

COMMUNITY HOSPITAL
EMERGENCY DEPARTMENT ADMISSIONS
FOR INDIVIDUALS WITH
BEHAVIORAL HEALTH DISORDERS
IN DURHAM COUNTY



BACKGROUND

Recent reports have noted increasing emergency department (ED) use nationwide by individuals with untreated psychiatric and/or substance use disorders which contributes to overcrowding. The Institute of Medicine (IOM) has declared hospital-based emergency care in the U.S. as “at the breaking point.”¹ The IOM report describes EDs as over-crowded, under-reimbursed, and carrying large loads of uncompensated care. In the face of these problems, some hospitals have closed their EDs, putting more pressure on remaining facilities. While the U.S. population rose by 12 percent between 1993 and 2003 and ED visits grew by 26 percent, a net of 425 hospital-based EDs closed during that time.²

In past years, Durham County has had a history of high rates of admissions of individuals with behavioral health disorders (defined as either mental illness, substance abuse, or both) to community emergency departments. In addition, during Fiscal Years 2007 and 2008 The Durham Center had the highest rates of admissions per capita to the State psychiatric hospitals.

WHY THIS IS A PROBLEM

While local emergency departments are a critical source of care for people, the use of EDs for mental health and substance abuse treatment is considered less than optimal because they are:

- Significantly more expensive than other community-based options. A typical emergency room visit for someone with a behavioral health disorder costs an average of \$1500³, while a visit to the Durham Center Access crisis facility costs approximately \$260.
- Challenged in staffing capability to handle behavioral health crises due to the need to cover physical health crises such as cardiac arrests and serious accidents.
- Unable to provide the continuity of care that many underserved clients need, many times leaving the only option being transfer to the State psychiatric hospital.

PURPOSE OF THIS REPORT

This report aims to provide awareness of how the Durham community has responded to increasing ED and State hospital admissions by taking a strategic and collaborative approach to addressing the needs of our most vulnerable citizens, and to share encouraging data reflecting positive reversals in these trends over the past two years.

WHAT HAS CHANGED

The Durham Center **Crisis Plan** was developed in 2007 at the request of the State to ensure that adequate capacity exists to care for individuals experiencing a behavioral health crisis. The purpose of the plan was to identify existing crisis services and to explore and identify alternatives to emergency departments and State hospital admissions.

¹ Institute of Medicine, 2006a, available at www.iom.edu.

² Coffey RM, Houchens R, Chu BC, Barrett M, Owens P, Stocks C, Vandivort-Warren R, Buck J, Emergency Department Use for Mental and Substance Use Disorders. Online August 23, 2010, U.S. Agency for Healthcare Research and Quality (AHRQ). Available at www.hcup-us.ahrq.gov/reports.jsp.

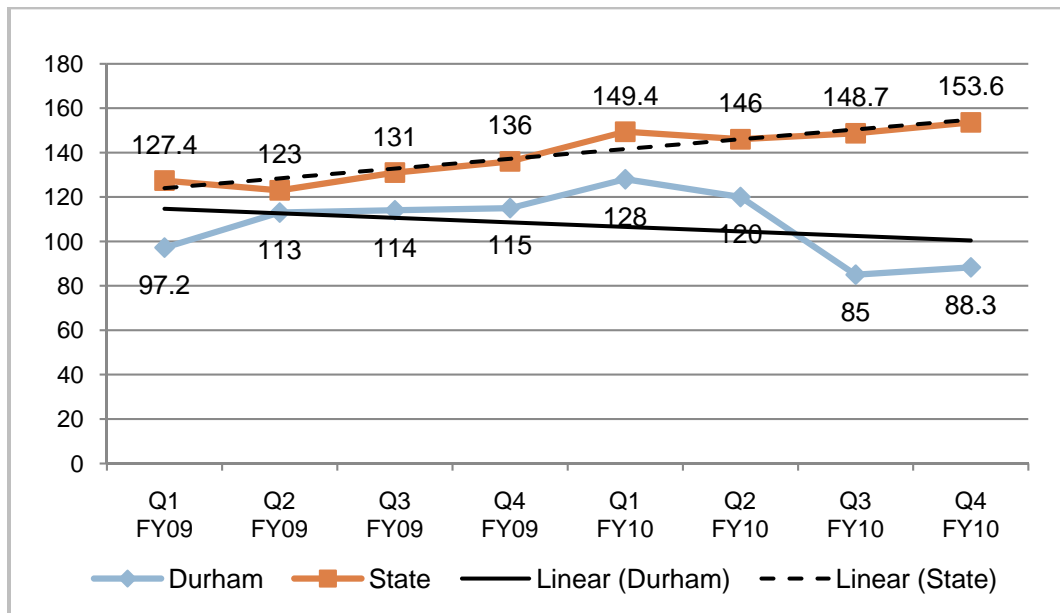
³ U.S. Department of Health and Human Services, Agency for Healthcare Research & Quality, 2008.

A **Hospital Plan** was created in 2008 in response to Durham being ranked as #1 in hospital admissions per capita in North Carolina.⁴ The Durham Center (TDC) created a plan that focused on creating and enhancing Durham’s capability for rapidly and seamlessly responding to individuals in need in the community, with an emphasis on ensuring a comprehensive and responsive continuum of services and support is available. It focused on ensuring continuity of care with providers and established an infrastructure within the LME and among community partners to address system gaps and barriers.

