

Cannabis and Psychosis

Randomized clinical trial: Specialized addiction treatment versus treatment as usual for young patients with cannabis abuse and psychosis

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RESUME

Background

One fourth of the first-episode psychotic patients referred to the OPUS trial (a treatment for young people with psychosis) in Copenhagen and Aarhus had a comorbid diagnosis of substance abuse, and the vast majority of these had abuse of cannabis. The use of cannabis is associated with worsening of prognosis regarding development of symptoms, compliance to treatment, and number of days in hospital. Trials examining the effect of interventions addressing the cannabis use of young people with psychosis are consequently required.

Method

Young people with a psychosis in the schizophrenia-spectrum (F2 in ICD-10) and co-occurring cannabis abuse (F12 in ICD-10) are included in the trial. The study is a randomized single-blinded clinical trial of the effect of specialized addiction treatment compared with treatment as usual.

Treatment as usual is not homogenous, but is either in OPUS, Community Mental Health Centre or Assertive Community Treatment. The specialized treatment encompasses a month of individual treatment with 'Motivational Interviewing', followed by three months of group-based treatment, and finally two months of individual treatment.

During the entire 6-month specialized treatment, meetings are held with the patients' family and the case manager. This is to ensure that these important supporting networks in the life of the patient are informed and knowledgeable about the factors that contribute to decreased cannabis use. Harm-reduction is the primary goal for the intervention.

Two therapists lead the group intervention together and carry out the specialized treatment. They maintain contact with the patient's case manager, and offer additional contacts with the patient and family.

A research assistant, who is blinded to which kind of treatment the patient has been randomized to, performs the examinations of the patient. This is done at baseline, after six months, and again after ten months. The primary outcome measure is days of abuse during the last month before follow-up, measured with time-line follow-back and validated with measures of THC in blood samples. The plan is to include 120 patients in the trial. The study has sufficient power to detect a reduction from 20 days to 15 days with cannabis abuse during the last month before follow-up at the five percent statistical significance level.

Statistics

Dropout analysis will be carried out, as well as ANOVA with repeated measurement analysis with interaction analysis of time and type of treatment. This is to evaluate the effect and reduce the bias due to skewed attrition.

Organization

Staff at Bispebjerg Hospital will carry out the trial. The patients can be referred to the trial by psychiatric outpatient clinics in the whole region of Copenhagen.

PROJECT ORGANIZATION

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PURPOSE OF THE TRIAL

The randomized clinical trial aims to examine the effect of specialized treatment of cannabis abuse amongst young people with psychosis. Specialized addiction treatment is compared with treatment as usual. Treatment as usual is a non-specialized, non-manualized treatment.

In order to examine the effect of the two treatments, patients are randomized to either specialized addiction treatment or treatment as usual.

INTRODUCTION

A recent meta-analysis of longitudinal studies concluded that cannabis use is associated with increased risk of long lasting psychotic conditions later in life [Moore et al., 2007; Nordentoft and Hjorthøj, 2007]. Abuse of cannabis among patients with psychosis can maintain and worsen the psychotic symptoms [Linszen et al., 1994; Grech et al., 2005; Hides et al., 2006; van Os et al., 2002]. Several studies show that use of cannabis increases the risk of development of schizophrenia-like symptoms, especially in young men disposed to developing psychosis [Zammit et al., 2002; Arseneault et al., 2002; Arseneault et al., 2004; Henquet et al., 2005; Smit et al., 2004; Stefanis et al., 2004; Hall, 2006]).

