed for the substance use problem, whereas a non-judgemental, empathetic approach is preferred for assessment of psychosis. Staff however, found this comprehensive assessment problematic due to the increase in resource use and strain on time for healthcare professionals.

Regarding treatment, most participants found medication to be beneficial, but ambivalence about it was common often due to the regimen and side effects. Participants also spoke positively about having a good relationship with a key worker or participating in a self-help group. Employment was seen as providing positive structural value and a sense of belonging.

Family and friends can have an important role to play in supporting a person with psychosis and coexisting substance misuse. They can promote and maintain change, but in order to do this they require information and support from healthcare professionals. The strain on carers, however, can be challenging and they may require a carer's assessment.

From a staff perspective, the qualitative studies suggest that an improvement in staff training is required to facilitate access and engagement in treatment for people with psychosis and coexisting substance misuse. When interventions were successfully delivered, a thorough assessment, as well as coordination between mental health services and substance misuse services, were perceived as crucial.

One interesting result emerging from all the studies was the realisation that it is possible to conduct qualitative research with this specific population and engage them in focus groups and interviews. It is hoped that this finding can facilitate further research in the future for people with psychosis and coexisting substance misuse.

While these qualitative studies provide insight about the experience of care for service users with psychosis and coexisting substance misuse, the overall quality of the evidence was moderate. All studies were assessed for methodological quality according to a qualitative study checklist (NICE, 2009b), however several of the included studies could have been improved by describing methodology and data analysis further. In addition, the theoretical frameworks and approaches were variable across studies, as were the populations on which they focused.

4.5 QUALITATIVE ANALYSIS

4.5.1 Introduction

The following section includes a qualitative analysis of transcripts available on the internet from people with psychosis and coexisting substance misuse. These were accessed from the following seven websites:

- Bipolarworld (<http://www.bipolarworld.net/>)
- Dual Recovery Anonymous (DRA) (<http://draonline.org/>)

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- Foundations Associates (<http://dualdiagnosis.org/>)
- Healthtalkonline (<http://www.healthtalkonline.org/>)
- Meriden Family Programme (<http://www.meridenfamilyprogramme.com/>)
- Rethink (<http://www.rethink.org/>)
- Talktofrank (<http://www.healthtalkonline.org/>).

The websites all provided information and support to people with psychosis and coexisting substance misuse and included personal narratives from people with these conditions and their families, carers or significant others. The review team undertook their own thematic analysis of the accounts to explore emergent themes that could be used to inform recommendations. It should be noted that service users with diagnoses of bipolar disorder, schizophrenia, schizoaffective disorder and psychotic disorder were all included in these transcripts, in addition to having problematic or dependent substance use.

4.5.2 Method

Using all the personal experiences available from seven websites, the review team analysed the accounts of 48 service users. All accounts were published on the websites in their original form. The majority were written by people from the UK but there were also some from the US. Poems and letters were excluded from the analysis. Each transcript was read and re-read and sections of the text were collected under different headings using a qualitative software programme (NVivo). Initially the text from the transcripts was divided into six broad headings emerging from the data: impact and experience of psychosis and coexisting substance misuse; access and engagement; support and services for people with psychosis and coexisting substance misuse; experience of treatment; experience of recovery; and the perspectives of families, carers or significant others. Under these broad headings, specific emergent themes that were identified separately and coded by two researchers. Three GDG members also individually coded the accounts into emergent themes. Overlapping themes and themes with the highest frequency count across all of the accounts were extracted and regrouped under the subsections below.

There are some limitations to the qualitative analysis for this guideline. Some of the accounts are written in retrospect, whereas others are written about more recent experiences, or in the present, which may have had an impact on the way in which the experiences were recalled. Moreover, the accounts cover different time periods, which may affect factors such as attitudes, and information and services available.

4.5.3 Impact and experience of psychosis and coexisting substance misuse

Given the debilitating impact of having a diagnosis of psychosis or a psychotic-related disorder with coexisting substance misuse, the main themes emerging from the online accounts regarding experience of illness described the symptomatology of the disorder(s), the emotions people felt in receiving an accurate diagnosis, the use of

self-medication to control psychiatric symptoms, and, lastly, gaining insight into their mental illnesses.

Symptoms of psychosis and coexisting substance misuse

Many people alluded to the cyclical nature of their mental health problems (especially those with bipolar disorder), and how these symptoms were or were not affected by their substance use:

When I first got sober, the manic-depressive disorder appeared even more pronounced than it had before. It was no longer hidden by alcohol and drugs. The stress of withdrawal in my early recovery triggered wild mood swings for me. (DRA)

At times my moods were changing from depression to manic even without booze or drugs. Sometimes I got so depressed I would seclude myself for weeks at a time without paying attention to whether I bathed or ate. (Bipolarworld)

Participants also described how they would hide their symptoms from others:

You can't lump everybody in together, you know, to say oh this is, these people are manic depressives, so their behaviour would be blah, blah, blah. Everybody is different . . . I might act different to the next manic depressive or whatever and, you know, perhaps I might not show my symptoms because there's one thing about manic depression, depressives you really are clever at hiding your symptoms and very good at manipulating people. (Healthtalkonline)

Self-medication as a reason to misuse substances

Self-medicating with drugs or alcohol as a way to manage symptoms emerged as a prominent theme in the online accounts. The most common reasons for self-medicating were to manage manic or depressive symptoms:

The army caught on to my problem, and tried to treat me with lithium and Prozac. This helped for a little while, but I also started drinking. Eventually, I went off the meds and started self-medicating with the alcohol. (Bipolarworld)

I began to self medicate myself. Smoking weed drinking alcohol these help me come down from my intense moods (Bipolarworld)

I started to self-medicate. Alcohol and speed were my crutches. If I felt myself getting too high I would drink, if I felt I was getting too low then I would take a few grams of speed. (Bipolarworld)

Gaining understanding

Gaining an understanding of mental illness is an important step towards both engaging in treatment and promoting the recovery process. The themes that emerged centred on accepting both diagnoses of a psychotic and substance misuse disorder,

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and understanding how the two illnesses could be treated and how their substance misuse had had an impact on their psychiatric symptoms. Understanding their conditions frequently led to positive thoughts about their illnesses and the future:

Recovery from chemical dependency requires that I accept my addiction and abstain from mood-altering chemicals. It involves attending 12-Step meetings, working with my sponsor, working the 12-Steps and improving my physical health. Recovery from bipolar disorder...requires that I accept the disease. Attend dual disorder meetings; increase my activity when I'm depressed and decrease my activity when I'm manic, or slow down and think constructively. (DRA)

Believing that my mind would return to rational thinking once time healed it from the years of drug abuse. The entire time ignorant of [bipolar disorder]. As if my mind completely blocked out those years of hospitals and knowledge. I'm beginning to believe it was shame, fear of stigma. But still, why I sabotage myself is a mystery, and I still have to fight it! (Bipolarworld)

... drugs might not be responsible for all mental illness but where, where people with mental illness take drugs they greatly compound the problem and prevent recovery. And I think that other things being equal, people do recover more or less but the drugs stop them recovering. (Healthtalkonline)

4.5.4 Access and engagement

Due to the additional burden of having both psychosis and a substance misuse problem, there are many barriers to accessing and/or engaging in treatment. This can stem from experience of stigma, cultural or ethnic factors, lack of coordination between services, and assessing and engaging the person.

Stigma

There is a significant amount of stigma attached to having a severe mental illness like psychosis, and coupled with a substance misuse problem there is additional risk of stigma. Many online accounts, from both service users and families, carers or significant others, highlighted the experience of interacting with others in the community and the stigma that their diagnoses carried. The experience of stigma often elicited feelings of shame, embarrassment, and frustration:

When we go out there in the community people might know you have got a mental health problem, you might not look different to the, but they know you have got that. There is a stigma against it and a discrimination taboo...because of the label, and because of what it stands for. Which is people don't understand. (Healthtalkonline)

I found that a lot of people disbelieve me when I say I've had schizophrenia, ... They don't believe it because my behaviour doesn't match their stereotype and if there's one thing that makes me upset more than anything else is when people start to question my integrity. (Healthtalkonline)

So if we can get actually people on board to recognise that not all... mentally ill people are violent, psychopathic or whatever that which actually we're just normal people trying to live our lives every day with the added burden of having a mental health issue then perhaps... people would get on a lot better. (Healthtalkonline)

If anybody heard that you have a sick son, they don't want to know you. That's the worst part... I still hear people saying to me, "... he has two sons, they are sick". And when people hear that, they don't want their children to even come any nearer. Because they are afraid... that your son might do something... because they do not have enough knowledge that not all sick people are violent. (Healthtalkonline)

When he was sectioned, we told them he had been spiked, probably with LSD. Bizarrely that explanation is more socially acceptable than telling people your son has a mental health problem. That's how far this society is entrenched in stigma and prejudice about mental health, but tolerates drugs as part of the social structure. (Meriden Family Programme)

Access for BME groups and cultural factors

One theme that emerged in several online accounts was that access to care was more difficult for those coming from a BME group or a different cultural background. Factors that affected access to care for BME groups were a fear of accessing treatment due to the conceptualisation of mental illness in their home country or native culture, or fear of stigma:

Well people look at you differently if you say you've got a mental health problem back home. They don't treat you the same. I think now it's changed but that, when I was there it was different... (Healthtalkonline)

Many felt that they were or would be treated differently by mental health professionals as a result of their ethnicity or cultural background:

... it wasn't so much racist it was more institutionalised racist. It's embedded within the system. (Healthtalkonline)

... within the mental health system it's their foreign-ness which is emphasised because it is their foreign-ness which is considered to, to shape their, their diagnosis. (Healthtalkonline)

... it's very hard for minority to express their views, because any time a minority express their views... "if you don't like it, what are you doing here?" (Healthtalkonline)

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But they don't know where to go to no one. They don't go to a doctor or no GP. They want to deal with it themselves. (Healthtalkonline)

You know, some Black folk they don't want to go to the GP, they don't want to go, then them's not treated, because the stories they hear about the system, so we've got to find a way to make it more attractive to help them to go and get treatment before it gets worse. (Healthtalkonline)

Access to services

A significant number of factors affected accessing services, including fear of contacting a healthcare professional about substance misuse, and uncertainty about how to begin accessing treatment or who to contact:

And I did ask somebody from my mental health team if it was possible to have like a social worker and she said no, she didn't know how I would access that. I asked my doctor the same thing she didn't know how I would access anything like that so it just leaves you vulnerable. (Healthtalkonline)

Coordination between services

Another theme that emerged from the online accounts was the link between mental health services and the criminal justice system and the police. Several accounts compared how, in the UK, there needs to be more coordination between the police and mental health services in order to make the most effective referrals for people with psychosis and coexisting substance misuse. In addition, it was thought necessary to circulate general information regarding mental illness to the police:

... if you're struggling with a substance misuse problem you'd be better off in, in the criminal justice system. People say that their lives have been saved by being put in the criminal justice system being forced to come off the drugs and then given help to stay off. And I have to tell you that at the moment there's no, no plan to, to give that kind of care to, to people in my trust [NHS]. (Healthtalkonline)

... if they realise that somebody is, you know, is not particularly a drunk, that there's something underlying with that person as well, mental health issues I think a mental health team should be available, a crisis team of some sort should be available to help that person while they're at in police custody, yeah. I never had any of that and so you can't, you haven't got access to your medication, you're off your medication, that's only going to make you worse. (Healthtalkonline)

Like my son, the policeman came, he was so rough on him, you know although he has mental problem. The police are not trained. The police don't know what is mental health... if every community would work with the law enforcement, hand in hand, things might get better... (Healthtalkonline)

4.5.5 Support and services for people with psychosis and coexisting substance misuse

In the online accounts, people with psychosis and coexisting substance misuse frequently highlighted the positive and negative aspects of their support networks, be it personal social networks, peers accessed through mutual support groups, or mental health services. Many participants described how their social networks facilitated or impinged on accessing care or treatment.

Positive and negative social support networks

One emergent theme was how a lack of social support, or a social network that was based around substance misuse, hindered recovery:

I had nobody there to help me with this. (Bipolarworld)

I also remember having friends who really weren't my friends if I had booze or drugs they were always there, if I had nothing or tried to quit they were always gone. It really hurt to find out who were your real friends. (Bipolarworld)

However, having positive social support networks actively encouraged recovery:

I have the encouragement and support of my wife even though we are planning to separate in the near future... I also have a very close... friend, and although he doesn't understand bi-polar disorder, he has been very supportive. He makes sure that I get out of the house at least three times a week. (Bipolarworld)

The care and loving doesn't come from professionals. They haven't got time to hug me and kiss me and tell me how much they love me, and give me sweet things, chocolate to eat. That comes from a different source that comes from your friends, it comes from your family, it comes from the community. It comes from your spouse, your husband, your boyfriend and that happens after you've finished the day time treatment. So I think that is what the other thing is. The care and loving that we need. (Healthtalkonline)

The impact of key workers

Another theme that emerged from the online accounts was the helpfulness of particular key workers in addressing both the psychosis and the substance misuse, acting as a positive role model and supporter, helping to encourage recovery, and referring the service user to useful community services. A key worker typically made the service user feel cared for and increased their motivation to get involved in social activities. Key workers were people to whom service users could go for help, who were separate from their personal support network and their clinicians:

I have great help from [my key worker] who I see once a week and I know that if I have a problem I can just pick up the phone and, you know, as long as it's within working hours he's here. (Healthtalkonline)

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Because he [money adviser] did say to me, 'The first time I met you... you were seriously ill... mentally,' and he said, 'The, the improvement over time has been great.' And I said... 'that is partly because.. you've took a lot of my burden...and let me concentrate on getting better in myself... putting apart that, the worry of all of that'. (Healthtalkonline)

But just that small group it makes you feel like you're being cared about and cared for and [my key worker] does a great job with that I think .. He can be a pest at times making sure that you, I've got to go out with him, 'Come on you're coming for a cup of coffee,' that's only to get, make sure that I'm getting out. (Healthtalkonline)

4.5.6 Experience of treatment

Due to the nature of treating both psychosis and substance misuse simultaneously, treatment is complex and often managed across multiple services. Many online accounts highlighted experience of medication, the need for specific attributes in a therapist or mental health services, and the beneficial nature of mutual support groups addressing both of their illnesses. They also expressed the opinion that services and treatment were often disconnected.

Interactions with healthcare professionals

There were many reports within the online accounts of interactions with healthcare professionals. Some service users lacked confidence and trust in their healthcare professional:

And the GP, oh they have no clue about mental illness. If you go to them about any major problem, they look into the book, any tablets they can give you. (Healthtalkonline)

I would get very frustrated with what I felt was incompetence and ineptitude by my doctors. I did not feel that they were listening to me nor were they willing to make medication changes when my current mix of medications did not seem to be stopping my cycling. I had three doctors within that year, until I found my current doctor, who I am finally comfortable with. (Bipolarworld)

I've seen different psychiatrists but to me they always feel, they, it's always felt like they're sitting on a pedestal... and I'm just there as part of their job really. (Healthtalkonline)

So the important thing is they listen to what people are saying, especially the people who have the illness... But they don't listen to them. They just make presumptions. Because of the label of they have been given. They look at a label. 'He's paranoid schizophrenic. So we put him in that category, he must be saying this.' Not necessarily. Things can change. Actually listen to what he's saying. Look at what he does. Look at his care plan. And listen ... And now people are beginning to listen to me and that is what makes me feel good. (Healthtalkonline)

There was a feeling among service users of having to conceal certain issues or disclose specific aspects of their illness in order to comply with their healthcare professional:

... make it clear that you believe what they say, very clearly that you believe what they say because if you show or hint that you don't believe what they say then that's, then you've undermined your own authority in their eyes and therefore that makes the repair process a lot, a lot more difficult and a lot more long term. (Healthtalkonline)

However some service users understood the pressures facing healthcare professionals:

They've got loads to cope with. It's not their fault. Most of these things, people have a go about their consultant and the doctor. It's not their fault why these things are happening. It's the way the system is. (Healthtalkonline)

Others highlighted the positive aspects of their healthcare professionals, such as how they helped them achieve insight into their illnesses:

I began to work with a new doctor, and when I told him about my continued marijuana smoking, he stated simply, 'Do you know marijuana is bad for your mental health?' It was a non-judgmental statement. But, somehow it reverberated in me. I do not believe he judged me as good or bad for the choices I was making, but he just wanted to empower me by allowing me insight into what I was doing to myself. (DRA)

Self-help

Self-help groups, particularly in the online accounts from the US, emerged as a beneficial treatment option where people could openly discuss both their psychosis and substance misuse. Mutual support enabled service users to relate to someone with similar diagnoses and experiences, as well as to develop a positive social network outside the formal group sessions. It was strongly emphasised that the support group should be focused on both illnesses, because those targeting substance misuse only led to frustration:

I lost the zeal for AA several years ago because they didn't understand my bipolar condition. They felt meetings, a sponsor, and the big book along with a spiritual program were all you needed to obtain good sobriety. (Foundations Associates)

Dual Recovery Anonymous [DRA] helps keep my whole self together so I have a chance to hope, cope and heal from the impact a dual disorder has had on my life. (DRA)

The people at the meeting really made an impression on me. I could tell they were sincere and serious about what they were doing, and they said they

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used to be like me until they started working this honest program. They were practical and realistic, yet had uncommon sense, they were humble and unselfish, and I wanted to be as much like them as possible. I wanted what they had. (Bipolarworld)

I was not compliant with good mental health practices... I refused psychiatric medication, assuring myself that increased effort to work the 12 Steps would restore me to sanity... Later I would learn that my sobriety program would restore me to sanity from addiction and not my total mental health, but it went a long way in improving my quality of life. (Bipolarworld)

I met my third husband at my sponsor's house. He is also bipolar, and because we have worked through stabilizing his medication, then mine... we have learned why people in dual recovery need each other... (DRA)

I think joining a group is a big help. You'll find that you make friends, you make the odd friend here and there and it's up to you if you want to continue the friendship outside which we have done with our, when we had our black and ethnic group going here we all made friends and we all had each other's telephone numbers and we'd go out independently as well. (Healthtalkonline)

My group has been a godsend... I get so much from my brothers and sisters in DRA... love, support, encouragement and finally, a sense of belonging... I have DRA to treat my dual illnesses as a whole, rather than a part here, and a part there. (DRA)

People show up at our meeting that I have never seen at the social club where it's held. They say how happy they are that they have somewhere to go, and they share their experience, strength and hope without reserve. They ask questions, and they hang around for a while to yak and drink coffee. And we don't feel alone anymore. They come back the next week. (DRA)

So when you do start recognising your symptoms hopefully there will be somebody there, on the other end of a phone or perhaps a group you can go, even if it's just another mental health, mentally challenged person like yourself and sometimes they're better than the professionals I'm telling you, and give you better advice... (Healthtalkonline)

Resistance or ambivalence towards medication

One of the most prominent themes that emerged from all the online accounts was a strong opinion about medication regimes for psychosis. Feelings towards medication were typically ambivalent, and side effects often outweighed the positive aspects of medication in managing symptoms. In some cases, medication had a debilitating effect (for example, people found it difficult to stay awake) and impacted on the service user's ability to engage in daily activities, such as work.

Some online accounts highlighted the problematic nature of increasing and changing doses, and how this resulted in them stopping their medication altogether, or relapsing:

I was seeing a psychiatrist once a week and slowly I felt like my life was getting better. However the medication did not continue to work. So my doctors just put the dose up each time they saw me. I was incredibly frustrated with this and decided that I would take myself off all the medication and do it my own way. (Bipolarworld)

Medications would only work for short periods of time, then we would have to increase dosages until we reached maximums, then we would have to search for something new. It was so frustrating for me, and I would often lose hope of ever feeling better. (Bipolarworld)

However, my dosage kept increasing... even at such a high dosage, the medication was not showing up in my system so the doctors dropped me off the medication out of concern. Again, I started drinking. (Foundations Associates)

Others were concerned about the side effects of their medication:

Well, lithium turned me into an emotionless zombie. I think they just had me on too high of a dose, but I wasn't about to live my life that way, so I stopped taking it. Of course, I went back on a manic high right away. (Bipolarworld)

I went back to the doctors and they started me on new meds. I was exhausted by fatigue as a side effect of meds. I couldn't hold a job. (Bipolarworld)

... most of the time you just try and dodge your medication anyway, everybody did it if they could. (Healthtalkonline)

I was in a bit of a fog with all this sedating medications so I started reducing it with out telling the doctors. (Bipolarworld)

I soon stopped taking my prescribed medication preferring to self-medicate with substances that had euphoric side effects instead of the lethargy, dry mouth, impotence, and muscle spasms of the legitimate drugs. (DRA)

However several online accounts expressed more positive views towards medication:

Coming off my meds the second I felt better... then crashing... back on my meds again... then crashing lower... it was a vicious cycle. I met my disability counselor and she explained to me everytime I came off my meds and I dropped to a new low it was that much harder for the medication to bring me back to the original me... that scared me I didn't want to lose me forever... so I have been faithfully taking my meds for over a year! (Bipolarworld)

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Once I started taking medication for my bipolar disease, I became balanced; my mood swings were less severe. Medication management is critical for me, because any fluctuation of time or dosage can affect the purpose of the medication. (DRA)

Some service users, who were initially compliant with their medication regime, gradually stopped taking their medication without consulting a clinician once they felt better, which led to relapse:

For over a year I was taking my medication faithfully and feeling balanced and 'normal'. As with substance abuse, 'stinking thinking' started to set in, for my mental illness. I believed that I was 'well', so I slowly stopped taking my meds. (DRA)

... however I started to believe that I did not need to continue taking my medication because I was feeling so much better. So I stopped it all together. Life returned to the rollercoaster. (Bipolarworld)

4.5.7 Experience of recovery

Many online accounts were positive about the future in terms of recovery and learning how to cope with their mental illness as well as maintaining abstinence from substances. The majority of the accounts expressing feelings about their recovery mentioned the tumultuous journey and the need to recognise recovery as a constant yet manageable and rewarding struggle:

Life does get better and it is an enabling disability... a sort of a perceptual thing that never leaves you. But it is actually a gift if you can learn about it and manage it and get the best out of yourself. I mean it's no different from what anybody else is trying to do is get the best out of ourselves aren't we so, you know, it's pretty good. (Healthtalkonline)

I still take each day as it comes. I'm always prepared for a relapse; even though I have five years 'under my belt' of being relatively 'episode free,' I'm always on alert. (Bipolarworld)

I still experience peaks and valleys, but now the cycles aren't so great or frequent, and they are more manageable. I know that experience teaches expertise, help and hope replace helplessness and hopelessness, and weaknesses turn around to become strengths. (Bipolarworld)

Now, after a few years... some med changes and a lot of work I AM getting better! I can see the light at the end of the tunnel! I know that I have to work every day to deal with my illness and I will always have to be diligent with my meds. But, I also know that I can feel better... (Bipolarworld)

With thanks to the doctors I have seen since, my condition, though present, is understandable now. I have greatly controlled the symptoms I have experienced. Gone are the days of binge drinking and marital infidelity. I have settled into the life of being a simple person, who gets great pleasure out of all the little things in life, while coping with my disability at the same time. (Bipolarworld)

4.5.8 Families' and carers' perspective of services

Many families, carers or significant others held strong views on the efficacy of mental health services for people with psychosis and coexisting substance misuse. There were obvious differences between engagement in services in the US versus the UK. Families, carers or significant others perceived that US non-medical services (for example, the police), had a better understanding of mental healthcare than in the UK. Others drew on the lack of communication between services in the UK. Families, carers or significant others perceived mental health professionals as most effective when they spent a significant amount of time with not only the service user, but the family, carer or significant other as well, allowing time for questions to be asked about treatment and medication regimes:

I can go in there and the patient and the parent, and there will be a head nurse or a psychiatrist or somebody there to organise the meeting. And my son can say anything to me and I can give a good, - and I can answer him back. Then a psychiatrist will say, - will tell my son he is wrong or I am wrong or something like that, you know. A friendly, - this thing. And to me, that is very, very helpful, because sometimes - you don't say things in anger, things go better. My son has his view, I have my view, or my son wants something, I will say, 'I will try my best to do it'. And that is very helpful. (Healthtalkonline)

Others expressed concern about the discontinuity of care, for example in the transition to adult services:

... [he] was eighteen... and CAMHS [child and adolescent mental health services] needed to get rid of him, but he wasn't having any of it. We had no idea that such a schism existed within the services and had assumed there would be a thread of continuity... [his] CAMHS doctor is a saint. But he is an overworked and under-resourced saint and he hung on to him as long as he could. (Meriden Family Programme)

The day after their eighteenth birthday they are adults and you are expected to be carers. But carers whose motives are suddenly viewed with suspicion. Carers whose agenda it is automatically opposed to theirs. You are part of the problem. You have to play by confidentiality rules and observe their conventions of procedure. (Meriden Family Programme)

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Some families, carers or significant others felt neglected by services, feeling that they received inadequate information about their family member's or friend's illness:

No-one told us what to expect or how to deal with anything... on a day-to-day basis; the services; medication; relapses; claiming our rightful benefits; Nothing! (Meriden Family Programme)

Families, carers or significant others emphasised the impact of coping with their family member's or friend's psychosis and substance use problems on their own. Many provided advice on coping and caring for someone with both illnesses:

Mental health needs to be handled with care and support. You have to put yourself into that person's shoes - if you are this person how would your family feel... (Healthtalkonline)

Learning all you can is a vital part. His mood swings have many times made me want to say I give up... this isn't worth it. After I learned, and still learning each day, all that I can about bipolar disorder I now know and have some idea of what I should expect and how to handle those things. (Bipolarworld)

Several online accounts highlighted the importance of having the right accommodation for people with psychosis and coexisting substance misuse:

Along with non-compliance with medication regimes and continued substance abuse, inappropriate accommodation would seem to be one of the most common causes of relapse, including remaining too long with parent/carers. (Meriden Family Programme)

Whilst there are some excellent models of supported accommodation, a huge percentage of options offer very little or no proper support, most especially if there are no family carers in the background. Service users are left vulnerable to a financially motivated system, overseen by under-resourced, underfunded and under-informed social workers, trained to feed them into what has become a multi-billion pound industry, regardless of consequences. (Meriden Family Programme)

4.5.9 Summary of the qualitative analysis of the online accounts

The online accounts highlight the effect of substance use on psychiatric symptoms, and how many people hide their symptoms from others. Self-medication was frequently cited as a reason to use substances as a way to manage or normalise psychiatric symptoms. The accounts illustrated the cycle of increased symptomatology and escalating substance use.

The theme of social networks also ran through all the online accounts, highlighting that positive support can promote change and optimism in people with psychosis and coexisting substance misuse. This social support could be from a carer, a key

worker or advocate, or a self-help group. A number of people commented that the relationship between service user and therapist is of prime importance.

Discontinuity of care and lack of coordination between services was also a prominent theme emerging from the accounts. A few highlighted how police and criminal justice systems could increase awareness about mental health, and promote more coordination and integration between services.

Having a psychiatric diagnosis was often viewed as stigmatising and resulted in the service user concealing problems and symptoms from others. Many people expressed that they felt discriminated against because of their diagnosis.

When accessing services, those from BME groups emphasised that it was difficult for minorities to express their views, and many were reluctant to approach their GP for help. Lack of information from healthcare professionals is a barrier to coming to a full understanding of psychosis and its interaction with substance misuse, the range of treatments available and the role of services.

There were varied views about healthcare professionals emerging from the online accounts, and the main area of criticism concerned contact with the GP and maintaining a therapeutic relationship with a healthcare professional. A number expressed negative views, such as the healthcare professional being uninterested in the service user or not investing enough time in them. Others felt that they had to conceal information from staff, and generally expressed a lack of confidence and trust in their healthcare practitioners. Conversely, positive interactions with healthcare professionals led to greater insight and facilitated readiness to change.

Another overarching theme emerging from the online accounts was a strong opinion about medication for psychiatric illness. There were mixed reports regarding medication; ambivalence and resistance towards medication were frequently cited because of side effects and other factors, and some people abruptly discontinued their medication once they felt better. Self-help groups (such as DRA) were cited as beneficial in promoting change and ongoing support.

The impact of psychosis and coexisting substance misuse on families, carers or significant others was a prolific theme. Some people remarked on the change of roles that occurred as a result of one person having a diagnosis of psychosis and coexisting substance misuse. Many people also commented on the supportive nature of families, carers or significant others.

Lastly, several online accounts explained the process of recovery, and expressed optimism and hope for the future, stemming from ongoing support from their social networks, medication and treatment, and readiness to change.

4.6 OVERALL SUMMARY

Twenty-one studies were reviewed in the narrative synthesis of the qualitative literature and 48 testimonies from seven websites were analysed in the qualitative analysis (four websites were based in the UK and three in the US). Many of the same themes were found in both the qualitative literature and the online accounts. Table 8 provides a list of the themes emerging from both sources of evidence.

Table 8: List of themes emerging from the qualitative analysis and the narrative synthesis of the qualitative literature

	Qualitative (thematic) analysis of online accounts	Narrative synthesis of the qualitative literature
Reasons for substance use	√	√
Feelings of stigma	√	√
Socioeconomic status as a barrier to accessing treatment	x	√
Culture or ethnicity as a barrier to accessing treatment	√	√
Gender-specific barriers to care	x	√
The importance of a comprehensive assessment and referral	x	√
Importance of social networks	√	√
Positive aspects of employment	x	√
Difficulty accessing and engaging in services	√	√
Ambivalence towards medication	√	√
Medication compliance and effects	√	√
Utility of mutual help and self-help groups	√	√

The literature review of qualitative studies and the qualitative analysis of online accounts revealed that many people used substances (the most common of which were alcohol, cannabis and cocaine) in an effort to control their psychiatric symptoms, such as mania or depression, although substance use was often reported as exacerbating psychotic episodes. Additional reasons for substance use with coexisting psychosis included the social benefits.

Being aware of the reasons for substance misuse is important in contributing to an understanding of the relationship between psychosis and substance misuse, and how staff can better identify and help maintain positive change.

Stigma was discussed in the qualitative analysis as well as in the literature review. People with psychosis and coexisting substance misuse concealed their feelings and thoughts, which was a barrier to getting help or support. The literature showed that few people with psychosis and coexisting substance misuse seek help until they have

had a serious psychotic episode or have ‘hit rock bottom’. When people do present to services, typically one of their coexisting illnesses is managed while the other problem is left untreated. Furthermore, families, carers or significant others from BME groups of varying socioeconomic status were difficult to engage in services. The primary study authors felt that more attention should be given to engaging this family/carer group and population in treatment (for example, through the provision of culturally-specific community groups). Families of a higher socioeconomic status had adequate support networks and did engage more frequently in treatment. The online accounts highlighted that an increase in support groups with a focus on recovery for both psychosis and substance misuse could be beneficial.

Moreover, the GDG discussed that healthcare professionals in both mental health and substance misuse services could have had more cultural sensitivity and awareness regarding the links between cultural or spiritual practices and substance use, and provided culturally-specific services for BME groups presenting with psychosis and coexisting substance misuse. Evidence from the Warfa and colleagues’ (2006) study showed that BME groups were heavily accessing culturally-tailored programmes in the UK.

Women felt additional internal stigma due to alcohol misuse being perceived largely as a male problem. They reacted positively to healthcare professionals who employed an empathic, non-judgemental approach, but were critical of a lack of childcare opportunities and rigid treatment programmes that did not allow for flexible timing to enable women to enter treatment and care. Treatment could be adjusted or more flexible treatment times could be provided in order to account for this.

Both the literature and the online accounts highlighted the perceived lack of coordination and communication between services (for mental health and substance use). It is important to take these findings into account and ensure a better continuity of care. Having a key worker was frequently cited in both the literature and the online accounts as providing support to the service user, referring the person on to appropriate services and facilitating recovery.

One study highlighted the need for a comprehensive assessment to properly diagnose both the psychosis and coexisting substance misuse so that the person could be referred to appropriate services, and the need for more integrated management where the coexisting disorders could be treated concurrently. A comprehensive assessment improves professionals’ understanding of the role of substance misuse in a service user’s life and provides insight into their lifestyle and social circumstances. This increases the possibility of providing effective, tailored treatment and support suited to the individual. Healthcare professionals should work collaboratively with service users to agree a structured support plan and encourage and motivate them to engage in treatment. A non-judgemental attitude that will engender trust in service users is crucial. Integrating treatment and referrals are important in establishing a therapeutic relationship, together with continuity of care. The benefits of a therapeutic relationship both in assessment procedures and in treatment were cited frequently.

The need for more information about psychosis and substance misuse (as well as the relationship between the two) with regards to treatment options, specifically medication regimes, were mentioned consistently in the literature and the online

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accounts. Lack of accessible information may be a particular issue for people from BME groups, as well as for families, carers or significant others.

Social networks emerged as a prominent theme in both the literature and the the online accounts. Positive social networks were seen as helping to promote long-term recovery and maintaining positive change, whereas negative social networks pressured people to use substances, exacerbated mental illness and encouraged relapse.

Employment and positive social activities in addition to standard treatment can help prevent relapse from substance-use disorders occurring from boredom or re-engagement with substance-using social networks. Employment promotes empowerment in this population, as do social activities that foster autonomy and independence.

Both reviews highlight the importance of mutual support and self-help groups so that people with psychosis and coexisting substance misuse can communicate and interact with those with similar complex needs and experiences. The literature and online accounts had a prominent theme of ambivalence and resistance towards medication regimens due to side effects or the perceived irrelevance of drug treatment. Many ceased taking their medication, leading to relapse. In order to control the onset of psychiatric symptoms, people self-medicated with more substances, perpetuating the cycle. This can result in more hospitalisations and treatment, therefore an effort should be made to promote adherence to medication, including providing as much information as possible about medication regimes to individuals and families, carers and significant others, and to ensure medication monitoring and follow-up.

In the literature as well as in the online accounts, one prominent issue that emerged for families, carers or significant others of people with psychosis and coexisting substance misuse was a feeling of being neglected by mental health services. The GDG discussed that more effort should be made to engage families, carers and significant others as part of the service user's the care plan. There should be opportunities for families, carers or significant others to ask questions, and information about medication and treatment should be provided. Where possible families, carers or significant others should be encouraged to participate in family/carer support groups so that they can share their experiences.

Finally, the qualitative analysis and review of the literature reflected the views of service users and their families, carers or significant others on preferred treatments. Non-pharmacological treatments (for example, psychological or alternative treatments) did not emerge as themes as expected.

Limitations

There are some limitations to the qualitative analysis and qualitative review of people's experience of psychosis and coexisting substance misuse in this guideline. First, the illustrative and retrospective nature of the online accounts must be taken into account. Furthermore a large proportion of these accounts were from the US and the treatment modalities or services described may differ or not be accessible in the UK. Second, only certain substances (for example, cannabis and alcohol) were mentioned as substances of misuse in the literature and the online accounts, whereas other substances (such as hallucinogens or heroin) were not mentioned as frequently, or at all. Despite these limitations, a number of themes were identified and ran through both sources of evidence.

Overall, the validity of the qualitative evidence needs to be mentioned, particularly regarding the triangulation of findings from different qualitative methods and its potential limitations. It may be that it is inappropriate to use data gathered from various methods and contexts to inform the experience of care of people with psychosis and coexisting substance misuse. While the qualitative accounts were informative and analysed in a systematic, consensus-based way, the motivation behind the writing of the accounts is unknown and there could be a bias in the information they provide. This needs to be considered when judging the validity of the analysis.

4.7 FROM EVIDENCE TO RECOMMENDATIONS

Both the narrative synthesis of the qualitative literature and the qualitative analysis of the online accounts revealed overlapping and similar themes, which were discussed by the GDG. Both forms of evidence highlight the value of gathering information about service users' experience of psychosis and coexisting substance misuse, treatment and services. The qualitative evidence can therefore further inform the quantitative research and lead to more informed recommendations for improving the experience of service users and their families, carers and significant others. Though qualitative research is largely subjective due to its narrative nature and aimed at a specific population that may not generalise widely to the UK, a number of themes were identified that ran through both sources of evidence.

The GDG judged that the qualitative evidence reviewed for this guideline suggests that people with psychosis and coexisting substance misuse should be given information regarding comprehensive assessment, treatment decisions and options, and aftercare. This issue is important for families, carers or significant others as well, because many felt neglected by services and could have benefitted from more inclusion in the treatment progress and being given more information. The GDG identified that when families, carers or significant others are involved in supporting the person with psychosis and coexisting substance misuse, a carer's assessment of their caring, physical, social, and mental health needs will be important. The GDG also agreed that family intervention, as recommended in the NICE *Schizophrenia* guideline (NCCMH, 2010), was appropriate. The GDG felt that healthcare professionals could also provide information about family/carer support groups and voluntary organisations, including those for psychosis and substance misuse, and help families, carers or significant others access these, as many felt that they would have benefitted from support from others with similar experiences. The GDG also discussed issues of consent, capacity and advance decisions, agreeing that advice was needed about these issues and the legal requirements under the Mental Capacity Act (2005; HMSO, 2005) and Mental Health Act (1983; amended 1995 and 2007; HMSO, 2007).

Furthermore, the GDG thought that the literature and the online accounts highlighted that healthcare professionals should be culturally competent and able to take account of the service user's cultural or ethnic background when providing information

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and treatment. Information about voluntary organisations and support groups in the community that are culturally specific could benefit both service users and their families, carers or significant others and facilitate access to and engagement in treatment. No evidence was found in the economic literature of the burden on families, carers or significant others, both in terms of financial cost and quality of life. Further research would be required to provide an empirical estimate of this burden, although such costs would be considered outside the current NICE reference case (NICE, 2008).

Although highlighted in the qualitative evidence reviewed for this guideline, the GDG additionally discussed the importance of having an advocate or key worker to provide ongoing support and ensure coordination between services. The GDG also established by consensus that a positive therapeutic relationship between the health-care professional and the service user is important in facilitating engagement in services and treatment and promoting change. The evidence reviewed above supports these discussions.

4.8 RECOMMENDATIONS

4.8.1 Recommendations

Working with adults and young people with psychosis and coexisting substance misuse

4.8.1.1 When working with adults and young people with known or suspected psychosis and coexisting substance misuse, take time to engage the person from the start, and build a respectful, trusting, non-judgemental relationship in an atmosphere of hope and optimism. Be direct in your communications, use a flexible and motivational approach, and take into account that:

- stigma and discrimination are associated with both psychosis and substance misuse
- some people will try to conceal either one or both of their conditions
- many people with psychosis and coexisting substance misuse fear being detained or imprisoned, being given psychiatric medication forcibly or having their children taken into care, and some fear that they may be 'mad'.

4.8.1.2 When working with adults and young people with known or suspected psychosis and coexisting substance misuse:

- ensure that discussions take place in settings in which confidentiality, privacy and dignity can be maintained
- avoid clinical language without adequate explanation
- provide independent interpreters (who are not related to the person) if needed
- aim to preserve continuity of care and minimise changes of key workers in order to foster a therapeutic relationship.

Race and culture

- 4.8.1.3 Healthcare professionals working with adults and young people with psychosis and coexisting substance misuse should ensure that they are competent to engage, assess, and negotiate with service users from diverse cultural and ethnic backgrounds and their families, carers or significant others⁵.
- 4.8.1.4 Work with local black and minority ethnic organisations and groups to help support and engage adults and young people with psychosis and coexisting substance misuse. Offer organisations and groups information and training about how to recognise psychosis with coexisting substance misuse and access treatment and care locally.

Providing information

- 4.8.1.5 Offer written and verbal information to adults and young people appropriate to their level of understanding about the nature and treatment of both their psychosis and substance misuse. Written information should:
- include the ‘Understanding NICE guidance’ booklet⁶, which contains a list of organisations that can provide more information
 - be available in the appropriate language or, for those who cannot use written text, in an alternative format (audio or video).
- 4.8.1.6 All healthcare professionals in primary, secondary or specialist substance misuse services working with adults and young people with psychosis should offer information and advice about the risks associated with substance misuse and the negative impact that it can have on the experience and management of psychosis.

Working with and supporting families, carers or significant others

- 4.8.1.7 Encourage families, carers or significant others to be involved in the treatment of adults and young people with psychosis and coexisting substance misuse to help support treatment and care and promote recovery.
- 4.8.1.8 When families, carers or significant others live or are in close contact with the person with psychosis and coexisting substance misuse, offer family intervention as recommended in ‘Schizophrenia: core interventions in the treatment and management of schizophrenia in adults in primary and secondary care’ (NICE, 2009a).
- 4.8.1.9 When families, carers or significant others are involved in supporting the person with psychosis and coexisting substance misuse, discuss with them any concerns about the impact of these conditions on them and on other family members.

⁵‘Significant other’ refers not just to a partner but also to friends and any person the service user considers to be important to them.

⁶Available in English and Welsh from www.nice.org.uk/guidance/CG120

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- 4.8.1.10 Offer families, carers or significant others a carer's assessment of their caring, physical, social, and mental health needs. Where needs are identified, develop a care plan for the family member or carer.
- 4.8.1.11 Offer written and verbal information to families, carers or significant others appropriate to their level of understanding about the nature and treatment of psychosis and substance misuse, including how they can help to support the person. Written information should be available in the appropriate language or, for those who cannot use written text, in an accessible format (audio or video).
- 4.8.1.12 Offer information to families, carers or significant others about local family or carer support groups and voluntary organisations, including those for psychosis and for substance misuse, and help families, carers or significant others to access these.
- 4.8.1.13 Negotiate confidentiality and sharing of information between the person with psychosis and coexisting substance misuse and their family or carer or a significant other.
- 4.8.1.14 Ensure the needs of young carers or dependent adults of the person with psychosis and coexisting substance misuse are assessed. Initiate safeguarding procedures where appropriate (see Chapter 5, recommendations 5.8.1.1 – 5.8.1.5).

Support for healthcare professionals

- 4.8.1.15 Working with people with psychosis and coexisting substance misuse can be challenging and healthcare professionals should seek effective support – for example, through professional supervision or staff support groups.

Consent, capacity and treatment decisions

- 4.8.1.16 Before undertaking any investigations for substance misuse, and before each treatment decision is taken:
 - provide service users with full information appropriate to their needs about psychosis and substance misuse and the management of both conditions, to ensure informed consent
 - understand and apply the principles underpinning the Mental Capacity Act (2005), and be aware that mental capacity is decision-specific (that is, if there is doubt about mental capacity, assessment of mental capacity should be made in relation to each decision)
 - be able to assess mental capacity using the test set out in the Mental Capacity Act (2005).

These principles should apply whether or not people are being detained or treated under the Mental Health Act (1983; amended 1995 and 2007).

Advance decisions and statements

- 4.8.1.17 Develop advance decisions and advance statements in collaboration with adults with psychosis and coexisting substance misuse, especially if their condition is severe and they have been treated under the Mental Health Act

(1983; amended 1995 and 2007). Record the decisions and statements and include copies in the care plan in primary and secondary care. Give copies to the person, their care coordinator, and their family, carer or a significant other if the person agrees.

- 4.8.1.18 Take advance decisions and advance statements into account in accordance with the Mental Capacity Act (2005). Although advance decisions and advance statements can be overridden using the Mental Health Act (1983; amended 1995 and 2007), try to honour them wherever possible.

5 ASSESSMENT AND CARE PATHWAYS

5.1 INTRODUCTION

Due to a paucity of evidence, the GDG addressed the review questions concerning assessment (review question 1.1.1) and care pathways and referral guidance (review question 1.4.1) using expert consensus. For further information about the methods used in this chapter, see Chapter 3, Section 3.5.6; for a list of all review questions see Appendix 6.

The challenge in providing treatment and care for people with psychosis and coexisting substance misuse has been the disparity between clinical models used in different parts of the care system, particularly between addiction/substance misuse specialities and the mainstream mental health services. This has been compounded by the two services being funded and commissioned separately, and variation and confusion over which service holds clinical responsibility for people with differing relative severities of each condition. This has, at worst, led to the exclusion of individuals with a coexisting disorder from both services, and, more often, to variable access to services and then attempts at parallel or sequential treatment, which may become disjointed and where accountability and governance is dispersed.

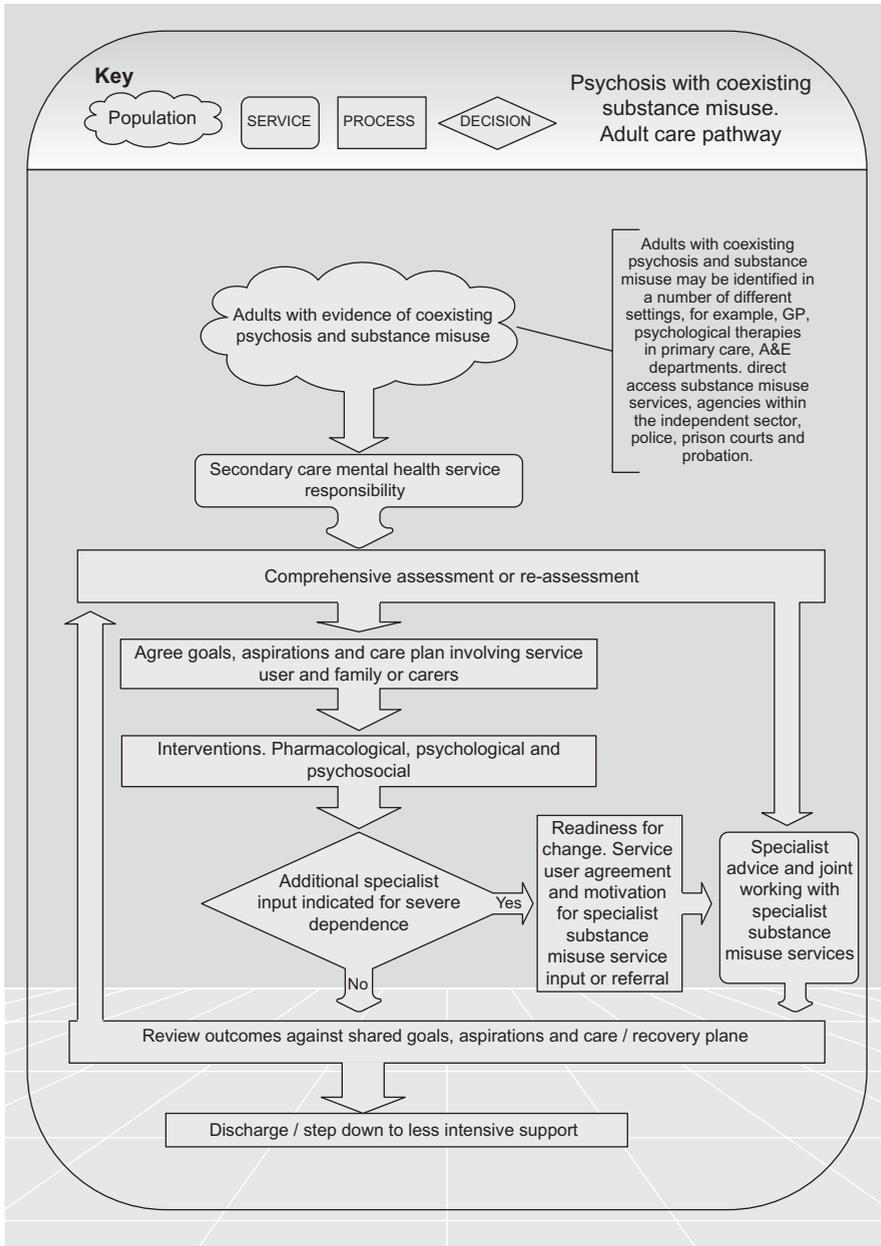
In *Models of Care for Treatment of Adult Drug Misusers: Update 2006* (National Treatment Agency for Substance Misuse, 2006) there is a workable definition of a care pathway and the required components:

An integrated care pathway (ICP) describes the nature and anticipated course of treatment for a particular service user and a predetermined plan of treatment. A system of care should be dynamic and able to respond to changing individual needs over time. It should also be able to provide access to a range of services and interventions that meet an individual's needs in a comprehensive way.

The pathway therefore seeks to standardise the steps taken through access, assessment, treatment and discharge as well as provide guidance points for the thresholds and relationships between different treatment teams and services. Care pathways have been developed for drug misuse and for schizophrenia and bipolar disorder within NICE guidelines (NCCMH, 2006, 2008a, 2008b, 2010).

A care pathway for people with psychosis and coexisting substance misuse designed specifically for this guideline is summarised in Figure 3 (Chapter 9 includes a companion care pathway for young people). Both Figure 3 and the following text are designed to be illustrative and offer some broad principles and direction, rather than to be prescriptive. They are sufficiently broad to take into account local context regarding the availability of services, individual need, and clinical discretion while providing a framework based on expert consensus.

Figure 3: Care pathway for people with psychosis and coexisting substance misuse – right care at the right intensity



5.2 PRINCIPLES UNDERPINNING CARE PATHWAYS

5.2.1 Access to mainstream services

The key message in the *Dual Diagnosis Good Practice Guide* (Department of Health, 2002) is that people with psychosis and coexisting substance misuse deserve access to good-quality, person-centred and coordinated care and that mainstream mental health services should take responsibility for addressing their needs, drawing on support from substance misuse services. The rationale for this, which the GDG endorsed, is that ‘substance misuse is usual rather than exceptional among people with severe mental health problems’. Locally agreed care pathways need to be explicit so that responsibilities are clear. In addition, mechanisms for resolving disagreements about team responsibility and specialist input need to be in place, such as regular care pathway meetings with executive powers.

The quadrant model (Department of Health, 2002) offers a tool for titrating the likely intensity of care and service involvement required based on the assessed relative severity of mental illness and substance misuse. People who score high on both counts of need (for example, unstable schizophrenia with substance dependency) would therefore be candidates for coordinated specialist care where available, or care from the mental health team with input from substance misuse services where required. Similarly a person with alcohol dependence with moderate depressive symptoms would more likely be managed by substance misuse services and primary care services. The GDG decided however that it was not possible to simply plot service provision against the need identified by each quadrant because the provision of services varies locally and the evidence for integrated services compared with standard care is not robust (see Chapter 6).

