The crisis resolution team model in Norway:

Implementation, outcome of crisis and admissions.

Dissertation

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Nina Hasselberg

Abbreviations

ANOVA……Analysis of variance

AUS…….. The Alcohol Use Scale

CMHC……...Community Mental Health Centres

CMHT……Community Mental Health Teams

CPPS…….The Community Program Practice Scale

CRT……...Crisis resolution team

DUS……...The Drug Use Scale

GAF…….. The Global Assessment of Functioning Scales

GP……..General Practitioner

HoNOS……..Health of the Nation Outcome Scale

ICD-10…….. The International Statistical Classification of Diseases and Related Health Problems, 10th Revision

MAP……...Multicentre Study of Acute Psychiatry

SAS……Statistical Analysis Software

SPSS……...Statistical Package for the Social Sciences

Summary

The CRT model of treating acute mental health crises outside inpatient wards has been implemented in several Western countries in the past decade. In addition to this adoption, the CRT model has been implemented as part of national policies in Norway and the UK. This makes research on the CRT model highly relevant.

Our study examines Norwegian CRTs and their patients, treatment outcome and pattern of admissions from the CRTs to inpatient wards.

The sample consisted of 680 patients and 62 staff members of eight Norwegian CRTs. The data were collected in 2005 and 2006. A registration form was developed to record information about the patients from admission to discharge, including socio-demographic, and clinical data, the content of treatments and the pattern of admissions from the CRTs. The Community Program Practice Scale (CPPS) was completed by each CRT clinician and a questionnaire on how the CRTs were organized and operated was completed by the team leaders of each CRT.

We found that the Norwegian CRTs operate without gate-keeping function for acute inpatient wards, without 24/7 operating hours, with 40 per cent of patients waiting more than 24 hours for treatment and with patients who were not considered for hospital admission being treated. The CRTs worked more with depression and suicidal crises than with psychoses. Compared to the intentions of the CRT model, the CRTs provided less intensive and less out-of-office care. The odds of being admitted to in-patient wards were significant lower for those patients treated by a CRT operating extended opening hours compared to

CRTs operating in office hours only. In addition, patients with psychotic symptoms, with concrete suicidal plans or self-injury but no death intention, and with a prior history of admissions were more likely to be admitted.

These findings indicate CRTs in Norway operate in a way that departs from the CRT model, and that there are reason to believe that the CRTs do not completely fulfil their intended role in the mental health system.

List of papers

1. Hasselberg, N., Gråwe, R.W., Johnson, S., Ruud, T. (2011) An implementation study of the crisis resolution team model in Norway: are crisis resolution teams fulfilling their role? *BMC Health Service Research, 11,* 96.

2. Hasselberg, N., Gråwe, R.W., Johnson, S., Ruud, T. (2011) Treatment and outcomes of crisis resolution teams: a prospective multicentre study. *BMC Psychiatry, 11,* 183.

3. Hasselberg, N., Gråwe, R.W., Johnson, S., Ruud, T. Psychiatric admissions from crisis resolution teams. [Submitted]

1 Introduction

1.1 Relevance

Our study of CRTs in Norway is relevant in current health service research because the CRT model of treating acute mental health crises outside inpatient wards has been implemented in several Western countries in the past decade (Johnson, 2004; Johnson et al., 2008). The government in the UK mandated the introduction throughout England of CRTs in 2000 (Department of Health, 1999; Department of Health, 2000). CRTs were introduced there nationwide, aiming to reduce acute psychiatric bed use and improve service users' experiences. The CRTs were rapidly implemented cross the country with 343 in place in 2006-2007 (Clark, 2008).

In 2005, inspired by the implementation of CRTs in the UK, the Norwegian health authorities decided to implement the CRT model at all CMHCs by the end of 2008 (St prp nr 1 (2004–2005); Directorate of Health and Social Welfare, 2006). CRTs should ensure more integrated and accessible specialized mental health services for patients experiencing acute mental health crisis. The CRT interventions should include support of the patients' self-efficacy and to the patients' social network. In addition, the CRTs should aim to reduce acute inpatient admissions and coercion in mental health services. Fifty-one of the 76 CMHCs in Norway had established a CRT by 2010 (Karlsson, Borg, & Sjølie, 2011).

Services aimed at treating patients with mental health crisis in the community and, where possible, avoiding inpatient admission have been implemented in Australia, North America and Europe. But to our knowledge, Norway and the UK are the only countries where the government has decided to implement CRTs nationwide.

Even though some pioneer services and one analysis of national data from English National Health Service (NHS) in the UK have shown a reduction in acute inpatient admissions and improved patient satisfaction after introduction of CRTs (Johnson et al., 2005a, Johnson et al., 2005b; Jethwa, Galappathie, & Hewson, 2007; Keown et al., 2007), recent national reports identify significant limitations in implementation of the CRT model (Onyett, Linde, & Glover, 2007; Jones & Robinson, 2008; Jones & Jordan, 2010). This indicates the need for further studies of the CRT model implementation in addition to studies that describe the implementation of a system of care in countries other than that in which it was developed.

1.2 Definition of "crisis"

The assessment of crisis is partly discretionary and affected by the goal and the resources of a mental health service as well as the definition of "crisis" as it is understood within the CRT. The term "crisis" was first used in psychiatry by Gerald Caplan in 1961. Caplan describes a crisis as a brief non-illness response to severe psychosocial stress and not as a manifestation of mental health illness (Rosen, 1997; Johnson et al., 2008). According to Caplan, crisis is the individual's mental state moving from homeostatic equilibrium to increasing disequilibrium when established coping strategies fail to reduce subjective stress (Tobitt &Kamboj, 2011).

Rosen (1997) draws a distinction between psychiatric emergencies and psychological crisis. He describes emergency as "a life-threatening situation demanding an immediate response, often requiring the attendance of emergency services". Rosen advocates that psychiatric services can not provide the entire range of crisis interventions in our society. Rosen divides psychological crisis into three types: 1) Developmental crisis: These are the transitions between the stages of life that we all go through (becoming adult, getting married,

becoming elder etc.). 2) Situational crisis: This is accidental crisis (such as loss of job, accidents, burglary, divorce, etc.). 3) Complex crisis: Complex crisis is divided into a) severe trauma: such as violent personal assault or natural or man-made disasters, and b) crisis associated with severe mental illness. According to Rosen, there is strong evidence that more specialized 24-hour crisis response services are needed for individuals experiencing crisis as a consequence of severe mental illness and for their families.

Johnson et al. (2005a) developed a methodology for identification and operational definition of "crisis" for the CRT they studied. They defined crisis as a situation in which the following three criteria are met: 1) A substantial deterioration has occurred in the mental health and/or social functioning of a patient, either against the background of an existing mental disorder or in someone not previously known to services OR a significant disruption in the support network and social circumstances of a severely mentally ill person that threatens his/her ability to continue to function at an adequate level AND 2) the deterioration or disruption is such that the risk that the individual will harm him or herself or others has substantially increased AND/OR the individual is no longer able to care for him/herself at an acceptable level, so that there is a threat of significant physical debility or injury resulting from self-neglect AND/OR because of his/her lack of caution, the individual is at significant risk of injury, imprudent actions with lasting serious consequences or becoming the victim of assault or exploitation by others AND/OR members of the individual's usual support network who are essential to his/her community functioning state that they can no longer sustain their usual role in supporting him/her AND 3) the extent of the deterioration or disruption is so severe that secondary mental health professionals believe that a change in the management of his/her illness must be initiated immediately.

Tobitt & Kamboj (2011) claim that CRTs are a significant reform of acute mental health care in the UK and beyond, but the complex issue of conceptualizing crisis is overlooked in the CRT literature. In the CRT policy guidelines in the UK, "crisis" is defined as "an acute psychiatric crisis of such severity that, without the involvement of CRT, hospitalisation would be necessary" (Department of Health, 2001). The Norwegian recommendations have a similar definition (Directorate of Health and Social Welfare, 2006). According to Tobitt & Kamboj (2011) this definition has limited utility in characterizing the essential features of crisis. He has conducted a semi-structured interview study of 39 CRT workers on four different teams. The responses to "characterizing of crisis" were presenting in three clusters: a) functional disruption, b) risk of harm and c) additional support needed.

1.3 The crisis resolution team: the core model

The key features of the core CRT model are more a framework for delivering care and treatment than a specific type of treatment or therapy (Johnson et al., 2008).

1.3.1 The key organizational characteristics

The CRT model includes separate and multidisciplinary teams capable of delivering a rapid and full range of acute psychiatric interventions in the community and offering intensive home treatment rather than hospital admission whenever feasible and with availability 24 hours a day seven days a week (24/7). The Mental Health Policy Implementation Guide (Department of Health, 2001) advocate that CRTs need to be on the pathway between community-based referrers and inpatient care and be able to act as a point of assessment and as a gatekeeper to other parts of the mental health system for people in severe distress. The emphasis is on learning from the crisis with involvement of the whole social and professional support network (Onyett, Linde, & Glover, 2007). The CRT care is a time-limited intervention, often just two to three weeks, but with flexibility to respond to differing service

users' needs. Medical staff is available around the clock and medication can be administered. Social issues are addressed as a part of the overall care plan. Involvement continues until the crisis is resolved and clients are then referred to other relevant services if required. CRTs may also facilitate early discharge from acute wards by active involvement in discharge planning and by transferring inpatients to intensive home treatment (Department of Health, 2001; Onyett, Linde, & Glover, 2007; Johnson et al., 2008).

Multidisciplinary working is important to ensure a mixture of perspectives and a focus on both clinical and social aspects of patients' difficulties. The Mental Health Policy Implementation Guide (Department of Heath, 2001) suggests that the CRTs include psychiatric nurses, psychiatrists, occupational therapists and psychologist. The Norwegian recommendations do not specify the professions to be employed in a CRT other than doctors. The emphasis is on competence in specialist assessments, pharmacological treatment, physical conditions, substance abuse, collaboration skills, legislation and crisis intervention (Directorate of Health and Social Welfare, 2006).

Capacity to offer intensive treatment is "at least twice a day" in the UK and "frequent contact" in Norway. The advantages of intensive contact are comprehensive initial assessment, monitoring medication, ability to tolerate higher levels of risk and building relationships between staff and patients and network (Johnson et al., 2008).

The UK guidelines emphasize 24/7 availability: the Norwegian guidelines call for extended hours of operation. Around-the-clock availability is seen as necessary to be an alternative to hospital admission and to ensure effective gate-keeping of inpatient beds. Johnson et al. (2008) claim that gate-keeping is important as the CRTs are considered to be

less able to reduce admissions if they do not assess every potential admission for suitability for home treatment.

Given the short-term involvement of the CRT, it is also crucial that relationships are maintained through the crisis period with those responsible for providing long-term care - for example CMHT, CMHC and the GPs.

To summarize, the CRTs should offer rapid assessment, intensive short-term home treatment, specialist multidisciplinary team interventions, collaboration with the wider mental health care system and families/network, and have gate-keeping functions for acute wards.

1.3.2 The key characteristics of the intervention

Johnson et al. (2008) pointed out that crisis resolution interventions should include comprehensive initial assessment of risk, symptoms, social circumstances, substance abuse, compulsion and physical health. The assessment should include whether CRT care is a feasible and acceptable way to treat the patient. It should emphasize engagement to establish a therapeutic relationship and negotiating a treatment plan in collaboration with the patient and his/her social network. The clinicians should give patients the opportunities to talk through current problems with staff and offer brief interventions aimed at increasing problem-solving abilities and daily living skills. The clinicians should also identify and discuss potential triggers of the crisis, including difficulties in family and other important relationships. Medication management, practical help, a discussion about current problems, education about mental health problems, a crisis plan to prevent relapses and discharge planning are also important in the crisis intervention. The clinicians of the CRT must emphasize flexibility in contact with the patients and crisis should be understood in its social context, working with families and social networks. An aim of the CRTs is to provide interventions aimed at

maintaining and improving the social network of the patients, but also to assess the family burden and consider the situation of the children in the home treatment setting.

The CRT intervention should match with interventions that are delivered in a hospital, but do so in the person's home, in addition to the extra benefit the clinician gain from working in the patients' natural environment (Johnson et al., 2008).

1.3.3 Target group

According to the Mental Health Policy Implementation Guide (Department of Health 2001), the target group of the CRTs in the UK is adults (16 to 65 years old) with severe mental illness (e.g. schizophrenia, manic depressive disorders, severe depressive disorder) with an acute psychiatric crisis of such severity that, without the involvement of a CRT, hospitalization would be necessary. This service is usually not appropriate for individuals with mild anxiety, primary diagnosis of alcohol and other substance misuse, brain damage, dementia, learning disabilities, personality disorder as the only diagnosis, recent history of self-harm but not suffering from psychotic illness or severe depressive illness, or a crisis related solely to relationship issues (Department of Health, 2001).

Likewise, in the Norwegian recommendations, the CRT is a service for adults 18 years or older who experience a mental health crisis and who are in the catchment area of the CMHC. The CRT targets persons for whom, without the involvement of a CRT, admission to inpatient wards would usually be necessary. The target group includes individuals experiencing a severe mental health crisis when the coping strategies of the individual and his or her family and social network are inadequate. This includes persons with first-time psychosis, psychotic breakdown, acute suicide crisis, drug-related mental health crisis and other mental health

crises. The CRT should help to ensure that people receive treatment at the right level in the treatment chain (Directorate of Health and Social Welfare, 2006).

1.3.4 The rationale of the CRT model

The CRT care aims to be an alternative to inpatient admission, to reduce the length of admissions and to avoid readmissions. The role of the CRTs in the mental health system is to ensure that individuals experiencing severe mental distress are served in the least restrictive environment and as close to home as possible. There are a number of reasons why home- and outpatient treatment sometimes is preferred over inpatient treatment.

The traditional mental health inpatient wards have been criticized for being costly, having capacity problems, poor accessibility, irrelevant admissions and excessive use of coercion (Gråwe, Ruud, & Bjørngaard, 2005). In the UK, surveys have revealed poor physical conditions, understaffing, a lack of therapeutic activities and an increasingly high level of needs among inpatients, particularly in inner-city hospitals (The Sainsbury Centre for Mental Health, 1998; The Sainsbury Centre for Mental Health, 2005). The service users and their families have raised criticism of overt medical orientation and a lack of user involvement in treatment planning at the acute inpatient wards (Winnes, Borg, & Kim, 2010). Patients with severe mental health problems have reported that an admission to an acute inpatient ward is associated with multiple negative consequences that are personal, social, occupational and economical. Institutionalization has been shown to have harmful effects, including a passive approach to life and more severe negative symptoms (Wing & Brown, 1970). For many patients it is difficult to transfer skills learnt in hospital or another institutional setting to daily life (Johnson et al., 2008).

Treatment of patients outside the hospital in their natural environment may be preferable because it allows the patients to maintain their normal life. They may develop new skills and improved coping strategies in their natural environment, which in turn may prevent relapse. The CRT aims to preserve client autonomy. In addition, treatment outside inpatient wards facilitates the patients' contact with the formal and informal social network (Johnson et al., 2008).

In the CRT model the clinicians promote engagement including respect for the dignity of the patients, strengthening of coping strategies and focus on service users' involvement. Crisis management at home requires a different and more informal personal approach compared to the one typically found in a hospital, and it may contribute to more equity between patients and clinicians. In addition, managing crisis outside inpatient wards give the clinicians a unique opportunity to engage in difficulties in families and social networks that may play a role in mental health crisis (Johnson et al., 2008). The CRT care provided in the patient's own home allows a flexible response to the individual needs at a degree that is harder to achieve in a hospital (NIMHE, 2003). "Mental patients are still defined by the public as those who have been admitted to a psychiatric hospital. Stigma is lessened by the avoidance of admission" (NIMHE, 2003).

Quotes from the vision and values for mental health services that should be reflected in the CRTs (NIMHE, 2003):

1. "Focus on recovery and inclusion: In the future mental health system, service users will be responsible for their own recovery".

2. "Include people into their own community, not into the service system".

3. “Support for family and peer networks: The informal carers have a crucial role in the overall system and their needs must be taken into account when developing services”.

4. The differences that exist between service and education providers and service users are matters of perspective and experiences, not innate intelligence, abilities or talents”.

2 Background

2.1 Precursors to the current CRT model

The main precursors of the current CRT model date back to the deinstitutionalization of mental health care and to the development of different emergency home treatment services. Reform of acute mental health services in Australia and the US has influenced the recent nationwide expansion of the CRTs in the UK and similar community-based initiatives in other parts of Western Europe, including Norway.

2.1.1 Deinstitutionalization

The closure of psychiatric hospitals as a part of a deinstitutionalization of mental health care during the last 40 years in the Western world prompted the development of various types of services treating patients with severe mental illnesses in the community. Ensuring the delivery of an acceptable level of care in the community during the acute phases of severe mental illness has proven to be problematic in many countries. The most recent development is the establishment of CRTs that could adequately treat severe psychiatric crisis for short periods in the community (Joy, Adams, & Rice, 2006).

2.1.2 Early home treatment services and studies

Different kinds of outpatient home-based acute care and outpatient crisis teams in mental health care in the communities have existed for decades in many Western countries (Joy, Adams, & Rice, 2006; Gråwe, Ruud, & Bjørngaard, 2005; Johnson et al., 2008).

Home treatment services: The psychiatric service in Amsterdam, established by the psychiatrist Querido in the 1930s, is considered to be the first admission-diversion service. It

provided a 24-hour home visiting service by social workers and psychiatrists to all patients referred for acute admission (Joy, Adams, & Rice, 2006; Johnson et al., 2008).

The early home-visiting initiatives, including Queridos, were not separate teams. In the 1960s and 70s separate specialist teams were establish in the US, Australia and the UK.

The US: The service established by Pasamanick in Ohio in 1961 was intended to manage patients with schizophrenia at home, but it did not involve intensive contact (Pasamanick et al., 1964). Polak developed more extensive services in Colorado in the 1970s (Polak & Jones, 1973), consisting of a multidisciplinary home visit service assessing all patients prior to admission and offering 24/7 home treatment to those able to stay at home. His team developed a network of family homes to accommodate patients in crisis supported by the home treatment team. This model included extensive use of volunteers. This service ceased to exist after about 10 years.

In Wisconsin in the 1970s Stein wanted to establish services to reduce dependence on expensive acute hospital wards. His service carried out rapid assessments of everyone referred for hospital admission and provided intensive community treatment for a short period. It was a 24/7 service with intensive home visits and facilitation of early discharges (Stein & Test, 1980).

Australia: Hoult started what was considered to be pioneer work in Sydney, Australia. As a result of what he saw as a very limited capacity for treating severely mentally ill people in their homes at the community centre in Sydney, he established a short-term home-treatment service in the community as an alternative to hospital admission. It included a detailed assessment, involvement of the social network in the initial assessment, drafting of a

management plan with the patients and their relatives, psycho-education and medication (Hoult, 1986).

The UK: In the late 1980s and early 1990s the CMHTs were the main providers of emergency intervention in the community in the UK and they were operating only office hours and with limited capacity for rapid response to crisis. However, there emerged a growing number of government-funded projects of CRTs in the late 1980s in the UK, influenced by Hoult's work in Australia (Johnson et al., 2008). One example of a project that sought to introduce more extensive home service than traditional CMHT was carried out by Burns and colleagues in southwest London in the late 1980s (Burns et al., 1993). The Yardley team in Birmingham was an important model for the subsequent CRT model and for policy guidance in the UK. Here Hoult drew on his experiences in Sidney. This was a separate specialist team, provided emergency assessments and intensive home treatment, and controlled access to acute beds (Johnson et al., 2008).

Home treatment studies: The Cochrane collaboration has reviewed studies on crisis intervention for people with severe mental illnesses (Joy, Adams, & Rice, 2000, updated in 2006). The randomized controlled trials included in this review are studies preformed by some of the pioneers in home treatment mention above, in addition to some other studies: Fenton, Tessier, & Struening, 1979; Hoult et al. 1983; Muijen et al., 1992; Pasamanick et al., 1964a; and Stein & Test, 1980. Several of these early studies were designed to test the feasibility of managing patients with acute and severe mental illnesses at home. The Cochrane-review concluded that 45 percent of patients who received home-based crisis intervention did not avoid hospital admission during the treatment period. Four of the included studies showed that home-based treatment reduced the treatment drop-out rate. One study showed that it reduced the burden experienced by the patients' families and was a more

satisfactory form of treatment for patients and their relatives. Joy, Adams, & Rice (2000, updated in 2006) found no differences in death or mental state outcomes. Although the data were skewed or incomplete, all studies showed that home-based crisis treatment was more cost effective than hospital care.

The authors of the Cochrane review write that it is impossible to comment on the effects of crisis intervention in a "pure" form, as crisis intervention is evaluated in the context of community-based care. None of the included studies purely investigated crisis intervention; all used a form of home care for acutely ill people, which included elements of crisis intervention (Joy, Adams, & Rice (2000, updated in 2006)).

In a review of home treatment studies, Catty et al. (2002) concluded that the evidence concerning the effectiveness of home treatment remains inconclusive. The researchers characterized the studies as heterogeneous in relation to definition of both home treatment service and control services. Nevertheless, they also wrote that there was a tendency in their material indicating that regular home visiting and combined responsibility for health and social care were associated with reduced hospitalization.

Despite these limitations, these studies have been highly influential in the development of the CRT model. They formed the basis for the 2000 decision on the establishment of CRTs throughout the UK, and they are cited in the Mental Health Policy Implementation Guide as supporting evidence for crisis resolution teams (Department of Health, 2001).

Despite the frequent citations of these randomised studies from the 1960s through 1980s in support of the CRT model, these studies may not be representative of current CRT care. The main reasons for this is that the current CRTs provide more short-term interventions than

did the older services, the included patients had vaguely describe crisis conditions and changes in the wider mental health system make the control services unequal.

Nevertheless, these pioneer home treatment projects proved that it was a feasible, safe and acceptable way to treat most patients with severe mental health problems and crisis in the community.

2.1.3 The development in a Norwegian context

In Norway also, deinstitutionalization has contributed to the development of mental health care in the community. In 1998 the Norwegian authorities resolved to reform of the mental health service including an increase in the funding a re-organization and an implementation period of 1999-2008. This initiative was intended to result in both a qualitatively and a quantitatively improved service for people with severe mental health disorders though better co-ordinated and comprehensive services. This decision was targeted to increase focus on prevention, integration, incorporation of users' perspectives, voluntary treatment and promotion of living in ordinary settings (Norwegian Ministry of Social and Health Affairs, 1997).

One of the main measures in the deinstitutionalization of the mental health care in Norway has been the establishment of about 75 CMHCs. These centres have taken over the primary responsibility for specialized mental health services for the hospitals, with outpatient clinics, inpatient wards, day care and one or more specialized teams (case management teams, early intervention teams for first-episode psychoses and assertive community treatment teams). A close collaboration between CMHCs and the municipalities has been emphasized (Karlsson, Borg, & Kim, 2008).

Towards the end of the increased funding period the government made the decision to establish the CRTs at all the CMHCs to improve the accessibility to specialized mental health services for people in mental health crisis (St prp nr 1(2004-2005)). The aim was to offer these patients a rapid, intensive and ambulatory intervention alternative to admission to an acute psychiatric ward. A survey of CMHCs in Norway found that 35 of the 75 CMHCs had established a CRT by 2008 (Directorate of Health, 2008). A telephone survey of CRTs in Norway showed that 51 of the 76 CMHCs had established a CRT by 2010 (Karlsson, Borg, & Sjølie, 2011).

The early Norwegian CRT put emphasis on being an alternative to admissions though offering a self-referral service, working with families and social networks and collaborate with other mental health services. CRTs were intended to be multi-disciplinary teams offering rapid emergency assessments, out-of-office contact and extended operating hours.

2.2 Recent research on CRTs

The literature on the CRT model published after the government decision to establish CRTs in the UK in 2000 is mostly from the UK and focuses primarily on the admission rate. In addition, organizational structure, cost-effectiveness, outcome of crisis and users' experiences have been important issues in the literature.

2.2.1 Organizational structure

The literature regarding organizational characteristics of CRTs includes national surveys (Onyett, Linde, & Glover, 2007, 2008; Jones & Robinson, 2008, 2010; Karlsson, Borg, & Sjølie, 2011) and results from a national study of routine data (Glover, Arts, & Babu, 2006). It focuses primarily on opening hours, gate-keeping and staffing.

The largest source of knowledge about the implementation of CRTs in England is a large survey conducted by the National Audit Office in 2005/2006. Team leaders from CRTs answered questions about how their teams were operated and were organized (Onyett, Linde, & Glover, 2007; Onyett et al., 2008). Information was collected from GPs who referred patients to the CRTs (National Audit Office, 2007). A total of 243 CRTs were identified; responses were received from 73 percent of the team leaders. Of the respondents, 53 percent reported that their team had 24/7 availability, and 68 percent indicated that they were gate-keeping inpatient beds. Of 500 admissions that were reviewed as part of the study, only half had been assessed by the CRT staff before admission. But having a CRT staff member at the assessment made it far more likely that the assessment will consider whether CRT was an appropriate alternative to admission (gate-keeping), and increased the chances that the CRT team was involved in an early discharge. Almost all teams included nurses, the majority of teams included support workers and just under half included psychiatrists. Other professions were not well represented. The study found wide regional variations in the lack of consultant psychiatrists. One of the main findings from this large survey was that there were considerable variations in the extent to which various elements of the CRT model was implemented.

Assessments of the implementation of CRTs in Wales (Jones & Robinson, 2008) have also been carries out. Of 18 identified teams, 15 responded to the survey. The authors reported results similar to those of Onyett, Linde, & Glover, 2007 and Onyett et al., 2008 including findings of only three teams that offered a 24 hours service. Registered nurses accounted for the majority of team members, in addition to some social workers and occupational therapists. However, only one team had a dedicated full-time consultant psychiatrist. All stated that they could provide an alternative to hospital admission, gate-keep hospital beds, provide intensive home treatment and facilitate early discharge. But there appear to be significant variations in

realizing these goals, including considerable differences in the referral processes for each team. Inclusion criteria were also diverse, with some teams appearing to accept referrals for diagnoses excluded by Welsh Assembly Government guidelines (2005).

In a survey in 2010, Karlsson, Borg, & Sjølie (2011) identified 51 CRTs in Norway. Only one CRT had 24/7 availability. Seventeen CRTs were operational during the day and evening on both weekdays and weekends, and 30 operated during office hours only.

Glover, Arts, & Babu (2006) used routine data to analyze national changes in inpatient admissions following the implementation of the CRT model. They found that teams operating 24/7 were most likely to be associated with reduced admissions.

In summary, these reports identify significant limitations in implementation related to gate-keeping function, operating hours and multi-disciplinarity.

2.2.2 Admission rate in inpatient wards

The main focus of studies on the CRT model after its nationalwide introduction in the UK has been its impact on admission rate. The evidence for CRTs' contribution to reduction of acute psychiatric hospital admission was limited at the time of their introduction. The studies followed different methodological approaches: one used a randomized control trial and the rest were naturalistic. Most naturalistic studies compare neighbouring catchment areas with and without a CRT or areas before and after the establishment of a CRT or both (Hubbeling & Bertram, 2012).

Johnson et al. (2005b) performed a randomized controlled trial in the north Islington area of inner London. They compared CRT care (experimental group) with standard care from inpatient services, crisis houses and community mental health teams (control group). Johnson

et al. (2005a) also preformed a before-and-after study of a CRT based in the southern part of Islington in London. These studies found a lower probability of a patient being admitted to hospital within eight weeks after a crisis and reductions in admission rates from 71 to 49 percent in the six weeks after the crisis.

Jethwa, Galappathie, & Hewson (2007) and Keown et al. (2007) both performed naturalistic studies. Both found a fall in number of admissions, although Keown et al. found an increase in the median length of stay in hospitals. Robin, Bronchard, & Kannas (2008) found that both admissions and duration of hospital stays decreased for patients receiving CRT care, even though the impact of CRT intervention on subsequent hospitalization did not differ from the second year onwards. Barker et al. (2011) found, by analyzing routinely collected data, a 24 percent decrease in acute psychiatric admissions in the year after a CRT began to operate. The duration of inpatient stay fell by 6.5 days (22 percent) and they found a 4 percent decrease in readmissions. But evidence on admission rates is not wholly consistent. Damsa et al. (2005) found a significant decrease in the rate of voluntary, but not of non-voluntary, hospitalizations, after introduction of a crisis intervention program in Luxembourg. Tyrer et al. (2010) found that the introduction of a CRT was associated with an increase in compulsory admissions and a decrease in informal admissions. Forbes, Cash, & Lawrie (2010) found that the rates of admission to hospital were unchanged after introduction of a CRT and that there was an increase in episodes of detention in the year following the team's introduction. Compulsory admission was not found to be significantly reduced in Johnson et al.'s randomized study (2005b) and Johnson et al.'s quasi-experimental study (2005a) found a significant impact only on voluntarily admissions.

Two national research papers explore the reduction in hospital admission associated with CRT services using an uncontrolled observational analysis of trends in national routine data

related to hospital admissions at primary care trust (PCT) level across England (Glover, Arts, & Babu 2006; Jacobs & Barrenho, 2011). Glover, Arts & Babu (2006) tested the difference in mean admission rate values from 1998 to 1999 and 2003 to 2004. They found the areas that had introduced CRTs were associated with reduction in admission compared to areas without CRTs. Jacobs & Barrenho (2011) re-analyzed data from the Glover, Arts, & Babu study, but they used a policy evaluation methodology to simultaneously examine temporary changes (PCTs before versus after the introduction of CRT) and cross-sectional changes (PCTs with and without CRTs). Contrary to Glover, Arts, & Babu, they concluded that there was no evidence that the CRT policy per se had made any difference to admissions.

In terms of admissions under the Mental Health Act in the UK, Keown et al. (2007) found that detentions under Sections 2 and 3 of the Mental Health Act 1983 increased, whereas those under Sections 5(2) and 5(4) declined following the introduction of crisis resolution and assertive outreach teams. Furminger & Webber (2009) and Barker et al. (2011) found a reduction in admissions under the Mental Health Act 1983 after CRTs began operating in Edinburgh, but it was not statistically significant. Tyrer et al. (2010) and Forbes, Cash, & Lawrie (2010) found an increase in episodes of detention following the CRTs' introduction, but these findings were not significant. Johnson et al. (2005a and b) found no difference in involuntary admissions after the introduction of CRTs.

These discrepancies indicate the need for further studies of the impact of CRTs on Mental Health Act admissions and on socially deprived people before we can draw any clear conclusions. Suicide is a rare event and it is likely that none of the studies on CRTs will have or have had enough power to detect a difference (Hubbeling & Bertram, 2012).

Some variations among studies complicate the comparison of findings of these studies and their generalizability. The target population may be quite different among the studies related to geographical variations and degree of deprivation in the areas studied. The time period for measurement differed among the studies. Some studies focused on post-crises hospitalization rates, others on general inpatient use (Sjølie, Karlsson, & Kim, 2010). In addition, non of the studies compared CRTs directly with such alternative to inpatient admission as day hospitals and crisis houses.

To summarize, one randomized control trial and most naturalistic studies have found evidence of a reduced admission rate after introduction of CRT service, but the reduction is mainly related to voluntarily admissions. A few studies found no evidence for reduction in admissions. There is also no conclusive evidence that CRTs cause an increase in compulsory admissions. One problem of interpreting the findings is that in the same period as the establishment of CRTs, there has been a concurrent focus on reduction of acute inpatient admissions and on ambulatory care in all of the mental health care services.

2.2.3 Social and clinical outcome

In the literature on CRT care there is currently no clear evidence of any clinical or social benefits of CRT intervention compared with standard care. In the Cochrane review (Joy, Adams, & Rice, 2006), none of the studies found any differences in symptom outcomes, although none exclusively investigated crisis intervention and the studies mostly ranged from the 1960s to the 1980s. In the randomized controlled trial of CRT and standard care by Johnson et al. (2005b) it was found that symptoms, quality of life, social functioning, and adverse incidents such as violence and self-harm were similar between CRT and standard care after six months follow-up. Another quasi-experimental study found no clear differences in symptoms, social functioning, or quality of life before and after the introduction of a CRT

(Johnson et al., 2005a). Barker et al. (2011) reported that carers said patients got better after CRT input, but that study had a low response rate (29 percent).

Nor have most studies attributed any disadvantages to CRT care. The Cochrane review (Joy, Adams & Rice, 2006) showed that treatment by a CRT was as safe as standard hospital care in terms of suicide prevention, that home care reduced the family burden and that there was no difference in the incidence of death. Keown et al. (2007) reported that the number of suicides remained constant. Bookle &Webber (2011) found that people of African ethnic origin used home treatments to the same extent as other ethnic groups in mental crises. However, Kingsford & Webber (2010) found that people from more socially deprived areas, older people and those referred by enhanced community mental health teams had poorer outcomes after a CRT intervention.

To summarize, the evidence suggest the CRTs results in similar social and clinical outcome as inpatient care. Suicide is a rare event and it is likely that none of the studies on CRTs will have enough power to detect a difference between different mental health services.

2.2.4 Service users and carers experiences

Measuring service users' experiences with CRT care have been a part of the research questions of several studies and reviews of CRTs.

The Cochrane review found the CRT reduces family burden and is a more satisfactory form of care for both patients and families (Joy, Adams, & Rice, 2006). In the review of Winness, Borg, & Kim (2010) of service users' experiences with CRTs, using both qualitative and quantitative studies, three major themes as characteristics of CRTs are extracted as a) access and availability, b) being understood as "normal" human beings and c) dealing with crisis in an everyday life context.

The quantitative studies - both studies of Johnson et al. (2005a; 2005b), Tyrer et al. (2010) and Barker et al. (2011) - indicated that the patient satisfaction is significantly higher with CRT than with standard care. However, there were methodological limitations in the two studies other than Johnson's including low response rate and no control groups. Hopkins & Niemiec (2007) found that previous service users appreciated accessibility, availability, consistency, choice/negotiation and communication in a home treatment service.

