

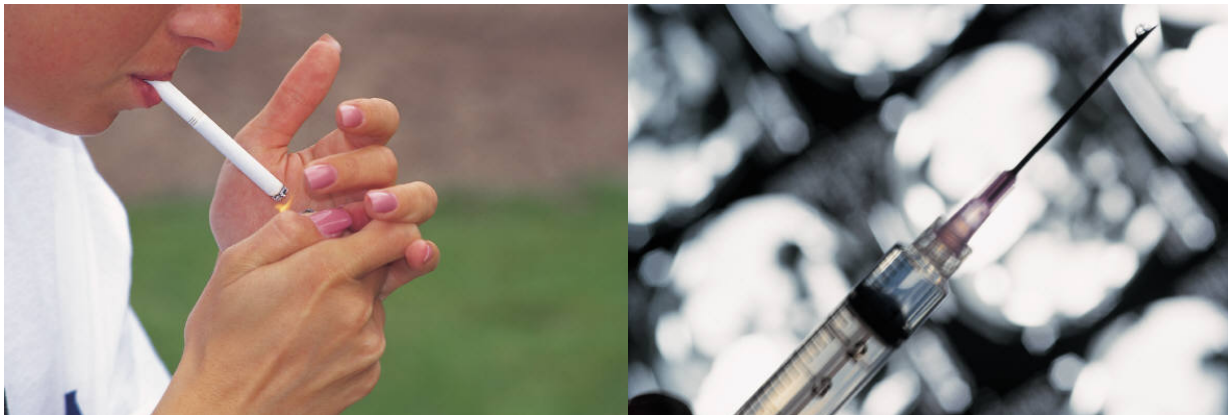


# **Substance Use and Abuse in Durham County**

## *Healthy Durham Substance Abuse Subcommittee*

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## Forward

The impact of substance use and addiction surrounds us and affects every aspect of our Durham community. We see the effects in our homes, churches and places of work as well as in our emergency rooms, criminal justice system, child welfare system and homeless shelters. This report documents how substance abuse impacts the lives and families of the Durham community. In addition, this report provides information on how we can combat the substance abuse problem.

People from all parts of the Durham community are working together aggressively to address the problems caused by substance abuse disorders and addiction. These efforts require better information in order to know what problems exist, what services are most needed and the whether the efforts are successfully alleviating the problem. The 2005 Community Health Summit and the Substance Abuse Committee of the Partnership for a Healthy Durham asked the Center for Child and Family Policy at Duke University to help us get a better handle on the nature of the problems in our community so we could strategically redesign our treatment delivery system and our prevention systems. Having this information improves our ability to select the best evidence-based practices for the population most in need. Choosing the appropriate evidence-based practices for the needs in our community is the best way to produce positive change in the lives of Durham residents.

Substance addiction is a community problem. Solving it requires involving all segments of the community – public and private. The information found in this report will help guide these efforts. Future updates will document concrete positive changes and identify areas where more needs to be done.

Gayle Harris  
Assistant Director  
Durham County Health Department

## Executive Summary

This document contains information gathered from numerous sources regarding substance use and abuse in Durham County, including health, juvenile justice, criminal justice, and social service systems. This report documents the relationship between substance use and incarceration, illness and even death. It shows that substance abuse exacerbates problems such as domestic violence, child maltreatment, and homelessness. By looking at each of these data sources, we can begin to identify the types of drugs being abused and some of the harms that substance use causes the community. Done regularly, and with additional information, this kind of document can highlight emerging trends and identify gaps in our knowledge.

This report represents the first effort in Durham County to gather this information in one document. *It is our strong hope that community agencies will build upon the foundation set forth here to help the community deal with the problems caused by substance abuse.* By adding details to the information reported here, Durham can more effectively plan prevention and service activities.

### Highlights from the report:

- **Illicit Drugs in Durham County**  
Cocaine, heroin, and marijuana are the primary illicit drugs that appear to be available and most commonly used among Durham residents.
- **Domestic Violence**  
29% of domestic violence cases responded to by Durham Police in 2005 involved substance use.
- **Foster Care**  
In 2005, use of illicit substances or alcohol by a parent or child was a contributing factor in 13% of the children removed from their home (total=246) by the Department of Social Services in Durham County.
- **Drinking and Driving**
  - Approximately 300 injuries in Durham are the result of drinking and driving each year.
  - 25% of fatal car accidents in Durham involve substance use.
- **HIV and Injection Drug Use**  
Progress has been made in reducing the number of Durham residents infected with HIV due to injection drug use. Between 2000-2005, 9% of new HIV cases were related to injection drug use compared to 40% during 1983-1994. However, Durham County has the fourth highest rate of HIV in North Carolina.

- **The Homeless**  
Approximately 50% of the homeless in Durham have a substance use problem.
- **Alcohol**  
In the past 30 days, approximately 27% of adults in Durham report binge drinking and 2.1% report heavy drinking.
- **Smoking**
  - The second leading cause of death in Durham is cancer, with lung cancer being the most common.
  - 19% of adult Durham residents reported smoking in 2005.
- **Attitudes toward Secondhand Smoke**
  - Over two-thirds of Durham residents feel that smoking should be banned from all areas of public buildings, grocery stores, and convenience stores. Over 50% feel smoking should be banned from restaurants, bowling alleys, and indoor sporting events.
  - 51% of Durham residents are in favor of a \$1 increase in the cigarette tax per pack of cigarettes.

### **Populations of Special Interest**

- Based on statistics generated from data on emergency room admissions, HIV rates, and arrests, African-American males stand out as a population in particular need.
- **Juveniles:**
  - Juveniles mark a special population because individuals who try drugs at an early age are more likely to become addicted.
  - The illicit nature of substance use has long lasting consequences for many individuals. During 2000-2005, 60% of Durham inmates entered prison with a substance use problem. Three quarters of inmates who use drugs say that they first used substances before the age of 19.
  - 53% of adjudicated youth in Durham have a known substance abuse problem.
  - Over the last 3 years, there have been almost 300 arrests on Durham public school grounds for possession of alcohol or illicit substances.