5.2.2 Skills and competencies

Skills and competencies for working with people with psychosis and coexisting substance misuse need to be developed through training and supervision to match demand. Suitable frameworks exist for developing skills at core, generalist and specialist levels depending on the type of staff and their exposure to people with psychosis and coexisting substance misuse (Hughes, 2006). For example, staff working in psychiatric inpatient settings, early intervention in psychosis services and assertive outreach teams are likely to have high exposure. The competencies encompass values and attitudes, knowledge and skills, and practice development. In the review of service models reported in Chapter 6, one RCT (Craig and colleagues – see below) was identified during the search, but excluded from the review that examined the effectiveness of staff training; this is reviewed in more detail below.

Clinical evidence for substance misuse training

Craig and colleagues (Craig *et al.*, 2008; Hughes *et al.*, 2008; Johnson *et al.*, 2007) undertook a cluster-randomised trial involving brief (5-day) substance misuse training

of case managers working within CMHTs in south London (called the ‘COMO’ study). In addition to the training, the case managers received supervision from the trainer during the follow-up period. Forty case managers received training and 127 of their service users with coexisting psychosis and substance misuse were followed up over 18 months. Thirty-nine case managers did not receive the training and 135 of their service users were also followed-up.

There was no significant difference at follow-up in terms of inpatient bed days, admissions and substance use (Johnson *et al.*, 2007). Craig and colleagues (2008) reported that there were no significant differences in service costs, but symptoms as measured by the Brief Psychiatric Rating Scale (BPRS) and needs for care were significantly lower at follow-up in the group whose case managers were trained. Hughes and colleagues (2008) reported that the training course in psychosis and coexisting substance misuse interventions had a significant effect on secondary measures of staff knowledge and self-efficacy that was detectable at 18 months’ post-training. However improvements in attitudes towards working with people who used substances in mental health settings failed to reach statistical significance.

This study did not meet the eligibility criteria for the review of service delivery models in Chapter 6 but does provide some evidence for this review that a training programme for staff in substance misuse combined with supervision may have an impact on symptoms. The brief training course had only a modest impact on staff knowledge and skills in working with people who misuse substances.

Health economic evidence of substance misuse training

The study by Craig and colleagues (2008) included an economic evaluation, comparing the costs and outcomes of a programme for case managers receiving substance misuse training with a waitlist control condition. A societal perspective was used for the cost analysis. The CSRI was used to collect resource use data over the 18-month follow-up period, including inpatient days, healthcare professional visits (psychiatrist, social worker, GP, or drug or alcohol worker), medication and criminal justice (court, police, prison). An array of effectiveness measures were used in the study including psychiatric symptoms (BPRS), drug and alcohol consumption, quality of life (Manchester Short Assessment) and social functioning. Mean total 18-month costs were £18,672 in the intervention group and £17,639 in the control group, resulting in a difference of £1,033 (95% CI, –£5,568 to £6,734). The authors did not attempt to synthesise incremental costs and outcomes, therefore the economic evaluation took the form of a simple cost analysis. Although the results of the analysis are applicable to the UK context, it is difficult to interpret whether the training programme was cost effective, given the variety of outcome measures used and the variability across the effectiveness measures of the training programme compared with the control group.

5.2.3 Choice

While at times people may struggle to make informed choices about their care and treatment options, it is good practice to promote shared decision-making using the

assumption of competency unless assessed otherwise. Even where capacity may be limited, the active involvement of families, carers or significant others can reinforce messages from services about personal responsibility and consideration of the impact the individual's choices have upon themselves and others. Motivation and stage of readiness for change concerning substance misuse behaviour are key points determining routes on the care pathway. Sustained change comes about from engaging in a constructive alliance with the individual where they are supported in working through the stages of change without losing their sense of capability and self-direction towards shared goals.

5.3 PRIMARY CARE

5.3.1 Identification and assessment

For this care pathway, 'primary care' refers to general practice, accident and emergency departments and psychological therapy services in primary care. Services are generalist, office or department based, and offer limited intensity and frequency of contact. GPs are commonly the first healthcare professionals that worried individuals or families, carers or significant others will choose to consult, and they often have a long-term relationship with and perspective on people and families on their list. Frequent consultations with people presenting with apparently minor ailments may signal underlying issues they are reluctant to disclose and the GP's task is to elicit these hidden concerns. General practice and other primary care services play a key role in early identification and appropriate referral, with full assessment of psychosis and harmful substance misuse taking place in secondary care mental health or addictions services.

Initial assessment in primary care

Ziedonis and Brady (1997) suggested that primary care professionals should always maintain a high index of suspicion for either substance misuse in people with psychosis, or mental illness in people who misuse substances. These authors go on to suggest that when psychosis or substance misuse is detected, initial assessment for the other disorder should always take place and the findings included in referrals for secondary assessment. Alertness to and assessment for signs of current intoxication is particularly pertinent in presentations to accident and emergency departments.

It is important for primary care practitioners to suspect and exclude physical causes for presenting symptoms, including acute intoxication, withdrawal, and side effects from medications.

Primary care also plays a role in screening for physical comorbidities, which have a high rate of incidence in individuals with substance misuse and psychosis, including liver damage, blood borne viruses, cognitive changes, and nutritional deficiencies, particularly where dependent drinking and injecting drug use is suspected.

Further assessment in primary care

Primary care practitioners may see individuals over a period of time and may hear the concerns of families, carers or significant others. They are therefore in an ideal position to detect the insidious decline in functioning that may be the premonitory signs of a psychotic illness. Substance misuse may present with very similar symptoms, and it is the GP's task to establish the duration and extent of substance misuse in relation to the onset of symptoms. For example, a service user may describe increasing consumption of alcohol to the point where it takes priority over other activities and results in a shortage of money, self-neglect and social withdrawal. They may clearly be distinguished from an individual who describes hearing voices and withdraws from social contact due to paranoid beliefs about others, but has a few drinks in order to sleep.

It will usually be helpful to make an assessment of the person's social support networks of family, friends, and co-workers and the degree to which these networks are predicated around substance use activities. Families, carers or significant others may also need an assessment of their needs.

Where significant substance use is detected in primary care, the practitioner will usually need to assess the extent to which this substance use is problematic to the individual and those with whom they come into contact, including children, and whether there is physical or psychological dependency on the substance.

5.3.2 Management

GPs or other primary care practitioners will normally refer a person with a first presentation of suspected psychosis for secondary assessment and not attempt to treat symptoms except to manage crises until a secondary care appointment can be obtained.

While people with a diagnosis of psychosis and substance misuse will normally be managed in secondary care, they remain service users of primary care and GPs may play a key role as a source of background information and may be the first to be aware of changes in people's physical and mental health as well as their social situation. Therefore, close liaison with the secondary care team will be necessary, and efforts should normally be made to include primary care practitioners in CPA reviews.

People with psychosis are known to have poorer physical health than the average service user and thus will benefit from annual health checks, including monitoring of weight, blood pressure, cardiovascular risk (if indicated) and respiratory symptoms, and, if they smoke, a smoking cessation intervention. Regular blood test monitoring is indicated for some medications, such as lithium. Individuals taking psychotropic medication will need to be counselled regarding contraception, and may need information on the safety of psychotropic drugs during pregnancy.

The Quality and Outcomes Framework (QOF) (British Medical Association & NHS Employers, 2009)⁷ for schizophrenia, bipolar disorder and other psychosis asks practices to keep a register of these service users and to record how many of them have had

⁷Further information about QOFs can be found at: <http://www.qof.ic.nhs.uk/>

a review within the previous 15 months. This should indicate that the service user has been offered routine health promotion and prevention advice appropriate to their age, gender and health status. In addition, there are further indicators for the percentage of service users on lithium who have had their renal and thyroid function measured in the past 15 months and a therapeutic lithium level recorded in the past 6 months.

Primary care practitioners may also need to provide information and support to families, carers or significant others, and monitor and assess the welfare of any children involved.

5.3.3 Discharge back to primary care

People with psychosis and coexisting substance misuse may be discharged back to primary care when their secondary care team is satisfied that their psychotic illness is stable and their substance use has stopped or is stable at a level that is unlikely to affect their mental health. Indicators of relapse, and contingency plans in the event of a crisis, need to be agreed before discharge.

The GP may need to see people with psychosis and coexisting substance misuse at least for annual review and more often if indicated. They may need to ask questions to elicit symptoms of relapse of psychosis as well as gain an accurate picture of the type and quantity of substances the individual is using and the stability of their lifestyle. Prescribing records may give an indication of people's adherence to their prescribed medication, but in addition they should normally be asked directly about adherence and any side effects or other problems they may be experiencing. Changes to medication would not normally be made by primary care practitioners, but GPs may liaise with secondary care staff for advice about any changes deemed necessary and if indicated the service user may be seen for a secondary care review.

5.4 SECONDARY CARE (GENERAL MENTAL HEALTH SERVICES)

5.4.1 Assessment

The NICE *Schizophrenia* (NCCMH, 2010, Section 2.4), *Bipolar Disorder* (NCCMH, 2006, Section 4.4.4) and *Drug Misuse* (NCCMH, 2008a, Section 3.7; 2008b, Section 6.2) guidelines outline the key points of good practice for comprehensive assessment and the use of assessment questionnaires and tools. Such tools have not been validated in populations with psychosis and coexisting substance misuse, but by consensus, the GDG considered them suitable. (Preliminary discussion of assessment and diagnostic criteria can be found in Chapter 2.)

Assessment of substance use will normally be an integral component of mental health assessments. Some substances can trigger psychotic episodes (in use and/or withdrawal) and some can trigger relapse in pre-existing psychotic disorders. Evidence suggests that substance use is often inadequately assessed and therefore under-detected (Barnaby *et al.*, 2003; Noordsy *et al.*, 2003), resulting in potential

misdiagnosis and inappropriate treatment (Carey & Correia, 1998). Even low levels of substance use by people with psychosis can worsen symptoms.

Expert advice and assessment from substance misuse services will normally need to be sought where there is complexity and high risk, for example injecting opiate use and dependency, or substances less commonly encountered in general mental health services. Referral thresholds for advice and subsequent interventions from substance misuse services are described in Section 5.5.1.

5.4.2 Engagement and sources of information

Regardless of the circumstances at first presentation, engaging the person and working towards establishing a collaborative, respectful, trusting relationship is essential. This may require considerable sensitivity, flexibility and persistence. While the healthcare professional and the service user may have differing views on whether the psychosis or the substance misuse is the ‘main problem’, working with the person on what they see as the priority can provide a basis for working more collaboratively in the short term, and building on the relationship over the longer term.

A similar collaborative relationship is also required with the service user’s family, carers or significant others, if they are involved in their care. They can provide helpful information to contribute to the assessment process and may subsequently provide support with treatment.

Given the multiple needs of people with psychosis and substance misuse, other service providers may be involved or have knowledge of the person (for example, their GP, accident and emergency staff, housing providers, probation staff, or drug and alcohol services). As well as contributing to the assessment, maintaining constructive relationships and sharing information with these staff will be essential in developing effective care plans.

Confidentiality may be a particular concern for this population and their families, carers or significant others, for example knowing whether information about use of substances will negatively impact on treatment received, knowledge about illegal activity will be passed on to the police, information about their diagnosis will be passed on to employers, or concerns about parenting abilities will be communicated to families’ and children’s services. Wherever possible the organisation’s confidentiality policy should be explained at the outset. It is important to highlight that the care plan is likely to involve working with other agencies and as such information sharing is an integral part of providing appropriate care. Consent to obtain and share such information should be sought at an early stage. Under some circumstances (for example, where there is a risk to children or vulnerable adults) it may be necessary to break confidentiality and pass on information to relevant agencies. Where possible, service users should be made aware of the action being taken.

Reliable systems and protocols for ensuring the safety of staff in both outpatient and community settings will normally include avoiding assessing or treating people who are severely intoxicated. A non-confrontational approach will need to be taken to rearrange the assessment on a future occasion.

During assessment, most information is likely to be obtained by asking the person themselves unless they are floridly psychotic. Supplementing self-report with observation is important in the assessment, especially when people are reluctant to reveal their experience or details of their substance use or financial status.

The GDG was concerned about the routine use of biological testing because of its potential to work against a collaborative approach. In typical healthcare settings a case-by-case approach set against a clearly explained rationale for care and treatment is preferred. The NICE *Drug Misuse: Psychosocial Interventions* guideline provides a thorough review of biological testing, and also clinician-rated and self-report identification questionnaires and their potential for identifying drug misuse in high-risk populations (NCCMH, 2008b, Section 6.2.1). The guideline states that while ‘urine testing for the absence or presence of drugs is an important part of assessment and monitoring’, ‘routine screening for drug misuse is largely restricted in the UK to criminal justice settings, including police custody and prisons . . . it is sparsely applied in health and social care settings’ (NCCMH, 2008b).

5.4.3 Components of assessment

Table 9 provides an overview of the assessment components for people with suspected psychosis and substance misuse (left-hand column) and key factors to consider when obtaining such information (right-hand column). This table is consistent with related NICE guidance detailed in Section 5.4.1.

Having drawn together information from the assessment, some consideration of the relationship between mental health and substance misuse will be possible. Knowing when the person last used particular substances may be important in determining whether their current presentation could be related to substance use alone, or whether it is a contributory factor to an underlying psychotic presentation. However, it can be difficult to distinguish symptoms and effects of mental illness from the effects of misused substances.

There has been a tendency to try to identify the primary and secondary diagnosis, however, even with careful history taking it can sometimes not be possible to disentangle symptoms, and it is recommended that both are considered primary and treated at the same time.

It is important to obtain a picture of the person’s reasons for using substances and their understanding of the relationship between their substance use and mental health. For example, some people will believe that drinking alcohol lifts their low mood, while others will have insight into the fact that crack cocaine makes them more paranoid.

When a diagnosis has been reached it will normally be fully explained and discussed with the person and their family, carers or significant others subject to consent. Information about substance use, prescribed medications, and the interaction between medication and illicit or non-prescribed substances should also be discussed and written information offered.

Table 9: Assessment – Components and considerations

Assessment component	Key considerations
Current/recent substance use	<ul style="list-style-type: none"> • Which substances is the person using? (polysubstance use is common) • How much they are using? (this may be expressed as weight or cost) • How often they are using? • Route(s) of administration (for example, oral, smoking, injecting) • When last used? (may help to explain current presentation) • How long they have been using at the current level? • Daily use – detail over past week • Patterns of use (for example, stable/chaotic, one substance to counteract effect of other, use following receipt of benefits followed by period of abstinence) • Evidence of physical dependence – past/recent experience of withdrawal symptoms in absence of substance use may indicate need for pharmacological interventions (for example, for alcohol, opioids, benzodiazepines) • Whether meets diagnostic criteria DSM-IV/ICD-10 • Severity of dependence (use questionnaire) • Service users’ understanding of effects of use on physical and mental health
Substance use history	<ul style="list-style-type: none"> • Identify substances that have been used • Build chronology: age of first use – ‘first tried’, weekend, weekly, daily – pattern of use over time, whether dependent • Reasons for use • Impact on physical health, mental health, relationships, education/ employment, involvement with criminal justice system • Periods of abstinence – length, impact on mental health and other areas of life • Treatment episodes – dates, services interventions, what helped, triggers to relapse
Risks	<ul style="list-style-type: none"> • Consider risks associated with mental illness, substance use and their inter-relationship • Consider risks to person themselves, family, carers, significant others, staff (on organisational premises and home visits) and wider community, for example,

Continued

Table 9: (Continued)

Assessment component	Key considerations
	<p>violence, self-harm, suicide, self-neglect, vulnerability to abuse and exploitation, accidental injury, withdrawal symptoms (such as seizures, delirium tremens), injecting practices, blood borne viruses, accidental overdose, interactions between prescribed medication and illicit drugs and/or alcohol, unstable accommodation/homelessness, physical health problems, criminal activity</p> <ul style="list-style-type: none"> • Risks to children • Risks to service users (are there vulnerable adult issues?)
Social circumstances	<ul style="list-style-type: none"> • Accommodation – situation and any identified needs • Family relationships – supportive or otherwise • Caring responsibilities: children, others – any safeguarding children or vulnerable adult issues? • Domestic violence • Friendships – supportive or otherwise, including other people using substances • Education/employment (past and current) – vocational assessment required?
Finances	<ul style="list-style-type: none"> • Benefits/other income • Cost of current use • How substance use is being funded • Debts, for example, rent arrears, utility arrears, to dealers
Legal/forensic issues	<ul style="list-style-type: none"> • Involvement in criminal activity to fund use (for example, shoplifting, burglary), as consequence of use (for example, driving while under the influence of alcohol or drugs, violence) • Previous convictions, custodial sentences, any charges pending – were mental illness and/or substance use contributory factors?
Medication	<ul style="list-style-type: none"> • Current and past – for psychiatric, physical and substance use issues: prescribed, over-the-counter and homeopathic remedies; check whether prescribed medication is taken as indicated (consider non-adherence and/or misuse)
Personal and family history	<ul style="list-style-type: none"> • Family background • Early development – developmental milestones, schooling • Psychosocial history – physical or sexual abuse? • Family history of mental illness/psychological problems; substance misuse; physical health problems

Continued

Table 9: (Continued)

Assessment component	Key considerations
Physical health/medical history	<ul style="list-style-type: none"> • Physical illness(es) – past and current: consider those associated with mental illness and those associated with substance use for example, diabetes, cardiovascular disease, respiratory problems, blood borne viruses (hepatitis, HIV), liver disease, seizures, accidental injury, abscesses, bacterial endocarditis, deep vein thrombosis, tuberculosis, sexually transmitted diseases • If intravenous user, inspect injection sites • Hospital admissions, treatment and outcomes
Psychiatric/mental health history	<ul style="list-style-type: none"> • Diagnoses, treatment, hospital admissions • Review of previous acute episodes, relapse signatures (taking account of substance use issues) • Symptoms: during acute episodes, between episodes
Spiritual/cultural needs	<ul style="list-style-type: none"> • Beliefs, practices
Investigations	<ul style="list-style-type: none"> • Biological – urine or saliva testing can be helpful to corroborate self-reports • Haematological – full blood count, liver function test, hepatitis B, C, HIV • Electrocardiogram – important for people prescribed methadone who are also prescribed other medication that can cause QT-elongation
Reasons for and perceptions of use; motivation for change	<ul style="list-style-type: none"> • What are the reasons for use? (for example, to block out auditory hallucinations, alleviate boredom, conform with peers) • Does the person view their use as problematic? • Do they want to make changes to current use (manner of use, stopping use)?
Strengths and supports	<ul style="list-style-type: none"> • What can the service user do well, what support do they have outside statutory services?
Involvement of other agencies	<ul style="list-style-type: none"> • Identify all other agencies involved with the service user • Obtain collateral information • With consent of service user include them in future care/treatment planning and review
Needs of families, carers or significant others	<ul style="list-style-type: none"> • Consider physical, mental health and social needs • Consider impact of mental illness/substance use on relationships, welfare of children, siblings, vulnerable adults • Assess knowledge/understanding regarding mental illness, substance use, their interrelationship, risks

5.4.4 Care planning

Care planning is normally a collaborative process between the healthcare professional and the service user, together with, where appropriate, their family, carers or significant others, and any other agencies.

Understanding the person's perceptions of their substance use and motivation for change is essential for planning appropriate care and treatment. The transtheoretical model of change provides a helpful framework for informing decisions (Prochaska & Di Clemente, 1986; Prochaska *et al.*, 1992). It is important to note that the person's motivation to make changes may be different for different substances. It should be borne in mind, however, that although substance use is likely to have detrimental effects on health, and professionals will usually think the person should work towards abstinence, many people will be unwilling or unable to do so.

Working collaboratively and accepting the person's relative autonomy is essential in maintaining a therapeutic relationship. Being non-judgemental, avoiding confrontation and maintaining optimism are likely to be associated with better long-term outcomes (Miller & Rollnick, 2002; Raistrick *et al.*, 2006).

5.4.5 Safeguarding

Although it is essential to work collaboratively with people with psychosis and substance misuse, it is also important to recognise that those dependent upon them may also need help, and sometimes protection. When someone with psychosis and coexisting substance misuse looks after or has significant involvement with dependent children, the needs and safeguarding of the child must be secured according to the Common Assessment Framework (see Chapter 9). The care co-ordinator or key worker may need to ensure that children's services are alerted to the need for assessment and possible help for the child. Similarly, when dependent or vulnerable adults are involved, the vulnerable adult may need to be assessed (including risks) at home and any necessary safeguarding procedures initiated.

5.5 SECONDARY MENTAL HEALTHCARE REFERRAL TO SPECIALIST SUBSTANCE MISUSE SERVICES

5.5.1 Referral threshold

Specialist substance misuse services, whether hospital (inpatient units) or community based (community drug and alcohol teams), are dedicated to providing assessment and treatment for problematic alcohol and drug use, for example, heroin and cocaine. There is no reason why people with psychosis and coexisting substance misuse should be excluded from access to substance misuse services because of a diagnosis of psychosis.

Referral from mainstream mental health services for specialist advice and joint working with specialist substance misuse services will occur where people with psychosis are known to be severely dependent on alcohol, dependent on both alcohol and benzodiazepines or dependent on opioids, although there will be variation between services.

As can be seen in Figure 3 (see page 103), tertiary referral allows access to more specialist skills, knowledge and resources, including opiate prescribing and inpatient detoxification, residential rehabilitation, and support or treatment groups.

Because motivation is an important element of entry criteria to specialist substance misuse services, secondary care professionals may need to help individuals toward readiness for change.

5.5.2 Assessment and recognition

The possible coexistence of psychosis among people who come to specialist substance misuse services is often underestimated at least in part because of the complex clinical picture when substance misuse is severe, involves the use of multiple substances and in people with personality disorder or other mental health problems. This is further complicated by that fact that substances may well be used to combat particular psychiatric symptoms or experiences, such as anxiety, depression, intrusive thoughts, difficulties sleeping or more severe and troublesome experiences such as hallucinations. Moreover, significant life events, such as bereavement, divorce and trauma, are frequently associated with the emergence of mental health problems, including relapse for people with psychosis, and are commonly also triggers for the beginning of, or a significant increase in, substance misuse. Furthermore, substance misuse may alter the presentation of symptoms – improving some and worsening others; this is especially so when a person is either intoxicated or experiencing withdrawal. For these, and many other reasons, assessment of mental state for people with substance misuse problems can prove to be difficult and recognition of a coexisting psychosis delayed.

It is important that the assessment of people with a substance misuse problem is comprehensive – it may need to take place over several meetings and over an extended period. It is also important to obtain additional information and history from family, carers or significant others, where this is permitted and feasible. Ideally assessment will cover not only all the information needed for a substance misuse assessment and a mental health assessment, but also aim to examine how the person's behaviour, mental state and experiences co-vary (or not) with changing patterns of substance misuse, how patterns of substance misuse may co-vary (or not) with changes in mental state, and how both substance misuse and mental state change in light of different life events. Understanding changes in mental state when someone misusing substances becomes either relatively or completely abstinent can be crucial in making the right diagnostic formulation, not least because communicative and cognitive functions can be greatly improved at these times. In any event, for some people where the index of suspicion for the coexistence of a psychosis with known substance misuse is high, use of the Mental Health Act (1983; amended 1995 and 2007, HMSO, 2007) (for assessment) can be necessary and decisive.

5.5.3 Interfaces and coordination

Substance misuse services will normally need to work closely with secondary mental health services to ensure that there are agreed local protocols derived from these guidelines that set out responsibilities and processes for assessment, referral, treatment and shared care across the whole care pathway for people with psychosis and coexisting substance misuse. This includes substance misuse professionals being available for care programme meetings for individuals receiving shared care with a secondary care mental health team. Secondary care community mental health services will usually need to continue to monitor and treat psychosis, and provide care coordination.

Referral and signposting options will always need to be discussed with and agreed by the service user. There may be a choice of agencies and it is important that the service user is informed and involved in a shared decision. A range of tier 2 and 3 drug and alcohol services will need to be considered in this respect (see Section 5.5.5), in line with the principle of the right care at the right intensity outlined in Section 5.2.1. Specialist liver clinics, probation services and homeless or housing agencies are also interfaces to be managed and fostered. There needs to be clarity around the role of each service, clearly reflected in the care plan, with regular communication and appropriate sharing of information between agencies.

Advocates working in voluntary organisations and other third sector groups will need to be involved in care planning and care programming where this is agreed with the service user.

5.5.4 Responsibility for prescribing

Where a treatment plan is agreed involving secondary care and specialist substance misuse services the responsibility for any opiate substitute prescribing will need to be clearly agreed between the consultants for the two teams, incorporated into the service user's written care plan, and implemented according to the prescribing guidelines. The service user will need to be seen regularly.

Advice and guidelines on prescribing for service users with substance misuse problems, for example, home assisted alcohol withdrawal programmes, should be available from substance misuse services. Mental healthcare professionals working with people with psychosis and coexisting substance misuse will need to consider having supervision, advice, consultation and/or training from professionals with expertise in substance misuse to aid in developing and implementing treatment plans for people with substance misuse within secondary care mental health services.

5.5.5 Differences in care frameworks

People with psychosis and severe coexisting substance misuse will need to remain under the care of secondary care, managed within the Care Programme Approach (CPA), a term that describes the approach used in secondary adult mental healthcare

to assess, plan, review and co-ordinate the range of treatment, care and support needs for people in contact with secondary mental health services who have complex characteristics.

Specialist drug services operate under *Models of Care for Treatment of Adult Drug Misusers: Update 2006* (National Treatment Agency for Substance Misuse, 2006), whereas specialist alcohol services function according to *Models of Care for Alcohol Misusers (MoCAM)* (Department of Health & National Treatment Agency for Substance Misuse, 2006). Both models of care utilise a four-tier framework and these refer to the level of the interventions provided and not the provider organisations:

- Tier 1 interventions include provision of drug- or alcohol-related information and advice, screening and referral. For alcohol misuse, tier 1 can also involve simple brief interventions.
- Tier 2 interventions for drug misuse include provision of drug-related information and advice, triage assessment, referral to structured drug treatment, brief psychosocial interventions, signposting to support groups such as Narcotics Anonymous (NA), harm reduction interventions (including needle exchange) and aftercare. For alcohol misuse, interventions include provision of open access facilities and outreach that provide: alcohol-specific advice, information and support; signposting to mutual aid groups such as AA; extended brief interventions to help reduce alcohol-related harm; and assessment and referral of people with more serious alcohol-related problems for care-planned treatment.
- Tier 3 interventions include provision of community-based specialised drug and/or alcohol misuse assessment and coordinated care-planned treatment and drug specialist liaison.
- Tier 4 interventions include provision of residential specialised drug and/or alcohol treatment, which is care planned and coordinated to ensure continuity of care and aftercare.

5.6 INPATIENT AND RESIDENTIAL SERVICES

5.6.1 Adult mental health services

Substance misuse is a common and major problem within adult inpatient mental health settings (Barnaby *et al.*, 2003; Bonsack *et al.*, 2006; Phillips & Johnson, 2003; Sinclair *et al.*, 2008), with alcohol, cannabis and cocaine being the most commonly misused substances in inner urban settings. Service users with psychosis who misuse substances spend more time as inpatients and are admitted more frequently (Isaac *et al.*, 2005; Menezes *et al.*, 1996). Very high rates of cannabis use were found in a study of service users admitted to an inner urban psychiatric intensive care unit and those who continued to misuse cannabis (despite the best attempts of staff to restrict access to the drug) spent longer in hospital (Isaac *et al.*, 2005).

Violence is also a major cause of concern on acute inpatient wards, and substance misuse has been identified by staff as an important contributor to such violence (Healthcare Commission, 2007). This is consistent with the epidemiological finding

that most of the serious offending behaviour in people with schizophrenia that is over and above what is seen in the general population occurs in the context of a comorbid substance-use disorder (Fazel *et al.*, 2009b). In the substance misusing population as a whole, cocaine and alcohol are particularly associated with violence (Macdonald *et al.*, 2008).

People with psychosis are usually admitted to a general adult mental health inpatient ward because of deterioration in their mental state and/or evidence of increased risk either to themselves or others. Substance misuse may be a coincidental factor or play a causal role in the circumstances surrounding admission. In either case, assessment and management of the substance misuse should follow the general principles outlined above in other settings.

The Department of Health has issued specific guidance about the management of people with mental illness and coexisting substance misuse being cared for in day hospital and inpatient settings (Department of Health, 2006). Particular difficulties that potentially face healthcare professionals in inpatient settings include: the place and role of routine and occasional testing of biological samples (urine, blood, hair and, for alcohol, breath) as part of an agreed treatment plan; the requirement for policies on searching; and the practical management of episodes of substance misuse occurring in inpatients. This requires the development of local policies on the management of substances found on the premises, consideration of exclusion of visitors believed to be bringing in illicit substances and good liaison with the police. For detained service users, management of ongoing substance misuse may involve a review of their leave status and the appropriate level of security for safe and effective care.

Admission of service users with psychosis and coexisting opiate misuse to an adult psychiatric inpatient unit is uncommon; but when it happens it poses particular challenges. In this context it is imperative that an appropriate assessment by an expert in substance misuse and/or advice to the adult psychiatric team is available before developing a treatment plan for the opiate misuse. The treatment plan will often include prescription of substitute opiates (methadone or buprenorphine). Healthcare professionals working within adult mental health services generally, and in inpatient settings in particular, need to be familiar with current guidelines on the management of substance misuse provided by the National Treatment Agency (Department of Health, 2007).

5.6.2 Secure mental health services

Although substance misuse is a considerable problem within general adult mental health services, both in the community and especially in inpatient units, a significant past history of substance misuse is even more common among service users in secure care (Department of Health, 2006; D'Silva & Ferriter, 2003; Isherwood & Brooke, 2001). Inpatients in medium secure units report high levels of previous substance misuse, which has commonly continued after admission (Wyte *et al.*, 2004). Historically, dedicated substance misuse programmes were lacking within secure services despite the robust epidemiological evidence that links substance misuse with offending behaviour in people with a psychotic illness (Scott *et al.*, 2004). Secure

services now commonly provide structured substance misuse interventions, but these are only in the early stages of evaluation (Miles *et al.*, 2007).

5.6.3 Substance misuse inpatient services

There is evidence that a diagnosis of psychosis is much more prevalent in people in contact with community substance misuse services than in the general population (Weaver *et al.*, 2003). There appears to be no data on the prevalence of psychosis that is not a consequence of substance misuse among inpatients in substance misuse services who are admitted for detoxification. People who become or are acutely psychotic while being treated in a substance misuse inpatient setting are often appropriately referred for treatment in general adult psychiatric inpatient services (an exception here is delirium tremens in the context of alcohol withdrawal, which is a medical emergency and would not occur in a competent inpatient setting providing assisted alcohol withdrawal). There is no evidence that a diagnosis of a psychotic illness is a contraindication for admission for treatment of coexisting substance misuse where the psychotic illness has been effectively treated.

5.6.4 Residential and supported housing services

Residential and supported housing services for people with a diagnosis of a psychotic illness inevitably work with people who misuse substances. The general principles of assessment, treatment and care set out above are relevant to staff working in these settings, which will commonly be delivered through agencies other than the housing provider. There is a lack of evidence about how residential and supported housing services should work most effectively with people with psychosis and coexisting substance misuse although some practice guidance has been developed (Turning Point, 2007).

Residential and supported housing services for people with substance misuse have in the past commonly been reluctant to take in people with a psychotic illness, despite the fact that psychosis is common among people who misuse substances (Weaver *et al.*, 2003). The National Treatment Agency for Substance Misuse has identified a need for residential programmes that take account of the specific needs of 'drug misusers with severe and enduring mental health problems' (National Treatment Agency for Substance Misuse, 2006). There is no evidence that a diagnosis of a psychotic illness is a contraindication for residential rehabilitative services for people with coexisting substance misuse where the psychotic illness has been effectively treated.

5.6.5 Prison mental health services and the criminal justice system

The Bradley Report (Department of Health, 2009a), and the subsequent government response and delivery plan (Department of Health, 2009b), focus on people with mental health problems and learning disabilities who become involved with the criminal

justice system and makes wide-ranging recommendations. The report recognises the prevalence of psychosis with coexisting substance misuse in this population and makes a specific recommendation to develop improved services in prisons for these people. Current problems within the prison system echo those outside:

Mental health services and substance misuse services in prisons do not currently work well together; national policy is developed separately for mental health and for substance misuse, and this is reflected on the ground, where dual diagnosis is used as a reason for exclusion from services rather than supporting access.⁸

In terms of the care pathway the report calls for liaison and court diversion services to reduce the need for custodial interventions and allow access to appropriate treatment at an earlier stage in people's offending behaviour. The Bradley Report also calls for better links with community mental health services when people with psychosis and coexisting substance misuse are leaving prison.

5.7 FROM EVIDENCE TO RECOMMENDATIONS

There is only a limited amount of empirical evidence about the prevalence, pattern and epidemiology of different combinations of psychosis and coexisting substance misuse. Such information is necessary to target resources at groups most at risk of very poor outcomes, to determine whether early intervention might be more effective than interventions for long-standing comorbidity and to investigate whether different interventions are required for separate diagnostic groups and types of substance. In addition, little research is available to determine how healthcare professionals should work together to provide the most appropriate care and treatment for people with psychosis and coexisting substance misuse. Where evidence exists, it is often collected in different countries, such as the US, where the interventions, training and competence of professionals, the configuration of the healthcare system, and in particular, what counts as 'standard care', may be very different. The GDG, nevertheless, extrapolated where possible and practical. The following recommendations are, therefore, developed through an iterative process, synthesising the collective experience of the GDG to develop a framework of good practice recommendations that it is hoped will support healthcare professionals develop services in mental health and, in particular substance misuse, services so that people with psychosis and coexisting substance misuse can receive the care and treatment most likely to bring benefit and improve their lives and those of their families, carers or significant others.

The recommendations for good practice cover five main areas: (1) working with adults and young people with psychosis and coexisting substance misuse, (2) recognition, (3) primary care, (4) secondary care mental health services, and (5) substance misuse services.

⁸This quotation is from p. 16 of the executive summary of the Bradley Report: http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_098699.pdf.

When working with people with psychosis and coexisting substance misuse, the GDG thought that a number of safeguarding issues were important and needed recommendations. (There is further discussion of safeguarding in Chapter 9.) In addition, the GDG felt that voluntary sector organisations had an important role to play in lives of people with psychosis and coexisting substance misuse, therefore, recommendations were made about collaborative working.

With regard to recognition, given that substance misuse is usual rather than exceptional among people with psychosis, the GDG felt it was vital that healthcare professionals in all settings ask service users about substance use, and where appropriate, an assessment of dependency should be conducted using the existing NICE *Drug Misuse* (NICE, 2007a, 2007b) and *Alcohol-use Disorders* (NICE, 2011) guidelines. Likewise, in people with known or suspected substance misuse, there should be an assessment for possible psychosis.

In primary care, the GDG felt that there was a clear rationale (supported by Department of Health guidance) to recommend that people with psychosis or suspected psychosis, including those who are suspected of having coexisting substance misuse, should be referred to either secondary care mental health services or child and adolescent mental health services (CAMHS) for assessment and further management. Likewise, people with substance misuse or suspected substance misuse who are suspected of having coexisting psychosis, should be referred to either secondary care mental health services or CAMHS.

In secondary care mental health services, the GDG felt there was a need to recommend that healthcare professionals should ensure they are competent in the recognition, treatment and care of people with psychosis and coexisting substance misuse. In addition, mental health professionals should consider having supervision, advice, consultation and/or training from specialists in substance misuse services. The GDG considered that this would aid in the development and implementation of treatment plans for substance misuse within adult community mental health services and CAMHS. Also, because adults and young people with psychosis and coexisting substance misuse are often excluded from age-appropriate services for no justifiable reason, the GDG felt there was a strong rationale for recommending against exclusion. Finally, the GDG made a number of recommendations covering the process of assessment and the use of biological or physical testing. Regarding the latter, the GDG felt there was a place for testing when used as part of a care plan if the service user agrees. After much discussion, the GDG decided that biological or physical testing should not be used in routine screening for substance misuse, and should only be considered in inpatient settings as part of assessment and treatment planning; consent needs to be sought, and where mental capacity is lacking, healthcare professionals should refer to the Mental Capacity Act (2005).

In substance misuse services, the GDG saw a clear need to recommend that healthcare professionals should be competent to recognise the signs and symptoms of psychosis, and undertake a mental health needs and risk assessment sufficient to know how and when to refer to secondary care mental health services. The GDG also felt that recommendations for joint working needed to be made as this was not, in their experience, done well.

Although there is a paucity of evidence regarding all aspects of assessment and care pathways, the GDG felt that two research recommendations should be given priority.

First, as described above, the prevalence, risk and protective factors, and course of illness for different combinations of psychosis and coexisting substance misuse needs to be examined. Second, there are cogent reasons given the high prevalence of substance misuse among service users with a psychosis that staff working within mental health services develop, as part of their basic training and continuing professional development, skills and knowledge in substance misuse assessment and treatment interventions. More research is required on how this training is provided and the impact of ongoing supervision when working with people with psychosis and coexisting substance misuse. The GDG considered that the responsibility for monitoring the physical health of people with psychosis and coexisting substance misuse should remain in primary care as recommended in the NICE *Schizophrenia* guideline (NICE, 2009a).

5.8 RECOMMENDATIONS

5.8.1 Clinical practice recommendations

Working with adults and young people with psychosis and coexisting substance misuse **Safeguarding issues**

- 5.8.1.1 If people with psychosis and coexisting substance misuse are parents or carers of children or young people, ensure that the child's or young person's needs are assessed according to local safeguarding procedures.⁹
- 5.8.1.2 If children or young people being cared for by people with psychosis and coexisting substance misuse are referred to CAMHS under local safeguarding procedures:
- use a multi-agency approach, including social care and education, to ensure that various perspectives on the child's life are considered
 - consider using the Common Assessment Framework¹⁰; advice on this can be sought from the local named lead for safeguarding.
- 5.8.1.3 If serious concerns are identified, health or social care professionals working with the child or young person (see recommendation 5.8.1.2) should develop a child protection plan.
- 5.8.1.4 When working with people with psychosis and coexisting substance misuse who are responsible for vulnerable adults, ensure that the home situation is risk assessed and that safeguarding procedures are in place for the vulnerable adult. Advice on safeguarding vulnerable adults can be sought from the local named lead for safeguarding.
- 5.8.1.5 Consider adults with psychosis and coexisting substance misuse for assessment according to local safeguarding procedures for vulnerable adults if there are concerns regarding exploitation or self-care, or if they have been in contact with the criminal justice system.

⁹www.safeguardingchildren.org.uk

¹⁰www.cwdcouncil.org.uk/caf

Working with the voluntary sector

- 5.8.1.6 Healthcare professionals in primary care and secondary care mental health services, and in specialist substance misuse services, should work collaboratively with voluntary sector organisations that provide help and support for adults and young people with psychosis and coexisting substance misuse. Ensure that advocates from such organisations are included in the care planning and care programming process wherever this is possible and agreed by the person with psychosis and coexisting substance misuse.
- 5.8.1.7 Healthcare professionals in primary care and secondary care mental health services, and in specialist substance misuse services, should work collaboratively with voluntary sector organisations providing services for adults and young people with psychosis and coexisting substance misuse to develop agreed protocols for routine and crisis care.

Recognition of psychosis with coexisting substance misuse

- 5.8.1.8 Healthcare professionals in all settings, including primary care, secondary care mental health services, CAMHS and accident and emergency departments, and those in prisons and criminal justice mental health liaison schemes, should routinely ask adults and young people with known or suspected psychosis about their use of alcohol and/or prescribed and non-prescribed (including illicit) drugs. If the person has used substances ask them about all of the following:
- particular substance(s) used
 - quantity, frequency and pattern of use
 - route of administration
 - duration of current level of use.
- In addition, conduct an assessment of dependency (see ‘Drug misuse: opioid detoxification’ [NICE, 2007a] and ‘Alcohol-use disorders: diagnosis, assessment and management of harmful drinking and alcohol dependence’ [NICE, 2011]) and also seek corroborative evidence from families, carers or significant others, where this is possible and permission is given.
- 5.8.1.9 Healthcare professionals in all settings, including primary care, secondary care mental health services, CAMHS and accident and emergency departments, and those in prisons and criminal justice mental health liaison schemes, should routinely assess adults and young people with known or suspected substance misuse for possible psychosis. Seek corroborative evidence from families, carers or significant others, where this is possible and permission is given.

Primary care

Referral from primary care

- 5.8.1.10 Refer all adults and young people with psychosis or suspected psychosis, including those who are suspected of coexisting substance misuse, to either secondary care mental health services or CAMHS for assessment and further management.

Assessment and care pathways

- 5.8.1.11 Refer all adults and young people with substance misuse or suspected substance misuse who are suspected of having coexisting psychosis to secondary care mental health services or CAMHS for assessment and further management.

Physical healthcare

- 5.8.1.12 Monitor the physical health of adults and young people with psychosis and coexisting substance misuse, as described in the guideline on schizophrenia (NICE, 2009a). Pay particular attention to the impact of alcohol and drugs (prescribed and non-prescribed) on physical health. Monitoring should be conducted at least once a year or more frequently if the person has a significant physical illness or there is a risk of physical illness because of substance misuse.

Secondary care mental health services

Competence

- 5.8.1.13 Healthcare professionals working within secondary care mental health services should ensure they are competent in the recognition, treatment and care of adults and young people with psychosis and coexisting substance misuse.
- 5.8.1.14 Healthcare professionals working within secondary care mental health services with adults and young people with psychosis and coexisting substance misuse should consider having supervision, advice, consultation and/or training from specialists in substance misuse services. This is to aid in the development and implementation of treatment plans for substance misuse within CAMHS or adult community mental health services.

Pathways into care

- 5.8.1.15 Do not exclude adults and young people with psychosis and coexisting substance misuse from age-appropriate mental healthcare because of their substance misuse.
- 5.8.1.16 Do not exclude adults and young people with psychosis and coexisting substance misuse from age-appropriate substance misuse services because of a diagnosis of psychosis.

Assessment

- 5.8.1.17 Adults and young people with psychosis and coexisting substance misuse attending secondary care mental health services should be offered a comprehensive, multidisciplinary assessment, including assessment of **all** of the following:
- personal history
 - mental, physical and sexual health
 - social, family and economic situation
 - accommodation, including history of homelessness and stability of current living arrangements

- current and past substance misuse and its impact upon their life, health and response to treatment
- criminal justice history and current status
- personal strengths and weaknesses and readiness to change their substance use and other aspects of their lives.

The assessment may need to take place over several meetings to gain a full understanding of the person and the range of problems they experience, and to promote engagement.

5.8.1.18 When assessing adults and young people with psychosis and coexisting substance misuse, seek corroborative evidence from families, carers or significant others where this is possible and permission is given. Summarise the findings, share this with the person and record it in their care plan.

5.8.1.19 Review any changes in the person's use of substances. This should include changes in:

- the way the use of substances affects the person over time
- patterns of use
- mental and physical state
- circumstances and treatment.

Share the summary with the person and record it in their care plan.

5.8.1.20 When assessing adults and young people with psychosis and coexisting substance misuse, be aware that low levels of substance use that would not usually be considered harmful or problematic in people without psychosis, can have a significant impact on the mental health of people with psychosis.

5.8.1.21 Regularly assess and monitor risk of harm to self and/or others and develop and implement a risk management plan to be reviewed when the service users' circumstances or levels of risk change. Specifically consider additional risks associated with substance misuse, including:

- physical health risks (for example, withdrawal seizures, delirium tremens, blood-borne viruses, accidental overdose, and interactions with prescribed medication) **and**
- the impact that substance use may have on other risks such as self-harm, suicide, self-neglect, violence, abuse of or by others, exploitation, accidental injury and offending behaviour.

5.8.1.22 When developing a care plan for an adult or young person with psychosis and coexisting substance misuse, take account of the complex and individual relationships between substance misuse, psychotic symptoms, emotional state, behaviour and the person's social context.

Biological/physical testing

5.8.1.23 Biological or physical tests for substance use (such as blood and urine tests or hair analysis) may be useful in the assessment, treatment and management of substance misuse for adults and young people with psychosis. However, this should be agreed with the person first as part of their care plan. Do not use biological or physical tests in routine screening for substance misuse in adults and young people with psychosis.

Assessment and care pathways

- 5.8.1.24 Biological or physical tests for substance use should only be considered in inpatient services as part of the assessment and treatment planning for adults and young people with psychosis and coexisting substance misuse. Obtain consent for these tests and inform the person of the results as part of an agreed treatment plan. Where mental capacity is lacking, refer to the Mental Capacity Act (2005).

Substance misuse services

Competence

- 5.8.1.25 Healthcare professionals in substance misuse services should be competent to:
- recognise the signs and symptoms of psychosis
 - undertake a mental health needs and risk assessment sufficient to know how and when to refer to secondary care mental health services.

Assessment

- 5.8.1.26 Adults and young people with psychosis and coexisting substance misuse attending substance misuse services should be offered a comprehensive, multidisciplinary mental health assessment in addition to an assessment of their substance misuse.

Joint working

- 5.8.1.27 Healthcare professionals in substance misuse services should be present at Care Programme Approach meetings for adults and young people with psychosis and coexisting substance misuse within their service who are also receiving treatment and support in other health services.
- 5.8.1.28 Specialist substance misuse services should provide advice, consultation, and training for healthcare professionals in adult mental health services and CAMHS regarding the assessment and treatment of substance misuse, and of substance misuse with coexisting psychosis.
- 5.8.1.29 Specialist substance misuse services should work closely with secondary care mental health services to develop local protocols derived from this guideline for adults and young people with psychosis and coexisting substance misuse. The agreed local protocols should set out responsibilities and processes for assessment, referral, treatment and shared care across the whole care pathway.

5.8.2 Research recommendations

- 5.8.2.1 What are the prevalence, risk and protective factors, and course of illness for different combinations of psychosis and coexisting substance misuse (for example, schizophrenia and cannabis misuse or bipolar disorder and alcohol misuse)? (For further details see Appendix 12.)
- 5.8.2.2 What and how should training be provided to healthcare professionals working with people with psychosis and substance misuse?

6 SERVICE DELIVERY MODELS

6.1 INTRODUCTION

This chapter looks at models of service delivery for people with psychosis and coexisting substance misuse. These models are means by which therapeutic interventions and support are provided. Two broad questions are addressed in this chapter. First, is there evidence that providing therapeutic interventions and support relevant to both conditions in an integrated fashion (the same team addressing both issues) is superior to these interventions being provided separately? Second, is there evidence about the role of staffed accommodation and inpatient care in the management of coexisting substance misuse and psychosis?

In reviewing the evidence for the effectiveness of different service delivery models, the GDG decided to first focus on RCTs. Using this type of study design to evaluate service-level interventions raises problems relating to defining such interventions precisely; for example, the ‘intervention’ and ‘standard care’ may vary between studies, between countries and over time; also experimental interventions have a tendency to overlap with standard care. Service-level interventions that claim superiority over other methods of care delivery must be able to characterise clearly what they do, how they do it, and how they differ from alternative types of service and standard care. For these reasons, it is essential for new services to be subjected to the rigour of evaluation through RCTs; services must be able to demonstrate their overall value in comparison with other interventions to remain a supportable component of care within the NHS. Other types of study design (that is, longer-term observational studies) might help to differentiate, evaluate and refine services and the ways in which they operate. For this reason, a narrative synthesis of observational studies follows the review of RCTs.

6.2 INTEGRATED SERVICE MODELS

6.2.1 Introduction

Both in the UK, and elsewhere in the world, it has been proposed that effective treatment for people with psychosis and coexisting substance misuse usually requires an integrated treatment approach (Department of Health, 2002; Ziedonis *et al.*, 2005). An integrated approach combines elements of mental health and substance misuse service models in one delivery system. This approach was originally pioneered in the US in the 1980s, and contrasts with traditional treatment approaches that provided separate services either in parallel or sequentially (Mueser & Drake, 2003). It was felt that such services were unable to meet the needs of people with severe mental health

Service delivery models

and drug/alcohol problems; typically, service users perhaps got only one or the other component, incompatible or inconsistent treatment from both, or worse still, fell somewhere between the two and received little care (Drake *et al.*, 2008). Integrated care aimed to provide both mental health and substance misuse treatments from the same team of clinicians at the same time. The potential advantages of such an integrated approach include ensuring that both problems are given attention, and that any interactions between mental health and substance use problems are formulated and addressed. Due to differences in service provision, organisation funding, and treatment philosophies in the UK, compared with the US, it has been suggested that more shared care with drug and alcohol services is feasible in the UK (Graham *et al.*, 2003). Moreover, current Department of Health policy proposes that the main focus for service delivery should be within mental health services, and that both problems and the relationship between them are addressed simultaneously (Department of Health, 2002).

Integrated service delivery models that have been evaluated have involved changes in healthcare systems to accommodate components of interventions delivered in a variety of service configurations. Different elements of interventions have been delivered in multiple combinations and with varying intensity, including motivational interventions, various forms of group, individual, and family counselling, and housing interventions (Mueser *et al.*, 2005). Integrated service delivery models have also differed in structure, varying from different case management models in CMHTs, to more intensive, outreach-oriented services. There have also been evaluations of staffed accommodation (usually comparisons of residential integrated treatment with non-residential treatment).

Definition of interventions

Integrated service models

Integrated service models were defined as those that unify services at the provider level rather than requiring service users to negotiate separate mental health and substance misuse treatment programmes (Cleary *et al.*, 2008; Drake *et al.*, 1993).

Standard care

This was defined as the usual treatment received from a CMHT (which will include a care coordinator) with the potential to access separate substance misuse services.

