# Is There a Difference?
# A Comparative Study of Mobile Intensive Treatment Team and Continuing Care Team Consumers Clinical and Other Characteristics

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## Abstract

Assertive community treatment has become widely accepted as a vehicle for providing treatment for mental health consumers who require intensive community follow up due to their numerous and lengthy presentations to hospital. This study was designed to identify the clinical differences in consumers who access case management through community mental health services and those who receive services through a mobile intensive treatment team (MITT). The findings indicate that consumers in MITT had higher dynamic risk factors, receive involuntary care through the Mental Health Act and had increased physical health care needs. In addition, MITT consumers were socially isolated and most were living alone with a history of unemployment. The findings identified that MITT clients were significantly more disabled on the indicators assessed and were likely to require the more intensive treatment provided through assertive follow-up. The smaller caseloads found in assertive models of case management need to be maintained to enable clinicians to deal with clients who have complex needs.



**Keywords:** Mobile intensive treatment team, assertive community treatment, community mental health services.

## Introduction

The increasing focus on community treatment for those with mental illness has resulted in an expanding array of community based approaches to service delivery. The most prominent among these has been the use of case management as an alternative to hospitalization. Case management emerged from the original PACT model developed in the USA by Stein and Test (1976). The primary goals of case management are: (i) to keep people in contact with services (Thornicroft, 1991); (ii) reduce the frequency and duration of hospital admissions and hence costs (Kanter, 1989); and (iii) improve outcomes such as social functioning and quality of life (Holloway, 1991).

Standard case management delivered through Continuing Care Teams (CCT) forms the cornerstone of publicly funded community mental health services throughout much of the developed world including UK, USA and Australia. The main activities of the case manager within CCTs include the assessment and planning of care, linking clients to required services (consultation with families, health professionals), providing patient interventions (skills training, psychotherapy, etc), providing crisis intervention and monitoring (Meehan & King, 2007). It works best in multidisciplinary team settings where the case manager can access the specialist skills of team members. The advantages include clear clinical accountability, readily identifiable points of contact for clients and families or carers and simplicity. However, the case manager may lack objectivity with respect to decisions about continuing need for services and a tendency for the clinical case manager to attempt interventions that might be better provided by a specialist.

As different models of case management emerged to meet the complex needs of individuals with mental illness, there was a growing realisation that a sub-group of individuals was difficult to engage using standard approaches (Test & Stein, 1976). This group of clients consumed large amounts of staff time and used the most expensive treatment options available including inpatient care and multiple visits to emergency departments (Surles & McGurrin, 1987). Such clients were described as 'revolving door patients' because discharge from acute inpatient care would be quickly followed by re-admission (Kent & Yellowlees, 1994). Characteristics of this group (also known as 'heavy service users') included poor treatment compliance, homelessness, lack of natural supports and multiple problems including physical illness, substance use or forensic problems (Kent, Fogarty, & Yellowlees, 1995). Standard case management was generally ineffective with this group as there was limited capacity to follow up clients who missed appointments since standard case management operates within normal working hours. Moreover, most standard case managers did not have time or the capacity to develop intensive programs that would enable such people to successfully adapt to life in the community (Meehan & King, 2007).

By the mid 1990's, assertive community treatment models began to emerge in Queensland and other regions in Australia to provide a more intensive treatment approach for those with severe mental health problems (Hambridge & Rosen, 1994). A summary of the literature highlight significant differences between the services provided by MITT and those provided through standard case management (see table 1). The MITT case manager is responsible for coordinating client assessment, the development of a

comprehensive management plan, the delivery of services and the monitoring and evaluation of services provided. Such a system enhances the continuity of care, its accessibility, accountability and efficiency (Hambridge & Rosen, 1994). An important feature of MITT is the ability to deliver services to the clients through various engagement strategies such as outreach with time unlimited interventions (Jones, 2002). With smaller caseloads of 8-10 consumers the MITT case manager is more responsive to consumers needs and has greater ability to outreach to the consumer and other support services. MITT programs tend to have common principles which include problem solving, a team approach in which the team shares responsibility for the outreach to every client on the caseload and a long-term commitment to clients, providing services for as long as required (McGrew & Bond, 1995).