## Introduction to the Surveillance Network

Substance abuse affects many aspects of society, including but not limited to, health care, crime rates, unemployment, education, and family life. Many of us have seen unpleasant evidence through our personal experiences and from the experiences of family and friends. While agencies and individuals in our community are making real strides in addressing issues related to substance abuse, our community's responses are often hampered by our collective difficulty to view these issues comprehensively. Looking in isolation at each problem caused by substance abuse is often inadequate to capture the distinctions required to shape effective local strategies. It is the Surveillance Network's desire that both citizens and agencies come to understand the full scope of problems associated with substance abuse and not only the problems plaguing "their" organization and/or community.

The National Institute of Drug Abuse's Community Epidemiology Work Group (NIDA-CEWG) developed the model Substance Abuse Surveillance Network to generate information that would help communities address the wide range of problems caused by substance abuse. This report is a first step toward adopting this model in Durham County. The goal of this report is to collect baseline data related to substance abuse from various community agencies to help guide our collective efforts and make better use of existing resources to reduce the associated harms. Communities and agencies that have adopted this model usually start with very little information but find that, over time, valuable information is produced for local action regarding policies, education, prevention, treatment, and law enforcement.

This substance abuse surveillance report is intended to be the first in a regular series of reports on the substance abuse in Durham County. It is designed with flexibility, allowing communities and agencies to view existing inventories of information to identify information gaps and minimize overlap. It is our hope that the process and the product of collecting relevant data at regular intervals will help Durham County better understand substance abuse in the community and develop appropriate strategies to minimize harms. We also hope that bringing information together to address these issues will increase public interest and mass support for solutions in Durham County.

### *What are Surveillance Networks?*

The National Institute on Drug Abuse defines a surveillance network as follows:

*"Community Epidemiology Surveillance Networks are multi-agency work groups with a public-health orientation which study the spread, growth, or development of drug abuse and related problems. The networks have a common goal - the elimination or reduction of drug abuse and its related consequences (National Institute of Drug Abuse, 1998)."*

The network creates a resource sharing system for different kinds of groups, including but not limited to, public health offices, law enforcement agencies, hospitals, and schools. It could include businesses, churches, and other civic organizations. This information can be supplemented with the results of local household surveys which provide community estimates of specific behaviors among subpopulations. Representatives from all respective agencies meet frequently to discuss data implications and create a standard template for data reporting.

After completing the report from accumulated data, the team disseminates the results to vast audiences. In order to disseminate the results to the maximum number of stakeholders, the results should be distributed frequently in a format that is easily understandable. This includes providing both quantitative and qualitative information.

The general experience of surveillance networks has been that, once groups begin to meet and look at even limited amounts of information, the group is quickly able to identify additional sources of information. The more people are able to use the information, the more information is generated. Surveillance networks tend to grow as they become more useful to stakeholders.

The network's objectives are designed to focus on problems specific to a particular area. NIDA lists the following objectives in their model description:

- 1) Identify drug abuse patterns in specific geographic areas;
- 2) Identify changes in drug abuse patterns with the aim of finding patterns and trends over time;
- 3) Detect emerging substance abuse trends and consequences for the community; and
- 4) Distribute all acquired information to as many bodies as possible for policy use, research, general public knowledge, and prevention strategies.

### ***The Benefits of Surveillance Networks***

Substance abuse is a dynamic problem. Over time, the types of substances, the population most affected by different drugs, and the location where the drugs are bought and sold change. Thus, in order to use community resources efficiently, it is important to first identify the "problem" as precisely as possible and then choose the appropriate intervention strategy. Surveillance networks are designed to help communities target resources as efficiently as possible.

Surveillance networks are particularly efficient at identifying trends early as the problem emerges. With substances, early detection is imperative because addiction and dependency spread rapidly with time, furthering associated problems (health, crime, etc.). Early detection helps all sectors mobilize resources for prevention and allow treatment professionals, law



enforcement, and medical professionals, to get a better idea about the kinds of problems they are likely to face.

The other advantages of a network go beyond simply providing accurate data. For the most part, they are inexpensive and self-sustaining. A few committed members from each organization can easily gather data for comparison and analysis. In addition, most network members are likely to be already engaged in prevention. Therefore, the network exposes members to more perspectives, information, and immediate feedback about changes that may be occurring.

As new members are added to the network, the community gains additional information. At the local level, sharing information across agencies allows for trends to be identified early and appropriate strategies to be developed in a timely fashion. On a broader level, networks can share information with other communities, such as effective interventions and strategies. For example, if a network established in Pleasantville had successfully halted the introduction of drug x into its community, that approach becomes a case study when that drug is identified as an issue in Durham or other surrounding counties.

In summary, surveillance networks are inexpensive, efficient, and accurate. The initial implementation requires little, aside from a place to meet and community members' time. Networks help to identify problems that are endemic to a particular area and, in turn, provide exactly the form of data that is needed to address a problem as complex as drug and substance abuse.

## Demographics of Durham County

According to the 2000 US Census, the estimated population of Durham County in 2004 was 239,733. Children under the age of 18 account for 23 percent of Durham's population (vs. 25% in North Carolina) while those over the age of 65 account for 10 percent (vs. 12% in North Carolina).

Durham is particularly diverse when compared to North Carolina as a whole. According to 2000 Census, half of Durham is White, relative to 72 percent of North Carolina. Forty percent of Durham is African-American, relative to 22 percent of the state.

