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**Substance misuse brief Interventions during psychiatric  
hospital admissions**

Journal:	<i>Advances in Dual Diagnosis</i>
Manuscript ID	ADD-03-2016-0007.R2
Manuscript Type:	Discussions Paper
Keywords:	randomised controlled trial, hospital admission, dual diagnosis, schizophrenia, substance misuse, CBT

**Title: Brief Intervention for substance misuse during a mental health admission****Abstract**

*Article classification: General review*

**Purpose:** To provide a summary of the principles, theories and basic components of a recently developed brief integrated motivational intervention (BIMI) for working with individuals experience co-occurring severe mental health and substance use problems in inpatient settings, including the outcomes of a feasibility randomised controlled trial (RCT).

**Background:** There are greater financial costs and a negative impact on functioning associated with psychiatric admissions for people who experience co-occurring severe mental health and substance misuse problems. In addition, their engagement in treatment is often problematic.

**Methodology:** The BIMI described was evaluated via a feasibility RCT that assessed whether the opportunity to discuss use of substances whilst on an inpatient ward represented an opportunity to engage inpatients in thinking about their use and the impact it has on their mental health.

**Intervention:** The BIMI is delivered in short burst sessions of 15-30 minutes over a two-week period adopting a simple 3-step approach that can be delivered by routine ward staff. It incorporates an assessment of substance use, mental health and motivation followed by personalised feedback, a focus on increasing awareness of the impact on mental health and the development of goals and a change plan.

**Findings:** The intervention has been shown to lead to higher levels of engagement in clients exploration of alcohol and drug use and the impact on mental health. Findings suggest both staff and inpatients found the intervention feasible and acceptable.

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2  
3 **Originality:** Routine ward staff were trained to deliver a brief intervention to inpatients  
4  
5 during an acute hospital admission.  
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10 **Keywords:** randomised controlled trial; hospital admission; dual diagnosis; schizophrenia;  
11  
12 **substance misuse; CBT**  
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17 This overview aims to provide a summary of a recently developed brief integrated  
18  
19 motivational intervention (BIMI) for working with individuals experience co-occurring severe  
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21 mental health and substance use problems; the paper brief describes the theoretical  
22  
23 framework and outlines the feasibility randomised controlled trial (RCT) conducted to  
24  
25 evaluate the approach. For more information on the feasibility RCT please see Graham et al.  
26  
27 (2016) and Graham et al. (Under Review); the treatment approach will be published in  
28  
29 manualised form (Graham et al., In Press).  
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### 33 34 35 36 **Hospital Admissions: a Window of opportunity?**

37  
38 In considering the individuals admitted into mental health hospitals, 22-44% are suggested to  
39  
40 also have co-occurring alcohol or drug problems (DoH, 2006). Such co-occurring problems are  
41  
42 often associated with increased psychiatric hospital admissions (e.g. Lai, 2012) and can  
43  
44 impact negatively on the delivery of treatment and management of care during inpatient  
45  
46 stays (DoH, 2006). Given the financial costs and negative impact on functioning associated  
47  
48 with psychiatric admissions it is worth asking the question, “have opportunities been  
49  
50 missed?”. Admission to a psychiatric hospital has been suggested to present a “natural  
51  
52 window of opportunity” (Graham et al., 2016 p.5) to engage this client group, a chance for  
53  
54 inpatient staff to start a conversation with inpatients about other health-related concerns  
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3 (e.g. drug and alcohol use) that may have indirectly contributed to their admission. It has  
4  
5 been suggested that the period during which acute mental health symptoms begin to  
6  
7 decline represents a time of contemplation, of increased awareness and insight into factors  
8  
9 that contributed to becoming mentally unwell and/or being admitted to hospital (Rosenthal,  
10  
11 2003; Blow et al., 2010; Graham et al., 2015). When clients that use substance  
12  
13 problematically admitted to hospital the situation may present a “teachable moment”, as  
14  
15 has been found in general hospital and emergency department settings (e.g. Lau, et al.  
16  
17 2010; Buchbinder et al., 2014). If given the opportunity to speak about their use of alcohol  
18  
19 and/or drugs whilst on the ward, it is suggested inpatients may be open to thinking about  
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21 their use and the impact it has on their mental health.  
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29 The importance of targetting this time period clinically is highlighted by research  
30  
31 distinguishing two contrasting conceptual styles of recovery from mental health relapses.  
32  
33 ‘Integration’, is hypothesised to be an acknowledgement of, openness and attempt to cope  
34  
35 with the mental health problem, whereas ‘Sealing-over’ is characterised by cognitive and  
36  
37 behavioural attempts to avoid the diagnosis and experience of mental health problems in an  
38  
39 attempt to reduce emotional distress (Tait et al., 2003). That is, individuals may deny or  
40  
41 minimize recent mental health symptoms or experiences and precipitating factors, and as a  
42  
43 result, lose awareness of the triggers for becoming unwell (Tait et al., 2003). A *Sealing over*  
44  
45 recovery style has been found to predict low engagement with mental health services six  
46  
47 months after discharge from a psychiatric hospital (Tait et al., 2003). This coupled with the  
48  
49 poor engagement in treatment (Maslin, 2003; Mueser et al., 1992; DoH, 2002) and low  
50  
51 motivation to change (McHugo, 1995; Carey, 1996; Swanson et al., 1999) suggested among  
52  
53 those who experience severe mental health problems and use substances problematically,  
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3 means engagement becomes a key hurdle for change and positive treatment outcomes  
4  
5 (Mueser et al., 1992; Swanson et al., 1999; Drake et al., 2001; Mueser, 2003).  
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### 8 9 **Brief Integrated Motivational Intervention (BIMI)**