Insert Table 1 about here

**Assertive versus standard case management – client differences**

Priebe and colleagues (2003) examined the characteristics of consumers accessing assertive community treatment (such as MITT) and found that consumers were more likely to be male, single, unemployed, living alone and have a diagnosis of schizophrenia or schizoaffective disorder. More than one-third of patients had been physically violent in the previous 2 years, with one-fifth of them being arrested. Casper and Pastva (1990) reported that in their study that heavy service user population were in the mid 30s: 60% – 70% never married; over 40% abused alcohol and/or other drugs; suicide, violence and forensic histories were present in 30%-50% of cases; medication and program non compliance and chronic denial of illness were found in over 75% of cases. Kent and

Yellowlees (1994) investigated the socio-demographic findings and diagnoses of 50 heavy service users in Adelaide. The mean age was 34.1 years for men and 33.2 years for women. Women (52%) were slightly more predominant than men. Thirty (60%) had never married, 12 were divorced, and eight were either married, living with a partner, separated, or widowed. Most were diagnosed with schizophrenia and lived alone. Conditions related to mental health problems such as lack of insight or denial of illness had the highest correlation with readmission (contributing to 62.2 % of readmissions).

The results of these studies seem to indicate that MITT consumers are likely to be male, in their mid 30's, never married, living alone with forensic, drug and alcohol and/or history of violence. They tend to have a diagnosis of a psychotic illness such as schizophrenia and also have experienced readmissions to hospital as a result of non-compliance and disengagement with treatment programs. However, most of these conclusions have been derived from overseas studies.

Given the lower staff:client ration and resultant higher costs associated with intensive models of case management, it is important to determine if there is a difference in the characteristics of clients receiving assertive case management through MITT and those receiving standard case management through Continuing Care Teams.

## METHOD

### Subjects/Setting

The study took place within the Gold Coast Health Service District in Queensland. Clients in receipt of intensive treatment through MITT and standard case management through CCTs were targeted for the study. The Queensland Health consumer integrated mental health application (CIMHA) was initially accessed to

identify all current clients receiving treatment through MITT. Sixty-six clients were identified and these were matched on gender, diagnosis and age range to a sample of clients currently receiving treatment through CCTs. The medical records of these 132 clients (MITT = 66 & CCT = 66) were then audited using a proforma designed for the study. The coded data for both groups were than entered onto the statistical package for the social sciences (SPSS, version 15). Descriptive statistics were used to summarise the data and differences between both groups were assessed using chi-sq analyses.

**RESULTS**

Schizophrenia was the prominent diagnosis in the overall group of clients (77.3%) followed by bipolar affective disorder (15.2%) and schizoaffective disorder (7.6%). The most frequent Axis II diagnosis's was substance disorders for both groups. A total of 31 CCT consumers and 28 MITT consumers had a dual diagnosis of substance disorder.

*Length of time in contact with CCT or MITT Service*

CCT consumers were significantly more likely to be still receiving services by 18 months post-entry to the CCT when compared to their CCT counterparts ($\chi^2$ =15.168 p <0.0001). More than three-quarters (75.8%) of the CCT group was still receiving treatment after 18 months, compared to MITT (42.4%).

*Risks*

Differences in static risks (such as previous suicide attempt, family history of suicide, under 25 years, and history of violence) collected on both samples were not statistically significant. However, dynamic risk factors (such as intent/plan/thoughts, hopelessness, impulsivity, anger, intoxication) were significantly higher in the MITT

group ($\chi^2$ =21.58 p <0.0001) with 42.4% of MITT clients having combination of risk factors compared to 16.7% of those in the CCT group.

*Mental Health Act*

A significant proportion of MITT consumers were receiving involuntary treatment ($\chi^2$ =23.48, p= 0.0001). Only 4 (6.1%) of MITT clients were voluntary while over one-third of clients in the CCT group (37.9%) were voluntary.

*Physical Health*

Clients in the MITT cohort were significantly more likely to present with some form of chronic physical health problem (48.5%) compared to 28.8% of the CCT group ($\chi^2$ =15.60, p<.0001). The most common diagnosis in both groups was diabetes Type II followed by obesity. Physical health risks in the MITT group were frequently identified in case notes and recovery plans. At total of 97.9% of MITT consumers had risk factors identified with a majority of consumers having a combination of factors such as smoking, poor diet, lack of exercise and drug and alcohol use. CCT consumers were less likely to have the physical health documented with 40.9% having a risk factor identified.