After these plans were put in place, the ED rate for Durham County has been lower than the state average and continues to decrease. In FY08 Durham’s ED admission rate was approximately 97 per 10,000 people, with the state average at approximately 127 per 10,000 individuals (23% higher than Durham’s rate). With Durham’s rate continuing to decrease, with an overall rate of 88 per 10,000 people (31% lower than the statewide rate) in the fourth quarter of FY10, The Durham Center is rated in the top 15% of LMEs with the lowest rate of emergency room admissions for all disability groups, behind only The Guilford Center, Beacon Center and Five County.

THE DATA

RATE OF INDIVIDUALS WITH ANY DIAGNOSIS OF MH/DD/SA ADMITTED TO EDs
(per 10,000 population)



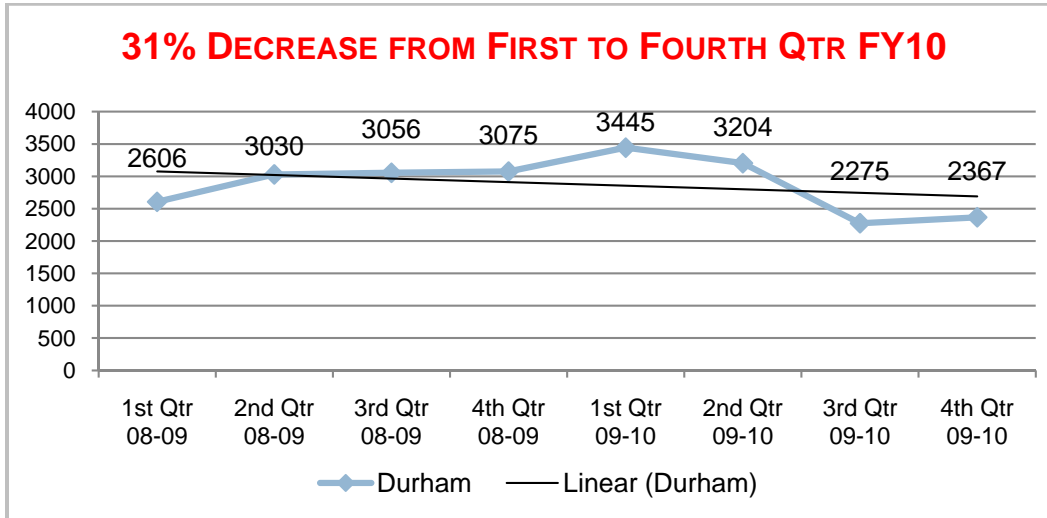
The chart above reflects the differences (per 10,000 individuals) between statewide rates and Durham’s rates of ED admissions for any mental health, developmental disability, or substance abuse diagnosis between FY09 and FY10. While the state shows increased ED rates of 21%, Durham’s rates have decreased overall by 9%.

⁴ State Psychiatric Hospital Admission Report (7/07-6/30/08 and 7/1/08-6/30/09).

Individuals with Any Behavioral Health Diagnosis or Developmental Disability

Durham emergency department admissions related to individuals with a mental health, developmental disability or substance abuse disorder have decreased by 31% from a high of 3445 in the first quarter of FY10 to 2367 in the fourth quarter (based on actual admissions).

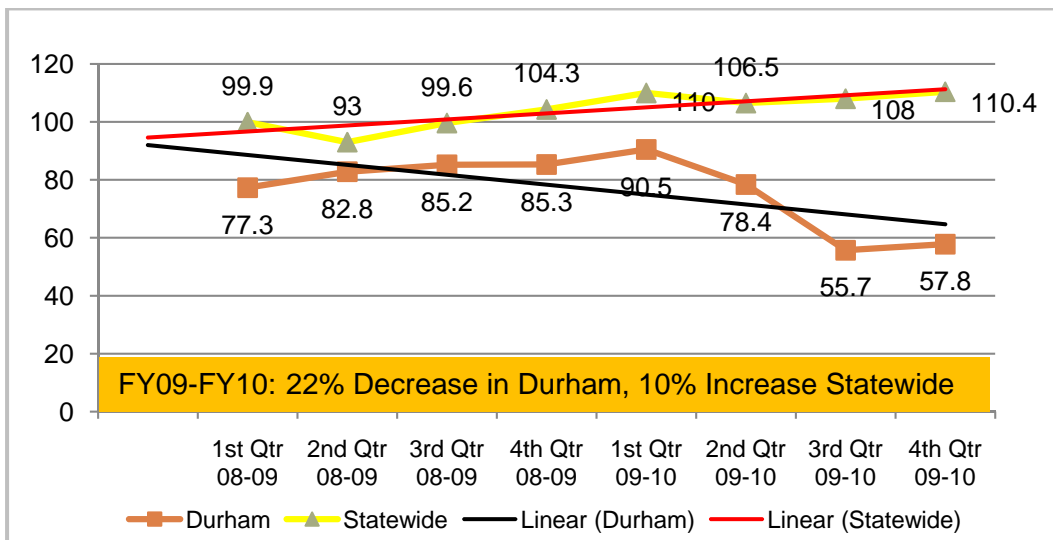
DURHAM BEHAVIORAL HEALTH ADMISSIONS TO EDs



Individuals with a Mental Illness

Durham’s rate of emergency room admissions for individuals with a mental illness diagnosis has continued to decrease over the past year, with a record low rate of 55.7 per 10,000 people as compared to the state rate of 108 per 10,000 in the third quarter of FY10. The state overall rate increased by 10% between FY09 and FY10 while Durham’s rate decreased by 22% during the same period.