Comorbid schizophrenia and substance abuse (dual-diagnosis) have been associated in several reviews with lack of compliance to treatment. A systematic examination of hospitalized patients with schizophrenia found that lack of compliance to the treatment was related to substance abuse and lack of insight [Kamali et al., 2001]. A follow-up study of patients with schizophrenia and cannabis abuse found significantly more rehospitalizations, worse psychosocial functioning, higher levels of thought disorders and more pronounced paranoia compared to non-abusing patients with schizophrenia [Caspari, 1999]. In the "Reference Programme for Schizophrenia" [Sekretariatet for referenceprogrammer, 2004], the Danish National Board of Health makes the following recommendation:

"Since patients with schizophrenia and concomitant cannabis abuse have a poorer prognosis, the treatment system should therefore develop treatment methods that are effective at alleviating cannabis abuse."

Evidence for the effect of treatment for cannabis abuse

A Cochrane review from 2006 concludes that both Cognitive-Behavioural Therapy (CBT) and Motivational Enhancement Therapy / Motivational Interviewing have been demonstrated to be effective to reduce cannabis use, both when given individually or in group sessions. Two studies on contingency-management treatment conclude that this may enhance outcomes combined with CBT or motivational enhancement [Denis et al., 2006].

The literature suggests that cannabis abuse can be treated using methods that are effective for other types of abuse. Several randomized trials show an effect of cognitive behavioural therapy in dual diagnosis patients [Waldron and Kaminer, 2004]; however, treatment programmes that combine motivational interviewing, family involvement, and cognitive behavioural treatment seem to be more effective [McRae et al., 2003; Carroll, 2005].

Evidence for the effect of treatment of patients with dual diagnosis

A Cochrane review from 2002 concludes that insufficient evidence exists to show that any intensive treatment method is superior to others [Jeffery et al., 2000]. It is recommended not to offer the treatment separately but as a part of treatment programmes [Drake et al., 2004; Linszen et al., 1994]. A randomized trial showed that the combination of cognitive behavioural therapy, motivational interviewing, and family involvement had a significant positive effect on level of functioning,

psychotic symptoms, and duration of periods without abuse, compared with regular treatment [Barrowclough et al., 2001]. Two reviews conclude that there is positive evidence for integrated treatment with motivational interviews, cognitive behavioural therapy (individual or group-based), 12-step treatment, and a harm-reduction approach [RachBeisel et al., 1999; Ziedonis, 2004].

Evidence for the effect of group-based intervention for cannabis abuse

There is no clear evidence to show that group-based interventions are superior to individual treatment [Greene, 2002; McRobert et al., 1998]. Treatment in groups is less expensive. In a literature review, Weiss et al. conclude that specialized group therapy can reinforce the effect of the existing treatment [1992]. A randomized controlled trial on group therapy for dual diagnosis patients concludes that it is possible to reduce substance use in individuals with psychotic disorders, using a targeted group-based approach [James et al., 2004]. Similar results were found in an earlier study from 1999 which showed a significant positive effect on symptoms, level of functioning, and lower costs for supportive services by robustly implementing a manualized behavioural group intervention [Jerrell and Ridgely, 1999].

There is evidence for the efficacy of a stepwise or phase-specific treatment that is successively based on engagement, motivation, coping with symptoms, and preventing relapse [Drake et al., 2004].

Conclusion

A review of the literature shows that there is a lack of randomized trials that can ensure that the treatment of patients with dual diagnosis is evidence-based. This trial will assist in solving this problem by building on best practice. Therefore, we plan a trial in which individual and group-based, combined treatment, such as motivational interviewing, psychoeducation, cognitive behavioural therapy, and social skills training is compared with treatment as usual.

INTERVENTIONS

1) The experimental intervention: Cannabis and Psychosis (CapOpus) – the specialized treatment programme

The patient is connected to a case manager who is offered education and supervision by one of the two addiction consultants employed in the trial-project.

The addiction consultants are both directly and indirectly involved in the treatment of the patient. During the month prior to the group intervention, one of the addiction consultants is in contact with the patients once or twice a week. A meeting is also held with the patient's family and fortnightly contact with the case manager is established.