6.2.2 Clinical review protocol (integrated service models)

A summary of the review protocol, including the review question, information about the databases searched and the eligibility criteria used for this section of the guideline can be found in Table 10 (the full protocol can be found in Appendix 20). During the early stages of guideline development, a Cochrane review (Cleary *et al.*, 2008) and related peer-reviewed publication (Cleary *et al.*, 2009) were identified that

Table 10: Clinical review protocol for the review of integrated service models

Component	Description
Review question	1.2.1 In people with psychosis and coexisting substance misuse, does an integrated service model (usually involving the model of assertive community treatment) when compared with an alternative management strategy lead to improved outcomes?
Electronic databases	CENTRAL, CINAHL, EMBASE, MEDLINE, PsycINFO
Date searched	01.01.2008 to 26.05.2010 ¹
Study design	RCTs and observational studies
Population	People with psychosis and coexisting substance misuse
Intervention(s)	Integrated service model (usually involving the model of assertive community treatment)
Comparison	Alternative management strategies
Critical outcomes	<ul style="list-style-type: none"> • Reduced mortality (all causes) • Reduced relapse rates (measured by exacerbation of symptoms requiring change in healthcare management) • Reduced substance misuse (however measured) • Improved global and social functioning (for example, employment, accommodation) • Improved subjective quality of life • Improved satisfaction with care • Reduced physical morbidity
¹ The search is an update to Cleary and colleagues (2008) and Cleary and colleagues (2009).	

addressed the review question. These systematic reviews were used as a source of evidence, and only a new systematic search for more recent primary-level studies was conducted for this guideline (further information about the search strategy can be found in Appendix 7).

Where evidence allowed, the following two sub-questions were addressed: (1) what are the elements in an integrated service model that are most likely to be associated with better outcomes, and (2) are there any subgroups of people (for example, young people, BME groups) who benefit from some elements of the service model more than others?

6.2.3 Studies considered for review (integrated service models)¹¹

Four RCTs, CHANDLER2006 (Chandler & Spicer, 2006), DRAKE1998 (Drake *et al.*, 1998), ESSOCK2006 (Essock *et al.*, 2006), MORSE2006 (Morse *et al.*, 2006), that were included in the review by Cleary and colleagues (2008), met the eligibility criteria for this review. All were published in peer-reviewed journals between 1998 and 2006. One RCT identified during the search for new evidence (Craig *et al.*, 2008) was excluded from the meta-analysis because the GDG considered it to be a trial of training, which was not comparable to other trials included in the analysis. Further information about this study can be found in Section 5.2.2. Full study characteristics (and any associated references), as well as a list of excluded studies can be found in Appendix 13.

Of the four included RCTs, two compared an integrated service model with standard care (CHANDLER2006, MORSE2006). MORSE2006 also included an intervention group receiving non-integrated assertive community treatment (ACT), allowing a comparison between integrated and non-integrated ACT (see Table 11 for summary information). In addition, two trials compared integrated ACT with integrated standard case management (DRAKE1998, ESSOCK2006) (see Table 12 for summary information).

In addition to the RCTs, three observational studies (Drake *et al.*, 1997; Ho *et al.*, 1999; Mangrum *et al.*, 2006), that were included in the review by Cleary and colleagues (2008), met eligibility criteria for this review. All studies were published in peer-reviewed journals between 1997 and 2006.

One of the observational studies compared an integrated service model with a parallel service model (Mangrum *et al.*, 2006), one was a before-and-after study of a 'dual-diagnosis treatment program' (Ho *et al.*, 1999), and one compared an integrated service model with standard care (Drake *et al.*, 1997) (see Section 6.2.5 for further information about each study and a narrative summary of results).

6.2.4 Clinical evidence for integrated service models from RCTs

Meta-analysis was used to synthesise the evidence for each comparison. For the comparison of an integrated service model with a non-integrated management strategy, there is a GRADE summary of findings in Table 13 and Table 14. For the comparison of integrated ACT with integrated standard case management, there is a GRADE summary of findings table in Table 15.

The forest plots and full GRADE evidence profiles can be found in Appendix 14 and 15, respectively.

¹¹Here and elsewhere in the guideline, each RCT considered for review is referred to by a study ID (primary author and date of study publication, except where a study is in press or only submitted for publication, then a date is not used).

Table 11: Study information table for RCTs comparing an integrated service model with a non-integrated management strategy¹²

	Integrated service model (ACT/dual disorders treatment [DDT]) versus standard care	Integrated ACT versus non-integrated ACT
Total no. of trials (N)	2 RCTs (277)	1 RCT (100)
Study ID	(1) CHANDLER2006 (2) MORSE2006	MORSE2006
Number randomised	(1) 182 (2) 95	100
Diagnosis	(1) 66% DSM-IV schizophrenia, schizoaffective disorder, bipolar or psychotic disorder not otherwise specified (NOS) and 100% current substance-use disorder (34% alcohol dependence, 47% drug dependence) ¹ (2) 89% DSM-IV schizophrenia, schizoaffective, atypical psychotic disorder or bipolar disorder; 9% major depression-recurrent disorder; 2% other. All had one or more substance-use disorders; 46% substance dependence disorder for alcohol and/or drugs; 64% substance abuse disorder for alcohol and/or drugs; 40% an alcohol-only diagnosis; 18% drug-only diagnosis; 42% had both drug and alcohol disorders – cocaine most frequently used drug (34%), cannabis (19%)	89% DSM-IV schizophrenia, schizo-affective, atypical psychotic disorder or bipolar disorder; 9% major depression-recurrent disorder, 2% other. All had one or more substance-use disorders; 46% substance dependence disorder for alcohol and/or drugs; 64% substance abuse disorder for alcohol and/or drugs, 40% an alcohol-only diagnosis, 18% drug-only diagnosis, 42% had both drug and alcohol disorders – cocaine most frequently used drug (34%), cannabis (19%)
Ethnicity	(1) 66% African American, 21% white (2) 73% African American, 25% white	73% African American, 25% white, 2% other

Continued

¹²The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), with additional information extracted from the primary study publication (see Appendix 13 for further details about each study).

Table 11: (Continued)

	Integrated service model (ACT/dual disorders treatment [DDT]) versus standard care	Integrated ACT versus non-integrated ACT
Treatment length	(1) 36 months (2) 24 months	24 months
Country	(1)–(2) US	US
Intervention (n)	(1) In-custody standard care + brief aftercare + integrated DDT (post-custody, participants received motivational interviewing, substance misuse counselling, group treatment oriented to both disorders, family psychoeducation about ‘dual disorders’, stagewise interventions, time-unlimited services, care from a multidisciplinary team, integrated substance misuse specialists, outreach, and so on) (n = 103) ² (2) Integrated ACT (n = 46)	Integrated ACT (n = 46)
Control (n)	(1) In-custody standard care + usual post-custody services + 60 days of post-release case management and housing assistance (n = 79) (2) Provided with a list of community agencies (mental health and substance misuse treatment) and staff provided linkage assistance to facilitate access (n = 49)	(1) Non-integrated ACT. Referred service users to other community providers for outpatient or individual substance misuse services and to 12-step groups (n = 54)
<p>¹ Some participants were dependent on more than one substance.</p> <p>² Before release from custody, all participants received an intervention including intensive assessment, medication, treatment planning in preparation for discharge, consultation with jail staff, one-to-one counselling and crisis intervention (for more details about the intervention, see Mercer-McFadden <i>et al.</i>, 1998).</p>		

Table 12: Study information table for RCTs comparing integrated ACT with integrated standard case management¹³

	Integrated ACT versus integrated standard case management
Total no. of trials (N)	2 RCTs (421)
Study ID	(1) DRAKE1998 (2) ESSOCK2006
Number randomised	(1) 223 (2) 198
Diagnosis	(1) 53% DSM-III-R schizophrenia with active DSM-III-R substance-use disorder (73% alcohol abuse, 42% drug abuse) ¹ (2) 76% DSM-III-R schizophrenia, 17% mood disorder with co-occurring DSM-III-R substance-use disorder (74% alcohol abuse, 81% other substances) ¹
Ethnicity	(1) 96% white (2) 55% African American, 27% white
Treatment length	(1)–(2) 36 months
Country	(1)–(2) US
Intervention (n)	(1) Integrated ACT: community-based, high-intensity, direct substance misuse treatment by team members, use of stage-wise ‘dual-disorder’ model, ‘dual-disorder’ treatment groups and exclusive team focus on service users with psychosis and coexisting substance misuse. Caseload ~12 (n = 109) (2) Integrated ACT with a direct substance use component (n = 99)
Control (n)	(1) Standard case management: community-based, team working with service user’s support system and vigorously addressing coexisting substance use. Caseload ~25 (n = 114) (2) Standard case management: some services provided directly and teams had training from study authors in integrated treatment, including comprehensive assessment, individual motivational interviewing, group treatments and stagewise interventions (n = 99)
¹ Some participants were dependent on more than one substance.	

¹³The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary *et al.* (2008), with additional information extracted from the primary study publication (see Appendix 13 for further details about each study).

Table 13: GRADE summary of findings table for RCTs comparing integrated ACT with standard care¹⁴

Outcomes	Effect size (95% CI)	No. of participants (studies)	Quality of the evidence (GRADE)
<i>Substance use: 1. Substance use rating</i>			
by 6 months	SMD 0.19 (−0.21 to 0.59)	95 (1 study) ³	Low ^{1,2}
by 12 months	SMD 0.27 (−0.14 to 0.67)	95 (1 study) ³	Low ^{1,2}
by 18 months	SMD 0.12 (−0.29 to 0.52)	95 (1 study) ³	Low ^{1,2}
by 24 months	SMD 0.12 (−0.28 to 0.53)	95 (1 study) ³	Low ^{1,2}
<i>Substance use: 2. Days used substances</i>			
6 months	SMD 0.08 (−0.33 to 0.48)	95 (1 study) ³	Low ^{1,2}
by 12 months	SMD 0.11 (−0.3 to 0.51)	95 (1 study) ³	Low ^{1,2}
by 18 months	SMD 0.09 (−0.31 to 0.49)	95 (1 study) ³	Low ^{1,2}
by 24 months	SMD 0.13 (−0.28 to 0.53)	95 (1 study) ³	Low ^{1,2}
<i>Service use: 1. Days in stable community residences (not in hospital)</i>			
by 6 months	MD 3.17 (−0.52 to 6.86)	95 (1 study) ³	Low ^{1,2}
by 12 months	MD 2.84 (−2.07 to 7.75)	95 (1 study) ³	Low ^{1,2}
by 18 months	MD 6.46 (1.36 to 11.56)	95 (1 study) ³	Moderate ¹
by 24 months	MD 5.70 (0.59 to 10.81)	95 (1 study) ³	Moderate ¹
<p><i>Note.</i> Negative SMDs favour integrated service models, positive MDs favour integrated service models.</p> <p>¹ OIS (for continuous outcomes, OIS = 400 participants) not met.</p> <p>² CI includes both (1) no effect and (2) appreciable benefit or appreciable harm.</p> <p>³ MORSE2006</p>			

¹⁴Where available, data were extracted from the review developed for the Cochrane Collaboration by Cleary *et al.* (2008), otherwise from the primary study publication (see Appendix 13 for further details about each study).

Table 14. GRADE summary of findings table for RCTs comparing integrated ACT with non-integrated ACT¹⁵

Outcomes	Effect size (95% CI)	No. of participants (studies)	Quality of the evidence (GRADE)
<i>Substance use: 1. Substance use rating</i>			
by 6 months	SMD 0.14 (−0.25 to 0.53)	100 (1 study) ³	Low ^{1,2}
by 12 months	SMD 0.18 (−0.22 to 0.57)	100 (1 study) ³	Low ^{1,2}
by 18 months	SMD −0.15 (−0.54 to 0.25)	100 (1 study) ³	Low ^{1,2}
by 24 months	SMD 0.05 (−0.34 to 0.44)	100 (1 study) ³	Low ^{1,2}
<i>Substance use: 2. Days used substances</i>			
6 months	SMD 0.09 (−0.31 to 0.48)	100 (1 study) ³	Low ^{1,2}
by 12 months	SMD 0.27 (−0.12 to 0.67)	100 (1 study) ³	Low ^{1,2}
by 18 months	SMD 0.09 (−0.30 to 0.48)	100 (1 study) ³	Low ^{1,2}
by 24 months	SMD 0.08 (−0.32 to 0.47)	100 (1 study) ³	Low ^{1,2}
<i>Service use: 1. Days in stable community residences (not in hospital)</i>			
by 6 months	MD 2.42 (−1.01 to 5.85)	100 (1 study) ³	Low ^{1,2}
by 12 months	MD 0.31 (−4.42 to 5.04)	100 (1 study) ³	Low ^{1,2}
by 18 months	MD −1.18 (−5.94 to 3.58)	100 (1 study) ³	Low ^{1,2}
by 24 months	MD 0.51 (−4.36 to 5.38)	100 (1 study) ³	Low ^{1,2}
<p><i>Note.</i> Negative SMDs favour integrated service models, positive MDs favour integrated service models.</p> <p>¹ OIS (for continuous outcomes, OIS = 400 participants) not met.</p> <p>² CI includes both (1) no effect and (2) appreciable benefit or appreciable harm.</p> <p>³ MORSE2006</p>			

¹⁵Where available, data were extracted from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), otherwise from the primary study publication (see Appendix 13 for further details about each study).

Table 15: GRADE summary of findings table for RCTs comparing integrated ACT with integrated standard case management¹⁶

Outcomes	Effect size (95% CI)	No. of participants (studies)	Quality of the evidence (GRADE)
Death – by 36 months	RR 1.18 (0.39 to 3.57)	421(2 studies) ^{3,4}	Low ^{1,2}
<i>Substance use: 1. Not in remission</i>			
by 36 months – alcohol	RR 1.15 (0.84 to 1.56)	143 (1 study) ³	Low ^{1,2}
by 36 months – drugs	RR 0.89 (0.63 to 1.25)	85 (1 study) ³	Low ^{1,2}
<i>Substance use: 2. Substance misuse (Substance Abuse Treatment Scale - SATS)</i>			
by 6 months	SMD 0.03 (–0.17 to 0.23)	379 (2 studies) ^{3,4}	Moderate ¹
by 12 months	SMD 0.08 (–0.23 to 0.39)	374 (2 studies) ^{3,4}	Moderate ¹
by 18 months	SMD –0.02 (–0.22 to 0.19)	375 (2 studies) ^{3,4}	Moderate ¹
by 24 months	SMD 0.11 (–0.14 to 0.37)	365 (2 studies) ^{3,4}	Moderate ¹
by 30 months	SMD 0.11 (–0.1 to 0.31)	358 (2 studies) ^{3,4}	Moderate ¹
by 36 months	SMD 0.05 (–0.15 to 0.26)	360 (2 studies) ^{3,4}	Moderate ¹
<i>Service use: 1. Days in stable community residences (not in hospital)</i>			
by 12 months	MD –10 (–38.61 to 18.6)	378 (2 studies) ^{3,4}	Low ^{1,2}
by 24 months	MD 8.54 (–4.46 to 21.55)	377 (2 studies) ^{3,4}	Low ^{1,2}
by 36 months	MD 5.17 (–9.2 to 19.55)	364 (2 studies) ^{3,4}	Low ^{1,2}
<i>Functioning: 1. Average general score (GAS)</i>			
by 6 months	SMD 0.13 (–0.18 to 0.43)	162 (1 study) ⁴	Low ^{1,2}
by 12 months	SMD 0.07 (–0.23 to 0.38)	171 (1 study) ⁴	Low ^{1,2}
by 18 months	SMD 0.11 (–0.18 to 0.41)	176 (1 study) ⁴	Low ^{1,2}
by 24 months	SMD 0.18 (–0.13 to 0.48)	166 (1 study) ⁴	Low ^{1,2}

Continued

¹⁶Where available, data were extracted from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), otherwise from the primary study publication (see Appendix 13 for further details about each study).

Table 15: (Continued)

Outcomes	Effect size (95% CI)	No. of participants (studies)	Quality of the evidence (GRADE)
by 30 months	SMD -0.06 (-0.37 to 0.24)	164 (1 study) ⁴	Low ^{1,2}
by 36 months	SMD 0.04 (-0.26 to 0.34)	170 (1 study) ⁴	Low ^{1,2}
<i>Satisfaction: Average general score (Quality of Life Interview – QOLI)</i>			
by 6 months	SMD 0.06 (-0.17 to 0.29)	377 (2 studies) ^{3,4}	Low ^{1,2}
by 12 months	SMD 0.01 (-0.2 to 0.23)	370 (2 studies) ^{3,4}	Low ^{1,2}
by 18 months	SMD 0.02 (-0.19 to 0.22)	366 (2 studies) ^{3,4}	Low ^{1,2}
by 24 months	SMD 0.07 (-0.13 to 0.27)	373 (2 studies) ^{3,4}	Low ^{1,2}
by 30 months	SMD 0.03 (-0.17 to 0.23)	379 (2 studies) ^{3,4}	Moderate ¹
by 36 months	SMD 0.08 (-0.23 to 0.39)	374 (2 studies) ^{3,4}	Moderate ¹
<p><i>Note.</i> A RR of <1 favours integrated ACT; negative SMDs favour integrated ACT, positive MDs favour integrated ACT.</p> <p>¹ OIS (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.</p> <p>² CI includes both (1) no effect and (2) appreciable benefit or appreciable harm.</p> <p>³ DRAKE1998.</p> <p>⁴ ESSOCK2006.</p>			

6.2.5 Evidence from observational studies (integrated service models)

Mangrum and colleagues (2006) investigated hospitalisation and arrest outcomes for people with psychosis and coexisting substance misuse allocated to integrated (n = 123) or parallel treatment (n = 93). Of the total sample, 21% had a principal diagnosis of schizophrenia, 20% bipolar disorder, and 11% alcohol or substance-use disorder. Service users in the parallel treatment condition received substance misuse and mental health treatment by separate clinics; therefore services were not coordinated and lacked a centralised case management component. Results using weighted least squares methods revealed a significant effect favouring the integrated treatment group post-baseline on measures of any psychiatric hospitalisation, $F(1) = 21.17$, $p < 0.0001$ and hospital days, $F(1) = 4.28$, $p = 0.04$. Thus, a significant difference was found in number of days hospitalised favouring those in the integrated group.

Ho and colleagues (1999) prospectively looked at 6-month treatment engagement and outcomes of four groups (n = 179) successively enrolled in a day hospital of a 'dual-diagnosis treatment program', monitoring effectiveness changes over a 2-year period. The entire sample met criteria for psychosis (schizophrenia, schizoaffective

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disorder, or psychotic disorder NOS) and substance dependence (with the primary drug of use being cocaine, followed by alcohol and marijuana). Results demonstrated that all groups made sequential improvements (from group 1 to 4). Participants in group 4 had the highest engagement, attendance and retention rates, as they received the fullest spectrum of treatment (and had access to more activities and therapeutic treatments) when compared with the other three groups. Furthermore, an increasing percentage of participants from group 1 to 4 maintained sobriety for at least 1 to 4 months in the first 6 months of treatment (Cochrane-Armitage trend test statistic: 1 month, 2.16, $p = 0.03$; 2 months, 4.26, $p = 0.01$; 3 months, 6.37, $p = 0.001$; 4 months, 2.02, $p = 0.04$).

Drake and colleagues (1997) conducted a quasi-experimental study comparing integrated treatment with standard treatment on outcomes of mental health, substance misuse and housing for homeless people with psychosis and coexisting substance misuse. The entire sample met criteria for alcohol or drug dependence, and most had a diagnosis of schizophrenia (50%) or bipolar disorder (17%). At 18-month follow-up, service users in the integrated treatment group ($n = 158$) had significantly fewer days in an institution and more days in stable housing, made more progress in terms of substance misuse recovery ($p = 0.002$), and showed greater improvement of alcohol-use disorders than those in standard treatment ($n = 59$) ($p = 0.05$). There were no significant differences between the two groups on treatment retention.

6.2.6 Clinical evidence summary (integrated service models)

There were two trials comparing an integrated service model (integrated ACT or integrated DDT) with standard care ($N = 277$); one of these trials also compared integrated ACT with non-integrated ACT ($N = 100$). However, no data from the critical outcomes could be combined using meta-analysis, so for each outcome the evidence comes from a single study. Based on these critical outcomes, the evidence (*GRADED* moderate to low quality) is inconclusive regarding the effectiveness of using an integrated approach for people with psychosis and coexisting substance misuse.

In addition, there were two trials comparing integrated ACT with integrated standard case management ($N = 421$), but again the evidence (*GRADED* moderate to low quality) was inconclusive.

The three observational studies generally demonstrated support for integrated service models, but methodological issues and study setting make it difficult to generalise their results to the UK.

6.2.7 Health economic evidence (integrated service models)

Systematic literature review

The systematic search of the health economic literature identified two US-based studies (Clark *et al.*, 1998; Morse *et al.*, 2006) that considered the cost effectiveness of integrated service models versus standard or non-integrated care. Details on the methods used for the systematic search of the economic literature are described in Appendix 9.

The study by Clark and colleagues (1998), assessing the cost effectiveness of ACT versus standard case management, was based on the RCT described by Drake and colleagues (1998). The study sample consisted of 193 people recruited across multiple sites, diagnosed with schizophrenia, schizoaffective disorder or bipolar disorder alongside an active substance-use disorder. The time horizon of the economic analysis was 3 years with participants interviewed at 6-month intervals. A societal perspective was adopted for the cost analysis. Therefore, resource use data including mental health and general healthcare, legal services, community services (for example, homeless shelters) and informal care-giving, were all collected. The primary outcome measure used for the cost-effectiveness analysis was the quality-of-life year which weighted participants' subjective quality of life (measured by the QOLI on a 0-1 scale) over consecutive 6-monthly intervals.

Overall, mean 3-year costs were similar across both groups: \$118,079 for ACT and \$124,145 for standard case management. Average quality of life year ratios per \$10,000 were 0.24 for integrated care participants and 0.20 for standard care participants. Overall, no significant differences in costs and effectiveness were detected between the two groups over the 3-year period. There are several methodological issues with the study that limit the generalisability of the results to the UK context. First, estimates of quality of life were elicited directly from service users in the study rather than from national sample estimates. The latter approach is recommended by NICE for estimating quality-adjusted life years (QALYs) for cost-utility analyses in the UK (NICE, 2009b). The authors did not attempt to combine total costs and outcomes by using incremental cost-effectiveness ratios (ICERs), instead calculating ratios of cumulative quality of life years to total costs. No power calculations were provided in the determination of sample sizes and no formal consideration was given to study non-completers, which may have biased the results.

The study by Morse and colleagues (2006) included a cost analysis, which compared the costs over 24 months of three treatment programmes: integrated ACT, non-integrated ACT, and standard care. The study was based on an RCT of 149 individuals with co-existing severe mental illness and substance use disorders who were homeless at baseline. Again a societal perspective was adopted for the cost analysis. Resource use data associated with mental healthcare, substance misuse treatment, physical healthcare and emergency shelters were collected from Medicaid claims. Over 24 months, total average costs in integrated ACT (\$48,764) and standard care (\$41,726) were significantly lower than in the non-integrated ACT programme (\$71,211), while no significant cost differences were detected between the integrated ACT and standard care programmes. Most of the cost differences were explained by higher outpatient care incurred by the non-integrated ACT group, while inpatient care was similar across all three programmes. The results of the study have limited applicability to the UK setting for a number of reasons. First, the study was US-based and it is unlikely that treatment patterns and associated resource use is generalisable to the UK context. Sample attrition may have biased the results of the cost analysis, although Morse and colleagues (2006) argue that attrition resulted in low statistical power, but did not affect internal validity. Finally, the study was a cost analysis and no formal attempt was made to compare the differences in total costs across the two treatment pathways with any differences in effectiveness.

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Health economics summary

The literature review identified only two US-based studies that considered the cost effectiveness of integrated care models (Clark *et al.*, 1998; Morse *et al.*, 2006). Both studies suggest that integrated care models may be no more costly than non-integrated models, with no differences in health outcomes. Both studies adopted a societal perspective, including costs incurred by community services and families of service users. However, these costs accounted for a fraction of the total costs of the integrated service models considered. Both US-based studies are of limited applicability to the NHS context and limited in terms of their overall methodological quality.

Given the uncertainty surrounding the cost effectiveness of integrated models of care and the associated resource implications, it was anticipated that an economic model would be developed to address these issues. However, due to both the scarcity and the generally low quality of the clinical data that was identified in the guideline systematic review, the GDG agreed that it would not be possible to model the cost effectiveness of integrated models of care.

6.2.8 From evidence to recommendations (integrated service models)

Early in the development process, the GDG distinguished between outcomes that were critical to decision-making and those that were important but not critical. Critical outcomes included: mortality (all causes), relapse rates (measured by exacerbation of symptoms requiring change in healthcare management), substance misuse (however measured), global and social functioning (for example, employment and accommodation), subjective quality of life, satisfaction with care and physical morbidity. Only critical outcomes were included in the GRADE evidence profiles.

The review found only moderate- to low-quality evidence from RCTs relating to integrated service models, and the GDG concluded that this was inconclusive. Furthermore, all of the clinical and health economic evidence included in this review was from North America, and therefore was of questionable relevance to clinical practice in the UK.

Policy suggests that mental health services should be the lead service in working with people who are misusing substances and have a diagnosis of psychosis, and the GDG felt it was important to make a recommendation reflecting this policy.

The literature does not address the needs of the small group of people with psychosis who are severely dependent on substances. For reasons of safety in prescribing and the expertise required in monitoring substitute opiates, the GDG concluded that it would be appropriate to recommend a parallel model in which both substance misuse and mental health services work with the service user in the overall context of the CPA. There was no evidence addressing the two sub-questions (see Section 6.2.2) regarding elements of an integrated service model and subgroups of people.

6.2.9 Recommendations (integrated service models)

- 6.2.9.1 For most adults with psychosis and coexisting substance misuse, treatment for both conditions should be provided by healthcare professionals in secondary care mental health services such as community-based mental health teams.

Coordinating care

- 6.2.9.2 Consider seeking specialist advice and initiating joint working arrangements with specialist substance misuse services for adults and young people with psychosis being treated by community mental health teams, and known to be:
- severely dependent on alcohol **or**
 - dependent on both alcohol and benzodiazepines **or**
 - dependent on opioids and/or cocaine or crack cocaine.
- Adult community mental health services or CAMHS should continue to provide care coordination and treatment for the psychosis within joint working arrangements.
- 6.2.9.3 Consider seeking specialist advice and initiate joint working arrangements with specialist substance misuse services if the person's substance misuse:
- is difficult to control **and/or**
 - leads to significant impairment of functioning, family breakdown or significant social disruption such as homelessness.
- 6.2.9.4 If a person with psychosis and coexisting substance misuse requires planned detoxification from either drugs or alcohol, this should take place in an inpatient setting (see Section 6.4.7).
- 6.2.9.5 Delivery of care and transfer between services for adults and young people with psychosis and coexisting substance misuse should include a care coordinator and use the Care Programme Approach.

6.3 STAFFED ACCOMMODATION

6.3.1 Introduction

People with severe mental health problems frequently live in staffed or supported accommodation, either as a step in a rehabilitation programme or more permanently (Macpherson *et al.*, 2004; Wolfson *et al.*, 2009). There is a wide range of accommodation providing varying degrees of support, from 24-hour staffing to daytime staffing with out-of-hours telephone cover, to out-of-hours cover provided by generic on-call services for emergencies only. The staffing can range from a full NHS multidisciplinary team to third-sector or private providers with unqualified staff. Registered care homes have to meet standards set by the Care Quality Commission in terms of the levels and experience of the care staff and will offer 24-hour staffing.

Projects funded through the Supporting People programme¹⁷ have staff who will not be expected to provide direct care: the numbers of staff hours will depend on the nature of the project and the presumed needs of the service user group. At the lowest level of support, people may live independently with 'floating support'. Additional direct care may also be provided to people in Supporting People projects.

¹⁷Further information is available here: <http://www.communities.gov.uk>

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Other variations include housing schemes with a warden (sheltered housing or special sheltered housing), which are generally for older people. In ‘core housing’, staff are based in the primary setting that houses residents with the greatest support needs. Satellite (or ‘cluster’) housing accommodates other residents grouped by support needs.

In family placements, the service user becomes part of the family with whom they are placed. This may particularly suit people with educational under-achievement or cognitive impairment. In adult placements (also known as supported lodgings) a private landlord provides support to tenants renting rooms in a house. Group homes provide mutual support, usually for older people. Finally, dispersed intensive supported housing (Howat *et al.*, 1988) offers a specialist form of supported housing with support provided over extended hours as an alternative to residential care.

Current practice

In the past, substance misuse was generally seen as a reason for exclusion from residential care, and staffed or supported housing. Few units were prepared to tackle the challenges presented by people with mental illness and coexisting substance misuse, leading to very vulnerable individuals in need of housing being placed in extremely unsatisfactory bed and breakfast accommodation and to service users spending extended periods on acute inpatient wards in the absence of suitable alternative accommodation.

Residential care for people with substance misuse (rehabilitation) is seen as an important component in the management of people recovering from severe substance dependence. Traditionally such units were very reluctant to take in service users with a diagnosis of psychosis, even if this was effectively treated.

Definition of intervention

Any staffed accommodation or supported housing for people with a diagnosis of psychosis and coexisting substance misuse that may include an element of specific treatment for the substance misuse.

6.3.2 Clinical review protocol (staffed accommodation)

A summary of the review protocol, including the primary review question, information about the databases searched and the eligibility criteria used for this section of the guideline can be found in Table 16 (the full protocol can be found in Appendix 20). During the early phase of guideline development, a recent peer-reviewed systematic review (Cleary *et al.*, 2009) was identified that addressed the review question. This systematic review was used as a source of evidence, and only a new systematic search for more recent primary-level studies was conducted for the guideline (further information about the search strategy can be found in Appendix 7).

6.3.3 Studies considered for review (staffed accommodation)

One RCT (N = 132), BURNAM1995 (Burnam *et al.*, 1995), included in the review by Cleary and colleagues (2008; 2009), met eligibility criteria for the review for this guideline. BURNAM1995 compared a residential integrated mental health and

Table 16: Clinical review protocol for staffed accommodation

Component	Description
Review question	1.2.3 In people with psychosis and coexisting substance misuse, does staffed accommodation when compared with an alternative management strategy lead to improved outcomes?
Electronic databases	CENTRAL, CINAHL, EMBASE, MEDLINE, PsycINFO
Date searched	01.01.2008 to 26.05.2010 ¹
Study design	RCTs and observational studies
Population	People with psychosis and coexisting substance misuse
Intervention(s)	Staffed accommodation
Comparison	Alternative management strategies
Critical outcomes	<ul style="list-style-type: none"> • Reduced mortality (all causes) • Reduced relapse rates (measured by exacerbation of symptoms requiring change in healthcare management) • Reduced substance misuse (however measured) • Improved global and social functioning (for example, employment, accommodation) • Improved subjective quality of life • Improved satisfaction with care • Reduced physical morbidity
¹ The search is an update to Cleary and colleagues (2009).	

substance use treatment programme with standard care (see Table 17 for summary information). Full study characteristics (and any associated references), as well as a list of excluded studies can be found in Appendix 13.

In addition to the RCT, five observational studies (Anderson, 1999; Blankertz & Cnaan, 1994; Brunette *et al.*, 2001; De Leon *et al.*, 2000; Nuttbrock *et al.*, 1998) met eligibility criteria for this review. All were published between 1994 and 2004. Further information about each observational study and a narrative summary of results can be found in Section 6.3.5.

6.3.4 Evidence from RCTs (staffed accommodation)

For the comparison of staffed accommodation with standard care, a GRADE summary of findings table is shown in Table 18. Forest plots and a GRADE evidence profile can be found in Appendix 14 and 15, respectively.

Table 17: Study information table for trials comparing staffed accommodation with standard care¹⁸

	Staffed accommodation versus standard care
Total no. of trials (N)	1 RCT (132)
Study ID	BURNAM1995
Number randomised	132 (plus a further 144 people were randomised to an intervention not relevant to this section of the guideline)
Diagnosis	Schizophrenia and or major affective disorder with coexisting substance disorder ¹
Ethnicity	58% white
Treatment length	9 months
Country	US
Intervention (n)	Residential integrated mental health and substance use treatment: educational groups, 12-step programmes including AA or NA, discussion groups, individual counselling, case management, psychiatric consultation, ongoing medication management, general community activities (n = 67)
Control (n)	Routine care with no special intervention but free to access other services (shelters, mental health clinics, AA groups) (n = 65)
¹ Participants paid \$10 for each assessment interview.	

6.3.5 Evidence from observational studies (staffed accommodation)

There were five studies (Anderson, 1999; Blankertz & Cnaan, 1994; Brunette *et al.*, 2001; De Leon *et al.*, 2000; Nuttbrock *et al.*, 1998) that employed a non-randomised approach and examined the efficacy of residential settings for people with psychosis and coexisting substance misuse.

Brunette and colleagues (2001) compared the effectiveness of long-term and short-term residential treatment programmes. The sample consisted of participants diagnosed primarily with schizophrenia spectrum disorder (63% of the sample), in

¹⁸The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), with additional information extracted from the primary study publication (see Appendix 13 for further details about each study).

Table 18: GRADE summary of findings table for RCTs comparing staffed accommodation with standard care¹⁹

Outcomes	Effect size (95% CI)	No. of participants (studies)	Quality of the evidence (GRADE)
<i>Substance use: 1. Days used alcohol</i>			
At 3 months	SMD -0.32 (-0.71 to 0.07)	104 (1 study) ³	Low ^{1,2}
At 6 months	SMD 0.00 (-0.4 to 0.4)	97 (1 study) ³	Low ^{1,2}
At 9 months	SMD -0.05 (-0.49 to 0.38)	82 (1 study) ³	Low ^{1,2}
<i>Substance use: 2. Level of alcohol use</i>			
At 3 months	SMD -0.21 (-0.6 to 0.18)	104 (1 study) ³	Low ^{1,2}
At 6 months	SMD -0.06 (-0.46 to 0.33)	97 (1 study) ³	Low ^{1,2}
At 9 months	SMD -0.21 (-0.65 to 0.23)	82 (1 study) ³	Low ^{1,2}
<i>Substance use: 3. Days used drugs</i>			
At 3 months	SMD -0.22 (-0.61 to 0.17)	104 (1 study) ³	Low ^{1,2}
At 6 months	SMD -0.11 (-0.51 to 0.28)	97 (1 study) ³	Low ^{1,2}
At 9 months	SMD -0.04 (-0.48 to 0.39)	82 (1 study) ³	Low ^{1,2}
<i>Substance use: 4. Severity of drug use</i>			
At 3 months	SMD -0.14 (-0.52 to 0.25)	104 (1 study) ³	Low ^{1,2}
At 6 months	SMD -0.18 (-0.57 to 0.22)	97 (1 study) ³	Low ^{1,2}
At 9 months	SMD -0.16 (-0.6 to 0.28)	82 (1 study) ³	Low ^{1,2}
<i>Functioning: 1. % time on streets</i>			
At 3 months	SMD 0.04 (-0.35 to 0.42)	104 (1 study) ³	Low ^{1,2}
At 6 months	SMD -0.06 (-0.46 to 0.34)	97 (1 study) ³	Low ^{1,2}
At 9 months	SMD 0.10 (-0.34 to 0.54)	82 (1 study) ³	Low ^{1,2}
<i>Functioning: 2. % time in independent housing</i>			
At 3 months	SMD -0.16 (-0.55 to 0.23)	104 (1 study) ³	Low ^{1,2}
At 6 months	SMD -0.22 (-0.61 to 0.18)	97 (1 study) ³	Low ^{1,2}
At 9 months	SMD 0.22 (-0.22 to 0.66)	82 (1 study) ³	Low ^{1,2}
<i>Note.</i> Negative SMDs favour staffed accommodation.			
¹ OIS (for continuous outcomes, OIS = 400 participants) not met.			
² CI includes both (1) no effect and (2) appreciable benefit or appreciable harm.			
³ BURNAM1995.			

¹⁹Where available, data were extracted from the review developed for the Cochrane Collaboration by Cleary *et al.* (2008), otherwise from the primary study publication (see Appendix 13 for further details about each study).

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conjunction with an alcohol-use disorder (32%), substance-use disorder (12%) or polysubstance use (56%). Service users in the long-term programme had better engagement in treatment (Chi-square test, $\chi^2 = 11.4$, $df = 1$, $p < .001$) and were more likely to maintain abstinence from substance use post-discharge (Chi-square test, $\chi^2 = 10.4$, $df = 1$, $p < .001$). There were no significant differences between short- and long-term residential treatment on other measures, including psychiatric hospitalisation or incarceration. It is important to note that the groups were non-equivalent, so the data may be biased.

Anderson (1999) explored the different impacts of an integrated approach for the treatment of psychosis and coexisting substance misuse ($n = 76$) and a more restrictive and traditional substance misuse model based on a therapeutic community (TC) approach ($n = 139$). The sample consisted of homeless participants, of whom 68.4% had a psychotic spectrum disorder (Axis I). Fifty percent of the sample had a polysubstance abuse diagnosis (Axis I), 22.9% had crack/cocaine problems, and 29.8% were alcohol dependent. Results indicated significant differences in only five of the 33 characteristics studied. Length of stay in the programme was correlated to positive treatment outcomes. Furthermore, the restrictive programme was associated with twice the number of medically unadvised dropouts. It should be noted that results from this study should be interpreted with caution and cause and effect cannot be assumed, as the data analysis was based on a bivariate correlational analysis as well as a service user satisfaction survey.

Blankertz and Cnaan (1992, 1994) compared the effectiveness of psychosocial rehabilitation versus a modified TC for homeless people with psychosis and coexisting substance misuse. Nearly 80% of the overall sample had schizophrenia, and 11% had bipolar disorder. Two thirds of the sample population had a concurrent Axis II personality disorder. Substance use included alcohol (66%), cocaine, (55%), amphetamine (27%), heroin (29%), marijuana (40%), and other drugs (30%). Of the sample, 57% were polysubstance users. Results demonstrated that those having 2 years of psychosocial rehabilitation had increased abstinence (based on the Addiction Severity Index [ASI], $p < 0.01$), improved mental state and increased treatment retention compared with the TC.

Nuttbrock and colleagues (1998) compared a community residential treatment programme ($n = 87$) with a TC ($n = 98$). Of the total sample, 48.8% had a primary diagnosis of a non-affective psychotic disorder, and 53.5% had a secondary diagnosis of a substance-use disorder (abuse or dependence). Of those with a substance-use disorder, 87.6% reported polysubstance use, 43.9% reported crack, and 21.2% reported alcohol as their primary substance of misuse. Service users in both programmes improved on substance abuse and psychopathology outcomes, however the reductions and improvements were even greater in the TC. These results were not statistically significant after a Bonferroni correction was applied. Service users in the TC were more drug-free, had more improvement in psychiatric symptoms and had improved cognitive functioning. Regression analyses indicated that improvements on psychological symptoms at 2-month follow-up and level of functioning at 12-month follow-up were significantly greater among TC residents.

More recently, De Leon and colleagues (2000) compared two types of TCs for people with psychosis and coexisting substance misuse: medium-intensity TC ($n = 66$) and low-intensity TC ($n = 93$) versus treatment as usual ($n = 183$). Treatment as usual

consisted of the general residential programmes and support services (housing, case management and day treatment) available for those with mental illness and substance use problems. In order to meet inclusion criteria, participants had to have a primary mental illness Axis 1 referral diagnosis (usually schizophrenia or major depression), a secondary Axis 1 referral diagnosis of substance abuse or dependent disorder, and a history of homelessness. Results indicated that those in the more modified, higher-intensity TC had significantly higher retention rates and did better on 12-month follow-up outcomes than did those in the lower-intensity TC (Chi-square test, $\chi^2 = 12.05$, $p < 0.002$). Moreover, at 2-year follow-up, participants in the low-intensity TC had significantly lower substance use as well as significant improved mental state (lower-intensity TC). There were no significant differences found on other measures, or favouring the high-intensity modified TC. Those in the higher-intensity TC improved statistically on 9 out of 12 outcome measures, including reduced frequency of alcohol and drug use, criminality, increased employment and improvements on two measures of psychological functioning (the Shortened Manifest Anxiety Scale and Tennessee Self-Concept Scale). Those in the lower-intensity TC and treatment as usual groups improved on fewer outcome measures, 7 and 3 out of 12, respectively.

6.3.6 Clinical evidence summary (staffed accommodation)

In one trial of residential accommodation (N = 132), the evidence (*GRADED* low quality) was inconclusive to reach a decision about the effectiveness of this approach when compared with standard care for people with psychosis and coexisting substance misuse.

Taken together, the observational studies suggest that substance use outcomes improved at follow-up, and the majority of these studies favoured longer duration integrated residential programmes rather than shorter residential programmes. However, the substantial methodological limitations of these studies make interpretation very difficult.

6.3.7 Health economic evidence (staffed accommodation)

The systematic search of the health economic literature identified one US-based study that considered the cost effectiveness of a staffed accommodation intervention (French *et al.*, 1999). Details on the methods used for the systematic search of the economic literature are described in Appendix 9.

The study by French and colleagues (1999) assessed the costs and outcomes of a modified TC intervention over 12-month follow-up for mentally ill 'chemical abusers' who were homeless compared with standard services in a treatment as usual condition. This study was based on the same cohort assessed by De Leon and colleagues (2000). Many outcome measures were used in the economic analysis, including substance use, criminal activity, HIV-risk behaviour, psychological status and employment status. The perspective of the cost analysis was from the health service provider. Resource use data were collected for the modified TC intervention, hospital detoxification, accident and emergency visits, inpatient days, residential

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days, non-residential day visits, outpatient visits and methadone maintenance. Over 12 months, the total mean cost per service user was \$29,255 for the modified TC group and \$29,638 for the treatment as usual group. Overall, the higher initial cost of the modified TC intervention was offset by the higher health service utilisation in the treatment as usual group, including residential and non-residential day visits. In terms of effectiveness, multivariate analysis showed that modified TC service users reported significantly greater reductions in criminal activity and psychological dysfunction while no significant differences in substance use or HIV-risk behaviour were detected. No formal synthesis of costs and outcomes was carried out by the authors.

The results of this study is of limited applicability to the UK, as it is based on a US cohort and does not attempt to synthesise the costs and benefits of the two interventions being compared in the form of an ICER. The authors used an array of effectiveness measures rather than a single measure such as the QALY, which makes interpretation of the results difficult. Other methodological limitations relate to the cohort study design, specifically comparability between the two treatment groups in terms of subject demographic characteristics. No mention was made of how service users were allocated to the treatment groups, leading to possible selection bias, although the authors used multivariate statistical analyses to attempt to control for this. The sample sizes used for clinical outcomes and the cost analysis were different and no sensitivity analyses were performed to explore uncertainty around the base-case results.

6.3.8 From evidence to recommendations (staffed accommodation)

Early in the guideline development process, the GDG distinguished between outcomes that were critical to decision-making and those that were important but not critical. As in Section 6.2.8, critical outcomes included: mortality (all causes), relapse rates (measured by exacerbation of symptoms requiring change in healthcare management), substance misuse (however measured), global and social functioning (for example, employment and accommodation), subjective quality of life, satisfaction with care, and physical morbidity. Only critical outcomes were included in the GRADE evidence profiles.

Service users with coexisting substance misuse and psychosis are not ideally treated in a general ward setting, but tend to spend long periods in hospital (Menezes *et al.*, 1996). This environment is often counter-productive, and there may be concerns about consequences of the restrictions often imposed on them regarding their potential to acquire illicit drugs, and in the disruption that is often created in their relationships with service users who do not misuse substances.

Many service users with combined diagnoses are too vulnerable to be discharged from hospital and yet gain little from staying in. There have been moves to place such service users in supported staffed accommodation that include an element of specific treatment for the substance misuse.

The evidence from RCTs is currently inconclusive. Positive results from observational studies could be explained by other factors, and were conducted in the US, which makes generalisation to the UK context problematic. Nevertheless, the GDG

felt that people with psychosis and coexisting substance misuse were often excluded from staffed accommodation or from treatment delivered when living in staffed accommodation, and there was no good reason for this. Therefore, in the absence of good-quality evidence, the GDG decided that the main priority was to ensure people were not excluded and received appropriate treatment. However, given the paucity of evidence the GDG thought that further research was needed to decide if staffed accommodation was more cost effective than a combination of hospital and home treatment. The GDG also considered that research was needed to decide whether there was a service delivery model that would allow people with psychosis and coexisting substance misuse to remain living outside hospital.

6.3.9 Recommendations (staffed accommodation)

Staffed accommodation

Exclusion from services

- 6.3.9.1 Do not exclude people with psychosis and coexisting substance misuse from staffed accommodation (such as supported or residential care) solely because of their substance misuse
- 6.3.9.2 Do not exclude people with psychosis and coexisting substance misuse from staffed accommodation aimed at addressing substance misuse solely because of their diagnosis of psychosis.

Aims of treatment

- 6.3.9.3 Ensure that people with psychosis and coexisting substance misuse who live in staffed accommodation receive treatment for both their psychosis and their substance misuse with the explicit aim of helping the person remain in stable accommodation.

6.3.10 Research recommendations (staffed accommodation)

- 6.3.10.1 Is providing treatment for psychosis and substance misuse services within staffed accommodation more cost effective than a combination of hospital and home treatment?
- 6.3.10.2 What service delivery models allow people with psychosis and coexisting substance misuse to remain living outside hospital?

6.4 INPATIENT CARE

6.4.1 Introduction

The issues surrounding the management of inpatients with psychosis and coexisting substance misuse have been discussed in some detail in Chapter 5 (Section 5.6). In

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brief, substance misuse is a common problem among people with a psychotic illness admitted to inpatient services (including secure services). Coexisting substance misuse results in longer lengths of stay in hospital and contributes substantially to incidents of violence within inpatient settings (Isaac *et al.*, 2005; Healthcare Commission, 2007). Continuing substance misuse may be a reason for delay in discharge from hospital either because psychotic symptoms are exacerbated or because of concern over future risks to themselves or others that the service user might pose should they continue to misuse substances.

Current practice

Current practice within inpatient services is not well described in the literature, although the difficulties both staff and service users experience due to coexisting substance misuse have been very clearly documented (Healthcare Commission, 2007; Loubser *et al.*, 2009). The Department of Health has issued guidance for inpatient services about working with people with psychosis and coexisting substance misuse (Department of Health, 2006), which is focused on the need to develop policies and procedures surrounding the practicalities associated with substance misuse among inpatients.

Definition of service

Any hospital-based specialist mental health service.

6.4.2 Clinical review protocol (inpatient care)

A summary of the review protocol, including the review question, information about the databases searched and the eligibility criteria used for this section of the guideline can be found in Table 19 (the full protocol can be found in Appendix 20). During the early phase of guideline development, a recent peer-reviewed systematic review (Cleary *et al.*, 2009) was identified that addressed the review question. This systematic review was used as a source of evidence, and only a new systematic search for more recent primary-level studies was conducted for the guideline (further information about the search strategy can be found in Appendix 7). A new systematic search for systematic reviews published since 2000 was conducted in August 2009 (further information about the search strategy can be found in Appendix 7).

6.4.3 Studies considered for review (inpatient care)

Two studies included in the review of psychological interventions in Chapter 7 were conducted in inpatient settings: Kavanagh and colleagues (2004b) and Lykke and colleagues (2010). Of the included studies, one was an RCT comparing motivational interviewing with standard care (Kavanagh *et al.*, 2004), and one was an observational study of cognitive milieu therapy (Lykke *et al.*, 2010).

Table 19: Clinical review protocol for inpatient care

Component	Description
Review question	1.3.1 When a person with psychosis and coexisting substance misuse is admitted to an inpatient mental health setting (including forensic settings), should treatment follow the same principles as interventions delivered in a community setting?
Electronic databases	CENTRAL, CINAHL, EMBASE, MEDLINE, PsycINFO
Date searched	01.01.2008 to 26.05.2010 ¹
Study design	RCTs and observational studies
Population	People with psychosis and coexisting substance misuse
Intervention(s)	Inpatient care
Comparison	Community care
Critical outcomes	<ul style="list-style-type: none"> • Reduced mortality (all causes) • Reduced relapse rates (measured by exacerbation of symptoms requiring change in healthcare management) • Reduced substance misuse (however measured) • Improved global and social functioning (for example, employment, accommodation) • Improved subjective quality of life • Improved satisfaction with care • Reduced physical morbidity
¹ The search is an update to Cleary and colleague (2008) and Cleary and colleagues (2009).	

A number of other studies were also conducted in inpatient settings, but these were excluded from the review because only a small proportion of the sample were diagnosed with psychosis (for example, Moos *et al.*, 2000; Rosenheck & Fontana, 2001; Timko *et al.*, 2006).

6.4.4 Clinical evidence summary (inpatient care)

Evidence from the two studies (see Chapter 7) was of low quality and difficult to interpret, but suggested possible benefit of using psychological interventions to reduce substance misuse.

6.4.5 Health economic evidence (inpatient care)

No studies assessing the cost effectiveness of inpatient care for people with psychosis and coexisting substance misuse were identified by the systematic search of the economic literature undertaken for this guideline. Details on the methods used for the systematic search of the economic literature are described in Appendix 9.

6.4.6 From evidence to recommendations (inpatient care)

The empirical literature does not at present provide good evidence to support clinical practice in this field. There are very few examples of evaluations of approaches to the management of substance misuse or specific substance misuse programmes within inpatient mental health settings. Two studies have evaluated psychological interventions delivered in the inpatient setting, but provide little evidence to reach conclusions about their effectiveness (in addition, Miles *et al.* [2007] report the results of a non-controlled study evaluating an integrated treatment for inpatients). In the absence of good-quality evidence, the GDG felt that it was appropriate to ensure that any interventions that have proven efficacy in people with psychosis and coexisting substance misuse in community settings are deployed in inpatient settings, wherever this is practicable. The GDG also felt that it was appropriate to make several recommendations for good practice concerning policies and procedures, assessment, and discharge, in particular, that people with psychosis and coexisting substance misuse are not discharged from an inpatient mental health service solely because of their substance misuse.