RATE OF INDIVIDUALS WITH MENTAL ILLNESS ADMITTED TO EDs (per 10,000 population)

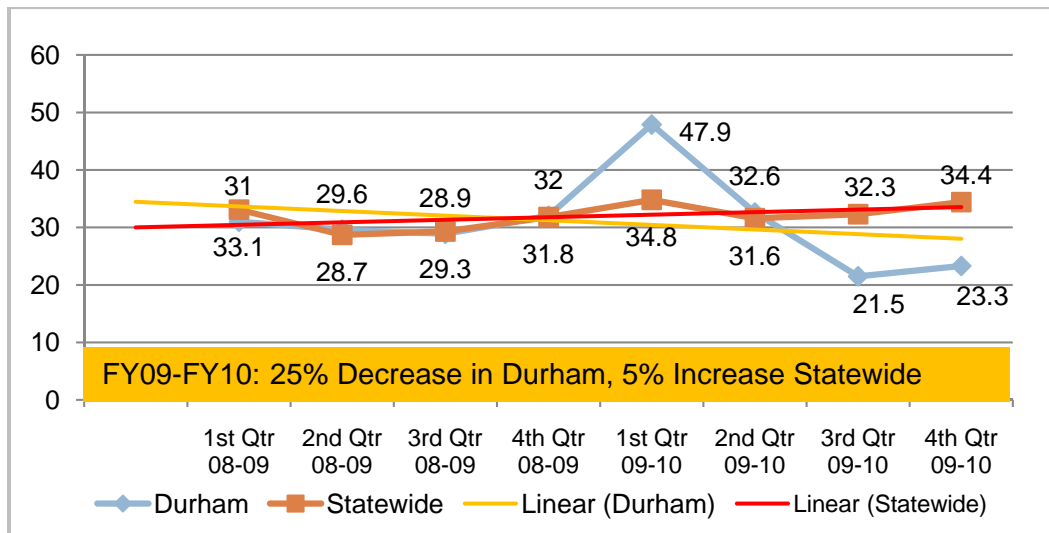


Individuals with a Substance Abuse/Use Diagnosis

The rate of co-occurring diagnoses of mental illness and substance abuse disorders is quite high for those presenting to the Durham Center Access crisis facility, at approximately 75%.⁵ The Durham Center LME has worked with providers to develop treatment options that meet best practices in behavioral health (described on pages 7-9). Nationally, treated prevalence rates for individuals with substance abuse disorders is low, at 8.2% in 2010⁶. TDC's treated prevalence rate of 12% for individuals with substance abuse disorders is higher than the national and state averages. North Carolina's average treated prevalence rate is 10%. One major reason that treated prevalence rates for individuals with substance abuse disorders is so low is the challenge of keeping them in treatment. This is one reason The Durham Center provides training in motivational interviewing, a best practice in substance counseling work.

Admission rates of individuals with substance abuse diagnoses to emergency departments in Durham are lower than the state average per 10,000 people (23.3 versus 34.4 in the fourth quarter of FY10, which is a 46% difference). The next chart reflects these differences in rates of emergency room admissions among these individuals in Durham and statewide.

RATE OF INDIVIDUALS WITH SUBSTANCE ABUSE/USE ADMITTED TO EDs (per 10,000 population)



The chart above shows that the rate of individuals with a substance abuse diagnosis admitted to an ED in Durham has decreased by 25% since FY09, while the statewide rate has increased by almost 5%.

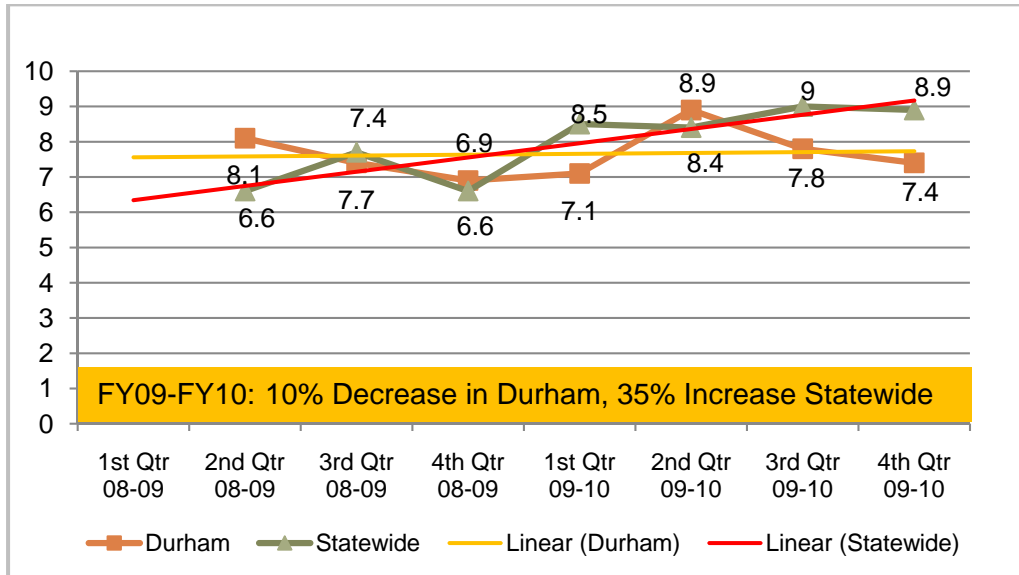
Individuals with a Developmental Disability