During the three months of group intervention, one of the addiction consultants has weekly individual contacts with the patient and two meetings with the family. In addition, the patient follows the weekly group intervention (12 meetings of 1½ hours) and has fortnightly consultative contacts to the case manager.

During the two months following the group intervention, the addiction consultants are in weekly contact with the patient and the family is invited to a meeting. The addiction consultants contact the patient's case manager every three weeks.

For the purpose of creating alliance and motivation, the treatment starts with motivational interviewing [Miller, 1983; Miller and Rollnick, 1991]. There is good evidence for the efficacy of motivational interviews in short-term treatment [Hettema et al., 2005; Burke et al., 2003]. The patient formulates individual goals for the treatment and is offered the group intervention. The groups consist of 6 to 8 patients, with the addiction consultants as trainers. Each group runs for three months with weekly sessions lasting 1½ hours. The group is conducted at a fixed time and weekday and the structure of the agenda is the same at all meetings. The group intervention is followed by two months during which the individual weekly meetings with the patient continue. The two addiction consultants offer consultative assistance to the patient's case manager, who also has the possibility of involving the consultants directly in the treatment of the patient. The entire specialized treatment programme, in which the addiction consultants are involved, amounts to six months.

A manualized treatment programme based on the Australian EPPIC manual [Hinton et al., 2002] especially developed for first-episode psychotic patients with cannabis abuse is used. This method is well described and incorporates methods with a high degree of evidence. Motivational interviewing with analyses of advantages and drawbacks of continued abuse are used. Instruction is given in coping skills in relation to craving and situations that usually trigger abuse, and in developing personal strategies for avoiding or handling these situations. Furthermore, strategies for handling withdrawal symptoms and for preventing relapse are facilitated. General coping skills are introduced, such as handling unpleasant emotions, stress-management, social skills training, and relaxation techniques.

An element of contingency management is introduced to enhance motivation for participation in the group intervention. A Cochrane Review from 2006 concludes that voucher-based incentives may enhance outcomes combined with CBT or motivational enhancement [Denis et al.] Contingency management in the CapOpus trial is solely connected to positive reinforcement of attendance in the group intervention. It has no connection to whether or not the use of cannabis is decreased. Patients are offered participation in free excursions, cinema visits etc. in the company of one of the addiction consultants. Also, sandwiches are served in conjunction with group sessions.

An important part of "Cannabis and Psychosis" is to understand and to help the patients understand the mechanisms that prevent them from abstaining from cannabis. The overall target is harm reduction, a method which has proved effective in several studies [RachBeisel et al., 1999; Ziedonis, 2004]. The treatment is based on the patients' own goals for tackling cannabis abuse.

The treatment is structured around the Transtheoretical Model of Change (circle of change) [Prochaska and DiClemente, 1992; Prochaska, 1991]. This describes changes in behaviour as a process that runs through phases of pre-contemplation, contemplation, preparation, action, and maintenance. Relapse is considered to be an integrated part of the process, after which the phases must be repeated.

Pedagogy of the group intervention takes into account that psychotic patients most often have subnormal cognitive functioning. It is therefore important that the structure of each session is predictable and over-learning is encompassed. This is done by using the same agenda at each session:

- Round – what has happened the past week.
- Repetition from last session.
- Homework assignment for this session.
- Talk/psychoeducation (new topic in each session).
- Discussion of participants' experience with the topic.
- New homework assignment.

- Finishing round – evaluation.

The active participation of the patients is facilitated through discussions and role-playing and homework between each session. To increase motivation, the teaching is made relevant in relation to the life of each patient and their individual goals for the treatment. The overall principles are described in the manual, but each session leaves room for adaptation to the patients' wishes and stage in the circle of change.

Therapist roles are directive and direct, but non-confronting non-critical. Emphasis is on empathy and positive reinforcement, problem solving and generalization to the patients' daily life. The atmosphere is sought to be relaxed and with room for humour. For the concluding part of the group intervention, a patient with former cannabis abuse is involved as a role model.