6.4.7 Recommendations (inpatient care)

Inpatient mental health services

Substance misuse

- 6.4.7.1 All inpatient mental health services should ensure that they have policies and procedures for promoting a therapeutic environment free from drugs and alcohol that have been developed together with service users and their families, carers or significant others. These should include: search procedures, visiting arrangements, planning and reviewing leave, drug and alcohol testing, disposal of legal and illicit substances, and other security measures. Soon after admission, provide all service users, and their families, carers or significant others, with information about the policies and procedures.
- 6.4.7.2 When carrying out a comprehensive assessment for all adults and young people admitted to inpatient mental health services, ensure that they are assessed for current substance misuse and evidence of withdrawal symptoms at the point of admission.

- 6.4.7.3 Ensure that planned detoxification from either drugs or alcohol is undertaken only:
- with the involvement and advice of substance misuse services
 - in an inpatient setting, preferably in specialist detoxification units, or designated detoxification beds within inpatient mental health services **and**
 - as part of an overall treatment plan.

For the further management of opioid detoxification see the guideline on opioid detoxification (NICE, 2007a). For the further management of assisted alcohol withdrawal see the guideline on alcohol dependence and harmful alcohol use (NICE, 2011).

Discharge

- 6.4.7.4 Do not discharge adults and young people with psychosis and coexisting substance misuse from an inpatient mental health service solely because of their substance misuse.
- 6.4.7.5 When adults and young people with psychosis and coexisting substance misuse are discharged from an inpatient mental health service, ensure that they have:
- an identified care coordinator **and**
 - a care plan that includes a consideration of needs associated with both their psychosis and their substance misuse **and**
 - been informed of the risks of overdose if they start reusing substances, especially opioids, that have been reduced or discontinued during the inpatient stay.

7 PSYCHOLOGICAL AND PSYCHOSOCIAL INTERVENTIONS

7.1 INTRODUCTION

7.1.1 Factors relating to the development of psychological interventions for people with psychosis and coexisting substance misuse

There is limited understanding of just how psychosis and substance misuse are linked (Blanchard *et al.*, 2000). While people with psychosis give many different reasons for substance use, the research consistently shows that drugs and alcohol are used by this group for many of the same reasons as those reported by the general population: to increase pleasure, to fit in with others and to alleviate negative affective states, including boredom and depression (Gregg *et al.*, 2009). However, compared with the rest of the population, these reasons may be more prominent for people with psychosis. Many people with psychosis experience negative affective symptoms (Blanchard *et al.*, 2000), and reports of drug and alcohol use to cope with distressing emotions and symptoms are common (Gregg *et al.*, 2009). Gregg and colleagues (2009) found that more than half of a large sample of people with psychosis used substances to cope with or reduce hallucinations or feelings of suspiciousness. Some people with psychosis use substances to try and counteract the side effects of antipsychotic medication (for example, Gregg *et al.*, 2007; Spencer *et al.*, 2002), or in preference to taking prescribed medication (Schneier & Siris, 1987). Restrictive lifestyles and limitations on finding pleasure in other ways may also play a part (Barrowclough *et al.*, 2006), along with a desire to fit in and be accepted by others, especially since psychosis is characterised by high levels of interpersonal difficulties (Penn *et al.*, 2004).

As highlighted in Chapter 2, alcohol is the substance most frequently used by people with psychosis. As regards illicit drugs, cannabis is most common, although rates of polysubstance use are high. This pattern of use is seen in the UK (Weaver *et al.*, 2003), the US (see review by Blanchard *et al.*, 2000) and Australia (Kavanagh *et al.*, 2004a) and is associated with the same demographic correlates as for the general population (Teesson *et al.*, 2000). It would seem that the social context and availability of substances most often influence substance choices in psychosis (Kavanagh *et al.*, 2004a; Patkar *et al.*, 1999) rather than any relationship to the service user's symptomatology (Brunette *et al.*, 1997).

Since the patterns and key motives of substance use are shared with the general population, the indications are that the psychological processes determining and maintaining use in people with psychosis may be similar to those found in populations without psychosis (Barrowclough *et al.*, 2006), and by extension that people

with psychosis may benefit from treatment approaches developed for people without psychosis. However, treatment may need to be modified to take account of issues specific to their mental health problems and associated circumstances.

Some of these issues present considerable challenges to treatment programmes. As outlined in Chapter 2, the functional aspects of substance use in psychosis may in part explain why motivation for reducing substance use in service users with psychosis is usually low (Baker *et al.*, 2002; Barrowclough *et al.*, 2001; Martino *et al.*, 2002), and for many, attempting to facilitate motivation to reduce or abstain from substances may need to be the primary focus of therapy. Importantly, people with psychosis often have low self-esteem (Barrowclough *et al.*, 2003); thus, self-efficacy may be low, which may further decrease motivation since people may feel unable to change. Additionally, psychosis is commonly associated with a range of complex issues, making the problematic aspects of substance use less obvious to the individual. This may be especially so when others in the same peer group are using at the same level, so substance use is not seen as unusual or particularly harmful. Added to these motivational issues, the nature of the mental health problem may lead to further treatment challenges. Studies indicate that engagement in treatment is often difficult and attrition rates are high (Drake *et al.*, 2004). Reasons why this might be the case include suspiciousness or paranoid symptoms exacerbated by substance use; chaotic lifestyles making appointment scheduling difficult; and problems with taking medication such as poor adherence to antipsychotics (Martino *et al.*, 2002) or the substances rendering the medication less effective.

7.1.2 Current practice

In both the UK and the US there has been agreement by consensus that a key element of treatment for psychosis and coexisting substance misuse is the need to take account of people's motivation to address or reduce their substance use (Department of Health, 2002; Ziedonis *et al.*, 2005). Since motivation to change is often low, motivational techniques, including motivational interviewing (Miller & Rollnick, 2002), have been emphasised. Motivational interviewing is 'a person-centred, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence' (Miller & Rollnick, 2002). It aims to build intrinsic motivation for change by engaging the service user, offering information and feedback from assessments where appropriate, and exploring and resolving ambivalence in an affirming and non-judgemental way. It is reported that the approach can be employed successfully with people with psychosis, although it is likely to take longer and some of the strategies may need adapting to take account of issues such as thought disorder, psychotic symptoms and impaired cognitive ability (Barrowclough *et al.*, 2005; Handmaker *et al.*, 2002; Martino *et al.*, 2002).

Cognitive behavioural therapy (CBT) is one of the most commonly used therapeutic orientations in the field of substance-use disorders (Stewart & Conrad, 2005), and it is recommended for people with schizophrenia (NCCMH, 2010), and

for depression in pregnant women with bipolar disorder (NCCMH, 2006). The CBT approach for people with psychosis and coexisting substance misuse is guided by individual formulations and by Marlatt and Gordon's (1985) model of relapse prevention. Components may include: identifying and increasing awareness of high-risk situations and warning signs; developing new coping skills for handling such situations and signs, with particular attention paid to psychotic symptoms and mental health-related problems identified as contributing to risk of use (for example, CBT strategies for dealing with distressing voices, paranoia or depressed mood); coping with cravings and urges; making lifestyle changes so as to decrease the need or urge for drugs and/or alcohol, or to increase healthy activities or alternatives to substance use; normalising lapses into substance use and developing strategies and plans for acting in the event of a lapse or relapse so that adverse consequences may be minimised; and cognitive restructuring around alcohol and drug expectancies.

7.2 EVIDENCE REVIEW

7.2.1 Introduction

A number of existing NICE guidelines have reviewed the evidence for psychological and psychosocial interventions and provided recommendations for both people with psychosis without substance misuse (that is, bipolar disorder and schizophrenia), and for people with substance misuse without psychosis (that is, alcohol misuse and drug misuse) (see Table 20).

For the purposes of the current guideline, two main issues were addressed. First, in people with psychosis and coexisting substance misuse, is there evidence that any psychological or psychosocial intervention, or combination of interventions, improve outcomes such as substance misuse, global and social functioning, and quality of life? Second, should interventions recommended for a single diagnosis (either psychosis or substance misuse) be modified as a result of the presence of the coexisting diagnosis and treatment provided? For example, in people with psychosis and coexisting substance misuse, should family intervention for treatment of the psychosis be modified as a result of the substance misuse and the treatment provided (for example, methadone)? In addition to the main issues, the GDG was also interested in whether there was any evidence that subgroups of people (for example, young people, people with a particular type of psychosis and people from BME groups) may benefit from alternative treatment strategies?

Where no evidence existed for a particular intervention in people with psychosis and coexisting substance misuse, the GDG used informal consensus to reach a conclusion about whether it was appropriate to use interventions recommended by existing NICE guidelines.

Table 20: Relevant interventions included in current NICE guidelines

Intervention	Existing NICE guideline
<i>Brief interventions</i>	
Brief interventions for people not in contact with services	<i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)
Brief interventions for people in contact with services	<i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)
<i>Self-help-based interventions</i>	
Self-help interventions (including guided self-help/ bibliotherapy, self-help groups, 12-step based interventions)	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011) <i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)
<i>Behavioural therapies</i>	
Cue exposure	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)
Behavioural self-control training	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)
Contingency management	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011) <i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)
<i>Cognitive and behavioural therapies</i>	
Standard CBT	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011) <i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a) <i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b) <i>Bipolar Disorder</i> (NCCMH, 2006) <i>Schizophrenia</i> (NCCMH, 2010)
Coping and social skills training	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)

Continued

Table 20: (Continued)

Intervention	Existing NICE guideline
Relapse prevention	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)
<i>Family-based interventions</i>	
Family intervention	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011) <i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a) <i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b) <i>Bipolar Disorder</i> (NCCMH, 2006) <i>Schizophrenia</i> (NCCMH, 2010)
<i>Motivational techniques</i>	
Motivational interviewing, motivational enhancement therapy	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011) <i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)
<i>Social network and environment-based therapies</i>	
Social behaviour and network therapy	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)
The community reinforcement approach	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)
Social systems interventions	<i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a) <i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)
<i>Other interventions</i>	
Adherence therapy	<i>Schizophrenia</i> (NCCMH, 2010)
Arts therapies	<i>Schizophrenia</i> (NCCMH, 2010)
Cognitive remediation	<i>Schizophrenia</i> (NCCMH, 2010)
Counselling and supportive psychotherapy	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol</i>

Continued

Table 20: (Continued)

Intervention	Existing NICE guideline
	<i>Dependence</i> (NCCMH, 2011) <i>Schizophrenia</i> (NCCMH, 2010)
Couples-based interventions (including behavioural couples therapy)	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011) <i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a) <i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)
Individual drug counselling	<i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a)
Interpersonal and social rhythm therapy	<i>Bipolar Disorder</i> (NCCMH, 2006)
Interpersonal therapy	<i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a) <i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)
Multi-modal care programmes	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011) <i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)
Psychoeducational interventions	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011) <i>Bipolar Disorder</i> (NCCMH, 2006) <i>Schizophrenia</i> (NCCMH, 2010)
Psychodynamic and psychoanalytic therapies	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011) <i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a) <i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b) <i>Schizophrenia</i> (NCCMH, 2010)
Social skills training	<i>Schizophrenia</i> (NCCMH, 2010)
Vocational interventions	<i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)

7.2.2 Definitions

Brief interventions

In the NICE *Drug Misuse: Psychosocial Interventions* guideline (NCCMH, 2008b), brief interventions were defined as interventions with a maximum duration of two sessions. The main aim of the intervention is to enhance the possibility of change in terms of abstinence or the reduction of harmful behaviours associated with drug misuse. The principles of brief interventions include expressing empathy with the service user, not opposing resistance and offering feedback, and with a focus on reducing ambivalence about drug misuse and possible treatment. A number of brief interventions are based on principles drawn from motivational interviewing. Brief interventions can be conducted in a variety of settings, including non-medical settings, and can be given opportunistically to people not in formal drug treatment or as an adjunct to formal structured drug treatment (Ashton, 2005).

Self-help-based interventions

Self-help intervention (guided self-help/bibliotherapy)

In the NICE guideline *Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence* (NCCMH, 2011), a self-help intervention was defined as an approach where a healthcare professional (or paraprofessional) would facilitate the use of self-help materials by introducing, monitoring and reviewing the outcome of such treatment. The intervention is limited in nature, usually no more than three to five sessions, some of which may be delivered by telephone. Self-help interventions are designed to modify drinking behaviour and they make use of a range of books, websites, CD-ROMs. This treatment uses the principles of CBT and motivational enhancement therapy, and is manual-based derived from an evidence-based intervention and designed specifically for the purpose – an example is *Problem Drinkers: Guided Self-Change Treatment* (Sobell & Sobell, 1993). The service user has an initial assessment usually followed by four treatment sessions and two follow-up telephone calls.

Self-help groups

In the NICE *Drug Misuse: Psychosocial Interventions* guideline (NCCMH, 2008b), a self-help group was defined as a group of people who misuse drugs who meet regularly to provide help and support for one another. The group is typically community-based, peer-led and non-professional.

12-step self-help groups

In the NICE *Drug Misuse: Psychosocial Interventions* guideline (NCCMH, 2008b), a 12-step self-help group was defined as a non-profit-making fellowship of people who meet regularly to help each other remain abstinent. The core of the 12-step programme is a series of 12 steps that include admitting to a drug problem, seeking help, self-appraisal, confidential self-disclosure, making amends, when possible, where harm has been done, achieving a spiritual awakening and supporting other drug-dependent people who want to recover.

Twelve-step facilitation (TSF)

In the NICE guideline *Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence* (NCCMH, 2011), TSF was defined as an intervention based on the 12-step or AA concept that alcohol dependence is a spiritual and medical disease. As well as a goal of abstinence, this intervention aims to actively encourage commitment to and participation in AA meeting. Participants are asked to keep a journal of AA attendance and participation and are given AA literature relevant to the 'step' of the programme the service user has reached. TSF is highly structured and manualised (Nowinski *et al.*, 1992) and involves a weekly session in which the service user is asked about their drinking, AA attendance and participation, and given an explanation of the themes of the current sessions; goals for AA attendance are set.

Behavioural therapies

Cue exposure

In the NICE guideline *Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence* (NCCMH, 2011), cue exposure was defined as a treatment for alcohol misuse that is based on both learning theory models and social learning theory and suggests that environmental cues associated with drinking can elicit conditioned responses, which can in turn lead to a relapse (Niaura *et al.*, 1988). The first case study using cue exposure treatment for excessive alcohol consumption was reported by Hodgson and Rankin (1976). Treatment is designed to reduce craving for alcohol by repeatedly exposing the service user to alcohol-related cues until the service user 'habituates' to the cues and can hence maintain self-control in a real-life situation where these cues are present.

Behavioural self-control training

In the NICE guideline *Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence* (NCCMH, 2011), behavioural self-control training (also referred to as 'behavioural self-management training') was defined as an approach based on the techniques described by Miller and Muñoz (1976). Service users are taught to set limits for drinking and self-monitor drinking episodes and are offered refusal skills training and training for coping behaviours in high-risk relapse situations. Behavioural self-control training is focused on a moderation goal rather than abstinence.

Contingency management

In the NICE *Drug Misuse: Psychosocial Interventions* guideline (NCCMH, 2008b), contingency management was defined as an approach that considers drug use as an example of operant behaviour that is maintained partly by the pharmacological effects of the drug in combination with other social and non-drug reinforcement provided by the drug-using lifestyle (Petry, 2006). In the NICE guideline *Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence* (NCCMH, 2011), contingency management was described as a system

of reinforcement designed to make continual alcohol use less attractive and abstinence more attractive.

Contingency management seeks to provide alternative incentives contingent on abstinence from a particular target drug. There are four primary methods of providing incentives:

- *Voucher-based reinforcement*: people who misuse drugs or alcohol receive vouchers with various monetary values (usually increasing in value after successive periods of abstinence) for providing biological samples (usually urine) that are negative for the tested substances. These vouchers are withheld when the biological sample indicates recent substance use. Once earned, vouchers are exchanged for goods or services that are compatible with a substance-free lifestyle.
- *Prize-based reinforcement*: this is more formally referred to as the ‘variable magnitude of reinforcement procedure’ (Prendergast *et al.*, 2006). Participants receive draws, often from slips of paper, for providing a negative biological specimen. Provision of a specimen indicating recent substance use results in the withholding of draws. There is roughly a 50% chance of winning a ‘prize’, the value of which may range from £1 to £100 (Prendergast *et al.*, 2006). The other 50% of the draws typically say ‘Good job!’ or similar.
- *Clinic privileges*: participants receive privileges, such as a take-home methadone dose (for example, Stitzer *et al.*, 1992), for performing the target behaviour, for example, providing a negative biological sample. Privileges are withheld when the target behaviour is not performed.
- *Cash incentives*: people who misuse drugs receive cash (usually of a relatively low value, for example, £1.50 to £10) for performing the target behaviour, such as submitting a urine sample negative for drugs or adherence with particular interventions. Cash incentives are withheld when the target behaviour is not performed.

Cognitive and behavioural therapies

Standard CBT

In the NICE guidelines *Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence* (NCCMH, 2011) and *Drug Misuse: Psychosocial Interventions* (NCCMH, 2008b), standard CBT was defined as a discrete, time-limited, structured psychological intervention, derived from a cognitive model of substance misuse (Beck *et al.*, 1993). There is an emphasis on identifying and modifying irrational thoughts, managing negative mood and intervening after a lapse to prevent a full-blown relapse.

In the NICE guideline *Schizophrenia* (NCCMH, 2010)²⁰, CBT was defined as a discrete psychological intervention where service users:

- establish links between their thoughts, feelings or actions with respect to the current or past symptoms, and/or functioning, and
- re-evaluate their perceptions, beliefs or reasoning in relation to the target symptoms.

²⁰A similar definition was provided in the NICE guideline *Bipolar Disorder* (NCCMH, 2006).

In addition, a further component of the intervention should involve the following:

- service users monitoring their own thoughts, feelings or behaviours with respect to the symptom or recurrence of symptoms, and/or
- promotion of alternative ways of coping with the target symptom, and/or
- reduction of distress, and/or
- improvement of functioning.

Coping and social skills training

In the NICE guideline *Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence* (NCCMH, 2011), coping and social skills training was defined as a variant of CBT that is based on social learning theory of addiction and the relationship between drinking behaviour and life problems (Kadden *et al.*, 1992; Marlatt & Gordon, 1985). Treatment is manual-based (Marlatt & Gordon, 1985) and involves increasing the person's ability to cope with high-risk social situations and interpersonal difficulties.

Relapse prevention

In the NICE guideline *Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence* (NCCMH, 2011), relapse prevention was defined as a CBT adaptation based on the work of Marlatt and Gordon (1985). It incorporates a range of cognitive and behavioural techniques to identify high-risk situations, alter expectancies and increase self-efficacy. This differs from standard CBT in the emphasis on training people who misuse alcohol to develop skills to identify situations or states where they are most vulnerable to alcohol use, to avoid high-risk situations, and to use a range of cognitive and behavioural strategies to cope effectively with these situations (Annis, 1986; Marlatt & Gordon, 1985).

Family-based interventions

Family intervention

In the NICE guideline *Schizophrenia* (NCCMH, 2010), family intervention was defined as discrete psychological interventions where:

- family sessions have a specific supportive, educational or treatment function and contain at least one of the following components:
 - problem solving/crisis management work, or
 - intervention with the identified service user.

Motivational techniques

Motivational interviewing

For the purposes of the current guideline, motivational interviewing was defined as 'a client-centred, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence' (Miller & Rollnick, 2002). As stated in Section 7.1.2, it aims to build intrinsic motivation for change and involves engaging the service user, offering information and feedback from assessments where appropriate, and exploring and resolving ambivalence in an affirming and non-judgemental way. In people with psychosis, it is likely to take longer and some of the strategies may need

Psychological and psychosocial interventions

adapting to take account of issues such as thought disorder, psychotic symptoms and impaired cognitive ability (Barrowclough *et al.*, 2005; Handmaker *et al.*, 2002, Martino *et al.*, 2002).

Motivational enhancement therapy

In the NICE guideline *Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence* (NCCMH, 2011), motivational enhancement therapy was defined as an approach based on the methods and principles of motivational interviewing (Miller *et al.*, 1992). It is person-centred and aims to produce rapid internally motivated changes by exploring and resolving ambivalence towards behaviour. The strategy of motivational interviewing is not to guide the service user through recovery step by step, but to use motivational methods and techniques to utilise the service user's resources. A more specific manualised and structured form of motivational interviewing based on the work of Project MATCH is usually utilised (Project MATCH Research Group, 1993).

Social network and environment-based therapies

Social behaviour and network therapy

In the NICE guideline *Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence* (NCCMH, 2011), social behaviour and network therapy was defined as comprising a range of cognitive and behavioural strategies to help service users build social networks supportive of change, and which involve members of the service user's networks (for example, family, carers or significant others) (Copello *et al.*, 2002). The integration of these strategies has the aim of helping the service user to build 'positive social support for a change in drinking'.

The community reinforcement approach

In the NICE guideline *Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence* (NCCMH, 2011), the community reinforcement approach (Hunt & Azrin, 1973; Meyers & Miller, 2001; Sisson & Azrin, 1986), was defined as a technique where emphasis is placed on maintaining abstinence through the development of activities that do not promote alcohol use, for example, recreational and social activities, employment and family involvement.

Social systems interventions

In the NICE guideline *Drug Misuse: Psychosocial Interventions* (NCCMH, 2008b), it was suggested that social systems interventions were developed primarily (but not exclusively) for young people. These interventions aim to address a range of risk and protective factors for drug misuse within the service user's wider social network. Family members, partners, significant others, close friends and other individuals (such as teachers or probation officers) may be involved in joint treatment sessions with the service user in a range of settings (for example, Henggeler *et al.*, 1999).

Other interventions

Adherence therapy

In the NICE guideline *Schizophrenia* (NCCMH, 2010), adherence therapy was defined as any programme involving interaction between service providers and service users, where service users are offered support, information and management strategies to improve their adherence to medication, and also improve symptoms and quality of life, and prevent relapse.

Arts therapies

In the NICE guideline *Schizophrenia* (NCCMH, 2010), arts therapies were defined as complex interventions that combine psychotherapeutic techniques with activities aimed at promoting creative expression. In all arts therapies:

- the creative process is used to facilitate self-expression within a specific therapeutic framework
- the aesthetic form is used to ‘contain’ and give meaning to the service user’s experience
- the artistic medium is used as a bridge to verbal dialogue and insight-based psychological development if appropriate
- the aim is to enable the service user to experience him/herself differently and develop new ways of relating to others.

Arts therapies currently provided in the UK comprise: art therapy or art psychotherapy, dance movement therapy, body psychotherapy, dramatherapy and music therapy.

Cognitive remediation

In the NICE guideline *Schizophrenia* (NCCMH, 2010), cognitive remediation was defined as:

- an identified procedure that is specifically focused on basic cognitive processes, such as attention, working memory or executive functioning, and
- having the specific intention of bringing about an improvement in the level of performance on that specified cognitive function or other functions, including daily living, social or vocational skills.

Counselling and supportive psychotherapy

In the NICE guideline *Schizophrenia* (NCCMH, 2010), counselling and supportive therapy were defined as discrete psychological interventions that:

- are facilitative, non-directive and/or relationship focused, with the content largely determined by the service user, and
- do not fulfil the criteria for any other psychological intervention.

Couples-based interventions

The content and definition of couples therapy can vary and reflect different approaches, for example, cognitive behavioural or psychodynamic (NCCMH, 2011). In the NICE guideline *Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence* (NCCMH, 2011),

couples-based interventions (including behavioural couples therapy) were defined as involving the spouse or partner expressing active support for the person who misuses alcohol in reducing alcohol use, including via the use of behavioural contracts. Couples are helped to improve their relationship through more effective communication skills, and encouraged to increase positive behavioural exchanges through acknowledgement of pleasing behaviours and engagement in shared recreational activities (Fals-Stewart *et al.*, 2005). Standard behavioural couples therapy is manual-based and structured (Fals-Stewart *et al.*, 2004) and combines cognitive-behavioural treatment strategies with methods that address relationship issues arising from alcohol misuse as well as more general relationship problems with the aim of reducing distress.

Individual drug counselling

In the NICE guideline *Drug Misuse: Opioid Detoxification* (NCCMH, 2008a), individual drug counselling was defined as the assessment of an individual's needs, provision of information and referral to services to meet their needs (including psychosocial interventions, methadone and residential rehabilitation). No attempt is made to engage in any specific formal psychological intervention. Sessions are normally weekly and last 15 to 20 minutes (Rawson *et al.*, 1983). To some extent this resembles keyworking as used in the UK drug treatment field.

Interpersonal and social rhythm therapy

In the NICE guideline *Bipolar Disorder* (NCCMH, 2006), interpersonal and social rhythm therapy was defined as a discrete, time-limited, structured psychological intervention derived from an interpersonal model of affective disorders that focuses on:

- working collaboratively with the therapist to identify the effects of key problematic areas related to interpersonal conflicts, role transitions, grief and loss, and social skills, and their effects on current symptoms, feelings states and/or problems
- seeking to reduce symptoms by learning to cope with or resolve these interpersonal problem areas
- seeking to improve the regularity of daily life in order to minimise relapse.

Interpersonal therapy

In the NICE guideline *Drug Misuse: Psychosocial Interventions* (NCCMH, 2008b), interpersonal therapy was defined as a discrete, time-limited, structured psychological intervention, originally developed for the treatment of depression, which focuses on interpersonal issues and where therapist and service user:

- work collaboratively to identify the effects of key problematic areas related to interpersonal conflicts, role transitions, grief and loss, and social skills, and their effects on current drug misuse, feelings states and/or problems
- seek to reduce drug misuse problems by learning to cope with or resolve interpersonal problem areas (Weissman *et al.*, 2000).

Multi-modal care programmes

In the NICE guideline *Drug Misuse: Psychosocial Interventions* (NCCMH, 2008b), multi-modal care programmes were defined as those including a combination of therapy activities delivered in intensive schedules of 10 hours per week or more. Content of these programmes varies but would usually include education, daily living skills and other psychologically based interventions (for example, CBT, relapse prevention and reinforcement-based approaches), mostly delivered in group format. Such programmes are not common in generic drug treatment services in the UK, although they are available in some areas. They are more commonly used within drug services linked to the criminal justice system as a way of providing more intensive programmes for those referred. The current use of these interventions in the UK is limited and their distribution is not well understood.

Psychoeducational interventions

In the NICE guideline *Schizophrenia* (NCCMH, 2010), psychoeducational interventions were defined as:

- any programme involving interaction between an information provider and service users or their family and carers, which has the primary aim of offering information about the condition
 - the provision of support and management strategies to service users and carers.
- To be considered as well-defined, the educational strategy should be tailored to the need of individuals or carers.

Psychodynamic and psychoanalytic therapies

In the NICE guideline *Schizophrenia* (NCCMH, 2010), psychodynamic interventions were defined as having:

- regular therapy sessions based on a psychodynamic or psychoanalytic model
- sessions that could rely on a variety of strategies (including explorative insight-orientated, supportive or directive activity), applied flexibly.

To be considered as well-defined the psychodynamic intervention needed to include working with transference and unconscious processes.

Psychoanalytic interventions were defined as having:

- regular individual sessions planned to continue for at least 1 year
- analysts required to adhere to a strict definition of psychoanalytic technique.

To be considered as well-defined the psychoanalytic intervention needed to involve working with the unconscious and early child–adult relationships.

Social skills training

In the NICE guideline *Schizophrenia* (NCCMH, 2010), social skills training was defined as a structured psychosocial intervention (group or individual) that aims to enhance social performance, and reduce distress and difficulty in social situations. The intervention must:

- include behaviourally-based assessments of a range of social and interpersonal skills
- place importance on both verbal and non-verbal communication, the individual's ability to perceive and process relevant social cues, and respond to and provide appropriate social reinforcement.

Vocational interventions

In the NICE guideline *Drug Misuse: Psychosocial Interventions* (NCCMH, 2008b), pre-vocational training was defined as any approach to vocational rehabilitation in which participants are expected to undergo a period of preparation before being encouraged to seek competitive employment. This preparation could involve either work in a sheltered environment (such as a workshop or work unit), or some form of pre-employment training or transitional employment (Crowther *et al.*, 2001). Supported employment was defined as any approach to vocational rehabilitation that attempts to place service users immediately in competitive employment. It is acceptable for supported employment to begin with a short period of preparation, but this has to be of less than 1 month's duration and not involve work placement in a sheltered setting, training or transitional employment (Crowther *et al.*, 2001).

7.2.3 Clinical review protocol (psychological and psychosocial interventions)

A summary of the review protocol, including the review questions, information about the databases searched, and the eligibility criteria used for this section of the guideline, can be found in Table 21 (the full protocol can be found in Appendix 20). During the early stages of guideline development, a recent Cochrane review (Cleary *et al.*, 2008) and related peer-reviewed publication (Cleary *et al.*, 2009) were identified that addressed the review question. These systematic reviews were used as a source of evidence, and only a new systematic search for more recent primary-level studies was conducted for the guideline (further information about the search strategy can be found in Appendix 7).

If the evidence allowed, the following sub-question was asked for review question 2.2.1 and 2.4.1: Are there sub-groups of people (for example, young people, people with a particular type of psychosis, or BME groups) who may benefit from alternative strategies? In addition, the following sub-question was asked for review question 2.4.1: Should interventions be matched to stages of the treatment process (that is, engagement, persuasion, active treatment, relapse prevention)?

7.2.4 Studies considered for review (psychological and psychosocial interventions)²¹

Eleven RCTs that were included in the review by Cleary and colleagues (2008), met the eligibility criteria for this review: BAKER2006 (Baker *et al.*, 2006), BARROW-CLOUGH2001 (Barrowclough *et al.*, 2001), EDWARDS2006 (Edwards *et al.*, 2006), GRAEBER2003 (Graeber *et al.*, 2003), HELLERSTEIN1995 (Hellerstein *et al.*, 1995), JERRELL1995 (Jerrell & Ridgely, 1995), KAVANAGH2004 (Kavanagh *et al.*, 2004b), RIES2004 (Ries *et al.*, 2004), SCHMITZ2002 (Schmitz *et al.*, 2002), TRACY2007 (Tracy *et al.*, 2007), and WEISS2007 (Weiss *et al.*, 2007). In addition,

²¹Here and elsewhere in the guideline, each RCT considered for review is referred to by a study ID (primary author and date of study publication).

Table 21: Clinical review protocol for the review of psychological and psychosocial interventions

Component	Description
Review question	<p>1.2.2 In people with psychosis and coexisting substance misuse, do psychological/psychosocial interventions when compared with an alternative management strategy lead to improved outcomes?</p> <p>2.2.1 For people with psychosis and coexisting substance misuse, should the psychological and psychosocial treatment (family intervention, CBT, arts therapies) of their psychosis be modified as a result of the substance misuse and the treatment provided (for example, methadone, buprenorphine, psychological treatment)?</p> <p>a) During the acute phase b) During the non-acute phase If so, how should treatment be modified?</p> <p>2.4.1 For people with psychosis and coexisting substance misuse, should psychological and psychosocial treatment for substance misuse be modified as a result of the presence of psychosis and the treatment provided?</p> <p>(a) During the acute phase (b) During non-acute phase If so, how should treatment be modified?</p>
Electronic databases	CENTRAL, CINAHL, EMBASE, MEDLINE, PsycINFO
Date searched	01.01.2008 to 26.05.2010 ¹
Study design	RCTs and observational studies
Population	People with psychosis and coexisting substance misuse
Intervention(s)	Individual psychological and psychosocial interventions for people with psychosis and coexisting substance misuse
Comparison	An alternative management strategy
Critical outcomes	<p>Reduced mortality (all causes)</p> <p>Reduced relapse rates (measured by exacerbation of symptoms requiring change in healthcare management)</p> <p>Reduced substance misuse (however measured)</p> <p>Improved global and social functioning (for example, employment, accommodation)</p> <p>Improved subjective quality of life</p> <p>Improved satisfaction with care</p> <p>Reduced physical morbidity</p>
¹ The search is an update to Cleary and colleagues (2008) and Cleary and colleagues (2009).	

two further trials were identified during the search for evidence: BARROWCLOUGH2010 (Barrowclough *et al.*, 2010)²² and WEISS2009 (Weiss *et al.*, 2009). Full study characteristics (and any associated references), as well as a list of excluded studies can be found in Appendix 13.

Of the 13 included RCTs, four compared CBT with standard care (EDWARDS2006, SCHMITZ2002, WEISS2007, WEISS2009), two compared motivational interviewing with standard care (GRAEBER2003, KAVANAGH2004), two compared group therapy (social skills training/psychoeducation) with standard care (HELLERSTEIN1995, JERRELL1995), two compared contingency management with standard care (RIES2004, TRACY2007), and three compared CBT combined with motivational interviewing with standard care (BAKER2006, BARROWCLOUGH2001, BARROWCLOUGH2010) (see Table 22 and Table 23) for summary information about each trial).

In addition to the RCTs, three observational studies (James *et al.*, 2004; Santa Ana *et al.*, 2007; Weiss *et al.*, 2000), that were included in the review by Cleary and colleagues (2008), met the eligibility criteria for review. A further three observational studies (Helmus *et al.*, 2003; Lykke *et al.*, 2010; Tyrer *et al.*, 2011) were found during the search for evidence.

Of the six observational studies, one compared CBT with standard care (Weiss *et al.*, 2000), one compared motivational interviewing with therapist attention activity control (Santa Ana *et al.*, 2007), one compared group psychotherapy with standard care (single educational session) (James *et al.*, 2004), one examined a contingency management programme (Helmus *et al.*, 2003), one studied cognitive milieu therapy (Lykke *et al.*, 2010), and one looked at nidotherapy (Tyrer *et al.*, 2011) (see Section 7.2.6 for further information about each study and a narrative summary of results).

Regarding the BARROWCLOUGH2010 trial, it should be noted that the GDG received the trial report only after the consultation period for the guideline had finished. The study had been accepted for publication in the *British Medical Journal*, and the quality of the study was judged by the GDG to be acceptable, therefore a fresh meta-analysis was undertaken post-consultation, of what was now three trials comparing CBT combined with motivational interviewing against standard care. This analysis is presented in the results, but readers should be aware that this small part of the guideline has not been consulted upon. As the fresh meta-analysis did not lead to any changes in the recommendations, the GDG, following consultation with NICE, deemed the lack of consultation on this point to be acceptable.

7.2.5 Evidence from RCTs (psychological and psychosocial interventions)

Meta-analysis was used to synthesise the evidence for each comparison (GRADE summary of findings tables are shown in Table 24, Table 25, Table 26, Table 27 and Table 28).

The forest plots and full GRADE evidence profiles can be found in Appendix 14 and 15, respectively.

²²BARROWCLOUGH2010 is also mentioned in Cleary and colleagues (2008) as an ongoing study.

Table 22: Study information table for trials comparing CBT, motivational interviewing, and CBT + motivational interviewing with standard care²³

	CBT versus standard care	Motivational interviewing versus standard care	CBT + motivational interviewing versus standard care
Total no. of trials (N)	4 RCTs (216)	2 RCTs (56)	3 RCTs (493)
Study ID	(1) EDWARDS2006 (2) SCHMITZ2002 (3) WEISS2007 (4) WEISS2009	(1) GRAEBER2003 (2) KAVANAGH2004	(1) BAKER2006 (2) BARROWCLOUGH 2001 (3) BARROWCLOUGH 2010
Number randomised	(1) 47 (2) 46 (3) 62 (4) 61	(1) 30 (2) 25	(1) 130 (2) 36 (3) 327
Diagnosis	(1) 72% DSM-IV schizophrenia/schizophreniform, 11% affective psychosis, 17% NOS/delusional/ other and all actively using cannabis (2) 100% DSM-IV bipolar disorder and substance-use disorder (72% alcohol, 61% cocaine, 26% marijuana, 59% were dependent on more than one drug) (3) 100% DSM-IV bipolar disorder and substance dependence (most common: 27% alcohol, 26% marijuana) (4) 100% DSM-IV bipolar disorder with dependence (26.2% alcohol, 8.2% drugs, 65.6% both)	(1) 100% DSM-IV schizophrenia and met criteria for an alcohol-use disorder within the 3-month period before study enrolment; service users with additional non-alcohol substance use (except active intravenous drug misuse) were eligible for protocol enrolment (2) 100% DSM-IV psychotic disorder with a current DSM-IV substance-use disorder (88% alcohol, 76% cannabis, 12% inhalants, 8% cocaine or heroin)	(1) 75% ICD-10 schizophrenia or schizoaffective disorder with SCID-I diagnosis of abuse or dependence in the past 12 months (alcohol 69%, cannabis 74%, amphetamine 42%) ¹ (2) ICD-10 and DSM-IV schizophrenia or schizoaffective disorder with DSM-IV substance abuse or dependence (3) ICD-10 and DSM-IV schizophrenia, schizophreniform or schizoaffective disorder with DSM-IV substance abuse or dependence
Ethnicity	(1) Not reported (2) 80% white (3) 94% white (4) 92% white	(1) 40% white, 40% Hispanic, 20% African American (2) 84% white	(1) Not reported (2) White European (3) 81% white, 11% black

Continued

²³The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), with additional information extracted from the primary study publication (see Appendix 13 for further details about each study).

Table 22: (Continued)

	CBT versus standard care	Motivational interviewing versus standard care	CBT + motivational interviewing versus standard care
Treatment length	(1) 6 months (2) 3 months (3) 8 months (4) 6 months	(1) 6 months (2) 12 months	(1) 15 weeks (follow-up at 6 and 12 months) (2) 9 months (follow-up at 12 and 18 months) (3) 12 months (follow-up at 24 months)
Country	(1) Australia (2)–(4) US	(1) US (2) Australia	(1) Australia (2)–(3) UK
Intervention (n)	(1) Cannabis-focused CBT (weekly over 3 months) (n = 23) (2) Medication monitoring and CBT (16 sessions) (n = 25) (3) Integrated group CBT (20 weekly 1-hour sessions) (n = 31) (4) Integrated group CBT (12 weekly 1-hour sessions) (n = 31)	(1) Motivational interviewing (3 sessions) (n = 15) (2) Brief motivational intervention (6 to 9 sessions) (n = 13)	(1) Motivational interviewing and CBT (10 weekly 1-hour sessions) + routine care (n = 65) (2) Family support worker plus motivational interviewing, manualised individual CBT for the participant and CBT for family/carer (a total of 29 individual sessions) + routine care (n = 18) (3) Motivational interviewing and CBT (26 individual sessions delivered over 12 months) + routine care (n = 164)
Control (n)	(1) Psychoeducation + standard EPPIC care (n = 24) (2) Standard care (included medication monitoring) (n = 21) (3) Group drug counselling (n = 31) (4) Group drug counselling (n = 30)	(1) Three-session educational intervention (n = 15) (2) Standard care (n = 12)	(1) Routine care plus self-help books (n = 65) (2) Routine care plus family support worker (n = 18) (3) Routine care (n = 163)
¹ Some participants were dependent on more than one of these.			

Table 23: Study information table for trials comparing group approaches or contingency management with standard care²⁴

	Group psychotherapy/ behavioural skills programme versus standard care	Contingency management versus standard care
Total no. of trials (N)	2 RCTs (94)	2 RCTs (71)
Study ID	(1) HELLERSTEIN1995 (2) JERRELL1995	(1) RIES2004 (2) TRACY2007
Number randomised	(1)–(2) 47	(1) 41 (2) 30
Diagnosis	(1) RDC schizophrenia with 74% DSM-III-R psychoactive substance abuse/dependence (2) 62% DSM-III-R schizophrenia with coexisting substance-use disorder	(1) 73% schizophrenia or schizoaffective disorder, 24% major recurrent depression or bipolar disorder, 2% other, and DSM-IV substance-use disorder with active substance use in the previous 6 months (2) 100% current or lifetime DSM-IV diagnosis of an Axis I psychiatric disorder and current diagnosis of cocaine or alcohol abuse or dependence
Ethnicity	(1) 43% African American, 32% Hispanic (2) 64% white	(1)–(2) Not reported
Treatment length	(1) 8 months (2) 18 months	(1) 6.5 months (2) 1 month
Country	(1)–(2) US	(1)–(2) US
Intervention (n)	(1) Group outpatient psychotherapy and psychoeducation plus drug treatment all at same site (twice weekly) (n = 23) (2) Behavioural skills programme: psychoeducational approach with self-management skills, repeated practice and reinforcement (weekly group sessions with two licensed clinicians) (n = 22)	(1) Contingency management of supplementary social security income/food vouchers and motivational message (n = 22) (2) Petry and colleagues' (2000) low-cost contingency management with variable ratio reinforcement (n = 15)
Control (n)	(1) Comparable levels of psychiatric care and substance misuse treatment from separate sites without formal case coordination (n = 24) (2) 12-step recovery programme: clinical staff (some 'recoverers') offered mock AA meetings within the Mental Health Centre, took or referred service users to community AA meetings, facilitated a sponsor relationship and provided counselling (n = 25)	(1) Non-contingency management of benefits (n = 19) (2) Assessment-only treatment (n = 15)

²⁴The information contained in this table is derived from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), with additional information extracted from the primary study publication (see Appendix 13 for further details about each study).

Table 24. GRADE summary of findings table for RCTs comparing CBT with standard care²⁵

Outcomes	Effect size (95% CI)	No. of participants (studies)	Quality of the evidence (GRADE)
<i>Substance use: 1. Using substances</i>			
by 1 month – alcohol or drugs	RR 0.48 (0.26 to 0.9)	61 (1 study) ⁴	Moderate ¹
<i>Substance use: 2. Using substances</i>			
by 3 months – alcohol	RR 5.88 (0.79 to 44.03)	46 (1 study) ⁵	Low ^{1,2}
by 3 months – drugs	RR 2.02 (0.85 to 4.8)	46 (1 study) ⁵	Low ^{1,2}
by 3 months – alcohol or drugs	RR 0.74 (0.55 to 1)	61 (1 study) ⁴	Low ^{1,2}
<i>Substance use: 3. Any substance (skewed data) - average score (ASI)</i>			
by 3 months	MD –0.07 (–0.16 to 0.02)	62 (1 study) ⁶	Low ^{1,3}
by 6–9 months	MD –0.06 (–0.16 to 0.04)	62 (1 study) ⁶	Low ^{1,3}
<i>Substance use: 4. Any substance (skewed data) - days reporting any substance use (ASI)</i>			
by 3 months	MD –2.1 (–5.9 to 1.7)	61 (1 study) ⁴	Low ^{1,2,3}
by 6 months	MD –2.7 (–7.25 to 1.85)	61 (1 study) ⁴	Low ^{1,2,3}
<i>Substance use: 5. Drugs use (skewed data)</i>			
by 3 months	MD 0.05 (–1.55 to 1.66)	103 (2 studies) ^{4,5}	Low ^{1,3}
by 6 months	MD –3.7 (–7.99 to 0.59)	57 (1 study) ⁴	Low ^{1,2,3}
<i>Substance use: 6. Alcohol use (skewed data)</i>			
by 3 months	MD –1.95 (–4.48 to 0.58)	103 (2 studies) ^{4,5}	Low ^{1,2,3}
by 6 months	MD 0.00 (–3.66 to 3.66)	57 (1 study) ⁴	Low ^{1,2,3}
<p><i>Note.</i> An RR of <1 favours the intervention, negative MDs favour the intervention. ¹ OIS (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met. ² CI includes both (1) no effect and (2) appreciable benefit or appreciable harm. ³ Skewed data. ⁴ WEISS2009. ⁵ SCHMITZ2002. ⁶ WEISS2007.</p>			

²⁵Where available, data were extracted from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), otherwise from the primary study publication (see Appendix 13 for further details about each study).

Table 25. GRADE summary of findings table for RCTs comparing motivational interviewing with standard care²⁶

Outcomes	Effect size (95% CI)	No. of participants (studies)	Quality of the evidence (GRADE)
<i>Substance use: 1. Not abstinent or not improved on all substances</i>			
by 12 months	RR 0.51 (0.24 to 1.10)	25 (1 study) ⁴	Low ^{1,2}
<i>Substance use: 2. Not abstaining from alcohol</i>			
by 3 months	RR 0.52 (0.26 to 1.03)	28 (1 study) ⁵	Low ^{1,2}
by 6 months	RR 0.36 (0.17 to 0.75)	28 (1 study) ⁵	Moderate ¹
<i>Substance use: 3. Other measures of alcohol use (skewed data) – drinking days</i>			
by 6 months	SMD –1.29 (–2.12 to –0.46)	28 (1 study) ⁵	Low ^{1,3}
<p><i>Note.</i> An RR of <1 favours the intervention, negative SMDs favour the intervention. ¹ OIS (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met. ² CI includes both (1) no effect and (2) appreciable benefit or appreciable harm. ³ Skewed data. ⁴ KAVANAGH2004. ⁵ GRAEBER2003.</p>			

7.2.6 Observational studies (psychological/ psychosocial interventions)

Cleary and colleagues (2009) included three observational studies that met the guideline eligibility criteria. Of these, one US study (Weiss *et al.*, 2000) of people with bipolar disorder and coexisting substance dependence was classified as examining integrated group sessions (12 to 20 weekly 1-hour sessions) using a CBT relapse prevention model (n = 21) versus standard care (n = 24). After 6 months' follow-up, there were statistically significant treatment group differences favouring CBT on a number of substance misuse outcomes and a measure of mania. However, assessment was not blind, although the substance misuse outcomes were verified by urine toxicology screens and breath alcohol assessments.

One US study (Santa Ana *et al.*, 2007), was described by Cleary and colleagues (2009) as a comparison of group motivational interviewing (two 2-hour sessions; n = 50) versus a control group (group discussion, two 2-hour sessions; n = 51).

²⁶Where available, data were extracted from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), otherwise from the primary study publication (see Appendix 13 for further details about each study).

Table 26: GRADE summary of findings table for RCTs comparing CBT plus motivational interviewing with standard care²⁷

Outcomes	Effect size (95% CI)	No. of participants (studies)	Quality of the evidence (GRADE)
Death – by about 1 year	RR 0.73 (0.22 to 2.41)	492 (3 studies) ^{3,4,5}	Low ^{1,2}
<i>Substance use: 1. Average number of different drugs used during the past month (Opiate Treatment Index)</i>			
by 3 months	MD 0.37 (–0.01, 0.75)	119 (1 study) ³	Moderate ¹
by 6 months	MD 0.19 (–0.22, 0.60)	119 (1 study) ³	Moderate ¹
<i>Substance use: 2. Average score – alcohol (skewed data) – estimated daily consumption – past month</i>			
At 3 months	MD 1.57 (–0.90, 4.04)	52 (1 study) ³	Moderate ¹
At 6 months	MD 1.21 (–1.07, 3.49)	52 (1 study) ³	Moderate ¹
At 12 months	MD 1.39 (–1.10, 3.88)	46 (1 study) ³	Moderate ¹
<i>Substance use: 3. Average score – amphetamine (skewed data) – estimated daily consumption – past month</i>			
At 3 months	MD 0.09 (–0.40, 0.58)	20 (1 study) ³	Moderate ¹
At 6 months	MD –1.28 (–2.79, 0.23)	20 (1 study) ³	Moderate ¹
At 12 months	MD 0.13 (–0.11, 0.37)	17 (1 study) ³	Moderate ¹
<i>Substance use: 4. Average score – cannabis (skewed data) – estimated daily consumption – past month</i>			
At 3 months	MD –0.57 (–4.27, 3.13)	73 (1 study) ³	Low ^{1,2}
At 6 months	MD 0.70 (–4.00, 5.40)	73 (1 study) ³	Low ^{1,2}
At 12 months	MD 4.41 (–1.40, 10.22)	58 (1 study) ³	Low ^{1,2}
<i>Substance use: 7. TimeLine FollowBack (TLFB): % days abstinent main substance (skewed data)</i>			
At 12 months	MD 6.81 (–2.07 to 15.69)	275 (1 study) ⁵	Low ^{1,2}
At 18 months	MD –1.21 (–10.74 to 8.32)	258 (1 study) ⁵	Low ^{1,2}
At 24 months	MD 2.52 (–7.42 to 12.46)	246 (1 study) ⁵	Low ^{1,2}

Continued

²⁷Where available, data were extracted from the review developed for the Cochrane Collaboration by Cleary and colleagues (2008), otherwise from the primary study publication (see Appendix 13 for further details about each study).

Table 26: (Continued)

Outcomes	Effect size (95% CI)	No. of participants (studies)	Quality of the evidence (GRADE)
<i>Substance use: 8. TLFB: % days abstinent all substances (skewed data)</i>			
At 12 months	MD 5.73 (−2.62 to 14.08)	273 (1 study) ⁵	Low ^{1,2}
At 18 months	MD −0.30 (−9.14 to 8.54)	256 (1 study) ⁵	Low ^{1,2}
At 24 months	MD 7.07 (−2.32 to 16.46)	247 (1 study) ⁵	Low ^{1,2}
<i>Functioning: 1. Average global functioning score (Global Assessment of Functioning [GAF])</i>			
At 3 months	MD −2.70* (−7.05, 1.65)	119 (1 study) ³	Low ^{1,2}
At 6 months	MD −0.09* (−3.70, 3.52)	119 (1 study) ³	Moderate ¹
At 9 months	MD 8.44* (0.48, 16.40)	32 (1 study) ⁴	Moderate ¹
At 12 months	MD 1.87* (−2.36, 6.11)	398 (3 studies) ^{3,4,5}	Low ^{1,2}
At 18–24 months	MD 0.69* (−3.86, 5.25)	262 (2 study) ^{4,5}	Low ^{1,2}
<i>Functioning: 2. Average social functioning score (Social Functioning Schedule)</i>			
By end of 9 months' treatment	MD 5.01* (−0.55, 10.57)	32 (1 study) ⁴	Low ^{1,2}
By 12 months (3 months following end of treatment)	MD 7.27* (0.86, 13.68)	32 (1 study) ⁴	Moderate ¹
<p><i>Note.</i> An RR of <1 favours the intervention, negative MDs favour the intervention (except if marked with *, then positive MDs favour the intervention).</p> <p>¹ OIS (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.</p> <p>² CI includes both (1) no effect and (2) appreciable benefit or appreciable harm.</p> <p>³ BAKER2006.</p> <p>⁴ BARROWCLOUGH2001.</p> <p>⁵ BARROWCLOUGH2010.</p>			

Participants were psychiatric inpatients with coexisting substance dependence. At 1 and 3 months' follow-up there was a statistically significant difference between groups favouring motivational interviewing on rates of alcohol use and binge drinking, and drug-use days. There were no significant differences between groups on measures of abstinence or on aftercare treatment attendance.