10  
11 A number of interventions have been developed that specifically focus on working with  
12  
13 individuals experiencing mental health difficulties that use alcohol and/or drugs as part of  
14  
15 an inpatient admission (e.g. Baker et al., 2002; Kavannagh et al., 2004; Bagoien et al., 2013).  
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18  
19 A recent Cochrane review (Hunt et al., 2013) of 32 RCTs, including a number of motivational  
20  
21 interventions and combined cognitive behavioural and motivational interventions  
22  
23 developed for use with individual experiencing co-occurring mental health and substance  
24  
25 use problems in inpatient settings (e.g. Swanson et al., 1999; Baker et al., 2002), concluded  
26  
27 that the available evidence does not recommend any one psychosocial approach for  
28  
29 working with this client group. The authors suggest the evaluation of brief interventions e.g.  
30  
31 motivational interviewing could present an opportunity to identify “cost-effective and easy  
32  
33 to implement components that can be quickly integrated into standard care” (p.62).  
34  
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38  
39 In line with this, a BIMI (Graham, Copello, Birchwood & Griffith, In Press) was specifically  
40  
41 developed for use with this client group. The BIMI is grounded in the Cognitive Model of  
42  
43 Substance Abuse (Beck et al., 1993), Motivational Interviewing (e.g. Hettem, Steele & Miller,  
44  
45 2005) and draws on the first two phases of the integrated treatment approach, Cognitive-  
46  
47 Behavioural Integrated Treatment (C-BIT; Graham et al., 2004). The first two phases of C-BIT  
48  
49 focus on engaging and working with individuals in the precontemplation and contemplation  
50  
51 stages of change, as outlined in the spiral of change (Prochaska, DiClementi and Norcross,  
52  
53 1992). The approach combines cognitive behavioural and motivational techniques for  
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3 working with these stages of change. The approach reflects the research evidence on using  
4  
5 brief motivational approaches to increase engagement and motivate behaviour change in  
6  
7 those with co-morbid mental health and substance misuse (Swanson, Pantalon & Cohen,  
8  
9 1999; Baker et al., 2002; Martino, 2007; Graber, Moyers & Griffith et al., 2003; Kavanagh,  
10  
11 Young & White et al., 2004; Carey et al., 2002).

### 12 13 14 15 16 17 **An overview of the BIMl**

18  
19 In helping clients consider the impact of substance use on their mental health by engaging  
20  
21 with them during the opportunity for engagement that admission is suggested to provide,  
22  
23 the BIMl aims to help clinicians maximise this “teachable moment”. The BIMl provides  
24  
25 clinicians with a brief, structured, personalised treatment approach that enables them to  
26  
27 start engaging clients who may not be motivated to talk about their substance use; using  
28  
29 questionnaire results and psychoeducational information that is specifically tailored to the  
30  
31 client’s individual needs. It is designed for use by clinicians as part of routine practice over a  
32  
33 two week period via ‘short burst’ sessions of 15-30 minutes, to a maximum of 1 to 6  
34  
35 sessions (Graham et al., In Press). The BIMl really encourages clinicians to adopt a  
36  
37 conversational style with the aim of building good collaborative relationships with clients so  
38  
39 that they can work toward a joint goal of ‘keeping clients from returning to hospital’ or  
40  
41 reducing risks of mental health relapse (Graham et al., In Press).  
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### 52 *Basic Components*