Methods of treatment are all part of the cognitive therapeutical framework, using psychoeducation, cognitive behavioural therapy, and social skills training. The aim is to ensure that the patients gain insight into inappropriate patterns of thoughts and actions and develop coping strategies. This is facilitated through: Exploration of the patient's reasons for using cannabis and the connection to symptomatology. Mapping of advantages/disadvantages of cannabis use and cessation of use. Warning signs of craving/relapse. Problem-solving skills and coping skills for symptoms. Use of behavioural chain analysis [Mørch and Rosenberg, 2005]. Work with negative automatic thoughts and alternative thoughts. Social skills training (e.g. to refuse drugs, solve conflicts, and engage in new contacts). Facilitating daily and recreational activities. Relapse prevention and developing a crisis plan.

Structure of the modules in the group-intervention:

The structure of the intervention is based on the stages in Prochaska and Diclemente's transtheoretical model of change (circle of change). The model is based on the view that the patient often fluctuates between the different stages and undergoes relapses before being able to reach the final stage, which marks lasting change.

In order to support the group and patient in the process of changing lifestyle, the therapists must be able to identify the current stage of the group/patient. Thus, the intervention can be aimed specifically, either by being oriented towards motivation enhancing or advisory techniques, or by changing focus, e.g. from exploring reasons for change to making plans for change. The purpose is to motivate the patient to move on through the stages; therefore, the model is also called "the motivational cycle" or "circle of change". In this way, each session in the group can be adapted to the participants' motivational level and stage of change.

Sessions for the pre-contemplation stage:

Psychoeducation about:

Knowledge of psychotic symptoms.

Knowledge of the psychosis-inducing effect of cannabis.

Knowledge of risks and harms caused by cannabis use.

Knowledge of abstinence symptoms following cannabis use [Denis et al., 2006].

Knowledge of the effect of decreased use (harm reduction).

Mapping the individual pattern of use, with focus on disadvantages of cannabis use and the triggers for craving and use. This is done by using registration charts.

Contemplation stage:

Exploration of pros and cons of cannabis use and cessation of use. This is used with the aim of replacing some of the advantages of cannabis use with other interventions.

Exploration of connections between cannabis abuse and symptomology.
Ambivalence and resistance is addressed from an accepting viewpoint.

Preparation stage:

Individual goal-setting with focus on disadvantages of cannabis use. Exploration of the connection between cannabis use and symptomatology. Development of symptom-coping skills and alternative coping strategies. This is facilitated through exploration of pros/cons, behavioural chain analysis and exploration of negative automatic thoughts and actions in relation to the cannabis abuse. Social skills training to enhance ability to refuse drugs, solve conflicts, and initiate contacts to non-users. Introduction to the problem-solving model [Denis et al., 2006].

Action stage:

Problem solving, where coping strategies are tested. Mapping of warning signs for relapse and triggers for cannabis use. Individual crisis plans in relation to relapse and worsening of symptoms.

Maintenance stage:

Development of new skills and habits in daily life. Support (in cooperation with the case manager) to maintain an active life with focus on activities of daily life (ADL), exercise and work/education/recreational activities. Widening of personal network with non-cannabis users. Training of general coping skills such as social skills training, handling of unpleasant emotions, stress management, and relaxation techniques. Strategies for relapse prevention and coping strategies for craving are tested in daily life. Involvement of patient with former cannabis abuse as a consultant and role model.

Relapse:

De-dramatizing and normalization with focus on learning from relapse. Support in order to re-engage in the stages of change, with focus on the patient's own coping strategies.

2) The control intervention: non-specialized individual treatment

The non-specialized treatment programme is carried out by staff in OPUS (a treatment for young people with psychosis in Copenhagen), in Assertive Community Treatment or in Community Mental Health Centres. Thus, the control intervention is identical to the treatment that is ordinarily offered to this patient-group. The frequency of contact with the patients may vary. There is no standardized manual for this treatment. The treatment approach is supportive and not condemnatory. It is important to advise the patient about alternative coping strategies and to encourage every small reduction in abuse.