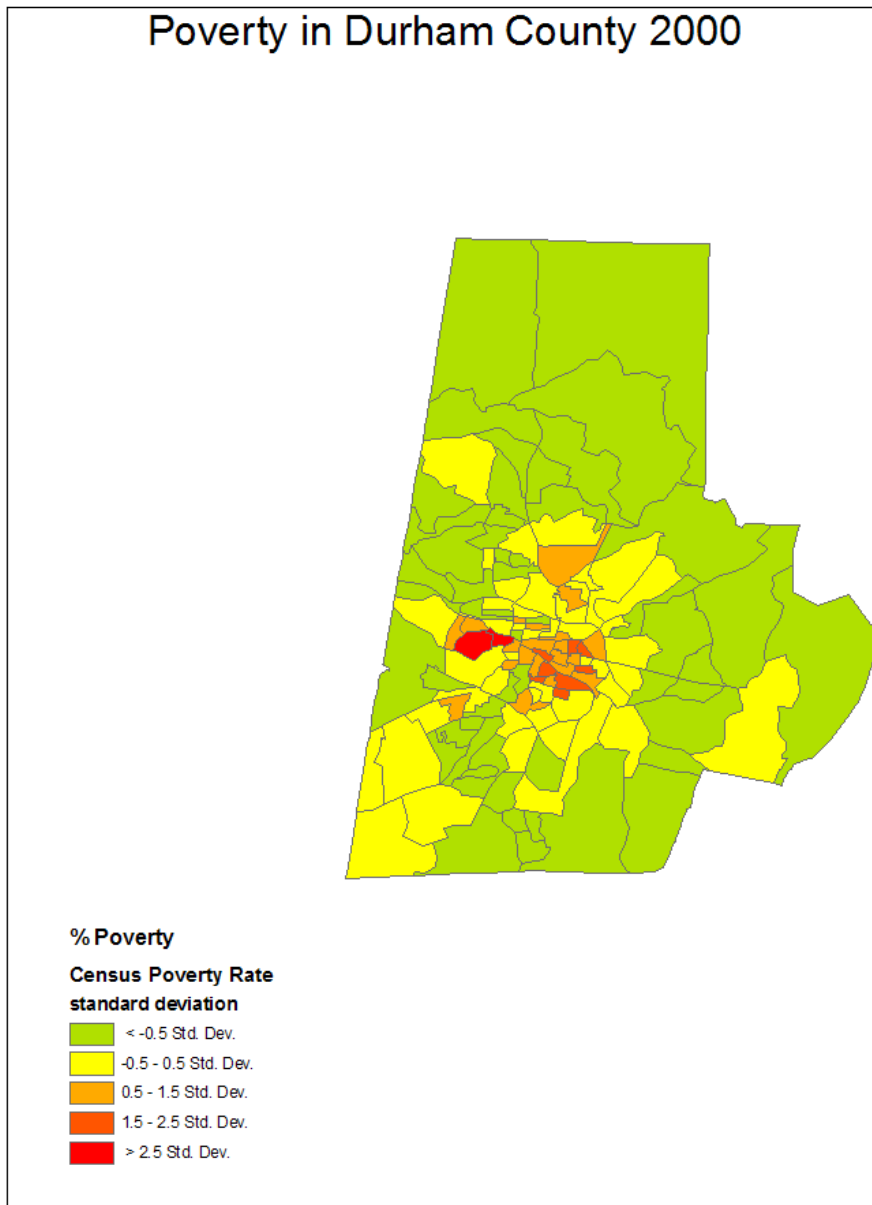
Moreover, 11 percent of people in Durham report being foreign born which is more than double the statewide figure of 5 percent. The estimated breakdown of reported ethnic groups is given below.

<b><u>Race/Ethnicity</u></b>	<b><u>Durham County</u></b>	<b><u>North Carolina</u></b>
White	51%	72%
African-American	40%	22%
Hispanic/Latino Origin	8%	5%
Other Race	4%	2%
Asian	3%	1%
2 or more Races Reported	2%	1%
American Indian	<1%	1%

Durham is generally better educated and slightly wealthier than the rest of the state. A larger percent of Durham residents over the age of 25 have a Bachelor's degree (40% relative to 23% for the state), and slightly fewer have not completed high school (27% relative to 33% for the state). While the median income in Durham is above the state average, the percent of Durham residents living in poverty is also slightly above the state average (13% vs. 12%).

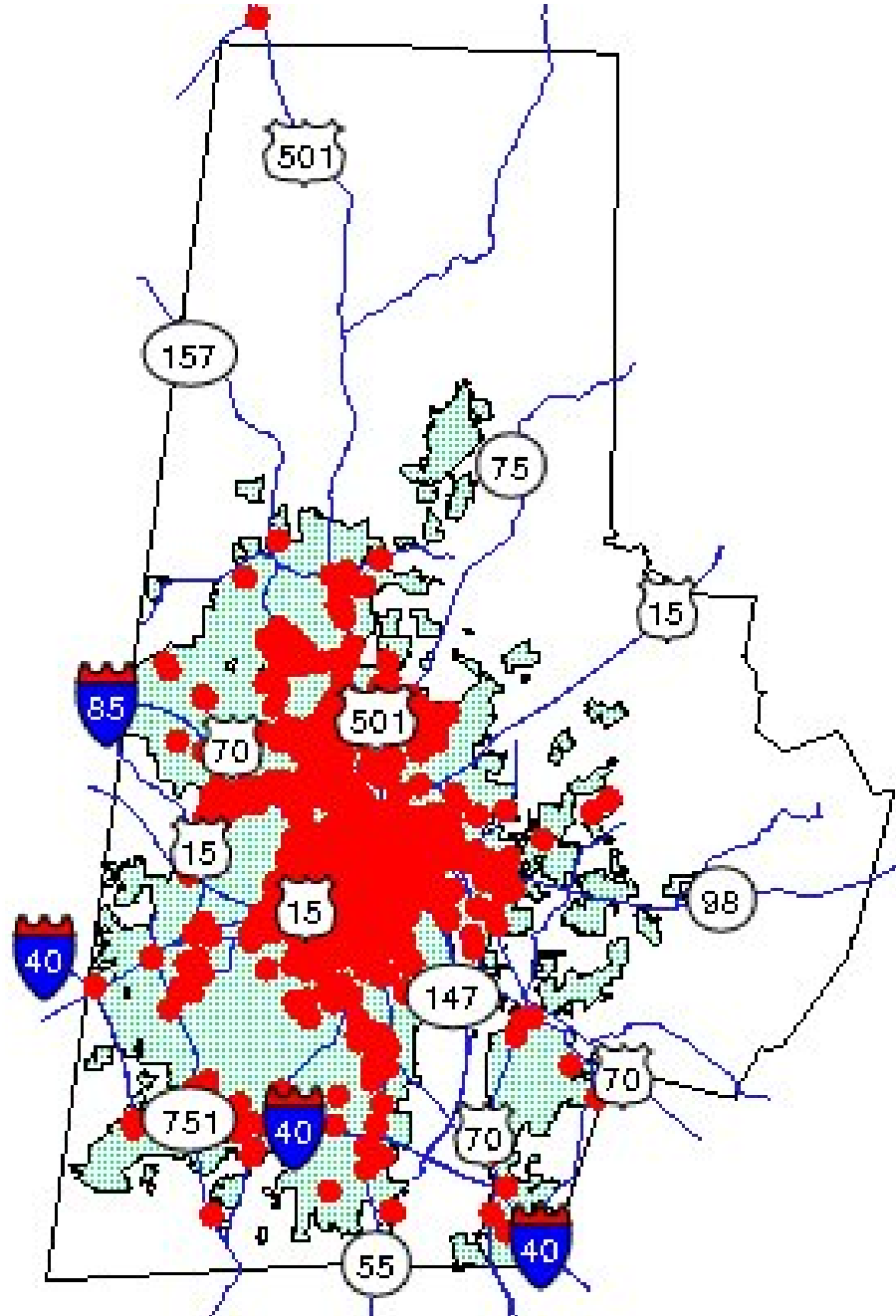
Like most American cities, crime, poverty, and education are not evenly distributed across Durham. The maps below display poverty and crime in Durham County.

