Allegheny HealthChoices, Inc.

Winter 2010

Outcomes for People on Allegheny County Community Treatment Teams

Community Treatment Teams (CTTs) in Allegheny County work with people who have some of the most complicated histories and needs in the mental health system. People referred to CTT generally have not benefited from traditional services and have had frequent psychiatric hospitalizations, long-term state psychiatric hospitalizations, and/or incarcerations. The first four CTTs in Allegheny County began offering services in 2001. Nine teams following the ACT model are now operating in 2009 (see page 2).

Key aspects of CTT services include:

- **Team approach:** CTT staff includes a team leader, psychiatrist(s), registered nurses, dual diagnosis specialists, vocational specialists, peer specialists, mental health professionals, and other general staff. While some staff members have specialties, they work as a team to meet each individual's needs. There are no more than 10 people served per staff member.
- **Single point of accountability:** CTTs take full responsibility for a variety of services, including case management, psychiatric services, medication management, counseling, housing support, substance abuse treatment, peer support, crisis and diversion services, employment and rehabilitation services, assistance in management of personal finances, and hospital and criminal justice liaison services.
- **Community-based:** CTTs provide most services in the community and see people frequently according to both their short and long-term goals and their immediate needs. To ensure this, CTTs organize each day's work during a daily staff meeting where each person's status is reviewed. Contacts for the day are based on actions outlined in individuals' recovery plans and their immediate needs.
- **Recovery-focused:** CTTs are expected to base services on the belief that people can recover from serious mental illness and substance abuse. They work with people as partners in completing assessments and recovery plans. CTTs focus not only on treatment and housing, but on helping people develop valued roles in the community in the areas of employment, education, and natural supports. CTTs develop creative, individualized ways to help people engage in treatment and find needed resources.

This report describes the population using CTT services, and whether people have reduced their psychiatric hospitalizations, improved their housing, pursued employment or educational opportunities, and developed natural supports during their time with CTT.

While research provides extensive evidence of this model's effectiveness, specific goals for specific outcomes (e.g., reduction in hospitalizations) have not been established. This report focuses on change over time at the consumer level along with completed and planned quality improvement efforts. The report uses state hospital data, claims data for behavioral health services, and data entered in the outcomes database by CTTs covering 2001 through 2008.

CTTs in Allegheny County

CTTs in Allegheny County play a critical role in the service system – they work with individuals with very complex needs and have been instrumental in providing intensive services to people being discharged from Mayview State Hospital as part of the closure.

CTT capacity has more than doubled since 2001, with the nine teams in 2009 able to work with 850-900 individuals. See page 2 for more information on CTT development, quality improvement, and monitoring.

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Allegheny County Community Treatment Teams (CTTs)

In partnership with Community Care Behavioral Health and Allegheny HealthChoices, Inc. (AHCI), the Allegheny County Office of Behavioral Health (OBH) has built a network of CTTs to work with people both eligible and not eligible for Medicaid who need these intensive services. CTTs follow the evidence-based model of Assertive Community Treatment (ACT).

Highlights of CTT development include:

2001: Mercy Behavioral Health, Residential Care Services, and Western Psychiatric Institute and Clinic (WPIC) start adult CTTs. WPIC also starts a transition-age CTT for young adults 16-25 years.

2006: Mercy starts a second CTT, primarily for people being discharged from Mayview State Hospital.

2007: NHS Human Services starts a CTT primarily for people being discharged from Mayview State Hospital.

2008: Family Services of Western Pennsylvania, NHS Human Services, and Mercy start new CTTs. Mercy assumes operations of the original Residential Care CTT.

By the end of 2008, nine CTTs were in operation in Allegheny County with the capacity to work with 850-900 individuals. Mayview State Hospital closed at the end of December 2008; 81% of people discharged to Allegheny County as part of the closure are receiving CTT services.

