AN EXPLORATORY AND DESCRIPTIVE ANALYSIS OF CLIENT SATISFACTION AND OUTCOME REALIZATION FOR CENTRAL HEALTH'S ASSERTIVE COMMUNITY TREATMENT TEAM

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by

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Abstract

The main objectives of this study were to provide a description of the service delivery model of an assertive community treatment (ACT) team in central Newfoundland and Labrador and to examine the characteristics of ACT service users, their degree of satisfaction with ACT, and whether their engagement with ACT had resulted in a reduced reliance on acute psychiatric services. A recently completed DACTS report, along with researcher immersion and informal interviews with the ACT team, were used as informational sources to explore the team's adherence to the ACT evidence-based model. Chart audits were completed to collect data on participant characteristics. Days of psychiatric admission and emergency room (ER) visits were collected retrospectively for participants based on their individual pre- and post-ACT engagement time periods. Twenty-nine ACT clients agreed to participate in this study. The majority of participants (82.8%) were male and diagnosed with schizophrenia or a schizoaffective disorder (65.5%). There was a high rate of concurrent substance abuse (75.9%). The main outcome measures were the number of readmission days and ER visits before and after ACT engagement. The average number of readmission days reduced from 14 to zero ($p < .05$) following engagement with ACT. The average number of visits to ERs also reduced from three to one ($p < .05$). Participants reported overall high satisfaction with ACT services. Responses were highly concentrated with references to emotional and instrumental support. This study articulates how model fidelity translates into practice. Its findings contribute to the current literature, which associates higher model fidelity with

improved client outcomes related to acute psychiatric services. The need for provincial cross-site comparisons and repeated program assessments of ACT are substantiated.

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Chapter 1

Introduction

The current study explored Assertive Community Treatment (ACT) service and service users in central Newfoundland and Labrador. The following chapters provide an in-depth description of the various stages of the research process, study findings, as well as recommendations and conclusions. Chapter one provides an introduction to the topic and a justification for the study. It also outlines study objectives, research questions, and discusses the study's significance. Chapter two provides a literature review of research related to Assertive Community Treatment (ACT), with particular attention to model fidelity, outcome research, and client satisfaction with services. Chapter three outlines the methods used to recruit participants, the procedure for data collection, and the measures used for data collection. Chapter four and five describe the results of the study. The sixth chapter provides a discussion of the results, highlighting the relationship to current research, and the implications they have. Limitations of this study are discussed along with possibilities for future research that will further contribute to the understanding of ACT.

Study Rationale

ACT is a specific model of intensive community mental health care and a key component of the national framework for mental health in Canada (Burge, 2009). It is intended for individuals with persistent and severe mental illness who have not responded well to traditional mental health services (Salyers, Rollins, Clendenning, McGuire &

Kim, 2011). These individuals have often had lengthy hospitalization histories and are considered at an increased risk for future hospitalizations (Salyers et al., 2011). Unlike traditional brokered services, ACT is provided by a single (team) source to avoid fragmented service delivery (Martin et al., 2005). Its broad aims include maximizing medication compliance; minimizing relapse; meeting basic and social occupational needs; enhancing quality of life; improving social and vocational functioning; promoting independent living skills; reducing caregiver burden; and facilitating community tenure and engagement (Martin et al., 2005). The extent of its effectiveness is well documented and favorable (Burns et al., 2007; Carpenter, Luce & Wooff, 2011; McGrew, Bond, Dietzen, McKasson & Miller, 1995; Weirdsma, Poodt & Mulder et al., 2007). ACT has been associated with many positive treatment outcomes; in particular a reduction in psychiatric hospitalizations, improved housing stability, and increased engagement and satisfaction with treatment (Monroe-DeVita, Teague, Moser, 2011).

A major focus of mental health reform in Newfoundland and Labrador has been the development of case management services that facilitate community adjustment for adults with serious and persistent mental illness (Government of Newfoundland and Labrador, 2005). The ACT model has been widely replicated in Canada, North America and around the world and has been more recently endorsed by Newfoundland and Labrador as a service model of choice for people with serious and persistent mental illness (Burge, 2009). In their 2005 *Provincial Policy Framework for Mental Health and Addictions Services in Newfoundland and Labrador*, the provincial government stated that the development of the mental health system in Newfoundland and Labrador had to

be guided by what is known to work. The policy ascertained that since nationally accepted, evidence-based findings for best practice in Mental Health Reform follow rehabilitation, personal strengths and Assertive Community Treatment (ACT) models, then so should the province. Accordingly, in October 2007, the *Mental Health Care and Treatment Act* offered a new recovery-oriented approach for interventions and services for people with severe and persistent mental illness in Newfoundland and Labrador. The act included Assertive Community Treatment (Mental Health Care and Treatment Act, 2009). The first provincial ACT team was established in St. John's, Newfoundland and Labrador in 2008. In 2010, a team was established in Grand Falls-Windsor, within the Central Regional Health Authority and made up one of three provincially operating ACT teams.

ACT is one of the most extensively researched mental health treatment models (Salyers et al., 2011) and with more than 30 years of clinical practice, it is considered an evidence-based practice (EBP) (Bond et al., 2001; Salyers et al., 2011). As a result, if a particular program hopes to affect positive change consistent with reported ACT outcomes, that program should adhere closely to the ACT model. The Dartmouth Assertive Community Treatment Scale (DACTS) is considered the standard for assessing a program's adherence to the critical elements inherent in ACT service delivery (Monroe-DeVita et al., 2011). In the fall of 2011 Central Health's ACT team had been in operation for nearly two years. At that time the team and key stakeholders were interested in evaluating their program's implementation. To address its program fidelity, external assessors completed a DACTS fidelity report for the team. Findings from that report

suggested that the team had been successfully implemented with some modifications from the original ACT model (Barrett & Parsons, 2011). Since greater model fidelity is correlated with improved outcome realization (Monroe-DeVita et al., 2011), the team in central Newfoundland and Labrador was eager to explore whether it had realized its desired outcomes - reduced psychiatric admissions and emergency room (ER) visits. In the winter of 2012, shortly after the fidelity assessment had been completed, this study's primary researcher completed a practicum placement with Central Health. At that time the primary researcher had the opportunity to meet with the ACT team and learn about their service provision. Given the team's high fidelity rating and established caseload, team members and the manager agreed that they were interested in learning more about their outcomes; details about their impact and trends among their clients. In addition to their expected outcomes, team members agreed that they would like to know if their clients were satisfied with their ACT experience and if they had any suggestions for areas of improvement. While informal feedback had been mostly positive, team members agreed that they would like for their client satisfaction to be properly collected and documented. The rationale for the current study was not only so that the team and clients could benefit, but also so that provincial government and key stakeholders could better understand the ACT team in central Newfoundland and Labrador and its impact (ACT team, personal communication, April 2012). Since ACT has become a standard of service in Newfoundland and Labrador, sound evaluative studies of its effectiveness in meeting the objectives of provincial mental health reform are warranted.

The team's interest in its clients' satisfaction aligns with provincial healthcare

policy. In fact, an essential principle of mental health reform in Newfoundland and Labrador has been the right of people with serious mental illness to have a voice in the development and implementation of the services that are supposed to operate on their behalf (Government of Newfoundland and Labrador, 2005). Presently, provincial healthcare policy in Newfoundland and Labrador stresses that healthcare consumers and their families must be involved in their care and treatment decisions. They must also be given the opportunity to participate in planning and evaluation (Government of Newfoundland and Labrador, 2005). In fact, the provincial healthcare policy introduced the term *consumer*, rather than *patient*. According to the policy, the switch in terminology indicated and encouraged an active role in self-care. It reflects the right to choose services, the right to complain if a service is not adequate, and the right to be consulted when services are being designed, implemented and evaluated (Government of Newfoundland and Labrador, 2005). This shift in healthcare policy is a growing justification to evaluate the effectiveness of healthcare services, such as ACT, through the lens of the client (or consumer)[1].

Study Objectives

With consideration for the aforementioned rationale, four study objectives were identified. The first was a process-related objective focused on accurately describing Central Health's ACT team. This objective included profiling the ACT team and examining it in relation to the established criteria for an ACT program. The completed

[1] ACT literature consistently uses the term *consumer*. However, the team at Central Health uses the term *client*. To remain consistent with the team this thesis will use the term *client*, which still implies the active, rather than passive, role of service user.

2011 Dartmouth Assertive Community Treatment Scale (DACTS) fidelity assessment informed and guided this process. Any changes or modifications from the original assessment were noted and explored through conversations with the ACT team and manager. Beyond purely comparing the team to a program model, the study also endeavored to provide a more comprehensive description of the service provision, including elements that were perhaps unique to the team in central Newfoundland and Labrador and not covered by the DACTS.

The second study objective involved an examination of the overall characteristics of the ACT team's clients. Despite an operational definition of "serious mental illness", ACT clients are a heterogeneous group of people with respect to diagnosis, treatment history, age and other characteristics. Variables of interest for the current study included age, sex, education, employment, marital status, psychiatric diagnoses, concurrent diagnoses, tobacco use, global assessment of functioning, and treatment history.

The third objective included an investigation of outcomes around client reliance on acute psychiatric services. As has been demonstrated in the literature (Fletcher, Cunningham, Calsyn, Morse & Klinkenberg, 2008; Kortrijk, Mulder, Roosenschoon, Weirdsma, 2010; Priebe et al., 2004; Prince & Gerber, 2005) outcomes associated with the ACT model can vary with specific client characteristics. This meant gaining familiarity with, and achieving new insights into, factors and variables such as age, sex, psychiatric diagnoses and co-morbidities to better understand the impact of this service on psychiatric service utilization.

The fourth objective of the current study was to examine client satisfaction with ACT delivery. A fundamental tenet of mental health reform in this province has been the

right of people with serious mental illness to have a say in the development and implementation of the services that are supposed to operate on their behalf (Government of Newfoundland and Labrador, 2005). This objective sought to articulate which aspects of ACT clients felt satisfied or dissatisfied with. Additionally, this objective revealed common themes with regards to satisfaction of services.

Research Questions

Based on the above objectives, the following research questions were considered:

1) What is the degree of fidelity for Central Health's ACT team model?
2) What are the overall characteristics of Central Health ACT team clients in relation to the following variables: age in years, sex, medical conditions/diagnoses, marital and employment status, rough income estimate, drug and/or tobacco use, hospital admission and visit history, and most recent global assessment of functioning (GAF) scores?
3) Does Central Health's ACT intervention relate to improved outcome for psychiatric service utilization, after controlling for the effects of the above noted client characteristics?
4) What is the extent of client satisfaction among ACT clients in central Newfoundland and Labrador?

Study Significance

The apparent shortage of ACT-related research in the province, the outcomes of interest to Central Health's ACT team, and this researcher's desire to better understand

and depict ACT service delivery, have amalgamated into this master's thesis project with practical implications.

Firstly, this study will result in a greater understanding and awareness of the ACT model and how it operates in central Newfoundland and Labrador. This study will convey the impact that the service is having on a large portion of its users and offer, albeit on a small scale, an indication of the degree of variability among them. In agreement with the current focus in provincial healthcare policy, this study will give a voice to mental health care service clients, who in this case happen to be a portion of the population that is often unheard and stigmatized (Government of Newfoundland and Labrador, 2005).

This study will also begin to address a deficit in ACT-related research in the province of Newfoundland and Labrador. It will contribute to the current literature, which associates higher model fidelity with improved client outcomes related to acute psychiatric services. Finally, the implications of this study have the potential to generate meaningful discussion among laypeople, ACT clients, frontline staff, management, and higher-level policy makers, all of whom may have vested interest in ACT programming in Newfoundland and Labrador.

ACT is an evidence-based practice that, when implemented properly, affects positive change in the lives of people with severe and persistent mental illness. It is an expensive treatment option that has recently been endorsed by Newfoundland and Labrador. Given the infancy of ACT in the province, it is not surprising that there is a lack of research as well. That being said, ACT has an extensive literature in Canada, North America, and around the world. With special consideration for the aforementioned study objectives, chapter two will provide a review of ACT literature.

Chapter 2

Literature Review

Chapter two provides a concise and thorough review of ACT literature. The chapter begins with an overview of the ACT model, including key elements, objectives, and governing principles. Next it summarizes empirical research related to ACT and key findings from prominent studies. Consistent with the current study's objectives, the chapter explores more closely two desirable outcomes related to ACT. With important consideration for ACT as an evidence-based practice, this chapter also explores program model fidelity and describes the tools favoured in the literature to measure it. Finally, informed by a thorough investigation of the literature, the chapter reiterates the intentions of the present study.

Assertive Community Treatment Model

Assertive Community Treatment (ACT) is a team treatment approach designed to provide comprehensive, community-based psychiatric treatment, rehabilitation, and support to people with serious and persistent mental illness (Bond et al., 2001). The ACT model of care evolved out of the work of Arnold Marx, M.D., Leonard Stein, and Mary Ann Test, Ph.D., in the late 1960s (Lang, Davidson, Bailey, & Levine, 1999). ACT has been widely implemented in the United States, Canada, and England. It differs conceptually and empirically from traditional case management approaches (Bond et al., 2001). A team of professionals whose backgrounds and training include social work, rehabilitation, counselling, nursing and psychiatry provide a plethora of services in the

community. ACT teams provide several services such as case management, initial and ongoing assessments; psychiatric services; employment and housing assistance; family support and education; substance abuse services; and other services and supports critical to an individual's ability to live successfully in the community (Martin et al., 2005). When implemented according to the model, ACT services are available twenty-four hours per day, 365 days per year (Allness & Knoedler, 2003).

As outlined by Allness and Knoedler (2003) in their program implementation manual, the primary goals of ACT include: to lessen or eliminate the debilitating symptoms of mental illness each individual client experiences and to minimize or prevent recurrent episodes of the illness; to meet basic needs and improve quality of life for its clients; to increase functioning in adult social and employment roles and activities; to encourage community tenure; and to reduce the family's burden with regards to providing care.

Beyond specific goals, ACT services are expected to adhere to certain essential standards and the following basic principles:

Primary provider of services. The ACT team is the primary provider of services and has the responsibility to help clients meet needs in all aspects of living in the community (Bond et al., 2001). In order to have the competencies and skills required to meet their clients' various needs, the team consists of a combination of the mental health and rehabilitation disciplines. The multidisciplinary team and the small client to staff ratio help the team provide most services with minimal referrals to other mental health programs or providers. The ACT team members also share offices and caseloads. Their roles are therefore interchangeable when providing services. This ensures that services are

not disrupted due to staff absence or turn over (Allness & Knoedler, 2003). Team members are cross-trained in each other's areas of expertise, as much as possible, and are available to help and consult with each other (Phillips et al., 2001).

Services are provided out of office. Rather than teaching skills or providing services in a clinical setting and then expecting them to be generalized to real life situations, the majority of treatment and rehabilitative services are provided *in vivo* or within community settings and contexts where problems arise and support or skills are needed (Phillips et al., 2001).

Highly individualized services. Given the diversity among individuals with severe mental illnesses and the constant variability in both clients and psychiatric conditions, the ACT team provides individualized treatment. Individual treatment plans, developed with the client, are based on the client's strengths and needs, hopes and desires. The plans are modified as needed through an ongoing assessment and goal setting process (Allness & Knoedler, 2003).

Assertive approach. ACT team members are pro-active with clients. They help them to participate in and continue treatment, live independently, and recover from disability. In fact, under an assertive 'Can Do' approach ACT teams assume the responsibility to do whatever is deemed necessary to assist a person with mental illness in meeting his or her individual goals and service and treatment needs (Allness & Knoedler, 2003).

Long-term services. Grounded in research, this principle acknowledges the propensity for severe and persistent mental illness to impair individuals in many areas of living over a long period of time (Allness & Knoedler, 2003). The service is therefore

intended to be long-term.