Table 27: GRADE summary of findings table for RCTs comparing group psychotherapy with standard care²⁸

Outcomes	Effect size (95% CI)	No. of participants (studies)	Quality of the evidence (GRADE)
<i>Substance use: 1. Average score – Computerized Diagnostic Interview – Revised (C-DIS-R) Drugs (skewed data)</i>			
by 6 months	MD -2.99 (-5.51 to -0.47)	46 (1 study) ³	Moderate ¹
by 12 months	MD -2.47 (-5.76 to 0.82)	46 (1 study) ³	Low ^{1,2}
by 18 months	MD -0.79 (-3.35 to 1.77)	25 (1 study) ³	Moderate ¹
<i>Substance use: 2. Average score – C-DIS-R Alcohol (skewed data) – C-DIS-R Alcohol</i>			
by 6 months	MD -1.81 (-3.41 to -0.21)	46 (1 study) ³	Moderate ¹
by 12 months	MD -0.71 (-2.54 to 1.12)	46 (1 study) ³	Moderate ¹
by 18 months	MD 0.04 (-2.27 to 2.35)	25 (1 study) ³	Moderate ¹
<i>Functioning: 1. Average role functioning score (Role Functioning Scale)</i>			
by 6 months	MD 0.61* (-1.63 to 2.85)	47 (1 study) ³	Moderate ¹
by 12 months	MD 1.07* (-1.15 to 3.29)	47 (1 study) ³	Moderate ¹
by 18 months	MD -2.55* (-6.24 to 1.14)	25 (1 study) ³	Low ^{1,2}
<i>Functioning: 2. Average social adjustment score (Social Adjustment Scale)</i>			
by 6 months	MD -0.92* (-6.58 to 4.74)	47 (1 study) ³	Low ^{1,2}
by 12 months	MD 2.58* (-3.39 to 8.55)	47 (1 study) ³	Low ^{1,2}
by 18 months	MD -4.66* (-15.29 to 5.97)	25 (1 study) ³	Low ^{1,2}
Service use: Days in hospital (skewed data)	MD 1.80 (-4.46 to 8.06)	29 (1 study) ⁴	Low ^{1,2}
<p><i>Note.</i> Negative MDs favour the intervention (except if marked with *, then positive MDs favour the intervention).</p> <p>¹ OIS (for continuous outcomes, OIS = 400 participants) not met.</p> <p>² CI includes both (1) no effect and (2) appreciable benefit or appreciable harm.</p> <p>³ JERRELL1995.</p> <p>⁴ HELLERSTEIN1995.</p>			

²⁸Where available, data were extracted from the review developed for the Cochrane Collaboration by Cleary *et al.* (2008), otherwise from the primary study publication (see Appendix 13 for further details about each study).

Table 28: GRADE summary of findings table for RCTs comparing contingency management with standard care

Outcomes	Effect size (95% CI)	No. of participants (studies)	Quality of the evidence (GRADE)
Substance use: 1. No. of days/weeks of drug use (confirmation by urine drug screen) – Days of cocaine use	SMD -1.04 (-1.8 to -0.28)	30 (1 study) ²	Moderate ¹
Substance use: 2. No. of days/weeks of alcohol use (confirmation by breathalyser)	SMD -1.16 (-1.83 to -0.49)	71 (2 studies) ^{2,3}	Moderate ¹
Substance use: 3. No. of days/weeks using both drugs and alcohol (confirmation by urine or breathalyser) – weeks	SMD -0.82 (-1.47 to -0.17)	41 (1 study) ³	Moderate ¹
Substance use: 4. Alcohol positive breathalyser samples	SMD -0.82 (-1.47 to -0.17)	30 (1 study) ²	Moderate ¹
<i>Note.</i> Negative SMDs favour the intervention. ¹ OIS (for continuous outcomes, OIS = 400 participants) not met. ² TRACY2007. ³ RIES2004.			

Cleary and colleagues (2009) included one Australian study (James *et al.*, 2004), which compared the effectiveness of a 6-week manualised group-based intervention (incorporating both substance use and mental health interventions; n = 32) versus standard care (consisting of a single educational session; n = 31). Participants were diagnosed with schizophrenia or bipolar disorder and coexisting substance dependence or harmful use. At 3 months' follow-up, there were statistically significant differences between the two groups, favouring group therapy in terms of reduced drug use and symptoms of psychosis, but not severity of dependence or alcohol use.

One non-randomised study (Helmus *et al.*, 2003), not included by Cleary and colleagues (2009), examined the effectiveness of a community-based contingency management programme. The sample consisted of 20 participants diagnosed with schizophrenia (15%), schizoaffective disorder (20%), bipolar disorder (30%) or major depressive disorder (35%) and a coexisting substance use disorder (alcohol dependence, 70%; cocaine abuse, 5%; polysubstance dependence, 5%) Using an A-B-A within-subjects reversal design, participants had a 4-week baseline phase, followed by 12 weeks of contingency management reinforcing their attendance at group counselling for people with psychosis and coexisting substance misuse and alcohol abstinence (based on breath alcohol levels), and then a 4-week return to baseline phase. Group counselling was provided twice weekly with alcohol breath tests given

before each session. The results demonstrated that contingency management attendance was significantly higher than at baseline, and remained elevated in the return to baseline phase. There were no significant effects found on alcohol use, however, as the breath tests remained negative throughout the entire study.

Lykke and colleagues (2010), not included in Cleary and colleagues (2009), conducted a pragmatic clinical trial evaluating cognitive milieu therapy in a convenient sample of 136 inpatients in Denmark, using a pre-post intervention design. Of the 136 participants, 53 to 65% had an ICD-10 diagnosis of schizophrenia, with a coexisting diagnosis of substance abuse (29 to 41% alcohol only, 5 to 6% cannabis only, 50 to 59% polysubstance abuse). Cognitive milieu therapy is carried out within a structured inpatient environment and incorporates both motivational and cognitive behavioural strategies in an effort to address both mental health and substance misuse problems simultaneously. Results revealed that the most significant changes post-treatment were in functioning (GAF scale, $p = .0001$), global symptomatology as assessed by the Global Assessment Scale ($p = .0001$), and levels of anxiety/depression on the BPRS ($p = .0001$). In addition, participants displayed significant improvement on anxiety levels (Beck Anxiety Inventory, $p = .0001$), depressive symptoms (Beck Depression Inventory, $p = .0001$), and self-esteem (Robson Self-Concept Questionnaire, $p = .0022$) at post-treatment follow-up. A regression analysis did not identify any predictors associated with treatment completion, although reduced chance of completion of treatment was associated with a higher BPRS score. Regression analysis for achieving sustained abstinence was associated with the absence of a polysubstance misuse diagnosis (OR = 0.19; $p = .018$) and lower BPRS score (OR = 0.80, 1 per point, $p < .01$).

One further study (Tyrrer *et al.*, 2011), not included in Cleary and colleagues (2009), was a secondary sub-group analysis of an RCT conducted in the UK, which looked at the impact of nidotherapy for people with psychosis, a significant proportion of whom had coexisting substance misuse problems (Ranger *et al.*, 2009). Nidotherapy is a 'collaborative treatment involving the systematic assessment and modification of the environment to minimise the impact of any form of mental disorder on the individual or on society' (Tyrrer *et al.*, 2003). The sub-group analysis of people with psychosis and coexisting substance misuse suggested that participants referred to nidotherapy had a 63% reduction in hospital bed use after 1 year compared with those referred to a standard assertive outreach team ($p = .03$). There was also some evidence that nidotherapy improved social functioning (MD -2.0, 95% CI, -4.0 to -0.1), without any detrimental effect on psychiatric symptoms (MD -2.6, 95% CI, -8.0 to 2.8) or engagement with services (MD 0.23, 95% CI, -1.6 to 2.1).

7.2.7 Clinical evidence summary (psychological and psychosocial interventions)

For the majority of interventions included in related NICE guidelines, the current systematic review found no direct evidence for people with psychosis and coexisting substance misuse (see Table 29). With regard to the evidence that was available, it should be interpreted with some caution because the research was not conducted in the UK and methodological issues limit the quality of the evidence.

Table 29: Relevant interventions included in current NICE guidelines and summary of evidence of effectiveness for people with psychosis and coexisting substance misuse

Intervention name	Existing NICE guideline ¹	Recommended	Evidence relevant to people with psychosis and substance misuse
Opportunistic brief interventions			
Brief interventions for people not in contact with services	<i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)	Yes ²	–
Brief interventions for people in contact with services	<i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)	Yes ²	–
Self-help based interventions			
Self-help intervention (including guided self-help/ bibliotherapy, self-help groups, 12-step based interventions)	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)	Yes	–
	<i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)	Yes	
	<i>Bipolar Disorder</i> (NCCMH, 2006)	Yes ²	
TSF	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)	Yes ³	
Behavioural therapies			
Cue exposure	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)	Yes (behaviour therapy in general recommended)	–
Behavioural self-control training	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)	Yes (behaviour therapy in general recommended)	–
Contingency management	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)	Research recommendation	Low-quality evidence in favour of contingency management
	<i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a)	Yes	
	<i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)	Yes	

Continued

Table 29: (Continued)

Intervention name	Existing NICE guideline ¹	Recommended	Evidence relevant to people with psychosis and substance misuse
Cognitive and behavioural based therapies			
Standard CBT	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)	Yes	Moderate to low-quality evidence available, but insufficient to reach conclusion about direction of effect
	<i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a)	No	
	<i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)	Yes ²	
	<i>Bipolar Disorder</i> (NCCMH, 2006)	Yes ²	
	<i>Schizophrenia</i> (NCCMH, 2010)	Yes	
Coping and social skills training	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)	No	Moderate to low-quality evidence available, but insufficient to reach conclusion about direction of effect
Relapse prevention	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)	Not specifically ⁴	–
	<i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a)	No	
	<i>Bipolar Disorder</i> (NCCMH, 2006)	Yes ²	
Family-based interventions			
Family intervention	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)	Yes ²	–
	<i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a)	No	
	<i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)	Yes ²	
	<i>Bipolar Disorder</i> (NCCMH, 2006)	Yes ²	
	<i>Schizophrenia</i> (NCCMH, 2010)	Yes ²	
Motivational techniques			
Motivational interviewing, motivational enhancement therapy	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)	Yes ³	Moderate to low-quality evidence in favour of motivational interviewing
	<i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)	No	

Continued

Table 29: (Continued)

Intervention name	Existing NICE guideline ¹	Recommended	Evidence relevant to people with psychosis and substance misuse
<i>Social network and environment-based therapies</i>			
Social behaviour and network therapy	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)	Not specifically ⁵	–
The community reinforcement approach	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011) <i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a)	Not specifically ⁵ No	–
Social systems interventions	<i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a) <i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)	No No	–
<i>Other interventions</i>			
Adherence therapy	<i>Schizophrenia</i> (NCCMH, 2010)	No	–
Arts therapies	<i>Schizophrenia</i> (NCCMH, 2010)	Yes	–
Cognitive remediation	<i>Schizophrenia</i> (NCCMH, 2010)	No	–
Counselling and supportive psychotherapy	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011) <i>Schizophrenia</i> (NCCMH, 2010)	No No	–
Couples-based interventions (including behavioural couples therapy)	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011) <i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a) <i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)	Yes Yes ² Yes ²	–
Individual drug counselling	<i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a)	No	–
Interpersonal and social rhythm therapy	<i>Bipolar Disorder</i> (NCCMH, 2006)	Yes ²	–
Interpersonal therapy	<i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a) <i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)	No No	–

Continued

Table 29: (Continued)

Intervention name	Existing NICE guideline ¹	Recommended	Evidence relevant to people with psychosis and substance misuse
Multi-modal care programmes	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011) <i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)	Yes ² No	–
Psychoeducational interventions	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011) <i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b) <i>Bipolar Disorder</i> (NCCMH, 2006) <i>Schizophrenia</i> (NCCMH, 2010)	No No Yes ² No	–
Psychodynamic and psychoanalytic therapies	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011) <i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a) <i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b) <i>Schizophrenia</i> (NCCMH, 2010)	No No No No	–
Social skills training	<i>Schizophrenia</i> (NCCMH, 2010)	No	–
Vocational interventions	<i>Drug Misuse: Psychosocial Interventions</i> (NCCMH, 2008b)	No	–
¹ Available from www.nice.org.uk . ² For specific groups and/or in certain circumstances (see relevant guideline for further information). ³ These interventions were seen as components of any effective psychosocial intervention delivered in alcohol services with the assessment and enhancing of motivation forming a key element of the assessment process. ⁴ Interventions that promote abstinence and prevent relapse recommended. ⁵ But social network and environment-based therapies recommended.			

There were two small RCTs (N = 56) of motivational interviewing compared with standard care. However, data could not be combined using meta-analysis, so for each outcome, the evidence comes from a single study. Nevertheless, the evidence (GRADED moderate to low quality) suggests that for people with psychosis and coexisting substance misuse this approach may reduce substance misuse at up to 12 months' follow-up. These results were supported by one observational study.

In two small RCTs (N = 71) of contingency management compared with standard care, there was evidence (*GRADED* low quality) suggesting benefit in terms of reduced substance misuse at up to 6 months' follow-up. One small observational study demonstrated improved attendance after contingency management, but no effect on alcohol use.

In four small RCTs of CBT (N = 216), three trials of CBT plus motivational interviewing (N = 493), and two small trials of group psychotherapy (social skills training/psychoeducation) (N = 94), the evidence (*GRADED* moderate to low quality) is inconclusive regarding the effectiveness of these approaches when compared with standard care for people with psychosis and coexisting substance misuse. Two small observational studies favoured CBT and group psychotherapy in terms of reduced substance misuse and improved symptoms of psychosis.

The study of nidotherapy suggests that collaborative psychosocial interventions involving the systematic assessment and modification of the environment may be worth studying further.

7.2.8 Health economic evidence (psychological and psychosocial interventions)

The systematic search of the health economic literature identified two relevant papers: one comparing the cost effectiveness of CBT combined with motivational interviewing versus standard care (Haddock *et al.*, 2003) and one comparing a group behavioural skills programme or case management with a 12-step control condition (Jerrell & Ridgley, 1997). Details on the methods used for the systematic search of the health economic literature are described in Appendix 9.

One UK study (Haddock *et al.* 2003), based on the RCT conducted by Barrowclough and colleagues (2001), evaluated the cost effectiveness of an integrated programme of CBT combined with motivational interviewing plus standard care versus standard care alone. The study sample consisted of 36 people diagnosed with psychosis and coexisting substance dependence or misuse recruited from the mental health units of three UK NHS hospital trusts, along with their families, carers or significant others. Resource use and outcome data were collected over 18 months' follow-up. The study adopted a societal perspective, with data on hospital care, primary care, community and domiciliary services, medications, service user travel and out-of-pocket expenses and productivity losses all collected from the CSRI. The primary measure of effectiveness was change in the GAF scale.

Over 18 months' follow-up, the intervention group was on average £1,260 ($p = 0.25$) less costly, while experiencing an average of 22.5% improvement in GAF scores in comparison with routine care. ICERs were calculated by the authors but not reported in the paper. Cost-effectiveness acceptability curves were used to measure uncertainty around the sample estimates of mean costs and outcomes. The probability of the intervention being less costly than standard care (at a willingness-to-pay of 0) was 69.3%. Overall, the authors concluded that the integrated programme of CBT combined with motivational interviewing was no more costly than standard care, and

there was a high probability of it being cost effective. The results of the study are relevant to the UK setting, although the major limitations are the small sample size (which may not have been representative of the study population) and the measure of effectiveness used in the analysis (which limits comparability across healthcare interventions). Furthermore, the study adopted a societal rather than an NHS and personal social services (PSS) perspective as recommended by NICE (NICE, 2008). However, differences between the two treatment groups, in terms of societal costs, including service users' travel and out-of-pocket expenditure and productivity losses, were not significant. Therefore, inclusion of these costs did not significantly alter the overall results of the cost-effectiveness analysis.

One US-based study was identified that assessed the cost effectiveness of two outpatient programmes (behavioural skills training and case management) with a 12-step control condition (Jerrell & Ridgely, 1997). The study population included 132 people with an Axis I DSM-III-R diagnosis of psychosis or major affective disorder with a coexisting substance disorder and previous psychiatric treatment. The primary measures of effectiveness in the study were psychological functioning, psychiatric and substance abuse symptoms. As no significant differences in clinical effectiveness were detected across the three treatment groups, the economic analysis was based on differences in costs only. A societal perspective was taken for the cost analysis, with data on mental health and general healthcare resource use, criminal justice and social services, family and caregiver resources and any other transfer payments, collected over an 18-month period. Total costs were reported separately for intensive mental healthcare (inpatient days, residential treatment and emergency visits) and supportive mental healthcare (outpatient visits, medication visits and supported housing visits).

For intensive mental healthcare costs, the total cost in the 12-step group was \$10,275, in the behavioural skills group was \$4,276 and in the case management group was \$7,643. For supportive mental healthcare costs, the total cost in the 12-step group was \$7,798, in the behavioural skills group was \$6,112 and in the case management group was \$5,970. No formal statistical tests were conducted to quantify the significance of any cost differences between the three treatment groups. Overall, the authors concluded that no differences in outcomes were detected between the three groups, but the 12-step group incurred the highest intensive and supportive costs over the 18-month period. The study is of limited relevance to the UK context as it was based in the US and has a number of methodological limitations. The partial randomised study design and lack of information about the power of the study in terms of detecting differences between the three treatment groups limits the internal validity of the effectiveness results. Resource use components were not described separately from costs and it is not possible to ascertain whether the cost analysis was based on actual costs or service charges.

Health economic summary

In summary, there was limited evidence of the cost effectiveness of specific psychological and psychosocial interventions for people with psychosis and coexisting substance misuse. The UK-based study by Haddock and colleagues (2003) suggested that a combination of CBT and motivational interviewing plus standard care was cost

effective compared with standard care alone. The US-based study by Jerrell and Ridgely (1997) showed that a behavioural skills training was more costly in terms of intensive and supportive mental healthcare when compared with 12-step recovery or case management programmes.

Given the uncertainty surrounding the cost effectiveness of psychological and psychosocial interventions and the associated resource implications, it was anticipated that further economic modelling would need to be developed to address these issues. However, due to both the scarcity and the generally low quality of the clinical data identified in the guideline systematic review, the GDG agreed that it would not be possible to model the cost effectiveness of specific psychological and psychosocial interventions in people with psychosis and coexisting substance misuse.

7.3 FROM EVIDENCE TO RECOMMENDATIONS (PSYCHOLOGICAL AND PSYCHOSOCIAL INTERVENTIONS)

Early in the development process, the GDG distinguished between outcomes that were critical to decision-making and those that were important but not critical. Critical outcomes included: mortality (all causes), relapse rates (measured by exacerbation of symptoms requiring change in healthcare management), substance misuse (however measured), global and social functioning (for example, employment and accommodation), subjective quality of life, satisfaction with care, and physical morbidity. Only critical outcomes were included in the GRADE evidence profiles and considered when making recommendations.

There was little direct evidence relating to most psychological interventions for people with psychosis and coexisting substance misuse. The evidence that was available was generally difficult to interpret because of the context in which the research was conducted and/or methodological issues. As a result, the GDG decided that it was not possible to recommend any specific psychological or psychosocial intervention or combination of interventions to people with psychosis and coexisting substance misuse. Nevertheless, the GDG thought that given the positive evidence in favour of contingency management (even if poor quality), a recommendation should be made that people with psychosis and coexisting substance misuse should not be excluded from contingency management programmes because of their psychosis. In general though, as no good-quality evidence was found relating to the modification of interventions recommended for people with a single diagnosis, the GDG concluded that people with psychosis and coexisting substance misuse should be offered the same range of evidence-based interventions recommended for people with a single diagnosis.

However, the GDG felt it was important to emphasise that low levels of substance use that would not usually be considered harmful or problematic in people without psychosis, can have a significant impact on the mental health of people with psychosis.

In addition, the GDG, while unwilling to make specific recommendations about environmental modifications such as nidotherapy, thought it important that research

is undertaken to assess the potential for such modifications for people with psychosis and coexisting substance misuse.

There was no evidence that addressed the two sub-questions regarding elements of an integrated service model and subgroups of people (see Section 7.2.3 for further information about these sub-questions). In addition, the GDG noted that valuable information about the potential benefits of pharmacological and psychosocial interventions for people with psychosis and substance misuse could be obtained from trials of treatments for people with either of these two different types of problems. However, to date, most trials conducted among people with psychosis have excluded those who have coexisting substance misuse and nearly all trials among people with substance misuse have excluded those with coexisting psychosis. In some instances, it may be necessary to exclude people with coexisting problems from future studies. However, very often, this important and prevalent group of service users have been excluded from intervention trials with no clear reason being offered. Therefore, future research should not routinely exclude people with psychosis and coexisting substance misuse.

7.4 RECOMMENDATIONS

7.4.1 Clinical practice recommendations

Secondary care mental health services

Treatment

- 7.4.1.1 Before starting treatment for adults and young people with psychosis and coexisting substance misuse, review:
- the diagnosis of psychosis and of the coexisting substance misuse, especially if either diagnosis has been made during a crisis or emergency presentation **and**
 - the effectiveness of previous and current treatments and their acceptability to the person; discontinue ineffective treatments.²⁹
- 7.4.1.2 Ensure that adults and young people with psychosis and coexisting substance misuse are offered evidence-based treatments for both conditions (see 7.4.1.3 and 7.4.1.4).²⁹
- 7.4.1.3 For the treatment of psychosis, see ‘Bipolar disorder: the management of bipolar disorder in adults, children and adolescents, in primary and secondary care’ (NICE, 2006) or the guideline on schizophrenia (NICE, 2009a).²⁹
- 7.4.1.4 For the treatment of substance misuse, see:
- ‘Alcohol-use disorders: diagnosis and clinical management of alcohol-related physical complications’ (NICE, 2010a) and the guideline on alcohol dependence and harmful alcohol use (NICE, 2011) **and/or**

²⁹This recommendation also appears in Chapter 8 (Section 8.4) where the pharmacological data is presented.

- ‘Drug misuse: psychosocial interventions’ (NICE, 2007b) and the guideline on opioid detoxification (NICE, 2007a).³⁰
- 7.4.1.5 When developing a treatment plan for a person with psychosis and coexisting substance misuse, tailor the plan and the sequencing of treatments to the person and take account of:
- the relative severity of both the psychosis and the substance misuse at different times **and**
 - the person’s social and treatment context **and**
 - the person’s readiness for change.
- 7.4.1.6 Do not exclude adults and young people with psychosis and coexisting substance misuse from contingency management programmes because of their psychosis.

7.4.2 Research recommendations (psychological and psychosocial interventions)

- 7.4.2.1 Are interventions for psychosis or substance misuse clinically and cost effective when compared with standard care for people with psychosis and coexisting substance misuse?³⁰
- 7.4.2.2 Are psychosocial interventions clinically and cost effective when compared with standard care for people with psychosis and coexisting substance misuse? (For further details see Appendix 12.)
- 7.4.2.3 Are environmental interventions clinically and cost effective when compared with standard care for people with psychosis and coexisting substance misuse? (For further details see Appendix 12.)

³⁰This recommendation also appears in Chapter 8 (Section 8.4) where the pharmacological data is presented.

8 PHARMACOLOGICAL AND PHYSICAL INTERVENTIONS

8.1 INTRODUCTION

There are many pharmacological treatments for both psychotic disorders and substance misuse, but there is very little overlap between the treatments for each group of disorders. The pharmacological treatments for each of the substance-use disorders are generally specific ones for each substance of dependence, for example, disulfiram and acamprosate for alcohol dependence, and methadone for opioid addiction. In the treatment of psychoses, however, there is much greater overlap, with lithium salts and other mood stabilisers, antipsychotics of all types, and anti-convulsants being used; these medications show little commonality with the treatments for substance misuse. It might be expected that with a large number of drugs being used to treat each group of disorders, there could be important interactions between them, both pharmacodynamic and pharmacokinetic. In practice, there is insufficient data about such interactions. It might also be expected that polypharmacy would be a problem for these coexisting disorders but the data here are conflicting with no clear evidence of greater use of drug treatment in people with psychosis and coexisting substance misuse (Centorrino *et al.*, 2008; Goldberg *et al.*, 2009; Kreyenbuhl *et al.*, 2007).

To date, few specific recommendations for pharmacological treatment of both groups of disorders have been made that are not covered by previous published NICE guidelines for substance misuse and the psychoses separately. The purpose of this chapter is to examine whether there is any evidence that pharmacological or physical treatment of each disorder should be modified as result of having a coexisting diagnosis.

8.1.1 Current practice

The pharmacological management of people with psychosis and substance misuse is primarily concerned with treating the individual disorders. Nevertheless, special attention needs to be paid to treatment adherence in this group, not least as the risk of adverse outcomes, including significant societal violence, is so much greater in this population (Kooyman *et al.*, 2007).

8.2 EVIDENCE REVIEW

8.2.1 Introduction

A number of existing NICE guidelines have reviewed the evidence for pharmacological and physical interventions used to treat people with psychosis without substance misuse (that is, *Bipolar Disorder* [NCCMH, 2006] and *Schizophrenia* [NCCMH, 2010]), and for people with substance misuse without psychosis (that is, *Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence* [NCCMH, 2011] and *Drug Misuse: Opioid Detoxification* [NCCMH, 2008a]).

For the purposes of the current guideline, three main issues were addressed for people with psychosis and coexisting substance misuse:

- (1) modification of the pharmacological treatment of psychosis as a result of substance misuse and the treatment provided (for example, methadone, buprenorphine, and so on)
- (2) modification of the pharmacological or physical treatment of substance misuse as a result of the presence of psychosis and the treatment provided (for example, antipsychotic drugs, lithium, and so on)
- (3) management of drug interactions or adverse effects from pharmacological interventions.

Where no evidence existed for a particular intervention in people with psychosis and coexisting substance misuse, the GDG used informal consensus to reach a conclusion about whether it was appropriate to cross-reference to existing NICE guidelines.

Interventions and licensing in the UK

Table 30 lists the interventions included in current NICE guidelines together with their licensed indications in the UK (those relevant to this guideline).

8.2.2 Clinical review protocol (pharmacological and physical interventions)

A summary of the review protocol, including the primary review question, information about the databases searched and the eligibility criteria used for this section of the guideline can be found in Table 31 (the full protocol can be found in Appendix 20). Initially a search for systematic reviews and existing guidelines that addressed the review question was conducted. Good-quality systematic reviews were then used as a source of evidence, and only a new systematic search for more recent primary-level studies was conducted for the guideline (further information about the search strategy can be found in Appendix 7).

If the evidence allowed, the following sub-question was asked for review questions 2.1.1 and 2.3.1: are there subgroups of people (for example, young people, people with a particular type of psychosis, people from BME groups) who may benefit from alternative strategies than those recommended for people with a single disorder?

Table 30: Relevant interventions included in current NICE guidelines and current licence status of medication

Intervention type/use	Name	UK licence (only relevant indications listed)	Reviewed by existing NICE guideline
MEDICATION			
Alcohol dependence	Acamprosate calcium	Maintenance of abstinence alcohol dependence in (it should be combined with counselling)	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)
Alcohol deterrent compounds	Disulfiram	Adjunct in the treatment of carefully selected and co-operative service users with drinking problems (15+); its use must be accompanied by appropriate supportive treatment	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)
Alpha-adrenergic agonists	Clonidine	Hypertension; migraine (13+)	<i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a)
Alpha-adrenergic agonists	Lofexidine	Management of symptoms of opioid withdrawal (18+)	<i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a)
Antiepileptic drugs	Phenytoin	All forms of epilepsy except absence seizures; <i>status epilepticus</i>	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)
Antiepileptic drugs	Topiramate	Generalised tonic-clonic seizures or partial seizures	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)
Antimanic drugs	Lithium	Bipolar disorder (12+)	<i>Bipolar Disorder</i> (NCCMH, 2006)
Antimanic drugs	Valproic acid	Manic episodes associated with bipolar disorder (18+); treatment of generalised, partial or other epilepsy; no mention of manic episodes	<i>Bipolar Disorder</i> (NCCMH, 2006)
Antimanic drugs/ anxiolytics	Benzodiazepine: diazepam	Adjunct in acute alcohol withdrawal; short-term use in anxiety or insomnia	<i>Bipolar Disorder</i> (NCCMH, 2006)/ <i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)

Continued

Table 30: (Continued)

Intervention type/use	Name	UK licence (only relevant indications listed)	Reviewed by existing NICE guideline
Antimanic drugs/ anxiolytics	Benzodiazepine: lorazepam	Short-term use in anxiety or insomnia, acute excitement and acute mania	<i>Bipolar Disorder</i> (NCCMH, 2006)
Antimanic drugs/ hypnotics	Benzodiazepine: chlordiazepoxide	Adjunct in acute alcohol withdrawal; short-term treatment of severe anxiety that is severe with or without insomnia/short-term psychosomatic/organic or psychotic illness	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)
Antimanic drugs/ hypnotics	Chlormethiazole	Alcohol withdrawal	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)
Antimanic/control of epilepsy	Carbamazepine	Prophylaxis of bipolar disorder unresponsive to lithium	<i>Bipolar Disorder</i> (NCCMH, 2006)
Antipsychotic drugs (first-generation)	For example: chlorpromazine, haloperidol	Schizophrenia; mania	<i>Bipolar Disorder</i> (NCCMH, 2006)/ <i>Schizophrenia</i> (NCCMH, 2010)
Antipsychotic drugs (second-generation)	For example: clozapine, olanzapine risperidone quetiapine	Schizophrenia; some individual drugs also indicated for mania. Note, clozapine only indicated for schizophrenia in people unresponsive to, or intolerant of, first-generation antipsychotic drugs	<i>Bipolar Disorder</i> (NCCMH, 2006)/ <i>Schizophrenia</i> (NCCMH, 2010)
Opioid agonists and partial agonists	Buprenorphine	Treatment for opioid drug dependence (Subutex) (16+)	<i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a)
Opioid agonists and partial agonists	Methadone	Treatment of opioid drug addictions (15+)	<i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a)
Opioid antagonists	Nalmefene	Unlicensed	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)/ <i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a)
Opioid antagonists	Naltrexone	Adjunctive prophylactic therapy in the maintenance	<i>Alcohol-use Disorders: Diagnosis, Assessment and</i>

Continued

Table 30: (Continued)

Intervention type/use	Name	UK licence (only relevant indications listed)	Reviewed by existing NICE guideline
		of detoxified formerly opioid dependent service users (18+)	<i>Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)/ <i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a)
Serotogenic agents	Ondansetron	Prevention and treatment of post-operative nausea and vomiting	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)
Serotogenic agents	Selective serotonin reuptake inhibitors (SSRIs)	Depression	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)/ <i>Depression</i> (NCCMH, 2010)
Skeletal muscle relaxants	Baclofen	Chronic severe spasticity	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)
PHYSICAL AND COMPLEMENTARY INTERVENTIONS			
Physical	Acupuncture	–	<i>Drug Misuse: Opioid Detoxification</i> (NCCMH, 2008a)
Physical	Electrical transcranial stimulation	–	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)
Complementary	Kudzu root	–	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)
Complementary	Vipassana meditation	–	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NCCMH, 2011)

Table 31: Databases searched and eligibility criteria for clinical evidence

Component	Description
Review questions	<p>2.1.1 For people with psychosis and coexisting substance misuse, should the medical treatment of their psychosis be modified as a result of substance misuse and the treatment provided (for example, methadone, buprenorphine, and so on)? (a) During the acute phase (b) During the non-acute phase If so, how should treatment be modified?</p> <p>2.3.1 For people with psychosis and coexisting substance misuse, should the medical/physical treatment of substance misuse be modified as a result of the presence of psychosis and the treatment provided (for example, antipsychotics, lithium)? (a) During the acute phase? (b) During non-acute phase? If so, how should treatment be modified?</p> <p>2.5.1 In people with psychosis and coexisting substance misuse, is there any evidence that the management of drug interactions or adverse effects from pharmacological treatments should be different from those people without coexisting disorders? If so, how should management of drug interactions be modified?</p>
Electronic databases	CENTRAL, CINAHL, EMBASE, MEDLINE, PsycINFO
Date searched	Inception to 26.05.2010
Study design	Reviews, clinical guidelines, primary-level studies
Population	People with psychosis and coexisting substance misuse
Intervention(s)	Pharmacological and physical interventions
Comparison	Any relevant treatment
Critical outcomes	<p>Reduced mortality (all causes) Reduced relapse rates (measured by exacerbation of symptoms requiring change in healthcare management) Reduced substance misuse (however measured) Improved global and social functioning (for example, employment, accommodation) Improved subjective quality of life Improved satisfaction with care Reduced physical morbidity</p>

8.2.3 Studies considered for review (pharmacological and physical interventions)

Thirteen clinical evidence reviews and guidelines met the eligibility criteria for this section of the guideline (Buchanan *et al.*, 2009 [Schizophrenia Patient Outcomes Research Team, PORT, psychopharmacological treatment recommendations and summary statements]; Casas *et al.*, 2008; Center for Substance Abuse Treatment, 2005a [Treatment Improvement Protocol series 42]; Center for Substance Abuse Treatment, 2005b [Treatment Improvement Protocol series 43]; Center for Substance Abuse Treatment, 2006 [Treatment Improvement Protocol series 45]; Green *et al.*, 2008; Hjorthoj *et al.*, 2009; Mills *et al.*, 2009 [Australian guideline]; San *et al.*, 2007; Smelson *et al.*, 2008; Tiet & Mausbach, 2007; Vornik & Brown, 2006; Wobrock & Soyka, 2008). All were published in peer-reviewed journals between 2006 and 2009. In addition, a number of reviews were excluded as they had either been superseded by more recent reviews (for example, Brunette *et al.*, 2005; Goldstein *et al.*, 2006; Green, 2005), or are currently under review (that is, Lingford-Hughes *et al.*, 2004).

In addition, a search was conducted for RCT evidence that may have been published too recently to be included in existing reviews. From this, four RCTs were found (Brown *et al.*, 2009; Kemp *et al.*, 2009; Nejtek *et al.*, 2008; Van Nimwegen *et al.*, 2008). A summary of study characteristics is given in Table 32 and the results are described in the text below. Additionally, a secondary analysis from the Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) project was reviewed (Swartz *et al.*, 2006).

All of the studies, evidence reviews and guidelines were of pharmacological interventions; no evidence was found for physical or complementary treatments for psychosis and coexisting substance misuse.

8.2.4 Evidence from existing reviews and guidelines for pharmacological interventions for people with schizophrenia and coexisting substance misuse

Eleven recent existing reviews and/or guidelines included evidence for the pharmacological treatment of people with schizophrenia (or related disorders) and coexisting substance misuse (Buchanan *et al.*, 2009 [Schizophrenia Patient Outcomes Research Team, PORT]; Center for Substance Abuse Treatment, 2005a [Treatment Improvement Protocol series 42]; Center for Substance Abuse Treatment, 2005b [Treatment Improvement Protocol series 43]; Center for Substance Abuse Treatment, 2006 [Treatment Improvement Protocol series 45]; Green *et al.*, 2008; Hjorthoj *et al.*, 2009; Mills *et al.*, 2009 [Australian guideline]; San *et al.*, 2007; Smelson *et al.*, 2008; Tiet & Mausbach, 2007; Wobrock & Soyka, 2008). They review a range of evidence, from case studies to RCTs.

Buchanan and colleagues (2009) updated the PORT psychopharmacological treatment recommendations last published in 2004 (Lehman *et al.*, 2004). The authors conducted a systematic review of evidence sourced from quarterly searches of

Table 32: Summary information table for RCTs of pharmacological interventions

	Pharmacological interventions versus any control
Total no. of trials (N)	4 RCTs (216)
Study ID	(1) Brown <i>et al.</i> , 2009 (2) Kemp <i>et al.</i> , 2009 (3) Nejtek <i>et al.</i> , 2008 (4) Van Nimwegen <i>et al.</i> , 2008
Number randomised	(1) 50 (2) 31 (3) 94 (4) 41
Diagnosis	(1) Bipolar disorder I or II and alcohol dependence (2) Rapid cycling bipolar disorder I or II and substance abuse and/or dependence (3) Bipolar disorder I or II with and without psychotic features and stimulant dependence, currently in manic or hypomanic episode (4) Schizophrenia or schizophreniform disorder and cannabis misuse
Treatment (mean dose) (n)	(1) Naltrexone (50 mg/day) + CBT (n = 23) (2) Lithium (1440 mg/day; range 900–2400 mg) (n = 16) (3) Risperidone (3.1 mg/day + – 1.2 mg) (n = 46) (4) Olanzapine (11.1mg) (n = 20)
Control (mean dose) (n)	(1) Placebo + CBT (all with usual medication) (n = 27) (2) Lithium (1400 mg/day; range 600–2100 mg) + divalproex (1583 mg/day; range 1000–3250 mg) (n = 15) (3) Quetiapine (303.6 mg/day + – 151.9 mg) (n = 48) (4) Risperidone (3mg) (n = 21)
Treatment length; study design	(1) 12 weeks; double-blind RCT (2) 25 weeks; double-blind RCT (3) 20 weeks; double-blind RCT (5) 6 weeks; double-blind RCT
Country	(1)–(3) US (5) The Netherlands

MEDLINE (January 2002 to March 2008) to supplement searches undertaken for their previous guideline. No other electronic database was used. The guideline covers pharmacological treatments for schizophrenia, with a subsection on the treatment of coexisting substance misuse. It mostly focuses on double-blind RCTs. It included studies where at least 50% of participants had a schizophrenia spectrum disorder

diagnosis and where study drugs had US Food and Drug Administration (FDA) approval. Studies involving people with schizophrenia and coexisting cocaine misuse or dependence included two double-blind RCTs comparing olanzapine with haloperidol, and one double-blind RCT comparing olanzapine with risperidone. Also included was one double-blind RCT comparing naltrexone with placebo in people with schizophrenia and coexisting alcohol-use disorders. Finally, the authors mention a sub-analysis of a larger RCT that examined naltrexone, disulfiram, and naltrexone plus disulfiram compared with placebo in people with psychosis and coexisting substance misuse. The GDG concluded that based on the research examined there was insufficient evidence to support a specific recommendation for a pharmacological intervention to treat people with schizophrenia and coexisting substance misuse.

Green and colleagues (2008) conducted a narrative review of evidence, but did not describe their methodology for identifying relevant research. The authors focused on antipsychotic drugs for the treatment of schizophrenia and coexisting substance misuse, but also covered medications for substance-use disorders. They reported a range of evidence (mostly low-level such as case reports and open-label non-comparative studies) suggesting that atypical antipsychotics may be helpful in reducing substance misuse in people with coexisting schizophrenia and substance misuse. The evidence reviewed covered a range of drugs of misuse, including alcohol, cocaine and marijuana. They found the most consistent evidence (from non-randomised studies) suggesting that clozapine may reduce substance use. There was 'less substantial' evidence for quetiapine and aripiprazole, while that for olanzapine and risperidone was unclear, with some studies showing benefit and others not. Overall they concluded that RCT evidence is required before firmer conclusions can be drawn.

With regard to evidence for drugs specifically used to treat substance misuse, Green and colleagues (2008) found preliminary evidence to support the use of naltrexone and disulfiram in people with coexisting schizophrenia and alcohol dependence. They found no relevant studies of acamprosate. They report case studies indicating the potential benefit of valproic acid in people with schizophrenia and coexisting alcohol misuse or dependence.

However, Green and colleagues (2008) conclude that 'despite numerous suggestive reports, the questions of whether and to what degree antipsychotic medications and other medications for substance use disorders are effective in reducing substance use among people with [schizophrenia and] co-occurring disorders are not yet answered.'

Hjorthoj and colleagues (2009) conducted a systematic review focusing on the treatment of cannabis-use disorder in schizophrenia spectrum disorders, covering all types of intervention including psychosocial. The evidence was sourced from searches of four electronic databases up to September 2008. The authors focused on studies that provided outcomes for cannabis use separately from outcomes for other substance misuse, although they also looked at studies reporting cannabis use as part of a grouped outcome. With regard to pharmacological interventions for reducing cannabis use, they found evidence from non-randomised studies of benefit from using clozapine and quetiapine.

The Australian Government Department of Health and Ageing funded the National Drug and Alcohol Research Centre to develop a guideline (Mills *et al.*,

2009) covering the management of people with mental disorders with coexisting alcohol and other drug misuse. The guideline, designed for alcohol and other drug workers, was based on a comprehensive review of the available evidence together with the experience of an expert panel. However, details of the methodology used to undertake the review work were not provided. For people with psychosis, Mills and colleagues (2009) found evidence that clozapine may be useful, but that evidence of benefit for second-generation antipsychotics was not yet clear. The authors also suggest that pharmacological interventions may be more effective than psychosocial interventions, because negative symptoms associated with psychosis may restrict involvement with and outcomes from psychosocial interventions. In addition, this group of people may have greater tolerance to medication regimes.

Mills and colleagues (2009) conclude that treatments that work for mental health disorders without coexisting substance misuse will also work for those with a coexisting disorder. They raise the issue of adherence and also the importance of an awareness of possible interactions and side effects.

San and colleagues (2007) produced a systematic review of treatment with antipsychotic drugs for people with schizophrenia and coexisting substance misuse. The evidence was sourced from searches of three electronic databases up to November 2006. The authors found three RCTs comparing olanzapine with haloperidol, plus other non-RCT evidence. From this they concluded that there was preliminary evidence that, compared with haloperidol, olanzapine is more effective in reducing cravings while retaining antipsychotic action, and that clozapine showed similar potential. They also concluded that older antipsychotics (first-generation) were not as appropriate in this population compared with newer drugs (second-generation) since they were more likely to increase extrapyramidal symptoms. Based on case reports, open and retrospective studies, they found that newer antipsychotics may be of use, although the evidence is generally weak. The authors point out the limitations of the evidence base, including small sample sizes, short follow-up periods, and high dropout rates, as well as the paucity of RCTs and blinded studies.

Smelson and colleagues (2008) conducted a review of FDA-approved medications for people with schizophrenia with coexisting substance misuse. There are no details of the methods used, including how evidence was sourced. However, they provide reasonably comprehensive tables of evidence found (compared with other reviews). They cover medication for the treatment of both schizophrenia (antipsychotics) and substance misuse. They conclude that there is very little evidence to support specific treatment recommendations and, therefore, that clinicians should base treatment decisions on what suits the service user in terms of efficacy and side effects. They found the most evidence suggesting benefit for clozapine, olanzapine and risperidone, although this evidence is not strong. They suggest that second-generation antipsychotics may be better for controlling drug craving in people with cocaine dependence. The authors make the point that non-adherence is a bigger threat to effective treatment rather than poor efficacy and, therefore, advocate that clinicians should consider depot medication. The authors found evidence to support the use of disulfiram and naltrexone.

Tiet and Mausbach (2007) report a systematic review of studies of treatment for people with mental disorders, including schizophrenia and bipolar disorder, with

coexisting substance misuse. Studies were sourced from a search of two electronic databases. The search date is unclear, but is probably no later than 2006. The authors estimated effect sizes using Cohen's *d* but they do not give CIs. It is unclear whether, or how, they applied diagnostic criteria when assessing studies. The authors concluded that treatments that are effective in reducing psychiatric symptoms in those with a mental disorder without coexisting substance misuse, also work with coexisting substance misuse, and those treatments that are effective for improving substance misuse also work in those with a mental disorder. Specifically, they found that naltrexone may reduce coexisting alcohol-related disorders. They found no evidence of enhanced efficacy with higher doses.

The Treatment Improvement Protocol (TIP) series 42, 43 and 45 published by the Center for Substance Abuse Treatment (2005a, 2005b and 2006) are based on systematic reviews and reviews of published meta-analyses together with the views of an expert consensus panel for the treatment of substance abuse in people with coexisting disorders (TIP series 42), pharmacological treatment of opioid addiction (TIP series 43) and detoxification and substance misuse treatment (TIP series 45). The methods for evidence review are not available, but the guidelines were drafted by expert panels.

TIP series 42 (Center for Substance Abuse Treatment, 2005a) does not focus on specific pharmacological treatments, but on general management and care by clinicians, and special considerations (such as for pregnant women). It is not considered further here.

TIP series 43 (Center for Substance Abuse Treatment, 2005b), which focuses specifically on opioid addiction, recommends stabilisation of addiction symptoms with methadone, and using newer antipsychotics as either initial or second-line treatment. This is based on the supposed lower side-effect profile and increased effectiveness of many newer antipsychotics compared with older medications.

TIP series 45 (Center for Substance Abuse Treatment, 2006), which focuses on detoxification, recommends avoiding abrupt withdrawal of existing medication because of the risk of withdrawal symptoms or precipitating a psychiatric episode. It recommends maintenance on existing medications, unless the person has been misusing the medication or the psychiatric symptoms were caused by the medication. It also recommends giving consideration to withdrawal of medications that lower seizure threshold during acute alcohol withdrawal, or at least using a loading dose or schedule taper of a benzodiazepine. The authors point out the importance of balancing risks and benefits of medication for people with mental disorders and coexisting substance misuse. These include the tension between the tendency for some medications to 'impair cognition and blunt feelings', which may hinder people from addressing problems in their lives that they need to change in order to abstain from misused substances successfully. However, untreated mental disorders 'can be powerful relapse triggers, especially for people with a long-standing pattern of relying on alcohol or other drugs to manage their symptoms'. With regard to psychotic disorders, TIP series 45 has no specific recommendations for treatment in the presence of coexisting substance abuse apart from usual care.

Wobrock and Soyka (2008) conducted a systematic review of pharmacological treatment of people with schizophrenia or psychosis and coexisting substance misuse based

on searches of five electronic databases searched to November 2007. They report a range of evidence including other reviews, RCTs and case studies. With regard to first-generation antipsychotics, Wobrock and Soyka (2008) found that 'most studies reported that service users with the psychosis and coexisting substance misuse showed a generally poorer response to treatment'. Whether the authors were using studies with both substance misuse and substance non-misuse populations, or whether they were comparing studies with substance misuse populations with studies with non-misusing populations is unclear. They include a range of substances including alcohol. They found some evidence that switching to flupenthixol improves outcomes in alcohol or cocaine misuse.

With regard to second-generation antipsychotics, Wobrock and Soyka (2008) found little high-quality evidence, but concluded making a theoretical case for the use of second-generation antipsychotics based on limited evidence that second-generation antipsychotics, particularly aripiprazole, clozapine, olanzapine, quetiapine and risperidone, may be more effective than older antipsychotics for both psychotic symptoms and for reducing craving and drug consumption. They found some evidence for the use of naltrexone in controlling alcohol misuse, as well as for the use of disulfiram, but did not consider this to be appropriate because of the risk of inducing psychosis.

Summary of evidence from reviews and guidelines for pharmacological interventions for people with schizophrenia and coexisting substance misuse

Although some of the reviews and guidelines described above either did not search widely for relevant studies, or did not describe the source of the evidence reviewed, they all came to the conclusion that there is poor evidence for the effectiveness of pharmacological interventions for people with schizophrenia and coexisting substance misuse. Some authors concluded that no specific drugs can be recommended and that treatment should follow that used for schizophrenia alone, while others suggest that the limited evidence for several second-generation antipsychotics, including clozapine, quetiapine, risperidone and olanzapine, should be interpreted as an indication for use of these drugs. All call for better-quality research to be undertaken.

8.2.5 Evidence from new RCTs for pharmacological interventions for people with schizophrenia and coexisting substance misuse

One additional RCT (Van Nimwegen *et al.*, 2008) and a secondary analysis from an earlier RCT (Swartz *et al.*, 2006) were found that were not included in the published reviews and guidelines.

The Van Nimwegen and colleagues' (2008) trial was a 6-week double-blind RCT comparing olanzapine with risperidone in people with schizophrenia, schizoaffective disorder or schizophreniform disorder with coexisting cannabis use. Participants were a subsample (N = 41) of 138 service users or outpatients from four mental health centres aged 18 to 30. The authors reported no differences between the study drugs in terms of cannabis use or cravings.

The Swartz and colleagues' (2006) study was a secondary analysis of a large pragmatic trial that included 1,432 participants (643 substance users and 789 non-users). People with schizophrenia were recruited at 57 US sites and randomly assigned to

olanzapine, perphenazine, quetiapine, risperidone or ziprasidone for up to 18 months. Among those using substances, there were no significant differences between treatment groups in time to all-cause discontinuation. The authors also report that people using substances and non-users were generally similar in terms of improvement of symptoms of psychosis and side effects. An analysis of the effect of treatment on substance misuse outcomes has not yet been published.

Summary of evidence from new RCTs

There is no new evidence showing increased effectiveness of any particular antipsychotic in reducing substance misuse in people with coexisting schizophrenia and substance misuse.

8.2.6 Evidence from existing reviews and guidelines for pharmacological interventions for people with bipolar disorder and coexisting substance misuse

Two reviews focus solely on the treatment of people with bipolar disorder and coexisting substance misuse (Casas *et al.*, 2008; Vornik & Brown, 2006). In addition, three reviews and guidelines discussed above also cover bipolar disorder (Mills *et al.*, 2009; Tiet & Mausbach, 2007; Center for Substance Abuse Treatment, 2006 [TIP series 45]).

Casas and colleagues (2008) developed a guideline based on a systematic review of published evidence together with expert consensus and surveys of expert practice. Evidence was sourced from a search of MEDLINE (to 2005). How the evidence was assessed, or what outcomes were used, is unclear. Similarly the diagnostic criteria used to include or exclude studies are unclear. Nevertheless, recommendations are made for the treatment of different episode types. With regard to mania, Casas and colleagues (2008) recommend that treatment for ‘concomitant substance use disorder ... should be initiated at the same time [as treatment for mania] without giving priority to one over the other. However, if substance abuse presents as an acute intoxication or abstinence syndrome, then the treatment of the manic episode must be adapted.’ They recommend second-generation antipsychotics, as well as carbamazepine and valproate, but not antidepressants. For rapid cycling bipolar disorder, Casas and colleagues (2008) recommend that treatment should be adapted if substance misuse presents as acute intoxication or abstinence syndrome, using the same drugs recommended for use in a manic episode; otherwise treat as for mania. The authors found that lithium was shown to be effective in young people with coexisting substance misuse, and that valproate was helpful in reducing alcohol consumption. They found no RCT evidence for carbamazepine, gabapentin, lamotrigine or benzodiazepines.