## Poverty in Durham County 2000



The Durham Police Department tracks “call to service” for a number of complaints, including illegal possession of substances. Each point on the map below depicts the location of a dispatcher’s call to police for drug-related calls. What is most noticeable from this map is that the majority of calls are within central/downtown Durham.

## Reports to Police for Drug Use



## Tracking the Problem

Our most reliable information on the harms caused by substance abuse comes from the records of public agencies. The health care and criminal justice systems are two places where it is easy to see the direct impact of substance abuse. Data in these systems also provide information about age and other relevant characteristics that stakeholders can use for planning purposes. Substance abuse also impacts child welfare and other social service agencies. We can look to these agencies to track trends.

### *Health-related Outcomes*

#### Emergency Department Visits

**Emerging Indicator: Number of Durham County emergency department admissions related to substance or alcohol diagnoses**

**Relevance:**

Emergency room visits are a good indicator of health crises that are caused by substance abuse. Most people will try to avoid going to the emergency room for drug-related issues because of the illegality of the substance use or because of the cost of the service. Thus, typically only severe cases are seen. A sharp change in emergency room visits can indicate that a new substance has been introduced into a community (and thus many people are trying it) or the purity of a substance has changed (and experienced users are taking potentially life threatening doses of the substance).

**Data: Solucient Database®**

This database contains information on all inpatient hospitalizations that occur in North Carolina. Specific details for each hospitalization are included, such as the patient's address, race, gender, birth date, date of admission to the hospital, and date of discharge. Also included in the data is the International Classification of Diseases Code 9 (ICD-9), which is assigned by the patient's doctor. From the ICD-9 code we were able to determine whether the hospitalization which occurred was related to substance use or abuse.<sup>1</sup>

*Note: Data on emergency department visits were voluntarily submitted by hospitals for 2004. However, beginning in 2005, all hospital emergency departments will be required to report this information.*

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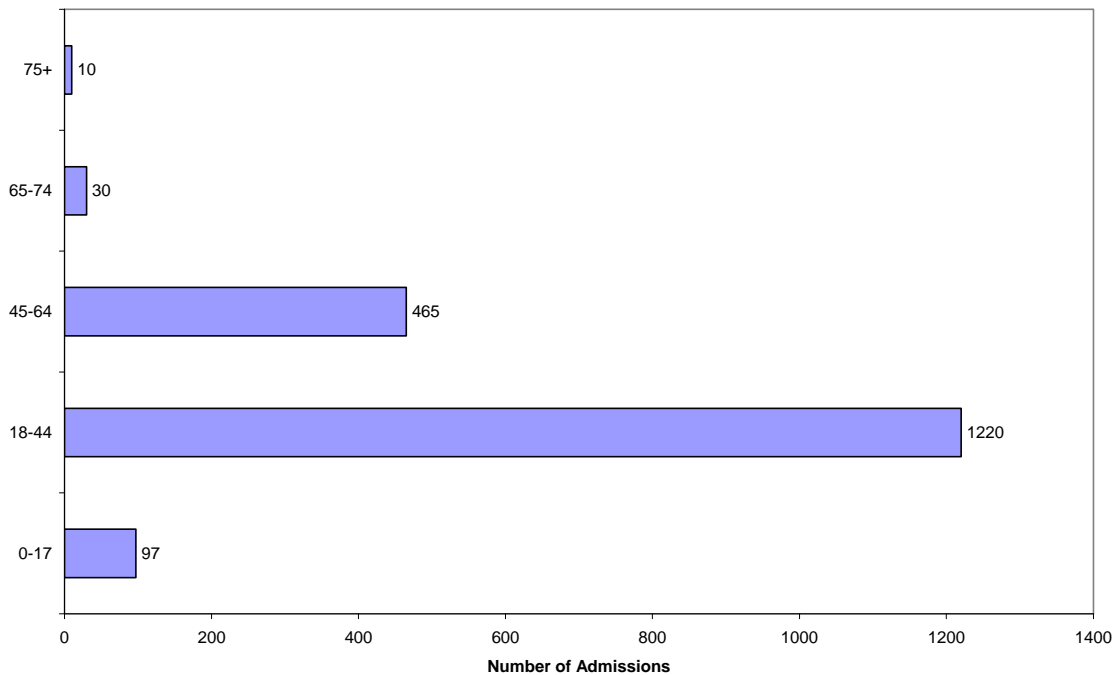
<sup>1</sup> In the data presented below, we counted all inpatient admissions by Durham residents, regardless of where in North Carolina the admission occurred. The hospitalization was considered to be associated with substance use or abuse if they had an ICD-9 code related to alcohol or substance abuse as a diagnosis for admission (however, the ICD-9 code was not always the primary diagnosis).