The ACT team is responsible for many different services and supports, including vocational support, substance abuse treatment, psychoeducational services, support and education for family members, housing and finances support, and helping with everyday problems in living (Bond & Salyers, 2004). The ACT team encourages all clients to participate in community employment and provides many vocational rehabilitation services directly. The team also coordinates and provides substance abuse services. Team members work with clients and their family members to become collaborative partners in the treatment process and clients are taught about mental illness and the skills needed to better manage their illnesses and their lives. ACT staff members realize that it is often necessary to help improve family relationships in order to minimize conflicts and improve client autonomy. Therefore they work to include the client's natural support systems (family, significant others) in treatment. These natural support systems are educated and included as part of the ACT services (Lang et al., 1999). The ACT team helps clients become less socially isolated and more integrated into the community by encouraging participation in community activities and membership in organizations of their choice (Solomon, 2004). Table 2.1 summarizes the core components of ACT.

Table 2.1.

Core ACT Principles

1. Services are targeted to individuals with severe and persistent mental illness.
2. Rather than brokering services, supportive rehabilitation services are provided directly by the team.
3. Team members share responsibility for the individuals served by the team.

4. Services are available 24 hours per day.
5. Small staff to client ratios is recommended.
6. Treatment and services are individualized.
7. Interventions are largely community-based.
8. Assertiveness in engaging individuals and monitoring progress in their recovery is stressed.
9. Treatment and services are comprehensive and flexible.
10. Services are not intended to be time-limited.

Empirical Research

With over 30 years of clinical practice, the ACT model abounds with empirical research and favourable reviews (Burns et al., 2007; Carpenter, Luce & Wooff, 2011; Killaspy, 2007; Joannette, Lawson, Eastabrook & Krupa, 2005; Phillips et al., 2001; Udechuku et al., 2005). In fact, ACT is the most extensively researched case management model (Bond et al., 2001). In 2001, Phillips et al. described the assertive community treatment model and discussed issues pertaining to implementation. At that time the assertive community treatment model had been the subject of more than 25 randomized control trials. Their literature review surmised that the ACT program was effective in reducing hospitalization, less expensive than traditional care, and more satisfactory to clients and their families than standard care (Phillips et al., 2001). In their review of 25 randomized controlled trials, Bond, Drake, Mueser and Latimer (2001) also reported that ACT substantially reduced psychiatric hospital use, increased housing stability, and moderately improved symptoms and subjective quality of life. Their study found that

while ACT services were costly, the costs of ACT services were actually offset by a reduction in hospital use in patients with a history of extensive hospital use. Aargaard and Muller-Nielsen (2011) evaluated the outcomes of an ACT team in a community in Denmark. The authors found that ACT clients showed a significant reduction in admissions, days admitted, and a significant increase in the number of consultations compared with the study control group. Consultations in this setting referred mainly to home visits for ACT clients and office based visits for the control group. They also noted that adherence to outpatient services was higher among ACT clients. The aforementioned reductions in hospitalization and emergency room visits have both economic and humanistic value. From an individual's personal recovery perspective, quality of life is reduced for clients in hospital settings. Furthermore, it is difficult to engage in meaningful life goals while hospitalized. From a public policy perspective, investing in recovery-based services may help to manage treatment costs (Salyers, Rollins, Clendenning, McGuire, & Kim, 2011). Similar outcome evaluations have been reported in Canada (Chan, Krupa, Lawson & Eastabrook, 2005; Joannette, Lawson, Eastabrook & Krupa, 2005; Prince & Gerber, 2005) but, to date, there are no empirical reviews of ACT teams in Newfoundland and Labrador.

Assertive Community Treatment was initially established as a response to the meagre community support available for people with severe and persistent mental illness (Martin et al., 2005). ACT programs are therefore geared towards individuals with severe functional impairments who are frequent users of emergency psychiatric services (especially inpatient care) and who have avoided or not been very responsive to traditional outpatient mental health care and psychiatric rehabilitation services (Bond,

Drake, Mueser & Latimer, 2001). That being said, individuals referred to ACT often have co-existing diagnoses such as substance abuse disorders or developmental disabilities, and co-existing problems such as homelessness or involvement with the judicial system (Bond et al., 2001; Parker, 2004; Phillips et al., 2001). As a result, studies have more recently begun to explore potential implications of offering ACT to these particular populations. In terms of homelessness, the literature agrees that ACT engagement significantly and consistently improves housing stability (Bond et al., 2001; Fletcher et al., 2008). Although less research has been directed specifically towards individuals with lengthy judicial histories, preliminary findings are positive (Kidd et al., 2011; Parker, 2004). Parker (2004) described the five-year outcomes of an ACT program that monitored 83 acquitted individuals. Study participants were "found not guilty by reason of insanity" (p. 291) and were placed on conditional release into the community. Main outcome measures of the study were potential community tenure, actual community tenure, number of arrests, and the number and duration of hospitalizations during the study period. Achieved outcomes included a low arrest rate, moderate hospitalization rate, and high community tenure (Parker, 2004).

It is estimated that people with developmental disabilities experience mental disorders at about double the rate of the general public (Burge, 2009). While some have questioned the value of this approach in supporting individuals in the community with developmental disabilities (Martin et al., 2005; Chan et al., 2005), researchers like King et al. (2009) argue its significance. In their review of an ACT team in Ontario that works specifically with dually diagnosed individuals, King et al. (2009) found significantly reduced days of hospitalization, retrospectively measured pre and post engagement with

the team. It has been estimated that at least half of individuals with severe mental illness also have a co-occurring substance abuse disorder (Fletcher et al., 2008). Worsened outcomes for those concurrently diagnosed individuals are well documented (Fletcher et al., 2008; Kortrijk et al., 2011). When compared to similar individuals, those with concurrent disorders are more prone to higher relapse rates, more physical health problems, greater violence, higher incarceration rates, more frequent hospitalizations, and high treatment costs (Fletcher et al., 2008). In their 2011 review of 33 assertive outreach programs in Northeast England, Carpenter, Luce and Wooff reported poorer outcomes – increased hospital admissions, reduced mental health and social functioning - for concurrently diagnosed individuals.

Psychiatric Service Use Outcome

When considering outcomes related to psychiatric hospitalization or emergency health care services, most studies retrospectively measured days of hospitalization pre and post engagement with ACT over a specified period of time (Carpenter et al., 2011; Ito et al., 2011; Kidd et al, 2011; King et al., 2009; Salyers et al., 2011; Sono et al., 2012). For example, King et al. (2009) retrospectively collected the number of episodes of hospitalization, days of hospitalization, as well as days institutionalized pre- and post-engagement with ACT over a two year period (one year before ACT engagement and one year after ACT engagement was initiated). Similarly, Udechuku et al. (2005) recorded admission episodes and duration for ACT clients in the 12-month period prior to ACT and for a period of 12 months after ACT engagement. The study's main outcome measures were the number of readmissions and readmission days before and after ACT

engagement. The authors found that the number of readmission days had reduced substantially since ACT engagement and concluded that assertive community treatment was effective in significantly reducing the number of readmission days in a group of clients suffering from long standing persistent and severe mental illness (Udechuku et al., 2005). In instances where studies were able to follow ACT teams over many years, researchers explored the temporal stability of outcomes and found a predictive relationship for increased length of time with ACT and positive outcomes, such as reduced hospitalizations (Parker, 2004) and improved quality of life measures (Gold et al., 2012).

Client Satisfaction

The literature has demonstrated that client satisfaction is a growing area of interest for ACT stakeholders, service-providers, and researchers (Aagaard & Muller-Nielsen, 2011; Gerber & Prince, 1999; Ito et al., 2011; Kidd et al, 2011; Redko, Durbin, Wasylenski & Krupa, 2004; Stobbe, Mulder, Roosenschoon, Depla & Kroon, 2010). In her 2007 editorial, Killaspy reviewed the place and impact of ACT in psychiatry. Killaspy argued that while it is important to reduce the use of inpatient services, reduced inpatient service usage should not be the main measure of success for ACT. According to Killaspy (2007), as a shift towards service delivery models in the community continues, there must be greater consideration for outcomes such as client satisfaction. Other studies have found that individuals who received assertive community treatment report greater general satisfaction with their care than those who receive other brokered services (Barrett et al., 2010; Phillips et al., 2001). In fact, Bond et al. (2001) summarized the outcomes of 25

randomized controlled ACT studies and of those studies that measured client satisfaction, 88 percent of them found greater satisfaction among ACT clients versus the control group.

Measuring satisfaction. In their 2011 study, Aargaard and Muller-Nielsen administered the Client Satisfaction Questionnaire (CSQ) and found that satisfaction was significantly higher among ACT clients than among clients of standard healthcare services. Gerber and Prince (1999) used a mailed survey to measure client satisfaction with ACT. A detailed 35-item questionnaire was mailed to clients of the Brockville Psychiatric Hospital's assertive community rehabilitation program. The researchers found that while respondents were generally satisfied with service from the program, they were dissatisfied with side effects of medication and the amount of medication they were taking (Gerber & Prince, 1999). Their research highlighted areas of need that the team in Ontario could address. Redko, Durbin, Wasylenski and Krupa (2004) explored client satisfaction with ACT programs in Ontario using a general satisfaction questionnaire in addition to three open-ended questions. Redko et al. (2004) found that the majority of client dissatisfaction surrounded the inflexibility of the team to adjust its level of care for clients' perceived needs. In particular, the researchers found that many study participants wanted more social activities. In line with ACT-related research trends, Redko et al. (2004) were interested in painting a more accurate picture of client experience and satisfaction. Their research identified areas that could benefit from further program development. Since the ACT model increasingly represents a standard for treating individuals with serious mental illness in Newfoundland and Labrador, soliciting client opinions about the services this model provides is absolutely critical. Presently, provincial

healthcare policy in Newfoundland and Labrador stresses that clients and their families must be involved in their care and treatment decisions and given the opportunity to participate in planning and evaluation (Government of Newfoundland and Labrador, 2005).

ACT Model Fidelity

To ensure that teams have the best opportunity to realize desired outcomes, program implementation and operations must be standardized across sites. *Program fidelity* refers to "how closely a program adheres to the intended model, both including features that are critical to achieving the intended outcomes and excluding those that would interfere" (Bond, Drake, Mueser & Latimer, 2001, p. 148). The value of measuring program fidelity spans across clinical, research, and administrative purposes and rests on the relationship between high fidelity and desired outcomes (Monroe-DeVita, Teague & Moser, 2011). Understandably, mental health program planners are acutely focused on the need for program standards and ways to monitor how closely teams are adhering to proper implementation. All of this, of course, is based on the premise that better implemented ACT programs have better client outcomes (Winter & Calsyn, 2000). In their 2001 review, Bond et al. described an analysis of data from 34 study sites. From that analysis, the authors were able to report that a higher-fidelity ACT program reduced hospitalizations by 78 percent compared with standard aftercare (Bond et al., 2001). Monroe-DeVita, Morse and Bond (2012) reviewed ACT implementation and sustainability literature published between January 2000 and May 2011. From that review, Monroe-DeVita et al. (2012) concluded there was a scarcity of rigorous research

pertaining to implementation and quality control. The authors also concluded that while fidelity measures are especially useful, they are insufficient when used in isolation (Monroe-DeVita et al., 2012). Randall, Wakefield and Richards (2012) profiled ACT programs in Ontario, Canada by asking program coordinators to complete fidelity surveys. The authors found that only four percent of the ACT programs were fully compliant with more than 75 percent of the program standards. They then proceeded to discuss implications of lower fidelity, namely outcome realization. A number of studies have compared fidelity to ACT programming across sites and as possible explanations for different outcomes (Deuchar et al., 2008; Gold et al., 2012; Harvey et al., 2012). Harvey et al. (2012) investigated model fidelity to explain differences between outcomes in European and Australian ACT teams. Bond and Salyers (2004) compared ten newly formed ACT teams to test the hypothesis that fidelity to the ACT model would be positively correlated with improved client outcomes, as measured by reduction in psychiatric hospital use. Using the team as the unit of measure, the mean reduction in state hospital days for a 1-year period before and after ACT engagement was calculated. Although the authors were not able to report a significant predictive relationship, they did report significant reductions in psychiatric hospitalizations for all teams after ACT engagement. One possible explanation for this finding, as suggested by the authors, was that even the lowest-fidelity ACT programs in their study were substantially higher than typical intensive case management programs (Bond & Salyers, 2004). The discrepancies between predictive power of high-fidelity ACT programs and desired outcomes must be considered. As with any comprehensive review of a service, there are multiple ways to assess a program's fidelity and many variables to consider when predicting outcomes. It

is therefore extremely important to seek information from multiple sources when exploring the impact of ACT on outcomes.

Fidelity tools. The Dartmouth Assertive Community Treatment Scale (DACTS) has been the most widely used fidelity measure for ACT and has been deemed the standard fidelity measure for ACT (Bond et al., 2001). DACTS is a 28-item interviewer-administered scale that assesses a program's degree of fidelity to the ACT model along three dimensions: human resources, organizational boundaries, and nature of services. Each item is rated on a five-point behaviourally anchored scale representing the range from not implemented at all – equivalent to standard care – to fully implemented, and a separate qualitatively (e.g., description of the team's role in offering crisis services) or quantitatively (e.g., average number of minutes spent with a client in a given week) descriptive anchor specified for each point (Gold et al., 2012). It is appealing to administrators and program planners as a user-friendly tool for training and self-evaluation within programs. The DACTS is considered to have acceptable internal consistency and inter-rater reliability (Winter & Calsyn, 2000).

Many studies and teams have relied on the DACTS to measure program fidelity in the start-up phase and/or to compare programs over time and across sites (Carpenter et al., 2011; Deuchar et al., 2008; Fletcher et al., 2008; Gold et al., 2012; Harvey et al., 2012; Kortrijk et al., 2010; Salyers et al., 2010; Sono et al., 2012). Harvey et al. (2012) used the DACTS to compare four ACT teams in Melbourne, Australia. Their objective was to offer the first description of the "real-world implementation" (p. 653) of ACT teams in Australia, including team organization and service delivery, staff characteristics and experiences and client characteristics. Sono et al. (2012) used the DACTS to compare

ACT teams in China. Over a four-year period, Gold et al. (2012) used repeated DACTS assessment scores to examine the impact of a gradual reduction in staff-client contact duration and increase in staff-client contact frequency on clients' employment and hospitalization outcomes. According to Salyers et al., 2010, many U.S. state ACT teams are assessed regularly for fidelity to the ACT model using the DACTS. The *Ontario ACT Program Fidelity Tool* (Randall & Wakefield, 2005) is Ontario's own fidelity measure that is based on the DACTS (Randall, Wakefield & Richards, 2012). The tool has 33 program standards, including the 28 DACTS items. Beyond critical program elements listed in the DACTS, the checklist also requires that provincial ACT teams have performance and evaluation plans that included: criteria and methods for assessing client outcomes, client/family satisfaction, and fidelity to the ACT model. The authors used the fidelity tool to survey program managers across ACT teams in Ontario (Randall, Wakefield & Richards, 2012).

Despite its widespread dissemination, some researchers have criticized the DACTS for having limited reliability and capacity to discriminate between different types of programs (Bond et al., 2001) and for emphasizing structure over process (Monroe-DeVita et al., 2011). In 2011, Monroe-DeVita et al. proposed the Tool for Measurement of Assertive Community Treatment (TMACT) as a more process-related measure of ACT fidelity. According to its developers, the goal of the TMACT was to create more explicit instructions to minimize rater subjectivity. The 47-items are distributed amongst six subscales: Operations and Structure, Core Team, Specialist Team, Core Practices, Evidence-Based Practices, and Person-Centred Planning and Practices. TMACT developers argued that their tool was more sensitive to subtle differences between teams

and was able to distinguish ACT programs at different levels of functioning and quality (Monroe-DeVita et al., 2011). In 2011 the TMACT had been piloted in five U.S. states, Japan, and Norway. The TMACT has been applauded for its efforts to improve items that were unclear on the DACTS and for its attempt to include additional elements and practices to improve outcomes for ACT clients. However, the TMACT has also been met with criticism for relying too heavily on expert opinion and having insufficient empirical evidence for many of its proposed additional elements (McGrew, 2011). At the time of this current thesis study, it appeared that the DACTS was still the choice assessment tool for ACT (Harvey, Killaspy, Martino & Johnson, 2012). The substantial focus on model fidelity in ACT literature highlights the importance of appropriately implementing and maintaining this evidence-based practice. It is reasonable to expect that as instruments measuring model fidelity improve, the standards for which we hold ACT teams will be heightened. As research linking higher fidelity with desired outcomes continues to grow, it is equally important for program evaluation studies to explore the fidelity of ACT teams, especially newer teams - like those in Newfoundland and Labrador.