The rate of Durham's admissions for individuals with developmental disabilities has decreased by approximately 10% while the statewide rate has increased by 35% over the past two years.

⁵ Durham Center Access Reports, 2010.

⁶ NC Substance Abuse Prevalence Rates: SAMHSA, Office of Applied Studies, National Surveys on Drug Use and Health, 2007 and 2008, published June 2010. The national average for 2010 was 8.2%.

**RATE OF INDIVIDUALS WITH DEVELOPMENTAL DISABILITIES ADMITTED TO EDs
(per 10,000 population)**



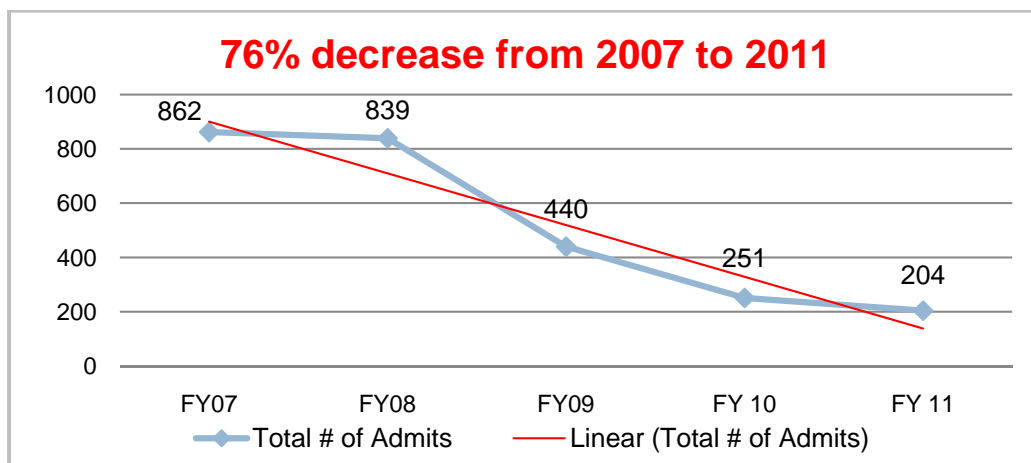
EMERGENCY ROOM ADMISSIONS AND STATE PSYCHIATRIC HOSPITAL ADMISSIONS

One indicator of success in managing the care of individuals with behavioral disorders is to decrease the rate of hospitalizations. Durham has focused on State psychiatric hospitalizations particularly due to being ranked #1 in numbers per capita for admissions in FY07 and FY08. Facilitating the decrease in emergency department admissions also decreases admissions to the State psychiatric hospitals because fewer individuals are referred from the emergency rooms.

State Psychiatric Hospitalizations

A major goal of The Durham Center has been to reduce State psychiatric hospitalizations for those individuals who can be served in the community. The next chart shows the downward trend in these admissions since FY07.