Findings:

In 2004, there were 1,822 admissions for substance use made by Durham residents to emergency rooms in North Carolina. This represents 3 percent of all emergency room visits by Durham residents. Information on race was missing for 42 percent of substance use admissions. Among the substance use cases where race was known, 65 percent of admissions were made by African-American and 29 percent were made by Whites.

The figure below shows emergency room admissions by patient’s age. Not surprisingly, the majority of admissions were for adults between the ages of 18 and 44.

**Durham Residents 2004: Emergency Room Visits by Age**



Limitations:

- Emergency department admissions typically only capture the most severe cases or admissions by individuals who can not seek treatment elsewhere.
- For illicit substances, the data do not include the type of substance that was abused.
- The data do not indicate the patients’ Hispanic ethnicity.

## Deaths Reported by the State Medical Examiner

**Indicator:** Number of deaths identified by the State Medical Examiner by type of substance

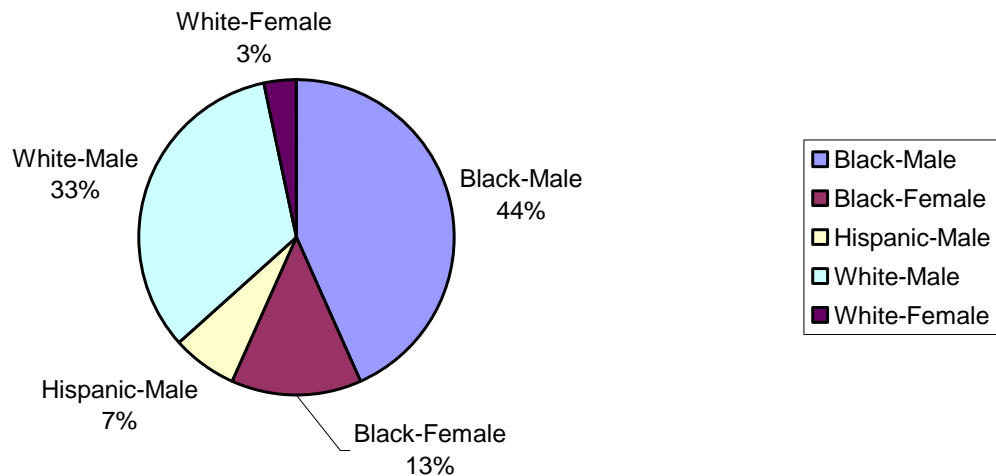
**Relevance:** Deaths examined by the medical examiner provide insight into the types of drugs that individuals are abusing. Changes in the number of substance use related deaths in a community are most likely when a drug is first introduced into a community or when there is a change in the purity of a drug that is commonly used. Deaths from the medical examiner give us a sense of the demographics of populations most at risk as well as the types of dangerous drugs that are in the community.

**Data:** Data from the State Medical Examiner.

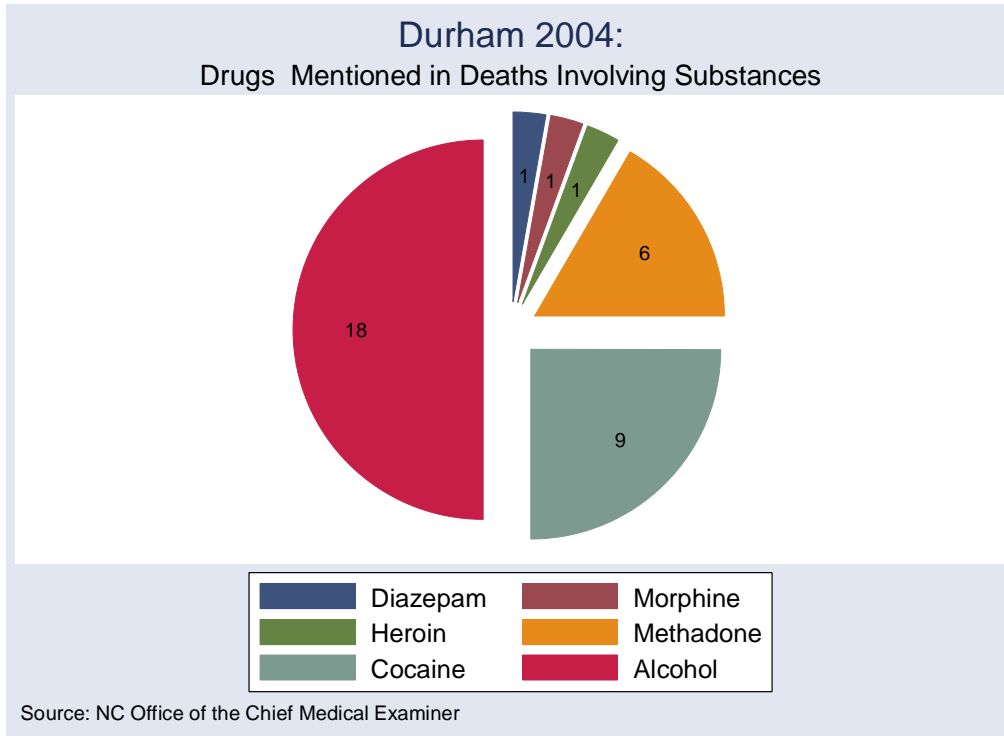
### **Findings:**

In 2004, the state medical examiner confirmed 30 deaths of Durham residents who died as a direct or indirect result of substance use. Males in all races constituted three-quarters of these deaths. African-Americans constituted 57 percent of these deaths.