The Present Study

The presence and effectiveness of ACT is well established across Canada and internationally (Deuchar et al., 2008). An evidence-based practice, ACT is considered the standard in care for persons with persistent mental illness who do not readily adhere to community-based treatment (Kortrijk et al., 2010). Established as an evidence-based practice, greater fidelity to the ACT model for service provision is associated with improved outcomes (Monroe-DeVita et al., 2001). While ACT has been associated with

multiple positive outcomes, it is consistently linked to outcomes related to reduced psychiatric hospitalization and improved client engagement and satisfaction with treatment (Bond et al., 2001).

While ACT has been active in areas of the province of Newfoundland and Labrador since 2008, it has yet to be a focus of empirical research. Since the DACTS is considered the standard for ACT fidelity and was the choice assessment tool of the Central Health ACT team, this study will remain constant to that choice. This study will make reference to the original DACTS assessment and engage in discussions with the team to help inform a detailed description of the ACT service in central Newfoundland and Labrador. Given that reliance on acute psychiatric services and client satisfaction are substantiated outcomes related to ACT and of particular interest to Central Health's ACT team, this study will explore them as well.

As demonstrated in this literature review, there is substantial research to support and encourage the use of ACT with individuals with persistent and severe mental illness. As an evidence-based practice there is also heightened attention given to standard implementation of the model. Chapter three will provide a detailed description of the methods used in this current study to collect information about the operation and structure of the ACT team in central Newfoundland and Labrador. It will explain how study participants were recruited and the procedures undertaken for data collection and analyses.

Chapter 3

Methodology

As detailed in chapter one, the objectives of this study were to develop an updated description of ACT service delivery in Central Newfoundland and a comprehensive aggregated description of the service users. With that in mind, the methodology incorporated both qualitative and quantitative methods. Observational shadowing of ACT team members along with informal interviews and discussions with the ACT team were facilitated through a qualitative lens. Client demographics, characteristics, and satisfaction with services were collected for quantitative analysis. Given the nature of the research questions as well as the small size of the population and study sample, an exploratory/descriptive approach to the research was utilized.

Setting

Data collection took place in Grand Falls-Windsor, Newfoundland and Labrador over the course of three weeks in the winter of 2013. The study received provincial Health Research Ethics Approval and approval from Central Health, the regional health authority in Central Newfoundland. Informed consent was obtained from all participants.

Sample

Purposeful sampling (Creswell, 2007) was used to identify Central Health's ACT team clients as potential participants for this study. Of the 43 active clients that comprised

Central Health's ACT team caseload[2], two individuals were not able to participate because they were out of town at the time of data collection. Upon recommendation from the ACT team, two more individuals were not approached for the study because of concerns for the severity of their illness at the time of data collection. Of the remaining 39 clients, 29 agreed to participate in this study (74 percent participation rate). The age range for this sample was 20 to 66 years of age with a mean age of 41 ±12.05 years. Twenty-three males and six females consented to participate in this study. Importantly, over 75 percent of the overall ACT client population in Central Health is male. Participants were offered no incentives for their participation.

Procedures and Measures

Comprehensive description of ACT. In order to describe the ACT team and its work, the primary researcher reviewed a 2011 DACTS report, completed by Barrett and Parsons (2011) (see Teague, Bond & Drake (1998) for DACTS protocol). Studies have suggested that the DACTS has adequate internal consistency (Winter & Calsyn, 2000), acceptable to excellent inter-rater reliability (Bond & Salyers, 2004), and sensitivity to change over time (Bond & Salyers, 2004; Stobbe et al., 2010). Furthermore, the DACTS was previously selected as the choice assessment tool for ACT teams in Newfoundland and Labrador and this study will remain consistent with that selection. The DACTS has, however, been criticized by some as being too focused on structural and organizational components of the program model, to the exclusion of clinical elements (Bond & Salyers,

[2] As of February 2013, Central Health's ACT team had a caseload of 46 and counting. However, at the time of data collection there were two clients who had very recently joined the service and another handful of referrals that were under review by the team to consider appropriateness of fit for the service.

2004). It is therefore important to further explore clinical elements specific to Central Health's ACT team. Based on this information the primary researcher engaged in an informal and brief conversation with the program manager and ACT team members to verify and learn about any changes that have occurred with the program since the recent completion of the evaluation. This was mainly for the purpose of understanding and providing context to more fully situate the results of the current study.

Immersion. The nature of the ACT service makes for an unpredictable workday. This irregularity directly affected how the primary researcher approached and completed data collection. Although data collection spanned three weeks, the number of meetings with potential participants varied considerably from day to day. Fortunately, the procedure for this study included having the primary researcher share the ACT team's office space. Practically, this arrangement made sense as there was access to online client health records and paper client files were stored onsite. Additionally, when meetings were arranged with potential participants, the primary researcher would accompany an ACT team member to the location, either in the researcher's own car or by riding with the team member. Opportunistically, this arrangement allowed for a genuine immersion experience. For three weeks the primary researcher worked side by side with the ACT team, observing and shadowing them through their daily routine. Usually the primary researcher would arrive at the office after the team's morning meeting. The team leader would have drafted for the team members a list of possible client meetings for the upcoming day. The primary researcher would then spend the workday in the office, amongst the team. If meetings with potential participants were scheduled in the evenings, or on weekends, and the primary researcher was not in the office at that time, a team

member would contact the primary researcher on the phone with the address and a meeting at the specified location would be arranged.

Informed consent. A script for first contact (see Appendix A) was distributed to the ACT team to facilitate a conversation about this study and to obtain verbal consent for the primary researcher to meet with a client. This initial conversation between ACT team and ACT clients occurred either on the phone or in person. Once a client agreed to meet with the researcher and learn more about the study, the primary researcher accompanied an ACT team member on a regularly scheduled visit with that client. Given the nature of the ACT program, as an intensive community-based intervention, the setting for this meeting varied and was dependent on the treatment plan unique to each client. As a result, meetings took place in the community - at coffee shops and participants' homes - or at the ACT team's office. Meetings occurred at different times throughout the day, including evenings and weekends. Once an ACT team member introduced the primary researcher to the client, that ACT team member waited either outside or in another room for the meeting to finish. The primary researcher provided the client with a consent form (see Appendix B) and verbally conveyed the information found on the consent form. Participants were informed that the study would involve having the primary researcher review their medical records for specific information that was listed on the consent form. Additionally, they were asked to complete an anonymous questionnaire about their satisfaction with ACT service delivery. Participants were informed that their participation was completely voluntary, all information that they provided would be confidential, and that their names would not appear on the questionnaires or in the study. Participants were then notified that they would have three days to withdraw their consent for the study.

Participants were told that once data was collected from their file, it would be transcribed without identifiers and as a result it would be impossible to link data back to individual participants. The primary researcher answered any questions or concerns before the consent form was signed and the questionnaire distributed. At this point, if an ACT client decided he or she was not interested in participating - something that occurred three times - they were thanked for their time and a copy of the consent form, with the primary researcher's contact information, was left in their possession. Once consent forms were signed, participants were given their own copy of the consent form for reference. To ensure confidentiality, the signed consent form was placed in an envelope and sealed before distribution of the questionnaire. Participants were reminded that their responses were anonymous and that the ACT team would have no way of knowing whether or not they had agreed to participate. The entire process (debriefing, consent, and questionnaire) took approximately 10-20 minutes, per participant. All participants were thanked for their time and participation and reminded that the primary researcher's contact information was listed on their copy of the informed consent.

Demographic and clinical variables. A chart audit (see Appendix C) was used to collect demographic information and clinical variables. Chart audits were completed by hand for each participant and then the data was transcribed electronically for later data analysis. Demographic information consisted of variables that were social descriptors of participants. These included participant age, sex, marital status, educational level, and income. Clinical variables described a participant's health situation. Clinical variables included length of time with ACT, psychiatric diagnosis, physical health issues, global assessment of functioning (GAF) scores, alcohol and drug use, lifetime number of days

admitted to a psychiatric hospital and lifetime number of visits to emergency rooms (ER). Demographic information and clinical variables, with the exception of psychiatric admission and ER visit histories, were collected from individual health records stored in paper files at Central Health's ACT team office. Psychiatric hospitalization and ER visit histories were collected through access to MediTech - the interactive interface used by Central Health to store patient records. A total number (in days) of psychiatric hospitalizations and total number of visits to ERs, for each participant over his or her lifetime, were collected. Additionally, each participant's psychiatric admission and ER visit history was examined during two periods of time: pre-ACT engagement and post-ACT engagement. These periods of time were determined on an individual basis given the length of time (in months) each participant had been engaged with ACT services. For example, if at the time of chart review a participant had been with ACT for 12 months (post-ACT engagement time), then that participant's pre-ACT engagement time was also 12 months. If a participant had been with ACT for 40 months his or her pre- and post-ACT engagement times were 40 months.

Client satisfaction. Client satisfaction was measured using the "Community Mental Health Evaluation Initiative (CMHEI) satisfaction with program" scale (see Redko et al., 2004 for measure). Developed by Redko et al. (2004), the questionnaire includes seven global items measuring satisfaction rated on a four-point Likert Scale. Some questions include asking clients how relevant they feel the program is to their needs, how well they feel their needs are being met, and whether they would recommend the program to others needing help. The only change made to the original CMHEI scale was to make it anonymous. The scale is based on items adapted from the Client

Satisfaction Questionnaire (Attkinson & Greenfield, 1995) – a reliable and familiar instrument in the client satisfaction literature (Aargard & Muller-Nielsen, 2011; Ito et al., 2011; Redko et al, 2004) – and instruments used on the Ohio Longitudinal Consumer Outcomes Study (Roth, Snapp, Lauber & Clark, 1998). Internal consistency for the 'CMHEI satisfaction with program scale' is acceptable with a Cronbach's alpha of .85 (Redko et al., 2004). In addition to the aforementioned justification, this instrument was selected because it is user-friendly, concise, and tailored specifically for ACT program evaluation. In addition to Likert-rated questions, the questionnaire contained three open-ended questions. They are: What have you *liked best* about your experience with this program? What have you *liked least* about your experience with this program? If you could *change anything* about this program what would it be?

Data Analysis

Document revision and researcher immersion. For each behaviourally-rated item on the DACTS fidelity report, the primary researcher included: a brief description of the item; Central Health's adherence to that item, as reported in the DACTS report; any changes or modifications in implementation since the report, as reported by the ACT team; and, when appropriate, a description, as reported by ACT members, of the team's efforts to address the DACTS reviewer recommendations.

Spending time and talking with the ACT team as well as reading available documents related to ACT Teams - informed an extended review of the ACT service provision. This extended review, beyond the quantifiable items accounted for on the DACTS, seemed appropriate to better and more fully describe the ACT service delivery

in central Newfoundland and Labrador. It seemed to be an appropriate way to amalgamate multiple data sources: It captures the complexity of many variables and factors; it is quite respectful of the team (not minimizing or trying to reduce the experience into something else); and it may be of use to the team for things like program evaluation, community outreach/awareness, and interest from key stakeholders.

Demographic and clinical variables. Measures of central tendency and dispersion were explored to describe study variables. Given the non-normative distribution of the sample, non-parametric statistics (Wilcoxon signed rank test) were used to examine outcome variables related to psychiatric admission- and ER visit-histories. Small sample size, however, meant that quantitative analyses were insufficient. Given this study's focus on profiling ACT team clients, especially in relation to client utilization of hospital services, the author opted to categorize participants into three descriptive groups based on outcome variables: those that reduced their reliance on acute psychiatric services; those that maintained (had no admissions or ER visits pre- or post-ACT engagement); and those that increased their reliance on acute psychiatric services. This was done so that readers could better understand the range of participants and resultant service provisions required to service these individuals. Demographic and clinical variables for these three groups were explored along with measures of central tendency and dispersion.

Client satisfaction. Individual and group mean scores for the seven Likert-rated client satisfaction questions were computed. On a 4-point Likert scale, higher scores indicated a higher degree of satisfaction with the program. As part of a preliminary exploratory analysis, the primary researcher read the transcribed participant responses to

open-ended questions multiple times (Creswell, 2007). Individual responses were coded to help make sense of the data and to identify specific thematic areas (Redko et al., 2004). *Codes* were often taken directly from participant responses, but at times were offered by the primary researcher (Creswell, 2007). Responses were reread and codes further reduced to minimize overlap and redundancy (Creswell, 2007). These codes were then collapsed into nine *themes* or final *categories* for analysis. Once the analysis was completed by hand, participant responses, along with their respective codes and themes, were copied into an electronic table. This allowed for faster searches through the data set with the 'Control Find' tool in Microsoft word.

Conclusion

The current study utilized both qualitative and quantitative lenses to address the process-related and exploratory descriptive nature of the study objectives. As seen, through surveys, chart reviews, and informal interviewing, the researchers have collected critical data exploring ACT services in central Newfoundland and Labrador. The Results section of this study is formatted into two chapters: one that addresses the process-related objective of describing Central Health's ACT team, and the second which presents findings related to the team's clients, including their characteristics and satisfaction with the service delivery.

Chapter 4

Results Part One: Describing Central Health's ACT Team

In the 17 months since their DACTS assessment was completed, the Central Health ACT team has undergone staff changes, made modifications to procedures, and followed through on several recommendations made by the assessment advisers to improve their model fidelity. The purpose of this chapter is to build a comprehensive description of the ACT service delivery in Grand Falls-Windsor. To accomplish this objective, this chapter is divided into two sections. The first describes Central Health's ACT team according to the items outlined in the DACTS fidelity assessment. The primary researcher was informed of changes as well as recommendations addressed by the team based on a conversation with the ACT team manager that reviewed their 2011 fidelity assessment. The primary researcher was further informed by informal conversations with ACT team members, as well as through observations of the team. The latter part of this chapter describes Central Health's ACT team based on the immersion experience of the primary researcher during data collection in Grand Falls-Windsor. It is hoped that collectively these sections will create a picture of the ACT service delivery and demonstrate how this evidence-based model operates in Central Newfoundland.

Comparing Central Health's ACT Team to the Model

The degree of a team's fidelity to the ACT model is measured by the DACTS along three dimensions: human resources (HR), organizational boundaries (OB), and nature of services (NS) (Deuchar et al., 2008). Within those dimensions are specific items

that are scored on a 5-point behaviourally anchored scale, ranging from 1 = not implemented to 5 = fully implemented (see Table 4.1). HR refers to client/clinician ratio, the number of various professional team member staff, the clinical role of the team leader and specialist roles. OB refers to the ability of the ACT team to deal with crises, take full responsibility of all the treatment needs of their clientele, tendency to initiate hospital admissions and intake and discharge rates. NS includes data such as frequency of contact, ability of the team to manage concurrent disorders and inclusion of clientele in case management (Deuchar et al., 2008).

Table 4.1.

DACTS Subscales and items		
Human resources	Organizational boundaries	Nature of services
Small caseload Team approach Program meeting Practicing team leader Continuity of staffing Staff capacity Psychiatrist on staff Nurse on staff Substance abuse specialist on staff Vocational specialist on staff Sufficient staffing	Explicit admission criteria Intake rate Full responsibility for treatment services Responsibility for crisis services Responsibility for Hospital Discharge Time-Unlimited Services	In-vivo services No drop-out policy Assertive engagement mechanisms Intensity of service Frequency of contact Work with support system Individualized substance abuse treatment Dual disorder treatment groups Dual disorders (DD) model Role of clients on treatment team

Prior research suggests that a score of 4 or higher as an overall mean is found in well-established ACT programs (Deuchar et al., 2008). On their original fidelity assessment, the Central Health ACT team achieved 4 or 5 on all items except for: Psychiatrist on staff; Responsibility for crisis services; Dual disorder treatment groups; and Dual disorders

(DD) model. This means that at the time of the DACTS report, aside from the aforementioned items, the Central Health ACT team was either fully or nearly fully implementing all required components of a very well established ACT program. For a detailed definition and rationalization of each item, the reader is encouraged to review the DACTS (see Teague, Bond & Drake (1999) for a DACTS protocol).