*GP Involvement*

MITT consumer were significantly more likely to have GP involvement documented in their files with 92.4% engaged with a GP compared to 60.6% of consumers in the CCT group identifying a GP ($\chi^2$ =18.59, p<.001). In reviewing the files, it became apparent that a considerable number of consumers in both groups refused to have contact with a GP despite the efforts of the treating team to attempt to assist the consumer in selecting a GP.

Insert Table 2 about here

*Housing and Relationships*

Differences in the type of accommodation accessed by both groups were not significant. A similar proportion of MITT and CCT consumers were living in their own accommodation (30.3%). While more MITT consumers were in receipt of supported accommodation, more CCT consumers were living in rental accommodation. Over one-third of MITT consumers (36.4%) were receiving disability support from a non-government support agency. More CCT consumers (18.2%) were married or in defacto relationship unlike the MITT consumers who were single, divorced or widowed ($\chi^2$ =11.07, p<.004).

*Education Level and Employment*

Both MITT and CCT consumer groups had low levels of education with 63.6% of MITT consumers and 71.2% of CCT consumers completing year 10. Small numbers of MITT (13.6%) and CCT consumers (10.6%) had complete TAFE and degree level qualifications. While only one (1.5%) of the MITT clients was working, almost one-quarter of CCT clients had documented employment histories (28.8%) of employment with 19.7% currently engaged in some form of employment.

*Differences in Functioning (HoNOS and Life Skill Profile scores)*

The Life Skill Profile-16 (Buckingham et al, 1998) and HoNOS (Wing et al., 2000) are completed routinely on all MITT and CCT consumers by clinical staff (at start of service episode, review- every 91 days, and end of service episode). The most recently completed HoNOS and LSP-16 assessments for each client were downloaded from the consumer integrated mental health application (CIMHA) and assessed for differences. Overall, when compared to clients in the CCT group, MITT clients had significantly

higher HoNOS and LSP-16 scores (i.e. more severe problems). The mean HoNOS total score for MITT clients (mean = 10.4, sd = 5.8) was significantly higher than that for clients in the CCT group (mean = 6.30, sd= 4.32) (t=4.60, p< 0.0001). Similarly, the mean LSP total score for MITT clients (mean = 18.85, sd = 7.91) was significantly higher than that for clients in the CCT group (mean = 11.88, sd= 6.28) (t= 5.55, p< 0.0001).

**DISCUSSION**

This study was designed to examine differences in the personal and clinical characteristics of clients receiving either assertive community treatment or standard case management. Although the samples were not randomly selected, all clients in the service in receipt of assertive community treatment (through MITT) at the time of the study were included. These were matched on gender, diagnosis and age range to clients receiving standard case management (through CCTs) within the same mental health service.

Overall, this chart review indicates that MITT consumers were predominantly male, had a diagnosis of schizophrenia, were involuntary, and had an increased likelihood of having physical health problems. This is a similar to previous findings (Casper & Pastava, 1990; Priebe et al., 2003). The study findings suggest that clients in receipt of MITT services are significantly more disabled on all of the indicators assessed than those in the CCT group. The referral process used by the service to allocate clients to MITT appears to be appropriate.

The study did identify two distinct groups of consumers in MITT; those who remain within MITT for longer than 18 months and those who require short term interventions to stabilize their mental health prior to being transferred to less intensive treatment. Indeed, when compared to the CCT group, MITT consumers were less likely

to be receiving treatment after 18 months. The likely reasons for this is that MITT transfers consumers to CCT in a step down approach to decreasing the level and type of mental health treatment rather than referring out to private sector. This approach is in response to risk management and due to consumers remaining under the mental health act when referred to CCT. The mental health act requires the consumers receive treatment from an authorized mental health service.

The MITT consumer group has a number of static and dynamic risks that require increased monitoring and mental health interventions in order to prevent further hospitalization or risk to themselves and the community. The CCT consumer group had a large number of static risks which may have also contributed to the retention of consumers within this team for longer than 18 months. Both CCT and MTT have approximate equal number of combined static risks however with dynamic risk there were more MTT clients who had combined dynamic risks.