RESEARCH PLAN

A research assistant is responsible for conducting interviews at the time of inclusion in the trial, at six months, and again ten months later. Thereby, the first follow-up interview is held when the specialized CapOpus treatment is concluding. The second follow-up interview is held four months after the specialized treatment has ended.

The assessment instruments used as effect measures are all validated psychometric scales, which the research assistant is certified to use.

Programme fidelity

To ensure programme fidelity in the intervention, the number of contacts with the patient, the patient's family, and the case manager are registered during the six-month intervention period. Forms for registration of programme fidelity are implemented in individual and group sessions. Registration forms are also used to ensure that the planned content in the group intervention is sufficiently implemented. These forms are anonymized and reviewed by the research assistant. To ensure method fidelity the addiction consultants are supervised by an external supervisor with expertise cannabis abuse, motivational interviewing, and cognitive behavioural therapy.

Inclusion criteria

- The patient must fulfil research criteria for F2 in ICD-10 (schizophrenia and schizophrenia-like conditions) and diagnosis of F12 (Mental illness or disturbances caused by cannabis). Cannabis abuse must be the dominant form of abuse. Other substance abuse may be present sporadically.
- The patient must understand Danish to the extent that assessment and treatment can be conducted without an interpreter.
- The patient must give informed consent to participate in the trial. In addition, the patient must consent to participate in the CapOpus project and to continuation or initiation of treatment for the psychiatric condition.
- Patients in OPUS, Assertive Community Treatment, Community Mental Health Centres, psychiatric wards, and others who meet the criteria can be included in the trial.
- Patients must be 18-35 years of age and have legal residence in the municipality of Copenhagen or Frederiksberg.

Exclusion criteria

- Patients who meet the criteria of alcohol-dependence syndrome (F10.2), opioid dependence syndrome (F11.2) or cocaine dependence syndrome (F14.2)
- Patients who do not give informed consent

Referred patients will be assessed by a research assistant to ensure that they meet the criteria for inclusion.

Randomization

Included patients are randomized to either specialized addiction treatment (CapOpus) or to treatment as usual. The Copenhagen Trial Unit (CTU) conducts the randomization. A research secretary is responsible for contacting CTU and for informing the patient about which kind of treatment he or she has been randomized to receive. Only CTU will know the block size of the randomization. The randomization is stratified for severity of cannabis addiction, measured by using Time Line Follow-Back (up to 14 days in the last month versus 15 days or more); and for the type of treatment setting (OPUS, Assertive Community Treatment, or Community Mental Health Centre), in order to ensure that patients from each type of setting are evenly distributed between the intervention group and control group. A secretary in the trial is appointed a PIN code to CTU and makes a telephone call to inform of the patients social security number and serial number. CTU sends an e-mail with information of which treatment the patient is allocated to. The identification of the patient is secured by the serial number.

The design of the trial implies that the same case manager can treat patients in the intervention group as well as in the control group. This is a drawback of the trial and can mean that the treatment methods used in the specialized CapOpus treatment are also used in the control group. Therefore, the follow-up analysis of patients in the control group must examine whether any differences occur between those who had a case manager with a patient receiving specialized treatment and those whose case manager did not have patients receiving specialized treatment. The trial is not blinded for therapists or patients, but the research assistant is blinded to treatment allocation. The patients are instructed not to tell the researcher which treatment they were allocated to. To register whether the blinding is effective, the research assistant registers his guess of the patient's treatment allocation.