Human resources

Small caseload. An appropriate caseload for an ACT team is 10:1 client/team member ratio (Teague, Bond & Drake, 1998). At the time of data collection, the ACT team had eight clinical staff and therefore a maximum capacity of 80 clients (ACT Manager, personal communication, January 2013). They are well within their caseload capacity with 46 clients.

Team approach. ACT team members know and work closely with all clients (Teague, Bond & Drake, 1998). Observations from the DACTS confirmed that 100 percent of Central Health's ACT team clients had face-to-face contact with more than one different team member in a two week period (Barrett & Parsons, 2011). The team confirmed this approach to service delivery (ACT Team, personal communication, January 2013).

Program meeting. ACT teams meet frequently to plan and review services for each client (Teague, Bond & Drake, 1998). Central Health's ACT team has continued to hold team meetings every morning, Monday through Friday, with all members scheduled to work in attendance. Each client is discussed and daily workload assignments are distributed amongst team members (ACT Team, personal communication, January 2013).

Practicing ACT team leader. The supervisor (team leader) of frontline ACT team members also provides direct services (Teague, Bond & Drake, 1998). As he did at the time of the DACTS report (Barrett & Parsons, 2011), Central Health's ACT team leader provides direct services to clients (Team Manager, personal communication, January 2013). A recommendation from the DACTS report was for the team to explore options to free up more of the team leader and nurses' time with medication preparation (Barrett & Parsons, 2011). This has been temporarily addressed with the recent hiring of an LPN who helps with medication preparation (ACT Manager, personal communication, January 2013).

Continuity of staffing. The program maintains the same staffing over time (Teague, Bond & Drake, 1998). Staffing had remained quite stable with 87.5% of staff consistency prior to the DACTS report (Barrett & Parsons, 2011). In the last 17 months, however, the team has had an estimated 40-59% turnover (ACT Manager, personal communication, January 2013). This inconsistency with staffing would reduce their initial high rating on this item.

Staff capacity. The program operates at full staffing (Teague, Bond & Drake, 1998). As was the case at the time of the DACTS assessment, there were no vacancies in staffing at the time of this study (ACT Manager, personal communication, January 2013).

Psychiatrist on staff. For 100 clients, at least 1 full-time psychiatrist is assigned to work with the ACT program (Teague, Bond & Drake, 1998). At the time of the fidelity assessment, the team had very recently recruited a psychiatrist to their program who was working with two ACT clients, resultantly the team was scored as 'not implemented' on that item (Barrett & Parsons, 2011). Since that time, their psychiatrist's caseload has

grown to include sixteen ACT clients (ACT team, personal communication, January 2013).

Nurse; substance abuse; and vocational specialist on staff. The model requires two full-time nurses, two substance abuse specialists and two vocational specialists for a 100-client program (Teague, Bond & Drake, 1998). At the time of data collection, the team was sufficiently staffed with the required specialists (ACT Manager, personal communication, January 2013). Additionally, different team members were being cross-trained to accommodate their growing caseload (ACT team, personal communication, January 2013).

Sufficient staffing. The program is of sufficient size to consistently provide necessary staffing diversity and coverage (Teague, Bond & Drake, 1998). The team was considered very well staffed at the time of the DACTS report (Barrett & Parsons, 2011). At the time of data collection in this study, the team was still very well staffed with eight full-time clinical staff. The team was led by a registered nurse and included another registered nurse, a licensed practical nurse (LPN), a master's-level social worker, an occupational therapist, an addictions counsellor, a bachelor's-level social worker, a mental health worker, a part-time psychiatrist, and an administrative assistant. Within the last 17 months, the team's peer support specialist position became vacant. The team decided to fill the position with an LPN. This temporary staffing decision was rationalized given the significant amount of time required to train a new peer specialist (ACT Manager, personal communication, January 2013). Although not in adherence to the model, the practical benefit of having another nurse on staff was to offer relief, albeit

temporary, for the team's two RN's who spend a considerable amount of time preparing client medications (ACT Manager, personal communication, January 2013).

Organizational boundaries

Explicit admission criteria. The program has a clearly identified mission to serve a particular population; it uses measurable and operationally defined criteria to screen out inappropriate referrals (Teague, Bond & Drake, 1998). As was the case at the time of the DACTS review (Barrett & Parsons, 2011), the team had clearly defined admission criteria for selecting clients in the greatest need of ACT services (ACT Team, personal communication, January 2013). ACT services are intended for clients with severe and persistent mental illness that seriously impair functioning in the community. Admission criteria are targeted toward clients who typically do not benefit from usual services. Although often dually diagnosed, the ACT program is not intended for primary substance abuse diagnoses (ACT team, personal communication, January 2013).

Intake rate. The program takes clients in at a low rate to maintain a stable service environment (Teague, Bond & Drake, 1998). Central Health's ACT team has an open referral system accepting referrals from clients, family, and other health care professionals. Once a referral is received an intake is completed within a set time frame and ACT appropriateness is determined. If ACT is not the appropriate service the client will be connected with another appropriate service (ACT Manager, personal communication, January 2013). The team has admitted 14 new clients since their DACTS assessment with an intake rate of no greater than six clients/month (ACT Team, personal communication, January 2013).

Responsibility for treatment, crisis services, hospital admission and discharge. The ACT team directly provides psychiatric services and medication management, counselling/psychotherapy, housing support, substance abuse treatment, and employment/rehabilitative services. The model also requires a 24-hour responsibility to cover psychiatric crises and that the team is closely involved in hospital admissions and discharge plans (Teague, Bond & Drake, 1998). According to the DACTS report the team was responsible for all treatment areas other than psychiatry and medication prescription. While they were very much involved in psychiatric admissions and preparing for discharges, the team had no 24-hour responsibility for psychiatric crises (Barrett & Parsons, 2011). At the time of this data collection, the team had increased their responsibility for comprehensive treatment with the increase in their psychiatrist's caseload. They were still extremely involved in all periods of psychiatric hospitalizations but responsibility for crisis after their working hours was still lacking (ACT Team, personal communication, January 2013). Although the team works extended hours, including evenings and on weekends, their funding does not allow for 24-hour crisis support (Team Manager, personal communication, January 2013).

Time-unlimited services. The ACT program does not adhere to arbitrary timelines. The team therefore remains the point of contact for all clients admitted to the program indefinitely as needed (Teague, Bond & Drake, 1998). According to the DACTS report, Central Health's ACT team had not graduated any clients (Barrett & Parsons, 2011). This was still the case at the time of this study's data collection (ACT Manager, personal communication, January 2013).

Nature of services

Community-based services. As opposed to an office-based program, ACT programs complete their work in the community; help clients develop their skills in the community (Teague, Bond & Drake, 1998). The DACTS report found that the team was fully implementing this item (Barrett & Parsons, 2011). They have continued to do so (ACT Team, personal communication, January 2013).

No drop out. The program engages and retains clients at a mutually satisfactory level (Teague, Bond & Drake, 1998). The team had maintained their caseload at the time of the DACTS report (Parsons & Barrett, 2011) and has continued to do so since. Any clients, who are no longer affiliated with the program, because they had moved out of the program's catchment area, were transferred to another service with a referral (ACT Team, personal communication, January 2013).

Assertive engagement mechanisms. ACT programs use street outreach, legal mechanisms or other techniques to ensure ongoing engagement with their clients (Teague, Bond & Drake, 1998). At the time of the DACTS assessment, the team was actively using assertive engagement mechanisms (Parsons & Barrett, 2011). These efforts were ongoing at the time of this study (ACT Team, personal communication, January 2013).

Intensity and frequency of services. Given the nature of the service as both community-based and assertive, clients receive a high-amount of face-to-face service time and contact, as needed (Teague, Bond & Drake, 1998). Using a chart audit, the DACTS assessors deemed that this item was fully implemented by Central Health's ACT team (Barrett & Parsons, 2011). The manager and team noted that this has been

consistently applied since the fidelity assessment (ACT Manager and Team, personal communication, January 2013).

Work with informal support systems. The ACT program provides support and skills for clients' informal support network (i.e., people not paid to support client, such as family, landlord, employers, or other key person) (Teague, Bond & Drake, 1998). DACTS reviewers surmised that the team was working diligently to involve informal support networks of clients (Barrett & Parsons, 2011). At the time of this review, this was reported to still be the case (ACT Team, personal communication, January 2013).

Individualized substance abuse treatment. One or more members of the team provide direct treatment and substance abuse treatment for clients with substance-use disorders (Teague, Bond & Drake, 1998). The team's substance abuse specialist was working directly with concurrent clients at the time of the DACTS review (Barrett & Parsons, 2011) and this was the case during this current study (ACT Team, personal communication, January 2013).

Dual disorder treatment groups. The program uses group modalities as a treatment strategy for people with substance-use disorders (Teague, Bond & Drake, 1998). At the time of the DACTS review, the team was not implementing any groups. Although they reported using groups in the past, at the time of the DACTS review, the team was not implementing any groups (Barrett & Parsons, 2011). At the time of data collection the team was still not utilizing a group modality, although they were in planning stages for both a wellness group and a substance abuse group for those with concurrent substance abuse diagnoses (ACT Team, personal communication, January 2013)

Dual disorder (DD) model. The program uses a non-confrontational, stage-wise treatment model, follows behavioural principles, considers interactions between mental illness and substance abuse, and has gradual expectations of abstinence (Teague, Bond & Drake, 1998). The team scored a partial implementation score for this item and was deemed to be using a mixed model approach (Barrett & Parsons, 2011). This practice was consistent at the time of data collection for this study (ACT Team, personal communication, January 2013).

Role of clients on team. Clients are members of the team who provide direct services (Teague, Bond & Drake, 1998). At the time of the DACTS review, the team had a client working full time in case management with reduced responsibilities (Barrett & Parsons, 2011). As aforementioned, at the time of this review, this position was vacant and a temporary LPN was working with the team (ACT Manager and Team, personal communication, January 2013).

Opportunities for improved model fidelity. A recurrent theme amongst the recommendations made by the DACTS assessors was encouraging the team to adopt assertive outreach mechanisms to improve community awareness about its service. Since that assessment, the team's caseload has grown by 43% and referrals arrive regularly for the service. The team has met with community organizations, leaders, and other healthcare providers to spread the word about ACT for individuals with SMI who do not adhere to regular community services (ACT Team, personal communication, January 2013). In fact, the team has received referrals from local law enforcement, the RCMP, and some clients' parole stipulates admission to the ACT program (ACT Team, personal

communication, January 2013). Remaining recommendations from the DACTS report were directly related to items on the assessment, for which the team scored below a 4.

Psychiatry. The ACT service delivery model rationalizes a staff psychiatrist working with all ACT clients (Teague, Bond & Drake, 1998). As a result, the recommendation from the DACTS assessors was to transition all clients to the team's newly recruited psychiatrist (Barrett & Parsons, 2011). As the team manager explained, theoretically this component of the program makes sense – having one psychiatrist for all clients would undoubtedly improve medication monitoring and communication between service providers and the client. In practice, however, she explained that given the SMI of their clients, most are already connected with psychiatry in the community prior to the team's involvement. If that relationship is considered by the client to be therapeutically beneficial, then severing that relationship may be problematic. Furthermore, she explained that the team must be mindful and careful to maintain positive professional relationships with psychiatry in their catchment area (ACT Manager, personal communication, January 2013). As one team member articulated, the issue with transferring a client that is already connected with psychiatry boils down to client choice and empowerment. If a client is content with their psychiatrist then the team should foster and encourage that helping relationship. The manager and team members did, however, concur that a longer-term plan would have ACT psychiatry following all clients. Furthermore, if a client is not connected with psychiatry prior to ACT entry or is not satisfied with their current psychiatrist, then the ACT psychiatrist would follow that client (ACT Team and Manager, personal communications, January 2013).

Psychiatric crisis responsibility. An immediate response can help minimize distress when clients are faced with psychiatric crisis. When the ACT team provides crisis intervention, continuity of care is maintained (Teague, Bond & Drake, 1998). The DACTS assessors encouraged the team to advocate for the resources necessary to implement 24/7 on call crisis response (Barrett & Parsons, 2011). Unfortunately, the team's funding and resource situation had not changed and therefore the team was still not able to offer 24/7 on call crisis management (ACT Manager, personal communication, January 2013). The team does however work extended hours, 8am-10pm on weekdays and from 12pm-10pm on weekends (ACT Team, personal communication, January 2013).

Dual disorders treatment groups and model. Group work has been shown to positively influence recovery for clients with dual disorders (Teague, Bond & Drake, 1998). It is a component of the co-occurring disorders model, which addresses issues of both SMI and substance abuse for greatest opportunity for recovery and symptom management (Teague, Bond & Drake, 1998). Since the team was not utilizing group modalities, DACTS assessors recommended exploring group work with their clients (Barrett & Parsons, 2011). The team explained that they had used groups in the past and found them to be very effective. They agreed that there was an urgency to provide group work, as there were no other therapeutic groups being offered in their catchment area. They were in the planning stages for both a wellness and concurrent substance abuse treatment group in the near future (ACT Team, personal communications, January 2013).

Building on the DACTS Assessment Through Researcher Immersion

An immersive experience affords the immersed an opportunity to further explore and more aptly understand items that are described on paper and rated, for example, on a model's fidelity checklist. There are components of the ACT program - and efforts made by the ACT team to provide superior healthcare services to their clients - that cannot and perhaps should not be articulated in an itemized report. In addition to the previous section, the following observations may help the reader understand the breadth and depth of the ACT service delivery, as it operates in Central Newfoundland and Labrador.

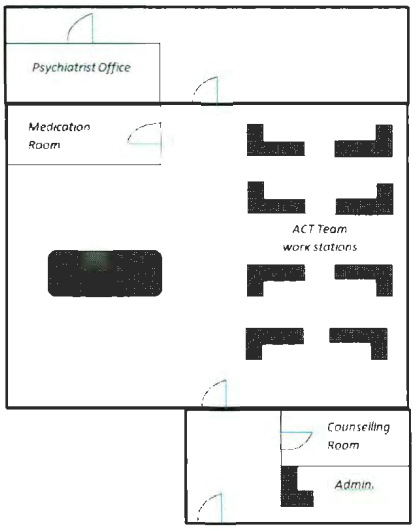
The word *multidisciplinary* delineates amalgamating expertise from different areas. While the notion of being the primary provider of *all services* – including but not limited to psychiatric services, counselling services, substance abuse treatment, and assistance with housing and income concerns - might seem straightforward, it is not. The reader is encouraged to consider: Services are expected to happen in the community - at the client's home, the grocery store, or at the income supports office; Any one of the eight clinical staff can, and is, expected to work with any client at any time; Clients have SMI and often suffer from concurrent diagnoses or other health concerns, have often exhausted other informal supports, do not adhere to regular community-based health services, and often live in poverty. The result is an exceptionally complex and ever-changing service delivery that is unique and tailored specifically for each client on the team's caseload. In an attempt to accommodate the varied needs of different clients, the team is equipped with different professionals with varied backgrounds and areas of expertise who cross-

train each other and work collaboratively to provide individualized treatment that is adherent to best practices of ACT program delivery.

For Central Health's ACT team to operate effectively it relies on, among other things, a suitable workspace that facilitates effective communication and collaboration. The ACT office is an open-concept office space within Central Health's Community Health Building (see Figure 4.1). The space is highly conducive to a team based approach. Team meetings take place at the start of each weekday at the boardroom table. There the team reviews each client on the caseload, discusses any concerns or crisis from the previous day and assigns duties for the upcoming day.

Figure 4.1.