In a National Audit Office report on service users' and carers' experiences of CRT services, surveys and focus groups of 29 CRTs were used (Clark, Khattak, & Nahal, 2009). The report found that "service users and carers appreciate a holistic approach to CRT, and often value personal engagement as highly as clinical expertise". In addition, the author emphasized the following key factors affecting experiences of CRT: 1) Phone contact: A fast response time or a sympathetic manner was important for the clients. The clients' direct phone access to the team and home visits can be used interchangeably, but one cannot replace or substitute the other. 2) Home visits: The main factors that appear to contribute to a good experience of home visits are expected visits on time without cancellations and knowing which members of staff will visit. 3) The home as a context of care: home treatment is less well received when the home environment is a contributing factor to mental health problems, but many service users reported the benefits of not 'being away from the reality of my life'. 4) Team capacity: many service users suggested that they felt CRT services were suffering from a shortage of time and resources, which impacted on both the quality and quantity of treatment available, and 5) Continuity of care: users of CRTs generally feel a strong association between perceived continuity of care and overall satisfaction – continuity both between teams and within teams.

Even though the evidence base on patient satisfaction is sparse, we can summarize the studies of the users' perspective as positive in favour of CRT care, although the lack of resources was reported as a problem.

2.2.5 Cost-effectiveness

Several review articles describe cost-effectiveness of CRTs (Brown, 2005; Gråwe, Ruud, & Bjørngaard, 2005; Joy, Adams, & Rice, 2006) through the reduction of the cost of treating crisis. The Cochrane study of Joy, Adams, & Rice, (2006) claimed that all studies included in their review found home care to be more cost effective than hospital care. In McCrone et al.'s (2009) study, two cohorts of patients were compared. After referral for a psychiatric crisis, the first cohort received existing services and the second cohort had access to input from a CRT. Baseline six-month and follow-up costs were measured for 181 cases: the study found that the CRTs resulted in lower costs. Damsa et al. (2005) reported increased cost due to ambulatory follow-ups, but this was widely compensated for by savings due to hospitalization avoidance.

The evidence base on cost-effectiveness of CRTs suggests that these teams can reduce costs in mental health services.

2.2.6 Summary of recent research

The balance of evidence of CRT care suggests that the majority of CRTs established in England and Wales are not fully implemented according to the CRT recommendations and guidelines. There is some knowledge about what these limitations are, but less is known about the consequences. The evidence suggests that CRTs can reduce hospital admissions and costs. Most studies showed no significant difference between CRT care and inpatient care with regard to symptomatic outcome or quality of life. The research suggests that patients prefer

CRT care over hospital care. There is no evidence that CRT care increase the risk of violence or suicide.

In addition, it is important to bear in mind the conclusion of Hubbeling & Bertram (2012): “The balance of evidence suggests that CRTs can reduce hospital beds and costs with similar symptomatic outcome and service satisfaction, but there is no evidence that CRTs are the only way to do so”.

2.3 The need for a study on CRTs in Norway

When the data for this study were collected in 2005-2006, only a few years had passed since the UK decision to establish CRTs nationally, and the similar decision in Norway had been made even more recently. At that time the evidence base for the effects of the current CRT model was limited both nationally and internationally. The randomized studies cited to attest to the efficacy of CRTs were done from the 1960s though the 1980s, and these may not be representative for the recent model of CRTs, especially since the clinicians worked with patients for a longer period of time than in recent the CRT model (Glover, Arts, & Babu, 2006; Joy, Adams, & Rice, 2006).

Over the last half decade the evidence base has grown, but most studies are from the UK setting. Our study of Norwegian CRTs provided an opportunity for a systematic evaluation of the real-world implementation of a national program for mental health in an environment other than that in which it was developed. Our study differ from studies other than national reports and surveys in the comparison of more than two CRTs: it fills an international gap, as few studies describe content of treatment and their impact on outcomes.

3 Aims

At the beginning of this century a need for alternative and more differentiated acute psychiatric service in mental health in Norway was recognized, and all the CMHCs were required to establish CRTs within 2008. This involved several hundred clinicians and was a great investment in the final phase of the National Programme for Mental Health 1999-2008. The studies that existed on CRTs were from the UK, the US and Australia. This emphasized the need for Norwegian studies to know more about CRTs in this country.

The main aim in the present thesis was to examine the implementation of the CRTs in Norway with reference to the characteristics of CRTs and their patients and examine differences and similarities between them. In addition, the thesis examines content and outcome of CRT care, predictors of favourable outcomes and patterns and predictors of admission.

4 Methods

4.1 Design

4.1.1 Multicentre Study on Acute Psychiatry (MAP)

Our study was a part of the Multicentre Study on Acute Psychiatry (MAP), which used a naturalistic cross-sectional prospective design. The study was a descriptive, comparative and explorative multicentre study. The study includes routine chart data only. In this type of design there is no manipulation by the researcher: It contains no intervention, no randomization and no control group and therefore does not allow any causal inferences.

SINTEF Health Research was commissioned to develop and lead a network that could contribute to local evaluation and research, and to accomplish a systematic survey of acute psychiatric treatment in Norway. The network was started in 2003 and arranged semi-annual two-day meetings. Planning and preparation for the MAP study was conducted in 2004 and early 2005, and data collection was made in 2005 and 2006. The researchers from SINTEF collaborated and supervised the local projects and the clinicians during the entire period.

Thirty-two psychiatric emergency service units were included in the MAP study. Of these, 19 were inpatient wards for adults (n=3,506 treatment episodes), eight CRTs for adults (n=680), and five inpatient wards for adolescents (n=441). Data from only the CRTs for adults was included in this thesis. The MAP study is the largest study to date on acute mental health services in Norway. Preliminary results from the MAP study were presented in a SINTEF report: “Akuttpsykiatrisk behandling i Norge – resultater fra en multisenterstudie” (Ruud, Gråwe, & Hatling, 2006).

Participants in the semi-annual two-day meetings of MAP were clinicians in the participating acute psychiatric units in Norway, researchers from SINTEF Health Research and representatives from user and carer organizations. A reference group had eight members from the National Forum for Acute Psychiatry, the user organizations Mental Health Norway and the National Association for Relatives in Mental Health, an acute psychiatric hospital, a CMHC, primary health care and the Norwegian Psychiatric Association.

All the participants in the two-day meetings/workshops contributed to the development of a registration form used in the MAP study.

4.1.2 The CRT part of the MAP study

Our study comprises the CRT part of the MAP study. Each participating CRT was a local project with a local project leader. The local project leader was a contact person with SINTEF and had the daily responsibility for the data collection. The project leader and SINTEF had contact through meetings, e-mail and telephone. The project leader had access to information in a shared area on the server in SINTEF.

The participating CRTs had meetings of their own between the semi-annual meetings. These meetings were coordinated by one of the senior researcher in MAP, Rolf W. Gråwe. There was a need for the clinicians to discuss target groups of CRTs, intake practice, good clinical practice, their role within the wider mental health services, collaboration with other mental health services, admission practice and other topics. The focus was on including professional and private networks in the treatment inspired by Seikkula (Seikkula, 2000), and on preventing admissions for patients accepted for CRT care rather than gate-keeping inpatient beds.

4.2 Sample

The sample in this study consisted of all 680 patients seen by eight CRTs in 2005 or the beginning of 2006. All patients 18 years or older were included in the study through face-to-face consultations with the clinicians in the CRTs. We estimate that the included 680 patients comprised approximately all patients seen by a CRT in the inclusion period, as the clinicians that were responsible for filling out the forms. There may be some unknown missing registrations of treatment episodes, but their lack will most likely be evened out by the large amount of data in the study. Some of the patients may be registered with more than one treatment episode. We do not know the numbers of these, and therefore we refer to both "patients" or "separate treatment episode" in this thesis.

The inclusion period was three months, with the possibility of being prolonged to include 60 patients from each team. The number of patients included by each team ranged from 46 to 147. There were no exclusion criteria.

The original number of registration forms collected from each treatment episode of the CRTs was 925. It became apparent that one of the CRTs had collected 328 registration forms because it had collected data over a period of 12 months. This was about one-third of the sample, which made this team overrepresented in the material. To correct this imbalance in the data we matched the inclusion period with the other teams and excluded 245 treatment episodes this team collected during other periods of time. The final sample, then, includes 680 treatment episodes (patients) from eight CRTs.

4.3 The current PhD candidate's contribution

The current PhD candidate took part in the semi-annual workshops of the MAP study before and during the study, as well as the meetings for the participating CRTs held in the

months between these workshops. Other than lectures on relevant topics about acute mental health, the main focus in the semi-annual workshops was the development of the registration form used in the MAP study: the candidate took part in this process. The registration form was originally developed for acute inpatient wards, but was adapted for use for the CRTs in the MAP project.

As a clinician in one of the CRTs in MAP, the candidate took part in the data collection.

4.4 Data collection

Data collection was performed by the clinicians in each CRT. The clinicians registered information on the registration form about the patients at the start and end of a treatment episode, as well as the information about practice and program climate of the CRTs (CPPS). The clinicians collaborated in filling out the registration forms. The goal was to obtain data on about 60 patients.

Data on patients was recorded electronically from paper documents that clinicians had filled out. An EpiData-based program developed by the project leader was used, and the CRTs submitted their patient data as de-identified data files to SINTEF Health Research. Data from CPPS that the clinicians had filled in were recorded electronically by SINTEF.

4.5 Measures

4.5.1 Registration form

The registration form was available in the versions for acute wards for adults, CRTs and acute units for adolescents. In our study we used the version for CRTs. The four-page form contained eight sections. The first two pages (parts A-D) were largely completed at intake, and the two last pages (parts E-H) at discharge. The eight parts were:

A. Referral and intake

B. Information about the patient

C. Services received before the treatment episode

D. Assessment at intake

E. Structured assessment and content of treatment during the treatment episode

F. Collaboration with other services and family/network

G. Assessments at discharge and length of treatment

H. Assessments of planned services after discharge.

Part B consisted of socio-demographic variables including information on age, sex, marital status, accommodations, employment status, social security benefits and custody of children.

Symptom severity and level of functioning were assessed at both admission and discharge using the Health of the Nation Outcome Scales (HoNOS) and Global Assessment of Functioning Scale, split version (GAF) (Wing et al., 1998; Endicott et al., 1979; Goldman, Skodol, & Lave, 1992). The patients who had one consultation were rated only once. HoNOS was developed in the UK in 1996 to quantify and measure progress in patient mental health during treatment. The HoNOS consists of 12 subscales, each of which rates problems from 0 (no problem) to 4 (severe to very severe problem). In our study, the sums of scales 1–8 and 9–12 on HoNOS were calculated to give an overall measure of symptom severity and social problems, respectively. In addition, the following subscales of HoNOS were included as the clinical scales most relevant to this study:

HoNOS 1: Overactive, aggressive, or disruptive behaviour

HoNOS 2: Non-accidental self-injury

HoNOS 3: Problems with drinking or drug-taking

HoNOS 6: Problems with hallucinations and delusions

HoNOS 7: Problems with depressed mood

HoNOS 9: Problems in relationships

HoNOS 8: Other mental and behavioural problem were excluded because this is the subscale with the greatest confusion and has less reliability than the other subscales (Ruud & Reas, 2002).

We used a split version of the GAF consisting of two scales ranging from 1–100 for symptom severity and functional impairment, respectively (Goldman, Skodol, & Lave, 1992).

The HoNOS, GAF, and CPPS scales have shown satisfactory reliability and validity (Pirkis et al., 2005; Jones et al., 1995; Hargreaves et al., 2007). Several studies have indicated moderately high internal consistency and low item redundancy for the HoNOS sum score, and therefore support the instrument's use as a meaningful measure of symptom severity, with the exception of HoNOS 8 (Pirkis et al., 2005). Söderberg found that when staff use patients' GAF scores to measure changes and outcomes, it might be necessary to use several raters for an individual patient for the GAF scales' reliability and validity to be satisfactory (Söderberg, Tungström, & Amelius, 2005). In this study, two or more raters filled in the registration form, including the GAF assessment score, for each patient.

The Alcohol Use Scale (AUS; Mueser et al., 1995) and the Drug Use Scale (DUS; Mueser et al., 1995) are 5-point scales based on the DSM-IV criteria (American Psychiatric

Association, 1994) for alcohol and drug use disorders during the past six months (1=no use, 2=use with impairment, 3=abuse, 4=dependence, and 5=dependence with institutionalization).

A scale on suicidal risk was designed in collaboration with the National Centre for the Prevention of Suicide (Mellesdal et al., 2010). At intake, the clinicians assessed and coded any suicidal problems as no suicidal thoughts/plans, passive death wishes, suicidal thoughts but no concrete plans, concrete suicidal plans, self-injury but no death wishes and self-injury/death intentions.

A range of possible treatments were registered. Most were rated as given or not given. Intensity of consultations with various professionals in the CRTs was rated as more than two times a week, one to two times a week, less than once a week, and not provided.

At discharge, one main diagnosis and up to two additional diagnoses were set according to the International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10).

Reasons for discharge from the CRT were coded as concluded earlier than planned, concluded as planned and concluded later than planned.

To ensure inter-rater reliability within and across the CRTs participating in the study, the MAP study arranged training workshops for the clinicians in rating of HoNOS.

4.5.2 Community Program Practice Scale (CPPS)

Each clinician completed the Community Program Practice Scale (CPPS) (Hargreaves et al., 2007). The CPPS is a questionnaire that measures practices and program climate of non-residential mental health programs and consists of a 45-item scale on a 5-point Likert scale

(from 1=strongly disagree to 5=strongly agree) and with 13 subscales. For our study the following six subscales were chosen as the most clinically relevant: case management, out-of-office contact, medication emphasis, team model, and family orientation and involvement.

4.5.3 Questionnaire for team leaders

A questionnaire completed by the team leaders addressed team characteristics: response time, length of treatment, whether the CRT had a team approach with shared responsibility for the patient, collaboration with the wider mental health care system and families/networks, use of home treatment and whether the CRT wanted to see the patient several times a week.

4.6 Approvals from the authorities

The MAP study was approved by the Regional Ethical Committee in Health Region East in Norway. The study received an exemption from the duty of confidentiality from the Directorate of Health and Social Welfare. SINTEF Health Research received a licence from the NSD/datatilsynet (Norwegian Social Science Data Services). In addition, each CRT had to be individually licensed by the NSD/datatilsynet (Norwegian Social Science Data Services) and sign a written agreement with SINTEF Health Research regarding data analysis.

4.7 Statistical methods

The statistical analyses were conducted using Statistical Analysis Software (SAS Institute Inc., Cary, NC, USA) version 9.2 and the Statistical Package for the Social Sciences (SPSS Inc., Chicago, IL, USA) version 15.0 and version 18.0. A significance level of 0.05 was used.

In all three papers, descriptive statistics were used to quantitatively describe and summarize the main features of the sample related to the aims of the papers. Chi-square tests were used when investigating group differences on categorical variables. Group differences in independent samples were explored with t-tests and one-way between-groups ANOVAs (with

Bonferroni post-hoc tests) on normally distributed continuous variables and Mann-Whitney U Test and Kruskal Wallis tests for variables with skewed distributions. Independent-samples t-tests/Mann-Whitney U tests were used for comparison of the mean score on continuous variables for two different groups and one-way between-groups ANOVAs (with Bonferroni adjustment)/ Kruskal-Wallis tests were used for comparison of the mean scores on continuous variables for more than two different groups.

In paper I, hierarchical cluster analysis was used to identify homogeneous groups of CRTs based on some key characteristics. A dissimilarity matrix was calculated using squared Euclidean distance and clustering performed by Ward's method. Comparison of identified clusters was done by χ^2 –test on key characteristics.

In paper II, a linear regression analysis was performed, with a stepwise backwards variable selection procedure of potential predictors, to explore the relationship between the continuous dependent variable and a number of independent predictors of favourable outcome. Pairwise interaction tests were performed on all significant predictors.

In paper III, first associations between explanatory variables and in-patient admission were tested first using bivariate logistic regression analysis (unadjusted: uncontrolled for the effects of all other predictor variables in the model). To assess the association between admission status (admitted or not admitted) and potential predictors on both levels a hierarchical logistic regression model with random effects for intercepts was fitted (The SAS GLIMMIX procedure). Such model takes possible correlations between members of the same cluster (i.e. team) into account, and might prevent against false significant findings. Both crude and adjusted odds ratios were calculated. The model was reduced by stepwise selection method with entry and stay probabilities close to one. This method produces a sequence of

models starting with the null model (no predictors) and ending with the full model (all potential predictors included). At each step, the Akaike's Information Criterion (AIC) was calculated and the model with the lowest AIC value chosen as the final one.

Multiple comparisons with Bonferroni *post hoc* corrections were used to reduce the probability of type 1 errors in paper I.

This study had a hierarchical data set including data at both patient level and team level. Standard statistical tests lean on the assumption of independence between observations. The multi-level analysis allows simultaneous analysis of both individual and contextual variables and takes into account the clustering structure of data (Leyland & Goldsted, 2001). Therefore, in papers II and III, multi-level analyses were used for a simultaneous analysis of the contribution of patient and team variables.

For more detailed descriptions of the statistical analysis performed, the reader is referred to the methods sections in each of the papers.

5 Summary of papers

Paper 1: Hasselberg N, Gråwe R, Johnson S, Ruud T. **An implementation study of the crisis resolution team model in Norway: Are the crisis resolution teams fulfilling their role?** BMC Health Services Research, 2011, 11: 96.

Background: The establishment of crisis resolution teams (CRTs) is part of the national mental health policy in several Western countries. The purpose of the present study is to describe characteristics of CRTs and their patients, explore the differences between CRTs, and examine whether the CRTs in Norway are organized according to the international CRT model.

Methods: The study was a naturalistic study of eight CRTs and 680 patients referred to these teams in Norway. Mental health problems were assessed using the Health of the Nation Outcome Scales (HoNOS), Global Assessment of Functioning Scales (GAF) and the International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10).

Results: None of the CRTs operated 24 hours a day, seven days a week (24/7 availability) or had gate-keeping functions for acute wards. The CRTs also treated patients who were not considered for hospital admission. Forty per cent of patients waited more than 24 hours for treatment. Fourteen per cent had psychotic symptoms, and 69% had affective symptoms. There were significant variations between teams in patients' total severity of symptoms and social problems, but no variations between teams with respect to patients' aggressive behaviour, non-accidental self-injury, substance abuse or psychotic symptoms. There was a tendency for teams operating extended hours to treat patients with more severe mental illnesses.

Conclusions: The CRT model has been implemented in Norway without a rapid response, gate-keeping function and 24/7 availability. These findings indicate that the CRTs do not completely fulfil their intended role in the mental health system.

Paper 2: Hasselberg N, Gråwe R, Johnson S, Ruud T. **Treatment and outcomes of crisis resolution teams: a prospective multi centre study.** BMC Psychiatry, 2011, 11: 183.

Background: Crisis resolution teams (CRTs) aim to help patients in acute mental crises without admitting them to hospital. The aims of this study were to investigate content of treatment, service practice, and outcomes of crises of CRTs in Norway.

Methods: The study had a multicentre prospective design, examining routine data for 680 patients and 62 staff members of eight CRTs. The clinical staff collected data on the demographic, clinical, and content of treatment variables. The service practices of the staff were assessed on the Community Program Practice Scale. Information on each CRT was recorded by the team leaders. The outcomes of crises were measured by the changes in Global Assessment of Functioning scale scores and the total scores on the Health of the Nation Outcome Scales between admission and discharge. Regression analysis was used to predict favourable outcomes.

Results: The mean length of treatment was 19 days for the total sample (N = 680) and 29 days for the 455 patients with more than one consultation; 7.4% of the patients had more than two consultations a week. A doctor or psychologist participated in 55.5% of the treatment episodes. The CRTs collaborated with other mental health services in 71.5% of cases and with families/networks in 51.5% of cases. The overall outcomes of the crises were positive, with a

small to medium effect size. Patients with depression received the longest treatments and showed most improvement of crisis. Patients with psychotic symptoms and substance abuse problems received the shortest treatments, showed least improvement, and were most often referred to other parts of the mental health services. Length of treatment, being male and single, and a team focus on out-of-office contact were predictors of favourable outcomes of crises in the adjusted model.

Conclusions: Our study indicates that, compared with the UK, the Norwegian CRTs provided less intensive and less out-of-office care and worked more with depression and suicidal crises than with psychoses. These findings suggest that in CRT care in Norway, more emphasis should be placed on severe mental illness and more intensive and ambulatory treatments.

Paper 3: Hasselberg N, Gråwe R, Johnson S, Ruud T. **Psychiatric admissions from crisis resolution teams.** 2012 [Submitted]

Background: The intention of the crisis resolution teams (CRTs) is to provide an intensive alternative care to hospital admission for patients in mental health crisis. The aims of this study were to describe the proportions and characteristics of patients admitted to in-patient wards from crisis resolution teams, to identify whether there are differences in admission practices between CRTs and to find predictors of admissions from such teams.

Methods: The study is a naturalistic prospective multicentre study of 680 consecutive patients under the care of eight CRTs in Norway over a three month period in 2005-2006. Socio-demographic and clinical data were collected on the patients, together with data from

the CRTs on organization and operation. Logistic regression analysis for hierarchical data was used to test potential predictors of admission both at team- and patient level.

Results: A total of 146 patients (21.5%) were admitted to in-patient wards. There were significant differences between the CRTs in admission rate. Regression analysis for hierarchical data showed that the odds of being admitted to in-patient wards were significant lower for those patients treated by a CRT operating extended opening hours compared to CRTs operating in office hours only. In addition, it showed that patients with psychotic symptoms, with concrete suicidal plans or self-injury but no death intention, and with a prior history of admissions were more likely to be admitted.

Conclusions: In the future, it should be a priority of national mental heath authorities in Norway to allocate resources to these teams to make extended opening hours for the CRTs possible. In this way, the CRTs might prevent some more admissions, including for some of the patients with moderately severe and relapsing mental health illnesses, although very severely ill patients experiencing imminent risk would not be able to be contained in the community by the CRTs.

6 Discussion

The main findings from the three studies in this thesis are discussed in relation to previous research, implementation of the CRT model and methodological issues.

6.1 Organization, practice and outcome of CRTs

6.1.1 Organization

The results of the first paper showed that the Norwegian CRTs operate without a rapid response, gate-keeping function or 24/7 availability. Five out of eight teams lacked a full-time consultant psychiatrist. There was a tendency for teams operating extended hours to treat patients with more severe mental illnesses.

These findings of lack of gate-keeping acute beds, lack of 24/7 availability and lack of full-time consultant psychiatrist are consistent with previous research reporting departures from the core CRT model (Glover, Arts, & Babu, 2006; Onyett, Linde, & Glover, 2007, Onyett et al., 2008; Jones & Robinson, 2008, Jones & Jordan, 2010; Karlsson, Borg, & Sjølie, 2011).

There have been identified limitations in the gate-keeping function in the UK: The national survey from England (Onyett et al., 2008) found that out of 500 admissions, only half had been assessed by a CRT, even though 72 percent of the CRT claimed to act as gatekeeper to the acute inpatient wards. In a national survey from Wales, 14 teams (93 percent) stated that they were able to gatekeep hospital beds. However, the National Audit Office suggests that about one in five admissions might still be avoided though gate-keeping (Jones & Jordan, 2010). While the CRTs in the UK strive to achieve full gate-keeping function for acute inpatient wards, the Norwegian CRTs have focused on preventing hospital admission for those who are referred or self-referred to the CRT rather than on gate-keeping hospital beds.

In Norway, there might be a risk that patients with more severe mental illnesses bypass CRTs in their admissions to acute psychiatric wards.

In our study, four out of eight CRTs were not open for extended hours. A more recent study from Norway showed that 30 of 51 CRTs operated during office hours only (Karlsson, Borg, & Sjølie, 2011). Even though the UK is still striving to achieve 24/7 CRTs in many regions (Onyett et al., 2008; Jones & Jordan, 2010), none of the CRTs in the UK have such limited opening hours. Glover, Arts, & Babu (2006) found that areas with CRT teams, particularly with 24/7 access, had greater reduction in inpatient admission that those without. Onyett et al. (2008) found that the likelihood of CRTs being involved in admissions was greater for teams available 24/7. In our first paper, we found a tendency for teams operating extended hours to treat more patients with severe mental illnesses.

The lack of full-time consultant psychiatrist and achievement of fully multidisciplinary teams seems to be an international problem. In Wales, the CRTs have been developed primarily using the nursing profession (80.9 percent of the total staff). One of 14 CRTs had a dedicated full-time consultant psychiatrist and three teams had no multidisciplinary staff (Jones & Jordan, 2010). Onyett, Linde, & Glover (2007) examined how the CRT model has been implemented in the UK and identified 243 teams. Almost all teams included nurses, the majority of teams included support workers and just under half included psychiatrists. Other professions were not well represented. In our study, three CRTs had a full-time psychiatrist and six had a full-time psychologist. There might be a somewhat better representation of psychologists in the Norwegian CRTs compared to those in the UK. The UK National Audit Office (Onyett, Linde, & Glover, 2007) reported that there were clinical psychologists in 8 percent of the CRTs. The UK National Audit Office report concluded that fully multidisciplinary teams, including dedicated input from a consultant psychiatrist, are able to

provide better quality of care and integration within mental health services (Onyett, Linde, & Glover, 2007).

One of the main differences in the organization of CRTs between Norway and the UK is the acceptance of self-referrals. Seven of the eight CRTs in our study accepted self-referrals. The CRTs in the UK allow direct referrals only from former service users and their families or carers (Department of Health, 2001). The national survey of CRTs in Wales found that six of 14 CRTs accept referrals from former service users (Jones & Robinson, 2008). The UK National Audit Office (Onyett, Linde, & Glover, 2007) reports that in some CRTs direct referrals are made also by former service users or carers themselves without appropriate liaison. The authors of this report warn against this practice because there is a risk that the CRTs will have to spend considerable time assessing service users who are not at risk for admission.

Self-referrals have been accepted in Norway so that early interventions can be conducted before full-blown and severe crises develop. This issue of accepting self-referrals has been debated in Norway both in the Acute Network and in the group working with the new recommendations for CRTs. Our study gives no evidence that acceptance of self-referrals is either a better or worse method of organizing the admission to the CRTs than is requiring referral from health professionals. With our study design we can not answer whether there acceptance of self-referrals is a cause for lower severity of illness among patients seen by the CRTs.

In the core CRT model a rapid response (within one hour if required) is recommended. In our study, the mean waiting time for admission to the CRTs was 1.6 days, with 40 percent of

patients waiting more than 24 hours for treatment. As far as we know, no other studies have measured the actual response time.

In summary, the main findings related to the organization of the CRTs presented in the first paper suggests that CRTs in Norway provide the core components of a CRT service to an less extent than do those in the UK. Successful implementation of the CRT teams as alternatives to hospital admission requires resources for the CRTs for rapid response, to gate-keep hospital beds, and to operate beyond office hours.

6.1.2 Target group

The results of the first paper showed that the Norwegian CRTs worked with patients with depression and suicidal crises more than those with psychosis. The CRTs also treated patients who were not considered for hospital admission. There were significant variations among teams in patients' total severity of symptoms and social problems, but no variations among teams with respect to patients' aggressive behaviour, non-accidental self-injury, substance abuse or psychotic symptoms.

With regard to the proportion of patients with psychotic symptoms reported in the first paper (14 percent), we based the comparison figures on studies that viewed together had found an average of 48 percent and a median of 46 percent. (Johnson et al., 2005a, Johnson et al.,2005b; Kolbjørnsrud et al., 2009; Guo et al., 2001; Harrison, Alam & Marshall, 2001; Ford et al., 2001; Harrison et al., 2003; Muijen et al., 1992; Fenton, Tessier, & Struening, 1979).

After the publishing of our first paper, and after the establishment of CRTs in the UK, more studies of CRTs and clinical characteristics of their patients have been published. These studies have found an average of 15 percent of the patients had psychotic symptoms (Damsa et al., 2005; Brooker et al., 2007; Robin, Bronchard, & Kannas, 2008; Barker et al., 2011).

In our first paper we concluded that the Norwegian CRTs serve patients with less severe mental illnesses than do the CRTs in the UK. But it seems there has been a decline in the proportion of patients with psychotic symptoms treated in ambulatory crisis resolution and home treatment teams in the UK as well, with the exception of Johnson's two studies from 2005. Johnson's samples were from the inner-London borough of Islington, an area characterized as deprived, which might explain the relatively high proportion of patients with psychotic symptoms in their samples.

In the semi-annual workshops arranged in the planning of this study in 2003-2005, the concept of crisis and the target group was debated among the representatives of the CRTs. It appeared that the features of crisis were perceived differently and the target group of the CRTs was poorly delineated in the CRTs and in other mental health services. This was probably a challenge for those working in the CRTs as well as for those referring patients to these CRTs and for the staff at the inpatient wards in recognizing which patients required treatment from a CRT.

In Manchester, a well-established CRT extended its referral route from taking only those from secondary services to include those from primary care (Harrison, Rajashankar, & Davidson, 2011). This CRT compared details of all referrals to the service in collected in 2005 with similar data collected in 2008-2009. There was a marked increase in the number of individuals accepted by the service in 2008-2009 with a corresponding reduction in duration of contact. This was mirrored by a change in diagnostic profile, with the proportion of individuals with mild to moderate illness increasing from 25 to 50 percent. In 2005, 70 percent of individuals treated had complex care needs compared with 39 percent in 2008-2009. The authors concluded that the main aim of the CRTs in the UK is to prevent hospital admissions for patients with severe mental illness (Department of Health, 2001). Despite this,

some CRTs are also seeing patients who do not suffer from serious mental illness, because they have to meet activity targets set by the government. The strict imposition of numerical activity targets can have a significant impact on service delivery. Although more individuals have been treated under the new arrangements, the emphasis has shifted away from the intensive care of those with severe mental illness (Harrison, Rajashankar, & Davidson, 2011).

One potential explanation for this possible decline in proportion of patients with psychotic symptoms might be that home treatment teams until 2000, focused on being an alternative to hospital admission for patients with schizophrenia and the like, and that the intervention not always was time limited. Another possible explanation is that the establishment of CRTs in the UK came at the same time as the establishment of early interventions in psychosis teams and ACTs, so that patients with psychotic symptoms received treatment in these teams. There have been similar developments in mental health services in Norway, even though the early intervention teams were implemented before the CRTs, and the ACTs afterwards. The increased funding of mental health-related services in Norway between 1999 and 2008 has strengthened the CMHTs in the municipalities with special attention being paid to people with severe mental health problems. There might also have been a higher volume of patients treated through the CRTs in the last decade compared to earlier home treatment teams, and the actual numbers of patients with psychotic symptoms might be the same, as Harrison's findings indicate (Harrison, Rajashankar, & Davidson, 2011).

Treatment of patients with psychotic problems in ACTs and CMHT give this group of patients a better continuity of care than in CRTs. But concern exists that this patient group is still admitted to inpatient wards after the implementation of CRTs, as our third paper indicates.

In summary, the UK mental health policy implementation guide (Department of Health 2001) and the national guidelines for CRTs in Norway (Directorate of Health and Social Welfare, 2006) emphasize the role of CRTs in treating patients with severe and enduring mental health problems. The evidence from our study suggests that those patients made up a minority of referrals, and that a high volume of patients with depression and suicidal crisis is assessed and treated by the CRTs. This finding is consistent with more recent studies on CRTs from other countries. We can not be sure whether this is a consequence of a shift of focus towards patients with less severe mental health problems in the CRTs or a result of the CRTs seeing more patients in total, with the actual numbers of patients with psychotic symptoms being the same.

6.1.3 Content of treatment

The results reported in the second paper suggests that, compared to the intentions of the CRT model, the Norwegian CRTs provided less intensive and less out-of-office care. The CRTs collaborated with other mental health services in 71.5 percent of cases and with families/networks in 51.5 percent of cases.

Intensive support (several times a day if needed), frequent contact (based on home visits) and support for family and peer networks throughout the crisis are emphasized in the Department of Mental Health Policy Implementation Guide (Department of Health, 2001). The Directorate of Health and Social Welfare (2006) promoted the importance of CRT as being mobile, practising home treatment, and emphasizing a family and network orientation (Sjølie, Karlsson, & Kim, 2010). In addition, several articles, reports and a book have emphasized these aspects of CRT care (Bridgett & Polak, 2003a; Bridgett & Polak, 2003b; Johnson et al., 2005a; Johnson et al., 2005b; Karlsson & Hultberg, 2007; Johnson et al., 2007; Onyett et al., 2008; Robin, Bronchard, & Kannas, 2008; Jones & Robinson, 2008). The

CRTs' out-of-office focus includes visits to the patient's home, to the GPs office and to the primary care mental health teams in the municipalities. But home treatment is also the specific aspect of CRT services that focuses on providing treatments (Sjølie, Karlsson & Kim, 2010). Sjølie, Karlsson & Kim (2010) et al. concluded that there is a paucity of articles on clinical intervention methods in home treatment. The clinical intervention methods in home treatment have not been a focus in our study.

To our knowledge, no other studies have measured the actual intensity of care as we did. For more details on content of treatment in our study, see paper II, Table 2. In the national survey of CRTs in Wales (Jones & Robinson, 2008) all teams claimed to be able to provide intensive contact for a period of up to six weeks. In the national survey of Onyett et al. (2008) 97 percent of the CRTs claimed that the team stays intensively involved for as long as necessary for the immediate crisis to be resolved. The most widely and intensively provided post-assessment interventions found in this survey were risk assessment, monitoring of mental state, help with self-help strategies, delivering psychosocial interventions and administering medication. About one third to one half of teams provided other key interventions once a week or more frequently, such as therapeutic work or practical help for family members, help with housing, income, activities of daily living or expanding social networks. Thirty percent of teams reported never using advance directives. Seventy-three percent of teams could initiate new medication regimes, a feature most available among rural teams. In our study, we measured the intensity of care and the content of treatment separately.

Our study did not measure the actual out-of-office contacts or consultations in the patients' homes. In the national survey of Onyett et al. (2008) the Department of Health reports 343 teams providing 95,397 home treatment episodes to 75,868 persons in 2006-07 (these figures are derived from the reporting CRT activity). Damsa et al. (2005) found an

increase in the proportion of patients with more than five ambulatory consultations after the introduction of a CRT (from 17.6 percent to 24.5 percent). Other studies have asked for the focus on home/out-of-office treatment as we did in the CPPS questionnaire and in the questionnaire for the team leaders (see paper II). In the national survey of CRTs in Wales (2008), all teams claimed to be able to provide intensive home treatment for a period of up to six weeks. In a telephone survey of CRTs in Norway, 31 of 51 CRTs replied that they most frequently met the patients at home (Karlsson, Borg, & Sjølie, 2011). Jones & Robinson (2008), Johnson et al. (2005a), Johnson et al. (2005b), Jethwa, Galappathie, & Hewson (2007), Keown et al. (2007), Barker et al. (2011), Robin, Bronchard, & Kannas (2008), Cotton et al. (2007) and Tyrer et al. (2010) report that the CRTs in their studies emphasized ambulatory care at home. The figures from the national survey of Onyett et al. (2008) and the other studies cited give us reason to believe that the CRTs elsewhere provide more home treatment than do CRTs in Norway.