CTTs receive much attention and support from OBH, Community Care and AHCI. Monitoring and quality improvement occurs on several different levels:

- On an ongoing basis, OBH, Community Care and AHCI collaborate with CTTs to help with resource needs for specific people. Technical assistance on following the ACT model and other evidence-based practices is also available.
- Each quarter, OBH, Community Care, AHCI, and CTT staff meet to discuss and problem-solve system issues facing CTTs. Issues have included addressing barriers to successful community inpatient diversions, improving collaboration with residential providers, and forensic issues.
- CTTs, OBH, Community Care and AHCI review regular reports on service and outcomes data compiled by AHCI. Concerns raised by the data are addressed in quarterly network meetings or addressed with teams individually through technical assistance.
- Each quarter, OBH, Community Care, AHCI, and CTT staff meet with the CTT Advisory Board (comprised of people receiving CTT services) to hear their concerns and feedback. CTT providers have begun convening their own agency CTT Advisory Boards.
- Annually, OBH, Community Care and AHCI conduct a complete evaluation called a fidelity assessment to ensure that CTTs are following the ACT model. Demonstrating a commitment to using the most current resources available, the County has piloted the latest version of the ACT fidelity assessment (the TMACT).

These quality improvement processes are intended to support the hard work of the CTTs and to assure that people are receiving services that follow the ACT model.

CTTs and the ACT Model

Extensive research has shown that the Assertive Community Treatment (ACT) model, originally developed in the 1970s, helps people in their recovery from mental illness. The Substance Abuse and Mental Health Services Administration (SAMHSA) has identified ACT as an evidence-based practice and has created toolkits to help agencies and local governments develop ACT programs. ACT can help people:

- Stay out of the hospital and jail
- Manage the symptoms of their mental illness and substance abuse disorders
- Find stable housing of their choice
- Get and keep employment
- Develop valued roles and supports in the community

For the Allegheny County CTTs, ACT model adherence is monitored annually and teams are expected to address any areas needing improvement. Without model adherence, the positive outcomes demonstrated through research cannot be expected.

A Unique Partnership

The Allegheny County CTT system is a unique partnership between the Office of Behavioral Health, Community Care, AHCI, and the providers.

- All share a common goal of assuring high-quality, high-fidelity services.
- Quality improvement is taken seriously, and data to measure team performance and consumer outcomes is used extensively.
- Technical assistance is freely available to all teams.

Access and Retention in CTT Services in Allegheny County

CTTs are expected to provide long-term services. Engaging people in treatment is an important goal for CTTs. At the same time, CTTs help people develop skills and supports outside CTT so that they eventually need less intensive services. According to the ACT model, CTTs should retain 95% of their caseload over a 12-month period.

Chart 1 shows the lengths of time people have been receiving CTT services. CTTs have worked with 762 individuals through the end of 2008. The largest percentage (26%) received CTT services for less than one year. Most of these individuals (72%) are new to CTT in 2008 as the service expanded and a smaller proportion was discharged from CTT within the first year (28%). Many individuals (74%) have received CTT services for multiple years.

Chart 2 describes the discharge rates from CTT. Of the 762 people who have received CTT services since 2001, 72% are still receiving CTT and 15% have been discharged voluntarily because they no longer wanted or needed the services.

Seven percent of people (40 individuals) died while receiving CTT services. The majority of deaths have been from natural causes (68% of the 40 deaths). Many individuals receiving CTT services have chronic medical conditions and overall poor health. Two deaths were accidental (5%), two were drug overdoses (5%), and two were suicides (5%). Seven people (18%) had an undetermined cause of death, meaning either an autopsy was not done or the county/CTT did not receive the results.

Overall, the CTTs have maintained their caseloads as expected by the ACT model. Access and retention in services is monitored in a number of ways.

- Community Care reviews all referrals and CTTs are expected to start engaging with people immediately.
- All discharges must be reviewed by Community Care and/or the Office of Behavioral Health.
- The Allegheny County CTT performance standards outline expectations for CTTs' planning assertive, creative engagement strategies, a component of services that is also measured in the annual program evaluation (fidelity assessments).

While the CTTs have retained their caseloads as expected by the ACT model, some improvements in assertive engagement have been recommended over the years as part of the annual fidelity assessments. As a result, technical assistance in developing engagement plans and organizing community contacts has been provided to a number of teams and will continue as necessary.