Central Health ACT Team Office Space



Team members share a workspace, which encourages regular collaboration and communication. Questions are often asked impromptu and out loud. They are responded to just as quickly by the people or person best suited to answer. When a clinician has a question with regards to service delivery - perhaps income supports or employment – the

clinician does not have to wait to schedule a meeting with an employment coordinator. Instead, that clinician can look up from his or her desk and directly ask a colleague most familiar with employment or income supports for guidance or input. The team psychiatrist, although part-time, has his office directly next door to the ACT team. He is extremely accessible for consultation and attends morning meetings, as needed. The office space is also equipped with a counselling room. Although most services occur in the community, ACT psychiatry sees clients in this room. Furthermore, team members use the space with clients when a safe, structured space is deemed appropriate. Administration is located at the front of the office space. Although there is a wall and door separating administration from the rest of the team, that door is rarely kept shut and there is constant traffic in and out. While not considered clinical, the ACT team's administrative support is the first point of contact when clients or collateral service providers call or arrive at the office. Administration has developed an impressive rapport with all clients and her role as a team member is integral.

Beyond the physical space that facilitates it, effective communication is indisputably vital to the success of this team. To provide consistent quality care there has to be regular communication. To ensure accurate and timely communication and share client information, team members electronically document all client contact, both direct and indirect. Every morning the team reviews notes and discusses each client before assigning daily caseloads to individual team members. However, to improve its availability for clients, the team works staggered hours. While some team members are at work for the morning meeting, others arrive in the afternoon and work until ten pm. The opportunities for poor communication abound and yet the ACT team operates incredibly

efficiently. This is a direct result of the effort being made by each team member to document, in a very timely manner, important details with regards to client contact and treatment plan. These efforts ensure that the daily transition from one team member's caseload to another is as seamless and efficient as possible.

Offering an invasive and assertive service is demanding on the clinicians and clients. ACT clinicians are intricately involved in the details of their client's lives. They do not see their clients in their office weekly or biweekly. Instead, they visit with that person in their home, at a coffee shop or a community centre. There could be any number of distractions or barriers that come up while they are in the community. If someone, a significant other or family member, is present at the time of the visit, they may participate in the session or not. Although a visit was scheduled or a specialized appointment was made, the client may be unreachable or difficult to locate. If a client has another pressing issue that they feel needs to be addressed, the nature of the visit can and most often will change in an instant. As a result, there is very little predictability and even less opportunity to prepare for what team members may encounter in the community with their clients. With contacts and visits ranging from multiple times per week to multiple times per day, there is also a much greater risk for clinician burnout. That is why the team approach, with no assigned caseloads, is adopted and considered effective. Team members take turns working with different clients so that a clinician is not forced to carry an extremely heavy caseload alone. Having a group caseload can also improve continuity of client care: If a clinician goes on vacation or leaves the team, a client is not left feeling abandoned or without adequate support. Furthermore, given the frequency of contact,

having experiences and interactions with different - but familiar - people is often welcomed by clients and can be seen as opportunity for improved social engagement.

The ACT team provides highly individualized services; the content, amount, timing of which vary across individual clients. While some individuals are seen daily, others are once or twice per week. Clients may talk on the phone with the ACT team multiple times per week or several times on any given day. Some visits are to supervise medication adherence or to administer medication or needles. Other visits are considered more therapeutic and in adherence with an individual treatment plan. With help from the ACT team, clients generate a list of short- and long-term goals. The steps to attain those goals are expected to be observable and quantifiable so that clients and the team can track and see progress. Goals range from improved physical or mental health, employment, education, substance use, interpersonal relationships, and community tenure. These treatment plans are signed by team members and client and kept on the client's file for easy reference. On average, treatment plans are updated every six months. As the team explained, updating treatment plans are an opportunity to sit down with clients and re-evaluate current goals and possibly set new goals. The team supports clients in goal attainment and also in maintaining the goal once achieved. This support can be as comprehensive as to include members of the team accompanying a client to a community function or similar event, if this was the client's goal. To improve community support and tenure the team initiated a community café. The social group meets weekly at the local community centre, is open to the public, and is now completely peer-driven.

Unique aspects of Central Health's ACT team. Central Newfoundland does not have public transportation. Although the team encourages its clients to arrange their way

to non-therapeutic appointments, for a number of reasons that is not always practical. When they have an appointment or need a ride somewhere, clients often rely on the ACT team for transportation; this is especially the case in the winter months. Central Health's ACT team's catchment area covers a vast geographic region, including multiple communities within central Newfoundland and Labrador. A large portion of the team's clientele lives outside the central community, where all services are located. The team therefore has to travel thirty to forty minutes to reach some clients and those clients have to travel the same distances to attend all appointments and avail of specialized services. While other programs across the country can encourage their clients to use public transportation, Central Health's team cannot. With consideration for frigid Newfoundland winters and the island's unpredictable weather year round, it is often not realistic to expect a client to walk where they need to go. Instead, a large portion of the team's time becomes dedicated to transporting clients; time that could arguably be better spent on planning and implementing group or therapeutic work. Given the difficulty in engaging and sometimes finding clients, the time spent in transit, which accounts for nearly thirty percent of their working hours (ACT Manager, personal communication, January 2013), often doubles as therapeutic time, a concept unofficially hailed as *therapy on the fly*.

Central Health's team is dedicated to creating a greener workspace. The team has stopped using day planners and paper assignment sheets, opting for laminated dry-erase sheets instead. Most filing and assessment summaries are done electronically as are daily care plans.

Conclusion

Quantifiable and measurable checklists to assess a program's adherence to a service delivery model have an important place in program development, evaluation and improvement. However, the primary researcher's active engagement with the ACT team afforded her the opportunity to see those checklist items in operation; to observe the impact that Central Health's ACT team is having on its clients; to more fully understand the breadth and depth of their service provision; and to realize the time, energy, and resources required to make a demanding community health program like ACT successful. Ever mindful of personal judgments, this chapter was designed to describe the ACT service delivery in central Newfoundland and Labrador with the primary researcher's informed perspective.

Chapter 5

Results Part Two: Study Participants

This chapter begins with a description of participant demographic variables. This is followed by an exploration of participant clinical and outcome variables. Finally, the chapter concludes with a quantitative and qualitative analysis of participant satisfaction with ACT service delivery, as surveyed by the CMHEI satisfaction with program scale.

Participants

The study sample was predominantly male (82.8%), single (79.3%), and ranged in age from 20 to 66 years old (41±12.05); 79.3% of participants had completed at least some high school; and most (79.3%) had an average annual income of between $10,000-$19,000. Most participants were unemployed (82.8%) and receiving income supports. Of those unemployed participants, three (10.3%) had worked in the previous six months and were receiving employment insurance (see Table 5.1).

Table 5.1.

Demographic Characteristics

Variable	N (%)
Sex (male)	24 (82.8)
Age (years): median (range)	43 (20-66)
Education	
Less than high school	6 (20.7)
Some high school	12 (41.4)
High school	7 (24.1)
Some post secondary	4 (13.8)
Marital Status	
Single	23 (79.3)
Married	1 (3.4)

Divorced	4 (13.9)
Other[1]	1 (3.4)
Employment Status	
Employed	-
Unemployed	24 (82.8)
Disability	1 (3.4)
Other	4 (13.9)
Annual Income	
10,000-19,999	23 (79.9)
20,000-29,000	4 (13.9)
30,000-39,000	2 (6.9)
1. Not specified.	

The majority of the study sample was diagnosed with a schizophrenia spectrum disorder (65.5%), while the remainder had a diagnosis of mood disorder (see Table 5.2). Three quarters (75.9%) of the participants were diagnosed with concurrent substance abuse, present or past (remission). In their lifetime, this study sample spent a total of 4,324 days in acute psychiatric inpatient care. The sample's lifetime ER visits totaled 1,650 visits. Upon admission to ACT, the sample's median GAF score was 59 (39-68). The most recent GAF (within past six months) average score was 68 (55-75).

Table 5.2.

Clinical Variables

Variable	N=29 n (%)
ACT admission time[1] (mean±SD)	26±12
Primary Diagnosis	
Schizophrenia	14 (48.3)
Schizoaffective disorder	5 (17.2)
Bipolar disorder	9 (31)
Depression	1 (3.4)
Concurrent	
Personality	3 (10.3)
Substance Abuse	
Present	16(55.2)
Past (remission)	6 (20.7)

Cognitive Deficits	4 (13.8)
GAF[2]	
At Admission: median (range)	59 (39-68)
Most recent: median (range)	68 (55-77)

1. In months
2. GAF: Global Assessment of Functioning Score. Possible scores range from 1 to 100, with higher scores indicating better functioning.

Acute psychiatric services outcomes. Outcome variables in the current study were days of psychiatric hospitalizations and number of visits to ERs pre- and post-ACT team engagement. Results from a Wilcoxon test indicated that the median number of days of psychiatric hospital admission post-ACT engagement period was significantly less than the median number of days of psychiatric hospital admissions pre-ACT engagement, $z = -3.24$, $p < .05$, $r = .43$. Similarly, a Wilcoxon test was conducted to determine whether the number of ER visits had reduced significantly since ACT team involvement. Results confirmed a significant difference, $z=-2.89$, $p < .05$, $r = .38$ (see Table 5.3). χ^2 analyses of participant characteristics did not yield significant findings. Small sample size inhibited further outcome analyses.

Table 5.3.

Medians and Interquartile Range for Pre and Post ACT Engagement times

	Median	Interquartile Range
Acute psychiatric hospitalization (days)		
Pre-ACT Admission	14.0	2.0 - 52.0
Post-ACT Admission	0.0	0 - 0
ER Visits (number of visits)		
Pre-ACT Admission	3.0	1.0 - 8.5
Post-ACT Admission	1.0	0 – 4.0

Psychiatric admission outcome groups. Exploratory in nature, Tables 5.4, 5.5, 5.6 and 5.7 illustrate data for the study sample that is broken into three outcome groups based on psychiatric admissions– worsened, maintained, and improved. The *worsened* outcome group consisted of four participants who accounted for 13.8% of total sample. Since working with ACT, those participants increased their number of days of psychiatric hospitalization. The *maintained* outcome group included six participants (20.7%), all male, who had zero admissions prior to (during their pre-ACT engagement periods) and since (post-ACT engagement period) working with ACT. Accounting for over half of the total sample (65.5%), the *improved* outcome group consisted of nineteen participants who either had no psychiatric admissions post-ACT engagement or had reduced their total number of psychiatric admissions post-ACT engagement. Table 5.4 outlines demographic variables for the three groups, while Table 5.5 describes clinical variables. Table 5.6 demonstrates lifetime reliance on acute psychiatric services for the three groups and Table 5.7 compares service use specifically during the pre- and post-ACT engagement time periods for the three groups. For the *worsened group*, all psychiatric admissions took place within the first year of ACT admission (see Table 5.7). All three groups reduced their average number of ER visits (see Table 5.5). Readers are reminded that these outcome groups were created to facilitate exploratory analyses, due to the study's very small sample size.

Table 5.4

Demographic Variables for Outcome Groups Based on Psychiatric Hospitalizations

	Outcome Groups		
	Worsened (N=4)	Maintained (N=6)	Improved (N=19)

Variable	n (%)	n (%)	n (%)
Sex (male)	3 (75)	6 (100)	14 (73.7)
Age (years): median (range)	45.5 (25-59)	30.5 (20-45)	46 (21-66)
Education			
Less than high school	-	1 (16.7)	5 (26.3)
Some high school	2 (50)	4 (66.7)	6 (31.6)
High school	1 (25)	1 (16.7)	5 (26.3)
Some post secondary	1 (25)	-	3 (15.8)
Marital Status			
Single	2 (50)	5 (83.3)	16 (84.2)
Married	1 (25)	-	-
Divorced	1 (25)	-	3 (15.8)
Common Law		1 (18.7)	-
Employment Status			
Employed	-	-	-
Unemployed	3 (75)	6 (100)	18 (94.7)
Disability	-	-	-
Other	1 (25)	-	1 (5.3)
Annual Income			
10,000-19,999	2 (50)	4 (66.7)	17 (89.7)
20,000-29,000	1 (25)	2 (33.3)	1 (5.3)
30,000-39,000	1 (25)	-	1 (5.3)

Table 5.5.

Clinical Variables for Three Outcome Groups Based on Psychiatric Hospitalization

Clinical Variables	Outcome Groups		
	Worsened (N=4) n (%)	Maintained (N=6) n (%)	Improved (N=19) n (%)
Primary Diagnosis			
Schizophrenia/Schizoaffective	2 (50)	5 (83.3)	12 (63.2)
Mood disorder	2 (50)	1 (16.6)	7 (36.8)
Concurrent			
Personality	-	-	3(15.8)
Substance (Present or Past)	3 (75)	5 (83.3)	14 (73.7)
GAF			
At Admission (mean ±SD)	48 ±5.9	61 ±2.7	55.8 ±9.1
Most current (mean ±SD)	72 ±3.4	64 ±3.3	64.4 ±5.0
Other medical conditions	2 (50)	4 (66.7)	14 (73.7)
Time with ACT (months): mean ±SD	21 ±8.4	23 ±15	28.47 ±13

Length of time with ACT upon Psychiatric admission (months): (mean ±SD)	6.13 ±4.77	-	15 ±4.24

Table 5.6.

Lifetime Use of Acute Health Care Services for Three Outcome Groups

	Outcome Groups		
	Worsened (N=4)	Maintained (N=6)	Improved (N=19)
Lifetime Psychiatric Hospital Admissions (days)			
Total	595	457	3272
Mean	148.8	76.17	172.21
Median	158.5	50	170
Range	92-186	16-180	12-495
IQR	55.75	118.8	164
Lifetime ER Visits (visits)			
Total	294	199	1157
Mean	73.5	33.17	60.89
Median	36.5	23.5	34
Range	9-212	6-91	2-250
IQR	66.5	24.5	58

Table 5.7.

Acute Health Care Service Use during Pre- and Post-ACT Engagement Time Periods for Three Outcome Groups

		Outcome Groups					
		Worsened		Maintained		Improved	
		Pre	Post	Pre	Post	Pre	Post
Psychiatric Hospitalizations (days)	Total (days)	71	122	-	-	863	19*
	Mean	19	30.5	-	-	45.42	1
	Median	17.75	31.5	-	-	33	0
	Range	8-25	15-44	-	-	2-160	0-10
	IQR	11.75	8	-	-	59.5	0
ER Visits (visit	Total (visits)	15	11	9	5	217	103
	Mean	3.75	2.75	1.5	.83	11.42	5.42

	Median	4	3	1.5	.5	5	1
	Range	1-6	0-5	0-2	0-3	0-42	0-38
	IQR	4.25	2.75	1.75	1	11.5	6
*Two participants in "Improved" outcomes group had admissions totaling 19 days.							

Client Satisfaction

Quantitative analysis. On a 4-point scale, the mean score for participants on the Program Satisfaction Scale was 3.4 (SD=0.6). This suggests a high degree of satisfaction with ACT service delivery among study participants. Table 5.8 shows the percentages of low and high satisfaction ratings for each item. Note that for question seven (*Do you get too much support from this program*), a high rating of satisfaction is actually negative. The question with the smallest gap between Low and High responses was related to emotional support or interpersonal relationships with the ACT team.

Table 5.8

CMHEI Satisfaction with Program Scale Likert Questions

	N = 30[1]	Low[2]	High[3]
1. Overall how satisfied are you with the program?	30	10.0%	90.0%
2. To what extent is the help offered at this program relevant to your needs?	30	10.0%	90.0%
3. Would you recommend this program to other people needing help?	30	6.7%	93.3%
4. Do you get enough support from this program when you need it?	30	13.3%	86.7%
5. Do you have enough say about the help you receive from this program?	30	13.3%	86.7%
6. Do people in this program really understand what you need?	30	30.0%	70.0%
7. Do you get too much support from this program?	29	82.7%	17.2%

1. Total number of participants varies due to a non-response
2. "not at all" or "some of the time" (response = 1 or 2)
3. "quite often" or "all of the time" (response = 3 or 4)

Qualitative analysis. Responses to open-ended questions were primarily one or two sentences in length or given in bullet form. Responses to the "liked best" question tended to contain multiple codes and on average contained material that satisfied at least two final categories for analysis. Responses to the other two open-ended questions, "liked least" and "change", were mostly contained to one idea and contributed to one final category for analysis. Table 5.9 illustrates open-ended responses, grouped by category of analysis.

Table 5.9.