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55 The BIMl approach uses a simple 3-step framework (see Graham, Copello, Birchwood &  
56  
57 Griffith, In Press for a fuller description ). The initial step (STEP 1) involves the clinician  
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2  
3 completing a brief questionnaire-based assessment, in a collaborative style with the client.  
4  
5 This assessment comprises of standardised measures and is followed up in the second  
6  
7 session with the clinician providing a personalised feedback statement of the results. The  
8  
9 basic idea underpinning this is to raise the clients awareness of their use and its potential  
10  
11 impact and to increase engagement in discussing substance use. The assessment is  
12  
13 completed within the context of the broader clinical and risk assessments and information  
14  
15 gathering, and assesses: the pattern and severity of alcohol and drug use over the past 30  
16  
17 days; motivation to change; and mental health symptoms. The feedback details the clients  
18  
19 substance use in light of financial costs and national health guidelines and highlights  
20  
21 potential impacts on health and mental health. The client is also provided with individually  
22  
23 tailored psychoeducational material/leaflets about the substance(s) they are using.  
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31 The second step (STEP 2) utilises the awareness and reflection that will have emerged  
32  
33 following the assessment feedback to help clients come to a point where they are able to  
34  
35 consider and make decisions about what outcomes/goals they want. The strategies used  
36  
37 aim to increase awareness of the perceived “benefits” of use and reflection on the “costs”  
38  
39 associated with continued substance misuse; including consideration of the clients greatest  
40  
41 concern when reviewing the costs of using (Graham et al., In Press). In considering this with  
42  
43 clients, a worksheet is used (Graham et al., in press) to facilitate and record the in-session  
44  
45 discussion (“Worksheet 2: What I enjoy about using or what keeps me using” (Graham et al.,  
46  
47 In Press). Throughout Step 2, clients are encouraged to “take a second look” at how they  
48  
49 have typically viewed the substance they use and to re-evaluate these positive thoughts and  
50  
51 beliefs about their substance use that tend to promote continued problematic use. A  
52  
53 reflective and collaborative approach enables clinicians to start helping the client consider  
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3 the impact of their substance use on their mental health. Furthermore, to become aware of  
4  
5 the possibility that continued use may interact negatively with mental health at times, by  
6  
7 drawing out a cognitive behavioural maintenance/vicious cycle. This cycle provides a  
8  
9 diagrammatic representation for the client to see the links between triggers, thoughts,  
10  
11 mood/mental health, behaviours (including substance use) and the consequences  
12  
13 associated with using and is used to facilitate an understanding of the relationship between  
14  
15 mental health and substance use. Clients are encouraged to begin to reflect on steps they  
16  
17 could take to help them exit this maintenance cycle or goals they would like to achieve that  
18  
19 their current substance use maybe impacting on.  
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27 The third step (STEP 3) encourages clients to contemplate change and develop a change  
28  
29 plan based on the self-identified goals discussed and developed during STEP 2. This step  
30  
31 aims to enable change to feel possible and achievable by adopting a practical approach and  
32  
33 working through any issues that may hinder the client from moving toward their goal.  
34  
35 Included in STEP 3 are practical strategies to cope with: setbacks to achieving their goal;  
36  
37 cravings and urges and how best to develop social support network that are more likely to  
38  
39 support the clients goal.  
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46 Not all the steps in the BIMl need to be delivered to all clients. The essential STEP is STEP 1.  
47  
48 The main idea is to collaboratively engage clients in the step suitable for them so that they  
49  
50 can meaningfully talk about and re-evaluate their alcohol or drug use. If necessary, and the  
51  
52 setting allows, a 'booster session' can be offered one month after the last session to help  
53  
54 consolidate motivation. This session focuses on reviewing with clients their motivational  
55  
56 statements about their substance use, the decisions they made and progress on goals  
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3 identified. During booster sessions, the clinician works with clients to ensure that clients  
4  
5 have the practical skills and strategies in place to be able to progress toward their goals.  
6  
7 This session is also an opportunity to link clients with community-based longer-term help to  
8  
9 address their substance use.  
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### 11 **Overview of the feasibility and acceptability of a Brief Intervention in inpatient settings**