Chart 1. Length of Time Receiving CTT Services

Time	Percent of people
< 1 year	26%
1-2 years	19%
2-3 years	11%
3-4 years	10%
4-5 years	9%
5-6 years	9%
6-7 years	12%
7+ years	4%
Total	100%

Chart 1 counts the amount of time people were receiving CTT services through 12/31/08 or their discharge date from CTT. It includes 762 individuals.

Chart 2. Discharges from CTT Services

Of the 762 people using CTT services since 2001:

- 72% (550 people) are still receiving CTT services
- 15% (114 people) were discharged voluntarily
- 8% (58 people) moved out of Allegheny County
- 7% (40 people) died while receiving CTT services

Conclusion:
Allegheny County CTTs have worked with close to 800 individuals. The great majority of people have received services for multiple years, and the CTTs have retained people in services.

Demographics of People on CTTs

As shown in Chart 3, CTTs work with people of varying ages, with the WPIC Transition Age CTT working with most individuals under 25 years. The teams work with a slightly higher proportion of males and Caucasians.

Schizophrenia is the most common primary diagnosis, followed by bipolar disorder/major depression. There is a large percentage of people with deferred primary diagnoses; these are people either new to CTT or people who were discharged from CTT before mandatory reporting of diagnosis data in the outcomes database began.

Conclusion:
CTTs work with people of varying ages, races and both genders, with the largest percent of people having a primary diagnosis of schizophrenia.

Chart 3. Demographics of People on CTTs

	Category	% of people
Age	16-25	20%
	26-35	16%
	36-45	21%
	46-55	28%
	56-65	10%
	66 and older	3%
	Total	100%
Race and Gender	African-American females	20%
	African-American males	24%
	Caucasian females	23%
	Caucasian males	29%
	Other races, both genders	4%
	Total	100%
Primary Diagnosis	Schizophrenia	43%
	Diagnosis deferred	32%
	Bipolar disorder/ Major depression	13%
	Other primary diagnosis	10%
	Total	100%
	Number of people who began CTT services before 12/31/08	762

Community Tenure for People Using CTT Services

One of the primary goals of CTT services is to help people improve their community tenure – helping them stay out of psychiatric hospitals, jail, and other intensive hospital or residential services.

Chart 4 compares community tenure in the year before people start CTT services to each full year they receive CTT services. Stays in state mental hospitals, community psychiatric hospitals, county jail, extended acute services, residential treatment facility for adults (RTF-A), and inpatient and residential detoxification or rehabilitation substance abuse facilities are included in the community tenure calculations for this report.

In the year before CTT, people spent on average 211 out of 365 days (58%) in the community, and 154 days in a hospital, jail or other restrictive treatment setting. During their first year with CTT, community tenure improves dramatically to 266 out of 365 days (73%), then to 306 out of 365 days (84%) in their second year with CTT. The percentage of time spent in the community in subsequent years is consistently between 85% and 90% of the year.

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Chart 4. Average Number and Percent of Days in the Community Before and During CTT Services

	# of people	Average # of days in the community (out of 365 days)	% of days in year
1 year before	561	211	58%
CTT year 1	561	266	73%
CTT year 2	419	306	84%
CTT year 3	332	316	87%
CTT year 4	258	321	88%
CTT year 5	192	319	87%
CTT year 6	121	329	90%
CTT year 7	33	323	89%

Each row in this chart includes a different number of people. Each individual's total number of full years with CTT up to 12/31/08 or their CTT discharge date was determined. Each individual is included in the rows representing each year they have been on CTT. For example, someone with five full years on CTT would be included in the 1 year before CTT row and CTT years 1-5 rows.

Community Tenure, continued

Additionally:

- Very few people from CTT have used the RTF-A or extended acute services in either the year before or years with CTT (less than 1% per year for extended acute and less than 5% for the RTF-A).
- About 20% of people on CTT were in jail the year prior to CTT services. Each year with CTT, between 16% and 22% of people still spend some time in the county jail, some for very short stays and others for several months.
- About 12% of people on CTT were in inpatient or residential substance abuse treatment facilities in the year prior to CTT. Each year with CTT, between 3% and 9% have needed these services.
- Community psychiatric hospitals and state mental hospitals accounted for the largest number of institutional days both before and after CTT services begin.