Open-ended CMHEI Responses by Category

	Liked best		Liked least		Change		Totals
	N	%	N	%	N	%	N
Emotional support	20	30.3	4	12.1	2	5.4	26
Interaction	16	24.2	8	24.2	6	16.2	30
Instrumental support	12	18.2	2	6.1	2	5.4	16
Medication	4	6.1	5	15.2	3	8.1	12
Activities	5	7.6	0	0	3	8.1	8
Availability	8	12.1	2	6.1	3	8.1	13
Nothing	1	1.5	4	12.1	5	13.5	10
No Response	0	0	8	24.2	8	21.6	16
Other	0	0	0	0	5	13.5	5
Totals[1]	66	100%	33	100%	37	100%	136

1. Since some responses could be classified in more than one category, the total number of responses for each question exceeds the total number of participants (N=30).

Emotional support was related to feeling understood by the ACT team and spoke to the quality of the helping relationship. Positive comments included, "I like that they

understand you and they don't judge you" and "Having friends and good help". Negative comments included, "Their misinterpretation of how I'm feeling..." or "Sometimes when I bring up a concern, they assume it's because of substance use".

Responses categorized as *Interaction* were related to the client's interaction with team members and their experience with the unique, ACT-sanctioned approaches to service delivery. Positive comments ranged from general interaction: " I enjoy their company", to more specific ACT team-related interaction: "you pretty much have an individual for every problem you have". While some participants appreciated the team's assertive approach: "they usually always manage to find me, even though I'm hard to find", other participants were less receptive. One participant noted, "Sometimes the service can be intrusive...". In response to the "change" question, one participant wrote, "privacy. If I tell them something they [the team] have a meeting to talk about it. I'd like them to keep my business my business". Importantly, overall negative comments related to interaction tended to express a desire to have more interaction (specifically more time) with the team, as opposed to actual negative experiences with the team.

Instrumental support consisted primarily of comments related to transportation, as well as assistance with employment, getting groceries and running other errands. Respondents were mostly satisfied with this type of support, however a couple of participants were interested in more (or more punctual) transportation services.

References to *medication* were mostly found in responses to "liked least" or "change" questions. Primarily, participants who mentioned medication generally wished they did not have to take medication at all. Some participants, however, appreciated the

team's help with medication adherence. As one respondent stated: "they give me my med reminders [because] I'm not good at remembering to take my meds right".

The *Activities* or social engagements category was the only category that received exclusively positive feedback. Some participants mentioned how ACT had connected them with established social organizations in the community, while others mentioned group outings or holiday meals offered by the ACT team to all its clients. Activities-related responses to the "change" question demonstrated a common yearning among participants for more outings and/or social engagements.

Availability was a category of analysis that could have been grouped under *Interaction*. However, it was made a separate category because of the strong language used by participants to address the team's availability, specifically. Statements like, "always there", "available anytime day or night", and "whenever", highlighted the importance of perceived availability of the ACT team. Similar to *Interaction*-related responses, negative comments addressing *Availability* were directly related to the amount of time participants felt they had with the team.

Conclusion

Measures of central tendency, dispersion, and frequency counts were used to describe study variables. Given the small sample size, it was not possible to use chi-square (χ^2) and t-tests to assess relationships between possible predictor variables and outcome variables related to acute health care services use. The non-normative distribution of the sample meant using non-parametric statistics (Wilcoxon signed rank

test) to examine outcome variables related to acute health care service use. Findings must be interpreted cautiously with consideration for the aforementioned small sample size and outliers that may have skewed findings. To more fully profile ACT team clients, participants were categorized into three descriptive groups based on the psychiatric hospitalization outcome variable. Demographic and clinical variables for these three groups were also explored along with measures of central tendency and dispersion. Study participants reported a high degree of satisfaction with the service and their responses to open-ended questions yielded interesting insight into the areas of the service delivery they consider essential. The Discussion chapter will amalgamate this study's findings; explore, in more detail, some limitations and opportunities afforded by this research; as well as some recommendations for future research.

Chapter 6

Discussion and Conclusions

This chapter begins with a discussion about the Central Health ACT team – some aspects of their service provision and implications for clinical practice. Next, the chapter reviews acute psychiatric service usage among the study participants. It presents an argument for reconsidering psychiatric hospitalization as an absolute *negative outcome*. Some unique observations about this study's participants are explored and practical implications for the team are discussed. After that, client satisfaction, as reported in this study, is considered. The latter half of the chapter includes suggestions for future ACT research in Newfoundland and Labrador and explores limitations inherent in the current study.

Central Health's ACT Team

Current observations. Based on this study's findings, as well as previous evaluations of this ACT team, the ACT team in central Newfoundland and Labrador is operating at a level consistent with well-established ACT teams. With the exception of on call availability for after hours crisis management, the team is either fully implementing, or working towards fully implementing, all key elements of an ACT service. Considering that the team was not on call after working hours it was noteworthy that the majority of participants praised the team for their availability and the immediacy with which they addressed client issues. This certainly speaks to the team's determination to offer reliable and comprehensive services in spite of budget barriers. It also highlights the effectiveness

of the team's communication, not only between staff during shift changes but between the team and clients.

Individual treatment plans (ITP) are an important tool to facilitate communication of treatment goals and expectations between the team and clients. They are also front-line examples of the strength- and recovery-based philosophy of ACT. ITPs are developed with the client, based on individual strengths and needs, hopes, and desires (Bond et al., 2001). Approximately every six months Central Health's ACT team members review treatment plans with their clients. In doing so, the team puts the onus and opportunity for growth in the client's hands. Living with conditions that have seriously impaired their functioning for years, ACT clients are encouraged to draw on their own strengths, use the team's support, and articulate the ways in which they plan to improve their circumstances.

A lack of group programming, as was observed with Central Health's ACT team, is consistent with findings from a multi-site comparison of ACT teams from Canada, United States, United Kingdom, and New Zealand (Deuchar et al., 2008). This trend could therefore be illustrative of the difficulties mental health systems are having in developing integrated treatment strategies for persons with concurrent disorders. It could of course also be related to geographical barriers, as proposed by Central Health ACT team members, and consistent with geographical challenges in central Newfoundland and Labrador. It is difficult to prepare and offer structured group therapy when services are expected to take place in vivo and be tailored to individual needs based on individual treatment plans and personal goals.

Looking forward. Since greater model fidelity is associated with improved hospitalization outcomes (King et al., 2009) the team should continue its effort to maintain and improve its adherence to the evidence-based model.

Presently, a dually diagnosed treatment group should be a priority for the team as well as concentrated efforts to encourage and offer vocational training and support. With consideration for a reduced job market in rural Newfoundland and Labrador, the team will have to engage community members and employers to explore creative employment opportunities – including volunteer positions. Vocational needs and desires of individual clients should be assessed regularly. If there happens to be vocational need commonalities amongst clients, perhaps offering vocational services or training opportunities as a group can improve client motivation as well as service efficiency.

Peer support has been recognized as an essential component of a supportive network for people with severe psychiatric disorders (Solomon, 2004). Not surprisingly then, many participants noted their desire for more interaction with team members as well as other social experiences. One participant also specifically mentioned an interest in working with a clinician who had "gone through the program themselves" - a peer specialist. Since the peer specialist position is currently vacant, the team might initiate some form of temporary peer support. The team could consider facilitating a support group for concurrent participants. This endeavor would address a deficit in group programming and satisfy the request among some participants for greater social involvement and team-facilitated social engagements.

Acute Psychiatric Service Usage

Reduced days of hospitalization and ER visits, measured pre and post engagement with the team, clearly demonstrate this service's value in supporting this population. This decline in acute psychiatric service usage is also consistent with ACT literature (Bond et al., 2001; Carpenter et al., 2011; Monroe-DeVita et al., 2001). An argument could be made that this finding was observed because of a "regression to the mean" (Carpenter et al., 2011, p. 469). These participants, however, had long-standing mental health problems and had not necessarily been admitted to the ACT team when terribly unwell or in hospital, so a natural decrease could not have been expected (Carpenter et al., 2011). What is more likely is that as participants were engaged with an assertive, multidisciplinary group of professionals who offered holistic support and helped clients to navigate their mental illness in the community, these clients were less inclined to be hospitalized or frequent the ER. That being said, data for lifetime psychiatric hospitalizations and ER visits were collected retrospectively for all participants and it is likely that number was an underestimation. Chart reviews for many participants noted indeterminate psychiatric hospitalizations in other parts of the province as well as other parts of the country. It is probable that while living outside of Central Health's catchment area, some participants also visited ERs. As a result, use of acute psychiatric services, including differences in psychiatric service use prior to starting and after ACT engagement, was most likely under reported in this study.

Reduced hospitalizations. Psychiatric hospitalization is a universally studied outcome variable. As this study and others have argued though, perhaps it should not be

viewed as exclusively negative, particularly early in ACT engagement (Carpenter et al., 2011; Priebe et al., 2004; Salyers et al., 2001). The team in central Newfoundland and Labrador highlighted that admission for treatment, especially early in service engagement, was often a valuable part of a client's engagement with services and helped to motivate clients to adhere to treatment plans. A Dutch study found that even involuntary admission, in the context of assertive outreach, was associated with improvements in psychosocial functioning and motivation for treatment (Carpenter et al., 2011). To further substantiate this position, more than half of this study's participants have been engaged with the ACT team for a minimum of 30 months and yet all re-admissions were contained to the first 12 months of ACT engagement. Furthermore, all but one of those psychiatric admissions occurred within the first eight months of ACT involvement. This finding is consistent with previous research, which delineates the first year of ACT engagement as the most likely time for psychiatric admissions (Carpenter et al., 2011). Given that the risk of psychiatric admission decreases over time (Phillips et al., 2001), Central Health's ACT team appears to be successfully integrating clients in their community settings.

Participants who had increased their number of days of psychiatric hospitalization post ACT engagement had been scored lower on their initial program GAF scores compared with participants who had not increased their psychiatric hospitalizations. Within twelve months, those lower scoring GAF participants were hospitalized. At the time of data collection (post hospitalizations), those same participants were deemed to be functioning at an overall higher level than the other study participants. This observation warrants further discussion as to whether hospital admission early in ACT engagement

should actually be considered a negative outcome. Instead, perhaps psychiatric admissions that are contained to an introductory period of ACT engagement (i.e., six to twelve months) could be viewed as an integral step towards improving overall client functioning and community tenure. It seems reasonable that as more time passes, a well-established and effective therapeutic rapport will grow and strengthen between team and client. Team members will have more traction when encouraging clients to adhere to their treatment plan (i.e., take medications properly, maintain personal hygiene, improve social relationships). It could be worthwhile to explore client engagement in treatment plans as a preventative factor related to psychiatric hospitalization later in ACT involvement.

ACT Clients

As previously reported, this study sample shared many demographic and clinical characteristics with ACT clients from other ACT sites (e.g., Deuchar et al., 2008). That being said, the unemployment rate and distribution of concurrent diagnoses merit further reflection.

Unemployment. A zero percent employment rate, as was reported in this study, seemed slightly lower than what is reported in the literature. While some studies have reported ACT employment near 50 percent (Gold et al., 2012), others report ranges between 5-20 percent of service users (Deuchar et al., 2008). In rural Newfoundland and Labrador, especially outside of central communities such as Grand Falls-Windsor, there are limited opportunities for employment. Provincial unemployment rates in February 2013 were 13 percent as compared to 7.3 percent nationally (Newfoundland and Labrador Statistics Agency, 2013). The disparity however between urban and rural unemployment

rates means that the estimation for rural Newfoundland is most likely far higher than 13 percent. In fact, in 2011, the unemployment rate in central Newfoundland was more than 16 percent (Antle, 2011). While provincial and federal funding is available for supported employment - arranging for a co-worker that can provide one-on-one support to the supported employee with no additional cost to the employer - it is intended for individuals with developmental and physical disabilities (Canadian Association for Supported Employment, 2011). Although this type of programming is consistent with the ACT model for employment, obtaining funding for a person diagnosed with a mental illness is difficult. It is also not feasible to expect ACT staff to accompany clients in the workplace. There are also additional systemic barriers to employment. For example, most ACT clients also take expensive medications. Clients on government support may harbor some degree of fear that giving up any of that support could result in loss of benefits to afford medications.

Full-time competitive employment is not always an appropriate goal for all people with mental illness, for example education and unpaid work experiences may be more appropriate (Russett & Frey, 1991). According to the ACT vocational model, a variety of vocational options should be made available to clients depending on their needs (Russett & Frey, 1991). Importantly, the model states that vocational development is a long-term commitment between the team and its client. In fact, the literature reiterates that it can take years to build relationships and develop client motivation to a level where clients are at a functional capacity that is suitable for work (Russett & Frey, 1991). Furthermore, if a client is unable to sustain employment or changes jobs frequently, the vocational development process and support from ACT does not end. Vocational support - like the

entire ACT service provision itself - is ongoing, as needed. Some ACT teams have demonstrated a substantial increase in the proportion of clients obtaining employment by length of time in service (Deuchar et al., 2008). This finding is promising for Central Health's ACT team. Given the infancy of their ACT program, its rural location, and some client hesitancy, perhaps a higher unemployment rate is to be expected. As the team continues to fortify long-term treatment relationships and seek out different forms of vocational support, it may be reasonable to expect that the number of clients working or perhaps seeking work-related endeavors will increase. As aforementioned, paid employment is not always an appropriate fit for individuals with persistent mental illness. Alternatives to paid employment should therefore also be explored. As the team establishes itself in the community it will have greater opportunity for collaboration within the community; with possible employers and volunteer organizations to establish more supported work opportunities.

Dual diagnoses. Traditional treatment systems are considered poorly equipped to respond to the varied and serious needs of people with both a substance abuse and other mental illness diagnosis (Fletcher et al., 2008). Under traditional treatments, individuals would most often visit one agency for mental health treatment and another agency for substance abuse treatment (Fletcher et al., 2008). ACT addresses this discontinuity in care and attends to the concerns of both severe mental illness and substance abuse (Teague, Bond & Drake, 1998). As compared to non-dually diagnosed clients, ACT clients with dual diagnoses are at heightened risk for poorer psychosocial functioning (Kortrijk et al., 2010) as well as higher relapse rates, more physical health problems, greater violence, higher incarceration rates, more frequent hospitalizations, and higher treatment costs

(Fletcher et al., 2008). Consistent with the finding that dually diagnosed substance abuse clients are prone to hospitalizations (Kortrijk et al., 2010), all participants in this study who had psychiatric hospitalizations post ACT engagement were dually diagnosed with substance abuse disorders. That being said, a predictive relationship could not be established because many participants who actually maintained or reduced their number of days of psychiatric admission also had concurrent substance abuse disorders. In fact, of the six participants who had maintained no admissions in their pre and post ACT engagement periods, all but one of those individuals were dually diagnosed with a substance abuse disorder. Furthermore, of the participants who actually reduced their days of psychiatric admissions post ACT engagement, 47 percent were concurrently diagnosed with substance abuse. These findings confirm that a large proportion of ACT users are concurrently diagnosed. The findings also emphasize the complexity of any potential relationship between dual diagnosis and hospitalization. Perhaps other avenues should be explored to assess the impact that this ACT team is having on its clients. For example, some researchers have found that ACT engagement is associated with a lower level of substance abuse among clients with dual diagnoses (Bond, Drake, Mueser & Latimer, 2001; Phillips et al., 2001). Since most of their clients are dually diagnosed with mental illness and substance use disorders, ACT teams are expected to adhere closely to a dual disorder (DD) treatment model. DD is a recovery-oriented approach that encourages a non-confrontational stage-wise treatment model. The DD model also, however, encourages gradual expectations of abstinence (Bond et al., 2001). Expectations of abstinence seem inconsistent with client empowerment and the empowering effects of client choice - abstinence or reduced consumption - are well documented (Mancini,

Hardiman & Eversman, 2008). Considering that the ACT model emphasizes the development of a personal sense of empowerment in the recovery process (Bond et al., 2001), it may be worthwhile to further consider harm reduction as an important component of substance abuse treatment with this population. In fact, there is evidence to support treatment efficacy with various populations within a harm reduction model (Little & Franskoviak, 2010). Impressive outcomes related to harm reduction approaches have been reported, such as reduction of harmful drug use, stabilization of psychiatric problems, and permanent housing (Laker, 2007; Little & Franskoviak, 2010). Furthermore, beyond their emphasis on client empowerment, both harm reduction and recovery-oriented services models identify supportive professional relationships as vital in the engagement of clients in treatment. Both models also recognize that continuous access to high-quality, comprehensive resources and services are critical to keeping individuals in treatment and helping them progress in their recovery (Mancini, Hardiman & Eversman, 2008). Such evidence may also be useful in informing ACT services and outcomes. Given the complexity and variability among dually diagnosed ACT clients and the treatment efficacy of harm reduction models with that population, a harm reduction approach to goals for drug use could be very complimentary to the DD ACT model.