### **Durham Residents: Deaths Related to Substances in 2005**



There were 7 different drugs mentioned in these deaths. Alcohol was the most frequently mentioned substance (18), followed by cocaine (9) and methadone (6).<sup>2</sup> A single death was reported for each morphine, diazepam, and heroin.<sup>3</sup>

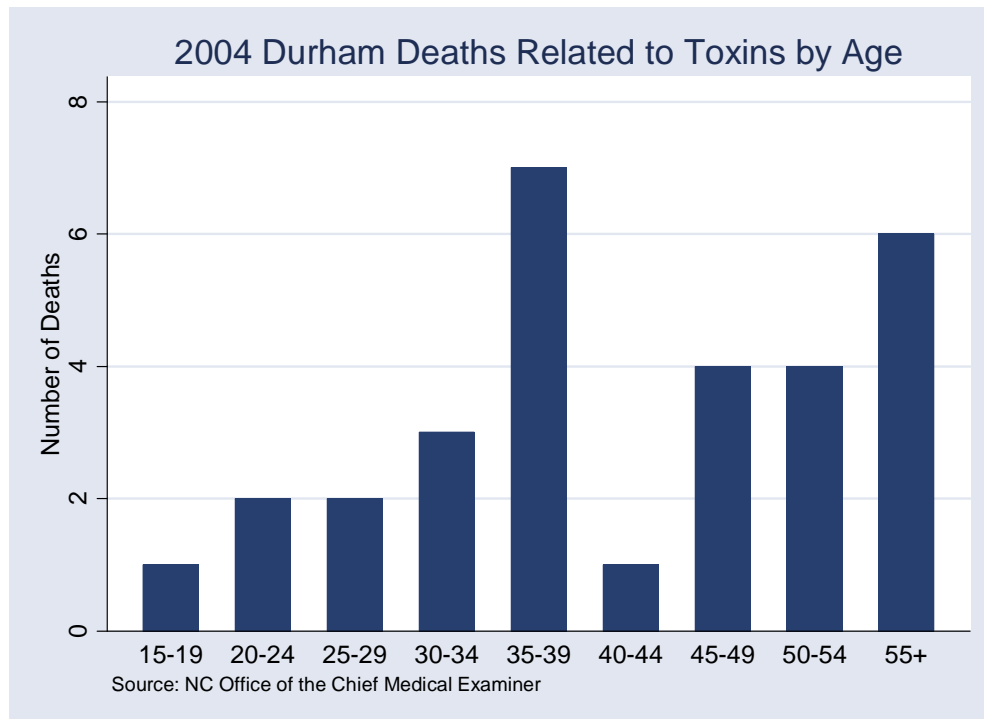


<sup>2</sup> Methadone is a medication used to help individuals addicted to narcotics such as heroin (Office of National Drug Control Policy, 2000).

<sup>3</sup> Morphine is commonly used as a pain medication. Diazepam is an anti-anxiety medication.



The figure below shows the age distribution of deaths reported to the medical examiner for illicit substances. Deaths related to substance use varied by age. There was only 1 death reported among individuals under 20 years old, 4 deaths among individuals in their twenties, 10 deaths among individuals in their thirties. *Individuals aged 35-39 seemed to be most at risk of death due to substances (7 deaths).*



## HIV and Injection Drug Use

### Indicators:

- The number of new HIV cases related to injecting substances.
- Drugs mentioned by individuals in treatment for HIV/AIDS.

### Data:

There are several sources of data that document HIV and AIDS incidence and rates in Durham County, including:

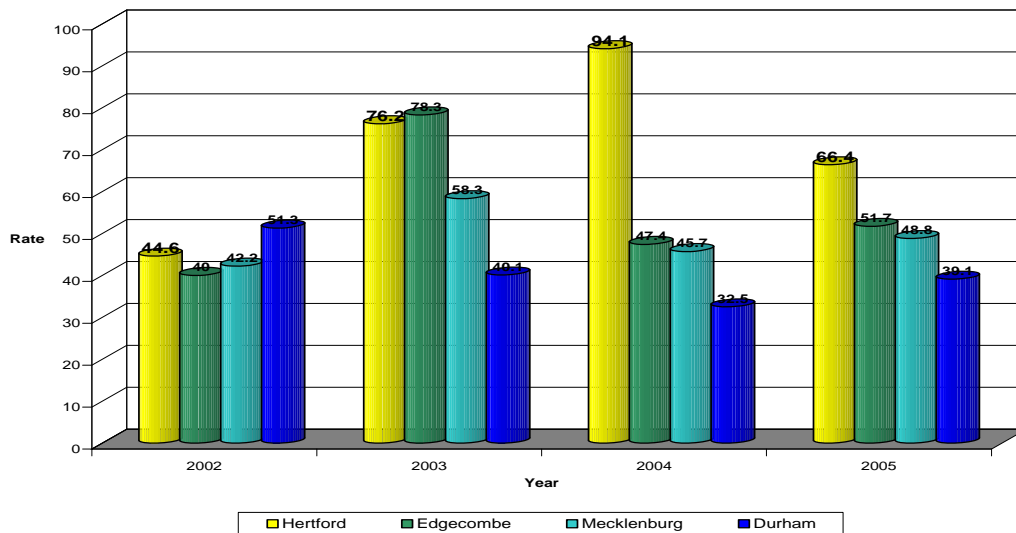
- The HIV/STD Prevention and Care Epidemiology Division in the North Carolina Public Health Department; and
- Duke University's Health Inequalities Expansion Project for Substance Abuse Treatment Services for People Living with HIV/AIDS.

**Relevance:**

Across the United States, approximately one-third of new HIV cases are related to substance abuse (Center for Disease Control and Prevention, 2006; Health Resources and Service Administration HIV/AIDS Bureau, 2004).

HIV rates in Durham County have been alarming for well over the past decade. Durham County had the fourth highest HIV infection rate (41.3 per 100,000 population) among North Carolina counties for the years 2002-2005, based on a 3 year average. The only counties with higher rates were: Hertford, Edgecombe, and Mecklenburg (North Carolina Department of Health and Human Services, 2005). The HIV rates in Durham County have been such a concern that the NC Department of Health and Human Services has created an HIV Epidemiological Profile for the county.

**HIV Cases by County Rank Based on a Three Year Average**



HIV/AIDS is a major threat in Durham. The age-adjusted death rate from HIV/AIDS for Durham (11.6) is over twice that of the state (5.4) or nation (4.1). During the years 2000-2004, HIV was the fifth leading cause of death among Durham residents aged 20-39 and the fourth leading cause of death among individuals aged 40-64 (North Carolina State Center for Health Statistics, 2006).