CRTs work alongside a variety of other mental health services (inpatient wards, casualty departments, liaison teams, CMHC including outpatient clinics, ACT and early intervention teams, GP/primary care, and CMHTs). There is a need for effective cooperative working between CRTs and all these other mental health services. In our study, we found that the CRTs collaborated with other mental health services in 71.5 percent of cases. This figure included all manner of contact (consultations, meetings, phone calls ect). In the national survey Onyett et al. (2008) found that in approximately one case out of every eight admissions, the CRT was either unaware that a service user had been discharged, or believed that the service user had been discharged when he or she had not. This suggests scope to improve communications and joint working between ward and CRT staff to improve the identification of people who would benefit from CRT support following discharge.

In our study, the CRTs collaborated with families/networks in 52 percent of cases. This figure included all kinds of contact (consultations, meetings, phone calls ect). In a telephone survey of CRTs in Norway, 38 of 51 reported collaborating with families. Robin, Bronchard, & Kannas (2008) reported that the patients' families were immediately mobilized to encourage their participation. In most cases, the patient's family or close friends were included in the treatment process, including in decisions related to medication. In the analysis of readmission data, Robin et al. found that these hospitalisations involved cases characterised by fragile support from friends and family. Damsa et al. (2005) found an increase in the proportion of patients with families receiving treatment after the introduction of CRT (from 2.2 to 19.4 percent).

In summary, few studies have focused on the actual intensity of care, out-of-office treatment, collaboration with other mental health services or support for family and peer networks. We suggest that future studies should include actual measurements of these core characteristics of the CRT care.

6.1.4 Outcome of treatment

The results of the second paper also showed a positive overall outcome of the crisis, with a small to medium effect size.

Contrary our study, other studies have concluded that the CRT care does not clearly affect patients' mental state (Joy, Adams, & Rice, 2006; Johnson et al., 2005a; Johnson et al.,2005b; Tyrer et al., 2010). Barker et al. (2011) reported that carers said that the patients got better after CRT input, but that study had a low response rate (29 percent). It is evident that there has been limited attention to outcomes at the micro-level in the literature on CRTs (Sjølie, Karlsson, & Kim, 2010).

In the second paper, we wrote that patients with severe mental health illnesses were less common in our sample compared with studies from the UK. This is a possible explanation for the improvement found in our study. I refer to the discussion in a section above that addressed the topic of proportion of patients with psychotic symptoms in more recent CRT studies (section 5.2.2).

In summary, there is little research on the issue of outcome of CRT care. The need for further studies of the outcome of CRT care is evident.

6.1.5 Predictors of admission

In the third paper, we reported that the odds of being admitted to in-patient wards were significant lower for those patients treated by a CRT operating extended opening hours compared to CRTs operating in office hours only. We found that patients with psychotic symptoms, with concrete suicidal plans or self-injury but no death intention, and with a prior history of admissions were more likely to be admitted.

The risk of being admitted decreased significantly for patients seen by CRTs providing services with extended opening hours. In paper I, we found that there was a tendency for teams that operate extended opening hours to treat patients with more severe mental illnesses. With regard to the topic of opening hours, I refer to the discussion in a section above (section 6.1.1). To our knowledge, no other study has used opening hours as a predictor of admission to in-patient wards.

A history of previous psychiatric admission, suicidality and psychosis are robust determinants in predicting admissions (NIMHE; 2003; Harrison et al., 2001; Guo et al., 2001; Brooker et al., 2007; Brimblecomb, O'Sullivan, & Parkinsson, 2003; Dean & Gadd, 1990; Schnyder et al., 1999). However, Cotton et al. (2007) did not find that patients who had a

history of admission, being suicidal and had psychotic symptoms were more likely to be admitted. But we find that patients with a history of compulsory admission were more likely to be admitted. At worst this pattern of admitting patients with history of previous admissions can lead to the "revolving door syndrome" of treatment, discharge and relapse with readmission. CRT care is aimed to interrupt this cycle and modify the sense of inevitability of admission in patients, carers and clinicians, and offer an alternative treatment at home (NIMHE, 2003). In our third paper we concluded that the Norwegian CRTs seem not to break this readmission circle in patients with the most severe and relapsing mental health illnesses.

We agree with the conclusion of Cotton et al. (2007) that we need a more detailed investigation of the working practices of CRTs and how these influence the effective prevention of admission. A further potentially important factor is the extent to which teams permit patients to choose to go to a hospital if this is their preference. Current formulations of the model suggest that home treatment should be delivered whenever feasible and economic pressures certainly favour avoidance of admission. But the increasing emphasis on service users' choice conflicts with these imperatives. A proportion of patients will require hospitalization during psychiatric crisis and can not safely be supported in the community.

In summary, patients with the most severe and relapsing mental health illnesses are still in need of admissions to inpatients wards even after the establishment of CRTs.

6.2 Implementation

One of the main aims of this study was to describe implementation of CRTs in Norway. Guidelines and recommendations have been developed for the implementation of the CRT model both in the UK and in Norway (Department of Health, 2001; Directorate of Health and

Social Welfare, 2006). In the table below we compare the key organizational characteristics of the two guidelines and recommendations:

The English	**The Norwegian**
24/7	Extended opening hours, including availability office hours, evenings and weekends
Gate-keeping functions for acute wards	Gate-keeping functions for acute wards as far as possible
Intensive contact; at least once on each shift	Frequent contact
Time-limited intervention, usually within six weeks	Time-limited intervention, usually within four weeks
Separate multidisciplinary team	Multidisciplinary team
Psychiatrist are part of the team	Physician available for the CRT
Only emergency referrals	Accept self-referrals
Rapid emergency assessments; within an hour if needed	Rapid contact, within 24 hours
Home treatment whenever feasible	The CRT should be able to offer home treatment
Facilitate early discharge from hospital admission	Facilitate early discharge from hospital admission
Works in partnership with other services and the family	Works in partnership with other services and the family

As this table shows, the guidelines and recommendations are similar, but the main differences are less specific recommendations in the Norwegian guidelines regarding opening hours, gate-keeping function, intensity of the care and the emphasis of home treatment. The Norwegian CRTs also accept self-referrals. Even though the Norwegian national recommendations can be criticized for being more vague than the guidelines in the UK, a comprehensive and detailed implementation guideline does not guarantee adequate implementation. In both countries, as shown above, a difference between aspiration and current practice is evident.

Several authors have written about obstacles to implementation of best practice.

Tansella & Thornicroft (2009) have pointed out that there is a gap between the best available scientific knowledge and the implementation in a routine clinical practice. They described three phases, including different barriers or facilitators at the national, local and individual levels, in understanding the implementation of knowledge in the health science into routine clinical practice. The three phases are called adoption in principle, early implementation and persistence of implementation:

1. In the adoption in principle phase the authors emphasize the importance of policy priority both nationally and locally and the importance of funding of clinical trials and of local "early adopters" of the model. In Norway, the Minister of Health made the decision to implement CRTs in Norway after visiting a CRT in the UK in 2005. But the first CRTs were already established in Norway and had developed their service inspired by crisis-teams in Finland. These first CRTs were operating with extended hours, were emphasizing working with the inclusion and participation of the professional and social network in the treatment, and focused on preventing hospital admission for those who were referred or self-referred to the CRT rather than on gate-keeping hospital beds. These teams were inspiring the establishment of new CRTs in Norway at that time.

2. In the early implementation phase, the authors emphasize the importance of developing clinical guidelines and establishing networks of implementation sites, availability of enough resources for implementation and systems of assessing practice fidelity. In Norway, recommendations for CRTs were developed (Directorate of Health and Social Welfare, 2006) and the semi-annual meetings of the MAP project and the meetings between these semi-annual meetings was functioned as a network for the early established CRTs. But the teams were not given the resources to operate with

24/7 availability and there was a lack of full-time consultant psychiatrists. Lack of resources, particularly staff resources, was the most frequently cited obstacle to effective implementation in the UK survey of Onyett et al. (2007, 2008). A system of assessing practice fidelity was not developed: in paper I we recommend development of fidelity scales and supporting toolkits for achieving fidelity to recommended practice.

3. In the persistence of implementation phase, the authors emphasize the importance of continuing networks of implementation sites, availability of enough resources, staff training and systems to assess practice fidelity. In Norway, the Acute Network functions as a continuation of the MAP project as a network for the CRTs. There are still many CRTs operating during office hours only (Karlsson et al., 2011), and there is no system to assess practice fidelity. Since 2011, a project in the UK led by Professor Sonia Johnson has engaged in developing a more specific model for CRTs and in developing and testing fidelity criteria. Norway has been invited to take part in this project.

In the UK-survey, Onyett et al. (2008) found that an important hindrance to implementation was a lack of local understanding of the CRT's gate-keeping role and a considerable pressure of referrals for assessments that do not subsequently lead to home treatment.

McHugo et al. (2007) have stated that an important hindrance to widespread dissemination of evidence-based practices is a lack of knowledge about the process of implementation. Most evidence-based practices are complex and may be difficult to implement without adequate structure and support. Some studies have suggested that the

principal reason for failure lies in an inadequate implementation plan with no clear model specification. It can be argued that this has been the case in Norway.

But even though the whole CRT model were not implemented in Norway, it is likely that these teams have increased the patients access to specialized care though more rapid crisis assessments compared to the years before the establishment of CRTs. In addition, the "triage" role of the CRTs mentioned in paper II may have increased the patients' utilization of other services through more appropriate referrals to other parts of the mental health system.

It can probably be argued that the requirement for rapid implementation and the lack of sufficient resources in both the UK and Norway in addition to a lack of implementation plan and systems to assess practice fidelity, have contributed to the disparties between aspiration and current practice that have become evident in both countries.

6.3 Methodological issues

6.3.1 Strengths

The study has several strengths.

Preparation and organization: The data collection was well prepared before the actual inclusion period and the MAP study was organized as a research network consisting of clinicians from the participating CRTs (see the method section for more details). This worked to assure that the staff felt ownership of the study and were dedicated in collecting the data.

Sample: Another strength of this study was that the sites managed to collect data on nearly all patients treated by CRTs in Norway during the inclusion period. Collecting data on all patients over the course of three months or more at eight of the nine CRTs in Norway make the sample representative for CRT patients at the time.

We registered a considerable number of variables on CRT characteristics, patients, the content of treatments, admissions to inpatient wards and practice and program climate at the CRTs.

The sample size and the number of variables are considerable, also compared with international studies of CRTs.

Multicentre: The study was conducted at eight CRTs. The benefit of being a multicentre study is the possibility for including a wider range of population groups from different geographical locations. This includes the ability to compare results between CRTs.

Naturalistic design: This implied there is no intervention in this study and therefore gave us a realistic picture of what the CRTs and their patients were really like.

All these strengths suggest that the data may be considered to be representative of such teams in Norway: that is, the data have a good external validity.

Logistic regression analysis for hierarchical data: To our knowledge, no other studies of CRTs have used logistic regression analysis for hierarchical data as we did in paper III to test potential predictors of admission to in-patient wards both at team- and patient level.

6.3.2 Limitations

Several methodological limitations need consideration.

Design: The naturalistic design is limited as it has no comparison group and no randomization. This implies that the results of this study do not provide any causal explanations of the findings. Randomized controlled trials (RCTs) are generally considered the gold standard evidence for treatment effectiveness in medicine, although it has been

argued that the complexity of interventions and the many factors that may cause outcomes to vary among settings may limit the usefulness of RCTs in mental health services research (Slide & Priebe, 2001).

We were not allowed by the Norwegian Data Inspectorate to collect data on the municipalities in which the patients lived. The acute psychiatric wards admit patients from areas both with CRTs and without CRTs. Therefore, we could not differentiate admission data to acute wards related to catchment areas with and without CRTs and thus could not report any data on the CRT intervention effectiveness related to admission rate.

Complex interventions: The CRT intervention is complex, consisting of many different components. Evaluation of complex interventions is challenging because the intervention consists of many 'interconnected' parts that interact in different ways. It is difficult to differentiate which of the various elements of the intervention is effective. There may also be individual differences as to which elements of the intervention work for different patients.

Inter-rater reliability: The collection of such large amounts of data, recorded and rated by many different persons in several different teams, was complicated and challenging. The study did not include procedures to secure the inter-rater reliability. Therefore, we do not know if the clinicians in the CRTs had similar interpretation of the questions on the registration form, which may have affected the quality of the data. This may have caused some uncontrolled error variances. However, the project coordinators and some clinicians from each team participated in developing the registration forms, clinicians participated in training programs in relation to HoNOS and the project coordinators were responsible for instructing the other raters on the data collection by their team.

Missing data: In collecting so much data, it is almost impossible to avoid some missing data. The diagnosis-variable was the one with the most missing values: 54 percent of patients in one team, 17 percent in another team, and 3–10 percent for the other teams. The teams with the most missing values on the diagnosis variable operated without a physician/psychiatrist or psychologist as a part of the team and with nurses and social workers as the majority of staff. Due to missing diagnoses for many patients, HoNOS scales are used instead of diagnosis in the analyses of type and severity of mental problems. But even though the HoNOS subscales is a measure of type and severity of psychiatric problems and social functioning, it can be argued that the scales have a coarser division of mental health problems compared to diagnoses. In addition, mental health problems as overactive, aggressive and disruptive behaviour, non-accidental self-injury, drinking and drug-taking, hallucinations and delusions, depressed mood and problems in relationships have their own subscales, but problems such as phobia, anxiety, compulsive, stress, dissociative disorders, somatoform, eating problems, sleeping problems and sexual problems are scored in one subscale called "other mental and behaviour problems". This is the subscale with the lowest reliability (Ruud & Reas, 2002). When it comes to the mental health problems measured in HoNOS 8, diagnoses would probably have been better.

Regarding missing diagnoses for many patients, one cannot exclude the possibility that the missing values can be a result of a scepticism by some clinicians towards diagnoses as a way of categorizing patients with mental health problems.

One of the CRTs did not register the length of treatments (n=46). An imputation of missing values was performed with a regression model. We identified the socio-demographic and clinical variables that predicted length of treatment. For each of these patients, we calculated the length of treatment based on the estimated coefficients of these predictor

variables. We tried to collect the length of treatment data retrospectively from this team, but the project leader had left the team and nobody was able to find registered data.

Multilevel analysis: The marginal explained variances that were found at team level in the multi-level analysis in paper II might lead to the suggestion that the chosen variables lacked the discriminatory power necessary for comparison at the team level. In addition, only eight teams participated in this study. In paper II, we could not link patients' treatment outcome to individual clinicians, because the CPPS were mean values on team level. The possible random distribution attributed to the unreliability of the GAF scale may also have reduced the amount of variance explained in paper II. Nevertheless, the results of this study indicated that almost all of the variance in treatment outcome could be attributed to differences among patients.

Observer bias: Our measurements were based not on patients' reports, but on the clinical staff's evaluations. Having the clinicians from the CRTs collect the data risks observer bias, especially with respect to ratings on HoNOS and GAF scales at initial assessment and discharge. Staff members from these teams were participating in the development of a new service in Norway catering to people experiencing a mental health crisis. This might have increased the enthusiasm of the staff for their work, which may again have caused the staff to rate the patients' conditions after treatment as better than they really were. However, low to moderate effect size of outcome may indicate that there is no great bias in outcome reporting.

Variation among the CRTs: There was significant variation among the CRTs related to organizational structure, staffing, skills, qualifications, operating hours, availability, referral procedures, activities such as collaboration, ambulation and home-treatment, authority to admit to inpatient wards, use of beds at community mental health centres and being housed at

different places at CMHCs and hospital wards. These substantial differences among the CRTs were a methodological challenge that was enhanced by the relatively small number of teams (eight). Although dimensions may appear similar, variations in service delivery may happen. Variation in area population or in other aspects of the mental health service system may account for some of these differences. In this study we have tried to describe the similarity and diversity among them. Some organizational features may be omitted. The differences found raise questions about whether different implementations of the CRT model may produce substantially different results in terms of preventing admission.

Variation among the patients: There was substantial variation among the CRTs in relation to proportion of emergency referrals, whether the patients had had previous contact with mental health services, the total severity of mental health problems, whether the patients had had problems with depressed mood or had problems in relationships or suicidal problems or drinking problems and so on. This gave the impression that the CRTs might differ slightly in their target groups.

Diversity of treatment perspectives: In addition to significant variations among the CRTs related to organizational structure and patients treated, the CRTs contained multiple professional disciplines that imply diverse perspectives. The various CRTs may also have developed their own "team cultures" with their own priorities (objectives, program components, activities). This may have caused differences in service delivery both within and among the CRTs.

The diversity of perspectives makes it challenging to determine which dependent variables to chose and how to interpret the findings.

CRTs as a part of the health services: For many patients CRT care is a part of a treatment chain in the mental health system and the CRTs is not a program that is isolated from the overall mental health system. The patients flow among services for which they are among the target population. In some cases there are several services working with the patient and it is difficult to determine where the CRT services begin/end and other services end/begin. In addition to CRT care there are inpatient wards, CMHC, primary care mental health teams, social services, and home nursing. The clinical benefit of the CRTs might as well be a result of service providers who refer the patients, or might be apparent in another part of the mental health service. Admission rates may also be affected by the other health services in the catchment area.

The appropriateness of the referrals: An evaluation of the appropriateness of the referrals to the CRTs might be determined by pressures in other parts of the mental health system.

7 Ethics

The study was carried out in accordance with the declaration of Helsinki (1964). The study was approved by the Regional Ethical Committee for Research in Health and by the Norwegian Data Inspectorate. The Directorate of Health and Social Affairs gave consent for the use of information from the health services.

Patients with severe mental health problems are vulnerable and fragile in times of crisis. Some of them even lack the capacity to make a decision about their care at the time of the crisis. In our study, all patients 18 years or older who had face-to-face consultations with the CRT were included. Written consent was not requested as the Regional Committee on Ethics in Medical Research agreed that, for ethical reasons, it was important to include all patients in need of acute treatment, especially those with severe mental illness who probably would not have given written consent. This study was based on data routinely recorded by staff and did not include any intervention or manipulation of the patients. We were not allowed to register data that could be linked to the patients such as municipality and full date of birth. The CPPS data from the clinicians was anonymous. Data on patients received by the researcher was de-identified, but was not fully anonymous.

One can still argue that this does not fully justify not asking for informed consent, as some patients would presumably not have given written consent.

8 Conclusions

This thesis investigated the implementation, outcome of crisis and admissions to inpatient wards from CRTs in Norway. In conclusion, CRTs included in this study had not implemented the entire CRT model, were mainly treating patients with depression and suicidal problems and had a slightly positive outcome of CRT care. The risk of being admitted decreased for patients seen by CRTs with extended opening hours. The patients with the most severe and relapsing mental health illnesses were admitted to inpatient wards. Except for the findings of positive outcome of CRT care and the increased risk of being admitted from CRTs with limited opening hours, these findings are largely consistent with the CRT literature.

In sum, these three papers may indicate that Norwegian CRTs do not do what they were intended to do for the entire specified target population. But it might be just as correct to conclude that these CRTs are fulfilling *a* role in their catchment areas for a group of patients in need of treatment. Nevertheless, the Norwegian CRTs have some potential for improvements related to gate-keeping function, 24/7 availability, rapid assessments, multidisciplinary intensive and ambulatory care and preventing inpatient admissions for some of the patients with moderately severe and relapsing mental health problems. National reports from the UK have identified significant limitations in implementation there as well, including problems of gate-keeping, 24/7 availability, lack of consultant psychiatrist and problems of achieving continuity of care. Resource constraints and the requirement for rapid implementation are likely to contribute to the problems identified in this study.

Fidelity scales of assessment of critical ingredients have not been established for CRTs as they have for assertive outreach teams. However, there is some consensus on the key characteristics of the CRT model. For fuller implementation of the CRT model, fidelity scales

and supporting toolkits for achieving fidelity might be useful. A further investigation of barriers to implementation is recommended.

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RESEARCH ARTICLE Open Access

An implementation study of the crisis resolution team model in Norway: Are the crisis resolution teams fulfilling their role?

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Abstract

Background: The establishment of crisis resolution teams (CRTs) is part of the national mental health policy in several Western countries. The purpose of the present study is to describe characteristics of CRTs and their patients, explore the differences between CRTs, and examine whether the CRTs in Norway are organized according to the international CRT model.

Methods: The study was a naturalistic study of eight CRTs and 680 patients referred to these teams in Norway. Mental health problems were assessed using the Health of the Nation Outcome Scales (HoNOS), Global Assessment of Functioning Scales (GAF) and the International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10).

Results: None of the CRTs operated 24 hours a day, seven days a week (24/7 availability) or had gate-keeping functions for acute wards. The CRTs also treated patients who were not considered for hospital admission. Forty per cent of patients waited more than 24 hours for treatment. Fourteen per cent had psychotic symptoms, and 69% had affective symptoms. There were significant variations between teams in patients' total severity of symptoms and social problems, but no variations between teams with respect to patients' aggressive behaviour, non-accidental self-injury, substance abuse or psychotic symptoms. There was a tendency for teams operating extended hours to treat patients with more severe mental illnesses.

Conclusions: The CRT model has been implemented in Norway without a rapid response, gate-keeping function and 24/7 availability. These findings indicate that the CRTs do not completely fulfil their intended role in the mental health system.

Keywords: acute psychiatric services crisis resolution teams, mental health services, implementation study, patient characteristics

Background

The key characteristics of CRT model are separate multidisciplinary mobile teams offering rapid short term emergency services in the community, as an alternative to inpatient admission [1]. CRTs are intended to operate 24 hours, 7 days per week with a gate keeping function to acute wards. The target group is patients with psychosis or other mental health problems so severe and acute that without the involvement of a CRT, acute admission would usually be necessary [1-5]. Establishing CRTs is a part of the national mental health policy in several countries. In the UK, CRTs have been rapidly implemented across the country with 343 teams in place in 2006/07 [6], and in Norway 35 of the 75 community mental health centres (CMHCs) had established a CRT by 2008 [7]. Both CRTs and assertive outreach teams are intended to manage episodes of acute mental illness without admitting the patient to hospital. Assertive outreach teams provide intensive long-term community-based support for frequently relapsing and difficult-to-engage patients enrolled in their programme, while CRTs provide crisis resolution to anyone considered to be in the target group [8,9].

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A Cochrane review of randomized controlled studies on home care crisis treatment from the 1960s to the 1980s showed that such treatment could be effective [10], but this may not be representative of the recent model for CRTs. A later review found that CRTs were promising, but could not draw conclusions because of limited research [11]. In the last decade, only one randomized controlled trial of a CRT has been completed [12]. Johnson et al found a reduction in hospital admissions and a small increase in the satisfaction of patients receiving CRT care compared with standard care. Other uncontrolled recent studies also suggest that the introduction of CRTs was associated with a reduction in admissions [9,13-16] and there is some evidence that service users are more satisfied with CRTs than with standard care [13,17-19].

Some recent studies have described characteristics of CRTs. Glover et al used routine data to analyse national changes following the implementation of the CRT model across the UK [9]. They found that teams operating 24 hours a day, seven days a week (24/7 availability) were most likely to be associated with reduced admissions. Onyett et al examined how the CRT model has been implemented in the UK and identified 243 teams [20]. Almost all teams included nurses, the majority of teams included support workers, and just under half included psychiatrists. Other professions were not well represented. Sixty-eight per cent reported that they were gate-keepers to acute wards and 54% offered 24/7 availability.

Regarding patient characteristics of the CRTs, in the randomized controlled trial of Johnson et al, patients' average age was 38 years, about half were men, half were living alone, half were from ethnic minorities, most were unemployed, and 37% had a psychotic disorder [12]. In a non-randomized study by Johnson et al, patients' characteristics were similar except for some minor differences in the number of ethnic minorities, unemployment, and patients with psychotic diagnoses [13]. In a Norwegian study of one CRT, 27% had hallucinations or delusions [21]. In studies of home-care acute psychiatric treatment, based on data collected before the government proposed the establishment of nationwide CRTs in the UK [2], it was found that 53-62% of patients had psychotic disorders [22-25].

Several authors have pointed out that there is a gap between models based on what is known about effective treatment, and the implementation of effective routine clinical practice [26-28]. Tansella and Thornicroft [26] described three phases, including different barriers or facilitators at the national, local and individual levels, in understanding the translation of knowledge in the health science into routine clinical practice. The three phases are called adoption in principle, early implementation and persistence of implementation. This is a study of how the transfer of knowledge from the CRT model has been implemented into routine clinical practice in Norway.

The aims of the present study were to a) describe the characteristics of Norwegian CRTs and their patients, b) examine if there are differences between the CRTs with reference to key team characteristics and patients' mental health problems, c) examine if the teams cluster into particular groups with shared characteristics, and d) examine whether the CRTs in Norway are organized according to the international CRT model.

Methods

Study design

The study was a naturalistic study on eight CRTs and their patients in Norway, as part of the Multicentre Study on Acute Psychiatry (MAP) in Norway. The multicentre study was planned and implemented by a national network for the evaluation of acute psychiatric services.

Setting

In 2005, the Norwegian health authorities decided to implement the CRT model in Norway, inspired by the implementation of CRTs in the UK. The implementation of CRTs in Norway was proposed to increase accessibility to specialized mental health services for patients experiencing acute mental health crisis. The teams were to offer rapid assessment and 24/7 availability, and be an alternative treatment to acute admission.

Norway has 4.8 million inhabitants. There are large areas with low population density which implies longer distances to acute wards for the patients and longer distances to patients' residences for the staff of the mental health services. The national mental health system for adults consists of three service levels: at the first level there are GPs and mental health teams in primary care settings run by the 430 municipalities. Some municipalities have residential or sheltered accommodation. At the second level, there are 75 CMHCs. The CMHCs comprise different types of care units and teams. The outpatient teams comprise general outpatient teams, psychosis/rehabilitation/ambulatory teams, drug/alcohol teams and day/group teams. Some teams provide inpatient treatment at the CMHCs [7]. Assertive outreach teams are in the early stages of implementation in Norway. At the third level, there are psychiatric hospital wards, including acute wards (21 beds per 100,000 inhabitants).

Sample

The sample consisted of all 680 patients seen by eight CRTs in 2005 or the beginning of 2006. All patients 18

years or older, who had face-to-face consultations with the CRT, were included in the study. The inclusion period was three months, but could be prolonged to include 60 patients from each team. The number of 60 patients was chosen to include a reasonable sample of patients from each team for comparative data analysis and to give a picture of the implementation process of the CRT model. The number of patients included by each team ranged from 46-147. There were no exclusion criteria.

All the CRTs in Norway at that time took part in the study, except one that had recently carried out a study of its own [21]. The CRTs were from all parts of the country. Two teams were in urban areas, and the other six were in smaller towns or more rural areas. None of the catchment areas of the CRTs can be characterized as highly deprived. One of the teams is situated within an area with a significant number of people from minority ethnic groups (26%, compared to 2-16% for the other CRTs). The eight CRTs in this study covered 15.4% of the total population in Norway.

All patients were included. Written consent was not requested as the Regional Committee on Ethics in Medical Research agreed that, for ethical reasons, it was important to include all patients in need of acute treatment, especially those with severe mental illness who probably would not have given written consent.

Registration form, instruments and data collection

A registration form was used to collect data from each treatment episode. The form was developed in the network doing the multicentre study, and the final version was based on experiences of earlier pilot drafts. The data on patients included socio-demographic and clinical data. Type and severity of psychiatric problems and level of functioning were assessed using the International Statistical Classification of Diseases and Related Health Problems, 10th revision (ICD-10) for diagnoses [29], the Health of the Nation Outcome Scale (HoNOS) [30] and Global Assessment of Function Scales (GAF) [31-33]. The HoNOS has 12 items with a five-point scale (from 0-4) regarding severity of clinical and social problems. We used a split version of the GAF consisting of two scales ranging from 1-100 for symptom severity and functional impairment, respectively. Staff members who participated in the study received half a day of training in the use of the HoNOS, as provided in the UK, and all clinicians were trained in using the GAF as it was the routine measure required for all treatment episodes in the mental health services in Norway. Other studies with the same training of clinicians have repeatedly shown acceptable inter-rater reliability (intra-class correlation coefficient of. 60-.89) for the HoNOS subscales, with the exception of scale 8 [34]. These reliability data were from the approved Norwegian translation of HoNOS as used in this study. Scale 8 was therefore excluded from the analysis of single HoNOS scales. Studies have indicated moderately high internal consistency and low item redundancy of the HoNOS sum score, and therefore support the use of sum scores as a meaningful summary of severity of symptoms [35]. The Alcohol Use Scale (AUS) and the Drug Use Scale (DUS) were also used at admission [36,37] to rate the severity of alcohol and drug use, respectively. These are five-point scales ranging from "abstinence" (1) to "abuse" (3) to "addiction with hospitalization" (5). A suicidal behaviour scale (suicidal ideation, plans or attempts) administered at the time of referral was designed in collaboration with the National Centre for Prevention of Suicide [38]. ICD-10 diagnoses were made during the treatment.

Staff members from each team filled in the registration forms on the patients they were treating, and one team member coordinated the data collection for the team.

A questionnaire on how the CRT was organized and operated was completed by the leader of each team. This included information on catchment area, opening hours, number of team members and their profession, accessibility to beds, and availability of psychosis teams (early intervention teams and/or case management teams) or community mental health teams in the catchment area.

Approval from authorities and contributions from user groups

The study was approved by the Regional Ethical Committee for Research in Health and by The Norwegian Data Inspectorate. The Directorate of Health and Social Affairs gave consent for the use of information from the health services.

Representatives of the user organizations Mental Health Norway and The National Association of Relatives in Mental Health participated in a reference group and in the workshops for planning and preparation of the study.

Data analysis

For HoNOS scales with missing data (5.5% across scales) the rating was set to 0. This was considered to be the most probable rating based on the skewed distribution, with most patients rated 0, and it was assumed that clinicians would forget to mark the rating when there was no indication of problems. In addition, this was chosen in favour of imputation because it was the most conservative way to measure the patients' severity of mental health problems.

Diagnoses were missing for 54% of patients in one team, 17% in another team, and 3-10% for the other

teams. In Norway, only physicians and psychologists are authorized to make ICD-10 diagnoses. The teams with the most missing values on the diagnosis variable operated without a physicians/psychiatrist or psychologist as a part of the team and with nurses and social workers as the majority of staff. In these teams, diagnoses were made by physicians who were not a part of the team. These physicians took part in some consultations that focused on issues such as psycho pharmacological treatment, admissions to acute psychiatric ward, suicidal risk, violence risk or compulsory admission. In addition, the staff did use previous diagnoses made by physicians/psychologists in other mental health services.

For this reason, HoNOS scales were used instead of diagnosis in the analyses of type and severity of psychiatric problems. There was no significant difference between patients with or without diagnosis on the sum scale of HoNOS score or GAF symptoms and functioning score.

Continuous and some ordinal variables are reported with means and standard deviations and categorical and some ordinal variables are reported with frequencies and percentages. Independent sample *t*-tests, chi-squared tests, one-way analysis of variance (ANOVA), Mann-Whitney *U* and Kruskal-Wallis tests were used to test for statistically significant differences. For skewed variables, both parametric and non-parametric tests were used and results did not differ. Multiple comparisons with Bonferroni post hoc corrections were used to reduce the probability of type 1 errors. Thus, with an alpha level of 0.05, the individual error rate was reduced to 0.002 when using 25 items (0.05 divided by 25).

Hierarchical cluster analysis was used to identify homogeneous groups of CRTs based on key team characteristics. A dissimilarity matrix was calculated using squared Euclidean distance and clustering performed by Ward's method. Comparison of identified clusters was made by chi-square, *t*-tests and Mann-Whitney *U* tests on key patient characteristics. Both SPSS and Clustan showed the same results.

SPSS software (version 15 for Windows; SPSS Inc., Chicago) was used for data analysis. A significance level of 0.05 was used.

Results

Characteristics of the CRTs

Table 1 shows some characteristics of the organization and policy of the eight CRTs in this study.

None of the teams had 24/7 availability or gate-keeping functions to acute inpatient wards, and they all treated some who were not considered for hospital admission.

The number of team members varied substantially (range = 4-19 full time equivalent staff members, which was 0.5-2.0 staff members per 10,000 inhabitants). Some of the CRTs had been established recently, while others had been in operation for longer periods of time (range = 0-6 years). The CRTs were led by different professionals (psychiatrist, psychologist or psychiatric nurse). The CRTs used a team approach to patients, and two clinicians usually participated in each consultation.

Table 1 Characteristics of CRTs (n = 8)

Population of catchment areas: mean (range)	87,000 (65,000-115,000)
Opening hours: n	
24/7 (24 hours a day, 7 days a week)	None
Availability at night by phone	2
Team operates extended hours and at weekends	3
Team operates extended hours	1
Team operates office hours 5 days a week	4
Gate-keeping of admissions to acute psychiatric wards: n (%)	0
Staffing: mean (range)	
Number of team members (FTE)	9.1 (4.3-19.2)
Number of clinical disciplines	3.5 (3-5)
Psychiatrist/phyicians: mean (range)	0.6 (0-1.4)
Psychologist/specialist in psychology	1.5 (0-2.5)
Nurse/psychiatric nurse	6.7 (1.5-6.2)
Social workers	0.9 (0-1)
Other disciplines	1.8 (0-7.3)
Office staff	0.6 (0-2)
Team with a full-time psychiatrist: n (%)	3 (37.5)
Other characteristics: n if not otherwise specified	
Accepting patients for consultation without referral	7
Accessibility to beds (not acute inpatient beds)	2
Authority to admit patients to acute in-patient wards	4
How fast do the teams respond to referrals: range in hours	12-48
Psychosis team in the area	5

The mean waiting time for admission to the CRTs was 1.6 days (*SD* = 10.4), and the median waiting time was one day. Approximately 40% of patients waited more than 24 hours. Patients with psychotic symptoms waited significantly less time than patients with other mental health problems.

Patient characteristics

The socio-demographic and clinical characteristics of the 680 patients are presented in Table 2.