The smaller caseloads in MITT did seem to lead to more comprehensive treatment provision. MITT clients were more likely to have physical health issues and risks documented in their recovery plans as well as identified linkage to a general practitioner. Moreover, MITT consumers were more likely to have metabolic screening as part of their monitoring and had plans developed to address metabolic issues. However, there was no evidence of this information being communicated to general practitioners and vice versa. Both CCT and MITT groups had a number of consumers that continued to refuse contact with a general practitioner despite physical health care concerns being raised. The reasons for refusing GP contact remain unclear. It may be that individuals with mental

illness feel uncomfortable waiting in GP clinics or feel that the interventions provided by GPs are too brief to meet their needs.

## CONCLUSION

The results of this study indicate that clients receiving treatment from CCT and MITT differed significantly on key clinical and personal characteristics. MITT clients were significantly more disabled on the indicators assessed and were likely to require the more intensive treatment provided through assertive follow-up. The smaller caseloads found in assertive models of case management need to be maintained so that clinicians can provide adequate treatment to those with more complex needs.

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**Table 1 Difference in MITT and Standard Case Management**

| Characteristic | MITT | Standard Case Mgt |
|---|---|---|
| Staffing | Clinical staff to client ratio around 1 to 10 | Clinician to client ratio around 1 to 30 |
| Team structure | Team focus | Individual clinician focus |
| Referrals | From within the service | GP's, self referral, private and public agencies |
| Frequency of contact | Up to twice a day | Once every one to two weeks |
| Treatment base | Client homes, some clinical work occurring in the clinic | Client homes, but largely in community clinic |
| Medication | Largely the responsibility of the team | Responsibility of the client and their family |
| Hours of service | Seven days per week 8.30 – 5pm | Monday to Friday 8.30- 5pm |
| Type of clients | Major mental illness - poor engagement | Major mental illness - good engagement |

**Table 2: Difference between MTT and CCT consumers**

| | MTT | CCT | *Significance* |
|---|---|---|---|
| **Receiving Treatment** | | | |
| Less than 18 months | 38 (57.6%) | 16 (24.2%) | $\chi^2$ =15.168 |
| More than 18months | 28 (42.4%) | 50 (75.8%) | p=0.0001 |
| **Dynamic Risk** | | | |
| Combination | 28 (42.4%) | 11 (16.7%) | $\chi^2$ =21.587 |
| Aggression | 16 (24.2%) | 7 (10.6%) | p=0.0001 |
| Sexual | 3 (4.5%) | 12 (18.2%) | |
| Others | 19 (28.9%) | 36 (54.5%) | |
| **Mental Health Act** | | | |
| Voluntary | 4 (6.1%) | 25 (37.9%) | $\chi^2$ =23.487 |
| ITO | 48 (72.7%) | 38 (57.6%) | p=0.0001 |
| Others (Forensic, SNFP) | 14 (21.2%) | 3 (4.5%) | |
| **Physical health** | | | |
| Other medical | 20 (30.3%0 | 11 (16.7%) | $\chi^2$ =15.604 |
| Not stated | 14 (21.2%) | 36 (54.5%) | p=0.0001 |
| Chronic diseases | 32 (48.5%) | 19 (28.8%) | |
| **GP Involvement** | | | |
| Yes | 61 (92.4%) | 40 (60.6%) | $\chi^2$ =18.592 |
| No | 5 (7.6%) | 26 (39.4%) | p=0.0001 |
| **Housing** | | | |
| Own | 20 (30.3%) | 20 (30.3%) | $\chi^2$ =5.740 |
| Boarding/Government/supported housing | 33 (50.0%) | 22 (33.3%) | p=0.065 |
| Rental | 13 (19.7%) | 24 (36.4%) | |
| **Living with family** | | | |
| Yes | 21 (31.8%) | 27 (40.9%) | $\chi^2$ =1.179 |
| No | 45 (68.2%) | 39 (51.9%) | p=0.366 |
| **Relationship** | | | |
| Single | 50 (75.8%) | 45 (68.2%) | $\chi^2$ =11.071 |
| Married/defacto | 1 (1.5%) | 12 (18.2%) | p=0.004 |
| Not stated | 15 (22.7%) | 9 (13.6%) | |
| **Employment** | | | |
| Unemployed | 65 (98.5%) | 53 (80.3%) | $\chi^2$ =11.506 |
| Employed | 1 (1.5%) | 13 (19.7%) | p=0.0001 |