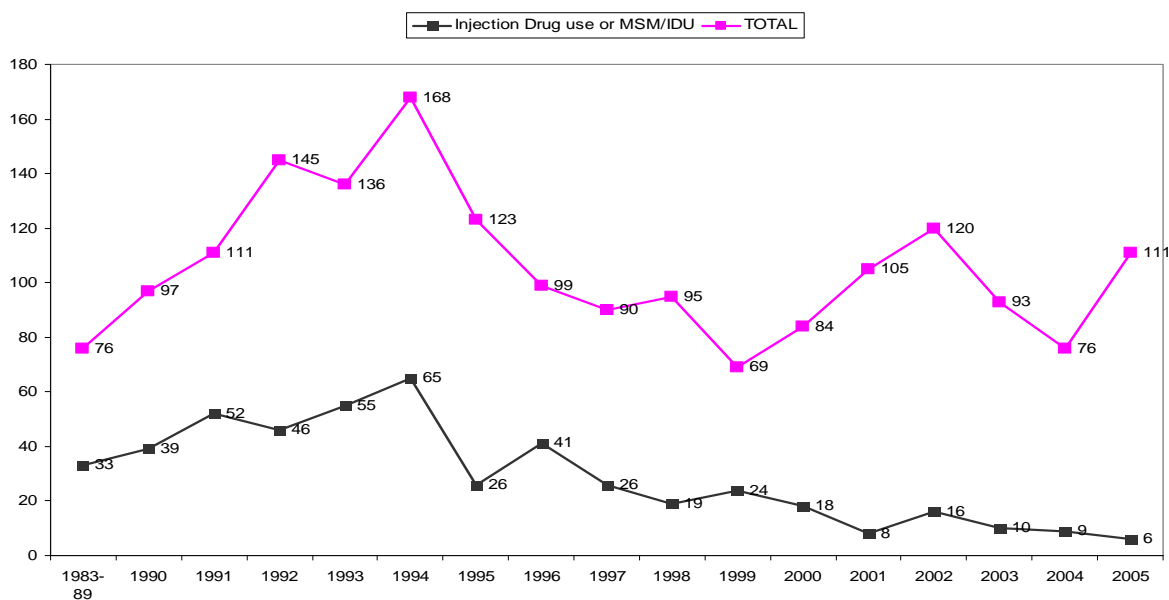
## Mortality Related to HIV

	Durham	North Carolina	United States
Number of New HIV Cases in 2004	77	1,641	42,514
Number of Deaths in 2004	24	406	15,798
Age-adjusted Death Rate 2000-2004	11.6	5.4	4.1

### Findings:

Progress has been made in Durham to lower the number of newly acquired HIV cases related to substance use. The figure below shows the total number of newly reported cases of HIV by year (North Carolina Department of Health and Human Services, 2005).<sup>4,5</sup> During the years 1983-1994, 40 percent of newly reported HIV cases were related to injection drug use, relative to 9 percent for 2000-2005. In addition, the total number of HIV cases per year related to substance use has decreased. During the years 1995-1999, there were approximately 27 new cases each year, relative to 11 cases per year during 2000-2005. Though this is a decrease from the 2004 HIV reports, it is important to note that, on average, one-third of new HIV cases do not have an identified mode of transmission (North Carolina Department of Health and Human Services, 2005).

### Number of New HIV Cases by Year and Mode of Exposure in Durham



<sup>4</sup> These numbers may be influenced by the availability of testing as well as public health efforts to encourage more individuals to seek treatment.

<sup>5</sup> The North Carolina public health department keeps track of newly reported cases by how the disease was acquired (men having sex with men (MSM), injection drug use (IDU), blood products, pediatric cases, no identified risk (NIR)). Some men who have sex with men also engage in injection drug use. For the purposes of the numbers presented below, MSM/IDU and IDU were combined.

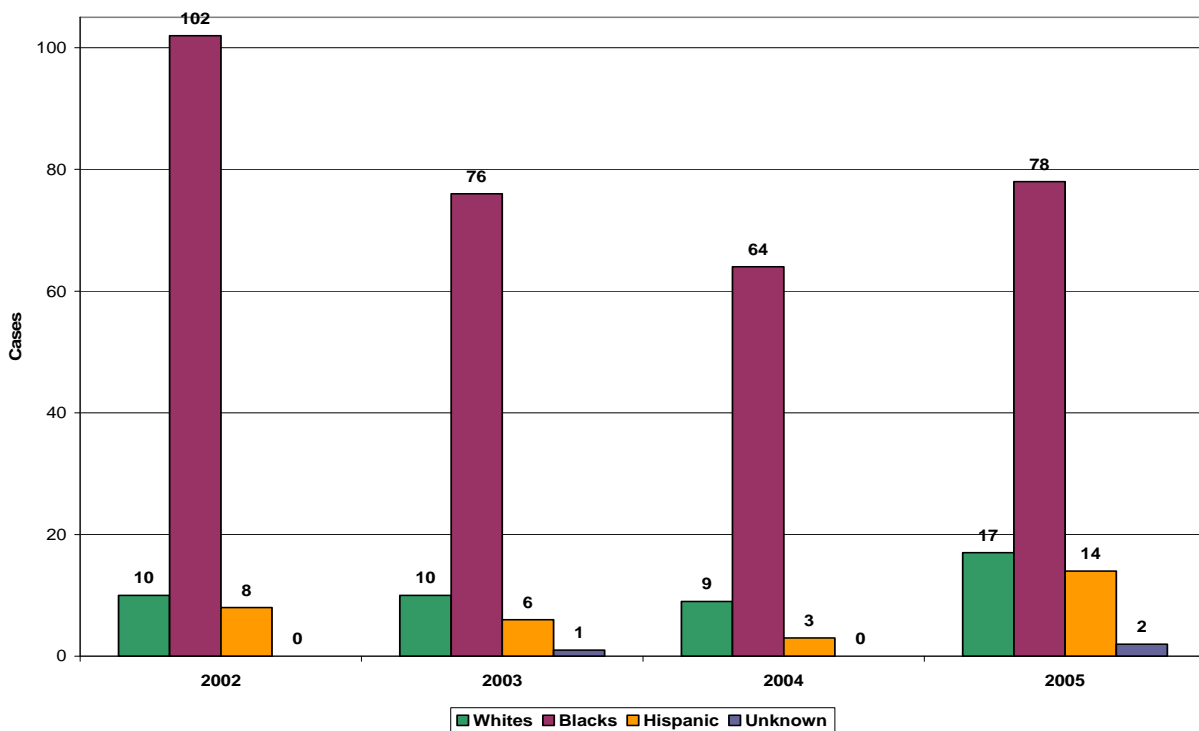
### HIV and Injection Drug by Gender

In Durham, males are living with HIV at a greater rate than females. In 2005, the HIV rate (per 100,000) for males was 69.3 compared to 24.4 for females (North Carolina Department of Health and Human Services, 2005). **Among individuals diagnosed with HIV from 2000-2005, injection drug use was the source of infection for approximately 11 percent of males and 8 percent of females in Durham County.**