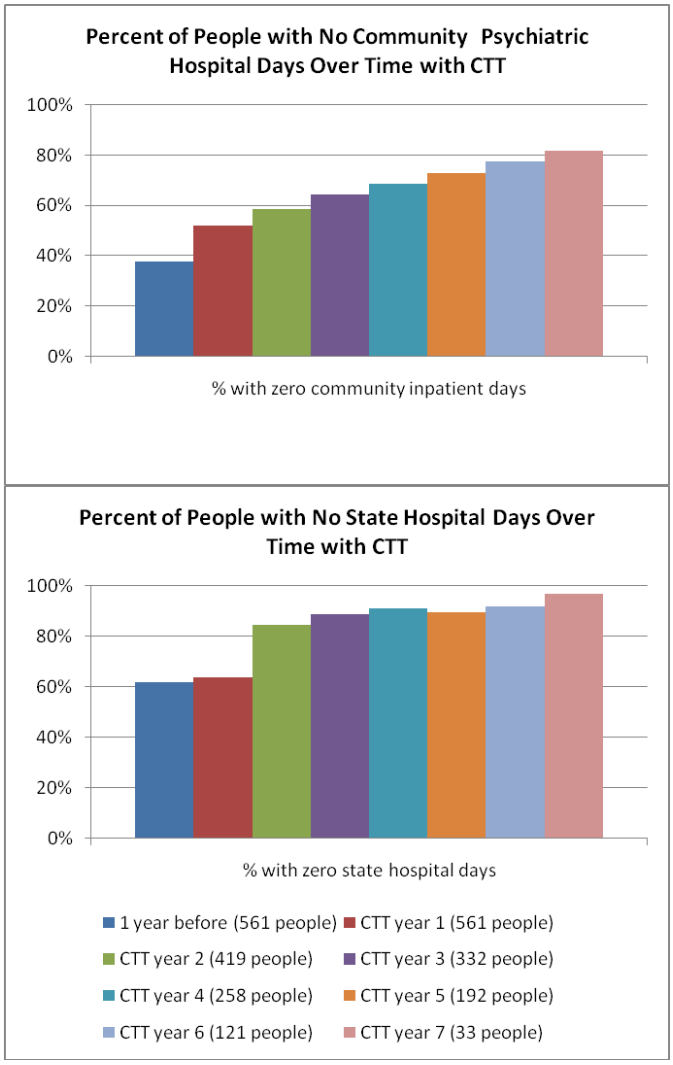
Chart 5 shows the increase over time in the percentage of people who stay out of community and state hospitals. In the year before CTT, less than 40% stayed out of community hospitals and 60% stayed out of a state hospital. Each year, the percentage of people on CTT for that time period who stayed out of the hospital increased, to 70% - 80% of people with zero community hospital days and over 90% of people with zero state hospital days.

Reducing community psychiatric hospitalizations has been a recurrent quality improvement topic, with some teams demonstrating greater success than others in addressing this area. According to fidelity assessments, CTTs generally have been involved with inpatient providers and take full responsibility for providing crisis services and diverting people from the hospital.

At the system level, OBH, Community Care, AHCI and the CTT providers have worked with the larger inpatient providers to improve the diversion process and have also organized discussions with residential providers to encourage better crisis planning.

Incarcerations are an important target of quality improvement areas as well. Efforts are underway to train forensic specialists on each team, assure they have access to people who are in jail, and improve communication with other county forensic services.

Chart 5. Community and Psychiatric Hospital Days



See the footnote on Chart 4 for an explanation of the number of people included in this analysis.

Conclusion:
CTTs have had the greatest success in helping improve community tenure through reducing the number of days spent in psychiatric community hospitals and state mental hospitals. While many people do maintain 100% community tenure in a given year, a significant number have still needed more intensive services. About 20% of people each year spend some time in jail.