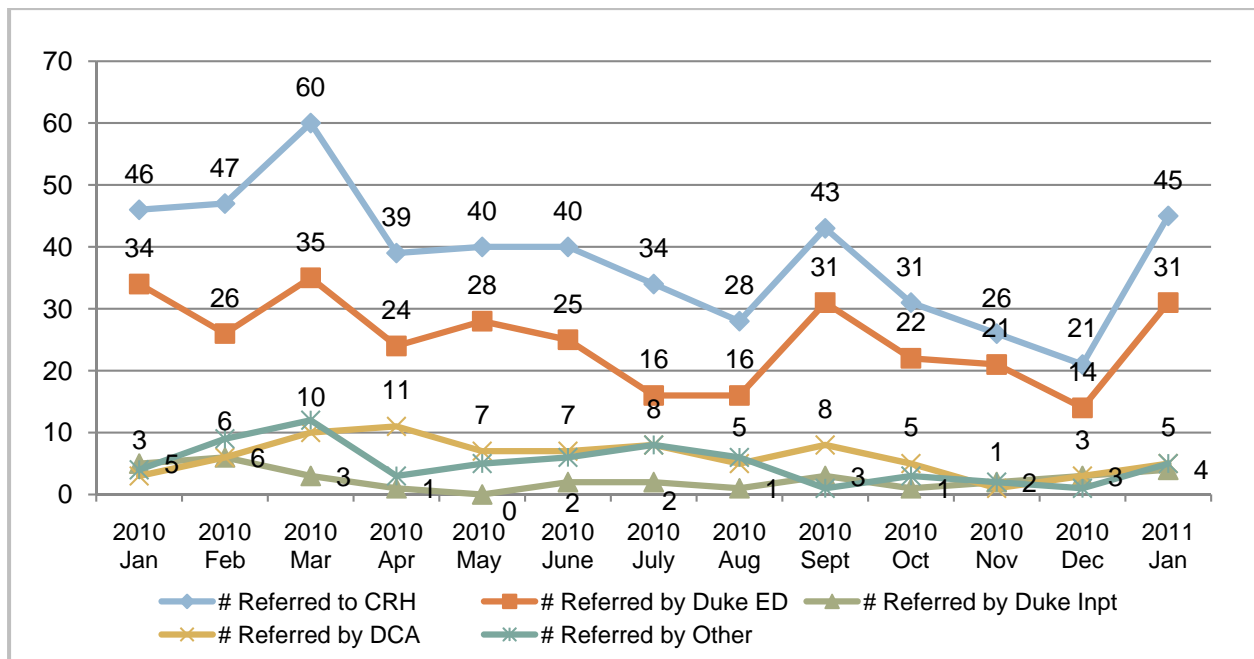
DURHAM ADMISSIONS TO STATE HOSPITALS



The chart on the previous page reflects a continuing decrease in admissions with a 76% decrease overall from FY07 to FY11 (FY11 data are annualized as actual data from July-December 2010). Initiatives such as the Durham Center Access crisis facility, mobile crisis team, walk-in assessments, assessments on site at the Durham County Jail, and increased care coordination for high-risk consumers have played a major part in reducing hospital admissions.

INDIVIDUALS ON DELAY FOR ADMISSION TO CENTRAL REGIONAL HOSPITAL

The State psychiatric hospitals began delaying admissions due to capacity issues in 2007. The Durham Center has tracked referrals to Central Regional Hospital (CRH) when the hospital is on delay status, which occurs daily, to determine where there might be referral concerns from local hospitals, emergency rooms and the Durham Center Access Crisis Facility. The following chart shows Durham community referrals to CRH from January of 2010 to January of 2011⁷.



The data in the chart above reveal that more referrals to CRH come from the Duke Emergency Department than from any other source. On average, 42% of the referrals from the Duke ED are admitted to CRH each month. Other dispositions from the Duke ED include admission to their own inpatient unit, admission to other community hospitals, and returning consumers home. The average wait time between referral and admission to CRH (while in the ED) is 56 hours over this period January 2010 to January 2011. The Durham Center is working on an initiative with Duke ED staff to identify additional strategies to reduce wait times in there as well as reducing inappropriate referrals to CRH. Fewer individuals are referred to CRH by Durham Center Access, most likely due to its ability to stabilize individuals in observational and short-term stay residential beds.

⁷ Central Regional Hospital Delay Data, Admissions Department, 2010 and 2011.

INDIVIDUALS SEEN FOR BEHAVIORAL HEALTH SCREENINGS AT THE DURHAM JAIL

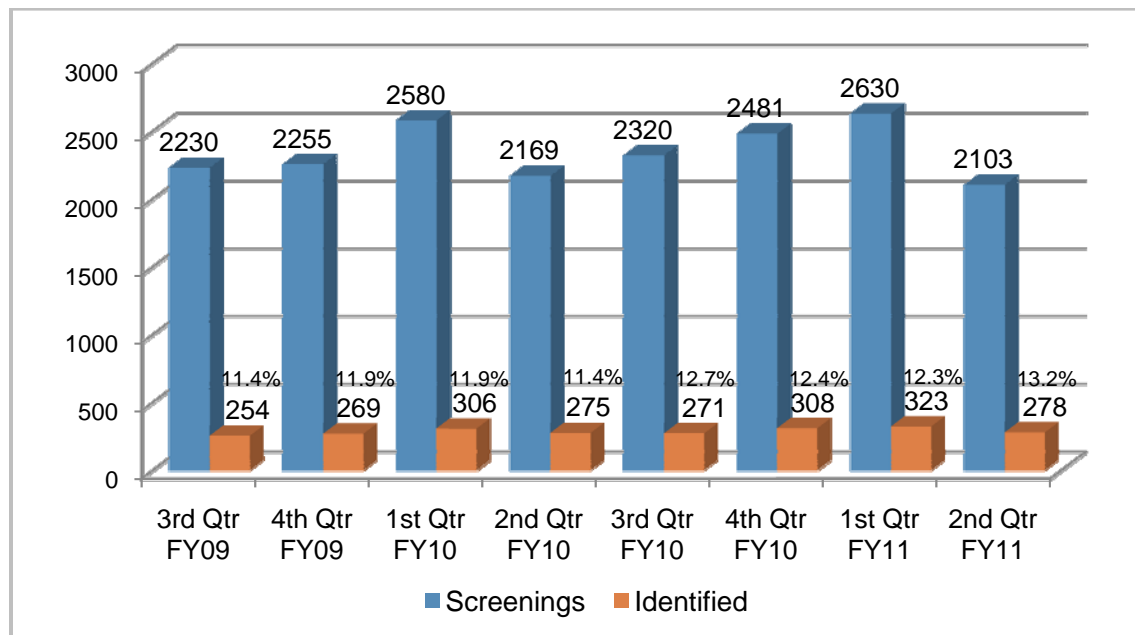
National statistics from a study conducted by UNC in 2007 indicate that many inmates are unable to access treatment in the criminal justice system. Data show that nationally up to 64% of persons in jail have a mental illness and an estimated 4-10 percent are developmentally disabled.⁸

As a result of individuals being incarcerated who may have a behavioral health disorder, and the mandate of Senate House Bill 1473 implemented in January of 2008, local law enforcement, The Durham Center and local Departments of Health and Humans Services are required to work together on various issues concerning the mental health of inmates housed in the county jail. All offenders must be administered a standardized evidence-based mental health screening at the time of booking.