Most patients were aged between 20 and 50 years, slightly more than half were women. Approximately half of the patients were unmarried and living alone, and one-quarter were in paid employment. Twenty-three patients (2%) were homeless. Twelve patients (1%) were not of Norwegian ethnicity, compared to 8% of the

Table 2 Characteristics of patients (n = 680), and variations between CRTs (n = 8)

Variables	Total sample	Significance of differences between teams*
Socio-demographic variables		
Age (years), mean (*SD*)	40.1 (15.1)	0.066
Gender: n (%) female	396 (58.8)	0.507
Single, divorced or widowed, n (%) □	415 (62.5)	0.022**
Living alone, n (%)	396 (58.2)	<0.001**
Employed at present, n (%)	175 (25.7)	0.006**
Not receiving benefit or disablement pension, n (%) □	258 (38.0)	0.035**
Clinical variables		
Clinical diagnosis (ICD 10) n (%)		
F 10-19 Substance use disorders	53 (7.8)	0.008**
F 20-29: Schizophrenia spectrum disorders	60 (8.8)	0.002**
F 30-39: Mood/affective disorders	220 (32.4)	0.003**
F 40-49: Neurotic, stress-related and somatoform disorders	147 (21.6)	<0.001**
F 60-69: Disorders of adult personality and behaviour	30 (4.4)	<0.001**
Missing diagnosis	119 (17.5)	0.001**
GAF: mean (*SD*)		
Symptoms:	48.4 (11.6)	<0.001**
Functioning:	49.6 (12.6)	<0.001**
Substance abuse or dependency: n (%)		
Alcohol (AUS):	74 (10.9)	0.001**
Drugs (DUS):	73 (10.7)	0.100
Suicidality: n (%)		
No suicidal thoughts/plans	260 (39.8)	<0.001**
Passive death wishes/suicidal thoughts, no concrete plans	261 (39.9)	
Concrete suicidal plans/self-injury, but no death intentions	110 (16.8)	
Self-injury/death intentions	23 (3.5)	
Severity of clinical and social problems: Mean (*SD*)		
HoNOS Total score	12.5 (6.26)	< 0.001**
HoNOS Total symptom severity (HoNOS 1-8):	7.6 (3.72)	< 0.001**
HoNOS Total social problem severity (HoNOS 9-12):	5.0 (3.53)	< 0.001**
HoNOS items: n (%) (score 2-4 on scale 0-4)		
HoNOS 1 Overactive, aggressive or disruptive behaviour	115 (16.9)	0.442
HoNOS 2 Non-accidental self-injury	126 (18.5)	0.447
HoNOS 3 Problems with drinking or drug-taking	130 (19.1)	0.074
HoNOS 6 Problems with hallucinations and delusions	99 (14.1)	0.273
HoNOS 7 Problems with depressed mood	467 (68.7)	0.001**
HoNOS 9 Problems in relationships	322 (47.4)	0.001**
Other characteristics		
Previous contact with the mental health service: n (%)	401 (59.0)	<0.001**
Emergency referrals: n (%)	489 (71.9)	<0.001**
Self-referrals: n (%)	172 (25.3)	<0.001**
Pharmacological treatment: n (%)	241 (35.4)	< 0.001**
Waiting time: mean (*SD*)	1.6 (10.4)	0.137

*p values from chi-square tests, ANOVA and Kruskal-Wallis tests **significant differences between teams

□ not significant using Bonferroni adjustment for multiple comparisons

general population of Norway. The majority of patients had primarily mood and anxiety disorders, and 14% had psychotic symptoms.

About 60% of the total sample had had previous contact with the mental health services. In the past 12 months, 38% of patients had received treatment at an outpatient clinic, and 22% had been in an inpatient ward. Patients with previous contact with the mental health services had significantly more severe mental health problems on most clinical measures (HoNOS

total score; 13.6/11.0, p <.001, GAF symptoms; 46.7/50.7, p <. 001, and GAF functioning; 47.5/52.1, p <. 001).

Three in four were emergency referrals and 25% had self-referred to the CRT. Patients with emergency referrals had significantly more severe mental health problems on most clinical measures than those who were not referred as an emergency (HoNOS total score; 13.2/10.7, p <. 001, GAF symptoms; 47.2/51.2, p <. 001, and GAF functioning; 48.5/52.3, p <. 001). Those who self-referred did not differ significantly on any clinical measures from those who were referred (HoNOS total score; 12.9/12.4, p = 0.42, GAF symptoms; 47.5/48.6, p = 0.28., and GAF functioning; 48.0/50.1, p = 0.05).

Variation between teams and their patients

Table 2 shows comparisons between the CRTs on patients' socio-demographic and clinical characteristics. After Bonferroni adjustment for multiple comparisons, there were no significant differences between the CRTs on socio-demographic variables, except whether patients were living alone, and whether patients were employed, with the two urban CRTs serving more unemployed patients. There were no significant differences between the CRTs on proportions of patients with overactive, aggressive or disruptive behaviour (HoNOS 1), non-accidental self-injury (HoNOS 2), problems with drinking or drug-taking (HoNOS 3), or problems with hallucinations and delusions (HoNOS 6). There were significant differences between teams on most other clinical variables.

The hierarchical cluster analysis indicated that the CRTs clustered on operating during office hours (except for one team) and lack of a psychosis team in the catchment area. However, the cluster analysis did not give a consistent clustering on the combination on these variables and the degree to which the teams operated with a full-time psychiatrist. The most distinct cluster identified by the analysis was the clustering on teams that operated during office hours (except for one team), which made a separate cluster in both the 2- and 3-cluster structure. Due to this, we chose to analyse differences between teams in respect of whether the teams operated during office hours and whether there was a psychosis team in the area.

As shown in Table 3, after Bonferroni adjustment for multiple comparisons, patients admitted during CRTs operating office hours were significantly less likely to live alone and had lower scores on all HoNOS total scales. In the CRTs that operated with no psychosis team in their catchment area, the patients were significantly less likely to have problems of suicidality and had higher GAF functioning scores.

Discussion

The purpose of this study was to describe the characteristics of Norwegian CRTs and their patients, examine any differences and/or clusters between the CRTs, and examine whether the CRTs in Norway are organized according to the international CRT model.

Characteristics of the teams

We found that, in Norway, the CRTs did not have 24/7 availability or gate-keeping functions for acute wards, average waiting time was about one and a half days, and the CRTs appeared to treat some patients who were not considered for hospital admission.

Operating without a gate-keeping function and 24/7 availability, with a waiting time of approximately one

Table 3 Variation between groups of teams based on opening hours and psychosis team in the area

Variables	Opening hours			Psychosis team in the area		
	Extended	Not extended	*p* value*	Yes	No	*p* value*
Teams	**n = 4**	**n = 4**		**n = 5**	**n = 3**	
Patients	**n = 406**	**n = 274**		**n = 427**	**n = 253**	
Living alone n (%)	264 (65.0)	132 (48.2)	<0.001**	242 (56.7)	154 (60.9)	0.284
Employed n (%)	99 (24.4)	76 (27.7)	0.327	105 (24.6)	70 (27.7)	0.375
GAF symptoms, mean (*SD*)	47.8 (10.6)	49.2 (12.2)	0.140	48.0 (11.1)	49.0 (12.5)	0.238
GAF functioning, mean (*SD*)	47.2 (11.8)	50.4 (12.8)	0.156	48.5 (11.6)	51.3 (13.8)	0.005**
Suicidal thoughts/plans n (%)	244 (63.7)	150 (55.4)	0.031	269 (64.7)	125 (52.5)	0.002**
HoNOS Total, mean (*SD*)	13.4 (6.5)	11.2 (5.7)	<0.001 **	12.3 (6.2)	12.9 (6.4)	0.219
HoNOS Total symptom severity mean (*SD*)	7.9 (3.9)	7.1 (3.4)	0.004**	7.4 (3.7)	7.8 (3.7)	0.128
HoNOS Total social problem severity, mean (*SD*)	5.5 (3.6)	4.2 (3.2)	<0.001**	4.9 (3.4)	5.1 (3.8)	0.563
Self-referrals n (%)	116 (28.6)	56 (20.3)	0.017	101 (23.7)	71 (30.3)	0.201
Waiting time days, mean (*SD*)	1.9 (12.9)	0.9 (2.4)	0.039	1.3 (4.4)	1.9 (15.7)	0.441

*p values are from chi-square tests for categorical variables, t-tests for continuous variables and Mann-Whitney U tests for ordinal variables

**significant differences between CRTs

not significant using Bonferroni adjustment for multiple comparisons

and a half days and not focusing on patients for whom hospital admission is considered, are fundamental departures from the CRT model. Fidelity scales of assessment of critical ingredients have not been established for CRTs as they have for assertive outreach teams. However, there is some consensus on the key characteristics of the CRT model [1,2,5]. These are a separate multidisciplinary team, the capability to deliver a full range of emergency psychiatric interventions in the community, targeting severe emergencies in which inpatient admission would otherwise be required, 24/7 availability, a psychiatrist working within the team, rapid emergency assessments, response within one hour if required, and gate-keeping functions to acute wards.

There are a number of possible explanations for not having implemented the whole CRT model in Norway. Firstly, it is less expensive to operate without 24/7 availability. Secondly, the geography of Norway, which is characterized by low density of population compared to the UK, makes rapid response and home treatment more challenging. Thirdly, a gate-keeping function to acute wards requires a transfer of authority from acute wards to CRTs. This has not been done in Norway. Fourthly, the practice of treating patients who are not considered for hospital admission may be explained by a need to reduce pressure on other mental health services. It is therefore possible that the CRTs are reducing emergency referrals to outpatient clinics more than to the acute wards. Fifthly, independent of national and international guidelines, local and national variations in resources and available clinical staff can affect team composition at times. In addition, there is a greater risk of local variation when the national guidelines for CRTs in Norway can be criticized for being vague.

Because Norwegian CRTs also treat patients who are not considered for hospital admission, they may have a lower threshold for the initial assessment of patients. This may make it possible for CRTs to pre-empt a full blown crisis by intervening before problems become severe. Evidence is emerging for the importance of early detection and intervention for people who may be developing signs of mental illness [39], though the aim of the CRTs is to give emergency community treatment to patients already in severe acute crises.

Patient characteristics

Our study showed that 14% of patients admitted by the CRTs had psychotic symptoms, one-quarter of the patients in our study were employed and three in four were emergency referrals. In both the UK and Norway, CRT services are intended to target patients with psychosis and other severe mental health problems [2,3]. The smaller proportion of patients with psychotic symptoms in Norway cannot be explained by differences in the size of the catchment areas in the UK and Norway (63,000 in the Islington area [13] compared with a mean population of 87,000 in the Norwegian CRT catchment areas).

Another possible explanation for the low proportion of patients with psychotic symptoms could be that patients with psychosis are treated by psychosis teams at CMHCs, although three of the CRTs did not have a psychosis team in their catchment area and there were no significant differences between CRTs in terms of admission of patients with psychotic symptoms.

A difference between Norway and the UK is that CRTs in Norway accept self-referrals, but in the UK they do not, even though the CRTs in the UK allow direct referrals from former service users and their families or carers [2]. In this study, about one-quarter of patients self-referred to Norwegian CRTs. This may contribute to the CRTs in Norway reaching patients with less acute needs than in the UK, although there were no significant differences between self-referrals and those who were referred by others.

Nevertheless, the above findings on the proportion of patients with psychotic symptoms, persons fully employed and emergency referrals indicate that Norwegian CRTs serve patients with less severe mental illnesses than the CRTs in the UK.

Variation between teams

The results from this part of the study must be interpreted in light of the fact that there are substantial differences between teams in the way they operate and are organized, and the small number of teams (eight CRTs).

As discussed above, CRTs should serve patients with severe mental symptoms. There were no significant differences between the CRTs on clinically relevant variables regarding the degree to which they treat patients with overactive, aggressive or disruptive behaviour, non-accidental self-injury, problems with drinking or drug-taking, or with psychotic symptoms. This may indicate that there are no significant differences between the CRTs in their admission assessments for these patients.

There was a tendency for teams that operate extended opening hours to treat patients with more severe mental illnesses, but the same consistent pattern of differences did not appear when comparison was made between CRTs operating with a psychosis team in their catchment area and those without. In addition, whether CRTs were operating with a full-time psychiatrist did not seem to make any difference to the severity of psychiatric problems.

Opening hours was the most distinct cluster in our hierarchical cluster analysis. Four of the CRTs in this study operated during office hours only and none of the teams operated with 24/7 availability. This study is not a

randomized controlled trial and therefore one cannot draw causality conclusions between the variables measuring severity of mental symptoms and opening hours. There may be other confounding variables. However, patients experience mental health crises in the evenings, at night and on weekends and it is difficult for Norwegian CRTs to operate as an adequate alternative to inpatient treatment if they do not operate during these hours. Local mental health care in these areas provides only casualty clinics and acute inpatient wards outside office hours.

Implementation

Tansella and Thornicroft [26] described three phases, including different barriers or facilitators at the national, local and individual levels, in understanding the translation of knowledge in the mental health science into routine clinical practice. In the first phase, called adoption in principle, the authors emphasize the importance of setting a policy priority at national level and having clinical guidelines. The establishment of CRTs in Norway was a priority of national mental health authorities, but the teams were not given the resources to operate with 24/7 availability or gate-keeping authority to acute wards. Clinical guidelines were developed in Norway, but these seemed to be less specific than similar guidelines from the UK, giving a greater risk of local variations. On an individual level, the lack of full-time consultant psychiatrists at CRTs in Norway may be related to more general problems in the mental health services, with a limited number of psychiatrists and problems recruiting psychiatrists to vacant positions. This lack of input from consultant psychiatrists makes the CRTs less multidisciplinary, and two teams in our study included mainly nurses and social workers.

While the policy implementation guidelines in the UK look relatively specific, there have been some difficulties in implementing CRTs in the UK too. Onyett et al found 68% of the CRTs in the UK in 2005 reported being gate-keepers to inpatient beds and 54% offered a 24/7 service [20]. A report by the National Audit Office [40] found that the introduction of CRTs had successfully reduced pressure on beds and supported earlier discharge from acute wards, but they found wide regional variations, particularly in the lack of consultant psychiatrists. In addition, they found that of 500 admissions, only half had been assessed by the CRT staff before admission (gate-keeping).

Strengths and limitations

The main strength of our study is that it is a naturalistic study of nearly all patients treated by the CRTs in Norway at the time of the study. Both the variety within the sample, the size of the sample, the length of the registration period, and the different geographical locations of the CRTs suggest that the data may be considered to be representative of such teams in Norway. Since the data collection, more CRTs have been established (35 of the 75 CMHCs had established a CRT by 2008) in Norway. These 35 CRTs were operating without a gate-keeping function and 24/7 availability and there was still a lack of full-time psychiatrist in these teams. About half of the teams operated extended hours. This indicates that the way the CRTs are organized and operate have not changed significantly since our data-collection and that our data was still representative for these teams [7].

The lack of randomization and control group are important limitations, and causality cannot be shown from this study. The multicentre design meant that many raters participated, which may have introduced some uncontrolled error variances, even though the project coordinators of each team participated in developing the registration forms and were responsible for instructing the other raters and the data collection by their team.

Conclusion

In our study, we found that the CRTs in Norway did not implement the whole CRT model and this may lead to the result that CRTs were only reaching part of the target group. Norwegian CRTs do not serve as an adequate alternative to admission in the same way as international CRTs and therefore do not completely fulfil their role in the mental health system. For fuller implementation of the CRT model, fidelity scales and supporting toolkits for achieving fidelity might be useful. A further investigation of barriers to implementation is recommended.

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Authors' contributions

TR, RWG and NH designed the study and formulated the research questions. NH conducted the literature search. NH performed the statistical analysis and interpreted the data with significant support from SJ and TR. The

manuscript was written by NH and substantially revised by TR, SJ and RWG. The final version of the manuscript was prepared by and revised by all authors. TR was head supervisor of this manuscript and project leader of the Multicentre Study of Acute Psychiatry in Norway (MAP).

Competing interests
The authors declare that they have no competing interests.

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Treatment and outcomes of crisis resolution teams: a prospective multicentre study

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Abstract

Background: Crisis resolution teams (CRTs) aim to help patients in acute mental health crises without admitting them to hospital. The aims of this study were to investigate content of treatment, service practice, and outcomes of crises of CRTs in Norway.

Methods: The study had a multicentre prospective design, examining routine data for 680 patients and 62 staff members of eight CRTs. The clinical staff collected data on the demographic, clinical, and content of treatment variables. The service practices of the staff were assessed on the Community Program Practice Scale. Information on each CRT was recorded by the team leaders. The outcomes of crises were measured by the changes in Global Assessment of Functioning scale scores and the total scores on the Health of the Nation Outcome Scales between admission and discharge. Regression analysis was used to predict favourable outcomes.

Results: The mean length of treatment was 19 days for the total sample (N = 680) and 29 days for the 455 patients with more than one consultation; 7.4% of the patients had had more than twice-weekly consultations with any member of the clinical staff of the CRTs. A doctor or psychologist participated in 55.5% of the treatment episodes. The CRTs collaborated with other mental health services in 71.5% of cases and with families/networks in 51.5% of cases. The overall outcomes of the crises were positive, with a small to medium effect size. Patients with depression received the longest treatments and showed most improvement of crisis. Patients with psychotic symptoms and substance abuse problems received the shortest treatments, showed least improvement, and were most often referred to other parts of the mental health services. Length of treatment, being male and single, and a team focus on out-of-office contact were predictors of favourable outcomes of crises in the adjusted model.

Conclusions: Our study indicates that, compared with the UK, the Norwegian CRTs provided less intensive and less out-of-office care. The Norwegian CRTs worked more with depression and suicidal crises than with psychoses. To be an alternative to hospital admission, the Norwegian CRTs need to intensify their treatment and meet more patients outside the office.

Background

The crisis resolution team (CRT) model of treating acute mental health crises outside in-patient wards has been implemented in some Western countries in the past decade [1,2]. With the adoption of CRTs in several Western countries in the past decade and in the UK and Norway, the implementation is part of national policies, it is important to evaluate the outcomes of crises after CRT care in ordinary clinical settings [3].

Guidelines or recommendations have been developed for the implementation of CRTs [4-6]. The teams should offer rapid assessment, intensive short-term home treatment, specialist multidisciplinary team interventions, reduced use of coercion, collaboration with the wider mental health care system and families/networks, and have gate-keeping functions for acute wards to a greater extent than outpatient clinics or in-patient wards. These key features of the CRT model are more a framework for delivering care and treatment than a specific type of treatment or therapy [1].

Recent studies in a range of UK settings, with both randomized and non-randomized designs, have suggested that CRT care is associated with a reduction in

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admissions to in-patient wards [7-13]. There is also some evidence that service users are more satisfied with CRT care than with standard care, although better study designs and response rates are required to be confident of this [1,7-16]. CRTs also seem to reduce care costs [17-19].

Apart from these findings, there is currently no clear evidence of any further clinical or social benefits of CRT care compared with standard care. In a Cochrane review, none of the studies found any differences in symptom outcomes, although none exclusively investigated crisis intervention, and the studies mainly ranged from the 1960s to the 1980s [19]. In the randomized controlled trial of CRT and standard care by Johnson et al., they found that symptoms, quality of life, social functioning, and adverse incidents, such as violence and self-harm, were similar between CRT and standard care after six months follow-up [8]. Another quasi-experimental study found no clear differences in symptoms, social functioning, or quality of life before and after the introduction of a CRT [9]. Barker et al. reported that carers said that the patients got better after CRT input, but that study had a low response rate (29%) [13].

Nor have most studies attributed any disadvantages to CRT care. The Cochrane review showed that treatment by a CRT was as safe as standard hospital care in terms of suicide, that home care reduced the family burden, and that there was no difference in the incidence of death [19]. Keown et al. reported that the number of suicides remained constant [11]. Bookle and Webber found that people of black ethnic origin used home treatments to the same extent as other ethnic groups in mental health crises [20]. However, Kingsford and Webber found that people from more socially deprived areas, older people, and those referred by enhanced community mental health teams had poorer outcomes after a CRT intervention [21]. In terms of admissions under the Mental Health Act in the UK, Keown et al. found that detentions under sections 2 and 3 of the Mental Health Act 1983 increased, whereas those under sections 5(2) and 5(4) declined following the introduction of crisis resolution and assertive outreach teams [11]. Barker et al. found a reduction in admissions under the Mental Health Act 1983 after CRTs began operating in Edinburgh [13]. These discrepancies indicate the need for further studies of the impact of CRTs on Mental Health Act admissions and on socially deprived people before we can draw any clear conclusions.

In an implementation study of the crisis resolution team model in Norway, it was found that the CRT model has been implemented without a rapid response, gate-keeping function and 24/7 availability [22].

The aim of the present study was to investigate and compare patients and CRTs with respect to: 1) content of treatment and service practices; 2) outcomes of crises; 3) predictors of favourable outcomes; and 4) where possible, compare Norwegian data with data from the UK.

Methods

Study design

This study had a naturalistic prospective pre-post multicentre design. The study was part of the Multicentre Study on Acute Psychiatry (MAP) in Norway. The multicentre study was planned and implemented by a national network to evaluate acute psychiatric services.

Setting

Norway has a total population of 4.9 million people. The country is characterized by more rural areas and a lower population density than many other countries. The standard of living is generally high. Mental health service provision for adults consists of primary care and specialist mental health services. The primary health care services run by the 430 municipalities consist of general practitioners (GPs) and primary care mental health teams, usually staffed by psychiatric nurses, social workers, and occupational therapists. Many municipalities have residential services, day centres for people with mental health problems, and ambulatory care. The specialized mental health services run by 20 health authorities include 75 community mental health centres (CMHCs), hospitals with acute psychiatric wards and some specialized wards, and psychiatrists/psychologists in private practice. The CMHCs usually consist of outpatient clinics, in-patient wards, day care, and one or more specialized teams (case management teams, early intervention teams for first-episode psychoses, CRTs, and assertive community treatment teams). Specialized services for substance abuse are usually organized as part of the specialized mental health services in the health authorities.

In 2005, the national health authorities of Norway decided to implement the CRT model at all CMHCs, inspired by the implementation of CRTs in the UK. Establishing CRTs was given national policy priority, to improve the accessibility to specialized mental health services of people in mental health crisis and to offer these patients a rapid, intensive, and ambulatory alternative intervention to admission to an acute psychiatric ward. In a telephone survey of CRTs in Norway, 51 of the 76 CMHCs had established a CRT by 2010. Thirty of these only operated during office hours and one had 24/7 availability. When asked about their collaboration with families, 38 replied that they did collaborate and 31 replied that they most frequently met the patients at home. This indicates that the way the CRTs are

organized and operate has not changed significantly since our data collection in 2005-2006, and that our data are still representative of these teams, although there are some indications of somewhat more home treatments in 2010 than in 2005-2006 [23].

In 2005, there were nine CRTs for adults in Norway, and eight of these teams participated in this study. The last CRT did not participate because it was undertaking a study of its own [24]. The target group of the CRTs was intended to be patients with mental health problems so severe and acute that without the involvement of a CRT, acute admission would usually be necessary [5]. The CRTs in this study were from all parts of Norway, varying from urban to rural areas, with catchment areas ranging from 65,000 to 115,000 inhabitants. They consisted of 4-19 team members, and the teams were multidisciplinary (mainly psychiatrists, psychologists, psychiatric nurses, and social workers). Three had a psychiatrist and six had a psychologist as a full-time member of the team. The intended response time was 12-48 hours and the intended length of treatment by these teams was between five consultations and eight weeks. The CRTs were similar in that they were not available 24/7, played no gate-keeping role for acute psychiatric wards, and treated patients who were not considered for hospital admission. There were variations between the CRTs in their opening hours, their authority to admit patients to acute in-patient wards, and their ability to facilitate early discharge from acute wards. The most usual referral routes to the CRTs were self-referral, and referral by GPs, CMHCs, primary care mental health teams, and casualty departments.

Sample

In this multicentre study, the sample consisted of 680 patients and 62 staff members of eight CRTs. All patients referred during a three-month period, aged 18 years or more, and having face-to-face consultations with the CRTs were included in the study. There were no exclusion criteria.

Further patient and team characteristics have been presented in a previous paper [22].

Data collection

The CRTs contributed to the planning of the study through their participation in semi-annual workshops in 2003-2005 in preparation for the study. The data were collected in 2005-2006. The CRTs included all patients referred during a three-month period, or longer if necessary to include 60 patients. The inclusion period started at different time points for different CRTs. The number of 60 patients was chosen to include a reasonable sample of patients from each team for a comparative data analysis. For patients seen for more than two months, the end of acute treatment was defined as being at two months, and the discharge assessment was performed at this point for these patients.

A registration form was designed to record information about the patients and the content of their treatments from admission to discharge. The form was piloted at two of the sites before its final revision. The data were collected by the clinicians in each CRT.

Measures

At admission, socio-demographic characteristics and suicidal risk were assessed by the clinicians. Suicidal risk was coded as (i) no suicidal thoughts or plans, (ii) passive death wishes or suicidal thoughts without concrete plans, (iii) concrete suicidal plans or self-injury but no death intention, and (iv) self-injury and death intention. This suicidal scale was designed in collaboration with the National Centre for the Prevention of Suicide [25].

At discharge, a diagnosis according to the International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10) [26], the content of treatment, and the reason for discharge were recorded. The content of treatment included variables such as length of treatment, frequency of and participants in consultations, collaboration with other services, unwanted incidents, and pharmacological treatments.

Symptom severity and level of functioning were assessed at both admission and discharge using the Health of the Nation Outcome Scales (HoNOS) and Global Assessment of Functioning scale, split version (GAF) [27,28]. The patients who had one consultation were only rated once. The HoNOS consists of 12 subscales, each of which rates problems from 0 (no problem) to 4 (severe to very severe problem). In this study, the sums of scales 1-8 and 9-12 on HoNOS were calculated to give an overall measure of symptom severity and social problems, respectively. The subscales of HoNOS for overactive, aggressive, or disruptive behaviour, non-accidental self-injury, problems with drinking or drug-taking, problems with hallucinations and delusions, and problems with depressed mood were also included as the clinical scales most relevant to this study. The clinicians were trained in rating HoNOS in the half-day training seminar used in the UK, and all the clinicians had experience in rating GAF as a routine measure required for all treatment episodes in the mental health services. An earlier study, which used the same training for the clinicians, had shown acceptable inter-rater reliability (intra-class correlation coefficient [ICC] of 0.60-0.89) for the HoNOS subscales used in this paper [29].

The Community Program Practice Scale (CPPS) [30] was completed by each clinician. The CPPS is a questionnaire that measures practice and program climate of

non-residential service models and consists of a 45-item scale on a five-point Likert scale (from 1 = strongly disagree to 5 = strongly agree) and with 13 subscales. For this study, the following six subscales were chosen as the most clinically relevant: case management, out-of-office contact, medication emphasis, team model, family orientation and involvement. The case management sub-scale measures whether the staff provide practical help to the patients, the out-of-office contact sub-scale measures to what degree the staff is working outside of the office, the medication emphasis sub-scale measures how much emphasis the team put on medication as a part of the treatment, the team model sub-scale measure whether more than one team member meet the patients, the family orientation sub-scale measures whether the team provide information or counselling for clients' family and the involvement sub-scale measures whether the staff members find their work interesting and challenging.

The HoNOS, GAF, and CPPS scales have shown satisfactory reliability and validity [30-32]. Several studies have indicated moderately high internal consistency and low item redundancy for the HoNOS sum score, and therefore support the instrument's use as a meaningful measure of symptom severity [31]. Söderberg found that when staff use patients' GAF scores to measure changes and outcomes, it might be necessary to use several raters for an individual patient for the GAF scales' reliability and validity to be satisfactory [33]. In this study, two or more raters filled in the registration form, including the GAF assessment score, for each patient.

A questionnaire completed by the team leaders assessed treatment approaches: response time, length of treatment, whether the CRT had a team approach with shared responsibility for the patient, collaboration with the wider mental health care system and families/networks, use of home treatment, and whether the CRT wanted to see the patient several times a week.

Approval from authorities and contributions from user groups

The study was approved by the Regional Ethical Committee for Research in Health and by the Norwegian Data Inspectorate. The Directorate of Health and Social Affairs consented to the use of information from the health services. The data were collected from all patients without their written consent, because the Regional Ethical Committee for Research in Health had agreed to this insofar as it was important to include information on all patients. Representatives for the user organizations Mental Health Norway and the National Association of Relatives in Mental Health participated as a reference group and in the workshops to plan and prepare the study.

Data analysis

HoNOS scales with missing values (average 5.5% across scales) were set to 0, because this was considered to be the most probable rating based on the skewed distribution with most patients rated 0, and on the assumption that clinicians most easily forgot to mark the rating when there was no indication of problems. This was also chosen in favour of imputation because it was the most conservative way to measure the severity of the patients' mental health problems. Diagnoses were missing for 53.5% and 17.4% of the patients in two teams and for 3.4%-10.4% in the other six teams. In Norway, only physicians/psychiatrists and psychologists are authorized to make ICD-10 diagnoses. The teams with the most missing values on the diagnosis variable operated without a physician/psychiatrist or psychologist as a regular member of the team and with nurses and social workers constituting the majority of their staff. In these teams, diagnoses were made by physicians who were not a part of the team. For this reason, the HoNOS scales were used instead of diagnoses in the analysis of the type and severity of the psychiatric problem.

One of the CRTs did not register the length of treatments (n = 46). An imputation of missing values was performed with a regression model. We identified the socio-demographic and clinical variables that predicted length of treatment. For each of these patients, we calculated the length of treatment based on the estimated coefficients of these predictor variables.

Descriptive and test statistics were assessed on all baseline variables according to whether the variables were categorical or continuous. Variations between the CRTs were also computed. In the analysis of treatment outcomes, we included only those patients who had received more than one consultation (n = 455). A paired-samples t test was used to evaluate the impact of the CRT interventions on the patients' clinical conditions by comparing the means of the pre-post test scores for the HoNOS total scores and the GAF scales. The calculation of the effect sizes was based on Cohen's d, defined as the difference between two means (pre- and post-treatment) divided by the standard deviation at admission [34].

A multilevel regression analysis was performed with the difference score for GAF symptoms as the dependent outcome variable. The ICC was 2.75% (ICC multiplied by 100), which indicated that the team level only contributed slightly to the explained variance. For this reason, a linear regression analysis was performed, with a stepwise backwards variable selection procedure. Potential predictors of a favourable outcome were chosen based on the guidelines for the implementation of CRTs both in relation to the target group and in clinical

practice. The predictor variables selected were age, sex, being single, current employment, HoNOS scales 1-3 and 6-7 at admission, previous contact with mental health services, self-referral, length of treatment, intensity of consultations, doctor/psychologist participation in the consultations, collaboration with other mental health services and families/networks, pharmacological treatment, and the six selected subscales of the CPPS. The CPPS variables were used as team-level variables. Pairwise interaction tests were performed on all significant predictors.

SPSS software version 15 for Windows (SPSS Inc., Chicago, IL) was used for most of the data analysis. Multilevel regression analysis was performed using the software SAS 9.2. A significance level of 0.05 was used.

Results

As shown in table 1, the 680 patients had a mean age of 40 years, 60% were female, 60% were single, and 25% were employed. The median number of patients per team was 80 (range, 46-147). The clinicians assessed patients to be at risk of suicide in about 60% of cases, and the mean GAF scores were 48.4 on the symptom scale and 49.6 on the functioning scale. The clinicians at the CRTs (n = 62) characterized themselves as focusing most often on involvement and least often on out-of-office contact. The analysis of the CRTs showed significant differences in the patients' characteristics and the service practices of staff members on most variables.

Content of treatment

As shown in table 2, the mean length of treatment for the total sample was 19 days (SD = 24.4, range 0-97 days). Two hundred and twenty-five patients had a single consultation for CRT care/assessment, and the remaining 455 received treatment with a mean length of 29 days. We found no significant difference between these two groups in the severity of their mental health illnesses. The mean length of treatment differed significantly between the CRTs (range 7-30 days). Patients with depressive problems received significantly longer periods of treatment (21 days, SD = 22) than those with

Table 1 Characteristics of 680 patients, 62 staff members, and eight CRTs

Variables	Total sample	Significance of the differences between teams
Patient characteristics		
Age (years), mean (SD)	40.1 (15.1)	0.066
Sex: n (%) female	396 (58.8)	0.507
Living alone: n (%)	396 (58.2)	<0.001**
Currently employed: n (%)	175 (25.7)	0.006**
Previous mental health service contact: n (%)	401 (59.0)	<0.001**
GAF mean (SD): Symptoms	48.4 (11.6)	<0.001**
Functioning	49.6 (12.6)	<0.001**
HoNOS mean (SD): Total	12.5 (6.26)	<0.001**
Total symptom severity (HoNOS 1-8)	7.6 (3.72)	<0.001**
Suicidal: n (%)		
No suicidal thoughts/plans	260 (39.8)	<0.001**
Passive death wishes/suicidal thoughts, no concrete plans	261 (39.9)	
Concrete suicidal plans/self-injury, but no death intentions	110 (16.8)	
Self-injury/death intentions	23 (3.5)	
Service practices (CPPS) of the staff members		
Case management: median (Q1-Q 3)	3.42 (3.05-3.63)	0.014**
Out of office contact: median (Q1-Q 3)	3.11 (2.89-3.72)	0.001**
Medication emphasis: median (Q1-Q 3)	3.34 (2.96-3.53)	0.033**
Team model: median (Q1-Q 3)	3.57 (3.02-4.17)	0.001**
Family orientation: median (Q1-Q 3)	3.66 (3.48-3.88)	0.018**
Involvement: median (Q1-Q 3)	4.44 (4.13-4.57)	0.131
Team characteristics		
Number of team members: mean (range)	9.1 (4.3-19.2)	
Individual staff member case-loads: mean (range)	2.5 (1.1-4.8)	
24/7 and gate-keeping function	None	
Team operates extended hours: n (%)	4 (50)	
Number of teams with specialist as a full-time part of the team: n (%)	4 (50)	

*p values from χ^2 tests, ANOVA (analysis of variance), and Kruskal-Wallis test; **significantly different

Table 2 Contents of treatment

Length of treatment:		
All patients: days (SD) range	19.5 (24.4) 0-97	<0.001**
More than one consultation by a CRT: days (SD)	29.3 (24.8)	0.001**
Frequency of consultations and co-operation:		
One consultation by a CRT: n (%)	225 (33.1)	<0.001**
Consultations more than twice a week: n (%)	50 (7.4)	<0.001**
Doctor/psychologist participated in consultations	375 (55.1)	<0.001**
Inclusion of family/networks (consultations, meetings, other kinds of contact):	350 (51.5)	<0.001**
Collaboration with other mental health services (consultations, meetings, or other kind of contact): n (%)	486 (71.5)	0.038**
GPs	351 (51.6)	<0.001**
Community mental health centres	219 (32.2)	<0.001**
Psychiatric nurse/other professions in the municipality:	173 (25.4)	<0.001**
Acute in-patient wards	144 (21.2)	<0.001**
Unwanted incidents: n (%)		
Suicide attempts	14 (2.1)	
Self-harm	32 (4.7)	
Physical attacks on others	16 (2.4)	
Exposed to physical attacks from others	5 (0.7)	
Pharmacological treatment: n (%)		
Medication at the end of treatment	316 (42.0)	<0.001**
Antipsychotic medication: n (%)	138 (20.9)	
Antidepressant medication: n (%)	181 (26.6)	
Mood-stabilizing medication: n (%)	72 (10.6)	
Anxiety medication: n (%)	83 (12.2)	
Sleep medication: n (%)	91 (13.4)	
Other kind of medication: n (%)	5	
Reasons for concluding treatment: n (%)		
Concluded as planned	511 (75.1)	0.002**
Concluded earlier than planned	132 (19.4)	0.016**
Concluded later than planned	35 (5.1)	0.008**
Other characteristics:		
Individual care plan: n (%)	68 (10.0)	<0.001**
Use of coercion: n (%)	8 (0.1)	
Brought to CRT by the police: n (%)	27 (4.0)	

*p values from χ^2 tests, ANOVA, and Kruskal-Wallis test; "**significance of the difference between teams

psychosis (13 days, SD = 21) or substance abuse (16 days, SD = 22). Patients with psychosis or substance abuse problems were frequently referred to other parts of the mental health service (about 10% were not), most often to GPs, psychiatric teams in primary care, CMHCs, or in-patient wards. The same applied to patients who received a single consultation (about 5% were not further referred).