ACT's Impact on Clients

While this study did not include a comparison group it did explore the unique experience of ACT clients. Open-ended questions were a means to gather important information about the needs and desired outcomes of individuals living with serious mental illness in the community (Krupa et al., 2005). Unlike closed-ended or Likert rated

scales, open-ended questions tend to be less influenced by social desirability (Redko et al., 2004). More over, open-ended questions were selected to help the researchers understand the scope of participants' satisfaction; aspects of the service that participants found most meaningful, those they did not, and areas they felt could be improved or changed. This was important given the often-marginalized status of this particular population and the focus in healthcare reform to address the needs and opinions of *all* healthcare service users.

Consistent with an underlying philosophy that the therapeutic relationship is central to ACT, participants expressed their satisfaction and dissatisfaction primarily in relation to their interpersonal relationships with ACT team members. While some participants were less satisfied with certain aspects of a team based approach (e.g., working with different clinicians), most were extremely satisfied with the elements inherent to a team-delivered service (e.g., assertive engagement mechanisms, medication reminders, access to different specialists, and interactions with more than one clinician). Consistent with the unique geographic and transportation issues mentioned by the team, many participants discussed their satisfaction and dissatisfaction in relation to the transportation support they received. Whether it was to get groceries and medications or to attend doctor and specialist appointments, participants welcomed the tangible support in realizing daily tasks.

When answering what they would like to change about their ACT service, a subgroup of participants lobbied for greater community awareness; they wished that the ACT team could increase and geographically broaden its services to help more people. Also thinking altruistically, some participants stated that they would like the opportunity

to offer their support to the team. These participants stated that they were willing to offer their time to help the ACT team. Although it was beyond the scope of this study to ask participants to elaborate, these responses speak to the high regard participants held for the services and the clinicians.

The initial objective of the open-ended questions was to learn which aspects of the program clients were satisfied or dissatisfied with. In retrospect, the responses actually offered insight – directly from clients - into the ways the ACT team is affecting change in its clients' lives. Participant responses substantiated the assumptions underlying the structure of ACT and the processes by which it is believed to affect positive change. Meaningful supportive relationships, assistance with navigating a mental illness in the community, goal setting and attainment, community integration and tangible support that eases problems associated with living in poverty, were all themes that emerged from this study. These themes could also be considered indirect measures of mental health and wellness and should be explored further as a way to understand and assess the effectiveness of an ACT service delivery.

Noteworthy at the time of data collection was the proportion of study participants eager to share their experience with the ACT program. As participants completed the paper and pencil satisfaction questionnaire, many of them expressed interest in talking with the primary researcher about their experiences - good and bad - with the service. This phenomenon reiterated the importance of offering service users, especially those with unique needs and characteristics, a genuine opportunity to give meaningful feedback. Additionally, it highlighted the substantial impact that the ACT was having on its clients.

Future Directions

The strategic use of repeated evaluations of programs using fidelity scales is based on the general principle that whatever is attended to is more likely to be improved (Bond & Salyers, 2004). This principle can be extended beyond program evaluation to include client characteristics, evaluations, and satisfaction. As an evidence-based practice and relatively new addition to community-based healthcare services in Newfoundland and Labrador, ACT should be subject to regular and rigorous investigation. This study can be used to inform and catalyze future research for ACT-related programming in the province.

The sharing of comparative data among ACT teams can facilitate meaningful reflection about the program model and outcomes within provinces and across health districts. In addition to reflection on program model adherence, multi-site studies of the three operational ACT teams in Newfoundland and Labrador could lead to richer relationships among sites (Deuchar et al., 2008). ACT models are relatively new in Newfoundland and Labrador and are not mentioned in the literature. It would be worthwhile to explore and compare these teams, to examine the effects of program and client characteristics on outcome variables. ACT services are also costly. Notwithstanding this fact, the costs of ACT services can be offset by a reduction in hospital use in patients with a history of extensive hospital use (Bond et al., 2001). Multi-site comparisons with special attention to cost-related outcomes may strengthen requests for program funding to improve model fidelity and effective program delivery.

Future studies of ACT programs in Newfoundland and Labrador should include robust experimental designs that incorporate qualitative and quantitative methods. Future research should include control groups or comparison groups across sites. Research related to client outcomes, with interest in predictive factors and causational relationships, should strive for larger sample sizes.

Psychiatric hospitalizations and ER visits were easily accessible and pre-post comparisons were of particular interest to the Central Health ACT team. As a result this study chose to explore participant outcomes related to acute psychiatric services. Conversely, prospective studies need to broaden the view of ACT success beyond hospitalizations to include other important aspects of treatment, such as medication adherence, social involvement, interpersonal relationship, and client-specific factors like quality of life. Special consideration should be given to these subjective quality of life measures. ACT programs are considered to be successful at reducing psychiatric hospitalizations when hospitalizations are high prior to ACT admission. They are considered less effective when pre-ACT hospitalizations are low. Given that a sizeable portion of this study's participants had no, or very few, psychiatric hospitalizations prior to ACT entry, it will be important to explore other ways to measure client growth and service impact. Given the variability and marginalized status of the population, it is also important to consider measures of growth as determined directly from that population and the people who know them best (their service providers). A study from 2010 discussed different views of success and failure with ACT as determined by ACT team staff and clients. The researchers concluded that while teams and clients agreed on the status of some variables, they disagreed strongly on others (Stull, McGrew & Salyers, 2010). For

example, clients were more likely than staff to identify the level or type of treatment as defining success or failure, whereas staff were more likely than clients to discuss substance abuse when defining failure and improved symptoms when defining success. Both groups rarely mentioned reduced hospitalizations (Stull, McGrew & Salyers, 2010). It could be interesting to explore and compare areas that the team and clients deem important or useful about the program. Findings could inform clinical focus as well as directions for future research.

Future studies should consider interviews and focus groups to more closely examine client satisfaction and improve understanding of how ACT clients experience the service. With consideration for anonymity, it would be useful to have an impartial third party collect this feedback. This study chose to keep participant responses completely anonymous and separate from chart reviews. Future research should compare the two and explore relationships between satisfaction and participant outcomes and/or variables of interest. Client satisfaction should also be updated regularly. Prospective studies could be used to compare satisfaction overtime within subjects and/or across teams or across different treatment groups (i.e., traditional case management, outpatient treatment group).

Study Limitations

This study explored and described the Central Health ACT team and a large portion of its service users. As the first known research study of ACT services in Newfoundland and Labrador, it offers much context to understand ACT services, client needs, and potential avenues for change and future research. Findings were largely

consistent with national and international ACT literature, but still should be interpreted cautiously as there were some study limitations.

Although this study offers an in depth examination of ACT service delivery in Central Newfoundland and Labrador, including a focus on the effectiveness of the service as well as the characteristics and perceived service satisfaction of its clientele, the study does have limitations and its findings should be interpreted cautiously. Consistent with the study objectives, the project was intended to be exploratory and descriptive in nature.

The scope of this study did not include an updated DACTS assessment as this was beyond the scope of the study. As aforementioned, the evaluation of team organization and model fidelity relied on reports from the ACT team and its manager. While there can be some concern for the accuracy of self-reported data, the primary researcher's immersion experience and the original DACTS report helped to inform this assessment and triangulate findings.

Although there was a high participation rate among the study's target population, the study was unable to access data related to the characteristics of the entire Central Health ACT population. As well, the ultimate study sample size was small, despite having a high participation rate. Furthermore, the study took place at one ACT site in central Newfoundland and Labrador and therefore findings are not necessarily applicable to other contexts. There was also no comparison group in this study and so it is not possible to determine whether reported outcomes were directly associated with participant engagement with ACT. The ACT team made first contact about the study and introduced potential participants to the primary researcher. Despite privacy protection, this procedure may have skewed some participant feedback. It is also possible that those individuals who

chose not to participate did so because of concerns that their privacy would not be protected.

The study sample was small, non-normatively distributed, and skewed by outliers. The outcome variables related to acute psychiatric services were also not calculated consistently across participants. That is, given the team's relative infancy and the range in participant length of time working with ACT, each participant was assigned his or her own pre- and post-ACT engagement time period, as opposed to a pre-determined period of time that was uniform across all participants. Finally, only two outcomes were selected for this study. Hospitalizations and ER visits were chosen because of their sensitivity to ACT interventions (Bond & Salyers, 2004). As aforementioned, a more comprehensive study would have examined multiple outcomes.

Conclusions

A major goal of assertive community treatment programs is to care for clients in the community. This study, albeit limited by small sample size and statistical power, reflects progress on the part of Central Health's ACT team toward achieving that goal. The study successfully depicts the service delivery and communicates the impact that the service is having on a large portion of its users – both in terms of acute psychiatric services and satisfaction. Although the study has some limitations and should not be considered representative of the entire ACT client population in Central Newfoundland and Labrador, its findings are encouraging and lend themselves to existing literature, which associates higher model fidelity with improved client outcomes related to acute psychiatric services. The study provides a comprehensive review of Central Health's

ACT service programming and highlights the characteristics and diverse needs of the service users. In agreement with the shift in provincial healthcare policy, it offers a voice to healthcare service users, who in this case happen to be a portion of the population that is often unheard and stigmatized. Future studies should compare ACT services across teams and treatment services in Newfoundland and Labrador. Robust research designs that incorporate qualitative and quantitative methods will improve understanding of how ACT services can best support the varied needs of those with severe and persistent mental illness in this province.

References

Aargard, J. & Mueller-Nielsen, K. (2011). Clinical outcome of assertive community treatment (ACT) in a rural area in Denmark: A case-control study with a 2-year follow up. *Nordic Journal of Psychiatry, 65*(5), 299-305.

Allness & Knoedler, (2003). *The PACT model of community-based treatment for persons with severe and persistent mental illnesses: A manual for PACT start-Up.* Arlington, VA: National Alliance for the Mentally Ill (NAMI), Arlington, VA.

Antle, R. (2011, September/October). Sharing the wealth. *Atlantic Business Magazine, 22*(5), 57-58.

Attkinson, C., & Greenfield, T. (1995). *The client satisfaction questionnaire (CSQ) scales and the service satisfaction scale-30 (SSS-30), in outcomes assessments in clinical practice*. Edited by Sederer, L., Dickey, B., Baltimore, Maryland, Williams & Wilkins.

Barrett, B.M., Young, S., Teague, G.B., Winarski, J.T., Moore, K.A., & Ochshorn, E. (2010). Recovery orientation of treatment, consumer empowerment, and satisfaction with services: A meditational model. *Psychiatric Rehabilitation Journal, 34*(1), 153-156.

Bond, G.R., Drake, R.E., Mueser, K.T., & Latimer, E. (2001). Assertive community treatment for people with severe mental illness: Critical ingredients and impact on patients. *Disease Management and Health Outcomes, 9*(3), 141-159.

Bond, G.R. & Salyers, M.P. (2004). Prediction of outcomes from dartmouth assertive community treatment fidelity scale. *CNS Spectrums, 9*(12), 937-942.

Burge, P. (2009). Assertive community treatment teams and adults with intellectual disabilities. *Journal on Developmental Disabilities, 15*(3), 96-102.

Burns, T., Catty, J., Dash, M., Roberts, C., Lockwood, A., & Marshall, M. (2007). Use of intensive case management to reduce time in hospital with severe mental illness: systematic review and meta-regression. *British Medical Journal, 335*(7615), 336-340.

Carpenter, J., Luce, A. & Wooff, D. (2011). Predictors of outcomes of assertive outreach teams: a 3-year follow-up study in North East England. *Social Psychiatry and Psychiatric Epidemiology, 46*, 463-471.

Barrett, B. & Parsons, P. (2011). *Central Health ACT fidelity DACTS summary*. Grand-Falls Windsor, NL: Barrett, B. & Parsons, P.

Chan, P.S., Krupa, T., Lawson, J.S. & Eastabrook, S. (2005). An outcome in need of clarity: building a predictive model of subjective quality of life for persons with severe mental illness living in the community. *American Journal of Occupational Therapy, 59,* 181-190.

Creswell, J.W. (2007). *Educational research: planning, conducting, and evaluating quantitative and qualitative research* (3rd ed). Upper Saddle River Creek, New Jersey: Prentice Hall

Deuchar, N., Saunders, K., Vanderpyl, J., Doub, T.W., Marquart, J.M., Lurie, S. … Humberstone, V. (2008). International comparative ACT study process and data: how ACT teams compare in Toronto, Birmingham, Nashville and Auckland. *The International Journal of Leadership in Public Services, 4*(1), 41-58.

Dixon, L., Hackmann, A., & Lehman, A. (1997). Consumer as staff in assertive

community treatment programs. Administration and Policy in Mental Health, 25, 199-208.

Dongier, M. (2005, April). [Review of the book *Integrated Treatment for dual disorders: a guide to effective practice,* by Mueser, K.T., Noordsy, D.L., Drake, R.E., & Fox, L.] *Canadian Journal of Psychiatry, 50*(4), 299-300.

Fletcher, T.D., Cunninghan, J.L., Calsyn, R.J, Morse, G.A. & Klinkenberg, W.D. (2008). Evaluation of treatment programs for dual disorder individuals modeling longitudinal and mediation effects. *Adm Policy Ment Health, 35*, 319-336.

Gerber, G.J. & Prince, P.N. (1999). Measuring client satisfaction with assertive community treatment. *Psychiatric Services, 50*(4), 546-550.

Gold, P.B., Jones, D.R., Macias, C., Bickman, L, Hargreaves, W.A., Frey, J. (2012). Assertive community treatment: change to more frequent, briefer client contact. *Bulletin of the Menninger Clinic, 76*(4), 314-328.

Government of Newfoundland and Labrador. (2005). Working together for mental health: A provincial policy framework for mental health and addictions services in Newfoundland and Labrador.

Harvey, C., Killaspy, H., Salvatore, M. & Johnson, S. (2012). Implementation of assertive community treatment in Australia: model fidelity, patient characteristics and staff experiences. *Community Ment Health J, 48*, 652-661.

Ito, J., Oshima, I., Nishio, M., Sono, T., Suzuki, Y. Horiuchi, K., Niekawa, N., … Tsukada, K. (2011). The effective of assertive community treatment in Japan. *Acta Psychiatrica Scandinavica, 123*, 398-401.

Joannette, J.A., Lawson, J.S., Eastabrook, S. & Krupa, T. (2005). Community tenure of

people with serious illness in assertive community treatment in Canada. *Psychiatric Services, 56*(11), 1387-1393.

Kidd, S.A., George, L., O'Connell, M., Sylvestre, J., Kirkpatrick, H., Browne, G., Odueyungbo, A.O. & Davidson, L. (2011). Recovery-oriented service provision and clinical outcomes in assertive community treatment. *Psychiatric Rehabilitation Journal, 34*(3), 194-201.

Killaspy, H. (2007). Assertive community treatment in psychiatry. *British Medical Journal, 335*(7615), 311-312.

Killaspy, H., Bebbington, P., Blizard, R., Johnson, S., Nolan, F., Pilling, S. & King, M. (2007). The react study: Randomized evaluation of assertive community treatment in North London. *British Medical Journal, 332*(7545), 815-818.

King, R., Jordan, A., Mazurek, E., Earle, K., Earle, E. & Runham, A. (2009). Assertive community treament-dually diagnosed: the hyphen was the easy part. *Mental Health Aspects of Developmental Disabilities, 12*(1), 1-7.