The Durham Center has funded two full-time social work positions to conduct these screenings and to liaise with the jail psychiatrist regarding medication issues. TDC also funds a psychiatrist's time for 8-10 hours per week at the jail to conduct medication evaluations.

As shown on the chart below, over the past two fiscal years more than 2,000 individuals per quarter at the Durham Jail are screened for a behavioral health disorder. These screenings and other liaison work facilitates offenders obtaining appropriate treatment while incarcerated and being connected to treatment when they are released. According to the Durham County Sheriff's office, admissions average approximately 10,000 per year to the Durham County Jail. All inmates received a screening at time of admission. Individuals identified for needing more intensive evaluations (most likely have a behavioral health diagnosis) comprise approximately 12% of jail admissions.

DURHAM COUNTY JAIL ADMISSIONS AND BEHAVIORAL HEALTH SCREENINGS

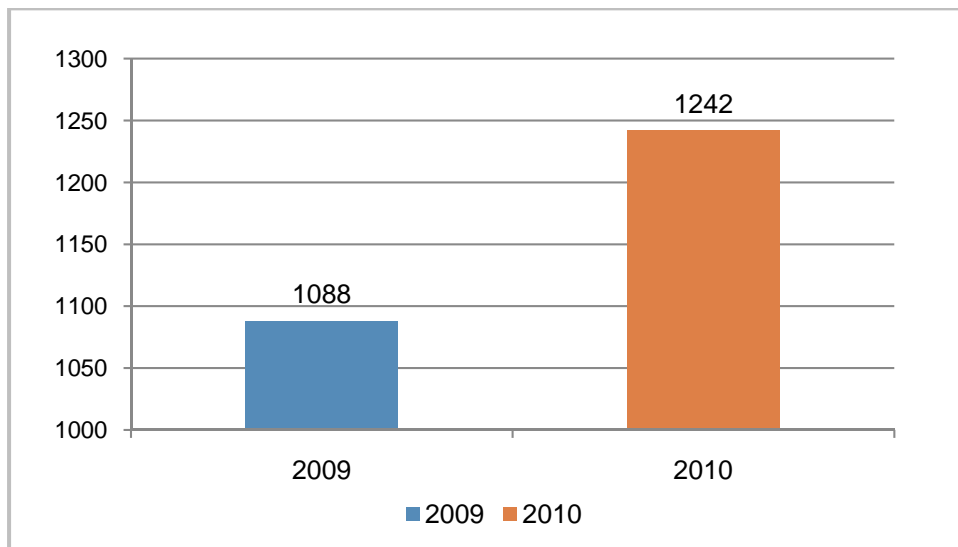


⁸ Identification and Treatment of Individuals with Mental Illness and Mental Retardation/Developmental Disability in North Carolina Jails report, University of North Carolina at Chapel Hill, January 2007.

Screenings and Jail Admissions are typically the same since all individuals are screened at admission to the jail. The data above indicate that jail admissions fluctuate over time, but have not increased significantly over the past two years. There has been a less than 3% increase between calendar year 2009 and calendar year 2010 in admissions to the Durham County jail.

HOMELESS SHELTER ADMISSIONS

Although individuals who are homeless or at-risk of being homeless are provided with funding resources via their clinical home providers, homeless shelter admissions are tracked to investigate whether or not the decrease in emergency department admissions has any relationship to increases in homeless shelter stays. Data from Urban Ministries of Durham reflects an increase of 154 admissions to the shelter between 2009 and 2010. In addition, 2011 data from the shelter indicate that the admission numbers are lower this current year due mainly to individuals staying long at the shelter, possibly attributed to programmatic changes there. These data reveal a 14% increase in shelter admissions from 2009 to 2010, but with a decrease in admissions in 2011.



COST SAVINGS

Upon review of the data available for this report, a natural transition is to discuss cost savings of individuals referred to appropriate sources for emergent behavioral health care, rather than waiting in emergency departments for long periods of time. Below is a comparison of costs of waiting in an ED and at the Durham Center Access Crisis Facility (while at DCA individuals receive immediate care).

Location	Cost per Day
Emergency Department	\$1500.00
Durham Center Access	\$260.00
Savings per Day	\$1240.00

To put these cost savings into perspective, between the first quarter of 2009 and the fourth quarter of 2010 there were 239 fewer admissions to EDs in Durham. This equates to a savings of \$358,500. If these individuals had been seen at Durham Center Access the total cost would have been \$62,140 (for a 24 hour period), resulting in a net savings of \$296,360.