In 7.4% of cases, the clinicians in the CRTs met the patient more than twice a week and the doctors and psychologists participated in 55% of the treatment episodes. The CRTs collaborated with other parts of the mental health services in 72% of cases and with families/networks in 52% of cases.

Pharmacological treatment was given to 42% of the patients. Few structured diagnostic interviews were used by the CRTs. Eight patients were under compulsory treatment.

With regard to the treatments, 75% of patients concluded them as planned.

Outcomes of crises

Of the 455 patients who had more than one consultation, 262 had positive changes in the HoNOS total score and 256 in the GAF symptom score. As shown in table 3, the mean HoNOS total scores were 12.1 at admission and 10.02 at discharge. The corresponding figures for the GAF symptoms were 49.2 and 54.3, respectively. This indicates a significant improvement between admission and discharge, with the largest effect size on the GAF symptoms (d = -0.45). The effect sizes across the GAF and HoNOS total scores (d = 0.15-0.45)

Table 3 Treatment outcomes (n = 455): pre- and post-treatment data and effect sizes

	T1*		T2**				
	Mean	SD	Mean	SD	P	95% CI	*d****
GAF symptoms	49.16	10.52	54.29	12.30	< 0.001	-5.87, -4.40	-0.45
GAF functioning	50.20	11.70	54.78	12.94	< 0.001	-5.32, -3.85	-0.37
HoNOS total	12.08	5.98	10.02	6.32	< 0.001	1.65, 2.47	0.34
HoNOS symptoms	7.25	3.52	5.72	3.63	< 0.001	1.24, 1.82	0.43
HoNOS sos probl	4.82	3.37	4.30	3.47	< 0.001	0.33, 0.73	0.15

Two-tailed

Results are presented as *t* values

* pre-treatment, ** post-treatment, ***effect size

indicated a small or medium improvement after CRT care [34]. A comparison of the effect sizes of the CRTs showed that the effect sizes of the HoNOS and GAF total scores for the CRTs differed (d = 0.19-0.45).

Table 4 shows the numbers of patients with scores of ≥ 2 on the clinically relevant HoNOS subscales at admission and discharge. These scores decreased most on the depression scale (19.4) and least on the psychosis scale (3.0) and the substance abuse scale (2.7).

Predictors of favourable outcomes of crises

Table 5 shows a linear multiple regression analysis of the significant predictors of favourable treatment outcomes, both unadjusted and adjusted for other variables. With adjustment for other variables, the length of treatment (p < 0.001), being male (p = 0.002), being single (p = 0.013), CRT focusing on out-of-office contact (p = 0.016), and having a problem with non-accidental self-injury (p = 0.017) were associated with a favourable outcome. A high degree of involvement of the team members (CPPS subscale) was negatively associated with outcome (p = 0.006). Current employment, having received consultations more than twice a week, and the participation of a doctor/psychologist in the consultations were significant predictive variables before we adjusted for other variables, but were not significant in the final multiple regression model.

The pairwise interaction tests of all the significant predictors showed that a favourable outcome depended on the length of treatment: interaction effects p ≤ 0.001.

The regression model explained 13.7% of the variance.

Discussion

The pattern of contact of the Norwegian CRTs was not characterized by intensive care, and there was an emphasis on depression and suicidal problems rather than on psychosis or substance abuse problems. The CRTs collaborated with other parts of the mental health system and with families/networks, but they had limited out-of-office and multidisciplinary contact.

Content of treatment

Providing intensive home-based care is a key element of the CRT approach [1-4]. Half the CRTs in this study claimed to have focused on home treatment. Only one team claimed that they wanted to see patients several times a week, and only 7.4% of the patients had had more than twice-weekly consultations with any member of the clinical staff of the CRTs. A team focus on out-of-office contact was a predictor of a favourable outcome in the adjusted regression model. Compared with the UK, where home treatment programmes and frequent visits (usually at least daily) are considered key components of CRT care, the Norwegian treatment by CRTs can be characterized as short-term interventions with less intensive care, and with more outpatient care than home-based care. There might have been some changes related to home treatment since this study; the telephone survey mentioned in the setting section of this paper indicating more home treatments occurring in the Norwegian CRTs [23]. We suggest future studies should include measurement on actual home treatment frequency.

Table 4 Numbers of patients with scores of 2-4 on HoNOS subscales (n = 455)

	T1: n (%) score 2-4	T2: n (%) score 2-4	p
HoNOS 1 Overactive, aggressive, or disruptive behaviour	68 (14.9)	47 (10.3)	0.003
HoNOS 2 Non-accidental self-injury	80 (17.6)	39 (8.6)	<0.001
HoNOS 3 Problems with drinking or drug-taking	70 (15.4)	58 (12.7)	0.023
HoNOS 6 Problems with hallucinations or delusions	46 (10.2)	33 (7.2)	0.012
HoNOS 7 Problems with depressed mood	326 (71.7)	238 (52.3)	<0.001
HoNOS 9 Problems with relationships	212 (46.6)	172 (37.8)	<0.001

Table 5 Predictors of favourable treatment outcomes

	Unadjusted*	p	95% CI	Adjusted**	p	95% CI
Age	-0.035	0.172	-0.085, 0.015	-0.038	0.147	-0.089, 0.013
Sex	-1.585	0.040***	-3095, -0.075	-2.499	0.002***	-4.069, -0.929
Single	1.282	0.096	0.230, 2.794	2.019	0.013***	0.436, 3.602
Non-accidental self-injury	0.718	0.027***	0.081, 1.355	0.820	0.017***	0.146, 1.494
Length of treatment	0.068	<0.001***	0.037, 0.099	0.068	<0.001***	0.037, 0.099
Out-of-office focus	0.708	0.038***	-0.879, 2.295	2.502	0.016***	0.476, 4.528
Involvement focus	-2.358	0.164	-5.681, 0.965	-5.770	0.006***	-9.843, -1.698
Currently employed	2.078	0.010	0.491, 3.667			
Consultations more than twice a week	3.481	0.005	1.058, 5.904			
Doctor/psychologist participated in consultations	1.474	0.050	-0.001, 2.950			
Interaction (sex × length of treatment)				0.029	0.001***	0.011, 0.046
Interaction (single × length of treatment)				0.038	<0.001***	0.019, 0.057
Interaction (non-accidental self-injury × length of treatment)				0.034	<0.001***	0.019, 0.050
Interaction (out-of-office focus × length of treatment)				0.020	<0.001***	0.011, 0.029
Explained variance				13.7%		

Multiple linear regression analysis of 455 patients and 62 staff members in eight CRTs

* Unstandardized bivariate regression coefficients

** Unstandardized multivariate regression coefficients

*** Significantly different ($p < 0.05$)

It has also been emphasized in this model that CRTs should be specialist multidisciplinary teams consisting of psychiatrists, psychologists, psychiatric nurses, social workers, and other social care professionals [1-4]. In this study, five of the CRTs lacked a full-time psychiatrist as part of the team. A national survey of CRTs in England also found a lack of full-time consultant psychiatrists (45% of teams had input from psychiatrist at a mean 0.5 full time) [35]. A significant proportion of the patients (about 45%) in our study did not meet a doctor or psychologist in a CRT during the treatment episode. This lack of consultant psychiatrists and psychologists is also reflected in the fact that many of the patients were not diagnosed by the CRTs during the treatment episode. In the unadjusted regression analysis, patients provided with a physician/psychologist during the consultations had better treatment outcomes. This lack of specialized professionals can restrict the CRTs' ability to provide comprehensive, multidisciplinary care.

A significant number of patients received only a single consultation for CRT assessment or care. Most of them were referred to other parts of the mental health services. This probably reflects the role of the CRTs as a kind of "triage" in the mental health system for patients with acute mental health problems. A key question is whether this screening process should be a function of outpatient clinics. The remaining group of patients received about four weeks of CRT care, with small to medium improvement. The size of the effect was not surprising given the brief period of the crisis intervention. Conversely, CRT care is a part a treatment chain in the mental health system. The clinical benefit of CRT care might be delayed, and may appear in another part of the mental health service.

We hypothesized that collaboration with other mental health services and families/networks would predict favourable outcomes, but it did not. In Norway, there has been particular emphasis on this part of CRT care. In the review of Winness et al. and the study of Hopkins and Niemiec of service users' experiences with CRTs, the inclusion of family members as part of the treatment and the staff's communication with other services were appreciated [15,16]. However, based on our study, we know little about the content of the contact with other parts of the mental health system or with families/networks, but only that there had been some form of contact (consultations, meetings, by phone, etc.).

Outcomes of crises

This study indicates that patients may benefit from CRT care. However, patients with severe mental health illnesses were not common in our sample compared with studies in the UK. In studies of home-care acute psychiatric treatment based on data collected before the government proposed the establishment of nationwide CRTs in the UK, it was found that 53 - 62% of the patients had psychotic disorders [36-39]. In Johnson's two samples from 2005 37% and 40% had a psychotic disorder [8,9]. But the evidence is not wholly consistent; In a study of Barker et al from Edinburgh they found that 17% of the patients had psychotic symptoms [13]) and Tacchi found 13.5% with psychosis in a home treatment emergency response service in Newcastle [40]. With the lack of a randomized control group in this

study, we cannot tell whether the patients would have progressed without CRT care (see the "Strengths and limitations" section below). The staff of these CRTs may also have overestimated the patients' improvement. Our measurement of the outcomes of crises was not based on patients' reports, but on the clinical staff's evaluations. By having the clinicians from the CRTs collect the data there is a risk of observer bias, especially with respect to rate HoNOS and GAF scales at initial assessment and discharge. Staff members from these teams were participating in the development of a new service in Norway, catering for people experiencing a mental health crisis. This might have increased the enthusiasm of the staff for their work, which may again have caused the staff to rate the patients' conditions better than they really were.

Patients with depressive symptoms showed the best outcomes from their crises, and non-accidental self-injury was also related to favourable outcomes. Patients with psychotic symptoms received shorter treatments, showed less improvement, and were most frequently referred to other parts of the mental health services. Our study indicates that because of the way in which Norwegian CRTs operate, they predominantly reach patients with depression and at risk of suicide.

The length of treatment was a highly significant predictor of favourable outcomes of crises, and an interaction effect showed that favourable treatment outcomes depended on the length of treatment. Although the interventions of the CRTs are meant to be brief, this finding indicates that these teams should provide intensive treatments for patients experiencing acute mental health crises rather than referring them to other parts of the mental health system or for rapid discharge. Then again, this finding may also indicate that people improve with time, regardless of any CRT care (see the "Strengths and limitations" section below).

In addition to the length of treatment, a team focus on out-of-office contact and suicidal problems, being male, and being single predicted favourable outcomes in the adjusted model. There were no significant differences between the sexes in the total severity of their symptoms or their social problems. The impact of CRT care may be greater for patients with little support from a social network.

The regression model in this study explained only a small part of the variance (13.7%). Despite the statistically significant results for several independent variables, it is clear that other unknown variables influenced the outcomes of these crises. CRT care is a complex intervention involving many factors. Given the variations in clinical practice and the significant variations in the social and clinical functioning of the patients in this study, it was likely that we would be unable to identify all the critical components required for favourable outcomes of these crises. The possible random distribution attributed to the unreliability of the GAF scale may also have reduced the amount of variance explained [33].

There were differences between the CRTs in the lengths of treatment and the outcomes of crises, insofar as the CRTs with best staffing provided the longest treatment episodes and had the best outcomes. However, the resources of the local mental health services in the catchment areas of the CRTs may have been intermediate variables that varied between the CRTs.

The proportions of compulsory treatments were low in these CRTs, but this is probably attributable to the small proportions of patients with severe mental health illnesses.

It is hard to interpret the finding that a high degree of involvement by the team members was negatively associated with the treatment outcomes. This might be a random finding. In contrast, this sub-scale measures whether the staff members find their work interesting and challenging and whether they are involved in their work. The implementation of the CRT model is a new way of treating patients experiencing mental health crises. Most staff members at the CRTs were enthusiastic and devoted to this new way of working. In their meetings with patients, this enthusiasm may have led to their over-involvement and excessive zeal, which may have caused negative outcomes of treatment.

Strengths and limitations

The major strength of our design was its good external validity, because all patients treated at the CRTs were included and the data were obtained in routine clinical services, with no exclusion criteria.

The lack of a control group and of randomization was the most important limitations. Randomized controlled trials (RCTs) are generally considered the gold standard evidence for treatment effectiveness in medicine, although it has been argued that the complexity of interventions and the many factors that may cause outcomes to vary between settings may limit the usefulness of RCTs in mental health services research [41]. Because our study was an uncontrolled naturalistic study, the positive outcomes of crises after CRT care may have resulted from factors other than the CRT intervention. The patients in this study were included because they were experiencing an acute mental health crisis. Their improvements may have been spontaneous recoveries or the natural fluctuations that often characterize mental health problems.

Conclusions

Our study shows that Norwegian CRTs provide less intensive and less out-of-office contact than UK CRTs,

and they concentrate on depression and suicidal crises rather than psychoses. In the future implementation of CRT care in Norway, there should be an emphasis on improving the intensity of contact and ambulatory work, and an expansion of the target patients to include psychotic patients.

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Authors' contributions
TR, RWG, and NH designed the study and formulated the research questions. NH conducted the literature search. NH performed the statistical analysis and interpreted the data, with significant support from SJ and TR. The manuscript was written by NH and substantially revised by TR and SJ. The final version of the manuscript was prepared and revised by all authors. TR was the head supervisor of this manuscript and the project leader of the Multicentre Study of Acute Psychiatry in Norway (MAP).

Competing interests
The authors declare that they have no competing interests.

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III

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Psychiatric admissions from crisis resolution teams in Norway

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Abstract

Background

The intention of the crisis resolution teams (CRTs) is to provide an intensive alternative care to hospital admission for patients in mental health crisis. The aims of this study were to describe the proportions and characteristics of patients admitted to in-patient wards from crisis resolution teams, to identify whether there are differences in admission practices between CRTs and to find predictors of admissions from such teams.

Methods

The study is a naturalistic prospective multicentre study of 680 consecutive patients under the care of eight CRTs in Norway over a three month period in 2005-2006. Socio-demographic and clinical data were collected on the patients, together with data from the CRTs on organization and operation. Logistic regression analysis for hierarchical data was used to test potential predictors of admission both at team- and patient level.

Results

A total of 146 patients (21.5%) were admitted to in-patient wards. There were significant differences between the CRTs in admission rate. Regression analysis for hierarchical data showed that the odds of being admitted to in-patient wards were significant lower for those patients treated by a CRT operating extended opening hours compared to CRTs operating in office hours only. In addition, it showed that patients with psychotic symptoms, with concrete suicidal plans or self-injury but no death intention, and with a prior history of admissions were more likely to be admitted.

Conclusions

In the future, it should be a priority of national mental heath authorities in Norway to allocate resources to these teams to make extended opening hours for the CRTs possible. In this way, the CRTs might prevent some more admissions, including for some of the patients with moderately severe and relapsing mental health illnesses, although very severely ill patients experiencing imminent risk would not be able to be contained in the community by the CRTs.

Background

Crisis resolution teams (CRTs) are specialized mobile teams that are intended to provide a rapidly available and intensive short-term home treatment to prevent admission to in-patient wards for patients experiencing an acute mental health crisis. The target group is patients who, without this intervention, would be admitted to in-patient wards [1, 2].

In the United Kingdom (UK), the government proposed the setting up of CRTs nationally in 2000 [3], and in 2005 the national health authorities of Norway decided to implement the CRT model at all Community Mental Health Centres (CMHCs) [4]. Recent studies, mostly from the UK, indicate that the introduction of CRTs may be associated with a decline in hospital admissions [5-11], although the evidence is not wholly consistent. Tyrer [12] found that the introduction of CRTs was associated with an increase in involuntary admissions and a decrease in voluntary admissions [12]. Jacobs [13] found no evidence that the CRT policy *per se* has made any difference to admissions, taking into account other possible explanatory factors such as contemporaneous changes in primary care trusts (PCTs) before and after the introduction of CRTs and cross-sectional changes in PCTs with and without CRTs [13].

Although CRTs are an alternative to in-patient admission, some of their patients are never the less admitted to in-patient wards. Studies from the last decade have found that about one-fifth of patients diagnosed with acute mental health problems are admitted to in-patient wards despite the availability of these teams [9, 14]. To our knowledge, only one study in the last decade has presented data about factors associated with hospital admission from CRTs [15]. This study found that the patients who were more likely to be admitted were those who were uncooperative at the initial assessment, at risk of self-neglect, with a history of involuntary admissions, and

assessed outside office hours or in hospital casualty departments. They also found the particular CRT delivering the service was a consistent determinant for hospital admission [5], but this variable was not otherwise specified in their study. Older studies of alternative mobile home-treatment services before 2000 identified severe mental health illness, previous hospital admission, suicide risk and referral route (for example, referral by the police, legal system or health professionals) as predictors of in-patient admission [14, 16, 17].

Studies from CRTs are sparse and are mainly from the UK. There is therefore a need for studies from other countries than UK where the CRT model was developed. To reach a better understanding of what variables are associated with admission from CRTs in routine practice may also help further service planning and development of both the CRTs and the psychiatric inpatient wards.

The aims of our study were: (a) to describe the characteristics of Norwegian CRTs and to identify if there were differences in admission practice between them (b) to describe the proportions and characteristics of patients admitted to in-patient wards from CRTs, and (c) to identify team- and patient predictors of admissions from such teams.

Methods

Setting

Norway has a total population of 5 million people. The country is characterized by more rural areas and a lower population density than many other countries. The standard of living is generally high. Mental health service provision for adults consists of primary care and specialist mental health services. The primary health care services run by the 429 municipalities consist of general practitioners (GPs) and primary care mental health teams, usually staffed by psychiatric

nurses, social workers, and occupational therapists. Many municipalities have residential services, day centres for people with mental health problems, and ambulatory care. The specialized mental health services run by 20 health authorities include 75 community mental health centres (CMHCs), hospitals with acute psychiatric wards and some specialized wards, and psychiatrists/psychologists in private practice. The 75 CMHCs usually consist of outpatient clinics, in-patient wards, day care, and one or more specialized teams (case management teams, early intervention teams for first-episode psychoses, CRTs, and assertive community treatment teams). Specialized services for substance abuse are usually organized as part of the specialized mental health services in the health authorities.

In 2005, the Norwegian national health authorities decided to implement CRTs in all CMHCs by 2008. This government policy was intended to increase the availability and mobility of specialized mental health services to manage episodes of acute mental health crisis outside in-patient wards [4].

In Norway, either patients may be admitted to in-patient mental health care in acute psychiatric wards in hospitals or in wards in CMHCs (both referred to below as in-patient wards). In 2008, there were 61 beds per 100,000 inhabitants in CMHCs and 21 beds per 100,000 inhabitants in acute psychiatric wards in hospitals [18]. It is only acute psychiatric wards in hospitals that has a mandatory duty to provide immediate emergency admission in the mental health service. Most of the CMHC in-patient wards are not certified for involuntary treatment. In-patient admissions are usually done by General Practitioners (GPs), casualty clinics or CMHCs.

Sample

The sample consisted of 680 consecutive patients aged 18 years or older presenting with a mental health crisis in a face-to-face consultation at eight CRTs during an inclusion period of three months in 2005–2006. Detailed descriptions of these patients, teams and content of treatment have been previously reported [19, 20].

The eight participating CRTs comprised all of the CRTs in Norway at that time, except one that had recently carried out a study of its own [21]. The populations of their catchment areas ranged from 65,000 to 115,000. There were CRTs from each of the five health regions of the country, and from both urban and rural areas. Norway is a fairly homogenous society with relatively minor differences in living standards and in differences between urban and rural areas, and none of the catchment areas can be characterized as highly deprived. A previously study on these CRTs indicated that, compared to the UK, the Norwegian CRTs provide less intensive and less out-of-office care [20].

Referral practices to in-patient wards from the CRTs varied between the teams. Some CRTs wanted GPs or doctors at casualty clinics to admit patients directly to the in-patient wards if the CRT considered there was no doubt that the patient should be admitted. Others wanted only that involuntary admissions should go directly to hospitals during the CRT's opening hours.

By 2010, CRTs had been established at 51 of the 75 CMHCs in Norway. Thirty of these 51 operated only during office hours, while only one had 24-hour availability [22]. Half of the teams established in 2008 had no full-time psychiatrist [18]. This indicates that the CRTs may not have changed significantly since our data were collected, and that our data are still representative.

Data collection

A registration form was used to record information about the patients and the content of their treatments from admission to discharge. The form was developed and piloted in collaboration with the clinical staff of the CRTs in 2003–2005. The clinicians in each team jointly completed the form for every patient who received at least one consultation. The inclusion period lasted three months in 2005 or early 2006. The CRTs included all patients referred during this three-month period, and the period was extended if necessary to include 60 patients. The inclusion period started at different time points for different CRTs (between November 2005 and April 2006). The number of 60 patients was chosen to include a reasonable sample of patients from each team for a comparative data analysis. Each team leader also completed a questionnaire about the organization and operation of the team.

Measures

Data were obtained on socio-demographic and clinical characteristics, contact during the 48 hours prior to referral to the CRT, and the referral process. Type and severity of psychiatric problems and level of functioning were assessed using the International Statistical Classification of Diseases and Related Health Problems, 10th revision (ICD-10) for diagnoses [23], the Health of the Nation Outcome Scale (HoNOS) [24] and Global Assessment of Function Scales (GAF) [25].

The HoNOS consists of 12 subscales, each of which rates problems from 0 (no problem), 1 (minor problem requiring no action), 2 (mild problem but definitely present), 3 (moderately severe problem), to 4 (severe to very severe problem). The subscales of HoNOS for non-accidental self-injury (HoNOS 2), problems with drinking or drug-taking (HoNOS 3), problems

with hallucinations and delusions (HoNOS 6), and problems with depressed mood (HoNOS 7) were included as the clinical scales most relevant to this study. Clinicians received four hours' training in using HoNOS, based on the training model developed in the UK. An earlier study, which used the same training for the clinicians, had shown acceptable inter-rater reliability (intra-class correlation coefficient [ICC] of 0.60–0.89) for the HoNOS subscales used in this paper [27]. Several studies have indicated moderately high internal consistency and low item redundancy for the HoNOS sum score, and therefore support the instrument's use as a meaningful measure of symptom severity [28].

We used a split version of the GAF consisting of two scales ranging from 1-100 for symptom severity and functional impairment, respectively. Clinicians were familiar with using GAF because it is a routine measure in Norwegian mental health services. Jones found the GAF scales' reliability and validity to be satisfactory [29]. Söderberg found that when staff use patients' GAF scores to measure changes and outcomes, it might be necessary to use several raters for an individual patient for [30]. In this study, usually two or more raters filled in the registration form, including the GAF score.

Suicide risk was coded as (i) no suicidal thoughts or plans, (ii) passive death wishes or suicidal thoughts without concrete plans, (iii) concrete suicidal plans or self-injury but no death intention, and (iv) self-injury and death intention. This suicide scale was designed in collaboration with the National Centre for Suicide Research and Prevention [26].

A minority of the patients were brought to the attention of the CRTs by seriously concern reports from family/friends/neighbours or from the staff at casualty departments, CMHCs or primary care mental health teams or from GPs. The police most often respond to a crisis if there is a threat of risk of harm being caused to the person or others, or if the crisis is occurring in the

community and the public are concerned for potential risk of safety. Some of these patients were uncooperative with the process of arranging or carrying out initial assessment. If there still was reason to believe that the patient was in need of involuntary treatment, the police was contacted by the clinical staff of the CRT to bring the patient to the CRT locality for involuntary assessment.

The questionnaire to the team leaders included information on opening hours, full-time doctor as a part of the team, patients treated in the inclusion period, team members, focus on home treatment, psychosis team in the catchment area, authority to admit patients to acute in-patient wards, and acceptance of self-referral.

Approval from authorities and contributions from user groups

The study was approved by the Regional Committee on Ethics in Medical Research, the Norwegian Data Inspectorate and the Directorate of Health. Written consent was not requested because the Regional Committee on Ethics in Medical Research agreed that, for ethical reasons, it was important to include all patients in need of acute treatment, especially those with severe mental health illness who probably would not have had capacity to give written consent.

The in-patient wards admit patients from areas with and without CRTs, and the Norwegian Data Inspectorate did not allow us to record in which municipalities the patients lived. Therefore, we could not analyse differences in admission rates between wards with and without CRTs in their areas.

Representatives of the user organizations Mental Health Norway and The National Association for Relatives in Mental Health participated in a reference group and in the workshops for planning and preparation of the study.

Data analysis

HoNOS scales with missing values (average 5.5% across scales) were set to 0, because this was considered the most probable rating based on the skewed distribution with most patients rated 0, and on the assumption that clinicians most easily forgot to mark the rating when there was no indication of problems. This was also chosen in favour of imputation because it was the most conservative way to measure the severity of patients' mental health problems. Diagnoses were missing for 53.5% and 17.4% of the patients in two teams and for 3.4%–10.4% in the other six teams. In Norway, only physicians, psychiatrists and psychologists are authorized to make ICD–10 diagnoses. The teams with the highest number of missing values on the diagnosis variable operated without a physician, psychiatrist or psychologist as a regular member of the team. In these teams, diagnoses were made by physicians who were not part of the team. For this reason, the HoNOS scales were used instead of diagnoses in the analysis of the type and severity of the psychiatric problems.

Socio-demographic and clinical variables were described as frequencies and percents or means and standard deviations, as appropriate. Differences between those admitted and not admitted to in-patient wards were analyzed by chi-squared tests for categorical variables, and *t* tests, and Mann-Whitney *U* test for continuous variables, as appropriate. For skewed variables, both parametric and non-parametric tests were used and results did not differ.

Data were on both patient and team levels. The selection of potential predictors on patient-level were based on significant findings on statistical comparison between patients admitted and not admitted (significant findings shown in table 2), in addition to predictors identified in earlier studies referred to in the introduction section of this article [14-17]. In the final selection process, we also had to take into account possible collinearity between different variables. We did also

include relevant team level variables (variables listed in table 1). These were more specified in this study compared to earlier studies. To our knowledge, only Cotton [15] has included a team-level variable in their analysis called 'crisis team available to patients'.

Associations between explanatory variables and in-patient admission were tested first using bivariate logistic regression analysis (unadjusted: uncontrolled for the effects of all other predictor variables in the model).

To assess the association between admission status (admitted or not admitted) and potential predictors on both levels a hierarchical logistic regression model with random effects for intercepts was fitted (The SAS GLIMMIX procedure). Such model takes possible correlations between members of the same cluster (i.e. team) into account, and might prevent against false significant findings. Both crude and adjusted odds ratios were calculated. Patient-level interactions between the following variables were considered: living alone and support from family/friends past 48 hours, brought to CRT by the police and physical attacks on others, suicide risk and depressive symptoms, and psychiatric admission past 12 months and psychotic symptoms. One team-level interaction was considered: number of team members and number of patients treated. No cross-level interactions were examined. The model was reduced by stepwise selection method with entry and stay probabilities close to one [31]. This method produces a sequence of models starting with the null model (no predictors) and ending with the full model (all potential predictors included). At each step, the Akaike's Information Criterion (AIC) was calculated and the model with the lowest AIC value chosen as the final one. The statistical analyses were conducted using SAS version 9.2 and SPSS version 18.0. Findings with $p<0.05$ were considered statistically significant.

Results

There were three related research questions in this study: to describe the characteristics of Norwegian CRTs and to identify if there were differences in admission practice between them, to describe the proportions and characteristics of patients admitted to in-patient wards from CRTs, and to identify team- and patient predictors of admissions from such teams.

Characteristics of the CRTs and differences between teams in admission practice

Table 1 presents some characteristics of how the eight CRTs in this study were organized and operated. The CRTs were not available 24 hours a day, 7 days a week, but four of the CRTs were available outside office hours. The number of team members varied substantially (range = 4-19 full time equivalent staff members, which was 0.5-2.0 staff members per 10,000 inhabitants). Three teams did not have a full-time doctor as a part of the team, all but one team did accept self-referral, and half of the teams had the authority to admit patients to acute in-patient wards (the rest had to refer patients to such wards).

Insert Table 1 about here

There were significant differences between the CRTs on overall in-patient ward admission rate (range 13.3%–37.3%). The CRTs with high admission rates also had patients with the most severe mental health problems (ANOVA: GAF symptom and functioning, $p < 0.001$, HoNOS total, $p < 0.001$).

The proportions and characteristics of patients admitted

In total, 146 of the 680 patients (21.5%) were admitted to in-patient wards, of whom 53 (7.8%) were admitted to in-patient wards at CMHCs and 91 (13.4%) to psychiatric wards in hospitals. There were no significant differences between these two admitted groups on severity of psychiatric and social problems as rated on HoNOS and GAF.

Table 2 shows socio-demographic and clinical characteristics, contacts in the last 48 hours prior to the first consultation with the CRT and referral route for patients admitted and not admitted from the CRTs to in-patient wards. Other than employed at present, there were no significant differences for socio-demographic variables. Except for substance abuse, the admitted patients had significantly more severe mental health problems on most clinical scales. Those who were admitted to in-patient wards had significantly more often been in contact with outpatient clinics during the last 48 hours, and they were significantly more often brought to the CRTs by the police.

Insert Table 2 about here

Team- and patient predictors of admission

Table 3 shows the results of hierarchical logistic regression analysis. According to the bivariate analyses (crude odds ratios), patients being admitted to in-patient ward were more often in contact with a CRT with accessibility on office hours only, were older, had psychotic symptoms, had more often concrete suicidal plans or self-injury but no death intention, had depressive symptoms, had risk of self-harm, had a previous psychiatric admission within the last 12 months, and were more often brought to the CRT by the police. In the reduced multivariate model, opening hours were the only significant predictor of admission at team level. The risk of in-

patient admissions were three to five times lower for patients seen by a CRT available outside office hours. The significant patient-level predictors were psychotic symptoms, concrete suicidal plans or self-injury but no death intention, psychiatric admission within the last 12 months. The highest risk of admission was for patients rated by the clinicians as having moderate severe problems (OR=8.62), or severe to very severe problems (OR=30.83) with psychotic symptoms. Patients that have had contact/support from CMHCs past 48 hours before admission had 3.78 higher risk of admission. Age was identified as week but significant predictor as well. There were no significant interaction effects between the independent variables in the regression model.

Insert Table 3 about here

Discussion

We found that about one fifth of the patients were admitted to in-patient wards, but the CRTs varied in their admission rate. The risk of being admitted decreased for patients seen by CRTs with extended opening hours, and increased for patients with psychotic symptoms, concrete suicidal plans or self-injury but no death intention, and a prior history of admission.

Characteristics of the CRTs and differences between teams in admission practice

There is a gap in the literature with regard to the consequences of the effect of specific variations in staffing and practice of CRTs on admission rate [5]. Cotton et al. found the particular CRT delivering the service was a consistent determinant for hospital admission [15], but this variable was not otherwise specified in their study. Even though there are no fidelity criteria for the organization and operations of the CRT model, we included several team level variables,

considered as important for effective CRT care in the literature [1, 32]. Except for opening hours, the hierarchical logistic regression analysis revealed no other significant team level predictors associated with admission to in-patient wards. This was surprising in view of the fact that there were significant variations between the CRTs in many aspects: admission practice, staffing, and focus on home treatment, among others. This may suggest that similar patients experiencing similar levels of acuity may be treated in a similar way across different CRTs in Norway.

The proportions and characteristics of patients admitted

Our finding that 21.5% of CRT patients were admitted to in-patient wards confirms previous findings, including Brimblecombe et al. (21.1% admitted) and Johnson et al. (22% admitted) [9, 14]. This indicates that the Norwegian CRTs achieved one of their goals of providing an alternative to in-patient admission, even though the more severely ill patients were probably under-represented in the sample. This might be a marker of the effectiveness of the model and is similar to the effectiveness of CRT care in the UK.

We found no significant differences in severity of patients' mental health problems between those admitted to in-patient wards at CMHCs and those admitted to psychiatric hospitals. This is somewhat surprising, given that the in-patient units at CMHCs are intended for patients with less severe mental health problems and patients who do not need involuntary admissions. This finding may be related to variations in capacity at the different in-patient wards, and to patients being admitted wherever beds were available.

The proportions of patients receiving involuntary treatment, being brought to the CRT by the police or being at risk of harm to self or to others, were less frequent than in similar studies [8, 14, 15]. This might indicate that a higher proportion of the patients with more severe mental health illness are bypassing CRTs in admission to acute psychiatric wards in Norway compared

with the UK, although we do not have numbers that prove this assumption. Even though some of these patients could been treated outside in-patient wards, it must be emphasized that very severely ill patients experiencing imminent risk would not be able to be contained in the community and would warrant direct admission. Some of these situations are very complex to respond to and may be very time intensive.