Housing for People Using CTT Services

CTTs also help people find and maintain the housing of their choice. Chart 6 shows the differences in housing arrangements at three time points:

- CTT enrollment
- End of first year receiving CTT services
- At the end of 2008 or CTT discharge

At CTT enrollment, over 40% of people were living in institutional settings, particularly state hospitals. By the end of year one, many have moved to settings that provide substantial care or to independent settings. This trend out of institutional settings toward more independent settings continues after people's first year with CTT. At the end of 2008 or CTT discharge:

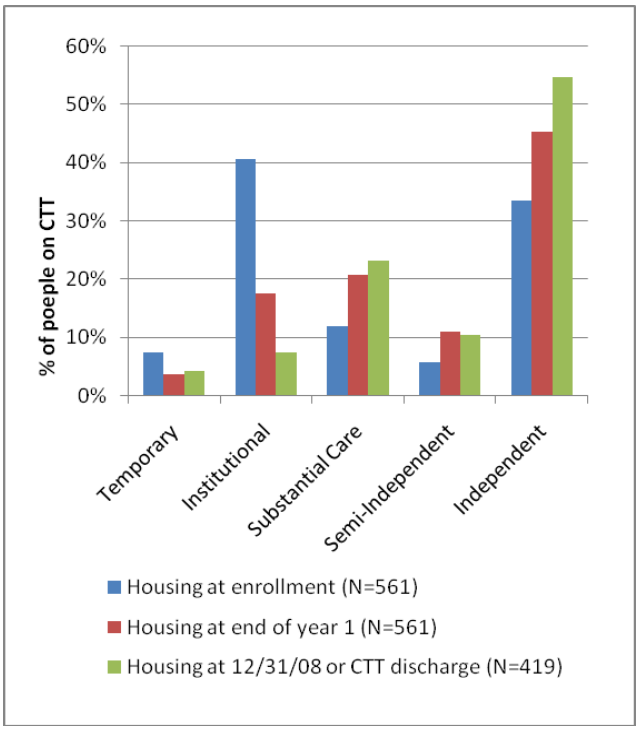
- 55% of people were living in independent settings
- 23% were living in substantial care settings
- 10% were living in semi-independent settings
- 4% were in temporary settings
- 7% were in institutional settings

About one third of people were living independently when they started CTT services. Close to 80% of these individuals were still living in independent settings at the end of 2008 or at CTT discharge; only a small number had moved to institutional or temporary settings.

The independent category includes living independently and living with family. Most of the individuals living with family fall into the youngest age category and receive services from the WPIC-Transition Age CTT.

Conclusion:
Many people using CTT services move from institutional settings to more independent settings within a year of starting CTT services. Most people living in independent settings at the time of CTT enrollment maintain independent housing.

Chart 6. Housing at CTT Enrollment, Year 1, and 12/31/08 or CTT Discharge



Housing categories

Temporary: people living in shelters, missions, or homeless

Institutional: people living in inpatient settings, state mental hospitals, jail, long-term structured residences, or nursing homes

Substantial care: people living in personal care homes or drug and alcohol residential rehabilitation facilities

Semi-independent: people living in supervised or supported apartments, single room occupancy, drug and alcohol halfway houses, and other community-based housing

Independent: people living in a family setting or living on their own or in their own apartment

Employment and Education Activities for People Using CTT Services

For many people with mental illness, employment is a key part of their recovery. Research shows that individuals with serious mental illness want to work and can do well in competitive employment positions. CTT staff includes employment specialists who help people find, get and keep employment and pursue their educational goals.

Chart 7 shows that the great majority of individuals (83%) were unemployed when they begin receiving CTT services. After the first year with CTT, 73% are unemployed, with 27% involved in some vocational activity. Most commonly, people were involved in sheltered employment (e.g. one provider operates a car wash on site) or paid, competitive employment. A larger proportion of people with more than one year with CTT were employed.