Effect measurements

The following effect measurements are used at baseline, after six months and after ten months:

1. Severity of abuse. Assessment of number of days with cannabis abuse during the last month with Time Line Follow-Back [Sobell and Sobell, 1992;Donohue et al., 2007]. This effect measurement is the best for measuring the effect the trial aims to influence; namely whether number of days with cannabis use can be reduced. Information supplied by patients on cannabis use will be validated with the results of blood analysis. Blood tests are taken at the six-month and ten-month follow-up interviews.
If comparison of results of blood analysis and the patient's self-report in Time Line Follow-Back indicates that the patient's reports are reliable, Time Line Follow-Back is used to measure effect.
2. Influence and severity of other substance use, including prescribed medication, and establishment of the severity of consequences of cannabis use, are assessed using sections 11 (use of alcohol) and 12 (use of psychoactive substances other than alcohol) of the *SCAN* interview (*Schedules for Clinical Assessment in Neuropsychiatry*). [Wing et al., 1990]
3. Psychosis symptoms are assessed by the use of *The positive and negative syndrome scale (PANSS) for schizophrenia*. [Kay et al., 1987] A psychiatrist, who is blinded to patients' allocations, rates samples of videotaped interviews to measure the reliability of the rating of these interviews
4. Cognitive function. Danish Adult Reading Test (DART) is used as an estimate of prepsychotic IQ [Nelson and O'Connell, 1978]. Speed of information processing is assessed with BACS' symbol coding and with Trailmaking A [Bowie and Harvey, 2006;Keefe et al., 2004;Spreen and Strauss, 1998]. Attention/vigilance is assessed by Continuous Performance Test, Identical Pairs Version [CPT-IP; Cornblatt et al., 1989]. Working memory is assessed with Trailmaking B. Memory and verbal learning is assessed with Hopkins Verbal Learning Test [Brandt, 1991]. Executive functioning is assessed with NAB Mazes [Stern and White, 2003].
5. Social functioning (major life areas; community, social, and civic life) is assessed with WHODASII [WHO, 2000].
6. Quality of life is assessed with Manchester Short Assessment of Quality of Life [MANSA; Priebe et al., 1999] and EQ-5D [Brooks, 1996].
7. User satisfaction is assessed with Client Satisfaction Questionnaire [Larsen et al., 1979]
8. Expenses for the experimental intervention (CapOpus) and control intervention is measured by examining number of outpatient treatment and bed days in both treatment groups.

Follow-up is planned to be undertaken at six months, because patients in specialized CapOpus treatment have just finished the intervention at that time. Follow-up at ten months is chosen, because this allows for a four-month follow-up period after the end of specialized treatment.

Sample size and power calculation

In order to be able to detect a difference between the two types of treatment with regard to the reduction of cannabis abuse, it is necessary to examine approximately 40 patients in each type of treatment. This is necessary in order to obtain a five percent statistical significance level in the detection of a difference in reduction of cannabis use from 20 days monthly to 15 days monthly (standard deviation is estimated to be 5). In the group intervention, the maximum inclusion is 24 patients annually (4x6); a therefore, it is necessary for the project to continue for several years in order to recruit the necessary number of patients. A loss to follow-up is anticipated from both research interviews and from intervention. Therefore, it is planned to include 70 patients in each type of treatment.

The necessary number of patients can be ensured by launching the project as a cooperation between the three OPUS teams in Copenhagen, Assertive Community Treatment, Community Mental Health Centres, and treatment facilities for cannabis abusers in Copenhagen and Frederiksberg.

Statistics

Continuous outcome measures will be analysed with ANOVA analyses of variance. Dropout analysis will be carried out comparing the group of patients who complete the entire experimental treatment with the population who enrolled in the trial.

Baseline values of measures are included as covariates in the analysis whenever possible. To counteract the effect of skewed attrition, repeated measurement (mixed model, unstructured variance) analysis with interaction analysis of time and type of treatment is used, in order to evaluate the effect over time. Sensitivity analysis will be carried out, three hypotheses will be tested: that all the dropouts have the same values as in the last measurement (last observation carried forward), that all the dropouts have ceased cannabis use completely, and that all dropouts have become daily users of cannabis.