Team- and patient predictors of admission

The risk of being admitted decreased significantly for patients seen by CRTs providing services with extended opening hours. In a previous study of the same CRTs, we found that there was a tendency for teams that operate extended opening hours to treat patients with more severe mental illnesses [19]. Four of the CRTs in this study operated during office hours only and none of the teams operated with 24/7 availability. Patients experience mental health crises in the evenings, at night and on weekends, and it is difficult for Norwegian CRTs to operate as an adequate alternative to inpatient treatment if they do not operate during these hours. The only service that provide assessments or care for patients experiencing mental health crisis outside office hours in these areas are casualty departments and acute inpatient wards. This study emphasized the importance of the mental heath authorities in Norway to allocate resources to these teams to make extended opening hours for CRTs possible.

There may be a difference between the UK and Norway with respect to the admission threshold of CRTs [15]. Contrary to the findings of Cotton et al. in the UK, clinical variables, such as patients with psychotic symptoms, suicidality, and previous admissions, did increase the likelihood of in-patient admission in our study. This may indicate that the CRTs in the UK are providing help for these subgroups of more severely ill patients in outpatient services. One possible explanation of this difference in admission threshold is that none of the CRTs in our

study had 24-hour, 7-day availability, and therefore probably were less able to treat patients needing intensive care throughout 24 hours. However, recent psychiatric admission and experience of severe psychotic symptoms are often markers of severe mental health problems, and these patients may be difficult to manage in the community. For such patients a psychiatric admission may be the most suitable option for care. Perhaps the Norwegian CRTs ensure that those patients mostly likely to require containment and intensive treatment, receive this at an in-patient ward. It may be that the CRTs in the UK are not as effective for those most at need. On the other hand, the staff in the CRTs in the UK has more experience due to the model being more established. It is therefore possible that they manage patients with more severe mental health problems outside in-patient wards in a satisfactory manner.

We found that psychotic symptoms, concrete suicidal plans or self-injury, and previous admissions were significant predictors of admission to in-patient ward. This is similar to earlier studies of home treatment as an alternative to hospital admission [14, 16, 17] conducted before the National Health Service Plan in the UK [3]. In addition to clinical and risk factors for admission mentioned above, another factor may be that previous in-patient treatment may have established expectations among patients and carers about in-patient treatment. A further potential factor is the extent to which teams permit patients to choose to go to hospital if this is their preference. Current formulations of the model suggest that home treatment should be delivered whenever feasible, but the increasing emphasis on allowing service users choice conflicts with these imperatives [15].

In the adjusted analysis age was identified as a week but significant predictor in the model (p value=0.019, OR=1.018). But taken into account that not all significant findings are significant, and given the number of hypothesis tested, this might be a chance finding. We

therefore chose not to emphasize this in the paper. The highest level of the suicide scale (self-injury and death intention) was not significant in the model, but the second highest level (concrete suicidal plans or self-injury but no death intention) was. This potential surprising finding might be explained by the fact that few patients were rated as having self-injury and death intention (n=23). Having had contact with or receiving support from a CMHC past 48 hours was a significant predictor of in-patient admission in the adjusted model, most likely explained by the fact that these patients also have the most severe mental health problems.

In the unadjusted analysis, patients being brought to the CRT by the police were significantly associated with in-patient admission. Contrary Cottons finding, this variable was not a significant predictor in the adjusted model. This may also be explained by the relatively few numbers of patients being brought to the CRTs by the police (n=27). The same explanation may pertain to the association between non-accidental self-injury and in-patient admission in the unadjusted model. Few numbers of patients rated as having severe to very severe problem with non-accidental self-injury (n=31).

The most consistent finding in Cotton's study was that patients who were uncooperative with the initial assessment were much more likely to be admitted (OR = 10.3) [15]. Our study might give confirmation to their conclusion that uncooperative patients are difficult to treat within the CRT model. Many patients considered uncooperative may have variable insight and motivation for treatment which may be associated with non-accidental self-injury problems and psychotic symptoms. For this group of patients, in-patient treatment will probably continue to be the treatment of choice despite the implementation of CRTs.

We did also find that the employment rate halved the odds for admission to in-patient wards in the unadjusted model. This finding is probably related to the fact that there is a negative correlation between employment status and severity of clinical and social problems.

Variables as attempted suicide, deliberate self-harm and GAF were not included in the regression analysis for hierarchical data even though they were significant in table 2. This is because of the risk of interaction effects between these and other similar variables like the HoNOS sub scales.

A range of other contextual factors not included in this study may also determine the types of patients admitted to a particular unit at a given time, such as availability of affordable housing, prioritizing at emergency departments, and availability of mental health services in the community [33].

Strengths and limitations

The main strength of our study is good external validity because of the inclusion of all patients presenting at a CRT during the study period. In addition, a hierarchical logistic regression model was taking into account both patient- and team-level variables in assessing risk of admission to in-patient wards from CRTs. Causality cannot be determined because this is not a randomized controlled trial. The 62 clinical raters in this study may have contributed to unpredictable error variance in the data material. The data for different teams were collected at different points in time and then there may be other exogenous factors which were not control for in the models e.g. seasonal variation in admissions.

Conclusion

The CRTs achieved one of their goals of providing an alternative to in-patient admission for about four fifth of the patients, but the CRTs varied in their admission rate. The risk of being admitted to a in-patient ward decreased significantly for patients seen by CRTs with extended opening hours, which emphasize the importance of CRTs offering an extended hours service to people with mental health problems. Patients with psychotic symptoms, concrete suicidal plans or self-injury, and a prior history of admission were predictive of an increased risk for admission. Even though some severely ill patients need in-patient care, the CRTs might still target some more suicidal and/or psychotic patients with relapsing mental illnesses for care in the community.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

TR, RWG, and NH designed the study and formulated the research questions. NH conducted the literature search. NH and JS-B performed the statistical analysis and interpreted the data, with significant support from SJ and TR. The manuscript was written by NH and substantially revised by TR and SJ. The final version of the manuscript was prepared and revised by all authors. TR was the head supervisor of this manuscript and the project leader of the Multicentre Study of Acute Psychiatry in Norway (MAP).

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Table 1 Characteristics of CRTs (n=8)

Variables on team level	
Opening hours: n	
24/7 (24 hours a day, 7 days a week)	None
Team operates office hours (37.5 hours a week)	4
Team operates extended hours (70 hours a week)	1
Team operates extended hours (75 hours a week)	2
Team operates extended hours (86 hours a week)	1
Number of team members (FTE)	9.1 (4.3-19.2)
Full-time doctor as a part of the team: n	5
Number of patients included: n (median)	46-147 (80)
Focus on home-treatment: n	5
Psychosis team in the catchment area: n	5
Accept self-referral: n	7
Authority to admit patients to acute in-patient wards	4

Table 2 Characteristics and comparison of patients (n=680) admitted and not admitted to in-patient wards from CRTs

Variables on patient level	**Admitted**	**Not admitted**	***P* value**[a]
Overall admission rate to in-patient wards *n* (%)	146 (21.5)	534 (78.5)	
Socio-demographic variables			
Age (years), mean (SD)	41.82 (14.66)	39.63 (15.12)	0.124
Gender *n* (%) female	84 (58.3)	312 (58.9)	0.908
Single, divorced or widowed *n* (%)	97 (68.3)	318 (60.9)	0.107
Living alone *n* (%)	83 (57.6)	313 (58.4)	0.870
Employed at present *n* (%)	24 (16.7)	151 (28.2)	0.005
Custody of children under 18 *n* (%)	34 (29.1)	134 (34.6)	0.263
Clinical variables			
Clinical diagnosis (ICD–10) *n* (%)			
F 10–19 Substance use disorders	8 (5.8)	45 (8.8)	0.260
F 20–29 Schizophrenia disorders	28 (20.4)	32 (6.3)	< 0.001
F 30–39 Affective disorders	55 (40.1)	165 (32.3)	0.085
F 40–49 Neurotic, stress-related and somatoform disorders	22 (16.1)	125 (24.5)	0.037
F 60–69 Personality disorders	3 (2.2)	27 (5.3)	0.126
GAF mean (SD)			
Symptom	39.26 (10.31)	50.80 (10.70)	< 0.001
Functioning	41.37 (10.62)	51.78 (12.13)	< 0.001
Suicide risk *n* (%)			
No suicidal thoughts/plans	36 (27.9)	221 (43.0)	0.001
Passive suicidal thoughts, no plans	52 (37.1)	209 (40.7)	0.451
Concrete suicidal plans or self-injury, no death intentions	43 (30.7)	67 (13.0)	< 0.001
Self-injury death intentions	6 (4.3)	17 (3.3)	
Severity of clinical and social problems: Mean			

Variables on patient level	**Admitted**	**Not admitted**	***P* value**[a]
(SD)			
Non-accidental self-injury (HoNOS 2)	0.99 (1.38)	0.52 (1.07)	< 0.001
Problems with drinking or drug-taking (HoNOS 3)	0.70 (1.14)	0.59 (1.09)	0.483
Psychotic symptoms (HoNOS 6)	1.08 (1.40)	0.32 (0.77)	< 0.001
Depressive symptoms (HoNOS 7)	2.13 (1.14)	1.86 (1.04)	0.009
Unwanted incidents *n* (%)			
Attempted suicide	6 (4.2)	8 (1.5)	0.031
Deliberate self-harm	12 (8.3)	20 (3.7)	0.031
Physical attacks on others	5 (3.5)	11 (2.1)	0.351
Physical attacks from others	1 (0.7)	4 (0.7)	
Past psychiatric history *n* (%)			
Previous mental health service contact	94 (65.2)	307 (57.3)	0.063
Psychiatric admission past 12 months	55 (44.4)	87 (19.0)	< 0.001
Other characteristics *n* (%)			
Pharmacological treatment	57 (39.6)	184 (34.3)	0.242
Receiving involuntary treatment	1 (0.7)	2 (0.4)	
Contact/support in 48 hours before admission *n* (%)			
GPs	54 (37.5)	176 (32.8)	0.294
Emergency ward	32 (22.2)	101 (18.8)	0.364
Local CMHC	21 (14.6)	62 (11.6)	0.326
Outpatient clinics	21 (14.6)	34 (6.3)	0.001
Support from family and/or friends	62 (43.1)	208 (38.8)	0.355
Referral route to the CRT *n* (%)			
Emergency referrals	114 (79.2)	375 (70.0)	0.029
Self-referrals	31 (21.5)	141 (26.3)	0.242
Brought to CRT by the police *n* (%)	14 (9.7)	13 (2.4)	< 0.001

[a] ***p*** values from chi-squared tests, *t* tests and Mann–Whitney *U* test

Table 3 Potential predictors associated with being admitted to an in-patient ward from CRTs on logistic regression (unadjusted and adjusted for other predictor variables)

Variables	Unadjusted model			Adjusted model		
	OR for admission	95% CI	*p* value	OR for admission	95% CI	*p* value
Team level						
Opening hours (37.5hrs=ref)						
Team operates extended hours (70 hrs a week)	0.398	0.200–0.791	0.009	0.197	0.076-0.508	0.001
Team operates extended hours (75 hrs a week)	0.549	0.356-0.848	0.007	0.363	0.200-0.657	0.001
Team operates extended hours (86 hrs a week)	0.579	0.326-1.029	0.063	0.216	0.095-0.492	<0.001
Number of team members	0.969		0.313			
Full-time doctor as a part of the team	0.886		0.691			
Number of patients included	0.994		0.154			
Focus on home-treatment	1.386		0.256			
Psychosis team in the catchment area	1.132		0.685			
Accept self-referral	0.631		0.227			
Authority to admit patients to acute in-patient wards	0.801		0.437			
Patient level						
Age	1.010	0.998-1.023	0.105	1.018	1.003-1.034	0.019
Gender	1.005		0.980			
Living alone	0.948		0.786			
Employed at present	0.507		0.006			
Suicide risk (0=ref):						
1 Passive death wishes or suicidal thoughts						

without concrete plans	1.470	0.924-2.337	0.104	2.288	1.287-4.068	0.005
2 Concrete suicidal plans or self-injury but no death intention	3.745	2.214-6.334	<0.001	6.883	2.475-13.632	<0.001
3 Self-injury and death intention	2.146	0.783-5.879	0.138	3.222	0.776-13.389	0.108
Non-accidental self-injury (HoNOS 2) (0=ref)						
1 Minor problem requiring no action	2.317	1.250-4.295	0.008			
2 Mild problem but definitely present	2.086	1.035-4.201	0.040			
3 Moderately severe problem	2.752	1.434-5.281	0.002			
4 Severe to very severe problem	3.403	1.560-7.426	0.002			
Substance misuse (HoNOS 3) (0=ref)						
1 Minor problem requiring no action	1.268	0.676-2.378	0.459			
2 Mild problem but definitely present	1.240	0.604-2.544	0.558			
3 Moderately severe problem	1.699	0.919-3.143	0.092			
4 Severe to very severe problem	1.840	0.678.4.997	0.232			
Psychotic symptoms (HoNOS 6) (0=ref)						
1 Minor problem requiring no action	1.871	0.986-3.551	0.056	3.280	1.542-6.977	0.002
2 Mild problem but definitely present	3.078	1.604-5.906	0.001	2.329	1.055-5.141	0.037
3 Moderately severe problem	8.368	4.037-17.345	<0.001	8.616	3.324-22.335	<0.001
4 Severe to very severe problem	16.457	4.965-54.546	<0.001	30.830	5.740-165.603	<0.001
Depressive symptoms (HoNOS 7)						
1 Minor problem requiring no action	0.745	0.360-1.541	0.428			
2 Mild problem but definitely present	0.939	0.499-1.770	0.847			
3 Moderately severe problem	1.377	0.705-2.689	0.350			
4 Severe to very severe problem	2.771	1.171-6.566	0.021			
Physical attacks on others	1.114	0.581-2.136	0.746			
Psychiatric admission past 12 months	3.852	2.422-6.126	<0.001	2.687	1.579-4.574	<0.001

Contact/ support from family/friends past 48 hours	1.209	0.827-1.767	0.326	1.505	0.931-2.433	0.096
Contact/support from CMHCs past 48 hours	3.092	1.634-5.851	0.001	3.784	1.555-9.210	0.004
Self-referral	0.752	0.476-1.187	0.220			
Brought to CRT by the police	3.997	1.806-8.845	0.001			

SINTEF

Registrering av utredning og behandling ved akutteam i psykisk helsevern

Utfyllingstidspunkt

Skjemaet er utformet slik at side 1-2 (A-D) vanligvis kan fylles ut i forbindelse med inntak, og side 3-4 (E-H) i forbindelse med avslutning. Vurderinger under D og G gjøres for anført tidspunkt. Resten kan fylles ut når informasjonen er tilgjengelig.
Det brukes egne skjema for døgnavdelinger for voksne/ungdom.

Prosjekt nr ☐☐

Institusjon ☐☐ **Team** ☐☐

Kodenummer for pasienten ☐☐☐☐☐☐☐

Kodenummer behandlingsepisode ☐☐☐☐☐☐☐

A Henvisning og inntak (første kontakt)

A01 Henvisning mottatt *ddmmåå* ☐☐ ☐☐ ☐☐

A02 Inntaksdato *ddmmåå* ☐☐ ☐☐ ☐☐

A03 Inntak klokkeslett *tt* ☐☐

A04 Inntak som øyeblikkelig hjelp (innen 24 t) ☐1Ja ☐ 2Nei

A05 Hvem som henviste pasienten?
- ☐ 1 Pasienten selv / pårørende
- ☐ 2 Fastlegen / allmennlege
- ☐ 3 Allmenn legevakt
- ☐ 4 Psykiatritjeneste i kommunen
- ☐ 5 Psykiatrisk legevakt
- ☐ 6 Somatisk poliklinikk / avdeling
- ☐ 7 Poliklinikk / dagtilbud ved DPS
- ☐ 8 Døgnavdeling ved DPS
- ☐ 9 Psykiatrisk poliklinikk / dagtilbud ved sykehus
- ☐10 Psykiatrisk døgnavdeling ved sykehus
- ☐11 Privatpraktiserende psykiater/psykolog
- ☐12 Politilege / tilsynslege i fengsel / rettsvesen
- ☐13 Annet:

A 06 Henvisningen er fra
- ☐ 1 Noen som kjenner og følger opp pasienten
- ☐ 2 Noen som har hatt liten/ingen kontakt med pasienten

A07 Henvisningsformalitet (satt av henvisende instans)
- ☐ 1 Frivillig
- ☐ 2 Tvungen observasjon (§3-6)
- ☐ 3 Tvungent psykisk helsevern (§3-7)
- ☐ 4 Dømt til tvungent psykisk helsevern
- ☐ 5 Barnevernsloven
- ☐ 6 Sosialtjenesteloven

A08 Inntaksformalitet ved spesialistvedtak (paragrafvurdering)
- ☐ 1 Frivillig (§2-1.1)
- ☐ 2 Kontrakt (§2-2.1)
- ☐ 3 Tvungen observasjon uten døgnopphold (§3-8.2)
- ☐ 5 Tvungent psykisk helsev. uten døgnopph (§3-1.2)
- ☐ 7 Dømt til tvungent psykisk helsevern (§5-3.1)

A09 Pasienten ble fulgt til inntaket (første kontakt) av politi
☐ 1 Ja ☐ 2 Nei ☐ 3 Ukjent

A10 Pasienten ønsket selv henvisning / kontakt med teamet
☐ 1 Ja ☐ 2 Nei ☐ 3 Ukjent

A11 Har pasienten tidligere hatt kontakt med psykisk helsevern?
☐ 1 Ja (polikl. eller døgnopph.) ☐ 2 Nei ☐ 3 Ukjent

B Opplysninger om pasienten

B01: Fødselsår ☐☐☐☐

B02: Kjønn ☐ 1 Mann ☐ 2 Kvinne

B03: Sivilstatus
- ☐ 1 Ugift
- ☐ 2 Gift
- ☐ 3 Samboende
- ☐ 4 Enke / enkemann
- ☐ 5 Separert / skilt
- ☐ 6 Ukjent

B04: Bor alene
- ☐ 1 Ja
- ☐ 2 Nei
- ☐ 3 Ukjent

B05 Pasientens etniske bakgrunn *(se veiledningen)*

☐ 1 Norsk ☐ 2 Annen : . . . . . .

. . . . . .

B06: Dersom ikke norsk	1 Ja	2 Nei	3 Ukjent
1 Nødvendig med tolk i samtaler	☐	☐	☐
2 Asylsøker, søknad behandles	☐	☐	☐
3 Asylsøker, søknad avslått	☐	☐	☐
4 Har vært utsatt for krig/tortur	☐	☐	☐

B07 Pasienten har ___ barn under 18 år

B08 Om pasienten har omsorg for barn
- ☐ 1 Pasienten har ikke omsorg for barn
- ☐ 2 Pasienten har deltids omsorg for barn
- ☐ 3 Pasienten har heltids omsorg for barn

B09 Hjelp/tiltak til barn som pasienten har deltids eller heltids omsorg for
- ☐ 1 Barna har ikke behov for hjelp/tiltak
- ☐ 2 Barna får hjelp/tiltak
- ☐ 3 Barna trenger hjelp/tiltak, men får det ikke
- ☐ 4 Kjenner ikke til om barna trenger hjelp/tiltak

B10 Bolig
- ☐ 1 Leilighet/bolig
- ☐ 2 Servicebolig uten tilsyn
- ☐ 3 Omsorgsbolig m. noe tilsyn
- ☐ 4 Omsorgsbolig, heldøgnstils.
- ☐ 5 Bor i institusjon
- ☐ 6 Bor hos foreldre/andre
- ☐ 7 Hospits eller lignende
- ☐ 8 Ingen bolig/ bostedsløs
- ☐ 9 Asylmottak
- ☐10 Fengsel
- ☐11 Ukjent

B11 Hovedinntektskilde
- ☐ 1 Lønnet arbeid/næringsdriv.
- ☐ 2 Forsørget
- ☐ 3 Studielån
- ☐ 4 Arbeidsledighetstrygd
- ☐ 5 Syke / rehabiliteringspenger
- ☐ 6 Attføringspenger
- ☐ 7 Uførepensjon
- ☐ 8 Alderspensjon
- ☐ 9 Sosial stønad
- ☐10 Annet:
- ☐11 Ukjent

B12 Status for nåværende psykiske lidelse
- ☐ 1 Psykisk lidelse som har debutert nylig
- ☐ 2 Ny sykdomsperiode etter periode uten sykdom
- ☐ 3 Forverrelse av langvarig vedvarende psykisk lidelse
- ☐ 4 Ukjent / annet: . . . . . .

B 13 Høyeste fullført utdanning
☐ 1 Grunnskole ☐ 2 Videreg. skole ☐ 3 Høgsk./Universitet

D03 GAF siste uke *alvorligste* **Sympt** ☐☐ **Funk** ☐☐

C Tjenester mottatt i tiden før inntaket

C01 Bruk av psykisk helsevern (inkl. DPS og sykehus) siste 12 måneder *Sett ett kryss i hver kolonne*

	Poliklinisk/ ambulant	Døgn-opphold
1 Ikke noe	☐	☐
2 En kortere periode	☐	☐
3 Flere kortere perioder	☐	☐
4 Lengre periode(r) eller vedvarende	☐	☐
5 Ukjent	☐	☐

C02 Grad av oppfølging siste 3 måneder før inntaket

Ett kryss innen de tre første kolonner på hver linje, samt eventuelt i kolonne 4

	Ja **1**	Nei **2**	Ukjent **3**	Avbrutt før inntak **4**
1 Stod på venteliste ved poliklinikk	☐	☐	☐	☐
2 Poliklinisk behandling DPS/sykehus	☐	☐	☐	☐
3 Dagbehandling DPS/sykehus	☐	☐	☐	☐
4 Ambulant team DPS/sykehus	☐	☐	☐	☐
5 Behandling ved rusteam	☐	☐	☐	☐
6 Fastlege eller annen primærlege	☐	☐	☐	☐
7 Psykiatriteam/sykepleie i kommunen	☐	☐	☐	☐
8 Fagperson ved sosiale tjenester	☐	☐	☐	☐
9 Hjemmetjenester	☐	☐	☐	☐
10 Kommunalt dagtilbud	☐	☐	☐	☐

C03 Kontakt og støtte siste 48 timer før innleggelsen

Det kan settes flere kryss

☐ 1 Fastlege
☐ 2 Legevakt
☐ 3 Fagpers. i kommune
☐ 4 Psyk. poliklinikk
☐ 5 Akutteam
☐ 6 Annet ambulant team
☐ 7 Kriseseng/lavterskel
☐ 8 Somatisk poliklinikk/avd.
☐ 9 Støtte fra pårørende
☐ 10 Støtte fra venner
☐ 11 Kontakt med politiet
☐ 12 Annet:

C04 Psykofarmaka pasienten stod på fram til inntaket

Se veiledningen når det gjelder andre medikamenter.
Kryss på C07 om pasienten ikke bruker medikamenter.

Medikamentnavn	mg /døgn

C05 Depotinjeksjon — døgn før innl

C06 ☐ 1 Frivillig ☐ 2 I kraft av vedtak om tvangsbehandling

C07 Hvordan pasienten tok psykofarmaka siste to uker

☐ 1 Stod ikke på noen psykofarmaka
☐ 2 Tok psykofarmaka stort sett som foreskrevet
☐ 3 Tok psykofarmaka delvis som foreskrevet
☐ 4 Tok ikke /stort sett ikke psykofarmaka som foreskrevet
☐ 5 Ukjent

D Vurdering ved inntaket (første kontakt)

D01 HoNOS *Se veiledningen.* Skåret ved: _____

Ved ukjent settes det ikke noe kryss

	0	**1**	**2**	**3**	**4**
1 Overaktiv eller aggressiv atferd	☐	☐	☐	☐	☐
2 Selvskade som ikke skyldes uhell	☐	☐	☐	☐	☐
3 Drikking eller bruk av stoff	☐	☐	☐	☐	☐
4 Kognitive problem	☐	☐	☐	☐	☐
5 Fysisk sykdom / funksjonshemming	☐	☐	☐	☐	☐
6 Hallusinasjoner og vrangforestillinger	☐	☐	☐	☐	☐
7 Senket stemningsleie	☐	☐	☐	☐	☐
8 Andre psykiske plager (merk bokstav)	☐	☐	☐	☐	☐
9 Problem med forhold til andre	☐	☐	☐	☐	☐
10 Problem med dagliglivets aktiviteter	☐	☐	☐	☐	☐
11 Problem med boligforhold	☐	☐	☐	☐	☐
12 Problem med yrke og aktiviteter	☐	☐	☐	☐	☐

A fobisk — F somatoforme
B angst — G spiseproblem
C tvangsproblem — H søvnproblem
D stress/spenninger — I seksuelle pr.
E dissosiative — J andre probl.

D02 Bruk av alkohol og stoff *Se veiledn.*	**1**	**2**	**3**	**4**	**5**
1 Bruk av alkohol	☐	☐	☐	☐	☐
2 Bruk av medikamenter / narkotika	☐	☐	☐	☐	☐

(GAF-skåringer skrives på side 1, ved "minste basis datasett")

D04 Om pasienten var ruset ved inntak

☐ 1 Ingen mistanke om pasienten var ruset
☐ 2 Mistanke om pasienten var ruset
☐ 3 Pasienten var åpenbart ruset

D05 Prøver på rusmiddelmisbruk	Alkohol	Stoff
1 Ikke funnet grunn til å ta prøve	☐	☐
2 Ikke tatt prøve fordi pasienten nektet	☐	☐
3 Prøve tatt og var negativ	☐	☐
4 Prøve tatt og var positiv (påvist)	☐	☐

D06 Selvmordsfare i forkant av inntak *(oppgitt i henvising eller avdekket under samtaler ved inntak)*

☐ 1 Ingen selvmordstanker/planer
☐ 2 Passive dødsønsker, ikke aktive selvmordstanker
☐ 3 Tanker om å ta sitt eget liv, ikke konkrete planer
☐ 4 Konkrete selvmordsplaner
☐ 5 Gjort villet egenskade med ingen/liten intensjon om å dø
☐ 6 Gjort villet egenskade med stor/sikker intensjon om å dø
☐ 7 Ukjent

D07 Selvmordsfare under behandlingen (vurdert ved inntak)

☐ 1 Høy
☐ 2 Moderat
☐ 3 Lav
☐ 4 Ingen
☐ 5 Usikkert

D08 Hovedgrunn for inntaket slik teamet ser det

Sett kryss på 1 - 3 linjer

☐ 1 Få gjennomført diagnostikk og utredning
☐ 2 Få etablert / bedret behandlingsrelasjon
☐ 3 Få satt igang / endret behandling
☐ 4 Få kontroll over destruktiv atferd
☐ 5 Ta vare på pasienten / beskytte / skjerme / avlaste
☐ 6 Få bedret pasientens kontakt / relasjoner med familie
☐ 7 Ha trygg ramme for bearbeiding av traumer / konflikter

E Utredning og behandling ved teamet

E01 Undersøkelser som er gjort	1 Ja	2 Nei	3 Nektet
1 Strukturert diagnostisk intervju *	☐	☐	☐
2 Skåringsskalaer utfra intervju * *	☐	☐	☐
3 Psykologisk testing	☐	☐	☐
4 System.kartlegg. av livssituasjon	☐	☐	☐
5 System.kartlegg. av sos.nettverk	☐	☐	☐
6 Ekstra somatisk undersøkelse	☐	☐	☐
7 Blodprøver, laboratorieprøver	☐	☐	☐
8 Bildediagnostikk av hjernen	☐	☐	☐
9 EEG	☐	☐	☐

*) I så fall strek under: SCID1, SCID2, MINI, SCAN, CIDI,SPIFA

**) I) så fall understrek: PANSS, BPRS, _____

Se veiledning om samarbeid med andre om punkt 4-7 ovenfor.

E02 Behandling og tiltak som er gitt under behandling ved teamet	Ikke noe	Under 1 g/uke	1-2 g/uke	Over 2 g/uke
Sett ett kryss på hver linje	**1**	**2**	**3**	**4**
1 Samt. psykiater/psykologspesialist	☐	☐	☐	☐
2 Samtaler m/ annen lege/psykolog	☐	☐	☐	☐
5 Samtaler med sosionom	☐	☐	☐	☐
6 Samtaler med psyk. sykepleier	☐	☐	☐	☐
7 Samtaler med annen i teamet	☐	☐	☐	☐
11 Samtalegruppe ved teamet	☐	☐	☐	☐
12 Familie/nettverkssamtaler	☐	☐	☐	☐
13 Møte i ansvarsgruppe	☐	☐	☐	☐
14 Andre møter med andre	☐	☐	☐	☐
21 Med på aktiviteter i gruppe	☐	☐	☐	☐
22 Individuelt tilrettelagte aktiviteter	☐	☐	☐	☐
23 Trening i å fungere sosial/praktisk	☐	☐	☐	☐
25 Fysisk trening	☐	☐	☐	☐

	Ja	**Nei**
31 Behandling med psykofarrnaka	☐	☐
32 Serummåling av psykofarmaka	☐	☐
33 Systematisk vurd. av bivirkninger	☐	☐
44 Politiet deltatt under behandlingen	☐	☐
51 Pasient med på behandlingsmøte	☐	☐
61 Bistand med økonomi/bolig/annet	☐	☐
71 Annet 1:	☐	☐
72 Annet 2:	☐	☐

F Samarbeid og koordinering

F01 Hvem har teamet hatt kontakt med under pasientens behandling?	Ikke aktuelt	Samtale / møte	Annen kontakt	Ikke kontakt	Ukjent
Sett ett kryss på hver linje	**1**	**2**	**3**	**4**	**5**
1 Familie/pårørende	☐	☐	☐	☐	☐
2 Venner av pasienten	☐	☐	☐	☐	☐
3 Verge/hjelpeverge	☐	☐	☐	☐	☐
4 Støttekontakt	☐	☐	☐	☐	☐
5 Fastlege/annen primærlege	☐	☐	☐	☐	☐
6 Sykepleier/fagpers. i kommunen	☐	☐	☐	☐	☐
7 Sosialkontor	☐	☐	☐	☐	☐
8 Dagsenter i kommunen	☐	☐	☐	☐	☐
9 Kommunalt sykehjem/institusjon	☐	☐	☐	☐	☐
10 Barnevernet / barnevernsinst.	☐	☐	☐	☐	☐
11 Privatprakt. psykiater/psykolog	☐	☐	☐	☐	☐
12 Annen fast terapeut annet sted	☐	☐	☐	☐	☐
13 Psykiatrisk sykehusavdeling	☐	☐	☐	☐	☐
14 Distriktspsykiatrisk senter	☐	☐	☐	☐	☐
15 BUP	☐	☐	☐	☐	☐
16 Somatisk sykehusavd./poliklinikk	☐	☐	☐	☐	☐
17 Rusteam, rusinstitusjon	☐	☐	☐	☐	☐
18 Arbeidsgiver	☐	☐	☐	☐	☐
19 Skole/utdanningssted	☐	☐	☐	☐	☐
20 Aetat	☐	☐	☐	☐	☐
21 Trygdekontor	☐	☐	☐	☐	☐
22 Politi, fengsel, krim.omsorg i frihet	☐	☐	☐	☐	☐
23 Sykehusprest	☐	☐	☐	☐	☐
24 Annen instans:	☐	☐	☐	☐	☐

F02 Hvilke av disse tilbudene har pasienten fra før, - eller har fått nå under behandlingen?	Hadde fra før	Fått under opph.	Ikke blitt tilbudt	Pas ønsker ikke	Ukjent
Sett ett kryss på hver linje	**1**	**2**	**3**	**4**	**5**
1 Fastlege	☐	☐	☐	☐	☐
2 Behandlingsplan i psyk. helsevern	☐	☐	☐	☐	☐
3 Individuell plan i følge loven	☐	☐	☐	☐	☐
4 Kriseplan (del av individuell plan)	☐	☐	☐	☐	☐
5 Hovedbehandler i psyk. helsevern	☐	☐	☐	☐	☐
6 Koordinator i kommunen	☐	☐	☐	☐	☐
7 Ansvarsgruppe i kommunen	☐	☐	☐	☐	☐
8 Kontaktperson i kommunen	☐	☐	☐	☐	☐

F03 Pasienten har ut fra vår vurdering behov for individuell plan ☐ 1 Ja ☐ 2 Nei ☐ 3 Usikkert

Besvares uavhengig av om pasienten har individuell plan.

F04 Behandling ved teamet eller eventuell døgnenhet

Fylles ut om pasienten har mottatt tilbud fra andre enn teamet.

Basisenhet* *Skriv tydelig*	**Fra** *ddmm*				-	**Til** *ddmm*			
					-				
					-				
					-				
					-				
					-				

*) *Kan føre opp* tidsrom for opphold i lavterksel døgnenhet *eller annet, samt om pasienten i en periode har vært* dagpasient.

G Vurdering ved avslutning

G01 HoNOS *Se veiledning.* Skåret ved: _____

Ved ukjent settes det ikke noe kryss

		0	1	2	3	4
1	Overaktiv eller aggressiv atferd	☐	☐	☐	☐	☐
2	Selvskade som ikke skyldes uhell	☐	☐	☐	☐	☐
3	Drikking eller bruk av stoff	☐	☐	☐	☐	☐
4	Kognitive problem	☐	☐	☐	☐	☐
5	Fysisk sykdom / funksjonshemming	☐	☐	☐	☐	☐
6	Hallusinasjoner og vrangforestillinger	☐	☐	☐	☐	☐
7	Senket stemningsleie	☐	☐	☐	☐	☐
8	Andre psykiske plager (merk 1 bokstav)	☐	☐	☐	☐	☐
9	Problem med forhold til andre	☐	☐	☐	☐	☐
10	Problem med dagliglivets aktiviteter	☐	☐	☐	☐	☐
11	Problem med boligforhold	☐	☐	☐	☐	☐
12	Problem med yrke og aktiviteter	☐	☐	☐	☐	☐

A fobisk
B angst
C tvangsproblem
D stress/spenninger
E dissosiative
F somatoforme
G spiseproblem
H søvnproblem
I seksuelle pr.
J andre probl.

G02 GAF (alvorligste, se veil.) **Sympt** ☐☐ **Funk** ☐☐

Se veiledning om avslutning skjer samme dag som inntak.