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17 A feasibility RCT has been conducted that explored whether a psychiatric hospital admission  
18  
19 does actually represent a natural window of opportunity for people who misuse drugs or  
20  
21 alcohol to be routinely offered treatment that aims to re-evaluate their use and help them  
22  
23 become aware of negative impacts on mental health (Graham et al., 2014; Graham et al.,  
24  
25 2015). The aim was to consider the feasibility and acceptability of using a brief integrated  
26  
27 motivational intervention (BIMI) (Graham et al., 2014; Graham et al., 2015; Graham et al., In  
28  
29 Press) on inpatient units.  
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### 36 **Overview of the Feasibility Randomised Controlled Trial**

37  
38 Participants were new admissions to one of six mental health inpatient units (11 acute and 3  
39  
40 Psychiatric Intensive Care wards) recruited in line with the inclusion criteria (Graham et al.,  
41  
42 2016).  
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48 Fifty nine inpatients (50 male; 9 female) consented to participate, 30 were randomised to  
49  
50 receive the BIMI plus standard ward care and 29 to 'Standard' ward care. Questionnaires  
51  
52 were completed at baseline, post intervention and at 3 month follow up, when participants  
53  
54 who received the BIMI were also invited to complete a qualitative interview. In addition to  
55  
56 questionnaires completed for the cost effectiveness evaluation, the questionnaires  
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3 completed as part of the feasibility RCT were, the *Substance Abuse Treatment Scale* (SATS)  
4  
5 (Drake et al., 1996) and *Clinicians Alcohol/Drugs Use rating scales* (CDUS/CAUS) (Drake et  
6  
7 al., 1996) completed by Care Coordinators, the *Maudsley Addiction Profile* (MAP; Marsden  
8  
9 et al., 1998), *Alcohol Use Disorders Identification Test* AUDIT (Saunders et al., 1993), Severity  
10  
11 of dependence scale (Gossop et al., 1995) the SOCRATES (Miller et al., 1996), Importance-  
12  
13 confidence ruler (Miller et al., 1997), Recovery Style Questionnaire (RSQ; Birchwood et al.,  
14  
15 1994) and the HADS (Zigmond & Snaith., 1983).  
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21  
22 Participants in the BIMl group were offered up to 6 sessions, with Inpatient staff & staff  
23  
24 from a specialist 'dual diagnosis' team over a 2 weeks period. Participants were also seen a  
25  
26 month later at home, if discharged from hospital, in conjunction with their Community Care  
27  
28 Coordinator to remind them of changes they had made and the information covered in the  
29  
30 sessions. The average age of inpatients who participated was 38.6 years, with a diagnosis of  
31  
32 Schizophrenia or schizoaffective disorder diagnosis (41/59), mainly misusing cannabis  
33  
34 (27/59) or alcohol (23/59); 50 participants were followed-up at 3-months.  
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41  
42 Twenty seven staff from all wards and six specialist staff were trained to deliver the  
43  
44 intervention. Inpatient staff were training to deliver the BIMl over two days prior to the  
45  
46 randomisation of any participants into the trial by two of the authors (HG and EG). The  
47  
48 training was open to all ward staff working clinically. Staff from the COMPASS (Combined  
49  
50 Substance Use and Psychosis) Programme who typically delivered the intervention jointly  
51  
52 with a member of inpatient staff also received training.  
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3 Of the staff trained, 12 inpatient and 5 specialist staff delivered the BIMl. Of the 30  
4  
5 inpatients randomised to receive the BIMl, 21 (70%) actually received the intervention. On  
6  
7 average these participants received 3 sessions of the BIMl(ranged 1-5 sessions). The average  
8  
9 length of a session was 18 minutes, and the total intervention time was approximately 57  
10  
11 minutes. The key finding after 3-months was a statistically significant improvement in  
12  
13 engagement with mental health Care Coordinators to change drug or alcohol use and access  
14  
15 treatment. There was no evidence of an effect of randomised treatment on the number of  
16  
17 days using the primary substance, however, in supportive analysis the amount of substance  
18  
19 use was explored. There was more abstinence for those that received the BIMl (38.4%)  
20  
21 compared to those that did not (20.8%). Both groups similarly reduced the number of days  
22  
23 using their main substance, by more than half. The number of substances used by both  
24  
25 groups reduced from between 1 to 4 substances to 0 to 2. The brief intervention was  
26  
27 relatively low cost at £72 and there were no significant differences between the service use  
28  
29 costs for the BIMl group when compared to the 'standard' ward care group.  
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38 Qualitative interviews with Inpatient staff and participants revealed that staff found the  
39  
40 short burst and targeted style of the BIMl a useful approach to engage inpatients in a  
41  
42 discussion about drug and alcohol use. Similarly, participants found the intervention  
43  
44 helpful, giving them an opportunity to talk to the inpatient staff. Some non-specific factors  
45  
46 of the BIMl such as staff giving time and "going out of their way" to meet with them were  
47  
48 perceived as helpful by participants giving them a sense that they were valued (Graham et  
49  
50 al. Under Review). A number of specific factors of the BIMl; personally tailoring the  
51  
52 feedback of the information gathered during the assessment, focussing on the perceived  
53  
54 "benefits", harms/costs and impact on mental health associated with their use, as well as  
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2  
3 developing new coping strategies and techniques appeared to promote motivation and  
4  
5 change (Graham et al., 2015; Graham et al., Under Review).  
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### 9 10 **Clinical Implications and Implementation**