Publication

The results of the trial will be published in national and international journals. Authorship is determined in an agreement of cooperation for the entire project. The publications will be publicized according to Consort and Vancouver guidelines of publication of randomized trials.

Ethical considerations

The participants are invited by letter to an assessment by the research assistant, who presents the trial to the patients, both orally and in writing. The research interviews can take place at Bispebjerg Hospital, in OPUS, in the patient's home, or wherever it may be possible. In the oral presentation, it is stated explicitly that participation is voluntary and not dangerous, and that the patient can withdraw informed consent at any time without any consequences for the treatment. Oral and written informed consent are obtained. The trial is registered with the ethics committee, the data surveillance agency and 'clinicaltrials.gov'.

LOCATION and ORGANIZATION

The group intervention can be conducted on the premises at OPUS (Bispebjerg Hospital, Nannasgade), where the addiction consultants can also be based. Inclusion of patients happens continuously. The group intervention is planned with sizes of 6-8 patients, and each group has ten sessions during the three months. It is possible to treat 9 groups during the course of the trial. The individual treatment can be conducted at the patient's homes, if they wish so.

The project is conducted in cooperation between the three OPUS teams. They are located in psychiatric departments at three hospitals in Copenhagen: Bispebjerg Hospital, Hvidovre Hospital and Rigshospitalet.

The addiction consultants are responsible for the group intervention and conduct training and supervision of the case managers connected to the patients in specialized treatment. They are also available for consultation or direct involvement in the patient's treatment, in cooperation with the patient's case manager.

Consent has been given to participate in a network of professionals within the field of substance abuse in Denmark. This network will act as a follow-group for the intervention. They will also be invited to seminars with dissemination of the results and empirical findings obtained during the trial, as will the network for professionals working with young people with mental illness.

PUBLICATION OF RESULTS

The trial is expected to increase knowledge of dual-diagnosis treatment, as well to provide experiences with treatment according to the Australian manual, which has not previously been used in Denmark.

After ten months, a seminar on dual-diagnosis treatment will be held to present the preliminary results and empirical findings. The network of professionals as well as the user-organizations of psychiatric services will be invited to the seminar. An evaluation of preliminary results and empirical findings will be carried out, and the treatment manual adapted accordingly. The preliminary results will be published in journals.

A two-day training seminar will be held for case managers of the patients involved in the intervention in order to disseminate the methods of the project through lectures, training and supervision.

Towards the end of the trial, a conference will be held for relevant staff in dual-diagnosis treatment on treatment methods and empirical findings of the CapOpus trial. Proposals for continuation of the project will be prepared and articles published in journals and news media.

A concluding seminar will be held for collaborators and the network of professionals, and a final evaluation and report of the trial will be published.

TIME PLAN

March 2007:	Appointment of research assistant and addiction consultants. Preparation of manualized description of the specialized individual addiction treatment and the group intervention in CapOpus.
August 2007:	Inclusion of the first patients.
September 2007:	Initiation of first group intervention.
September 2008:	Seminar for network of professionals and user organizations.
September 2009:	Training seminar for case managers.
November 2009:	Conference for relevant staff in dual-diagnosis treatment.
February 2010:	Concluding seminar. Final evaluation and report on the project.
September 2010:	Report of effect of the trial in scientific journals.

FUNDING

A grant from The Health Insurance Foundation (Sygekassernes Helsefond) has been obtained to cover the salary for an addiction consultant (Allan Fohlmann). Grants from the Copenhagen Council and The Lundbeck Foundation have been obtained to cover salary for a year for an addiction consultant (Anne-Mette Larsen) and for a research assistant (Carsten Hjorthøj). Funding for the additional two years of the trial will be sought from The Egmont Foundation, The Health Insurance Foundation, the Velux Foundation and The Danish Medical Research Council (DMRC)

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