Very few people on the adult CTTs are involved in secondary or post-secondary education. Most people pursuing education have been on the WPIC-Transition Age CTT, where the average age of people on the team is 22 years.

The ACT fidelity assessment guidelines indicate that 40% of people on CTT could benefit from supportive employment services. Findings show that teams have had continued difficulty in providing evidence-based supportive employment services within CTT. A technical assistance plan, which will be accompanied by a rate incentive for meeting outcomes, is in the planning stages for late 2009-2010.

Chart 7. Most Frequently Reported Employment and Education Activities for People Using CTT Services

	At CTT Enrollment (N=561)	At end of year 1 on CTT (N=561)	12/31/08 or CTT discharge (N=419)
Unemployed	83%	73%	61%
Paid, sheltered employment	6%	7%	11%
Paid, competitive employment	2%	7%	16%
Secondary or post-secondary education	12%	12%	11%

This table includes the most frequently used reporting categories. Very few people are reported as actively seeking work, involved in training

Conclusion:
While some individuals do find employment opportunities after starting CTT services, research suggests that a larger group of people could find competitive employment with the support of CTT.

Natural Supports for People Using CTT Services

Developing natural supports, meaning supports in the community outside of those offered by CTT, is also an important part of recovery for many people with mental illness.

Chart 8 shows that a large percent of people had regular support (either daily, weekly or monthly) from friends and/or family when starting CTT services, but few were involved in recreational activities, peer support, or self-help supports. This pattern is consistent at the end of the first year with CTT. A larger proportion of people with more than one year on CTT have developed other natural supports; 82% have reported support from family, 17% have reported recreational activities, 23% have reported peer supports, and 12% have reported involvement in self-help activities.

Fidelity assessment findings as well as input from the CTT Advisory Board indicate teams could improve in their *systematic* provision of wellness management services and in helping to connect people to different community resources. Tracking this data accurately is also a challenge. Technical assistance around recovery planning and wellness management activities will continue to address these issues.

Chart 8. Natural Supports for People Using CTT Services

	At CTT Enrollment (N=561)	At end of year 1 on CTT (N=561)	12/31/08 or CTT discharge (N=419)
Friends/family	68%	69%	82%
Recreational activities	10%	9%	17%
Peer supports	16%	15%	23%
Self-help supports	6%	6%	12%

Conclusion:
While many individuals do have some amount of support from friends and/or family, a small proportion develop support activities outside of CTT.

Future Quality Improvement Efforts

CTT services have grown significantly in Allegheny County since 2001. CTTs have demonstrated success in helping people improve their community tenure and move from institutional settings to more independent living arrangements.

CTTs have had more limited success in reducing or preventing incarcerations, assisting people in finding competitive employment or pursuing educational opportunities, and developing supports outside of CTT. Through 2009-2010, Community Care, OBH, AHCI and the CTT providers plan to focus on:

- Maintaining or improving adherence to the Assertive Community Treatment (ACT) model and the Office of Mental Health and Substance Abuse Services (OMHSAS) requirements for ACT/CTT through fidelity assessments and ongoing technical assistance
- Implementing the supported employment evidence-based practice consistently across teams to more effectively work with people on employment goals
- Developing a better understanding of forensic issues in order to reduce incarcerations
- Developing a better understanding of the supports provided by CTT and natural supports, and people's needs and interests in developing community roles

2009-2010 Target Areas for Improvement

- **Adherence to the ACT model**
- **Competitive employment**
- **Forensic issues**
- **Supports and community integration**

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Visit us at www.ahci.org to read related reports on CTT and to learn more about AHCI's training and technical assistance services for CTT/ACT.

Our mission is to assure equitable access to quality, cost-effective behavioral health care that promotes positive clinical outcomes, recovery, and resiliency.

Allegheny HealthChoices, Inc. (AHCI) is an innovative non-profit agency dedicated to supporting the provision of high-quality mental health and substance abuse treatment. Our services cover a range of areas:

- System Development and Planning
- HealthChoices (Medicaid) Oversight
- Assertive Community Treatment (ACT) and Community Treatment Teams (CTT)
- Housing
- Information Systems