11  
12 During the qualitative interviews with Inpatient staff and participants following the  
13  
14 feasibility RCT (Graham et al., 2016), staff reported that the style of the BIMl was a useful  
15  
16 approach to engage inpatients in a discussion about substance use (Graham et al., In  
17  
18 preparation; Graham et al., 2015). The clinical implications identified suggest the BIMl to be  
19  
20 a useful starting point to engage this client group and that, whilst evaluated for use in  
21  
22 inpatient settings, it is suggested that the BIMl could be used in a number of other settings,  
23  
24 especially when a 'teachable' moment' presents itself such as during lapses or relapses in  
25  
26 mental health or when acute symptoms are appearing. Such settings could include crisis,  
27  
28 home treatment, out-patient and community mental health treatment settings.  
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36 The RCT highlighted implementation issues that would be important to consider in future  
37  
38 implementaion of the BIMl; namely, the therapeutic environment of inpatient units and  
39  
40 whether clinicians perceive they have designated time and authorisation to deliver the  
41  
42 intervention in that setting. Challenges experienced in providing a BIMl within an inpatient  
43  
44 unit include the provision of training and supervision to staff, the dynamic nature of the  
45  
46 units and the accommodating of this work within the busy roles of staff work on the units;  
47  
48 robust training in a targeted manualised brief intervention, access to regular supervision  
49  
50 throughout, the support of the COMPASS team and close working with the management and staff  
51  
52 teams on the units were all important in facilitating the completion of the research with clients.  
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3 The results of the feasibility RCT suggest that the timing of the delivery of the intervention  
4 during an inpatient admission is also an important consideration for some inpatients on  
5 acute wards, to ensure that the initial acute symptoms have stabilised sufficiently for clients  
6 to have the “headspace” to be able to engage in the BIMl (Graham et al., Under Review).  
7  
8 Engaging inpatients in the BIMl during a hospital admission can promote inpatients  
9 experience of feeling valued, which may improve longer term therapeutic engagement. The  
10 authors suggest that clinicians benefit from adopting an open, non-judgemental,  
11 compassionate, accurate communication style in delivering the personalised assessment  
12 feedback and intervention, as it appears to promote greater reflection and engagement.  
13  
14 Inpatients reported feeling put off the intervention by the opposite approach (Graham et  
15 al., Under Review; Graham et al., 2015).  
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31 In terms of the implications for research, the authors suggest that research is now required  
32 that builds on the feasibility RCT completed and then considers the use of the BIMl  
33 approach via a effectiveness RCT. On a wider level as suggested by Hunt et al. (2013),  
34 further research is now required that evaluates the use of brief interventions with this client  
35 group via robust RCT’s to add to the evidence base in this area.  
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## 45 **Conclusions**

46 Overall, the authors experience of development, delivery and preliminary testing of the BIMl  
47 intervention in a feasibility trial suggests that the approach offers a relatively simple,  
48 opportunistic and evidence based intervention, that can be delivered by staff in busy in-  
49 patient units with relatively straightforward training and supervision support. The  
50 intervention aims to maximise the use of the period termed a ‘window of opportunity’,  
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3 during which clients are suggested to be more open to exploring their use of alcohol and/or  
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5 drugs and has been shown to lead to higher levels of engagement in clients' exploration of  
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7 alcohol and drug use and impacts on mental health A number of clinical implications and  
8  
9 implementation issues have been identified on completion of the feasibility RCT. Further  
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11 research is now required that considers this and builds on the initial research evaluating the  
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13 approach.  
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Advances in Dual Diagnosis

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