G03 Diagnose avslutning

Diagnose (ICD-10) (viktigste) ☐☐.☐☐

Diagnose (ICD-10) ☐☐.☐☐

Diagnose (ICD-10) ☐☐.☐☐

G04 Selvskading og vold under akuttbehandlingen	1 Ja	2 Nei	3 Ukjent
1 Selvmordsforsøk	☐	☐	☐
2 Selvskading	☐	☐	☐
3 Fysisk angrep på andre	☐	☐	☐
4 Utsatt for fysisk angrep fra andre	☐	☐	☐

G05 Vurdering av tidspunkt for avslutning

☐ 1 Avsluttes tidligere enn planlagt for å frigjøre plass
☐ 2 Avsluttes tidligere enn planlagt av annen grunn
☐ 3 Avsluttes på planlagt tidspunkt
☐ 4 Avsluttes seinere enn planlagt pga ventet på tilbud
☐ 5 Avsluttes seinere enn planlagt av annen grunn

G06 Boligsituasjon ved avslutning

☐ 1 Ingen bolig
☐ 2 Samme bolig som før innleggelsen
☐ 3 Har fått bolig under oppholdet
☐ 4 Ukjent

H Avslutning av akuttilbudet / overføring

H01 Denne delen H fylles ut ved følgende situasjon

☐ 1 Avslutning (inkl overføring) fra akutteamet
☐ 2 Pasienten er fortsatt i behandling ved teamet 2 måneder etter inntak, og akuttbeh. regnes da i prosjektet som avsluttet.

Dato for avslutning av kontakt eller avslutning av akuttbeh.

H02 Kontakt avsluttet *ddmmåå* ☐☐ ☐☐ ☐☐

H03 Avslutning klokkeslett *tt* ☐☐

H04 To mndr fra inntak *ddmmåå* ☐☐ ☐☐ ☐☐

H05 Hvem som skal gi tilbud videre til pasienten

Det kan settes flere kryss. Strek i så fall under hovedkontakt.

☐ 1 Pasienten ønsket ikke oppfølging
☐ 2 Fastlege / annen primærlege
☐ 3 Psykiatritjenester i kommunen
☐ 4 Sosiale tjenester / sosialkontor
☐ 5 Dagsenter i kommunen
☐ 6 Kommunalt sykehjem / institusjon
☐ 7 Poliklinikk
☐ 8 Dagavdeling
☐ 9 Ambulant team
☐ 10 Akuttavdeling ved DPS
☐ 11 Annen døgnavdeling ved DPS
☐ 12 Psykiatrisk akuttavdeling ved sykehus
☐ 13 Annen psykiatrisk døgnavdeling ved sykehus
☐ 14 Privatpraktiserende psykiater / psykolog
☐ 15 Somatisk poliklinikk / avdeling
☐ 16 Rusteam / rusinstitusjon
☐ 17 Barnevernet / barnevernsinsitusjon
☐ 18 Asylmottak
☐ 19 Fengsel
☐ 20 Politilege / tilsynslege i fengsel / kriminalomsorg i frihet
☐ 21 Uavklart / ukjent/ annet: . . . . . .

H06 Om pasienten skal følges opp ved annen instans, hva har vært gjennomført av kontakt før overføringen?

Det kan settes flere kryss

☐ 1 Henvisningsbrev er sendt
☐ 2 Telefonkontakt med dem som skal følge opp
☐ 3 Møte med dem som skal følge opp
☐ 4 Pasienten har fått time / tid ved ny enhet
☐ 5 Pasienten har fått tildelt ny behandler (navngitt)
☐ 6 Pasienten besøkt ny enhet / møtt ny behandler

H07 Hvordan avslutning skjedde

☐ 1 Kontakten ble avsluttet etter avtale
☐ 2 Kontakten ble avsluttet uten avtale (f eks avbrøt beh.)
☐ 3 Pasienten tok livet sitt
☐ 4 Pasienten døde av annen årsak
☐ 5 Pasienten innlagt frivillig (kryss av avdeling på H05)
☐ 6 Pasienten innlagt ved tvang (kryss av avdeling på H05)

H08 Psykofarmaka pasienten stod på ved avslutningen

☐ Står ikke på noen psykofarmaka ved avslutning

Se veiledning når det gjelder andre medikamenter.

Medikamentnavn	mg /døgn

H09 Depotinjeksjon	døgn før utskr

H10 ☐ 1 Frivillig ☐ 2 I kraft av vedtak om tvangsbehandling

SINTEF Helse

Multisenterstudie av akuttpsykiatri (MAP) 2005
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Veiledning for utfylling av skjema om behandling ved akutteam i psykisk helsevern for voksne, - for bruk i multisenterstudien i 2005

Generell veiledning om utfylling av skjemaet

Se skjemaet side 1 øverst til venstre om tidspunkt for utfylling.

Skjemaet fylles ut av pasientens hovedbehandler i samarbeid med andre som også har kontakt med pasienten.

I tillegg til denne veiledningen på to sider om utfylling av registreringsskjemaet, må en også ha skåringsskjemaene for HoNOS, GAF og alkohol/stoff og ha lært seg å bruke disse.

Hvilke pasienter som inkluderes

Det vises til informasjon for det enkelte sted som deltar i multisenterstudien. For akutteam vil det være alle pasienter som tas inn i et tidsrom på mellom 3 og 12 måneder.

Pasientene følges så gjennom behandlingen, slik at siste del av skjemaet fylles ut ved avslutning av kontakten.

Når kontakten ikke er avsluttet etter 2 måneder

Dersom pasienten har kontakt med teamet lenger enn 2 måneder, vil vi i denne undersøkelsen definere det slik at den akutte behandlingen da er avsluttet, og siste del av skjemaet fylles ut.

Bruk av skjema versjon A eller B

Versjon A av registreringsskjemaet brukes som standard. I dette skjemaet registreres det en del datoer. Versjon B der datoer ikke registreres, forutsetter at en regner ut tidsrom i stedet for å skrive datoer. Versjon B skal bare brukes dersom dette er avtalt mellom lokal prosjektleder og SINTEF.

Koder for prosjekt, institusjon og pasient

Lokal prosjektleder oppgir kode for prosjekt, institusjon og avdeling.

Kodenummer for pasienten skal være et unikt nummer for pasienten, men som ikke kan identifisere pasienten utenfor institusjonen (ikke fødselsnummer). Lokal prosjektleder gir regler for dette og oppbevarer en liste med nøkkel til hvilket nummer som gjelder hvilken pasient. Om det fylles ut skjema for flere perioder for samme person i registreringsperioden, skal disse skjemaene ha samme kodenummer her.

Kodenummer for behandlingsepisoden skal være et unikt nummer som gjelder denne behandlingsepisoden. Om det fylles ut skjema for flere episoder (inntak) for samme person i registreringsperioden, skal disse skjemaene ha forskjellige kodenummer her.

Når pasienten mottar tjenester fra flere steder

To enheter som samarbeider tett (f eks en avdeling og et akutteam) kan fylle ut hvert sitt skjema, men skal bruke samme kodenummer for pasienten eller notere koblingen. Vi vil da i samarbeid med de lokale prosjektledere avklare hvordan dette skal håndteres i bearbeiding og analyser.

Tips om registrering av minste basis datasett

For å forenkle samordningen med de data som institusjonen er forpliktet til å registrere om hver pasient ("minste felles datasett"), er GAF ved inntak plassert på side 1, selv om det hører hjemme under D på side 2. En kan bruke side 1 (ev kopi) som grunnlag for registrering av "minste basis datasett".

Hvem skal fylle ut hvilke deler av skjemaet

Noen deler av skjemaet kan fylles ut av kontorpersonalet, men det meste må fylles ut av de fagpersoner som har kontakt med og kjenner pasienten og tilbudet som gis. Diagnoser og skåringer av alvorlighetsgrad (HoNOS, GAF) kan med fordel fylles ut eller kvalitetssikres av lege/psykolog, men erfarne psykiatriske sykepleiere kan også lære å skåre. De som skårer HoNOS og GAF bør ha fått opplæring i dette.

Skåringenes pålitelighet er viktig i denne undersøkelsen, siden sammenligning mellom ulike steder/avdelinger/team forutsetter at en bruker skåringsskalaene på samme måte. Det er derfor ønskelig at ikke flere fagfolk enn nødvendig gjør skåringene, og det er ønskelig at disse deltar i en testing av pålitelighet ved å skåre en del pasientvignetter.

Vi har ikke laget detaljerte regler for hvem som skal fylle ut skjemaet eller de ulike felt, siden rutinene for dette må integreres i rutiner og arbeidsfordeling på det enkelte sted. Lokal prosjektleder og teamledelsen kan eventuelt søke råd om dette fra oss og fra andre avdelinger som deltar.

Utfylling ved innleggelsen (side 1-2)

A Henvisning og innleggelse

A02+A03 Innleggelsesdato og klokkeslett gjelder tidspunkt for pasientens første kontakt med teamet. Klokkeslett rundes ned til siste hele klokkeslett (f eks 23 i timen før midnatt og 00 i timen etter midnatt).

A04 Øyeblikkelig hjelp. Vurderingen av dette regnes ut fra det tidspunkt teamet fikk henvendelse pr telefon eller på annen måte.

B Opplysninger om pasienten

B05 Pasientens etniske bakgrunn: Komplisert punkt. Skriv ett eller flere stikkord om dette, så vil vi kode kategorier i ettertid. Eksempler på stikkord kan være etnisk bakgrunn, tid siden kom til Norge, om foreldre ulike etnisk bakgrunn etc.

B08 Omsorg for barn: Kryss på 3 om både 2 og 3 gjelder.

B10 Bolig med tilsyn: Gjelder fast tilsyn uansett timer/døgn.

C Tjenester mottatt i tiden før innleggelsen

C03 Annet ambulant team kan f eks være psykoseteam.

C04 Psykofarmaka: Her inkluderes sovemedisiner, smertestillende, thyroxin og medikamenter mot bivirkninger.

D Vurdering ved innleggelsen

D01 HoNOS: Følg instruksen på skåringsskjema for HoNOS på to egne sider. Skalaer en ikke kan besvare, settes åpent (= skåring 9). Ved inntak skåres HoNOS i samsvar med den vanligste bruk, altså mest alvorlige problem i problemområdet siste 2 uker før inntak.

D02 Bruk av alkohol og stoff: Skåres ut fra skalaer på eget ark. Gjelder siste 6 måneder (ikke siste to uker som HoNOS).

D03 GAF: Skåres ut fra skalaer på to egne ark. Gjelder alvorligste symptomer eller funksjonssvikt siste 7 dager.

Utfylling ved utskrivningen (side 3-4)

E Utredning og behandling under oppholdet

Undersøkelser: Om ett eller flere av punktene 4-7 er gjort av andre (f eks primærlege) i et samarbeid, settes det også **ja** for dette, samt at dere skriver en **A** ved siden av krysset.

E02 Behandling: Det kan være en fordel å ajourføre avkryssinger her underveis, slik at ikke deler av tilbudet blir glemt om den som fyller ut ved avslutning ikke vet om alt.

Med behandlingsmøte mener vi et tverrfaglig møte der behandlingsteamet (de som deltar i behandlingen) drøfter status og gjør faglige vurderinger om hvordan behandlingen bør legges opp videre. Dette kan være et eget møte om en enkelt pasient, eller et møte der flere pasienter drøftes.

"Annet" kan brukes til å ta med viktige deler av opplegget som ikke er dekket av punktene ovenfor, - fortrinnsvis elementer som gjelder mange pasienter i avdelingen.

F Samarbeid og koordinering

F01 Samarbeid og kontakt: Noen former for samarbeid registreres på E02, men da i liten grad hvem en har hatt samarbeid med, som registreres her på F01. Med annen kontakt menes telefon, videokonferanse og skriftlig.

F04 Behandling ved ulike team/poster (basisenheter): Det vil være nyttig å se på hvordan fordeling av behandlingen er på ulike team/poster (basisenheter) for ulike pasientgrupper. Dette er en enkel måte å registrere dette på. Bruk de kodene som vanligvis brukes for postene.

Om en pasient er dagpasient en tid (f eks noen dager før utskriving), kan dette markeres ved at dere fordeler oppholdet i posten å to linjer og skriver "dagpas" i tillegg til koden for posten for det tidsrommet dette gjelder.

Skjemaet brukes også til å notere bruk av lavterskeltilbud som ledd i behandlingen ved et akutteam.

G Vurdering ved avslutning / overføring

Se H dersom kontakten med pasienten ikke er avsluttet etter 2 måneder.

G01+G02 HoNOS: Følg instruksen på skåringsskjema for HoNOS på to egne sider. Skalaer en ikke kan besvare, settes åpent (= skåring 9). HoNOS ved avslutningen skåres ut fra en vurdering av pasientens tilstand på dette tidspunktet, og ikke basert på siste to uker slik som ved inntak.

G02 GAF: Skåres ut fra skalaer på to egne ark. Gjelder alvorligste symptomer eller funksjonssvikt. GAF ved avslutningen skåres ut fra en vurdering av pasientens tilstand på dette tidspunktet, og ikke basert på siste uke slik som ved inntak.

Dersom kontakten med pasienten avsluttes på inntaksdagen og det ikke har skjedd noen endring i tilstanden, settes skåringene på HoNOS og GAF lik skåringene ved inntak. Men dersom det på noen områder har skjedd klare endringer, skåres disse slik en vurderer at det er ved avslutningen.

H Avslutning av akuttbehandlingen / overføring

Om kontakten med pasienten ikke er avsluttet innen 2 måneder, svares det 2 på H01, H04 fylles ut i stedet for H02+H03, og H05-H07 og H11 fylles ikke ut. H08-H10 og alle deler under G fylles ut (eventuelt med unntak av G06) ut fra vurderingene gjort 2 måneder etter inntak.

NB: Se vedlagte skåringsskjema for HoNOS, bruk av alkohol/stoff, og GAF.

Elektronisk registrering av opplysningene på skjemaet

Lokal prosjektleder gir informasjon om utfylling og bruk av skjema. De steder der en har valgt å registrere data lokalt, gjøres dette i et opplegg som SINTEF Helse har utformet. Andre steder har valgt å sende papirskjema til SINTEF Helse i Oslo for elektronisk registrering der.

Data fra alle steder som deltar i prosjektet vil bli bearbeidet av SINTEF Helse, slik at alle får tilbake både resultatene om egen virksomhet og data om andre for sammenligning.

Avdelingen med det lokale prosjektet vil kunne bearbeide og bruke sine egne data, samt delta i samarbeid i nettverket om resultater og publisering. Dette samarbeidet vil delvis bli koordinert av SINTEF Helse.

Lokal prosjektleder har mer detaljert informasjon om dette.

HoNOS – Health of the Nation Outcome Scales

Norsk versjon april 2002 (korrigert desember 2002)

Oppsummering av instruksjon for skåring

1) Skår hver skala (problemområde) i rekkefølge fra 1 til 12.
2) Ikke ta med informasjon som er skåret på et tidligere punkt, med unntak av punkt 10 som skåres ut fra en samlet vurdering.
3) Skår det MEST ALVORLIGE problem som har forekommet i løpet av perioden som skåres (de siste to ukene, om ikke annet er bestemt)
4) Alle skalaene har denne graderingen:
   0= Ingen problem
   1= Lite problem som ikke krever tiltak
   2= Mildt problem, men avgjort tilstede
   3= Moderat alvorlig problem
   4= Alvorlig til svært alvorlig problem
   Skriv 9 hvis ukjent

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1. Overaktiv, aggressiv, forstyrrende eller agitert atferd

- *Inkluder slik atferd uansett årsak (f.eks. rusmiddel, alkohol, demens, psykose, depresjon etc.)*
- *Inkluder ikke bisarr atferd som skal skåres på skala 6.*

0 Ingen slike problemer i perioden som skåres.
1 Irritabilitet, krangler, rastløshet etc. som ikke krever noe tiltak.
2 Inkluder aggressive fakter, dytting eller plaging av andre, trusler eller verbal aggresjon, mindre skade på gjenstander (f.eks. knust kopp eller vindu); atferd som er markert overaktiv eller agitert.
3 Fysisk aggressiv mot andre eller dyr (mindre enn ved 4), truende atferd, mer alvorlig overaktiv atferd eller ødeleggelse av ting.
4 Minst ett alvorlig fysisk angrep på andre eller på dyr, ødeleggelse av ting (f.eks. ildspåsetting), alvorlig skremmende eller uanstendig atferd.

2. Selvskade som ikke skyldes uhell

- *Inkluder ikke selvskade ved uhell (f.eks. på grunn av demens eller psykisk utviklingshemning). Det kognitive problemet skal skåres på skala 4 og skaden på skala 5.*
- *Inkluder ikke sykdom eller skade som er en direkte konsekvens av stoff/alkohol-bruk skåret på skala 3 (f.eks. leverkirrose eller skade på grunn av fyllekjøring skal skåres på skala 5).*

0 Ingen slike problemer i perioden som skåres.
1 Flyktige tanker om å gjøre slutt på alt, men liten risiko; ingen selvskade.
2 Mild risiko i perioden; inkluderer ufarlig selvskade (f.eks. risping på håndleddet).
3 Moderat til alvorlig fare for forsettelig selvskade i perioden; inkluderer forberedelser (f.eks. samle opp tabletter).
4 Alvorlig selvmordsforsøk og/eller alvorlig forsettelig selvskade i perioden.

3. Problemdrikking eller bruk av rusmiddel

- Inkluder ikke aggressiv/destruktiv atferd som skyldes alkohol eller rusmiddel, skåret på skala 1.
- Inkluder ikke fysisk sykdom eller handikap som skyldes bruk av alkohol eller rusmiddel, som skal skåres på skala 5.

0 Ingen slike problemer i perioden som skåres.
1 Noe overdreven bruk, men innen sosiale normer.
2 Tap av kontroll over drikking eller bruk av rusmiddel, men ikke alvorlig tilvenning.
3 Markert trang til eller avhengighet av alkohol eller rusmiddel med hyppig tap av kontroll, tar risker når påvirket.
4 Ufør på grunn av alkohol/rusmiddelproblem.

4. Kognitive problemer

- *Inkluder problem med hukommelse, orienteringsevne og forståelse uansett hva slags lidelse de er forbundet med: psykisk utviklingshemming, demens, schizofreni etc.*
- *Inkluder ikke forbigående problem (f.eks. bakrus) fra bruk av alkohol/rusmiddel, som skal skåres på skala 3.*

0 Ingen slike problemer i perioden som skåres.
1 Mindre problem med hukommelse eller forståelse (f.eks. glemmer navn av og til).
2 Milde men klare problem (f.eks. har gått seg bort på et kjent sted eller ikke kjent igjen en person en kjenner); i blant forvirret overfor enkle beslutninger.
3 Betydelig desorientert for tid, sted eller person; forvirret av dagligdagse hendelser; talen er noen ganger usammenhengende.
4 Alvorlig desorientert (f.eks. ikke i stand til å kjenne igjen slektninger); risiko for ulykker; uforståelig tale; tåkete eller stuporøs.

5. Problemer med fysisk sykdom eller funksjonshemming

- *Inkluder sykdom eller funksjonshemming uansett grunn som begrenser eller hindrer bevegelse, svekker syn eller hørsel, eller på annen måte forstyrrer personlig fungering.*
- *Inkluder bivirkninger av medikamenter; virkninger fra bruk av stoff/alkohol; fysiske handikap som resultat av ulykker eller selvskade i forbindelse med kognitive problemer, promillekjøring etc.*
- *Inkluder ikke mentale eller atferdsmessige problem, skåret på skala 4.*

0 Ingen fysiske helseproblemer av betydning i perioden som skåres.
1 Mindre helseproblemer i perioden (f.eks. forkjølelse, ufarlig fall etc.)
2 Fysisk helseproblem som medfører mild innskrenkning i bevegelighet og aktivitet.
3 Moderat grad av innskrenket aktivitet på grunn av fysiske helseproblemer.
4 Fullstendig eller alvorlig grad av uførhet på grunn av fysiske helseproblemer.

6. Problemer forbundet med hallusinasjoner og vrangforestillinger

- *hallusinasjoner og vrangforestillinger uansett diagnose.*
- *Inkluder merkelig og bisarr atferd forbundet med hallusinasjoner eller vrangforestillinger.*
- *Inkluder ikke aggressiv, destruktiv eller overaktiv atferd som skyldes hallusinasjoner eller vrangforestillinger, skåret på skala 1.*

0 Ingen tegn til hallusinasjoner eller vrangforestillinger i perioden.
1 Noe merkelige eller besynderlige overbevisninger som ikke er i samsvar med kulturelle normer.
2 Vrangforestillinger eller hallusinasjoner (f.eks. stemmer, syner) er tilstede, men er i liten grad plagsomme for pasienten eller manifestert i bisarr atferd, dvs. klinisk tilstede men mildt.
3 Markert opptatt av vrangforestillinger eller hallusinasjoner, forårsaker mye plager og/eller viser seg i åpenbar bisarr atferd. dvs. moderat alvorlig klinisk problem.
4 Mental tilstand og atferd er på en alvorlig og negativ måte påvirket av vrangforestillinger eller hallusinasjoner, med alvorlig innvirkning på pasienten.

7. Problem med senket stemningsleie

- *Inkluder ikke overaktivitet og agitasjon, skåret på skala 1.*
- *Inkluder ikke selvmordstanker eller selvmordsforsøk, skåret på skala 2.*
- *Inkluder ikke vrangforestillinger eller hallusinasjoner, skåret på skala 6.*

0 Ingen problemer forbundet med senket stemningsleie i perioden som skåres.
1 Tungsindig; eller mindre endringer i stemningsleie.
2 Mildt men avgjort deprimert og plaget (f.eks. skyldfølelse, tap av selvfølelse).
3 Depresjon med urimelig selvbebreidelse, opptatt av følelse av skyld.
4 Alvorlig eller svært alvorlig depresjon, med skyldfølelse eller anklager mot seg selv.

8. Andre mentale eller atferdsmessige problem

- *Skår bare det mest alvorlige kliniske problemet som ikke er vurdert på skalaene 6 og 7:*
- *Spesifiser type problem ved å skrive rett bokstav: A fobi, B angst, C tvangslidelse, D mentalt stress/spenninger, E dissosiativ, F somatoform, G spiseproblemer, H søvnvansker, I seksuelt problem, J annet problem (spesifiser)*

0 Ingen tegn til noen av disse problemene i perioden som skåres.
1 Bare mindre problemer.
2 Et problem er klinisk tilstede i mild grad (f.eks. pasienten har en grad av kontroll).
3 Av og til alvorlige anfall eller plager, med tap av kontroll (f.eks. må unngå helt angstskapende situasjoner, tilkalle en nabo for hjelp etc.), dvs. moderat alvorlig grad av problem.
4 Alvorlig problem som dominerer de fleste aktiviteter.

9. Problemer med forhold til andre

- *Skår pasientens mest alvorlige problem forbundet med aktiv eller passiv tilbaketrekning fra sosiale relasjoner, og/eller ikke-støttende, destruktive eller selv-ødeleggende relasjoner.*

0 Ingen slike problemer av betydning i perioden som skåres.
1 Mindre ikke-kliniske problemer.
2 Klare problemer med å etablere eller opprettholde støttende relasjoner: pasienten klager og/eller problemene er åpenbare for andre.
3 Vedvarende store problem på grunn av aktiv eller passiv tilbaketrekning fra sosiale relasjoner, og/eller på grunn av relasjoner som gir liten eller ingen trøst eller støtte.
4 Alvorlig og plagsom sosial isolasjon på grunn av manglende evne til å kommunisere sosialt og/eller tilbaketrekning fra sosiale relasjoner.

10. Problemer med dagliglivets aktiviteter

- *Skår funksjonsnivået innen dagliglivets aktiviteter (ADL) samlet sett (f.eks. problemer med grunnleggende aktiviteter innen egenomsorg som spising, vasking, kle på seg, bruk av toalett; og komplekse ferdigheter som budsjettering, organisere hvor en skal bo, arbeid/beskjeftigelse og rekreasjon, bevegelighet og bruk av transportmidler, handling, egenutvikling etc).*
- *Inkluder eventuell manglende motivasjon for å bruke muligheter for egenhjelp, siden dette bidrar til et generelt lavere funksjonsnivå.*
- *Inkluder* ikke *manglene muligheter for å gjøre bruk av intakte evner og ferdigheter, som skal skåres på skalaene 11-12.*

0 Ingen problemer i perioden som skåres; god evne til å fungere på alle områder.
1 Kun mindre problemer (f.eks. ustelt, uryddig).
2 Adekvat egenomsorg, men større mangel på evnen til å utføre en eller flere komplekse ferdigheter (se ovenfor).
3 Store problem innen ett eller flere områder av egenomsorg (spising, vasking, kle på seg, bruk av toalett) så vel som stor mangel på evner til å utføre flere komplekse ferdigheter.
4 Alvorlig svikt eller manglende funksjonsevne på alle eller nesten alle områder for egenomsorg og komplekse ferdigheter.

11. Problemer med boligforhold

- *Skår det generelle nivået av problemer med kvaliteten på boligforhold og daglig husholdningsrutine.*
- *Er de grunnleggende nødvendigheter tilfredsstillende (varme, lys hygiene)? Finnes det hjelp til å mestre handikap og muligheter til å bruke ferdigheter og utvikle nye?*
- *Skår ikke selve funksjonsnivået, som er skåret på skala 10.*
- ***N.B: Skår pasientens vanlige boligforhold. Hvis pasienten er i en akuttavdeling, skal en skåre den boligen pasienten har utenfor institusjonen. Hvis en ikke har informasjon om dette, skårer en 9 (ukjent).***

0 Bolig og boligforhold er akseptable; er til hjelp for å holde eventuelt handikap skåret på skala 10 på et lavest mulig nivå, og gir støtte for selvhjelp.
1 Boligen er rimelig akseptabel selv om det er mindre eller forbigående problemer (f.eks. ikke ideell beliggenhet, ikke den boligtype en foretrekker, liker ikke maten).
2 Problemer av betydning med ett eller flere aspekter ved boligen og/eller systemet (f.eks. begrenset utvalg; personale eller de en bor sammen med har liten forståelse for hvordan en kan begrense handikap eller hvordan en kan hjelpe til å bruke og utvikle nye eller intakte ferdigheter).
3 Plagsomt mange alvorlige problem med boligen (f.eks. noen grunnleggende nødvendigheter mangler); boligen har minimale eller ingen hjelpemidler for å bedre pasientens uavhengighet.
4 Boligen er uakseptabel (f.eks. mangel på grunnleggende nødvendigheter, pasienten er i fare for å bli kastet ut, "uten tak over hodet", eller boligforholdene er på andre måter utålelige) og gjør pasientens problem verre.

12. Problemer med yrke og aktiviteter

- *Skår det generelle nivået av problemer med kvalitet på omgivelsene på dagtid. Finnes det hjelp til å mestre handikap, og muligheter for å vedlikeholde og forbedre ferdigheter i forhold til arbeid og fritidssysler? Vurder faktorer som stigma, mangel på kvalifisert personale, tilgang på støttende tilbud (f.eks. bemanning og utstyr på dagsentre, arbeidssentre, sosiale klubber o.l.)*
- *Skår ikke selve funksjonsnivået , som er skåret på skala 10.*
- ***N.B: Skår pasientens vanlige situasjon. Hvis på akutt-avdeling, skåres aktivitetene i perioden før innleggelsen. Hvis informasjon ikke er tilgjengelig, skårer en 9.***

0 Pasientens omgivelser på dagtid er akseptable: til hjelp for å holde handikap skåret på skala 10 på et lavest mulig nivå, og med støtte for selvhjelp.
1 Mindre eller forbigående problemer (f.eks. sen utbetaling av penger); gode hjelpemidler er tilgjengelige men ikke alltid på ønskelig tidspunkt etc.
2 Begrenset utvalg av aktiviteter, f.eks. mangel på rimelig toleranse (f.eks. urettferdig nekting av adgang til offentlige bibliotek eller svømmehall etc.); handikap i form av mangel på fast adresse; utilstrekkelig støtte fra omsorgspersoner eller fag-folk; eller nyttig dagtilbud som bare er tilgjengelig i noen få timer.
3 Markert mangel på tilgjengelige gode tjenester som kan bidra til å begrense nivået av eksisterende handikap; ingen muligheter for å bruke intakte ferdigheter eller legge til nye; ufaglært pleie som er vanskelig å vurdere.
4 Mangel på noen som helst muligheter for aktiviteter på dagtid gjør pasientens problemer verre.

J Wing, RH Curtis, and A Beevor: Health of the Nation Outcome Scales (HoNOS). Glossary for HoNOS score sheet. Br J Psychiatry 174: 432-434.
Norsk oversettelse av Torleif Ruud (1996, 2002) godkjent av Royal College of Psychiatrists Research Unit, London.

Skalaer om alkohol/stoffmisbruk 1999	**Pasient nr:**	**Tidsrom:**
Veiledning: Sett ring rundt ett tall i hver spalte	**Skåret av:**	**Dato:**

Skala for klinikerens vurdering av alkoholforbruk	**Skala for klinikerens vurdering av rusmiddelbruk (ekskl. alkohol)**
Vurder din klients bruk av alkohol gjennom de siste 6 måneder etter følgende skala. Hvis personen er innlagt i institusjon, er rapporteringsintervallet perioden forut for institusjonalisering. Du bør avveie opplysninger fra selv-rapportering, intervjuer, observasjoner av atferd samt komparentopplysninger (fra familie, dagsenter, nettverk etc.) mot hverandre ved valg av nivå på skalaen.	Vurder din klients bruk av rusmidler (ekskl. alkohol) gjennom de siste 6 måneder etter følgende skala. Hvis personen er innlagt i institusjon, er rapporterings-intervallet perioden forut for institusjonalisering. Du bør avveie opplysninger fra selvrapportering, intervjuer, observasjoner av atferd samt komparentopplysninger (fra familie, dagsenter, nettverk etc.) mot hverandre ved valg av nivå på skalaen.
1 = AVHOLDENDE Klienten har ikke brukt alkohol i dette tidsintervallet.	**1 = AVHOLDENDE** Klienten har ikke brukt rusmidler i dette tidsintervallet.
2 = BRUK UTEN FUNKSJONSNEDSETTELSE Klienten har brukt alkohol i dette tidsintervallet, men det er ikke sikre tegn til vedvarende eller tilbakevendende sosiale, yrkesmessige, psykologiske eller fysiske problemer relatert til bruken og ingen sikre opplysninger om tilbakevendende farlig alkoholbruk.	**2 = BRUK UTEN FUNKSJONSNEDSETTELSE** Klienten har brukt rusmidler i dette tidsintervallet, men det er ikke sikre tegn til vedvarende eller tilbakevendende sosiale, yrkesmessige, psykologiske eller fysiske problemer relatert til bruken og ingen sikre opplysninger om tilbakevendende farlig bruk av rusmidler.
3 = MISBRUK Klienten har brukt alkohol i dette tidsintervallet, og det er sikre tegn til vedvarende eller tilbakevendende sosiale, yrkesmessige, psykologiske eller fysiske problemer relatert til bruken eller sikre opplysninger om tilbakevendende farlig alkoholbruk.	**3 = MISBRUK** Klienten har brukt rusmidler i dette tidsintervallet, og det er sikre tegn til vedvarende eller tilbakevendende sosiale, yrkesmessige, psykologiske eller fysiske problemer relatert til bruken, eller sikre opplysninger om tilbakevendende farlig bruk av rusmidler.
4 = AVHENGIGHET Fyller kriteriene for misbruk, pluss minst tre av følgende: Større mengder eller lengre intervaller med bruk enn hensikten var, mye av tiden går med til å få tak i eller bruke alkohol, hyppig intoksikasjon eller tilbaketrekning interfererer med andre aktiviteter, viktige aktiviteter oppgis på grunn av alkoholbruk, kontinuerlig bruk til tross for viten om alkoholrelaterte problemer, markert toleranse for alkohol, karakteristiske abstinenssymptomer, alkohol brukt for å lindre eller unngå abstinenssymptomer. For eksempel: Ukontollert drikking og opptatthet av drikking har har fått klienten til å falle ut av arbeidstrening og sosiale aktiviteter som ikke er relatert til drikking.	**4 = AVHENGIGHET** Fyller kriteriene for misbruk, pluss minst tre av følgende: Større mengder eller lengre intervaller med bruk enn hensikten var, mye av tiden går med til å få tak i eller bruke rusmidler, hyppig intoksikasjon eller tilbaketrekning interfererer med andre aktiviteter, viktige aktiviteter oppgis på grunn av rusmiddelbruk, kontinuerlig bruk til tross for viten om rusmiddelrelaterte problemer, markert toleranse forrusmidler, karakteristiske abstinenssymptomer, rusmidler brukt for å lindre eller unngå abstinenssymptomer. For eksempel: Ukontrollert rusmiddelbruk og opptatthet av rusmidler har har fått klienten til å falle ut av arbeidstrening og sosiale aktiviteter som ikke er relatert til rusmiddelbruk.
5 = AVHENGIGHET MED INSTITUSJONALISERING Møter kriteriene for alvorlig, og i tillegg er de relaterte problemene så alvorlige at de gjør det vanskelig å bo utenfor institusjon. For eksempel: Konstant drikking fører til ukontollert atferd og manglende evne til å betale husleie, slik at klienten ofte blir politianmeldt og søker hospitalisering.	**5 = AVHENGIGHET MED INSTITUSJONALISERING** Møter kriteriene for alvorlig, og i tillegg er de relaterte problemene så alvorlige at de gjør det vanskelig å bo utenfor institusjon. For eksempel: Konstant rusmiddelbruk fører til ukontollert atferd og manglende evne til å betale husleie, slik at klienten ofte blir politianmeldt og søker hospitalisering.

Manual for GAF-S - Symptomer

Vurder psykisk symptombelastning på en hypotetisk kontinuerlig skala for mental helse/sykdom.
Ta ikke i betraktning symptomer som skyldes somatiske (eller miljømessige) begrensninger.