With regard to bipolar disorder, Mills and colleagues (2009) found evidence to suggest that alcohol-use outcomes improved with the use of valproate; that carbamazepine and lithium may help to reduce substance misuse; and that quetiapine and lamotrigine may also be of value in people with cocaine dependence.

In addition to the findings described above, Tiet and Mausbach (2007) found that the combination of valproate and lithium may reduce coexisting alcohol use in bipolar disorder.

TIP series 45 (Center for Substance Abuse Treatment, 2006) looked at drugs commonly prescribed for bipolar disorder in the context of people with substance misuse. With regard to lithium, the authors concluded that ‘lithium has no conclusively positive effect on rates of abstinence in either depressed or nondepressed patients.’ They also state that ‘anticonvulsant mood stabilizers, such as divalproex sodium and carbamazepine, can be effective in controlling mania and, some evidence suggests, in coexisting addictive conditions as well. Carbamazepine is known to be as effective as some benzodiazepines in inpatient treatment of alcohol withdrawal and, because of its anticonvulsant properties, it may be a good choice for treating those service users at high risk of withdrawal seizures.’

Vornik and Brown (2006) reviewed pharmacological interventions for bipolar disorder and coexisting substance misuse. There is no description of how evidence was sourced or of any criteria by which evidence was assessed, which makes it difficult to assess the overall quality of the conclusions drawn. The authors report some evidence from RCTs for the effectiveness of mood stabilisers, including carbamazepine for reducing depressive symptoms in bipolar disorder (depressed phase) and coexisting cocaine misuse; major depressive disorder and coexisting substance use; and valproate in reducing alcohol use. They report non-randomised evidence for lamotrigine in reducing psychiatric symptoms and cocaine use. They also found evidence for the effectiveness of antipsychotics, including quetiapine (open-label, randomised) and aripiprazole (open-label, non-randomised), for reducing psychiatric symptoms and drug craving.

Summary of evidence from reviews and guidelines

As with schizophrenia, not all the reviews searched more than one electronic database or gave full details of their methodology, which makes it hard to judge their quality. However, the reviews and guidelines largely came to similar conclusions, other than concerning the use of lithium. Some used the Geller and colleagues’ (1998) trial in young people (see Chapter 9) as evidence for lithium’s effectiveness (for example, Casas *et al.*, 2008), but others found no particular effect (for example, TIP series 45). With regard to other drugs used as mood stabilisers, most reviewers found evidence for the use of carbamazepine, valproate for improving alcohol-related outcomes, and antipsychotics. One found low-level evidence for the use of lamotrigine.

8.2.7 Evidence from new RCTs for pharmacological interventions for people with bipolar disorder and coexisting substance misuse

Three relevant RCTs were found that were not included in the published reviews and guidelines (Brown *et al.*, 2009, Kemp *et al.*, 2009, Nejtek *et al.*, 2008).

Brown and colleagues (2009) reported results from a 12-week placebo-controlled double-blind RCT of naltrexone plus CBT in 50 people with bipolar disorder I or II (currently depressed or mixed phase) with coexisting alcohol dependence. All participants continued to take their usual medication throughout the trial. The authors report that although the decline in alcohol consumption was

numerically greater in the naltrexone group, there was no significant difference between groups on the primary outcome (percentage of drinking days) or any secondary outcome.

Kemp and colleagues (2009) reported results from a 6-month, double-blind, maintenance trial of lithium monotherapy versus the combination of lithium and divalproex in people with coexisting rapid-cycling bipolar disorder and substance misuse and/or dependence. Of 149 participants enrolled into an open-label acute stabilisation phase, 31 were randomised to the maintenance phase. The authors report no statistically significant advantage in using combination therapy in terms of the primary outcome measure (time to relapse; defined as treatment for a mood disorder) or any secondary outcome.

Nejtek and colleagues (2008) report results from a 20-week, double-blind RCT comparing risperidone with quetiapine in people with bipolar disorder I or II and coexisting stimulant dependence. Of 96 participants who consented and were randomly assigned, 80 attended at least one follow-up visit. The results suggested little difference between study medication in terms of drug use or craving, or mood.

Summary of evidence from new RCTs

When tested in an RCT, there was insufficient evidence to reach a conclusion about the effectiveness of using naltrexone or a combination of lithium with divalproex to improve alcohol-related outcomes in people with bipolar disorder and coexisting alcohol dependence. In terms of antipsychotic medication, evidence from one trial suggests little difference between risperidone and quetiapine, but a lack of placebo control makes it difficult to determine if these medications may be effective.

8.2.8 Clinical evidence for the management of drug interactions or adverse events from pharmacological interventions for people with psychosis and coexisting substance misuse

None of the reviews specifically focuses on interactions between treatment medication and substances of misuse, or on adverse events that are specific to, or especially elevated in, people with psychosis and coexisting substance misuse compared with those with psychosis alone.

Adverse events associated with most psychotropic drugs are well documented. For antipsychotics, these include extrapyramidal symptoms (notably with first-generation drugs), weight gain, and increased glucose and lipid levels, leading to increased risk of diabetes (notably with second-generation drugs). Clozapine, which is used in several of the trials discussed above, tends to be associated with more reports of side effects than other antipsychotic medication. However, as Green and colleagues (2008) state, interactions between psychotropic medications and drugs of misuse are rare. These authors also point out that some newer medication can be sedating, which can be problematic with some drugs of misuse. In addition, Farren and colleagues (2000) reported near syncopal episode following cocaine use in a service user treated with clozapine.

Meanwhile, pharmacological treatments for alcohol misuse, such as naltrexone and acamprosate, are not contraindicated in schizophrenia, and disulfiram also seems to be well tolerated, although it has been suggested that symptoms of psychosis and liver toxicity should be closely monitored (Green *et al.*, 2008).

TIP series 43 (Center for Substance Abuse Treatment, 2005b) covers problems with treatments for opioid dependence, such as methadone and buprenorphine. These drugs can precipitate withdrawal in people also taking drugs to treat HIV infection, such as nelfinavir, efavirenz, and nevirapine. There is a similar problem with these opioid treatments and carbamazepine, phenytoin and phenobarbital.

With antidepressants, some SSRIs that inhibit the isoenzymes that metabolise methadone (particularly, CYP3A4, CYP1A and CYP2D6) could lead to increased serum methadone levels. Fluvoxamine is the most likely to cause excessive serum methadone levels due to inhibition of CYP1A2 and has been implicated in over-sedation and respiratory depression when combined with methadone. Also, there is some indication that methadone increases serum levels of tricyclic antidepressants, so lower doses may be needed. Rifampin, carbamazepine, phenobarbital and some HIV infection medications may induce liver enzymes that alter the transformation of methadone. So clinicians may need to adjust the dose of methadone accordingly.

TIP series 45 (Center for Substance Abuse Treatment, 2006) warns that benzodiazepines, which are known to be addictive, are particularly so in those already addicted to other substances. Because of their reduced side-effect profile and lower risk of dangerous drug interactions, SSRIs may be considered as the antidepressants of choice for those with substance misuse and coexisting psychiatric conditions. However, the potential for different SSRIs to cause drug interactions should be considered in individual cases.

8.2.9 Clinical evidence summary (pharmacological interventions)

There is limited evidence from well conducted RCTs for the relative effectiveness of pharmacological treatments for people with psychosis and coexisting substance misuse, either for psychosis or aimed at improving substance misuse. There is also little data on interactions between drugs given as medication and drugs of misuse. See Table 33 for a summary for each medication.

8.2.10 Health economic evidence (pharmacological and physical interventions)

No studies assessing the cost effectiveness of pharmacological and physical interventions for people with psychosis and coexisting substance misuse were identified by the systematic search of the economic literature undertaken for this guideline. Details on the methods used for the systematic search of the economic literature are described in Appendix 9.

Table 33: Relevant interventions included in current NICE guidelines and summary of evidence of effectiveness

Intervention type/use	Name	Recommended in existing NICE guideline? ¹	Evidence found from existing reviews and new RCTs	Notes from Summary of Product Characteristics (SPC)
MEDICATION				
Alcohol dependence	Acamprosate calcium	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NICE, 2011; NCCMH, 2011): Yes ²	No evidence, but no known contraindication in people with schizophrenia.	–
Alcohol deterrent compounds	Disulfiram	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NICE, 2011; NCCMH, 2011): Yes ²	At best, there is preliminary evidence of effectiveness in people with schizophrenia and coexisting alcohol dependence, but some reviewers consider that using this medication risks inducing psychosis.	Chlordiazepoxide and diazepam toxic effect may be enhanced. Very rare reports of potentiation of organic brain syndrome and choreoathetosis with pimozide. The intensity of the disulfiram-alcohol reaction may be increased by amitriptyline and chlorpromazine and decreased by diazepam. Avoid lithium liquid (contains 5% ethanol).
Alpha-adrenergic agonists	Clonidine	<i>Drug Misuse: Opioid Detoxification</i> (NICE, 2007a; NCCMH, 2008a): Not routinely	No evidence.	Antipsychotics and tricyclic antidepressants may provoke orthostatic hypotension. CNS depressants may be potentiated and cause excessive

Alpha-adrenergic agonists	Lofexidine	<i>Drug Misuse: Opioid Detoxification</i> (NICE, 2007a; NCCMH, 2008a): Yes ²	No evidence.	Efficacy may be reduced by tricyclic antidepressants. Concomitant use of drugs which prolong the QT interval should be avoided.	drowsiness. Increased risk of rebound hypertension if clonidine is withdrawn in service users taking tricyclic antidepressants.
Antiepileptic drugs	Phenytoin	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NICE, 2011; NCCMH, 2011): No	No evidence.	Class warning for anticonvulsants. A small increased risk of suicidal ideation and behaviour reported.	Potential for drug interactions is complex and includes a range of psychotropic drugs.
Antiepileptic drugs	Topiramate	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NICE, 2011; NCCMH, 2011): No	No evidence.	SPC class warning for anticonvulsants. A small increased risk of suicidal ideation and behaviour reported.	Inhibits the enzyme CYP2C19.
Antimanic drugs	Lithium	<i>Bipolar Disorder</i> (NICE, 2006; NCCMH, 2006): Yes	There is limited evidence of effectiveness in reducing substance misuse in those with bipolar disorder; of combined use with valproate in reducing coexisting alcohol use.	Avoid lithium liquid with metronidazole or in service users with alcohol misuse.	

Continued

Table 33: (Continued)

Intervention type/use	Name	Recommended in existing NICE guideline? ¹	Evidence found from existing reviews and new RCTs	Notes from Summary of Product Characteristics (SPC)
Antimanic drugs	Valproic acid	<i>Bipolar Disorder</i> (NICE, 2006; NCCMH, 2006): Yes	Case study evidence of benefit in schizophrenia and coexisting alcohol dependence; recommended by one author for mania but evidence is unclear; evidence of usefulness in reducing alcohol consumption.	Class warning for anticonvulsants. A small increased risk of suicidal ideation and behaviour reported. Combination with olanzapine may significantly increase the risk of certain olanzapine-associated adverse events.
Antimanic drugs/ anxiolytics	Benzodiazepine (for example, diazepam, lorazepam, chlordiazepoxide)	<i>Bipolar Disorder</i> (NICE, 2006; NCCMH, 2006): Yes ² <i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NICE, 2011; NCCMH, 2011): Yes	No evidence, but potentially addictive.	-
Antimanic drugs/ hypnotics	Clomethiazole (chlormethiazole)	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and</i>	No evidence, but potentially addictive.	Fatal cardiorespiratory collapse reported when combined with other CNS depressant drugs.

<p>Antimanic/ control of epilepsy</p>	<p>Carbamazepine</p>	<p><i>Alcohol Dependence</i> (NICE, 2011; NCCMH, 2011): No</p> <p><i>Bipolar Disorder</i> (NICE, 2006; NCCMH, 2006): Not routinely</p>	<p>Evidence that it may reduce substance misuse in bipolar disorder, and control mania and depressive symptoms.</p>	<p>Class warning for anticonvulsants. A small increased risk of suicidal ideation and behaviour reported.</p> <p>Avoid with monoamine oxidase inhibitors (MAOIs) and individuals of Han Chinese and Thai origin with positive HLA-B*1502 allele, due to increased risk of developing carbamazepine-associated Stevens-Johnson syndrome.</p> <p>Principal isoenzyme responsible for metabolism is CYP3A4, therefore use caution with inhibitors or inducers of this isoenzyme.</p> <p>Levels of carbamazepine and its principal active metabolite may be increased by concomitant use of a range of drugs including fluoxetine, fluvoxamine, paroxetine, trazodone, olanzapine, quetiapine and valproic acid.</p> <p>Carbamazepine is also a potent inducer of CYP3A4 and may therefore reduce</p>
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Continued

Table 33: (Continued)

Intervention type/use	Name	Recommended in existing NICE guideline? ¹	Evidence found from existing reviews and new RCTs	Notes from Summary of Product Characteristics (SPC)
Antipsychotic drugs	For example: clozapine, haloperidol, olanzapine, risperidone	<i>Bipolar Disorder</i> (NICE, 2006; NCCMH, 2006): Yes <i>Schizophrenia</i> (NICE, 2009a; NCCMH, 2010): Yes	Inconsistent findings on substance misuse outcomes. More frequent reports suggest clozapine may be of benefit.	the plasma concentrations of concomitant pharmacotherapy which is metabolised by CYP3A4. Principal isoenzyme responsible for metabolism is CYP1A2. Clozapine is contraindicated in alcoholic and other toxic psychoses, drug intoxication and comatose conditions. Principal isoenzyme responsible for metabolism is CYP1A2. Sudden smoking cessation may significantly increase clozapine plasma levels, concomitant benzodiazepine use may increase risk of circulatory collapse.
Opioid agonists and partial agonists	Buprenorphine	<i>Drug Misuse: Opioid Detoxification</i> (NICE, 2007a; NCCMH, 2008a): Yes	No evidence.	Consult the SPC of individual agents for information about other drugs. Principal isoenzyme responsible for metabolism is CYP3A4.

Opioid agonists and partial agonists	Methadone	<i>Drug Misuse: Opioid Detoxification</i> (NICE, 2007a; NCCMH, 2008a): Yes	No evidence. Some suggestion of interactions with other medications.	Principal isoenzyme responsible for metabolism is CYP3A4. Concomitant use with MAOIs and drugs that prolong the QT interval should be avoided. No UK licence.
Opioid antagonists	Nalmefene	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NICE, 2011; NCCMH, 2011): No <i>Drug Misuse: Opioid Detoxification</i> (NICE, 2007a; NCCMH, 2008a): No	No evidence.	
Opioid antagonists	Naltrexone	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NICE, 2011; NCCMH, 2011): Yes ² <i>Drug Misuse: Opioid Detoxification</i> (NICE, 2007a; NCCMH, 2008a): Yes ²	Some evidence of effectiveness in schizophrenia with coexisting alcohol dependence.	-

Continued

Table 33: (Continued)

Intervention type/use	Name	Recommended in existing NICE guideline? ¹	Evidence found from existing reviews and new RCTs	Notes from Summary of Product Characteristics (SPC)
Serotogenic agents	Ondansetron	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NICE, 2011; NCCMH, 2011): No	No evidence.	Metabolised by multiple hepatic isoenzymes: CYP3A4, CYP2D6 and CYP1A2. Therefore enzyme inhibition or reduced activity of one enzyme is normally compensated by other enzymes and should result in little or no significant change in overall ondansetron clearance or dose requirement.
Serotogenic agents	SSRIs	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NICE, 2011; NCCMH, 2011): Not routinely for alcohol misuse <i>Depression</i> (NICE, 2009d; NCCMH, 2010): Yes ²	No evidence in psychosis. Some suggestion of interactions with methadone, leading to increased serum methadone levels (SSRIs).	Individual SSRIs vary in their propensity to affect cytochrome p450 isoenzymes. Consult current SPC for details.
Skeletal muscle relaxants	Baclofen	<i>Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence</i> (NICE, 2011; NCCMH, 2011): No	No evidence.	Tricyclic antidepressants may potentiate effects, resulting in pronounced muscular hypotonia. Concomitant use of CNS drugs may lead to increased sedation.

¹ Available from www.nice.org.uk.

² For specific groups and/or in certain circumstances (see relevant guideline for further information).

8.3 FROM EVIDENCE TO RECOMMENDATIONS

There is little robust evidence to guide the use of specific pharmacological treatments for people with psychosis and coexisting substance misuse in the UK. On the basis of the evidence reviewed, it is not possible to identify specific drugs that should be considered as agents of first choice.

The GDG felt that the use of depot formulations may be expected to increase the opportunity to identify episodes of non-adherence to prescribed treatment. While this may be an important consideration in individual cases there is, overall, insufficient evidence to recommend depot preparations as routine first-line treatment.

Clozapine is frequently cited as having a particular role in this population, although there is no RCT evidence to support this view. In addition, its use may increase the risk of adverse effects, and due to the possibility of a syncopal episode, the GDG felt that particular care should be exercised where the drug of misuse is cocaine.

In general though, as no good-quality evidence was found relating to the modification of interventions recommended for people with a single diagnosis, the GDG concluded that people with psychosis and coexisting substance misuse should be offered the same range of evidence-based interventions recommended for people with a single diagnosis. In addition, the GDG felt it important to make a number of recommendations for good practice concerning the initiation and use of medication.

There was no evidence that addressed the sub-question regarding subgroups of people (see Section 8.2.2 for further information about the sub-question). In addition, the GDG noted that valuable information about the potential benefits of pharmacological and psychosocial interventions for people with psychosis and substance misuse could be obtained from trials of treatments for people with either of the two different types of problems. However, to date, most trials conducted among people with psychosis have excluded those who have coexisting substance misuse and nearly all trials among people with substance misuse have excluded those with coexisting psychosis. In some instances, it may be necessary to exclude people with coexisting problems from future studies. However, very often, this important and prevalent group of service users has been excluded from intervention trials with no clear reason being offered. Therefore, future research should not routinely exclude people with psychosis and coexisting substance misuse.

8.4 RECOMMENDATIONS

8.4.1 Clinical practice recommendations

Secondary care mental health services

Treatment

8.4.1.1 Before starting treatment for adults and young people with psychosis and coexisting substance misuse, review:

- the diagnosis of psychosis and of the coexisting substance misuse, especially if either diagnosis has been made during a crisis or emergency presentation **and**

- the effectiveness of previous and current treatments and their acceptability to the person; discontinue ineffective treatments.³¹
- 8.4.1.2 Ensure that adults and young people with psychosis and coexisting substance misuse are offered evidence-based treatments for both conditions (see 8.4.1.3 and 8.4.1.4).³¹
- 8.4.1.3 For the treatment of psychosis, see ‘Bipolar disorder: the management of bipolar disorder in adults, children and adolescents, in primary and secondary care’ (NICE, 2006) or the guideline on schizophrenia (NICE, 2009a).³¹
- 8.4.1.4 For the treatment of substance misuse, see:
- ‘Alcohol-use disorders: diagnosis and clinical management of alcohol-related physical complications’ (NICE, 2010a) and the guideline on alcohol dependence and harmful alcohol use (NICE, 2011) **and/or**
 - ‘Drug misuse: psychosocial interventions’ (NICE, 2007b) and the guideline on opioid detoxification (NICE, 2007a).³¹
- 8.4.1.5 Use antipsychotics according to the guideline on schizophrenia (NICE, 2009a) or bipolar disorder (NICE, 2006) because there is no evidence for any differential benefit for one antipsychotic over another for people with psychosis and coexisting substance misuse.
- 8.4.1.6 Use depot/long-acting injectable antipsychotics according to the guideline on schizophrenia (NICE, 2009a) in managing covert non-adherence with treatment for psychosis and not as a specific treatment for psychosis and coexisting substance misuse.
- 8.4.1.7 When prescribing medication for adults and young people with psychosis and coexisting substance misuse:
- take into account the level and type of substance misuse, especially of alcohol, as this may alter the metabolism of prescribed medication, decrease its effectiveness and/or increase the risk of side effects
 - warn the person about potential interactions between substances of misuse and prescribed medication
 - discuss the problems and potential dangers of using non-prescribed substances and alcohol to counteract the effects or side effects of prescribed medication.

8.4.2 Research recommendations

- 8.4.2.1 Are interventions for psychosis or substance misuse clinically and cost effective when compared with standard care for people with psychosis and coexisting substance misuse?³¹
- 8.4.2.2 Is clozapine clinically and cost effective when compared with other pharmacological interventions for people with psychosis and coexisting substance misuse? (For further details see Appendix 12.)

³¹This recommendation also appears in Chapter 7 (Section 7.4) where the psychological/psychosocial data is presented.

9 YOUNG PEOPLE WITH PSYCHOSIS AND COEXISTING SUBSTANCE MISUSE

9.1 INTRODUCTION

There is a paucity of evidence relating to young people with psychosis and coexisting substance misuse with regard to all the review questions (for a list of all questions see Appendix 6). Therefore, the GDG developed by expert consensus specific recommendations for young people (for further information about the methods used in this chapter, see Chapter 3, Section 3.5.6). A care pathway for young people is summarised in Figure 4. As with Chapter 5, the pathway and the text that follows are designed to be illustrative and offer some broad principles and direction, rather than to be prescriptive.

Adolescence is a period of major developmental transitions – physically, psychologically and socially. During this period young people experience emotional distress, frequent interpersonal disruptions and challenges in establishing a sense of identity. These factors can act as both stressors for those vulnerable to a psychotic illness and as difficulties that can lead to substance misuse as a form of escape or self-treatment.

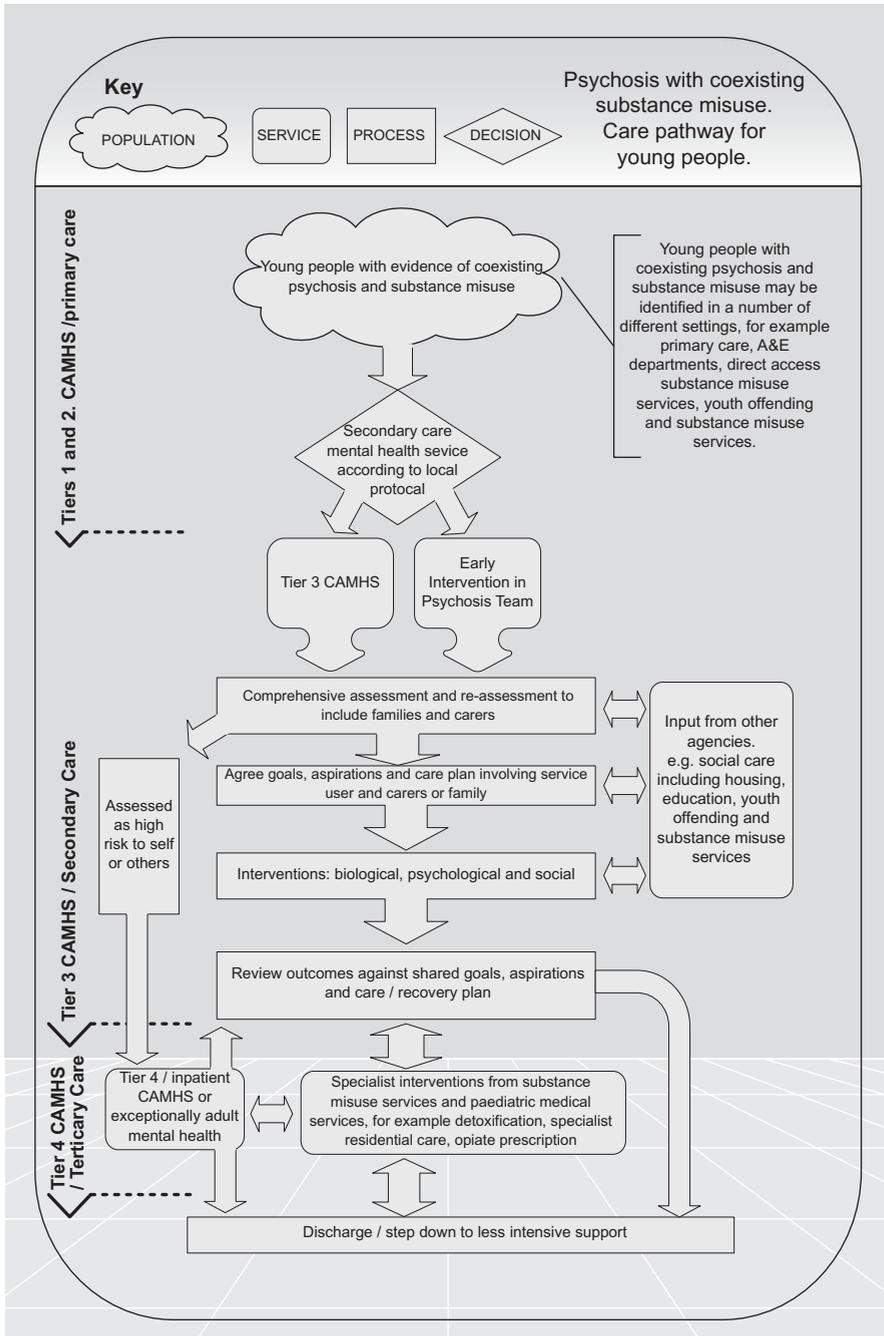
Little research has been carried out on the specific factors that lead young people to be vulnerable to both psychosis and substance misuse. Furthermore, little is known about the effectiveness of interventions specific to this age group. This chapter, therefore, covers what is known about prevalence, outcomes and service configuration for young people. In the absence of more specific evidence, the principles of intervention will be drawn from and adapted from the adult literature.

This guideline uses the term ‘young people’ to refer to people aged between their 14th and 18th birthdays, as people of this age generally prefer this descriptor to the term ‘adolescent’.

9.2 PREVALENCE

It is not simple to identify the prevalence of substance misuse and psychosis in young people. Studies exploring the age range might include a discussion about each of the disorders, but rarely combine them. Studies that do investigate combined disorders usually do not focus on people aged under 18 years. A systematic review of coexisting substance use in people with psychosis carried out by Carra and Johnson (2009) pointed to wide variations in prevalence rates. Most recent UK studies reported rates of between 20 and 37% in mental health settings, and 6 and 15% in addiction settings (Carra & Johnson, 2009). Inpatient, crisis and forensic settings are, not surprisingly, higher, that is, 38 to 50% (Carra & Johnson, 2009). People from inner cities and some ethnic groups are over represented (Carra & Johnson, 2009). It should be emphasised

Figure 4: Care pathway for young people with psychosis and coexisting substance misuse



that there are varying age ranges in these studies and few specifically focused on young people.

9.2.1 General practice

A study undertaken from 1993 to 1998 of comorbid psychiatric illness and substance misuse estimated that there were at least 195,000 comorbid service users and 3.5 million GP consultations involving comorbid service users of all ages in England and Wales (Frisher *et al.*, 2004). An unanticipated finding was that each year 80 to 90% of comorbid service users were newly diagnosed, although existing service users may have continued to receive treatment. Thus, there is a significant problem in terms of primary care workload. The number of people newly developing comorbidity in primary care increased year on year. The impact on health services is far in excess of that for mono-morbid service users; those with a comorbidity have an extra consultation frequency for all problems, estimated as an excess of 1,115,751 consultations in England and Wales in 1998.

During the 6-year study period, the annual comorbidity rate increased by 62%, but rates of comorbid schizophrenia, paranoia and psychoses increased by 128%, 144% and 147%, respectively (Frisher *et al.*, 2004). In this study, the level of comorbidity increased at a higher rate among younger service users, which indicates that comorbidity may increase, perhaps at a faster rate than observed in the study period, in future years. All comorbid diagnoses – including schizophrenia and psychosis – peaked at ages 16 to 24 or 25 to 34. In 1998, it was estimated that there were about 20,000 people with a comorbidity aged between 16 to 34 (7,773 in the 16 to 24 age range and 12,949 in the 25 to 34 age range) in primary care.

The data reported by Frisher and colleagues (2004) indicate that substance misuse may be precipitating more serious forms of comorbidity, although it is by no means clear that this is the case. For example, nearly all diagnoses of comorbid schizophrenia precede substance misuse. In this study (Frisher *et al.*, 2004), the majority (54%) of service users had a psychiatric diagnosis first, and half become comorbid within 6 months of the first diagnosis.

The findings on transition from mono-morbidity to comorbidity have major implications for understanding and preventing comorbidity. It is possible that people with comorbidity may be qualitatively different in the form of their mono-morbidity than those who remain mono-morbid. Early development of comorbidity suggests that there may be characteristics already present at the mono-morbid stage that may predict the likelihood of developing comorbidity. Identifying such characteristics in future research might contribute to the early management or prevention of comorbidity in primary care.

9.2.2 Community substance misuse and mental health services

Weaver and colleagues (2003) conducted a multicentre study that derived estimates of psychosis and coexisting substance misuse (76% of whom were diagnosed with

schizophrenia) in the 16 to 30 age range. They found that one third of their sample was misusing substances. Although the age range looked at in this study exceeds the range considered for young people in this guideline, it is helpful in providing a figure on substance misuse in the community.

9.2.3 First-episode psychosis

Donoghue and colleagues (2009) utilised data from two epidemiological studies of first-episode psychosis (the Schizophrenia in Nottingham study and the Aetiology and Ethnicity of Schizophrenia and Other Psychoses study), demonstrating that for those aged 16 to 29 years, there was a significant increase from 14.9 to 30.1% in all substance-use disorders between 1992 to 1994 and 1997 to 1999 (Donoghue *et al.*, 2009). Similarly, for cannabis-specific substance-use disorder, there was a significant increase from 3.2 to 10.6%. These increases were seen in both males and females.

9.3 IMPACT OF SUBSTANCE MISUSE ON OUTCOME IN PSYCHOSIS

In a group of service users treated with psychological therapy for first-episode psychosis, 33% of those under 21 years had self-reported substance misuse (Haddock *et al.*, 2006). Of relevance is the finding that young people may have differing needs with regard to engagement. Counselling appeared to be more beneficial for the younger age group.

An Australian study (Wade *et al.*, 2006) in people aged 15 to 30 years (mean age 21.6 years) reported that substance misuse (53% at follow-up) was an independent risk factor for problematic recovery in first-episode psychosis (for example, increased risk of admission, relapse of positive symptoms and shorter time to relapse). However, substance misuse was not associated with longer time to remission.

Hides and colleagues (2006) has pointed to a bi-directional relationship between substance misuse and cannabis relapse in that a higher frequency of cannabis use was predictive of psychotic relapse (if medication adherence, other substance use and duration of untreated psychosis were controlled for), while an increase in psychotic symptoms was predictive of relapse to cannabis use. In this study, only 15% of service users had not used any illicit substance in the previous 12 months.

9.4 ASSESSMENT AND DIAGNOSIS

Many aspects of the assessment and diagnosis of young people with psychosis and coexisting substance misuse will be the same or similar as for adults. This is covered in detail in Chapter 5.

As is the case for adults, healthcare professionals in all settings should routinely ask young people with known or suspected psychosis about their use of substances.

This may include questions about type and method of administration, quantities and frequency. It is important for healthcare professionals in all settings to routinely assess young people with known or suspected substance misuse for possible psychosis.

For young people with psychosis and coexisting substance misuse presenting to mental health services, a comprehensive assessment of both conditions is crucial. This includes an assessment of psychiatric, psychological and physical health, home and family environment, educational or employment status, medication, risk to self and others, relationships and social networks, forensic and criminal justice history, strengths and aspirations. Assessing the relationship between substance use, emotional state and reasons for substance use is also important. In addition, gaining corroborative evidence where possible is helpful in order to assess the impact of substance misuse on mental state and behaviour.

The assessment of young people may take time and involve multiple sessions due to difficulty with concentration, ambivalence, lack of clarity about the purpose of the assessment(s), and the need to gradually gain trust and confidence in the practitioners and service. There are three crucial goals of an assessment: (1) to conduct the assessment in such a manner that fosters and promotes continuing engagement; (2) to ensure the safety of the young person; and (3) to determine which substance(s) the young person is dependent on in order to determine whether administration of a pharmacological agent – possibly for detoxification – is appropriate. It is important to note that even if the young person is not dependent on a substance, serious harm may result from drug misuse.

The comprehensive assessment of a young person presenting with psychosis and coexisting substance misuse is similar to what is described for adults in Chapter 5. The issues brought up for adults, however, apply even more strongly for young people, as they are more complex to engage, are more vulnerable, and can experience serious problems as a result of substance misuse, without having substance dependence. Additional differences between adults and young people relate to service delivery, as services for young people are usually provided separately from those for adults.

9.5 SERVICE CONFIGURATION AND CARE PATHWAYS

9.5.1 Introduction

Interventions for young people with psychosis and coexisting substance misuse may be provided by a range of agencies and services within each agency. Agencies will include Children's Services, which may be involved around social care, housing, education or safeguarding. Youth offending services may be involved. However, once a diagnosis of psychosis with coexisting substance misuse has been made, mental health services will usually be provided by specialist child and adolescent mental health services (CAMHS) or early intervention in psychosis services (EIS). Specialist substance misuse interventions for young people may be available from within core mental health services or from specialist substance misuse services.

9.5.2 Tier structure of child and adolescent mental health services

In order to recognise the different levels of interventions for many mental health problems in children and young people, CAMHS has been organised into four main levels, or tiers, of delivery (Department of Health, 2004; Health Advisory Service, 1995) (see Text Box 1).

Text Box 1: CAMHS tiers structure

Tier 1	<ul style="list-style-type: none"> • Provide primary or direct contact with young people, primarily for reasons other than mental health, including primary care/general practice, counselling and psychotherapy, general paediatrics, social services, health visitors and schools • First point of contact with the child with mental health problems and their family • Draw on specialist CAMHS personnel who can consult and advise them about working with children and young people in their care who either have, or are at risk of developing, a mental health problem
Tier 2	<ul style="list-style-type: none"> • Specialist CAMHS professionals working in a community-based setting alongside Tier 1 workers, working in primary care, schools and other relevant community settings such as social services • Work as a part of a team, with Tier 1 staff, built around the individual child • Able to provide fairly rapid assessment and treatment to children within Tier 1 settings, as well as consultation/support to Tier 1 workers • Able to help identify those children needing referral to more specialist services • Ideally organised into multidisciplinary teams, with good links to tier 3 services, thereby facilitating a more seamless transition across tiers • Sometimes Tier 2 services are provided by the voluntary sector (for example, some but not all adolescent counselling and psychotherapy services)
Tier 3	<ul style="list-style-type: none"> • Comprise multidisciplinary teams of specialist CAMHS professionals working in (secondary care) specialist CAMHS facilities (for example, child and family consultation services or hospital liaison teams) • The National Service Framework for children's services (Department of Health, 2004) states that all PCT/Local Health Board areas should have at least one (or access to one) comprehensive Tier 3 multidisciplinary CAMHS team providing specialist co-ordinated assessments and interventions, and offering the full range of appropriate psychological and pharmacological treatments

	<ul style="list-style-type: none"> • Offer outreach services to young people who are housebound or otherwise unable to access Tier 3 services based in secondary care facilities, or to work in conjunction with outpatient treatment plans (for example, monitoring medication). Emergency services, with 24-hour availability, should also be in place in all localities • Provide consultation and training to Tier 1 workers and refer when necessary to Tier 4 services
Tier 4	<ul style="list-style-type: none"> • Highly specialised tertiary CAMHS that provide multidisciplinary services for very severe mental health problems, or for those who need very intensive treatment or supervision; these services vary in how they are organised • Includes highly specialist outpatient treatment, crisis intervention and intensive home-based therapies. • Referrals to Tier 4 services usually come from Tier 3 CAMHS professionals, and service users are usually discharged back to Tier 3 services or outreach services after the Tier 4 intervention

Tier 1 CAMHS

Professionals at Tier 1 are most likely to encounter young people with psychosis and coexisting substance misuse when a change in their behaviour is noticed. This could be unusual or otherwise out-of-character behaviour, a decline in academic performance or increasing social isolation. Tier 1 professionals are unlikely to be involved in diagnosing psychosis, but may become aware of substance misuse difficulties. They could also become involved in providing for the young person's physical healthcare, social and educational needs when the young person's mental health needs are being met. Awareness of psychosis and substance misuse in young people may prevent inappropriate dismissal of their presenting difficulties and encourage Tier 1 professionals to refer on to appropriate services.

For Tier 1 professionals to be able to fulfil these roles they will need appropriate training. Training programmes for Tier 1 staff may require modification to cover psychosis with substance misuse or behaviours suggestive of the diagnosis. This training may be most effectively targeted at services that have young people with higher rates of mental health concerns, for example Key Stage 4 Pupil Referral Units. Following appropriate training Tier 1 professionals may be involved in the sensitive detection of psychosis and substance misuse. When identified, such concerns should lead to referral to, or consultation with, Tier 2 professionals.

Tier 2 CAMHS

Tier 2 professionals provide consultation and training to Tier 1 professionals in regard to all mental health problems. Tier 2 professionals therefore require an awareness of the problems of young people with psychosis and coexisting substance misuse and competence to detect psychotic symptoms or the early features of

Young people with psychosis and coexisting substance misuse

psychosis in young people. If a diagnosis of psychosis or early features of psychosis is suspected, a referral to Tier 3 CAMHS or EIS teams can be made according to local protocols.

Tier 3 CAMHS

Tier 3 services can provide a comprehensive assessment of the young person with psychosis and coexisting substance misuse. When a diagnosis of psychosis is made, it is important for Tier 3 professionals to consider the possibility of substance misuse.

When a diagnosis of psychosis and coexisting substance misuse has been made, priority should be given to both treatment of the psychosis and of the substance misuse. Constant review of risk is of key importance, and if the young person presents with a high risk to themselves or others due to their psychosis, then it is important to consider inpatient admission.

All the mainstays of treatment, including prescribing medication, monitoring mental state and providing psychological and psychosocial interventions can be offered in Tier 3 CAMHS or by EIS teams or by collaboration between the two.

Given that most young people with psychosis and coexisting substance misuse live with their families, with foster parents, or in social services residential placements, involving families and carers in treatment is helpful. Families and carers can be involved in relapse prevention work as well as working with professionals in supporting the young person. Interventions to support parents, including family therapy, should be offered to all families and include a focus on high levels of criticism and intrusiveness (expressed emotion) when identified.

Because many young people with psychosis and coexisting substance misuse require a multi-agency response, clarity about the responsibilities of each agency facilitates the delivery of care. As well as their mental health and substance misuse needs, young people with psychosis and coexisting substance misuse will often have housing, employment or educational needs. Agencies must strive to collaborate to provide coordinated care. Different thresholds for entry into services can compromise this objective. For example, Tier 3 professionals may have concerns about a young person's social care that may not meet social service thresholds for intervention. This can reduce the effectiveness of therapeutic interventions as Tier 3 staff become involved in trying to coordinate or meet social care needs. Likewise social services may find accessing specialist therapy services for some of the young people they care for difficult because, for example, despite ongoing substance misuse, Tier 3 staff may consider that the young person's mental health difficulties are in remission and therefore subthreshold for active intervention. Failure to engage at all with the young person in these circumstances may prevent the success of social services interventions to improve the young person's social care and increase likelihood of relapse. Professionals need to work flexibly and creatively around these tensions over service thresholds. Respecting the validity of the principles leading to the development of thresholds while trying to meet the needs of the young person is required in these circumstances.

It is important for Tier 3 teams to develop sub-teams of professionals with expertise in the management of young people with psychosis and coexisting substance

misuse either separately or in collaboration with EIS teams. One model of collaboration widely adopted is for CAMHS to provide psychiatric input whilst EIS provide care co-ordination and psychosocial interventions. In some areas, stand-alone CAMHS psychosis services have been set up. Tier 3 CAMHS professionals must also have the capacity to provide consultation and training to Tier 2 staff.

Healthcare professionals working in Tier 3 can also follow the recommendations for adults in other chapters.

Tier 4 CAMHS

For young people with psychosis and coexisting substance misuse, Tier 4 CAMHS principally comprise inpatient services. There is usually a limited role for other Tier 4 services such as specialist outpatient services and home-based treatment teams, as most non-bed based treatments can be picked up by other services such as Tier 3 CAMHS or EIS teams.

Inpatient services

Admission to an inpatient unit will usually be indicated due to the level of risk identified in managing the young person in the community. This can often present in an acute crisis. Admissions for the management of acute risk should be clearly linked to an acute exacerbation of risk, time-limited, and with clear goals in mind. Such admissions may also be required when risk is high and the motivation of the service user to collaborate in community treatment is very low or non-existent. The aim of such admissions is usually to ensure that the service user is just 'community ready'. Transfer back to the community is clearly facilitated when the young person is effectively engaged in a structured outpatient programme.

Other factors warranting consideration for admission by a Tier 4 team for treatment of psychosis and coexisting substance misuse include other Axis I difficulties combined with a significant deterioration in functioning and reduced capacity of either the family or community team to manage the young person.

If a young person's needs are thought to be best met by an adult ward and they choose this (for example if they are almost 18 years and adult services are much closer to home), then it is acceptable for them to be admitted to an adult mental health ward. It is also acceptable for a young person aged 16 or 17 years to spend a short time on an adult ward if an age-appropriate bed is not available. In both circumstances, safeguarding measures need to be in place while the young person is on the adult ward. It is never acceptable for a young person aged under 16 years to be admitted to an adult ward. (See the Mental Health Act 1983; amended 1995 and 2007; Section 31 [HMSO, 2007] and MHA Code of Practice [Department of Health, 2008].)

Specialist home-based treatment teams

These teams for young people are in the early stages of development in the UK and consequently their place in the treatment of psychosis and coexisting substance misuse has yet to be established. Like inpatient services, existing teams frequently manage acute risk and attempt to address chronic risk and/or low functioning service users.

Services are likely to take different forms depending on their focus on acute or chronic issues. When focused on acute risk, services usually combine characteristics of assertive outreach and crisis intervention with intensive case management. These services have proved effective both when Tier 3 treatment has been disrupted and as a mechanism for organising an effective outpatient intervention plan. Typically services have a capacity for rapid and intensive engagement lasting no more than a few weeks, followed by service user/family-centred intensive case management.

Services focused on chronic risk and/or low functioning are characterised by a stronger psychotherapy focus, a longer duration of treatment and an active engagement phase pre-treatment. These services have also been used as a 'step down' from inpatient services when inpatient stays have become ineffective, or for community rehabilitation. This type of intervention might be considered when parenting has become distorted by the service user's presentation and family relationships are undermining individually-focused treatment plans.

In most cases, psychoeducational work with parents is required prior to implementing more intensive interventions that may often be experienced as intrusive. These forms of home-based treatment are best avoided where there are longstanding concerns about parental capacity.

Home-based treatment services, regardless of whether they focus on the treatment of acute or chronic issues, share a number of characteristics: they require experienced staff with expertise in psychosis and coexisting substance misuse and a team structure that allows a high level of supervision and the effective management of risk in the community; each is likely to offer time-limited treatment but of different durations; and each is likely to balance limit setting with developing autonomy. Services need to effectively differentiate young person, parents, family, and wider system interventions and to focus primarily on the management of risk and the promotion of functioning.

9.6 EARLY INTERVENTION IN PSYCHOSIS SERVICES

Early intervention services (EIS) are assertive community-based multidisciplinary teams that provide care for people aged between 14 and 35 years with a first presentation of psychotic symptoms during the first 3 years of psychotic illness (Department of Health, 2001) and are primarily concerned with the identification and treatment of the early phase of psychotic illness. For young people (aged 14 to 18 years), EIS often work according to locally agreed protocols with Tier 3 and 4 CAMHS.

Often, the initial focus of the EIS is on engagement in order to develop a shared, individualised recovery-focused treatment plan that incorporates a range of interventions including antipsychotic drugs, CBT, family intervention, vocational activity and reduction of substance misuse. As substance use and misuse is so common in people presenting with a first episode of psychotic illness, there are sound clinical reasons why EIS staff would consider the possibility of substance misuse in a young person presenting with psychotic symptoms, and if a diagnosis

of psychosis and coexisting substance misuse is made, it should be ensured that treatment for both conditions is offered.

Interventions for substance misuse may be complicated if the young person's peer group is also using substances and so there is a strong rationale for why staff in EIS need to develop strategies to help enable the young person to recognise the impact of their substance use on their psychotic symptoms. In order to do this, EIS staff will need to fully assess substance use including type, amount and frequency of use of each substance as well as understanding the context in which the substance is used and its function.

9.7 SPECIALIST SUBSTANCE MISUSE SERVICES FOR YOUNG PEOPLE

The Health Advisory Service reports (1996, 2001) identified a four-tier framework for specialist substance misuse services for young people, similar to that described above for CAMHS. However, the functions of each tier, rather than the professional discipline involved, are the focus. Different models and configurations have developed in different regions due to a variety of factors including the prevalence of substance misuse, the general level of affluence or deprivation, existing services, and leadership in service development and innovation. A key issue is that interventions for young people whose substance misuse is serious enough to require specialist help are not isolated, but integrated with other medical and social services so that continuity is established and maintained.

Tier 1: universal, generic and primary services

This tier is aimed at all young people. It provides information and advice, health promotion and support to all young people and their families and carers. At this level, vulnerable individuals with risk factors including child protection issues may be identified. It is important for staff in such generic and mainstream services to be aware of the need for a destigmatising non-confrontational empathic approach to substance use and be equipped to identify where more complex interventions may be required.

Tier 2: specialist services

This tier is directed at vulnerable children who are in contact with children's services such as CAMHS, youth offending teams, paediatrics, child psychology and voluntary services and who are potentially vulnerable to substance use. Staff should be skilled in the comprehensive assessment of children and young people and appreciate the context of developmental issues. Implementation of advice and counselling, crisis management, outreach, interventions with the family, as well as competence in 'brief interventions' or motivational techniques for substance misuse is part of the role. Collaboration with agencies in the formulation of care planning so that interventions are integrated – and substance misuse interventions are not delivered in isolation – is a key component.

Tier 3: specialist addiction services

This tier comprises a multidisciplinary team to deliver a complex range of interventions for young people who have harmful and potentially serious substance misuse problems and dependence. Close collaboration with CAMHS, youth justice, voluntary agencies and medical services is needed in the delivery of these complex care plans. These services should be integrated with children's services and should cater for the needs of young people and not be based on adult models. Staff should be competent in the delivery of the range of pharmacological and individual, group and family psychological interventions that are available for dependent substance use. Training can be provided to staff to understand the intricacies of the relationship between mental, physical and social problems and substance misuse in this age group so that appropriate links can be forged between the diverse agencies in the locality or region.

Tier 4: very specialised services

This tier provides intensely focused pharmacological and psychological interventions that require implementation in a residential or inpatient setting or in a structured day programme, due to the severity of the problems. Since there are no residential units for young people who misuse substances at present, units such as inpatient CAMHS, forensic or paediatric units might be appropriate for different stages of the care plan. Inpatient detoxification for alcohol dependence or titration of opiate substitution treatment are examples of medical interventions requiring inpatient treatment. Intense daily psychological support may only be achieved in an inpatient CAMHS unit or a structured day programme. Coordination of support for accommodation, education and other social needs may also require crisis and fostering placements in order to achieve stability and safety in critical situations, rather than the professional groups involved in provision of care.

Children and young people may need a range of services from a number of tiers at different times. Tiers 3 and 4 should not be involved without support from Tiers 1 and 2. Tiers 1 and 2 are key to the development of a broader base, a more comprehensive approach and the establishment of credibility and trust. Continuity of care from Tier 1, particularly in health and education, is crucial. Where possible, coordination and management of the intervention can be done within Tier 1. This would reduce the stigmatisation and attempt to 'normalise' the child and his/her family. For those young people not connected with Tier 1, any other services involved may want to ensure re-integration and provision of services at Tier 1. Tiers 3 and 4 act as a base for specialist opinion and focused interventions.

9.7.1 Transition to adult services

The transition to adult services for young people is often marked by a series of discontinuities in terms of personnel, frequency of treatment (often less intense in adult services) and treatment approach, and often a failure to recognise and adapt treatment to developmental stage. Parents who are used to being intensively involved

with CAMHS may feel disengaged with adult services. In such circumstances the CPA and joint working between adult mental health services and CAMHS may facilitate the transition. A period of engagement with adult services before handover is preferable. Flexible working around age limit cut-offs is also likely to be helpful in promoting smooth transitions.

If the young person is primarily being managed in CAMHS, protocols with adult mental health services need to be in place to ensure the straightforward transition of young people to adult services when they turn 18 years old (or in some localities 16 years). It is preferable that such protocols ensure that access criteria to adult services are consistent with young people who have been previously treated by CAMHS, and that EIS are involved in this process.

In exceptional circumstances where no age-appropriate services are available for young people, establishing protocols for admitting young people to adult wards is important. These protocols should include liaison with and involvement of CAMHS.

9.8 INTERVENTIONS

9.8.1 Clinical evidence review

A number of existing NICE guidelines have reviewed the evidence for interventions used to treat young people with psychosis without substance misuse (that is, *Bipolar Disorder* [NCCMH, 2006]), and young people with substance misuse without psychosis (that is, *Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence* [NCCMH, 2011]; *Drug Misuse: Opioid Detoxification* [NCCMH, 2008a]; and *Drug Misuse: Psychosocial Interventions* [NCCMH, 2008b]).

For the purposes of the guideline, the review questions relating to young people with psychosis and coexisting substance misuse were sub-questions of those for adults and, therefore, the review protocols are not repeated here (see Chapters 6, 7 and 8).

Where no evidence existed for a particular intervention in young people with psychosis and coexisting substance misuse, the GDG used informal consensus to reach a conclusion about whether it was appropriate to cross-reference to existing NICE guidelines.