Kortrijk, H.E., Mulder, C.L., Roosenschoon, B.J., & Wiersma, D. (2010). Treatment outcome in patients receiving assertive community treatment. *Community Mental Health Journal, 46*, 330-336.

Krupa,T. , Eastabrook, S., Hern, L., Lee, D., North, R., Percy, K., Von Briesen, B. & Wing, G. (2005). How do people who receive assertive community treatment experience the service? *Psychiatric Rehabilitation Journal, 29*(1), 18-24.

Lang, M.A., Davidson, L., Bailey, P.L., & Levine, M.S. (1999). Clinicians' and clients' perspectives on the impact of assertive community treatment. *Psychiatric Services, 50*(10), 1331-1340.

Little, J. & Franskoviak, P. (2010). So glad you came! Harm reduction therapy in community settings. *Journal of Clinical Psychology: In Session, 66*(2), 175-188.

Mancini, M.A., Hardiman, E.R. & Eversman, M.H. (2008). A review of the compatibility of harm-reduction and recovery-oriented best practices for dual disorders. Best Practices in Mental Health, 4(2), 99-113.

Martin, G., Costello, H., Leese, M., Slade, M, Bouras, N., Higgins, S. & Holt, G. (2005). An exploratory study of assertive community treatment for people with intellectual disability and psychiatric disorders: conceptual, clinical, and service issues. *Journal of Intellectual Disability Research, 49*(7), 516-524.

McGrew, J.H. (2011). Letter to the editor: the TMACT: evidence based or eminence based? *Journal of the American Psychiatric Nurses Association, 17*(1), 32-33.

McGrew, J.H., Bond, G.R., Dietzen, L., McKasson, M. & Miller, L.D. (1995). A multisite study of client outcomes in assertive community treatment. *Psychiatric Services, 46*(7), 696-701.

Mental Health Care and Treatment Act (2009). Provincial Policy and Procedure Manual. Government of Newfoundland and Labrador Department of Health and Community Services. Newfoundland and Labrador.

Mental Health Commission of Canada (2009). Toward recovery & well-being: A framework for a mental health strategy for Canada. Calgary, AB.

Monroe-DeVita, M., Morse, G. & Bond, G.R. (2012). Program fidelity and beyond: multiple strategies and criteria for ensuring quality of assertive community treatment. *Psychiatric Services, 63*(8), 743-750.

Monroe-DeVita, M., Teague, G.B., & Moser, L.L. (2011) The TMACT: A new tool for

measuring fidelity to assertive community treatment. *Journal of the American Psychiatric Nurses Association, 17(1)*, 17-29.

Newfoundland and Labrador Statistics Agency. (2013). Labour force flash sheet: labour force data for the month of February 2013 [Data file]. Retrieved from: http://www.stats.gov.nl.ca/.

Parker, G.F. (2004). Outcomes of assertive community treament in an NGRI conditional release program. *Journal of the American Academy of Psychiatry and the Law, 32*(3), 291-303.

Phillips, S.D., Burns, B.J., Edgar, E.R., Mueser, K.T., Linkins, K.W., Rosenheck, R.A., Drake, R.E. & McDonel Herr, E.C. (2001). Moving assertive community treatment into standard practice. *Psychatric Services, 52*(6), 771-779.

Priebe, S., Fakhoury, W., White, I., Watts, J., Bebbington, P., Billings, J.... Wright, C. (2004). Characteristics of teams, staff and patients: associations with outcomes of patients in assertive outreach. *BJP, 185*, 306-311.

Prince, P.N. & Gerber, G.T. (2005). Subjective well-being and community integration among clients of assertive community treatment. *Quality of Life Research, 14*(1), 161-169.

Randall, G.E., Wakefield, P.A. & Richards, D.A. (2012). Fidelity to assertive community treatment programs: A regional survey of adherence to standards. Community *Mental Health Journal, 48*, 138-149.

Redko, C., Durbin, J., Wasylenski, D. & Krupa, T. (2004). Participant perspectives on satisfaction with assertive community treatment. *Psychiatric Rehabilitation Journal, 27*(3), 283- 286.

Roth, D., Snapp, M.B., Lauber, B., & Clarke, J.A (1998). Consumer turnover in identified patterns of community mental health service utilization. *Administration and Policy in Mental Health, 25*, 241-255.

Russert, M. G. & Frey, J. L. (1991). The PACT vocational model: A step into the future. Psychosocial Rehabilitation Journal, 14(4), 7-18.

Salyers, M.P., Rollins, A.L., Clendenning, D., McGuire, A.B., & Kim, E. (2011). Impact of illness management and recovery programs on hospital and emergency room use my Medicaid enrollees. *Psychiatric Services, 62*(5), 509-515.

Solomon, P. (2004). Peer support/peer provided services underlying processes, benefits, and critical ingredients. *Psychiatric Rehabilitation Journal, 27*(4), 392-401.

Sono, T., Oshima, I., Ito, J., Nishio, M., Suzuki, Y., Horiuchi, K., Niekawa, N., Ogawa, M.,...Tsukada, K. (2012). Family support in assertive community treatment: an analysis of client outcomes. *Community Ment Health J, 48*, 463-470.

Stobbe, J., Mulder, N.C.L, Roosenschoon, B.J. & Depla, M., & Kroon, H. (2010). Assertive community treatment for elderly people with severe mental illness. *BMC Psychiatry, 10*(84).

Stull, L.G., McGrew, J.H., Salyers, M.P. (2010). Staff and consumer perspectives on defining treatment success and failure in assertive community treatment. *Psychiatric services, 61*(9), 929-932.

Teague, G. B., Bond, G. R., & Drake, R. E. (1998). Program fidelity in assertive community treatment: Development and use of a measure. *American Journal of Orthopsychiatry, 68*, 216-232.

Udechuku, A., Olver, J., Hallam, K., Blyth, F., Leslie, M., Nasso, M, ... Burrows. (2005).

Assertive community treatment of the mentally ill: service model and effectiveness. *Psychiatric Services, 13*(2), 129-134.

Weirdsma, A.I., Poodt, H.D. & Mulder, C.L. (2007). Effects of community-care networks on psychiatric emergency contacts, hospitalization and involuntary admission. *Journal of Epidemiology and Community Health*, *61*(2), 613-618.

Winter, J.P. & Calsyn, R.J. (2000). The Dartmouth assertive community treament scale (DACTS): A generalizability study. *Evaluation Review, 24*, 319-338.

Appendix A

Script for first contact

ACT Members, please reference the following script when addressing your ACT consumers:

A graduate student from Memorial University, named Leslie Pope, is interested in learning about the Assertive Community Treatment (ACT) team in Central Newfoundland. She is hoping to conduct a study about the ACT team and is interested in collecting some information about you, your experience with ACT and your opinion of ACT. Any information you provide will be anonymous.

She would like to meet with you to discuss your participation in her study. She will explain what exactly she would like to do and answer any questions you may have. This will take about 15 minutes - long enough to meet with her, to discuss the details of the study, and if you agreed to participate, to answer one questionnaire about your satisfaction with your ACT.

Would that be okay?

This is entirely voluntary so if you do not wish to participate you do not have to. This will not affect your usual healthcare.

If you are willing to meet with her, she will come along to one of our visits. This will be within the next few weeks so I will remind you that she is coming before she attends.

MEMORIAL UNIVERSITY Faculty of Education
St. John's, NL Canada A1B 3X8
Tel. 709 864 3404 Fax: 709 864 2345
www.mun.ca

Appendix B

Consent to Take Part in Research

TITLE: An exploratory and descriptive analysis of consumer satisfaction and outcome realization for Central Health's Assertive Community Treatment (ACT) team

INVESTIGATOR(S): Leslie Pope, B.A., Dr. Greg Harris, M.Sc., Ph.D., RPsych.

You have been invited to take part in a research study. Taking part in this study is voluntary. It is up to you to decide whether to be in the study or not. You can decide not to take part in the study. If you decide to take part, you are free to stop your participation at any time. This will not affect your usual health care.

Before you decide, you need to understand what the study is for, what risks you might take and what benefits you might receive. This consent form explains the study.

Please read this carefully. Take as much time as you like. If you like, take it home to think about for a while. Mark anything you do not understand, or want explained better. After you have read it, please ask questions about anything that is not clear.

The researcher will:

- discuss the study with you
- answer your questions
- keep confidential any information which could identify you personally
- be available during the study to deal with problems and answer questions

1. **Introduction/Background:**
   Assertive Community Treatment (ACT) was introduced to Newfoundland in 2008 and Central Newfoundland in 2010. Since that time there have been no formal studies or reviews of the service. Studies and reviews of health care services are very important because they can help to improve the quality of a service, increase community awareness about a service, and provide people who use a service an opportunity to express their opinions about it.

2. **Purpose of study**:

The objectives of this study are to describe Central Health's Assertive Community Treatment (ACT) team; understand some of the characteristics of the people who use ACT services; explore the impact that ACT has on its consumers, in particular how using the ACT services may impact their reliance on acute psychiatric services; and describe consumers' satisfaction with ACT.

3. **Description of the study procedures:**
As a study participant you will be asked to consent to having the researcher review your Meditech and CRMS records and having certain information copied (e.g., age, sex, medical conditions, marital and employment status, rough income estimate, drug and/or tobacco use, hospital admission and visit history, GAF score) and to filling out a brief questionnaire about your satisfaction with Central Health ACT.

4. **Length of time:**
You will be expected to fill out one questionnaire that should take no more than 5-10 minutes.

5. **Possible risks and discomforts:**
In this study, the researcher will review your file for some personal information. This information will be copied from your file and written onto a separate sheet that will not include your name. You will be asked to complete a confidential questionnaire on your satisfaction with the ACT team services you have received. Thus, the researchers in this study anticipate very minor risks associated with your participation. It is possible that you may experience some degree of discomfort in having your personal information (e.g., age, sex, employment status, diagnoses) reviewed by a researcher and/or in completing a questionnaire on your satisfaction with the services you have received. If that is the case, you are free to withdraw from the study within three days of completing the questionnaire. In the event that you felt like you needed to talk to a professional following your partial or full involvement in the current study you could immediately speak to a member of the ACT team or we can arrange for you to visit your local emergency room.

6. **Benefits:**
It is not known whether this study will benefit you.

7. **Liability statement:**
Signing this form gives us your consent to be in this study. It tells us that you understand the information about the research study. When you sign this form, you do not give up your legal rights. Researchers or agencies involved in this research study still have their legal, ethical, and professional responsibilities.

8. **What about my privacy and confidentiality?**
Protecting your privacy is an important part of this study. Every effort to protect your privacy will be made. However, it cannot be guaranteed. There are some exceptional

circumstances where disclosures may have to be made. For example, we may be required by law to allow access to research records.

When you sign this consent form you give us permission to

- Collect information from you
- Collect information from your health record
- Share information with the people conducting the study
- Share information with the people responsible for protecting your safety

Access to records

The members of the research team will see health and study records that identify you by name.

Other people may need to look at the study records that identify you by name. This might include the research ethics board. You may ask to see the list of these people. They can look at your records only when supervised by a member of the research team.

Use of your study information

The research team will collect and use only the information they need for this research study.

This information will include your:

- age in years
- sex
- medical conditions/diagnoses
- marital status
- employment status, including disability or government subsidy status
- rough income estimate
- drug and/or tobacco use
- hospital admission and visit history
- most recent assessment of your overall level of functioning, as reported by the ACT team, using a measure known as a global assessment of functioning (GAF) scale score
- information from the study questionnaire (this is anonymous and thus no one, including the researchers, will be able to link your answers on the satisfaction survey with you personally)

Your name and contact information will be kept secure by the research team in Newfoundland and Labrador. It will not be shared with others without your permission. Your name will not appear in any report or article published as a result of this study.

Information collected for this study will be kept for five years.

If you decide to withdraw from the study, the information collected up to that point

may not be collected. The information collected will only be used for the purposes of this study.
Any information collected from your records will be collected without identifying information, so there will be no way to trace it back to you. Once you have completed this form, the research team will wait a minimum of three days before reviewing your file. If you decide to withdraw from the study within that time frame, no information will be collected.

Hard copies of information collected and used by the research team will be stored in a locked office, in a locked filing cabinet in Dr. Greg Harris' office.

Typed information collected from the chart review will be kept in a secure, password-protected computer file. Leslie Pope and Greg Harris are the people responsible for keeping it secure.

Your access to records
You may ask the researcher, Leslie Pope, to see the information that has been collected about you. This request must be made at this time, while completing this consent form. Once Leslie Pope has collected your information, and if there has been no request to view it, it will be uploaded into a collective group form with no identifying information.

If you are interested in a summary of results from this study, please contact the primary researcher.

9. Questions or problems:

If you have any questions about taking part in this study, you can meet with the investigator who is in charge of the study at this institution. That person is: Leslie Pope or Greg Harris.

Leslie Pope (709) 690-9499; Greg Harris (709) 864-6925

Or you can talk to someone who is not involved with the study at all, but can advise you on your rights as a participant in a research study. This person can be reached through:

Ethics Office
Health Research Ethics Authority
709-777-6974 or by email at info@hrea.ca

After signing this consent you will be given a copy.

Signature Page

Study title: An exploratory and descriptive analysis of consumer satisfaction and outcome realization for Central Health's Assertive Community Treatment (ACT) team

Name of principal investigators: Leslie Pope and Greg Harris

To be filled out and signed by the participant:

Please check as appropriate:

I have read the consent. Yes { }
No { }

I have had the opportunity to ask questions/to discuss this study. Yes { }
No { }

I have received satisfactory answers to all of my questions. Yes { }
No { }

I have received enough information about the study. Yes { }
No { }

I have spoken to Leslie Pope and she has answered my questions. Yes { }
No { }

I understand that I am free to withdraw from the study Yes { }
No { }

- at any time
- without having to give a reason
- without affecting my future care

I understand that it is my choice to be in the study and that I may not benefit. Yes { }
No { }

I understand how my privacy is protected and my records kept confidential. Yes { }
No { }

I agree that the study investigator may read the parts of my hospital Yes { }
No { }
records which are relevant to the study.

I agree to take part in this study. Yes { }
No { }

Signature of participant	Name printed	Year Month Day
Signature of person authorized as	*Name printed*	*Year Month Day*

Substitute decision maker, if applicable _____

To be signed by the investigator or person obtaining consent

I have explained this study to the best of my ability. I invited questions and gave answers. I believe that the participant fully understands what is involved in being in the study, any potential risks of the study and that he or she has freely chosen to be in the study.

_____ _____ _____

Signature of investigator Name printed Year Month Day

Telephone number: _____

Appendix c

Chart Audit

Audit Date: _____

Consent form signed: ☐ Yes ☐ No (only proceed if yes)

Age: _____

Sex: ☐ Female
☐ Male

Length of time with ACT (in months): _____

Hospital History (use length of time with ACT to determine pre-ACT timeline. If participant has been an ACT consumer for 12 months, his/her pre-ACT period is 12 months):

Psychiatric Admissions:

Total days of psychiatric admission (pre-ACT): _____

Total days of psychiatric admission (post-ACT): _____

Visits to Emergency Room:

Total visits to ER (pre-ACT): _____

Total visits to ER (post-ACT): _____

Psychiatric diagnoses (please list):

1. _____
2. _____
3. _____
4. _____

Other medical conditions (please list):

1. _____
2. _____
3. _____
4. _____

Co-morbid substance abuse: ☐ Yes ☐ No

If yes, substance(s): _____

_____

Tobacco Use: ☐ Yes ☐ No

Marital Status:

☐ Married

- ☐ Divorced
- ☐ Widowed
- ☐ Single
- ☐ Other: _____

Employment Status:

- ☐ Employed
- ☐ Unemployed
- ☐ Disability
- ☐ Government subsidy
- ☐ Other: _____

Global assessment of Functioning (GAF) score:

At admission: _____

Most recent: _____ Date of most recent GAF: _____

Rough income estimate:

- ☐ < 9,999
- ☐ 10,000 – 19,999
- ☐ 20,000 – 29,000
- ☐ 30,000 -39,999
- ☐ > 40,000