		Utfyllende stikkord:*
100 ‖ **91**	**Ingen symptomer.**	Glede, kreativitet, livsgnist.
90 ‖ **81**	**Ingen eller minimale symptomer** **(** f.eks. lett angst foran en eksamen **).**	Jevnt og godt humør. Lettere stressymptomer.
80 ‖ **71**	**Hvis symptomer foreligger er de forbigående og forståelige reaksjoner på psykososiale påkjenninger (** f.eks. konsentrasjonsvansker etter en krangel i familien **).**	Moderate stresssymptomer.
70 ‖ **61**	**Noen lette symptomer** **(** f.eks. deprimert sinnstemning og lettere søvnløshet **).**	Her begynner mer avgrensede symptomer av lengre varighet.
60 ‖ **51**	**Moderate symptomer** **(** f.eks. avflatede følelser og omstendelig språk, sporadiske panikkanfall **).**	Symptomene begynner nå å bli tydelig for andre.
50 ‖ **41**	**Alvorlige symptomer** **(** f.eks. selvmordstanker, alvorlige tvangsritualer, hyppige butikktyveri **).**	Alvorsgraden tiltar. Klart behandlingstrengende.
40 ‖ **31**	**Endel forstyrrelse i realitetstesting, kommunikasjon, dømmekraft, tankevirksomhet eller stemningsleie (** f.eks. talen er iblant ulogisk, uklar eller irrelevant **).**	Psykosegrense, men rommer også andre svært alvorlige symptomer.
30 ‖ **21**	**Adferden er betydelig påvirket av vrangforestillinger eller hallusinasjoner, eller alvorlig svikt i kommunikasjon eller dømmekraft** **(** f.eks. av og til usammenhengende tale, svært upassende adferd, stadige selvmordstanker **).** ☞ **Se også GAF-F (funksjoner)**	Psykotiske *atferdsforstyrrelser* og beslektede tilstander.
20 ‖ **11**	**En viss fare for å kunne skade seg selv eller andre (** f.eks. selvmordsforsøk uten klar forventning om å dø; ofte voldelig; manisk oppstemthet **), eller grov svikt i kommunikasjon (** f.eks. stort sett usammenhengende eller stum **).** ☞ **Se også GAF-F (funksjoner)**	Utilregnelighet og utageringsfare. Skadebegrensende tiltak er nødvendig.
10 ‖ **1**	**Vedvarende fare for å skade seg selv eller andre alvorlig** **(** f.eks. gjentatte voldshandlinger **), eller alvorlig selvmordshandling med klar forventning om å dø.** ☞ **Se også GAF-F (funksjoner)**	Alvorligste psykopatologiske tilstander. Trenger konstant hjelp, tilsyn og beskyttelse over tid.

*) De utfyllende stikkord står ikke i den opprinnelige GAF-manual.

Manual for GAF-F - Funksjoner

Vurder sosial og yrkesmessig fungering på en hypotetisk kontinuerlig skala for mental helse/sykdom.
Ta ikke i betraktning funksjonsvikt som skyldes somatiske (eller miljømessige) begrensninger.

		Utfyllende stikkord:*
100 91	**Førsteklasses fungering innen et vidt spekter av aktiviteter, livsproblemer blir aldri uhåndterlige, andre søker seg til personen på grunn av hans eller hennes mange positive kvaliteter.**	Usedvanlige kvaliteter.
90 81	**God fungering på alle områder, interessert i og engasjert i et bredt spekter av aktiviteter, sosialt velfungerende, generelt sett tilfreds med livet, kun dagligdagse problemer og bekymringer (** f.eks. en gang i blant en krangel med noen i familien **).**	Svært godt fungerende.
80 71	**Ikke mer enn lett reduksjon i sosial, yrkesmessig eller skolemessig fungering** **(** f.eks. midlertidig komme på etterskudd med skolearbeid **).**	Fortsatt godt fungerende.
70 61	**Noen vansker med å fungere sosialt, yrkesmessig eller i utdanning (** f.eks. sporadisk skulking, tyveri innenfor hjemmet **), men fungerer generelt sett ganske bra, har noen meningsfulle mellommenneskelige forhold.**	Her begynner funksjonssvikt som er mer enn normalt situasjons-betinget.
60 51	**Moderate vansker sosialt, i yrke eller utdanning** **(** f.eks. få venner, konflikter med arbeidskolleger **).**	Økende vanskeligheter med å følge opp jobb / skolegang. Sporadiske sykmeldinger.
50 41	**Alvorlige vansker med å fungere sosialt, i yrke eller utdanning** **(** f.eks. ingen venner, klarer ikke å holde på en jobb **).**	Klarer ikke oppfylle vanlige krav fra jobb eller skole. Hyppige sykmeldinger.
40 31	**Større funksjonssvikt innen flere områder, så som i arbeid, utdanning og familieforhold (** f.eks. deprimert mann som unngår venner, forsømmer familien, og ute av stand til å arbeide; barn som ofte juler opp yngre barn, er trassig hjemme, og mislykkes på skolen **).**	Svikter på flere områder. Er bl.a. sykmeldt.
30 21	**Ute av stand til å fungere på nesten alle områder** **(** f.eks. holder sengen hele dagen; ingen jobb, venner eller hjem **).** ☞ **Se også GAF-S (symptomer)**	*Med atferdsforstyrrelsen går symptomer og funksjoner over i hverandre.*
20 11	**Av og til svikt i å sørge for et minimum av personlig hygiene (** f.eks. griser med avføring **).** ☞ **Se også GAF-S (symptomer)**	Trenger en del hjelp, beskyttelse og tilsyn for å opprettholde et minimum av funksjoner.
10 1	**Vedvarende ute av stand til å skjøtte et minimum av personlig hygiene.** ☞ **Se også GAF-S (symptomer)**	Trenger stadig og vedvarende hjelp, tilsyn og pleie.

*) De utfyllende stikkord står ikke i den opprinnelige GAF-manual.

Multisenterstudie av akuttpsykiatri (MAP)
SINTEF Helse, Postboks 124 Blindern, 0314 Oslo
Prosjektleder Torleif Ruud. Tlf. 9136 2750. E-post: torleif.ruud@sintef.no

Oslo 3.oktober 2005

Informasjon om spørreskjema til personalet ved akuttpsykiatriske tilbud

Vedlagte spørreskjema er en del av Multisenterstudie av akuttpsykiatri (MAP) som gjennomføres ved ulike typer akuttpsykiatriske tilbud rundt i landet i 2005 og begynnelsen av 2006.

Studien skal gi økt kunnskap om akuttpsykiatriske tilbud og akuttpsykiatriske behandlingsforløp. Undersøkelsen gjøres ved at det registreres opplysninger om alle pasienter som tas i mot i en periode.

I tillegg samles det i oktober 2005 inn opplysninger om de enkelte avdelinger/poster/team fra ledelsen for disse, og ved de vedlagte spørreskjema fra personalet som deltar i utredning og behandling.

Studien ledes av SINTEF Helse etter oppdrag fra Sosial- og helsedirektoratet, og den gjennomføres som et ledd i samarbeidet i et Nettverk for evaluering av akuttpsykiatriske tilbud. Den er godkjent av de instanser som skal godkjenne slike undersøkelser: Regional etisk komite for forskning, NSD/Datatilsynet og Sosial- og helsedirektoratet (om innhenting av opplysninger).

Orientering om de to vedlagte spørreskjema:

Spørreskjema C gjelder den utdanning og kompetanse du har. Disse opplysningene vil bli brukt til å beskrive omfang og profil av kompetanse ved ulike typer avdelinger, poster og team. Det vil ikke bli analysert eller vist data om individer.

Spørreskjema D gjelder behandlingstenkning og hva som vektlegges i klinisk praksis ved posten eller teamet. Også data fra skjema D brukes til å se på profiler for ulike typer avdelinger, poster eller team. Til slutt i skjema D er det et ark med 15 tilleggsspørsmål som gjelder bruk av tvang. Det vil heller ikke for dette skjemaet bli analysert eller vist data om individer.

Resultatene fra undersøkelsen vil bli presentert ved avdelingen der du arbeider. Dere får også tilsendt alle rapporter og andre publikasjoner som kommer fra undersøkelsen, samt notater og presentasjoner som ikke offentliggjøres. Fagfolk fra avdelingen kan også bruke egne data eller delta i publikasjoner.

For at bildet av kompetanse og klinisk praksis skal bli mest mulig riktige ut fra disse opplysningene, er det av stor betydning at alt personalet som tar del i behandlingen fyller ut disse skjemaene.

Utfylte skjema leveres slik dere får beskjed om fra den lokale koordinatoren.
Takk for at du bidrar til økt kunnskap om akuttpsykiatriske tilbud ved å fylle ut disse skjemaene!

Med vennlig hilsen

Torleif Ruud
Prosjektleder

SINTEF	**Multisenterstudie av akuttpsykiatri (MAP)** SINTEF Helse, Postboks 124 Blindern, 0314 Oslo.	**Skjema C 2005**

Prosjekt **Kode for post/team** (**MÅ** fylles ut. Er kjent eller koder nederst til høyre på arket) Utfylt dato (ddmm)

0 5

Spørreskjema til personalet om utdanning og kompetanse

Kjønn
☐ Kvinne ☐ Mann

Aldersgruppe:
☐ Under 20
☐ 20-29
☐ 30-39
☐ 40-49
☐ 50-59
☐ 60 eller mer

Ansettelsesforhold
☐ Fast ansatt
☐ Midlertidig ansatt

Hvor stor stillingsandel (%) du har ved denne posten/teamet?

Stillingsandel (%)

Arbeidstid
☐ Bare dag
☐ Dag og kveld
☐ Døgnturnus
☐ Bare natt

Fagutdanning
☐ Lege
☐ Psykolog
☐ Sosionom
☐ Sykepleier
☐ Hjelpepleier
☐ Vernepleier
☐ Fysioterapeut
☐ Ergoterapeut
☐ Aktivitør
☐ Pedagog
☐ Annen: _____
☐ Ingen/ufaglært

Har du tatt spesialistutdanning i psykiatri for din faggruppe?
☐ Ja ☐ Nei

Hva du har fullført av systematisk videreutdanning (antall år med fullverdig utdanningsopplegg)

Psykoanalytisk utdanning
Psykodynamisk psykoterapi
Kognitiv psykoterapi
Annen individualterapi
Analytisk gruppepsykoterapi
Annen gruppeterapi
Psykisk helsearbeid (høgskole)
Familieterapi (systemisk, annet)
Familiearbeid (psyko-edukativ)
SEPREPs psykoterapi v/psykose
SEPREPs tverrfaglige utdanning
Utdanning ved Voksne for barn
Annen omfattende utdanning

Spesifiser med stikkord om avkryssing "annen":

Annen videreutdanning:

Er du godkjent veileder for din faggruppe?
☐ Ja ☐ Nei

Hvor mange timer har du de siste tre månedene gitt slik veiledning

1. Ved denne institusjonen
2. Utenom institusjonen

Hvor mange timer har du i løpet av de siste tre månedene

1. Fått intern undervisning
2. Fått individuell veiledning
3. Fått veiledning i gruppe
4. Vært på kurs andre steder

Din arbeidserfaring (antall år)

1. Samlet (alt arbeid)
2. Innen psykisk helsevern
3. Ved denne institusjonen
4. Ved denne enheten

Hvor mange år regner du fortsatt med å arbeide i . . .

1. Denne jobben
2. Denne institusjonen
3. Psykisk helsevern

Koder for post/team

Kode	Basisenhet

SINTEF	**Multisenterstudie av akuttpsykiatri (MAP)** SINTEF Helse, Postboks 124 Blindern, 0314 Oslo.	**Skjema D 2005**

Prosjekt | **Kode for post/team** (**MÅ** fylles ut.Samme kode som for post/team på skjema C) | Utfylt dato (ddmm)

0 5

Spørreskjema om klinisk praksis ved akuttpsykiatrisk enhet

Spørsmålene gjelder behandlingstenkning og hva som vektlegges i behandlingen av personalet (terapeuter og miljøpersonale) i posten eller teamet der du arbeider.. Dette kan variere med hva slags pasienter en behandler, hva personalet og pasientene foretrekker, og tradisjoner i behandlingsenheten, - noe som gjør hver enhet unik. Profilen kan også påvirkes av begrensninger i ressurser.

"Din behandlingsenhet" betyr posten eller teamet der du arbeider, - ikke hele institusjonen. Spørreskjemaet gjelder behandlingsenheter som har pasienter med alvorlige psykiske lidelser, enten enheten har andre typer pasienter eller ikke. Hvis din behandlingsenhet behandler et bredt spekter av pasienter, skal du svare for hvordan dere behandler pasienter med alvorlige psykiske lidelser. Hvis enheten arbeider så tett sammen med en annen enhet at en kan si at din enhet gir den hjelpen som tilbys der, svarer du som om den enheten er en del av din enhet.

Det finnes ikke noe svar som er best eller riktig. Spørreskjemaet brukes til å gi et generelt bilde av enheten slik den oppfattes av alle de ansatte som en gruppe. Ikke skriv navnet ditt noe sted på skjemaet. Dine individuelle svar vil bli behandlet konfidensielt, og bare gjennomsnittskåringene for hele enheten vil bli brukt.

Les hvert utsagn og sett kryss i ruta (rute **1** lengst til venstre og **5** lengst til høyre) for ett av disse svaralternativene:

1 Svært uenig	**2** Uenig	**3** Nøytral	**4** Enig	**5** Svært enig

Enkelte utsagn ser kanskje ikke ut til å gjelde din behandlingsenhet. Hvis det ikke passer i det hele tatt på enheten, setter du kryss for "Svært uenig" i rute **1**. Hvis du ikke kan avgjøre om det passer på enheten eller ikke, setter du kryss for "Nøytral" i rute **3**. **Vennligst svar på hvert utsagn.** Det er i alt 120 utsagn fordelt på 4 sider.

1 Her prøver vi ut nye og annerledes ideer om behandling ☐☐☐☐☐

2 Personalet synes at arbeidet her er interessant og utfordrene. ☐☐☐☐☐

3 Behandlingsenhetens tilnærmingsmåte er svært godt gjennomtenkt. ☐☐☐☐☐

4 Personalet føler seg vel med å gjennomarbeide saker som gjelder jobben. ☐☐☐☐☐

5 Veiledere gir personalet anerkjennelse når de har gjort en god jobb. ☐☐☐☐☐

6 Mer en halvparten av tida til pasientarbeid bruker personalet utenfor kontorene sine. ☐☐☐☐☐

7 Pasienter blir tildelt til den enkelte terapeut framfor til et team. ☐☐☐☐☐

8 Vi hjelper sjelden pasientene med å sørge for egen bolig. ☐☐☐☐☐

9 Personalet synes at det er givende og utfordrende å arbeide med svært dårlig fungerende pasienter. ☐☐☐☐☐

10 Vi tilbyr lite, om i det hele tatt noe, informasjon eller rådgivning til pasientenes familier. ☐☐☐☐☐

11 Vi tilbyr organiserte tjenester for psykiatriske pasienter som også misbruker alkohol eller medikamenter/stoff de får tak i, ☐☐☐☐☐

12 Personalet hjelper ofte pasientene til å få den økonomiske støtte de har krav på. ☐☐☐☐☐

13 Behandlingsenheten har vaktberedskap utenom vanlig arbeidstid. ☐☐☐☐☐

14 Når vi henviser eller overfører pasienter til andre, følger personalet pasienten til den første avtalen. ☐☐☐☐☐

15 Personalet arbeider vanligvis med en pasient uten å trekke inn personale fra andre instanser. ☐☐☐☐☐

16 Vi gir førsteprioritet til det å være pasientens talsmann, - noen på hans eller hennes side. ☐☐☐☐☐

17 Personalet prøver sjelden å sette pasienten i forbindelse med frivillige jobber eller arbeidstreningsopplegg. ☐☐☐☐☐

18 Personalet ser psykoterapi som det viktigste aspektet i arbeidet med pasientene. ☐☐☐☐☐

19 God styring av medisineringen er avgjørende for de pasientene vi arbeider med. ☐☐☐☐☐

20 Behandlingsenheten legger vekt på å vedlikeholde regelmessig kontakt over lang tid med de fleste pasientene. ☐☐☐☐☐

21 Nye ideer om kliniske metoder blir ikke sett på med entusiasme her. ☐☐☐☐☐

22 Personalet her virker ganske engasjert i arbeidet sitt. ☐☐☐☐☐

23 Kliniske retningslinjer og fremgangsmåter er vage og tvetydige. ☐☐☐☐☐

24 Lagånden er dårlig her. ☐☐☐☐☐

25 Veiledere har en tendens til å kritisere personalet. ☐☐☐☐☐

26 Når pasienter uteblir fra avtaler, gjør vi lite for å holde dem engasjert. ☐☐☐☐☐

27 Flere av personalet får i oppgave å arbeide sammen som et team med den enkelte pasient. ☐☐☐☐☐

28 Vi ser på det å sørge for en bolig som pasientens eget ansvar og ikke som en del av våre tjenester. ☐☐☐☐☐

29 Personalet føler at de får til noe når de prøver å gjøre noe med de mange behovene som svært dårlige pasienter har. ☐☐☐☐☐

30 Vi underviser familiemedlemmer om psykiatriske lidelser, medikamenter, og hva familien kan gjøre for å hjelpe. ☐☐☐☐☐

31 Vi gjør mye for å oppmuntre psykiatriske pasienter til å ikke bruke alkohol eller medikamenter/stoff de får tak i. ☐☐☐☐☐

32 Pasienter får sjelden hjelp til å søke om sosial eller økonomisk støtte. ☐☐☐☐☐

33 Vi samarbeider tett med akuttmottak eller sykehuspersonale når en av våre pasienter behandles der. ☐☐☐☐☐

34 Når vi henviser eller overfører en pasient, vil personalet vanligvis la pasienten følge opp dette videre på egen hånd. ☐☐☐☐☐

35 Personalet bruker tid på å sikre at pasienter ikke blir fanget inn i konflikter mellom instanser. ☐☐☐☐☐

36 Det at pasienten skal få mer makt eller egne talsmenn støttes ikke veldig sterkt av personalet her. ☐☐☐☐☐

37 Vi tilbyr et arbeidsopplegg med støtte for passende pasienter framfor tradisjonelle yrkesrettede attføringsopplegg. ☐☐☐☐☐

38 Det er viktigere å gi pasientene støttende sosial kontakt enn å få dem engasjert i psykoterapi. ☐☐☐☐☐

39 Noen av pasientene våre får medisiner, men vi er ikke veldig opptatt av medisiner her. ☐☐☐☐☐

40 Vi hjelper pasientene gjennom en krise eller en omstilling uten å fortsette kontakten med dem i det uendelige. ☐☐☐☐☐

41 De samme kliniske metodene har vært brukt her i lang tid. ☐☐☐☐☐

42 Arbeidsmiljøet her er upersonlig. ☐☐☐☐☐

43 Ting er ganske dårlig organisert her. ☐☐☐☐☐

44 Personalet bruker hverandre som støtte når de møter problemer i jobben. ☐☐☐☐☐

45 Veiledere forventer altfor mye av personalet. ☐☐☐☐☐

46 Vi arbeider mest med pasientene i kontorene våre framfor ute i marka. ☐☐☐☐☐

47 Vårt teamarbeid gjør at personalet kan være tilgjengelig på en fleksibel måte for pasienter som trenger hjelp i kriser. ☐☐☐☐☐

48 Personalet vil gripe inn hvis pasienten kommer i krangel med husverten sin. ☐☐☐☐☐

49 Personalet foretrekker å fokusere det meste av sitt arbeid på pasienter med evne til innsikt og psykologisk forståelse. ☐☐☐☐☐

50 Personalet tar viktige beslutninger om behandlingen uten å konsultere familien. ☐☐☐☐☐

51 Psykiatriske pasienter som også misbruker alkohol eller medikamenter/stoff, passer egentlig ikke for behandlingsopplegget vårt. ☐☐☐☐☐

52 Vår behandlingsenhet kan ta pasientene med på fritidsaktiviteter. ☐☐☐☐☐

53 Når pasienter blir innlagt akuttmottak eller sykehus, går det kanskje flere dager før vi får vite om det. ☐☐☐☐☐

54 Det er en relevant arbeidsoppgave for personalet å transportere pasienter til tjenester som de trenger. ☐☐☐☐☐

Skala for utfylling: **1** Svært uenig **2** Uenig **3** Nøytral **4** Enig **5** Svært enig

55 Det er sjelden vi koordinerer en behandlingsplan med tjenester fra flere instanser for pasientene her. ☐☐☐☐☐

56 Vi prøver systematisk å få pasientens meninger på behandlingsenheten. ☐☐☐☐☐

57 Det er sjelden at pasienter oppmuntres til å gå tilbake til skolen eller starte på et utdanningsopplegg. ☐☐☐☐☐

58 Utdanning i psykodynamisk psykoterapi sees på som en essensiell kvalifikasjon hos personalet. ☐☐☐☐☐

59 Selv om medisiner brukes i denne behandlingsenheten, legges det først og fremst vekt på psykoterapi. ☐☐☐☐☐

60 Det er vanlig her at samme behandler eller team har kontakt med pasienten i mange måneder eller år. ☐☐☐☐☐

61 Denne behandlingsenheten er omgitt av en frisk og uvanlig atmosfære. ☐☐☐☐☐

62 Det virker som personalet her bare prøver å få tida til å gå. ☐☐☐☐☐

63 Det ansvaret personalet får tildelt, blir forklart i detalj. ☐☐☐☐☐

64 Personalet søker ikke støtte hos hverandre i denne behandlingsenheten. ☐☐☐☐☐

65 Veiledere forsvarer virkelig personalet. ☐☐☐☐☐

66 Arbeid utenfor kontorene er en del av vårt forsøk på å opprette forbindelse med pasientene. ☐☐☐☐☐

67 Pasientene blir vanligvis godt kjent med bare en person i teamet. ☐☐☐☐☐

68 Personalet arbeider for å sikre stabile boligforhold for den enkelte pasient. ☐☐☐☐☐

69 Personalet foretrekker for det meste å arbeide med pasienter som er villige til og i stand til å være i arbeid. ☐☐☐☐☐

70 I denne enheten behandles familier som samarbeidspartnere når det gjelder å velge og formidle tjenester til pasientene. ☐☐☐☐☐

71 Mange pasienter misbruker alkohol eller medikamenter/ stoff, men misbruk er ikke blant de ting vi fokuserer mest på her. ☐☐☐☐☐

72 Personalet hjelper sjelden pasientene til å komme i kontakt med somatiske helsetjenester. ☐☐☐☐☐

73 Vi råder pasienter og familier til å henvende seg til legevakt eller annet akuttmottak ved kriser utenom vanlig arbeidstid. ☐☐☐☐☐

74 Det er sjelden vi hjelper pasientene her med søknadsprosessen overfor andre instanser. ☐☐☐☐☐

75 Personalet prioriterer høyt det å løse uenigheter mellom instanser om en pasients behov. ☐☐☐☐☐

76 Personalet tar viktige beslutninger om behandlingen uten å konsultere pasienten. ☐☐☐☐☐

77 Vi oppmuntrer så mye som mulig til arbeidstrening eller yrkesrettede aktiviteter. ☐☐☐☐☐

78 Personalet ser hjelp i det praktiske liv som mer sentralt enn psykoterapi. ☐☐☐☐☐

79 Personalet oppfordrer pasientene sterkt til å ta den medisinen som er foreskrevet. ☐☐☐☐☐

80 De fleste pasientene her mottar korttidsbehandling med sikte på avslutning i løpet av noen få måneder. ☐☐☐☐☐

81 Her ved enheten er vi trenet i å forebygge og mestre aggressiv atferd og vold. ☐☐☐☐☐

82 Før vi setter i gang mer omfattende behandlingsopplegg, gjør vi en grundig og systematisk evaluering av pasientene. ☐☐☐☐☐

83 Mye av arbeidstida ved denne enheten går med til å gi pasientene praktisk hjelp og omsorg. ☐☐☐☐☐

84 En vesentlig del av vår oppgave er å skjerme pasientene fra å skade seg selv eller andre. ☐☐☐☐☐

85 Vi har ikke rutiner for å sikre oss tilbakemelding fra primærhelsetjenesten. ☐☐☐☐☐

86 Vi avslutter ofte behandlingen tidligere enn ønskelig for å frigjøre plass til nye pasienter. ☐☐☐☐☐

87 Vi må ha begrensede målsetninger for hvor mye pasienten skal gjennomarbeide under behandlingen her. ☐☐☐☐☐

88 Vi er opptatt av å gjøre noe med samspillet i pasientens familie. ☐☐☐☐☐

89 Når vi gjør noe sammen med pasientene i grupper, er det ut i fra praktiske behov og ikke for å bruke grupper som behandlingsform. ☐☐☐☐☐

Skala for utfylling: **1** Svært uenig **2** Uenig **3** Nøytral **4** Enig **5** Svært enig

90 Målbevisst opplæring i sosiale eller praktiske ferdigheter er et vesentlig element i behandlingen her. ☐☐☐☐☐

91 Takling og kontroll av aggresjon og voldelig atferd er ikke en oppgave for denne behandlingsenheten. ☐☐☐☐☐

92 Vi skiller ikke klart mellom når vi gjør evaluering og når vi driver behandling. ☐☐☐☐☐

93 Pasientene våre må selv ta ansvar for personlig hygiene, matlaging, klesvask, husarbeid og andre daglige gjøremål. ☐☐☐☐☐

94 Vi er lite opptatt av å skjerme pasientene mot mulige negative impulser. ☐☐☐☐☐

95 Vi har faste møter og mye kontakt med den primære helse- og sosialtjenesten angående arbeidsdeling og samarbeid. ☐☐☐☐☐

96 Av hensyn til pasienter som ikke har fått plass ennå, bør ikke behandlingen her bli for langvarig. ☐☐☐☐☐

97 Vi lar pasientene få mulighet til å gjennomarbeide følelser og problem som viser seg å være viktige for dem. ☐☐☐☐☐

98 Vi arbeider lite med relasjonene mellom familiemedlemmer. ☐☐☐☐☐

99 Gruppeterapi er en viktig del av behandlingstilbudet her. ☐☐☐☐☐

100 Vi bruker konkrete treningsopplegg for å lære pasientene spesifikke sosiale eller praktiske ferdigheter. ☐☐☐☐☐

101 En av de viktigste oppgavene ved denne enheten er å kunne kontrollere og dempe aggressiv atferd. ☐☐☐☐☐

102 Vi har egne møter for regelmessig og grundig evaluering av den enkelte pasient. ☐☐☐☐☐

103 En stor del av vår oppgave er å gi pasientene omsorg og hjelpe dem med det de ikke klarer selv. ☐☐☐☐☐

104 En viktig del av jobben vår er å beskytte pasientene mot inntrykk som kan virke negativt på deres tilstand. ☐☐☐☐☐

105 Tilbakemelding fra primærhelsetjenesten brukes aktivt i den videre utviklingen av denne behandlingsenheten. ☐☐☐☐☐

106 Vi kan ikke tenke for mye på dem som ikke har fått noe behandlingstilbud ennå. ☐☐☐☐☐

107 Vi er opptatt av at pasienten skal få løst mest mulig av sine dypereliggende problem før vi avslutter behandlingen. ☐☐☐☐☐

108 Vi ser det ikke som vår oppgave å forandre samspillet innen familien. ☐☐☐☐☐

109 Det har liten hensikt å bruke gruppeterapi i behandlingen her ☐☐☐☐☐

110 Vi legger forholdene til rette for samvær og aktiviteter uten å organisere bestemte treningsopplegg i sosiale og praktiske ferdigheter. ☐☐☐☐☐

111 Vi er ikke forberedt på at aggresjon og vold kan forekomme ved vår behandlingsenhet. ☐☐☐☐☐

112 I evaluering av pasientene bruker vi ikke skåringsskjemaer for å måle tilstand eller endring. ☐☐☐☐☐

113 Vi hjelper pasientene lite eller ingenting med praktiske gjøremål og dagliglivets aktiviteter. ☐☐☐☐☐

114 Her ved denne enheten driver vi ikke med skjerming av pasienter. ☐☐☐☐☐

115 Vi har lite direkte samarbeid med primærhelsetjenesten eller sosialtjenesten. ☐☐☐☐☐

116 Her ved behandlingsenheten er vi ikke så veldig opptatt av å få ting unna for å kunne behandle flere pasienter. ☐☐☐☐☐

117 Vi kan ikke ta sikte på at pasienten skal gjennomarbeide mer omfattende indre problem under behandlingen her. ☐☐☐☐☐

118 Her ved enheten arbeider vi mye med forholdet mellom familiemedlemmer. ☐☐☐☐☐

119 Vi bruker bevisst gruppesituasjoner som en del av det terapeutiske arbeidet. ☐☐☐☐☐

120 Vi legger liten vekt på opplæring i sosiale og praktiske ferdigheter ved vår behandlingsenhet. ☐☐☐☐☐

Vennligst kontroller at du ikke har oversett noe utsagn.

Takk for at du ved å fylle ut skjemaet har bidratt med informasjon om akuttpsykiatriske tilbud!

Skala for utfylling: **1** Svært uenig **2** Uenig **3** Nøytral **4** Enig **5** Svært enig

MAP – Skjema om akutteam i psykisk helsevern for voksne

Instruksjon: Skjema for informasjon om hvert akutteam gjelder for perioden 2005 – 2006 (perioden det ble registrert data til MAP studien).

Akutteam (navn): _____

1. Når ble akutteamet etablert?	
2. Hvor godt etablert var teamet i 2005/2006? ☐ Under etablering ☐ Ferdig etablert	**9. Var teamet lokalisert sammen med** ☐ akuttavdeling ☐ annen døgnavdeling ☐ DPS ☐ for seg selv ☐ annen type lokalisering
3. Opptaksområde? (Antall innbyggere) **4. Antall døgnplasser per 10000 innbyggere i opptaksområde (inkludert lavterskelsenger)?**	**10 Skjedde det omorganiseringer av teamet rundt 2005/2006?** ☐ Ja ☐ Nei
5. Bemanning i teamet (samlet antall stillinger slik det var i gjennomsnitt i perioden MAP data ble samlet inn) ___,__ spesialist i psykiatri ___,__ andre leger ___,__ psykologspesialist ___,__ andre psykologer ___,__ sykepleiere (inkludert psyk.sykepl.) ___,__ sosionomer ___,__ hjelpepleiere ___,__ ergoterapeuter, fysioterapeuter ___,__ andre faggrupper ___,__ andre ufaglærte ___,__ kontorpersonale	**11. Hvilken åpningstid hadde akutteamet? (Angi klokkeslett fra - til)** Mandag: _____ Tirsdag: _____ Onsdag: _____ Torsdag: _____ Fredag: _____ Lørdag: _____ Søndag: _____
6. Ledelse i teamet (faggruppe)?	**12. Tilgjengelighet om natten per telefon?** ☐ Ja ☐ Nei
7. Tok temaet inn pasienter direkte uten henvisning? ☐ Ja ☐ Nei	**13. Hadde teamet tilgang på lavterskelsenger?** ☐ Ja, i så fall antall _____ ☐ Nei
8. Var teamet organisert under ☐ akuttavdeling ☐ annen døgnavdeling ☐ DPS ☐ for seg selv ☐ annen type organisering	**14. Hvis temaet hadde tilgang på lavterskelsenger, hadde teamet** ☐ inntaksbeslutning over sengene ☐ kontakt med pasientene under oppholdet ☐ styring av behandlingen under oppholdet

15. Hvilken autoritet og myndighet hadde teamet over innleggelser på akuttavdelingen? ☐ Alle innleggelser skulle vurderes av akutteamet innenfor åpningstid ☐ akuttavdelingen tok i mot alle pasienter akutteamet vurderte til å være i behov av innleggelse ☐ akuttavdelingen hadde egen inntaksbeslutning	b) Utadrettet: - hjemmebesøk: ☐ svært ofte ☐ ofte ☐ Av og til ☐ sjelden ☐ svært sjelden ☐ Aldri - samtaler utenfor teamets lokaler: ☐ svært ofte ☐ ofte ☐ Av og til ☐ sjelden ☐ svært sjelden ☐ Aldri
16. Hadde akutteamet begrensning på lengden på oppfølgingen av pasientene i akutteamet? ☐ Ja; i så fall hvilken grense _____ ☐ Nei	c) Hadde teamet noen målsetning om hvor raskt etter kontakttidspunktet man skulle møte pasienten? ☐ ingen slik målsetning ☐ innen 2 – 4 timer ☐ innen 4 – 12 timer ☐ innen 12 – 24 timer ☐ innen 24 – 48 timer ☐ mer
17. Hva slags behandlingsformer og intervensjoner brukte akutteamet? a) Nettverksfokusert: - fokus på kontakt med familie: ☐ svært ofte ☐ ofte ☐ Av og til ☐ sjelden ☐ svært sjelden ☐ Aldri - fokus på kontakt med det offentlige hjelpeapparat: ☐ svært ofte ☐ ofte ☐ Av og til ☐ sjelden ☐ svært sjelden ☐ Aldri	d) Hadde teamet egne mål for hyppighet på samtalene? ☐ en gang per 14. dag ☐ en gang i uken ☐ flere gang per uke ☐ daglig ☐ flere ganger om dagen ☐ ingen slik målsetning

e) Skulle akutteamet være et alternativ til innleggelse på døgnavdeling? ☐ Ja ☐ Nei	**21. Måtte pasientene ha henvisning for å få et tilbud i akutteamet?** ☐ Ja ☐ Nei
f) Hadde man som målsetning at bruk av tvunget psykisk helsevern skulle reduseres? ☐ Ja ☐ Nei	**22. Jobbet dere i team rundt hver pasient?** ☐ svært ofte ☐ ofte ☐ Av og til ☐ sjelden ☐ svært sjelden ☐ Aldri
g) Hadde man som målsetning at antall innleggelse på døgnavdeling skulle reduseres? ☐ Ja ☐ Nei **18. Skulle teamet følge opp pasienter etter utskrivelse fra akuttavdeling?** ☐ Ja ☐ Nei	**23. Ble det lagt vekt på at pasienten skulle opprettholde kontakt med andre instanser under oppfølgingen av pasienten (for eksempel poliklinikk, kommunen, døgnavdeling)?** ☐ svært ofte ☐ ofte ☐ Av og til ☐ sjelden ☐ svært sjelden ☐ Aldri
19. Skulle teamet legge til rette for tidligere utskrivelser fra akuttavdeling? ☐ Ja ☐ Nei	**24. Var det etablert psykiatriske tjenester/team i kommunene i deres opptaksområde?** ☐ Ja ☐ Nei
20. Inntakskriterier i akutteamet? ☐ bare øyeblikkelig hjelpvurderinger ☐ bare ta inn de pasientene som andre av instanser ble vurdert til å være i behov av innleggelse ☐ bare suicidalitet og psykoser ☐ andre målgrupper; beskriv _____	**25. Var det etablert psykoseteam ved DPS i deres opptaksområde?** ☐ Ja ☐ Nei

Har dere brosjyrer/planer/årsmeldinger/konkrete registreringer fra denne perioden kunne det vært fint om det ble vedlagt!

Tusen takk!