To continue progress toward decreasing emergency department admissions and lengths of stay in Durham, The Durham Center will continue to prioritize endeavors to improve the behavioral health services continuum, particularly among crisis services. On the following pages are some of the initiatives that have been implemented to meet progress toward goals.

OUR STRATEGIC INITIATIVES

The initiatives that The Durham Center has implemented in the county to reduce emergency room admissions are numerous and several are listed below. It is the opinion of The Durham Center that results from a cumulative effect of these services has contributed to the decline in emergency room visits for individuals with behavioral health disorders.

Durham Center Access Crisis Facility (Implemented in 2004)

Durham Center Access (DCA) is a crisis facility established in 2006 in Durham (funded by The Durham Center) to offer an option to inpatient hospitalizations. In 2008 the facility was increased in size to 11 evaluation and observation chairs and 16 longer-term beds when it moved to a newly-renovated facility that resulted from a close collaboration between The Durham Center, the Durham Board of County Commissioners and Duke University. Utilization of the facility has fluctuated over this time, but for the most part averages 180 admissions per month into the crisis evaluation chairs (typically under 23 hours length of stay) and 120 admissions per month into the short-term stabilization beds with an average length of stay of three days. During FY10 the facility accommodated 2155 admissions to crisis evaluation and observation services, translating to 45,650 hours of assessment, stabilization and referral to appropriate services and 1463 admissions to facility-based crisis services, resulting in 4732 days of medical and social detoxification, psychiatric medication, stabilization and outpatient referral. Between July and December of 2010 DCA diverted 71 individuals from State psychiatric hospitalization.

Mobile Crisis Team (Implemented in 2006)

Overseen by a physician and staffed by licensed and qualified professionals, this team is available 24/7 to reach out to a consumer at any location if desired by the individual to provide assessment, triage and stabilization on the spot. Referral is made to the crisis facility (and hospital if appropriate) if a higher level of care is indicated. Of the 204 individuals served in FY10, 100% were diverted from hospitalization to a state psychiatric hospital.

Psychiatric Walk-in Clinic (Implemented in 2006)

The Durham Center Access Psychiatric Walk-in Clinic provides face-to-face assessments and intervention services Monday-Friday from 10:00am-6:00pm, including crisis stabilization, brief treatment (including medication) and linking with community services. Of the 532 individuals served in FY10, 100% were linked to community providers and diverted from state psychiatric hospitalization.

Durham Assessment Team (Implemented in 2009)

The Assessment Team is the first stop for consumers who are referred for services and who do not have an established provider. It is not connected to any other provider and therefore can remain neutral regarding referral for follow-up care. Housed at the Durham Center Access Crisis Facility, the Assessment Team also provides assessments at Urban Ministries. Since its inception, the Team has consistently received over 500 unduplicated referrals per quarter. The show rate for assessments is higher than the average across the state at approximately 65%. Of the individuals assessed, the majority (45%) only requires basic services and approximately 25% are referred for enhanced services.

“3-Way Contract” (Implemented in 2009)

The NC Department of Health and Human Services, through a three-way contract with The Durham Center and Duke University Hospital, funds the equivalent of two hospital beds to be utilized for individuals who are experiencing a behavioral health crisis and meet criteria for brief hospitalization. Data from 2009 indicate that there were 97 admissions to Duke under this contract with an average length of stay of six days and a typical range of 4-6 days. This contract has facilitated moving individuals most in need of hospitalization from the Duke Emergency Department more quickly to a hospital bed, and utilizes local resources rather than sending an individual to the State psychiatric hospital.

Focused Care Coordination (Implemented in 2007)

Individuals being discharged from State psychiatric facilities are receiving more focused discharge planning and coordination of services and resources before they are discharged. Once discharged, these individuals' providers are contacted to ensure appointments were kept and to determine if there were any barriers at discharge. On average, 62% of individuals discharged from State psychiatric hospitals are seen within seven days for a follow-up appointment.

Housing with Supports (Implemented in 2008)

Individuals who are homeless or at-risk of being homeless are provided with funding resources via their clinical home providers. Assertive homeless outreach and rental assistance has helped over 550 people in the past fiscal year. In addition, more than 150 individuals sought assistance with housing services and 35 were connected with behavioral health services at the 2010 Project Homeless Connect.

Substance Abuse Services (Implemented in 2005)

The Durham Center commissioned a report in 2004, *Designing the Substance Abuse Treatment System for Durham County* (Technical Assistance Collaborative), which identified deficiencies in the continuum of substance abuse services that had significant negative impact on individuals, families and the community. In 2005, Durham Center brought together an Advisory Council of experts, leaders, and providers to develop a community-wide plan to address the deficiencies. The Durham Center received funding in 2006 from County Commissioners to develop an infrastructure for substance abuse services under five major goals: reduce stigma of seeking treatment, integrate system of care principles into treatment continuum, develop workforce, improve quality of existing services, and expand array of services to meet needs. The additional resources and supports have resulted in a 47% increase in number served, a significant reduction in consumers who do not engage in services (from an average

of 66% not showing for first appointment to 32% in FY 10), and a 143% increase in credentialed staff working for contracted agencies.