9.8.2 Studies considered for review

Based on the searches conducted for Chapters 6, 7 and 8, only one RCT (Geller *et al.*, 1998) focusing specifically on young people with psychosis and coexisting substance misuse met eligibility criteria. Several further RCTs (Edwards *et al.*, 2006; Green *et al.*, 2004; Kemp *et al.*, 2007) included young people, but interpretation of the evidence is difficult as the majority of participants were over 17 years old. One review (Crome & Bloor, 2005), which examined interventions for ‘substance misuse and psychiatric comorbidity in adolescents’, included the study by Green and colleagues

(2004), but no other research specifically about psychosis. In addition, one review (Bender, *et al.*, 2006) systematically searched for studies of interventions for ‘dually diagnosed adolescents’. However, all of the evidence reviewed was for young people with common mental health disorders, not psychosis.

9.8.3 Evidence for the use of pharmacological interventions

One RCT (Geller *et al.*, 1998) randomised 25 young people aged 12 to 18 years who had bipolar disorder and coexisting substance dependency disorder to treatment with lithium or placebo. The results suggested that lithium may be effective in terms of numbers of participants screening positive for drug use after 6 weeks of treatment. This study was also reviewed for the NICE guideline *Bipolar Disorder* (NCCMH, 2006), in which the evidence for psychiatric outcomes was judged to be inconclusive and of overall low quality. Substance misuse outcomes were not examined. The participants had less than 2 months’ history of substance misuse, and the lithium serum levels achieved were high (0.9 to 1.3 meq/l; the guideline recommended 0.6 to 0.8 meq/l).

9.8.4 Guiding principles for treatment

Given the paucity of evidence relating to interventions for young people with psychosis and coexisting substance misuse, the GDG developed a set of guiding principles for treatment.

First, mental health services are the preferred service to lead the treatment of a young person with psychosis and coexisting substance misuse. At the same time, it is necessary for specialist substance misuse services to be involved in the management of young people with opiate misuse and they may advise or offer a service to those with cannabis misuse, stimulant misuse, or severe alcohol misuse or dependence. A collaborative coordinated approach is likely to be the most helpful.

Engagement

Engagement is an essential precursor to treatment. Without it, treatments, especially psychological, psychosocial and environmental, are less likely to be effective. It is important to take time to engage the young person by adopting a straightforward, non-confrontational, non-judgemental and optimistic approach. Assessing readiness to change can help inform care planning and treatment options.

Risk management

Young people with psychosis and substance misuse can at times present with high risk to either themselves or others due to their psychosis, their substance misuse or a combination of the two. Careful and thorough risk assessments are needed at initial presentation and whilst ill, with risk management plans put in place to address any risks identified.

Medication for psychosis

Medication for the treatment of bipolar disorder should follow the NICE guideline (NICE, 2006). A guideline for the treatment of young people with psychosis and schizophrenia was in development at the time of writing; in the meantime guiding principles can be adopted from the adult schizophrenia guideline (NICE, 2009a).

In the UK, licensing of antipsychotic drugs for the treatment of schizophrenia and bipolar disorder in people under 18 years is variable, with some manufacturers not recommending these drugs in those under the age of 18 and the drugs themselves not licensed for this use in this age group. However despite this, considerable clinical experience of their use in young people has been developed from open trials and from some controlled evaluations of drug treatments.

In 2000, the Royal College of Paediatrics and Child Health issued a policy statement on the use of unlicensed medicines or the use of licensed medicines for unlicensed applications, in children and young people. This states clearly that such use is necessary in paediatric practice and that doctors are legally allowed to prescribe unlicensed medicines where there are no suitable alternatives and where the use is justified by a responsible body of professional opinion (Joint Royal College of Paediatrics and Child Health/Neonatal and Paediatric Pharmacists Group Standing Committee on Medicines, 2000).

Caution should be taken with possible drug interactions with substances of misuse. Dosage should be adjusted according to age and weight/body mass index.

Psychological and psychosocial interventions

The following psychological and psychosocial interventions, used in adults, are also used in young people either on their own or in combination:

- motivational interviewing
- CBT
- relapse prevention work
- psychoeducation
- family work/therapy
- contingency management.

The choice of intervention depends on the nature of the problem and which approach may appear more appropriate and suitable, particularly for substance misuse. Motivational enhancement therapy is increasingly used and evidence is accumulating about its benefits and cost effectiveness. Some young people may feel more comfortable concentrating on behavioural methods rather than treatments that use abstract forms of reasoning. Intervention needs to focus not only on the substance misuse but also the psychiatric disorders (Chan *et al.*, 2008; Rowe *et al.*, 2004).

In the UK, there is also emphasis on harm reduction, including needle exchange, prevention of drug-related deaths, and treatment for physical illness and injury. Active support for families, and developing social skills and competence in parents and children, is a recent focus. The Iowa Strengthening Families Program (Molgaard *et al.*, 1994), Preparing for the Drug Free Years (Spath *et al.*, 2004) and community reinforcement and family training (Waldron *et al.*, 2007) are examples.

Treatment of substance misuse

Where available, relevant NICE guidelines can be used to inform treatment of substance misuse. In addition, it should be noted that young people who misuse substances who are referred to Tier 3/4 services are likely to have some psychological and physical coexisting conditions as well as polysubstance misuse. Thus, treatment of substance misuse should take account of these possibilities. Constant and consistent review of a young person's clinical state is crucial, as unpredictability is a feature of young people who misuse substances.

For relevant pharmacological treatments, section 9.8.3 can be consulted in addition to relevant NICE guidelines. It is crucial that dependence is diagnosed if medications for withdrawal or substitution are going to be prescribed. Medications should be prescribed by experienced practitioners who are aware of the risks in young people. Medications, apart from buprenorphine, are not licensed for use in people aged under 18 years. For detoxification of alcohol dependence and management of opiate dependence by detoxification or substitution, specialist substance misuse services should be involved.

Input from other agencies

Young people with psychosis and substance misuse often have a range of social needs. These should be fully assessed and housing, education, employment and youth offending services may need to be involved.

There are several key elements that contribute to the quality and effectiveness of young people's substance misuse services. These include having a comprehensive assessment, an integrated approach, family involvement, developmental appropriateness, engagement and retention, qualified staff, gender and cultural competence and evaluation of outcomes (Knudsen, 2009). Of note was the finding that treatment quality was significantly greater in programmes offering intensive levels of care.

9.8.5 Issues of consent to treatment for young people

It is desirable to gain informed consent from both the young person and their parents, not least because the success of any treatment approach significantly depends upon the development of a positive therapeutic alliance between the young person, the family and the professionals. In most outpatient settings, consent is usually straight forward, as the young person will generally have a choice to, at least, accept or decline treatment. Nevertheless, it is important to provide information about the potential risks and benefits of the intervention being offered, and where appropriate, a choice given between different treatment options.

There may be times when professionals consider inpatient admission to be necessary, but either the young person or the family does not consent. Under the Mental Health Act (1983; amended 1995 and 2007, HMSO, 2007), there have been some changes to the law regarding young people under the age of 18 years.

If a young person aged 16 or 17 years old has capacity to give or refuse consent for treatment, it is no longer possible for the person with parental authority to over-rule

the young person's wishes. However, for those under the age of 16 years a 'Gillick competent' young person can still be admitted against his or her wishes with the consent of someone with parental authority. While the use of parental consent is legal, the Code of Practice for the Mental Health Act (Department of Health, 2008) advises against this, suggesting it is good practice to consider the use of other appropriate legislation, usually the Mental Health Act. This includes safeguards such as the involvement of other professionals, a time limit and a straightforward procedure for appeals and regular reviews. It also avoids a possible conflict with the Human Rights Act (1998; HMSO, 1998a).

On the other hand, a 'Gillick competent' young person below the age of 16 years has the right to consent to treatment. If the person with parental authority objects, these objections must be considered but will not necessarily prevail.

Alternative legislation includes using a care order (Section 31) under the Children Act 1989 (HMSO, 1989; HMSO, 2004) or a specific issue order (Section 8). Both of these options normally involve social services and can be time consuming. Another, more rapid alternative to the Children Act, is to apply for a wardship order, which in an emergency can be organised by telephone.

9.8.6 Clinical evidence summary

In one small trial ($N = 25$) assessing pharmacological interventions for young people, lithium was compared with placebo. Based on this evidence (*GRADED* low quality), it was not possible to reach a decision about the effectiveness of pharmacological interventions for young people with psychosis and coexisting substance misuse.

There was no evidence for psychological or psychosocial interventions for young people with psychosis and coexisting substance misuse.

9.8.7 Health economic evidence (interventions for young people)

No studies assessing the cost effectiveness of interventions for young people with psychosis and coexisting substance misuse were identified by the systematic search of the economic literature undertaken for this guideline. Details on the methods used for the systematic search of the economic literature are described in Appendix 9.

9.9 FROM EVIDENCE TO RECOMMENDATIONS

Based on the limited evidence base, the GDG were required to extrapolate from data that may not accurately address treatment effectiveness for young people with psychosis and coexisting substance misuse. The GDG therefore developed guiding principles of treatment and recommendations based on consensus. The GDG recognises that as new evidence emerges on treatment for young people with psychosis and coexisting substance misuse, the recommendations in this guideline will be revised

and updated accordingly. The recommendations cover competency, identification and referral, and assessment and treatment.

The GDG felt that professionals in Tier 1 CAMHS should be competent to recognise early signs of psychosis and substance misuse, while Tier 3 and 4 CAMHS, and EIS healthcare professionals, should be competent with regard to managing psychosis and coexisting substance misuse. Regarding identification and referral, the GDG felt that professionals in Tier 1 should seek advice from Tier 2 staff when signs of psychosis are detected in young people. In Tier 2 services, referral should be made according to local protocols. The GDG also thought that it was important that all young people with psychosis or suspected psychosis seen by professionals in Tier 3 or 4 services, or EIS, should be asked about substance misuse. Referral to Tier 4 CAMHS should be done directly when a comprehensive assessment reveals a high risk of harm to self or others. In terms of assessment, the GDG thought that there needed to be a recommendation to ensure that healthcare professionals are familiar with the legal framework that applies to young people. In terms of treatment, the GDG felt that recommendations for the treatment of adults should be followed, but adapted for young people if necessary. It was also recognised that other agencies, including children's services, should be involved to ensure that the young person's educational, employment, family and housing needs are met. Finally, the GDG thought that a recommendation directed at commissioners was needed to ensure that age-appropriate mental health services are available for young people with psychosis and coexisting substance misuse, and that transition arrangements to adult mental health services are in place where appropriate.

In addition, the GDG discussed that because onset of psychosis at a younger age is also an indicator of poor prognosis, people with a combination of younger age of onset and coexisting substance misuse may have a particularly poor prognosis. A clearer understanding of the risk and protective factors for substance misuse in young people with psychosis, and the interrelationship of the two conditions over time, may facilitate the development of treatment approaches for the coexisting conditions in this group. This may then improve the longer-term outcome for a group of people who tend to have a poor prognosis.

9.10 RECOMMENDATIONS

9.10.1 Clinical practice recommendations

Competence

- 9.10.1.1 Professionals in Tier 1 (primary care and educational settings) should be competent to recognise early signs of psychosis and substance misuse in young people.
- 9.10.1.2 Healthcare professionals in Tier 3 (community mental health teams) and Tier 4 (specialist inpatient and regional services) CAMHS, and in early intervention in psychosis services, should be competent in the management of psychosis and substance misuse in young people.

Identification and referral

- 9.10.1.3 Professionals in Tier 1 (primary care and educational settings) should seek advice or consultation from Tier 2 CAMHS (primary care) when signs of psychosis are detected in young people. If healthcare professionals in Tier 2 CAMHS detect signs of psychosis in young people, a referral to Tier 3 CAMHS or early intervention in psychosis services for young people should be made according to local protocols.
- 9.10.1.4 Ask all young people seen in Tier 3 and Tier 4 CAMHS and in early intervention in psychosis services who have psychosis or suspected psychosis about substance misuse (see 5.8.1.8).
- 9.10.1.5 Children and young people who, after comprehensive assessment, are considered to be at high risk of harm to themselves or others, should be referred directly to Tier 4 CAMHS including inpatient services where necessary.

Assessment and treatment

- 9.10.1.6 Healthcare professionals working with young people with psychosis and coexisting substance misuse should ensure they are familiar with the legal framework that applies to young people including the Mental Health Act (1983; amended 1995 and 2007), the Mental Capacity Act (2005), and the Children Act (2004).
- 9.10.1.7 For psychological, psychosocial, family and medical interventions for young people, follow the recommendations for adults in this guideline; they may need to be adapted according to the young person's circumstances and age. In addition, other agencies, including children's services, should be involved to ensure that the young person's educational, employment, family and housing needs are met.
- 9.10.1.8 When prescribing medication, take into account the young person's age and weight when determining the dose. If it is appropriate to prescribe unlicensed medication, explain to the young person and/or their parents or carers the reasons for doing this.
- 9.10.1.9 Those providing and commissioning services should ensure that:
- age-appropriate mental health services are available for young people with psychosis and coexisting substance misuse **and**
 - transition arrangements to adult mental health services are in place where appropriate.

9.10.2 Research recommendations

- 9.10.2.1 What risk factors predict the onset of substance misuse in young people with psychosis? (For further details see Appendix 12.)

10 SUMMARY OF RECOMMENDATIONS

10.1 PRINCIPLES OF CARE

10.1.1 Working with adults and young people with psychosis and coexisting substance misuse

10.1.1.1 When working with adults and young people with known or suspected psychosis and coexisting substance misuse, take time to engage the person from the start, and build a respectful, trusting, non-judgemental relationship in an atmosphere of hope and optimism. Be direct in your communications, use a flexible and motivational approach, and take into account that:

- stigma and discrimination are associated with both psychosis and substance misuse
- some people will try to conceal either one or both of their conditions
- many people with psychosis and coexisting substance misuse fear being detained or imprisoned, being given psychiatric medication forcibly or having their children taken into care, and some fear that they may be ‘mad’.

10.1.1.2 When working with adults and young people with known or suspected psychosis and coexisting substance misuse:

- ensure that discussions take place in settings in which confidentiality, privacy and dignity can be maintained
- avoid clinical language without adequate explanation
- provide independent interpreters (who are not related to the person) if needed
- aim to preserve continuity of care and minimise changes of key workers in order to foster a therapeutic relationship.

10.1.2 Race and culture

10.1.2.1 Healthcare professionals working with adults and young people with psychosis and coexisting substance misuse should ensure that they are competent to engage, assess, and negotiate with service users from diverse cultural and ethnic backgrounds and their families, carers or significant others.³²

³²‘Significant other’ refers not just to a partner but also to friends and any person the service user considers to be important to them.

- 10.1.2.2 Work with local black and minority ethnic organisations and groups to help support and engage adults and young people with psychosis and coexisting substance misuse. Offer organisations and groups information and training about how to recognise psychosis with coexisting substance misuse and access treatment and care locally.

10.1.3 Providing information

- 10.1.3.1 Offer written and verbal information to adults and young people appropriate to their level of understanding about the nature and treatment of both their psychosis and substance misuse. Written information should:
- include the ‘Understanding NICE guidance’ booklet³³, which contains a list of organisations that can provide more information
 - be available in the appropriate language or, for those who cannot use written text, in an alternative format (audio or video).
- 10.1.3.2 All healthcare professionals in primary, secondary or specialist substance misuse services working with adults and young people with psychosis should offer information and advice about the risks associated with substance misuse and the negative impact that it can have on the experience and management of psychosis.

10.1.4 Working with and supporting families, carers and significant others

- 10.1.4.1 Encourage families, carers or significant others to be involved in the treatment of adults and young people with psychosis and coexisting substance misuse to help support treatment and care and promote recovery.
- 10.1.4.2 When families, carers or significant others live or are in close contact with the person with psychosis and coexisting substance misuse, offer family intervention as recommended in ‘Schizophrenia: core interventions in the treatment and management of schizophrenia in adults in primary and secondary care’ (NICE, 2009a).
- 10.1.4.3 When families, carers or significant others are involved in supporting the person with psychosis and coexisting substance misuse, discuss with them any concerns about the impact of these conditions on them and on other family members.
- 10.1.4.4 Offer families, carers or significant others a carer’s assessment of their caring, physical, social, and mental health needs. Where needs are identified, develop a care plan for the family member or carer.
- 10.1.4.5 Offer written and verbal information to families, carers or significant others appropriate to their level of understanding about the nature and

³³Available in English and Welsh from www.nice.org.uk/guidance/CG120

Summary of recommendations

treatment of psychosis and substance misuse, including how they can help to support the person. Written information should be available in the appropriate language or, for those who cannot use written text, in an accessible format (audio or video).

- 10.1.4.6 Offer information to families, carers or significant others about local family or carer support groups and voluntary organisations, including those for psychosis and for substance misuse, and help families, carers or significant others to access these.
- 10.1.4.7 Negotiate confidentiality and sharing of information between the person with psychosis and coexisting substance misuse and their family, carer or a significant other.
- 10.1.4.8 Ensure the needs of young carers or dependent adults of the person with psychosis and coexisting substance misuse are assessed. Initiate safeguarding procedures where appropriate (see recommendations 10.1.6.1–10.1.6.5).

10.1.5 Support for healthcare professionals

- 10.1.5.1 Working with people with psychosis and coexisting substance misuse can be challenging and healthcare professionals should seek effective support – for example, through professional supervision or staff support groups.

10.1.6 Safeguarding issues

- 10.1.6.1 If people with psychosis and coexisting substance misuse are parents or carers of children or young people, ensure that the child's or young person's needs are assessed according to local safeguarding procedures.³⁴
- 10.1.6.2 If children or young people being cared for by people with psychosis and coexisting substance misuse are referred to CAMHS under local safeguarding procedures:
 - use a multi-agency approach, including social care and education, to ensure that various perspectives on the child's life are considered
 - consider using the Common Assessment Framework³⁵; advice on this can be sought from the local named lead for safeguarding.
- 10.1.6.3 If serious concerns are identified, health or social care professionals working with the child or young person (see recommendation 10.1.6.2) should develop a child protection plan.
- 10.1.6.4 When working with people with psychosis and coexisting substance misuse who are responsible for vulnerable adults, ensure that the home situation is risk assessed and that safeguarding procedures are in place for

³⁴www.safeguardingchildren.org.uk

³⁵www.cwdcouncil.org.uk/caf

the vulnerable adult. Advice on safeguarding vulnerable adults can be sought from the local named lead for safeguarding.

- 10.1.6.5 Consider adults with psychosis and coexisting substance misuse for assessment according to local safeguarding procedures for vulnerable adults if there are concerns regarding exploitation or self-care, or if they have been in contact with the criminal justice system.

10.1.7 Consent, capacity and treatment decisions

- 10.1.7.1 Before undertaking any investigations for substance misuse, and before each treatment decision is taken:

- provide service users with full information appropriate to their needs about psychosis and substance misuse and the management of both conditions, to ensure informed consent
- understand and apply the principles underpinning the Mental Capacity Act (2005), and be aware that mental capacity is decision-specific (that is, if there is doubt about mental capacity, assessment of mental capacity should be made in relation to each decision)
- be able to assess mental capacity using the test set out in the Mental Capacity Act (2005).

These principles should apply whether or not people are being detained or treated under the Mental Health Act (1983; amended 1995 and 2007).

10.1.8 Advance decisions and statements

- 10.1.8.1 Develop advance decisions and advance statements in collaboration with adults with psychosis and coexisting substance misuse, especially if their condition is severe and they have been treated under the Mental Health Act (1983; amended 1995 and 2007). Record the decisions and statements and include copies in the care plan in primary and secondary care. Give copies to the person, their care coordinator, and their family, carer or a significant other if the person agrees.

- 10.1.8.2 Take advance decisions and advance statements into account in accordance with the Mental Capacity Act (2005). Although advance decisions and advance statements can be overridden using the Mental Health Act (1983; amended 1995 and 2007), try to honour them wherever possible.

10.1.9 Working with the voluntary sector

- 10.1.9.1 Healthcare professionals in primary care and secondary care mental health services, and in specialist substance misuse services, should work collaboratively with voluntary sector organisations that provide help and support

Summary of recommendations

for adults and young people with psychosis and coexisting substance misuse. Ensure that advocates from such organisations are included in the care planning and care programming process wherever this is possible and agreed by the person with psychosis and coexisting substance misuse.

- 10.1.9.2 Healthcare professionals in primary care and secondary care mental health services, and in specialist substance misuse services, should work collaboratively with voluntary sector organisations providing services for adults and young people with psychosis and coexisting substance misuse to develop agreed protocols for routine and crisis care.

10.2 RECOGNITION OF PSYCHOSIS WITH COEXISTING SUBSTANCE MISUSE

- 10.2.1.1 Healthcare professionals in all settings, including primary care, secondary care mental health services, CAMHS and accident and emergency departments, and those in prisons and criminal justice mental health liaison schemes, should routinely ask adults and young people with known or suspected psychosis about their use of alcohol and/or prescribed and non-prescribed (including illicit) drugs. If the person has used substances ask them about all of the following:

- particular substance(s) used
- quantity, frequency and pattern of use
- route of administration
- duration of current level of use.

In addition, conduct an assessment of dependency (see ‘Drug misuse: opioid detoxification’ [NICE, 2007a] and ‘Alcohol use disorders: diagnosis, assessment and management of harmful drinking and alcohol dependence’ [NICE, 2011]) and also seek corroborative evidence from families, carers or significant others, where this is possible and permission is given.

- 10.2.1.2 Healthcare professionals in all settings, including primary care, secondary care mental health services, CAMHS and accident and emergency departments, and those in prisons and criminal justice mental health liaison schemes, should routinely assess adults and young people with known or suspected substance misuse for possible psychosis. Seek corroborative evidence from families, carers or significant others, where this is possible and permission is given.

10.3 PRIMARY CARE

10.3.1 Referral from primary care

- 10.3.1.1 Refer all adults and young people with psychosis or suspected psychosis, including those who are suspected of coexisting substance misuse, to either

secondary care mental health services or CAMHS for assessment and further management.

- 10.3.1.2 Refer all adults and young people with substance misuse or suspected substance misuse who are suspected of having coexisting psychosis to secondary care mental health services or CAMHS for assessment and further management.

10.3.2 Physical healthcare

- 10.3.2.1 Monitor the physical health of adults and young people with psychosis and coexisting substance misuse, as described in the guideline on schizophrenia (NICE, 2009a). Pay particular attention to the impact of alcohol and drugs (prescribed and non-prescribed) on physical health. Monitoring should be conducted at least once a year or more frequently if the person has a significant physical illness or there is a risk of physical illness because of substance misuse.

10.4 SECONDARY CARE MENTAL HEALTH SERVICES

10.4.1 Competence

- 10.4.1.1 Healthcare professionals working within secondary care mental health services should ensure they are competent in the recognition, treatment and care of adults and young people with psychosis and coexisting substance misuse.
- 10.4.1.2 Healthcare professionals working within secondary care mental health services with adults and young people with psychosis and coexisting substance misuse should consider having supervision, advice, consultation and/or training from specialists in substance misuse services. This is to aid in the development and implementation of treatment plans for substance misuse within CAMHS or adult community mental health services.

10.4.2 Pathways into care

- 10.4.2.1 Do not exclude adults and young people with psychosis and coexisting substance misuse from age-appropriate mental healthcare because of their substance misuse.
- 10.4.2.2 Do not exclude adults and young people with psychosis and coexisting substance misuse from age-appropriate substance misuse services because of a diagnosis of psychosis.
- 10.4.2.3 For most adults with psychosis and coexisting substance misuse, treatment for both conditions should be provided by healthcare professionals in secondary care mental health services such as community-based mental health teams.

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10.4.3 Coordinating care

- 10.4.3.1 Consider seeking specialist advice and initiating joint working arrangements with specialist substance misuse services for adults and young people with psychosis being treated by community mental health teams, and known to be:
- severely dependent on alcohol or
 - dependent on both alcohol and benzodiazepines or
 - dependent on opioids and/or cocaine or crack cocaine.
- Adult community mental health services or CAMHS should continue to provide care coordination and treatment for the psychosis within joint working arrangements.
- 10.4.3.2 Consider seeking specialist advice and initiate joint working arrangements with specialist substance misuse services if the person's substance misuse:
- is difficult to control **and/or**
 - leads to significant impairment of functioning, family breakdown or significant social disruption such as homelessness.
- 10.4.3.3 If a person with psychosis and coexisting substance misuse requires planned detoxification from either drugs or alcohol, this should take place in an inpatient setting (see Section 10.6).
- 10.4.3.4 Delivery of care and transfer between services for adults and young people with psychosis and coexisting substance misuse should include a care coordinator and use the Care Programme Approach.

10.4.4 Assessment

- 10.4.4.1 Adults and young people with psychosis and coexisting substance misuse attending secondary care mental health services should be offered a comprehensive, multidisciplinary assessment, including assessment of all of the following:
- personal history
 - mental, physical and sexual health
 - social, family and economic situation
 - accommodation, including history of homelessness and stability of current living arrangements
 - current and past substance misuse and its impact upon their life, health and response to treatment
 - criminal justice history and current status
 - personal strengths and weaknesses and readiness to change their substance use and other aspects of their lives.
- The assessment may need to take place over several meetings to gain a full understanding of the person and the range of problems they experience, and to promote engagement.
- 10.4.4.2 When assessing adults and young people with psychosis and coexisting substance misuse, seek corroborative evidence from families, carers or

significant others where this is possible and permission is given. Summarise the findings, share this with the person and record it in their care plan.

10.4.4.3 Review any changes in the person's use of substances. This should include changes in: the way the use of substances affects the person over time

- patterns of use
- mental and physical state
- circumstances and treatment.

Share the summary with the person and record it in their care plan.

10.4.4.4 When assessing adults and young people with psychosis and coexisting substance misuse, be aware that low levels of substance use that would not usually be considered harmful or problematic in people without psychosis, can have a significant impact on the mental health of people with psychosis.

10.4.4.5 Regularly assess and monitor risk of harm to self and/or others and develop and implement a risk management plan to be reviewed when the service users' circumstances or levels of risk change. Specifically consider additional risks associated with substance misuse, including:

- physical health risks (for example, withdrawal seizures, delirium tremens, blood-borne viruses, accidental overdose, and interactions with prescribed medication) and
- the impact that substance use may have on other risks such as self-harm, suicide, self-neglect, violence, abuse of or by others, exploitation, accidental injury and offending behaviour.

10.4.5 Biological/physical testing

10.4.5.1 Biological or physical tests for substance use (such as blood and urine tests or hair analysis) may be useful in the assessment, treatment and management of substance misuse for adults and young people with psychosis. However, this should be agreed with the person first as part of their care plan. Do not use biological or physical tests in routine screening for substance misuse in adults and young people with psychosis.

10.4.6 Treatment

10.4.6.1 Before starting treatment for adults and young people with psychosis and coexisting substance misuse, review:

- the diagnosis of psychosis and of the coexisting substance misuse, especially if either diagnosis has been made during a crisis or emergency presentation and
- the effectiveness of previous and current treatments and their acceptability to the person; discontinue ineffective treatments.

10.4.6.2 When developing a care plan for an adult or young person with psychosis and coexisting substance misuse, take account of the complex and individual

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relationships between substance misuse, psychotic symptoms, emotional state, behaviour and the person's social context.

- 10.4.6.3 Ensure that adults and young people with psychosis and coexisting substance misuse are offered evidence-based treatments for both conditions (see recommendations 10.4.6.4–10.4.6.5).
- 10.4.6.4 For the treatment of psychosis, see 'Bipolar disorder: the management of bipolar disorder in adults, children and adolescents, in primary and secondary care' (NICE, 2006) or the guideline on schizophrenia (NICE, 2009a).
- 10.4.6.5 For the treatment of substance misuse, see:
- 'Alcohol-use disorders: diagnosis and clinical management of alcohol-related physical complications' (NICE, 2010a) and the guideline on alcohol dependence and harmful alcohol use (NICE, 2011) and/or
 - 'Drug misuse: psychosocial interventions' and the guideline on opioid detoxification (NICE, 2007b).
- 10.4.6.6 When developing a treatment plan for a person with psychosis and coexisting substance misuse, tailor the plan and the sequencing of treatments to the person and take account of:
- the relative severity of both the psychosis and the substance misuse at different times and
 - the person's social and treatment context and
 - the person's readiness for change.
- 10.4.6.7 Do not exclude adults and young people with psychosis and coexisting substance misuse from contingency management programmes because of their psychosis.
- 10.4.6.8 Use antipsychotics according to the guideline on schizophrenia (NICE, 2009a) or bipolar disorder (NICE, 2006) because there is no evidence for any differential benefit for one antipsychotic over another for people with psychosis and coexisting substance misuse.
- 10.4.6.9 Use depot/long-acting injectable antipsychotics according to the guideline on schizophrenia (NICE, 2009a) in managing covert non-adherence with treatment for psychosis and not as a specific treatment for psychosis and coexisting substance misuse.
- 10.4.6.10 When prescribing medication for adults and young people with psychosis and coexisting substance misuse:
- take into account the level and type of substance misuse, especially of alcohol, as this may alter the metabolism of prescribed medication, decrease its effectiveness and/or increase the risk of side effects
 - warn the person about potential interactions between substances of misuse and prescribed medication
 - discuss the problems and potential dangers of using non-prescribed substances and alcohol to counteract the effects or side effects of prescribed medication.

10.5 SUBSTANCE MISUSE SERVICES

10.5.1 Competence

- 10.5.1.1 Healthcare professionals in substance misuse services should be competent to:
- recognise the signs and symptoms of psychosis
 - undertake a mental health needs and risk assessment sufficient to know how and when to refer to secondary care mental health services.

10.5.2 Assessment

- 10.5.2.1 Adults and young people with psychosis and coexisting substance misuse attending substance misuse services should be offered a comprehensive, multidisciplinary mental health assessment in addition to an assessment of their substance misuse.

10.5.3 Joint working

- 10.5.3.1 Healthcare professionals in substance misuse services should be present at Care Programme Approach meetings for adults and young people with psychosis and coexisting substance misuse within their service who are also receiving treatment and support in other health services.
- 10.5.3.2 Specialist substance misuse services should provide advice, consultation, and training for healthcare professionals in adult mental health services and CAMHS regarding the assessment and treatment of substance misuse, and of substance misuse with coexisting psychosis.
- 10.5.3.3 Specialist substance misuse services should work closely with secondary care mental health services to develop local protocols derived from this guideline for adults and young people with psychosis and coexisting substance misuse. The agreed local protocols should set out responsibilities and processes for assessment, referral, treatment and shared care across the whole care pathway.

10.6 INPATIENT MENTAL HEALTH SERVICES

10.6.1 Substance misuse

- 10.6.1.1 All inpatient mental health services should ensure that they have policies and procedures for promoting a therapeutic environment free from drugs and alcohol that have been developed together with service users and their families, carers or significant others. These should include: search procedures, visiting arrangements, planning and reviewing leave, drug and alcohol testing, disposal of legal and illicit substances, and other security measures. Soon after admission, provide all service users, and their families, carers or significant others, with information about the policies and procedures.

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- 10.6.1.2 When carrying out a comprehensive assessment for all adults and young people admitted to inpatient mental health services, ensure that they are assessed for current substance misuse and evidence of withdrawal symptoms at the point of admission.
- 10.6.1.3 Biological or physical tests for substance use should only be considered in inpatient services as part of the assessment and treatment planning for adults and young people with psychosis and coexisting substance misuse. Obtain consent for these tests and inform the person of the results as part of an agreed treatment plan. Where mental capacity is lacking, refer to the Mental Capacity Act (2005).
- 10.6.1.4 Ensure that planned detoxification from either drugs or alcohol is undertaken only:
- with the involvement and advice of substance misuse services
 - in an inpatient setting, preferably in specialist detoxification units, or designated detoxification beds within inpatient mental health services and
 - as part of an overall treatment plan.
- For the further management of opioid detoxification see the guideline on opioid detoxification (NICE, 2007a). For the further management of assisted alcohol withdrawal see the guideline on alcohol dependence and harmful alcohol use (NICE, 2011).

10.6.2 Discharge

- 10.6.2.1 Do not discharge adults and young people with psychosis and coexisting substance misuse from an inpatient mental health service solely because of their substance misuse.
- 10.6.2.2 When adults and young people with psychosis and coexisting substance misuse are discharged from an inpatient mental health service, ensure that they have:
- an identified care coordinator **and**
 - a care plan that includes a consideration of needs associated with both their psychosis and their substance misuse **and**
 - been informed of the risks of overdose if they start reusing substances, especially opioids, that have been reduced or discontinued during the inpatient stay.

10.7 STAFFED ACCOMMODATION

10.7.1 Exclusion from services

- 10.7.1.1 Do not exclude people with psychosis and coexisting substance misuse from staffed accommodation (such as supported or residential care) solely because of their substance misuse.

- 10.7.1.2 Do not exclude people with psychosis and coexisting substance misuse from staffed accommodation aimed at addressing substance misuse solely because of their diagnosis of psychosis.

10.7.2 Aims of treatment

- 10.7.2.1 Ensure that people with psychosis and coexisting substance misuse who live in staffed accommodation receive treatment for both their psychosis and their substance misuse with the explicit aim of helping the person remain in stable accommodation.

10.8 SPECIFIC ISSUES FOR YOUNG PEOPLE WITH PSYCHOSIS AND COEXISTING SUBSTANCE MISUSE

10.8.1 Competence

- 10.8.1.1 Professionals in Tier 1 (primary care and educational settings) should be competent to recognise early signs of psychosis and substance misuse in young people.
- 10.8.1.2 Healthcare professionals in Tier 3 (community mental health teams) and Tier 4 (specialist inpatient and regional services) CAMHS, and in early intervention in psychosis services, should be competent in the management of psychosis and substance misuse in young people.

10.8.2 Identification and referral

- 10.8.2.1 Professionals in Tier 1 (primary care and educational settings) should seek advice or consultation from Tier 2 CAMHS (primary care) when signs of psychosis are detected in young people. If healthcare professionals in Tier 2 CAMHS detect signs of psychosis in young people, a referral to Tier 3 CAMHS or early intervention in psychosis services for young people should be made according to local protocols.
- 10.8.2.2 Ask all young people seen in Tier 3 and Tier 4 CAMHS and in early intervention in psychosis services who have psychosis or suspected psychosis about substance misuse (see recommendation 10.2.1.1).
- 10.8.2.3 Children and young people who, after comprehensive assessment, are considered to be at high risk of harm to themselves or others, should be referred directly to Tier 4 CAMHS including inpatient services where necessary.

10.8.3 Assessment and treatment

- 10.8.3.1 Healthcare professionals working with young people with psychosis and coexisting substance misuse should ensure they are familiar with the legal

Summary of recommendations

framework that applies to young people including the Mental Health Act (1983; amended 1995 and 2007), the Mental Capacity Act (2005), and the Children Act (2004).

- 10.8.3.2 For psychological, psychosocial, family and medical interventions for young people, follow the recommendations for adults in this guideline; they may need to be adapted according to the young person's circumstances and age. In addition, other agencies, including children's services, should be involved to ensure that the young person's educational, employment, family and housing needs are met.
- 10.8.3.3 When prescribing medication, take into account the young person's age and weight when determining the dose. If it is appropriate to prescribe unlicensed medication, explain to the young person and/or their parents or carers the reasons for doing this.
- 10.8.3.4 Those providing and commissioning services should ensure that:
 - age-appropriate mental health services are available for young people with psychosis and coexisting substance misuse and
 - transition arrangements to adult mental health services are in place where appropriate.

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APPENDIX 1: SCOPE FOR THE DEVELOPMENT OF THE CLINICAL GUIDELINE

1 GUIDELINE TITLE

Psychosis in conjunction with substance misuse: the assessment and management of psychosis with substance misuse³⁶

1.1 SHORT TITLE

Psychosis with substance misuse

2 THE REMIT

The Department of Health has asked NICE: ‘To develop a clinical guideline for the assessment and management of severe mental illness in conjunction with problematic substance misuse.’

3 CLINICAL NEED FOR THE GUIDELINE

3.1 EPIDEMIOLOGY

- a) The term psychosis is used to describe a major group of severe disorders of mental health characterised by the presence of delusions and hallucinations that disrupt a person’s perception, thoughts, emotions and behaviour. The two main forms of this are schizophrenia and bipolar disorder. Substance misuse is a broad term encompassing the use of any psychotropic medication or substance, whether illicit or not, or taken for pleasure or not, if the use is considered hazardous or harmful. It includes, for example, alcohol, and prescribed medications used for purposes other than those prescribed. Such use is usually, but not always, regarded as a problem if there is evidence of dependence, characterised by psychological reinforcement of repeated drug-taking behaviour and, in some cases, a withdrawal syndrome.

³⁶The guideline title changed to ‘Psychosis with coexisting substance misuse: assessment and management in adults and young people’ during the course of development.

- b) In the UK, the annual prevalence for probable psychotic disorder among adults living in private households is about 5 per 1000. This figure is 9 per 1000 in adults aged 30 to 44 years and 18 per 1000 in adults with an African-Caribbean family background. Among those diagnosed with a psychotic disorder, studies show that prevalence for any substance misuse ranges from 24 to 36% (7 to 20% for alcohol misuse only, 5 to 9% for drug misuse only, 8% for drug and alcohol misuse). In one study of people with a psychotic disorder, 35% of the sample had a lifetime history of any illicit drug use. Prevalence rates for substance misuse are even higher in forensic (50 to 70%) and inpatient (30 to 49%) mental health services. In addition, service users with comorbid drug misuse spend twice as long in hospital, on average, and have higher levels of unmet needs, compared with other inpatients with psychosis.
- c) Substance misuse among individuals with psychiatric disorders is associated with significantly poorer outcomes than for individuals with a single disorder. These outcomes include worsening psychiatric symptoms, poorer physical health, increased use of institutional services, poor medication adherence, homelessness and increased risk of HIV infection, as well as poor social outcomes including impact on carers and family and contact with the criminal justice system.
- d) There is a substantial link between substance misuse and crime. Hence the provision in the Crime and Disorder Act 1998 (HMSO, 1998b) for drug treatment and testing orders and in the Criminal Justice and Court Services Act 2000 (HMSO, 2000) for drug abstinence orders and drug abstinence requirements.
- e) Compared with people with psychosis only, people with psychosis and substance misuse have greater levels of inpatient mental health service use, higher overall treatment costs, and lower concordance with community care and medication.

3.2 CURRENT PRACTICE

- a) The National Service Framework for Mental Health (Department of Health, 1999) sets out how services will be planned, delivered and monitored. Several areas are relevant to this guideline including mental health promotion, primary care and specialist services. The following are also relevant:
 - The Care Programme Approach (CPA): this is a framework for interagency working. It seeks to ensure that service users have a proper assessment and that services are coordinated in line with service user need.
 - Assertive outreach and crisis resolution services: these are proactive approaches to engaging with service users and managing problems.
- b) Less than a fifth of people who have coexisting psychosis and substance misuse receive substance misuse interventions, and there is clearly uneven distribution of services with regard to ethnicity. In substance misuse services those with a severe mental illness and coexisting substance misuse are generally white; assertive outreach teams have a much higher proportion of service users classified as African-Caribbean than all other teams.
- c) There are no uniformly agreed screening or assessment tools.

Appendix 1

- d) The following three treatment models have been described in the literature, but there is currently little guidance about which is the most effective or cost effective:
- serial treatment: one treatment, either psychiatric or substance misuse, is followed by the other
 - parallel treatment: the concurrent but separate treatment of both the psychiatric disorder and the substance misuse disorder
 - integrated treatment: substance misuse and psychiatric treatment are provided concurrently by the same personnel.

4 THE GUIDELINE

- a) The guideline development process is described in detail on the NICE website (see section 6, 'Further information').
- b) This scope defines what the guideline will (and will not) examine, and what the guideline developers will consider. The scope is based on the referral from the Department of Health.
- c) The areas that will be addressed by the guideline are described in the following sections.

4.1 POPULATION

4.1.1 Groups that will be covered

- a) Adults and young people (14 and older) who have a clinical working diagnosis of schizophrenia³⁷, bipolar or other affective psychosis, in conjunction with substance misuse.
- b) This will include specific consideration of the needs of people with coexisting learning difficulties or significant physical or sensory difficulties, and the needs of people from black and minority ethnic groups.

4.1.2 Groups that will not be covered

- a) People with very late onset psychosis (onset after age 60) and coexisting substance misuse.

4.2 HEALTHCARE SETTING

- a) Care that is received from healthcare professionals in primary and secondary care, including standard inpatient and forensic settings, who have direct contact with,

³⁷This includes schizoaffective disorder and delusional disorder.

and make decisions concerning, the care of people with severe mental illness and substance misuse.

- b) Whilst the guideline will not provide specific recommendations for accident and emergency departments, paramedic services, prison medical services, the police and those who work in the criminal justice and education sectors, the guideline will be relevant to their work. The evidence considered in this guideline will not be derived from these settings.

4.3 CLINICAL MANAGEMENT

4.3.1 Key clinical issues that will be covered

- a) Identification and assessment.
- b) Sequencing of treatment, and integrated versus non-integrated models of care.
- c) The use of antipsychotic medication and/or psychological or psychosocial interventions (for example, family intervention) for the treatment of people with coexisting psychosis and substance misuse.
- d) Psychosocial interventions for the management of substance misuse (for example, CBT, motivational interviewing and contingency management) in people with coexisting psychosis.
- e) Pharmacological (for example, opioid antagonists) and physical interventions for the management of substance misuse in people with coexisting psychosis.
- f) Residential rehabilitation and inpatient mental healthcare of people with coexisting psychosis and substance misuse (including in a forensic setting).
- g) Working with non-NHS services (for example, the police and those who work in the criminal justice and education sectors).
- h) Ways to improve access to mental health services for people from black and minority ethnic communities (this will include issues concerned with engagement with services).
- i) Interactions between prescribed medication and substances misused.
- j) Ways to improve insight (that is, an individual's awareness of mental disorder and substance misuse, awareness of the social consequences of disorder/substance misuse, awareness of the need for treatment, awareness of symptoms and attribution of symptoms to disorder/substance misuse).
- k) Ways to improve and manage non-adherence to treatment. This guideline will cross-refer to the NICE clinical guideline on medicines adherence where appropriate.
- l) Note that guideline recommendations for pharmacological interventions will normally fall within licensed indications; exceptionally, and only if clearly supported by evidence, use outside a licensed indication may be recommended. The guideline will assume that prescribers will use a drug's summary of product characteristics to support joint clinical decision-making between service users and prescribers.

4.3.2 Clinical issues that will not be covered

- a) primary prevention
- b) diagnosis
- c) management of violence in people with severe mental illness.

4.4 ECONOMIC ASPECTS

Developers will take into account both clinical and cost effectiveness when making recommendations involving a choice between alternative interventions. A review of the economic evidence will be conducted and analyses will be carried out as appropriate. The preferred unit of effectiveness is the quality-adjusted life year (QALY), and the costs considered will usually only be from an NHS and personal social services (PSS) perspective. Further detail on the methods can be found in 'The guidelines manual' (see section 6, 'Further information').

4.5 STATUS

4.5.1 Scope

This is the final scope.

4.5.2 Timing

The development of the guideline recommendations will begin in May 2009.

5 RELATED NICE GUIDANCE

5.1 PUBLISHED GUIDANCE

- *Schizophrenia*. NICE clinical guideline 82 (2009 [NICE, 2009a]). Available from www.nice.org.uk/CG82
- *Medicines Adherence*. NICE clinical guideline 76 (2009 [NICE, 2009c]). Available from www.nice.org.uk/CG76
- *Drug Misuse: Opioid Detoxification*. NICE clinical guideline 52 (2007 [NICE, 2007a]). Available from www.nice.org.uk/CG52
- *Drug Misuse: Psychosocial Interventions*. NICE clinical guideline 51 (2007 [NICE, 2007b]). Available from www.nice.org.uk/CG51
- *Community-based Interventions to Reduce Substance Misuse Among Vulnerable and Disadvantaged Children and Young People*. NICE public health guidance 4 (2007 [NICE, 2007c]). Available from www.nice.org.uk/PH4

- *Naltrexone for the Management of Opioid Dependence*. NICE technology appraisal guidance 115 (2007 [NICE, 2007d]). Available from www.nice.org.uk/TA115
- *Methadone and Buprenorphine for the Management of Opioid Dependence*. NICE technology appraisal guidance 114 (2007 [NICE, 2007e]). Available from www.nice.org.uk/TA114
- *Bipolar Disorder*. NICE clinical guideline 38 (2006 [NICE, 2006]). Available from www.nice.org.uk/CG38
- *Violence*. NICE clinical guideline 25 (2005 [NICE, 2005]). Available from www.nice.org.uk/CG25
- *Schizophrenia*. NICE clinical guideline 1 (2002 [NICE, 2002]). Available from www.nice.org.uk/CG1

5.2 GUIDANCE UNDER DEVELOPMENT

NICE is currently developing the following related guidance (details available from the NICE website):

- Alcohol use disorders (prevention). NICE public health guidance. Publication expected March 2010.³⁸
- Alcohol use disorders (clinical management). NICE clinical guideline. Publication expected May 2010.³⁹
- Alcohol dependence and harmful alcohol use. NICE clinical guideline. Publication expected January 2011.⁴⁰

6 FURTHER INFORMATION

Information on the guideline development process is provided in:

- 'How NICE clinical guidelines are developed: an overview for stakeholders' the public and the NHS'
- *The Guidelines Manual* (NICE, 2009b)

These are available from the NICE website (www.nice.org.uk/guidelinesmanual).

Information on the progress of the guideline will also be available from the NICE website (www.nice.org.uk).

³⁸This has since been published as *Alcohol-use Disorders: Preventing the Development of Hazardous and Harmful Drinking* (NICE, 2010b).

³⁹This has since been published as *Alcohol-use Disorders: Diagnosis and Clinical Management of Alcohol-Related Physical Complications* (NICE, 2010a).

⁴⁰This has since been published as *Alcohol-use Disorders: Diagnosis, Assessment and Management of Harmful Drinking and Alcohol Dependence* (NICE, 2011).

APPENDIX 2: DECLARATIONS OF INTERESTS BY GDG MEMBERS

With a range of practical experience, GDG members were appointed because of their understanding and expertise in healthcare for people with psychosis and substance misuse and support for their families and carers, including: scientific issues; health research; the delivery and receipt of healthcare, along with the work of the healthcare industry; and the role of professional organisations and organisations for people with psychosis and coexisting substance misuse and their families, carers or significant others.

To minimise and manage any potential conflicts of interest, and to avoid any public concern that commercial or other financial interests have affected the work of the GDG and influenced the guideline, members of the GDG must declare as a matter of public record any interests held by themselves or their families which fall under specified categories (see below). These categories include any relationships they have with the healthcare industries, professional organisations and organisations for people with psychosis and coexisting substance misuse and their families, carers or significant others.

Individuals invited to join the GDG were asked to declare their interests before being appointed. To allow the management of any potential conflicts of interest that might arise during the development of the guideline, GDG members were also asked to declare their interests at each GDG meeting throughout the guideline development process. The interests of all the members of the GDG are listed below, including interests declared prior to appointment and during the guideline development process.

Categories of interest

Paid employment

Personal pecuniary interest: financial payments or other benefits from either the manufacturer or the owner of the product or service under consideration in this guideline, or the industry or sector from which the product or service comes. This includes holding a directorship, or other paid position; carrying out consultancy or fee paid work; having shareholdings or other beneficial interests; receiving expenses and hospitality over and above what would be reasonably expected to attend meetings and conferences.

Personal family interest: financial payments or other benefits from the healthcare industry that were received by a member of your family.

Non-personal pecuniary interest: financial payments or other benefits received by the GDG member's organisation or department, but where the GDG member has not

personally received payment, including fellowships and other support provided by the healthcare industry. This includes a grant or fellowship or other payment to sponsor a post, or contribute to the running costs of the department; commissioning of research or other work; contracts with, or grants from, NICE.

Personal non-pecuniary interest: these include, but are not limited to, clear opinions or public statements you have made about individuals with psychosis and co-existing substance misuse, holding office in a professional organisation or advocacy group with a direct interest in psychosis and substance misuse, other reputational risks relevant to psychosis and substance misuse.

Guideline Development Group - Declarations of interest	
Professor Peter Tyrer – Chair, GDG	
Employment	Professor of Community Psychiatry, Imperial College, London
Personal pecuniary interest	The originator of the treatment called nidotherapy, which may be used in the population considered in this guideline, and conducted a study looking at nidotherapy.
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	Published books and articles on nidotherapy
Non-personal non-pecuniary interest	A contingency management study is being conducted within my department.
Action taken	Nidotherapy was discussed by the GDG on 2 March 2010. It was decided that it was not appropriate for the Chair to be present and Peter Tyrer left the room for this discussion. All members were asked individually if they felt this approach was acceptable and all agreed.
Professor Mohammed T. Abou-Saleh	
Employment	Professor of Psychiatry, St George's, University of London and Honorary

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	Consultant in Addiction Psychiatry, South West London and St George's Mental Health NHS Trust, London
Personal pecuniary interest	None
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None
Non-personal non-pecuniary interest	Asked to chair a presentation at an event sponsored by a pharmaceutical company, although he did not receive any money for this.
Action taken	None
Professor Christine Barrowclough	
Employment	Professor of Clinical Psychology, University of Manchester
Personal pecuniary interest	None
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	Currently chief investigator for two major studies evaluating psychological therapy for people with psychosis with substance misuse.
Action taken	None
Ms Tina Braithwaite	
Employment	Representing service user/carer interests and Director of Service User Involvement, Revolving Doors Agency. Also I am a member of the Lived Experience Advisory Panel, Refocus Recovery Research Project.
Personal pecuniary interest	None
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None

Action taken	None
Dr Andy Cotgrove	
Employment	Medical Director and Consultant in Adolescent Psychiatry, Cheshire and Wirral Partnership NHS Foundation Trust
Personal pecuniary interest	None
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None
Action taken	None
Dr Mike Crawford	
Employment	Reader in Mental Health Services Research, Imperial College London and North West London Mental Health NHS Trust
Personal pecuniary interest	Involved in a study on nidotherapy
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None
Action taken	Nidotherapy was discussed by the GDG on 2 March 2010. It was decided that Mike Crawford could be present to answer any queries, but not be involved in the discussion. All members were asked individually if they felt this approach was acceptable and all agreed.
Professor Ilana Crome	
Employment	Professor of Addiction Psychiatry, Keele University; November 2009 – ongoing: Honorary Consultant Addiction Psychiatrist, South Staffordshire and Shropshire NHS Foundation Trust; Prior to November 2009: Honorary Consultant Addiction Psychiatrist, North Staffordshire Combined Healthcare NHS Trust.

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Personal pecuniary interest	None
Personal family interest	None
Non-personal pecuniary interest	<p>The Academic Psychiatry Unit, Keele University receives funding from pharmaceutical companies which covers speakers' expenses for regular departmental seminar series.</p> <p>Keele University has received funding from the Department of Health, Home Office and Social Care Institute for Excellence for research on drug misuse and mental illness.</p> <p>Policy roles for the Department of Health, Scottish Executive and Welsh Assembly.</p>
Personal non-pecuniary interest	<p>Member, Advisory Council on the Misuse of Drugs: specific roles in cannabis and schizophrenia research which informed recommendations on cannabis re-classification; <i>Pathways to Problems</i> report (2006); Chair of Working Group on Treatment Effectiveness.</p> <p>Member, Faculty of Academic Psychiatry, Royal College of Psychiatrists</p> <p>Member, Young People's Working Group, Royal College of Psychiatrists</p> <p>Honorary Secretary, Professors of Psychiatry Club</p> <p>Chair, Working group on Older People and Substance Misuse, Royal College of Psychiatrists</p> <p>Member, British Association of Psychopharmacology, Consensus group on Addiction and Comorbidity</p> <p>Trustee, Society for the Study of Addiction</p> <p>Chair, Steering Committee Assertive Community</p>

	<p>Treatment of Alcohol Dependence Trial – a trial funded by the Medical Research Council led by the Institute of Psychiatry</p> <p>Member, Young people and drugs and alcohol study</p> <p>DIPEX Research Group (Youthtalk) and Young people and depression study DIPEX Research Group (Youthtalk)</p> <p>Consultant, PaRticipation of the ElDerly In Clinical</p> <p>Trials (PREDICT) 2007-2009 European Union Project: developed and recently launched a charter for evaluation of medicines in older people.</p> <p>Steering Group Advisory Panel, National Undergraduate Substance Misuse Curriculum Implementation Group</p> <p>Adviser, Turning Point</p> <p>Editorial responsibilities for several journals, for example:</p> <p>International editor, <i>American Journal of Addiction</i></p> <p>Editor, <i>Drugs: Education, Prevention and Policy</i></p> <p>International Advisory Board, <i>British Journal of Psychiatry</i>, <i>Addiction</i>, <i>Journal of Mental Illness and Substance Misuse</i>, <i>Journal of Psychopharmacology</i></p> <p>Member, International Society of Addiction Journal Editors</p>
Action taken	None
Mr Mike Firm	
Employment	Clinical Service Development Lead, South West London and St George's Mental Health NHS Trust

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Personal pecuniary interest	Non-guideline specific interest: I am chair of a mutual trading organisation (National Forum for Assertive Outreach) that has educational grants from Janssen-Cilag pharmaceuticals covering venue and catering costs of two regional network events in Manchester within the last year. There has been no product information or talks given at either of these events beyond acknowledgement of the room and catering costs.
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None
Action taken	None
Dr Frank Holloway	
Employment	Consultant Psychiatrist and Clinical Director, Bethlem Royal Hospital
Personal pecuniary interest	None
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None
Action taken	None
Dr Cheryl Kipping	
Employment	Nurse Consultant, South London And Maudsley NHS Foundation Trust
Personal pecuniary interest	Member of independent review team into SUIs in a PCT area
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	Member of PROGRESS - a National Consortium of Consultant Nurses in Dual Diagnosis and Substance Misuse: co-ordinated group's response to consultation on scope of this guideline

	<p>Member of Department of Health steering group that developed <i>Mental Health Policy Implementation Guide: Dual Diagnosis Good Practice Guide</i> (2002)</p> <p>Co-editor of <i>Advances in Dual Diagnosis</i> journal</p> <p>Provide specialist dual diagnosis advice to National Mental Health Development Unit (NMHDU) dual diagnosis and acute programmes. Involved in development of dual diagnosis elearning packages for NMHDU Dual Diagnosis programme and National Acute Project Board.</p>
Action taken	None
Dr Kate McKinnell	
Employment	Senior Medical Officer (Addictions) Sefton Integrated Recovery Team (Crime Reduction Initiatives)
Personal pecuniary interest	None
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None
Action taken	None
Dr Jonathan Mitchell	
Employment	Consultant Psychiatrist, Early Intervention and Continuing Needs Services, Sheffield Health and Social Care Trust
Personal pecuniary interest	<p>In 2006 I chaired an educational meeting sponsored by Eli Lilly for which I received a payment of £250.</p> <p>In 2007 I chaired an educational meeting sponsored by Janssen for which I was offered, but did not accept payment.</p> <p>I have no current or ongoing personal pecuniary interests.</p>

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Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None
Action taken	None
Dr David Ndegwa	
Employment	Consultant Forensic Psychiatrist / Strategy Director South London and Maudsley NHS Foundation Trust
Personal pecuniary interest	None
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None
Action taken	None
Mr Peter Pratt	
Employment	Chief Pharmacist, Sheffield Health and Social Care Trust/Rotherham Doncaster and South Humber NHS Trust
Personal pecuniary interest	Gave a presentation regarding payment by results in mental health at an event sponsored by Janssen-Cilag Executive member of National Association of Psychiatric Intensive Care Units committee Received payment for market research about schizophrenia
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None
Action taken	None
Ms Theresa Renwick	
Employment	Social care lead for mental health, Royal Borough of Kensington and Chelsea

Personal pecuniary interest	None
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None
Action taken	None
Mr Leroy Simpson	
Employment	Representing Service User/Carer Interests; Board Member, Salvation Army Housing Association
Personal pecuniary interest	None
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None
Action taken	None
Mrs Penelope Wigram	
Employment	Representing Service User/Carer Interests; Psychoanalytic psychotherapist, British Psychoanalytic Council
Personal pecuniary interest	None
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None
Action taken	None
National Collaborating Centre for Mental Health	
Professor Tim Kendall	
Employment	Director, NCCMH; Medical Director, Sheffield Health and Social Care Trust; Consultant Adult Psychiatrist
Personal pecuniary interest	Grant holder for £1.44 million per year (approximately) from NICE for guidelines work. Work with NICE International. Undertake some research into mental health, and the mental health workforce

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	for Department of Health, Royal College of Psychiatrists and the Academy of Medical Royal Colleges.
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None
Action taken	None
Mr Matthew Dyer	
Employment	Health Economist, NCCMH
Personal pecuniary interest	None
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None
Action taken	None
Ms Katherine Leggett	
Employment	Guideline Development Manager, NCCMH
Personal pecuniary interest	None
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None
Action taken	None
Ms Laura Shields	
Employment	Research Assistant, NCCMH
Personal pecuniary interest	None
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None

Ms Sarah Stockton	
Employment	Senior Information Scientist, NCCMH
Personal pecuniary interest	None
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None
Action taken	None
Action taken	None
Dr Clare Taylor	
Employment	Senior Editor, NCCMH
Personal pecuniary interest	None
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	None
Action taken	None
Dr Craig Whittington	
Personal pecuniary interest	None
Personal family interest	None
Non-personal pecuniary interest	None
Personal non-pecuniary interest	Conducted a sub-analysis on the nidothrapy study for publication and subsequent use by the GDG
Action taken	None

APPENDIX 3: STAKEHOLDERS WHO SUBMITTED COMMENTS IN RESPONSE TO THE CONSULTATION DRAFT OF THE GUIDELINE

Alder Hey Children's NHS Foundation Trust
British Association for Psychopharmacology
Central and North West London NHS Trust
College of Mental Health Pharmacy
Department of Health
Faculty of Forensic and Legal Medicine (Royal College of Physicians)
Huntercombe Group
International Society for the Psychological Treatment of the Schizophrenias and Other Psychoses
Lancashire Care NHS Foundation Trust
Manchester Mental Health and Social Care Trust
Mental Health Nurses Association
MIDAS Therapists
National Consortium of Consultant Nurses in Dual Diagnosis
National Mental Health Development Unit
National Treatment Agency for Substance Misuse
NHS Direct
NIHR (National Institute for Health Research) Evaluation, Trials and Studies Coordinating Centre
Nottinghamshire Healthcare NHS Trust
Royal College of Paediatrics and Child Health
Royal College of Psychiatrists
Royal College of Psychiatrists (Wales)
Royal Pharmaceutical Society
Specialist Clinical Addiction Network
Welsh Assembly Government
West London Mental Health NHS Trust
Yorkshire and the Humber Local Supervising Authority

**APPENDIX 4:
EXPERTS WHO SUBMITTED COMMENTS IN
RESPONSE TO THE CONSULTATION DRAFT
OF THE GUIDELINE**

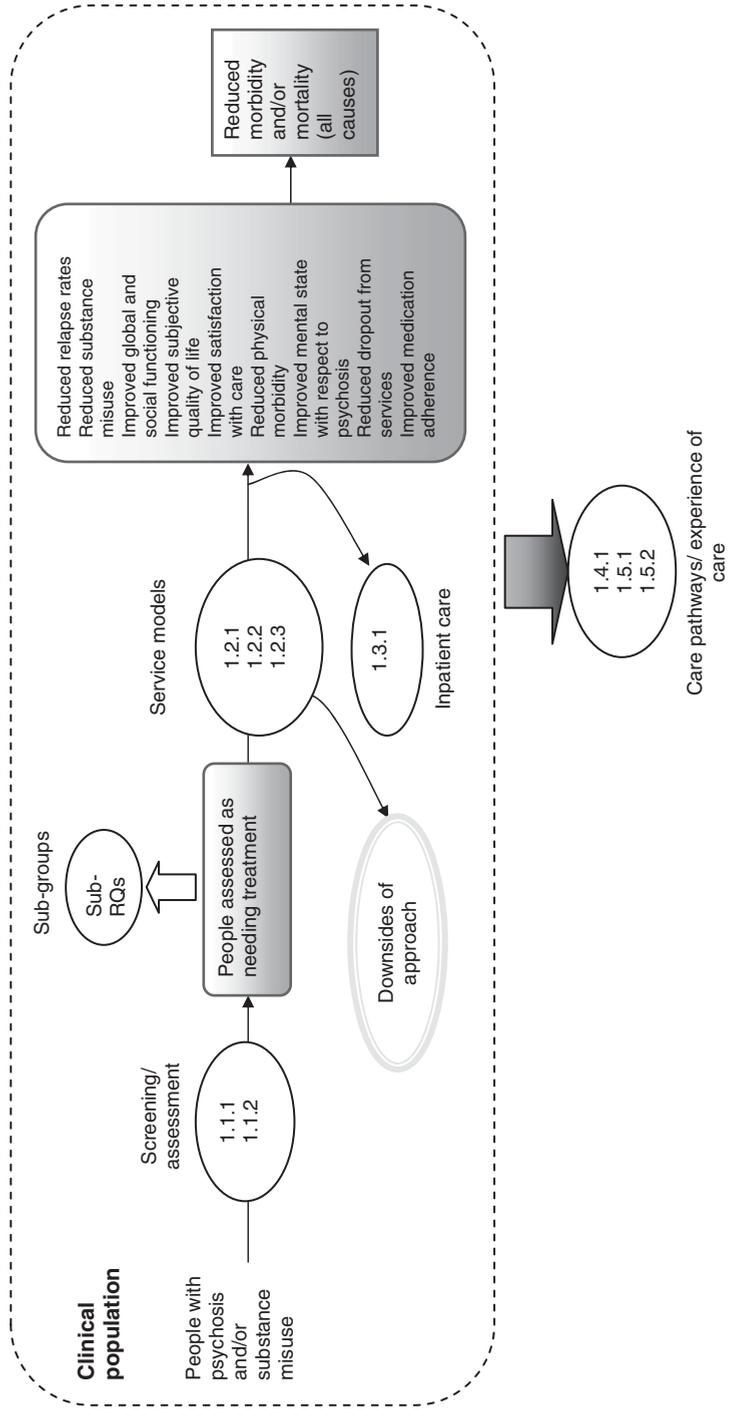
Dr Carol Caton, University of Columbia, New York, US

**APPENDIX 5:
RESEARCHERS CONTACTED TO REQUEST
FURTHER INFORMATION ABOUT PUBLISHED
OR UNPUBLISHED EVIDENCE**

Dr Alan Bellack, University of Maryland School of Medicine, Baltimore, US

APPENDIX 6: ANALYTIC FRAMEWORK AND REVIEW QUESTIONS

Assessment/service models/ inpatient care/care pathways/experience of care



Appendix 6

Assessment

No.	Primary review questions
1.1.1	<p data-bbox="325 311 1061 402">In people with psychosis and coexisting substance misuse, what are the key elements for a comprehensive assessment (of needs and risks)?</p> <p data-bbox="325 420 1044 484">Sub-question 1: should the assessment be the same in primary and secondary care?</p> <p data-bbox="325 502 1066 626">Sub-question 2: should the assessment be modified for subgroups of people (for example, young people, women, people from BME groups, homeless people, offenders, type of psychosis, type of substance misuse)?</p> <p data-bbox="325 644 973 673">Sub-question 3: what factors should trigger a reassessment?</p>

Service models

No.	Primary review questions
1.2.1	<p data-bbox="325 835 1053 959">In people with psychosis and coexisting substance misuse, does an integrated service model (usually involving the model of assertive community treatment) when compared with an alternative management strategy lead to:</p> <p data-bbox="325 977 529 1006">Critical outcomes:</p> <ul data-bbox="325 1021 1044 1306" style="list-style-type: none"><li data-bbox="325 1021 692 1050">• Reduced mortality (all causes)<li data-bbox="325 1051 1044 1115">• Reduced relapse rates (measured by exacerbation of symptoms requiring change in healthcare management)<li data-bbox="325 1117 877 1146">• Reduced substance misuse (however measured)<li data-bbox="325 1148 1038 1212">• Improved global and social functioning (for example, employment, accommodation)<li data-bbox="325 1213 739 1243">• Improved subjective quality of life<li data-bbox="325 1244 705 1274">• Improved satisfaction with care<li data-bbox="325 1275 667 1304">• Reduced physical morbidity <p data-bbox="325 1323 561 1352">Secondary outcomes:</p> <ul data-bbox="325 1366 1035 1616" style="list-style-type: none"><li data-bbox="325 1366 443 1395">• Insight<li data-bbox="325 1397 709 1426">• Improved medication adherence<li data-bbox="325 1428 866 1457">• Improved access to services (reduced dropout)<li data-bbox="325 1459 996 1523">• Reduced relapse rates (measured by admission to hospital; number of bed days)<li data-bbox="325 1525 1035 1588">• Improved mental state with respect to psychosis (for example, Positive and Negative Syndrome Schedule [PANSS])<li data-bbox="325 1590 687 1619">• Reduced offending behaviour.

	<p>Sub-question 1: What are the elements in an integrated service model that are most likely to be associated with better outcomes?</p> <p>Sub-question 2: Are there any subgroups of people (for example, young people, BME groups) that benefit from some elements of the service model more than others?</p> <p>Sub-question 3: Are there subgroups of people (for example, based on severity of substance misuse and severity of psychosis; young people, BME groups) who may benefit from alternatives strategies (non-integrated service models, serial treatment, for example)</p>
1.2.2	<p>In people with psychosis and coexisting substance misuse, do the psychological/psychosocial interventions listed below (delivered within an integrated service model) when compared with an alternative management strategy lead to improved outcomes? (for outcomes see 1.2.1)</p> <ul style="list-style-type: none"> • Individual interventions • Group interventions • Family intervention • Contingency management • Combined interventions
1.2.3	<p>In people with psychosis and coexisting substance misuse, does staffed accommodation when compared with an alternative management strategy lead to improved outcomes? (for outcomes see 1.2.1)</p>

Inpatient care

No.	Primary review questions
1.3.1	<p>When a person with psychosis and coexisting substance misuse is admitted to an inpatient mental health setting (including forensic settings), should treatment follow the same principles as interventions delivered in a community setting?</p> <p>Sub-question: Are there subgroups of people for whom we would alter our approach to treatment?</p>

Care pathways

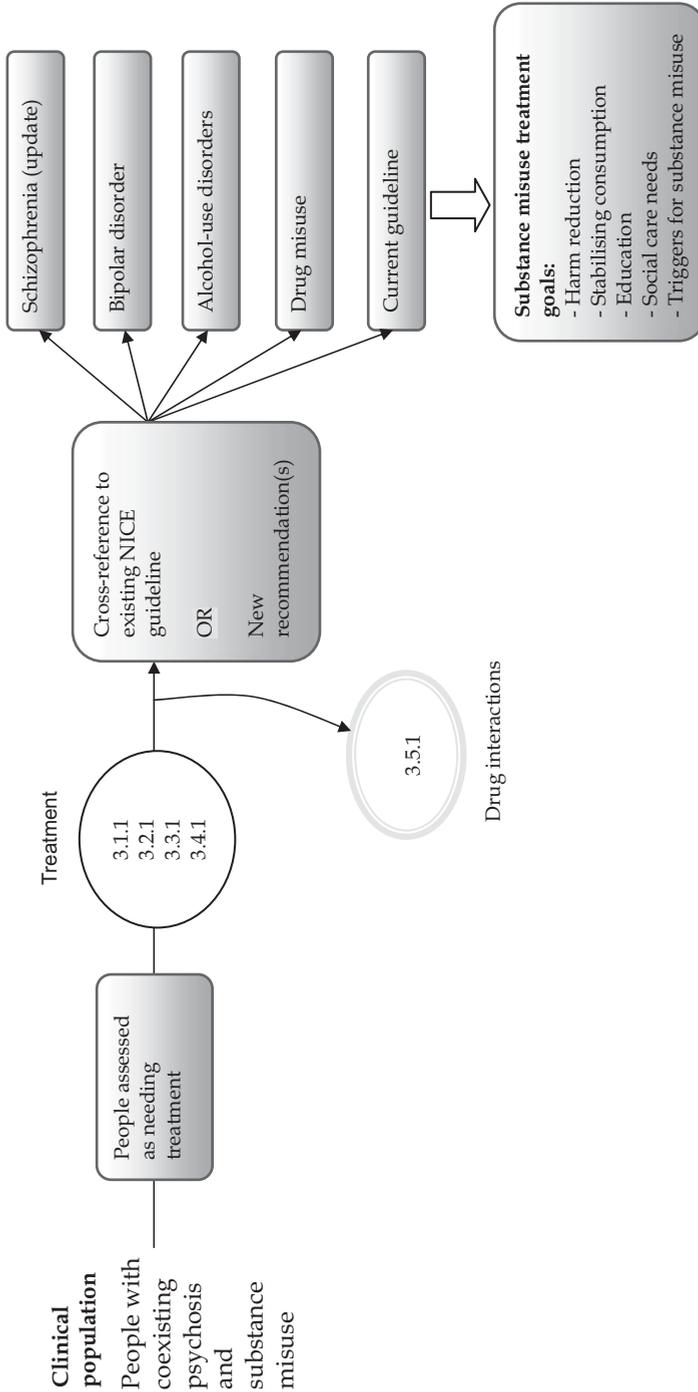
No.	Primary review questions
1.4.1	<p>In people with psychosis and coexisting substance misuse, what is the most appropriate care pathway (involving all NHS and non-NHS providers) and referral guidance at each transition?</p>

Appendix 6

Experience of care

No.	Primary review questions
1.5.1	For people with psychosis and coexisting substance misuse, what are their experiences of having problems with psychosis and substance misuse, of access to services, and of treatment?
1.5.2	For families, carers or significant others of people who have psychosis and coexisting substance misuse, what are their experiences of caring for people with psychosis and coexisting substance misuse, and what support is available for families, carers or significant others?

Treatment of psychosis and substance misuse



Pharmacological interventions for psychosis

No.	Primary review question
2.1.1	<p>For people with psychosis and coexisting substance misuse, should the medical treatment of their psychosis be modified as a result of substance misuse and the treatment provided (for example, methadone, buprenorphine, and so on)?</p> <p>(a) During the acute phase (b) During non-acute phase</p> <p>If so, how should treatment be modified?</p> <p>Sub-question 1: Are there sub-groups of people (for example, young people, people with a particular type of psychosis, BME groups) who may benefit from alternative strategies?</p>

Psychological and psychosocial interventions for psychosis

No.	Primary review question
2.2.1	<p>For people with psychosis and coexisting substance misuse, should the psychological and psychosocial treatment (family intervention, CBT, arts therapies) of their psychosis be modified as a result of the substance misuse problem and the treatment provided (for example, methadone, buprenorphine, psychological treatment)?</p> <p>(a) During the acute phase (b) During non-acute phase</p> <p>If so, how should treatment be modified?</p> <p>Sub-question 1: Are there sub-groups of people (for example, young people, people with a particular type of psychosis, BME groups) who may benefit from alternative strategies?</p>

Pharmacological and physical interventions for substance misuse

No.	Primary review question
2.3.1	<p>For people with psychosis and coexisting substance misuse, should the medical/physical treatment of substance misuse be modified as a result of the presence of psychosis and the treatment provided (for example, antipsychotics, lithium)?</p>

	<p>(a) During the acute phase (b) During non-acute phase</p> <p>If so, how should treatment be modified?</p> <p>Sub-question 1: Are there sub-groups of people (for example, young people, people with a particular type of psychosis, BME groups) who may benefit from alternative strategies?</p>
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Psychological and psychosocial interventions for substance misuse

No.	Primary review question
2.4.1	<p>For people with psychosis and coexisting substance misuse, should psychological and psychosocial treatment for substance misuse be modified as a result of the presence of psychosis and the treatment provided?</p> <p>(a) During the acute phase (b) During non-acute phase</p> <p>If so, how should treatment be modified?</p> <p>Sub-question 1: Are there sub-groups of people (for example, young people, people with a particular type of psychosis, BME groups) who may benefit from alternative strategies?</p> <p>Sub-question 2: Should interventions be matched to stages of the treatment process (that is, engagement, persuasion, active treatment, relapse prevention)?</p>

Drug interactions

No.	Primary review question
2.5.1	<p>In people with psychosis and coexisting substance misuse, is there any evidence that the management of drug interactions or adverse effects from pharmacological treatments should be different from those people without coexisting disorders?</p> <p>If so, how should management of drug interactions be modified?</p>

**APPENDIX 7:
SEARCH STRATEGIES FOR THE IDENTIFICATION
OF CLINICAL STUDIES**

Available on the CD-ROM.

APPENDIX 8: METHODOLOGY CHECKLIST TEMPLATE FOR CLINICAL STUDIES AND REVIEWS

The methodological quality of each study was evaluated using NICE checklists (NICE, 2009b). The checklists for systematic reviews and for RCTs are reproduced below (for other checklists and further information about how to complete each checklist, see *The Guidelines Manual* [NICE, 2009b]). The completed checklists can be found in Appendix 16.

Methodology checklist: systematic reviews and meta-analyses

Study identification <i>Include author, title, reference, year of publication</i>	
Guideline topic:	Review question no:
Checklist completed by:	
SCREENING QUESTIONS	
In a well-conducted, relevant systematic review:	<i>Circle one option for each question</i>
The review addresses an appropriate and clearly focused question that is relevant to the guideline review question	Yes No Unclear
The review collects the type of studies you consider relevant to the guideline review question	Yes No Unclear
The literature search is sufficiently rigorous to identify all the relevant studies	Yes No Unclear
Study quality is assessed and reported	Yes No Unclear
An adequate description of the methodology used is included, and the methods used are appropriate to the question	Yes No Unclear

Methodology checklist: RCTs

Study identification <i>Include author, title, reference, year of publication</i>		
Guideline topic:		Review question no:
Checklist completed by:		<i>Circle one option for each question</i>
A. Selection bias (systematic differences between the comparison groups)		
A1	An appropriate method of randomisation was used to allocate participants to treatment groups (which would have balanced any confounding factors equally across groups)	Yes No Unclear N/A
A2	There was adequate concealment of allocation (such that investigators, clinicians and participants cannot influence enrolment or treatment allocation)	Yes No Unclear N/A
A3	The groups were comparable at baseline, including all major confounding and prognostic factors	Yes No Unclear N/A
Based on your answers to the above, in your opinion was selection bias present? If so, what is the likely direction of its effect?		
Low risk of bias Unclear/unknown risk High risk of bias		
Likely direction of effect:		
B. Performance bias (systematic differences between groups in the care provided, apart from the intervention under investigation)		
B1	The comparison groups received the same care apart from the intervention(s) studied	Yes No Unclear N/A
B2	Participants receiving care were kept 'blind' to treatment allocation	Yes No Unclear N/A
B3	Individuals administering care were kept 'blind' to treatment allocation	Yes No Unclear N/A

Based on your answers to the above, in your opinion was performance bias present? If so, what is the likely direction of its effect?		
Low risk of bias Unclear/unknown risk High risk of bias		
Likely direction of effect:		
C. Attrition bias (systematic differences between the comparison groups with respect to loss of participants)		
C1	All groups were followed up for an equal length of time (or analysis was adjusted to allow for differences in length of follow-up)	Yes No Unclear N/A
C2	a. How many participants did not complete treatment in each group?	
	b. The groups were comparable for treatment completion (that is, there were no important or systematic differences between groups in terms of those who did not complete treatment)	Yes No Unclear N/A
C3	a. For how many participants in each group were no outcome data available?	
	b. The groups were comparable with respect to the availability of outcome data (that is, there were no important or systematic differences between groups in terms of those for whom outcome data were not available).	Yes No Unclear N/A
Based on your answers to the above, in your opinion was attrition bias present? If so, what is the likely direction of its effect?		
Low risk of bias Unclear/unknown risk High risk of bias		
Likely direction of effect:		
D. Detection bias (bias in how outcomes are ascertained, diagnosed or verified)		
D1	The study had an appropriate length of follow-up	Yes No Unclear N/A
D2	The study used a precise definition of outcome	Yes No Unclear N/A
D3	A valid and reliable method was used to determine the outcome	Yes No Unclear N/A

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D4 Investigators were kept 'blind' to participants' exposure to the intervention	Yes No Unclear N/A
D5 Investigators were kept 'blind' to other important confounding and prognostic factors	Yes No Unclear N/A
Based on your answers to the above, in your opinion was detection bias present? If so, what is the likely direction of its effect?	
<div style="display: flex; justify-content: space-between; width: 100%;"> Low risk of bias Unclear/unknown risk High risk of bias </div>	
Likely direction of effect:	

**APPENDIX 9:
SEARCH STRATEGIES FOR THE IDENTIFICATION
OF HEALTH ECONOMIC EVIDENCE**

Available on the CD ROM.

APPENDIX 10: METHODOLOGY CHECKLIST TEMPLATE FOR ECONOMIC STUDIES

The methodological quality of each study was evaluated using the NICE checklists for economic evaluations, reproduced below (for information about how to complete the checklist, see *The Guidelines Manual* [NICE, 2009b]).

Study identification <i>Including author, title, reference, year of publication</i>		
Guideline topic:		Question no:
Checklist completed by:		
Section 1: Applicability (relevance to specific guideline review question(s) and the NICE reference case). This checklist should be used first to filter out irrelevant studies.		Yes/ Partly/ No/Unclear/ NA
Comments		
1.1	Is the study population appropriate for the guideline?	
1.2	Are the interventions appropriate for the guideline?	
1.3	Is the healthcare system in which the study was conducted sufficiently similar to the current UK NHS context?	
1.4	Are costs measured from the NHS and personal social services (PSS) perspective?	
1.5	Are all direct health effects on individuals included?	
1.6	Are both costs and health effects discounted at an annual rate of 3.5%?	
1.7	Is the value of health effects expressed in terms of quality-adjusted life years (QALYs)?	
1.8	Are changes in health-related quality of life (HRQoL) reported directly from patients and/or carers?	

1.9	Is the valuation of changes in HRQoL (utilities) obtained from a representative sample of the general public?		
1.10	Overall judgement: Directly applicable/ Partially applicable/Not applicable There is no need to use section 2 of the checklist if the study is considered 'not applicable'.		
Other comments:			

Section 2: Study limitations (the level of methodological quality). This checklist should be used once it has been decided that the study is sufficiently applicable to the context of the clinical guideline.		Yes/ Partly/ No/Unclear/ NA	Comments
2.1	Does the model structure adequately reflect the nature of the health condition under evaluation?		
2.2	Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?		
2.3	Are all important and relevant health outcomes included?		
2.4	Are the estimates of baseline health outcomes from the best available source?		
2.5	Are the estimates of relative treatment effects from the best available source?		
2.6	Are all important and relevant costs included?		
2.7	Are the estimates of resource use from the best available source?		
2.8	Are the unit costs of resources from the best available source?		
2.9	Is an appropriate incremental analysis presented or can it be calculated from the data?		

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2.10	Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?		
2.11	Is there no potential conflict of interest?		
2.12	Overall assessment: Minor limitations/ Potentially serious limitations/ Very serious limitations		
Other comments:			

APPENDIX 11: EVIDENCE TABLES FOR ECONOMIC STUDIES

Study ID Country Study type	Intervention details	Study population Study design Data sources	Costs: description and values Outcomes: description and values	Results: cost effectiveness	Comments
Clark <i>et al.</i> , 1998 US Cost- effectiveness analysis (CEA)	Compared ACT and standard case management for service users with severe mental illness and substance-use disorders	Study population Service users with DSM-III-R diagnosis of schizophrenia, schizoaffective disorder, or bipolar disorder and an active substance-use disorder. Service users randomised to ACT (n = 100) or standard case management (n = 93) Average age: 34 years; 74% male Study design RCT (multi-centre) Time-frame: 3 years Data sources Seven mental health catchment areas in the US	Costs Resource use: mental health treatment; general healthcare; legal system; community services (homeless shelters/soup kitchens); administration; informal care (family members' input) Outcomes Subjective quality-of- life year details provided from service users' perspective using the QOLI instrument. A modified range from 0 (terrible) to 1 (delighted) was used and weighted (cumulative) scores were derived based on the time spent on each rating.	Costs ACT: \$118,078 per service user Standard case management: \$124,145 per service user Outcomes (quality- of-life improvement from baseline) ACT: 0.10 Standard case management: 0.04 Cost effectiveness Ratios of cumulative quality of life years to total societal costs rather than ICERs were computed. Average quality-of- life ratios per \$10,000 in societal costs were 0.24 (ACT) and 0.20 (standard case management).	Perspective: Societal Currency: US \$ Cost year: 1995 Time horizon: 3 years Discounting: Yes (3% costs; 5% outcomes) Funded by: National Institute of Mental Health, National Institute on Alcohol Abuse and Alcoholism/ New Hampshire Division of Mental Health and Developmental Services

<p>Craig <i>et al.</i>, 2008 UK Cost-analysis (CA)</p>	<p>Programme for case managers that trained them to manage substance-use disorders among persons with severe mental illness compared with waitlist control</p>	<p>Study population Service users with clinical diagnosis of schizophrenia, schizoaffective disorder, or other non-affective psychotic illnesses or bipolar disorder with psychotic symptoms plus abuse or dependence on at least one substance Intervention (n = 124) Control (n = 104)</p> <p>Study design RCT (cluster) Time-frame: 18 months</p> <p>Data sources Community mental health services in four London boroughs</p>	<p>Costs Resource use: hospital inpatient days; day care; medication; professional appointments (psychiatrist, community nurse, social worker, psychologist, drug or alcohol worker, counsellor, GP); criminal justice (court/police/prison)</p>	<p>Total mean costs Intervention: 18,672 Control: 17,639</p>	<p>Perspective: Societal Currency: UK £ Cost year: 2003/04 Time horizon: 18 months Discounting: No Funded by: Bethlem and Maudsley NHS Trust</p>
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Study ID Country Study type	Intervention details	Study population Study design Data sources	Costs: description and values Outcomes: description and values	Results: cost effectiveness	Comments
French <i>et al.</i> , 1999 US Cost- consequences analysis	Modified TC intervention compared with standard services in a treatment as usual condition	<p>Study population Homeless mentally ill 'chemical abusers' – axis I diagnoses of schizophrenia, major depression, mania and who also use drugs or alcohol</p> <p>Modified TC (n = 228); treatment as usual (n = 53)</p> <p>Study design Cohort study</p> <p>Data sources Homeless facilities and psychiatric hospitals located in New York City</p>	<p>Costs Perspective: health service intervention; hospital detoxification; emergency room visits; short-term residential stays; non- residential stays; outpatient visits; methadone maintenance; inpatient days</p> <p>Outcomes Substance use, criminal activity, HIV-risk behaviour, psychological status, employment status</p>	<p>Costs Modified TC: \$29,255 Treatment as usual: \$29,638</p> <p>Outcomes Modified TC service users reported significantly greater reductions in criminal activity and psychological dysfunction; no significant differences in substance use or HIV-risk behaviour No formal synthesis of costs and outcomes</p>	<p>Perspective: Health service Currency: US \$ Cost year: 1994 Time horizon: 12 months Discounting: NA Funded by: National Institute on Drug Abuse, Public Health Service, US Department of Health and Human Services</p>

<p>Haddock <i>et al.</i>, 2003 UK CEA</p>	<p>Integrated programme of cognitive behavioural combined with motivational intervention plus routine care versus routine care alone</p>	<p>Study population Service users (entered as service user and carer pairs) with ICD-10 diagnosis of schizophrenia, schizoaffective disorder or delusional disorder and DSM-IV diagnosis of substance dependence or misuse. Intervention (n = 18) Control (n = 18) Study design RCT Data sources Mental health units of three UK NHS hospital trusts</p>	<p>Costs Resource use: intervention; hospital services; primary care services (GPs/practice nurses); community or domiciliary services (social workers/occupational therapists); day services; medication; service user costs (travel/out-of-pocket payments); productivity losses Outcomes Change in the GAF over 18 months</p>	<p>Costs Intervention: 8,753 (SD 4,804) Control: 10,013 (SD 10,717) Outcomes Intervention: 60.12 (SD 18.96) Control: 53.44 (SD 13.00) Cost effectiveness Not reported Probability of intervention being less costly than routine care (at willingness-to-pay of 0) was 69.3%</p>	<p>Perspective: Societal Currency: UK £ Cost year: 1998/99 Time horizon: 18 months Discounting: No Funded by: West Pennine, Manchester and Stockport Health Authorities, Thameside and Glossop NHS Trust Research and Development support</p>
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Study ID Country Study type	Intervention details	Study population Study design Data sources	Costs: description and values Outcomes: description and values	Results: cost effectiveness	Comments
Jerrell & Ridgley, 1997 US CEA	Comparison of three primary interventions (with emphasis on any ethnic differences): 12-step recovery, case management and behavioural skills training	<p>Study population Service users with Axis I DSM-III-R diagnosis of psychosis or major depression with a coexisting substance disorder</p> <p>12-step (n = 39) Behavioural skills (n = 48) Case management (n = 45)</p> <p>Study design RCT</p> <p>Data sources Five community mental health centres in the US</p>	<p>Costs Perspective: societal Resource use: two categories - intensive mental health (inpatient days, nursing days, residential treatment, emergency days); supportive mental health (case management hours, outpatient visits, supporting housing days, service days)</p> <p>Outcomes Psychological functioning (Social Adjustment Scale-II; Role Functioning Scale), mental health and substance abuse (C-DIS-R)</p>	<p>Total costs Intensive mental health costs 12-step: \$10,275 Behavioural skills: \$4,276 Case management: \$7,643</p> <p>Supportive mental health costs 12-step: \$7,798 Behavioural skills: \$6,112 Case management: \$5,970</p> <p>No differences between three treatment approaches in psychological functioning or psychiatric or substance abuse symptoms. Analysis was therefore based on cost differences</p>	Perspective: US Health service Currency: US \$ Cost year: Not reported Time horizon: 18 months Discounting: No Funded by: National Institute of Mental Health

<p>Morse <i>et al.</i>, 2006 USA CA</p>	<p>Three treatments: integrated ACT; ACT only and standard care (control)</p>	<p>Study population Individuals (homeless at baseline) with co- occurring serious mental illness and substance use disorders Integrated ACT (n = 54); ACT only (n = 54); control (n = 49) Mean age: 40 years; 80% male Study design RCT Data sources US-based community mental health agencies</p>	<p>Costs Perspective: societal Outpatient care (direct treatments for integrated ACT and ACT only, other mental health/substance misuse treatment, physical healthcare, psychosocial rehabilitation); inpatient care; emergency shelter; social security; transfer payments and maintenance benefits Outcomes Service user satisfaction; BPRS; substance use (interviewer rating)</p>	<p>Costs Integrated ACT: \$48,764 ACT only: \$71,211 Control: \$41,726 Integrated ACT and control groups had significantly lower total mean costs than ACT only but no significant differences between integrated ACT and control Outcomes Integrated ACT and ACT only participants satisfied with their treatment than control; no significant differences between integrated ACT and ACT only. There was no significant effect of treatment on BPRS scale ($p = 0.1$) or substance use levels ($p = 0.72$).</p>	<p>Perspective: Societal Currency: US \$ Cost year: 2001 Time horizon: 24 months Discounting: No Funded by: National Institute of Mental Health</p>
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APPENDIX 12:

HIGH-PRIORITY RESEARCH RECOMMENDATIONS

The GDG has made the following recommendations for research, based on its review of evidence, to improve NICE guidance and service user care in the future.

1.1 DETERMINING PREVALENCE, RISK AND PROTECTIVE FACTORS, AND COURSE OF ILLNESS

What are the prevalence, risk and protective factors, and course of illness for different combinations of psychosis and coexisting substance misuse (for example, schizophrenia and cannabis misuse or bipolar disorder and alcohol misuse)?

Why this is important

Studies vary in terms of the definitions and diagnosis of psychosis and substance misuse, and how they are conducted. This makes it difficult to draw conclusions about prevalence and patterns in patient groups differentiated by diagnosis, ethnicity and other demographics. Additionally, most studies are cross-sectional, so little is known about how both conditions change over time. Moreover, there is little guidance about which levels and patterns of substance misuse in which patient groups are associated with the worst clinical and social outcomes. Such information is necessary to target resources at groups most at risk of very poor outcomes.

This question should be answered using a longitudinal study design with a representative sample large enough to establish the prevalence, pattern, and epidemiology of different combinations of psychosis and coexisting substance misuse, associated social determinants, treatment and outcome. The study should also collect information that could inform the development of new interventions or the modification of existing interventions to improve prognosis.

1.2 PREDICTING THE ONSET OF SUBSTANCE MISUSE IN YOUNG PEOPLE WITH PSYCHOSIS

What risk factors predict the onset of substance misuse in young people with psychosis?

Why this is important

People with psychosis and coexisting substance misuse are more likely to be non-adherent to prescribed medication, and have poor engagement with treatment programmes, increased risk of suicide, more and longer inpatient stays, increased risk

of violence and time spent in the criminal justice system, and poorer overall prognosis. Because the onset of psychosis at a younger age is also an indicator of poor prognosis, people with a combination of younger age of onset and coexisting substance misuse may have a particularly poor prognosis. A clearer understanding of the risk and protective factors for substance misuse in young people with psychosis, and the interrelationship of the two conditions over time, may facilitate the development of treatment approaches for the coexisting conditions in this group. This may then improve the longer term outcome for a group of people who tend to have a poor prognosis.

This question should be answered using a prospective cohort study design.

1.3 PSYCHOSOCIAL INTERVENTIONS VERSUS STANDARD CARE

Are psychosocial interventions clinically and cost effective when compared with standard care for people with psychosis and coexisting substance misuse?

Why this is important

Psychosocial interventions are recommended for the treatment of substance misuse, with contingency management showing particular promise. However, they have not been adequately tested in people who also have psychosis.

This question should be answered using a randomised controlled trial that examines the short- and medium-term outcomes over at least 18 months. Studies should focus on people whose misuse of substances is most often encountered in clinical practice and has the greatest impact on mental health (such as cannabis and polysubstance misuse), and on those interventions – such as contingency management, cognitive therapy and relapse prevention – that show most promise in people with substance misuse without psychosis. Those providing the intervention should be trained and supervised to ensure that the results are robust and generalisable. Outcomes should reflect both observer and service user-rated assessments of improvement (including mental health and social functioning) and the intervention's acceptability. Studies need to be large enough to determine the intervention's costs and cost effectiveness.

1.4 ENVIRONMENTAL INTERVENTIONS VERSUS STANDARD CARE

Are environmental interventions clinically and cost effective when compared with standard care for people with psychosis and coexisting substance misuse?

Why this is important

Social and other environmental factors can play a role in triggering and maintaining substance misuse in people with psychosis, and in reducing the likelihood of progress and recovery. Evidence suggests that when the primary focus of management involves improving the environment, both conditions may improve.

This question should be answered using a randomised controlled trial that examines short- and medium-term outcomes over at least 12 months. Studies should focus on people with psychosis whose misuse of substances is most often encountered in clinical practice and has the greatest impact on mental health (such as cannabis and polysubstance misuse), and on interventions that take a collaborative approach to identifying and modifying social and environmental factors that may trigger substance misuse. Those providing the intervention should be trained and supervised to ensure that the results are robust and generalisable. Outcomes should reflect both observer and service user-rated assessments of improvement (including mental health and social functioning) and the intervention's acceptability. Studies need to be large enough to determine the intervention's costs and cost effectiveness.

1.5 CLOZAPINE VERSUS OTHER PHARMACOLOGICAL INTERVENTIONS

Is clozapine clinically and cost effective when compared with other pharmacological interventions for people with psychosis and coexisting substance misuse?

Why this is important

The NICE guideline *Schizophrenia* (NICE, 2009a) states that clozapine should be offered to people with schizophrenia whose illness has not responded adequately to treatment despite the sequential use of adequate doses of at least two different antipsychotic drugs. However, there is insufficient evidence to guide healthcare professionals about the use of clozapine in people with psychosis and coexisting substance misuse. Expert opinion often advocates clozapine as having a particular role in this population, but the evidence to support such statements is lacking. Clozapine is expensive and has a wide range of side effects, some of which may be life-threatening if not monitored correctly.

This question should be answered using a randomised controlled trial in which participants are stratified for the presenting problem. It should report short and longer-term outcomes (including substance misuse, acceptability of the intervention, and cost effectiveness) of at least 12 months' duration.

**APPENDIX 13:
CLINICAL STUDY CHARACTERISTICS TABLES**

Available on the CD ROM.

APPENDIX 14: FOREST PLOTS

Available on the CD ROM.

APPENDIX 15: GRADE EVIDENCE PROFILE TABLES

Available on the CD ROM.

**APPENDIX 16:
COMPLETED METHODOLOGY CHECKLISTS**

Available on the CD ROM.

Appendix 17

APPENDIX 17: ECONOMIC EVIDENCE PROFILES

Available on the CD ROM.

**APPENDIX 18:
ECONOMIC EVIDENCE – COMPLETED
METHODOLOGY CHECKLISTS**

Available on the CD ROM.

Appendix 19

APPENDIX 19: ECONOMIC PLAN

Available on the CD ROM.

**APPENDIX 20:
CLINICAL REVIEW PROTOCOLS**

Available on the CD ROM.

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13 ABBREVIATIONS

AA	Alcoholics Anonymous
ACT	assertive community treatment
A&E	accident and emergency
AGREE	Appraisal of Guidelines for Research and Evaluation instrument
AHRQ	Agency for Healthcare Research and Quality
APA	American Psychiatric Association
ASI	Addiction Severity Index
AUS	Alcohol Use Scale
BDI (-II, -SF)	Beck Depression Inventory (second revision, Short Form)
BME	black and minority ethnic
BMJ	<i>British Medical Journal</i>
BPRS	Brief Psychiatric Rating Scale
CA	cost-analysis
CAMHS	child and adolescent mental health services
CATIE	Clinical Antipsychotic Trials of Intervention Effectiveness
CBT	cognitive behavioural therapy
CCA	cost-consequences analysis
C-DIS-R	Computerized Diagnostic Interview Schedule – Revised
CEA	cost-effectiveness analysis
CENTRAL	Cochrane Central Register of Controlled Trials
CI	confidence interval
CINAHL	Cumulative Index to Nursing and Allied Health Literature
CMHT	community mental health team
CNS	central nervous system
CPA	Care Programme Approach
CRD	Centre for Reviews and Dissemination (NHS)
CSRI	Client Service Receipt Interview
CUA	cost-utility analysis
DDT	dual disorders treatment
df	degrees of freedom
DRA	Dual Recovery Anonymous
DSM (-III, -III-R -IV)	<i>Diagnostic and Statistical Manual of Mental Disorders</i> (3rd edition, 3rd edition revised, 4th edition)
DSPD	dangerous and severe personality disorder
ECA	Epidemiological Catchment Area study

Abbreviations

EconLit	The American Economic Association's electronic bibliography
EIS	early intervention in psychosis services
EMBASE	Excerpta Medica Database
EPPIC	Early Psychosis Prevention and Intervention Centre (Australia)
FDA	Food and Drug Administration (US)
FU	follow-up
GAF	Global Assessment of Functioning
GAS	Global Assessment Scale
GDG	Guideline Development Group
GMI	group motivational interviewing
GP	general practitioner
GRADE	Grading of Recommendations: Assessment, Development and Evaluation
GRP	Guideline Review Panel
HDRS	Hamilton Depression Rating Scale
HIV	human immunodeficiency virus
HMIC	Health Management Information Consortium
HMSO	Her Majesty's Stationery Office
HRQOL	health-related quality of life
HTA	Health Technology Assessment
ICD-10	<i>International Classification of Diseases</i> – 10th revision
ICER	incremental cost-effectiveness ratio
IQR	inter-quartile range
ITT	intention to treat
IV	inverse variance
LSD	lysergic acid diethylamide
LYS	life years
M/m	mean
MAOI	monoamine oxidase inhibitor
MD	mean difference
MEDLINE	Medical Literature Analysis and Retrieval System Online
M-H	Mantel-Haenszel estimate
MI	motivational interviewing
MIDAS	Motivational Interventions for Drugs and Alcohol in Schizophrenia
MM	medical monitoring

N	total number of participants
n	number of participants in each group
NA	Narcotics Anonymous or not applicable
NCCMH	National Collaborating Centre for Mental Health
NHS	National Health Service
NHS EED	NHS Economic Evaluation Database
NICE	National Institute for Health and Clinical Excellence
NMHDU	National Mental Health Development Unit
NOS	not otherwise specified
OIS	optimal information size
OR	odds ratio
OTI	Opiate Treatment Index
p	probability
PANSS	Positive and Negative Syndrome Schedule
PCT	primary care trust
PORT	Patient Outcomes Research Team
PSSRU	Personal Social Services Research Unit
PsycBOOKS	A full text database of books and chapters in the APA's electronic database
PsycEXTRA	A grey literature database, which is a companion to PsycINFO
PsycINFO	Psychological Information Database
QALY	quality-adjusted life year
QOF	Quality and Outcomes Framework
QOLI	Quality of Life Interview
QT	The electrical activity of the heart's Q wave and T wave
RCT	randomised controlled trial
RDC	Research Diagnostic Criteria
RFS	Role Functioning Scale
RQ	review question
RR	relative risk
SANS	Scale for the Assessment of Negative Symptoms
SAS	Social Adjustment Scale
SATS	Substance Abuse Treatment Scale
SC	standard care
SCID-I	Structured Clinical Interview for DSM-IV (- Axis I disorders)
SCM	standard case management
SD	standard deviation
SE	standard error

Abbreviations

SFS	Social Functioning Scale
SIGN	Scottish Intercollegiate Guidelines Network
SMD	standardised mean difference
SOS	Start Over and Survive (a brief intervention for substance misuse in early psychosis)
SPC	Summary of Product Characteristics
SSRI	selective serotonin reuptake inhibitor
STR	support, time and recovery
SUI	serious untoward incident
SURS	Service Utilization Rating Scale
TAAC	therapist attention activity control
TAU/Tau	treatment as usual
TC	therapeutic community
TC1	therapeutic community – lower intensity
TC2	therapeutic community – higher intensity
THC	tetrahydrocannabinol
TIP	Treatment Improvement Protocol
TLFB	TimeLine FollowBack
TSF	twelve-step facilitation
WHO	World Health Organization

“This guideline establishes without doubt the routes into care and the effective approaches to treatment for people with a serious mental illness accompanied by a substance-use disorder. This is especially welcome because of the prevalence of both conditions and the likelihood that they will co-occur. Impressively, the guideline development group has shown that people do respond when both conditions are treated, and this can only instil hope for the future.”

Professor Sue Bailey, President of the Royal College of Psychiatrists
and Consultant Child and Adolescent Forensic Psychiatrist,
Greater Manchester West Mental Health NHS Foundation Trust

This clinical guideline covers the assessment and management of adults and young people (aged 14 years and older) who have a clinical diagnosis of psychosis (schizophrenia, bipolar disorder or other affective psychosis) and coexisting substance misuse (harmful use of any psychotropic substance including alcohol and legal or illicit drugs).

Around 40% of people experiencing psychosis also misuse substances at some point in their lives, which can lead to serious health and social problems for the person and complicate their treatment.

Although separate NICE guidelines have been developed for the management of schizophrenia, bipolar disorder and drug and alcohol misuse, the importance of this new guideline on psychosis and substance misuse is that it offers advice on how to integrate treatment for people with these commonly coexisting conditions.

The guideline includes comprehensive reviews of assessment, care pathways and service delivery models, psychological and pharmacological interventions for both conditions, and treatment and services for young people. There is also an extensive review of the experience of care.

An accompanying CD contains further information about the evidence, including:

- characteristics of included studies
- GRADE profile tables that summarise both the quality of the evidence and the results of the evidence synthesis
- all meta-analytical data presented as forest plots
- detailed information about how to use and interpret forest plots.

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