Impact of Care Review on Homelessness (Implemented in 2005)

Of the individuals involved in Care Review in FY10, 32% were homeless. Three months after Care Review only 5% remained homeless (a decrease of 84%) and almost 60% were in permanent housing.

Pharmacy Program (Implemented in 2008)

TDC provides funding to a local pharmacy to reduce costs to consumers for psychotropic medications. Consumers pay either a very low co-pay (\$3.00) or receive their medication free, depending on financial status. Over 800 consumers are provided with low cost medications per quarter in Durham. The highest number of consumers served in a quarter (1072) was during the first quarter of FY11.

Crisis Intervention Training (CIT) for Law Enforcement (Implemented in 2007)

CIT training is sponsored by TDC for law enforcement in Durham at no cost at least annually. By having law enforcement trained on how to deal with behavioral health emergencies, crises are often alleviated and trips to emergency departments are reduced. A total of 180 Durham law enforcement officers and 75 emergency telecommunicators have been trained since the program's inception in 2007.

Weekly Meetings with Duke Medical Staff (Implemented in 2007)

Care Coordination staff attend these meetings to discuss cases and to collaborate on strategies regarding barriers faced by consumers. Those individuals with the highest needs are discussed and then provided with more intensive and focused care to address medical and behavioral health needs.

Case Management of Individuals with Medical Issues (Implemented in 2010)

TDC has hired a case manager to coordinate integration of behavioral and medical care for individuals accessing the Durham Center Access Crisis Facility. This involves connections with a primary care provider and the behavioral health clinical home. This is a partnership with the Durham Community Health Network to provide collaborative support to individuals who over-utilize local hospital emergency departments.

IN CONCLUSION

Recent reports have noted a nationwide increase in the use of hospital emergency departments by individuals with untreated psychiatric and/or substance use disorders. As a result, EDs have provided significant amounts of under-reimbursed or uncompensated care that is often considered less than optimal. This is because ED services are significantly more expensive than other community-based treatment options, EDs are seldom staffed to manage individuals with behavioral health care crises; and EDs are unable to provide the continuity of care required by this population.

In past years, Durham County has also experienced a history of high rates of community ED admissions of individuals with behavioral health disorders (i.e. mental illness, substance abuse or both). In addition, during Fiscal Years 2007 and 2008, The Durham Center recorded the highest rates of per capita admissions to North Carolina State psychiatric hospitals as any other Local Management Entity

in the state. In response to these problems, The Durham Center **Crisis Plan** was developed in 2007 at the request of the State to develop adequate community-based service capacity for individuals experiencing a behavioral health crisis. The purpose of the plan was to develop new or enhance existing crisis services and to explore and identify treatment alternatives to EDs and State hospital admissions.

The Durham Center has responded to this crisis by taking a strategic and collaborative approach to addressing the needs of our most vulnerable citizens. This approach has included cooperative agreements with local hospitals; development and expansion of facility-based crisis services, mobile crisis assessment and support, focused care including housing and substance abuse services, expanded care management and assistance with chemotherapy.

As a result, Durham County's rate of local emergency room admissions for individuals with a mental illness diagnosis has significantly decreased. The overall State rate increased by 10% between FY09 and FY10 while Durham's rate decreased by 22% during the same period. During the past year (FY10) Durham County recorded a record low rate of 55.7 per 10,000 people as compared to the State rate of 108 per 10,000 in the third quarter. This trend has continued during the fourth quarter of FY10 as The Durham Center was rated among the lowest of the Local Management Entities (i.e. the bottom 15% in emergency room admissions for all disability groups).

The Durham Center is closely scrutinizing the impact of these reduced rates to ensure that individuals that previously appeared in EDs are not being inappropriately displaced to other facilities within the community. This includes monitoring jail admissions, homeless shelter stays and admissions to State hospitals. In addition, The Durham Center is also continuing to provide technical assistance and to publicize training opportunities to ensure that providers expand their capacity to serve consumers in more proactive and preventive ways. This includes the early detection of behavior that could lead to crisis events that would warrant an emergency room visit.

The Durham Center has diligently endeavored to strategize with the provider community to implement programs that facilitate recovery and improvements in the stabilization of individuals being served in Durham County. Programs such as those described in this report will continue to have a direct and positive impact on the lives of those with high-risk behaviors. With the joint efforts of our community partners, the number of people with behavioral health care issues using the EDs will decrease as they receive more appropriate services and support in the community.

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1. Institute of Medicine, 2006a, available at www.iom.edu.
2. Coffey, RM, Houchens R, Chu BC, Barrett M, Owens P, Stocks C, Vandivort-Warren R, Buck J, Emergency Department Use for Mental and Substance Use Disorders. Online August 23, 2010, U.S. Agency for Healthcare Research and Quality (AHRQ). Available at www.hcup-us.ahrq.gov/reports.jsp.
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5. Durham Center Access Crisis Facility Reports, 2010.
6. NC Substance Abuse Prevalence Rates: SAMHSA, Office of Applied Studies, National Surveys on Drug Use and Health, 2007 and 2008, published June 2010.
7. Central Regional Hospital Delay Data, Admissions Office, 2010 and 2011.
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