### HIV by Race/Ethnicity and Injection Drug Use

African-Americans are disproportionately affected by HIV. The rate of new HIV infections per 100,000 people in 2005 was 15.2 for Whites, 55.9 for Hispanics and 84.7 for African-Americans (North Carolina Department of Health and Human Services, 2005). Among North Carolinians in 2003 who recently tested positive for HIV, a similar percentage of Whites (12.4%) and African-Americans (10.6%) reported having used injection drugs (North Carolina Department of Health and Human Services, 2005). **However, there are no data available to analyze the racial and ethnic profile for HIV by cause of disease in Durham County.**

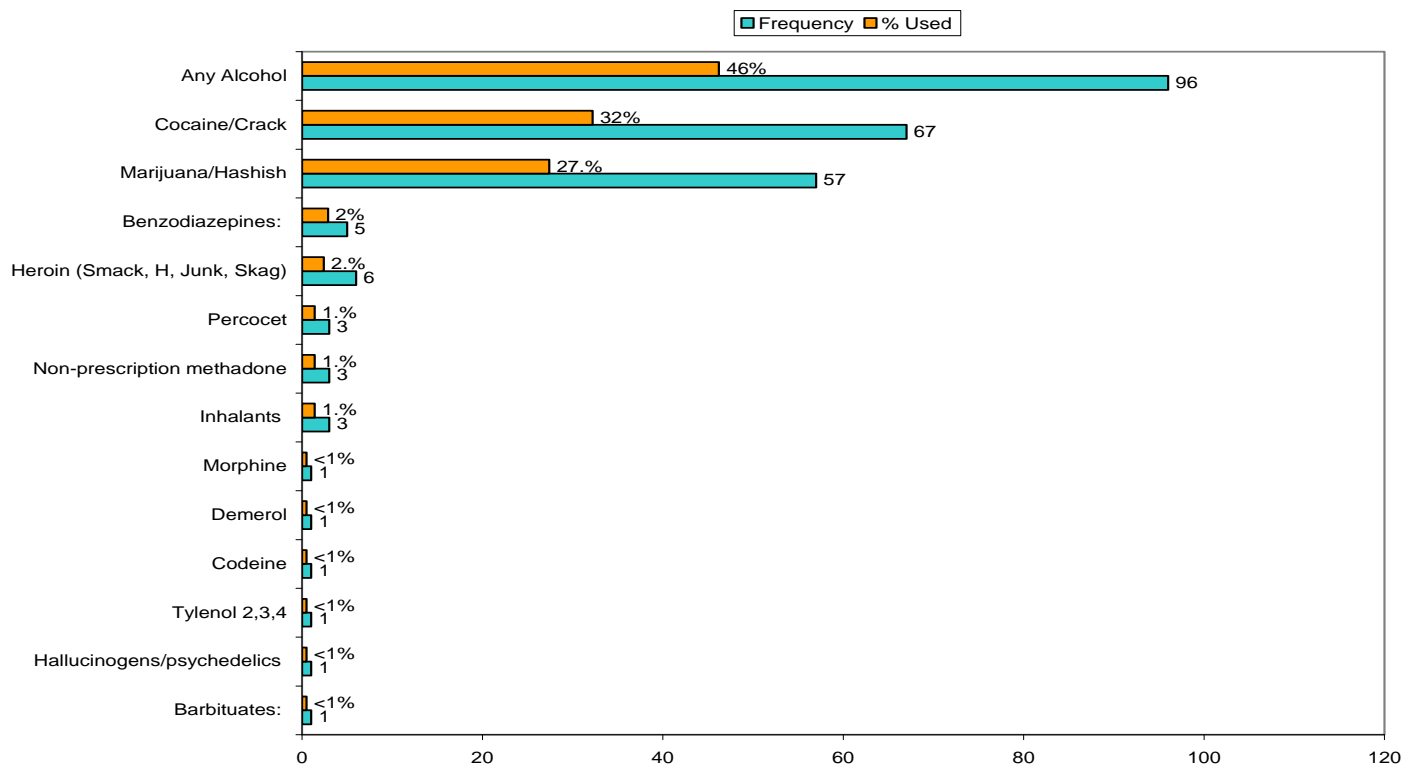
**HIV Cases by Racial and Ethnic Group in Durham County**



### Drug Mentions by Individuals in the Expansion Project

One source of information on the specific substances that individuals in Durham are using comes from the Duke University’s Health Inequalities Expansion Project for Substance Abuse Treatment Services for People Living with HIV/AIDS (HIP). HIP provides services to individuals in the Triangle Area. As of May 30, 2006, there were 208 participants in the program (Green, 2006). The chart below lists substances mentioned by participants in the program. The most frequently mentioned drugs were alcohol (46%), cocaine or crack/cocaine (32%), and marijuana (27%).

**Expansion Project Participants: Drug Use by Name and Frequency**



## Hepatitis

**Indicator:** Number of new viral hepatitis C (HCV) infections reported annually

### Relevance:

Hepatitis C (HCV) is a virus that can cause a liver disease known as cirrhosis. This virus is acquired by contact with infected blood. Approximately 4 million Americans (1.8% of the population) are living with hepatitis C, which is the most common chronic blood-borne infection in the United States. Of the amount above, 2.7 million people within this population are chronically infected with the hepatitis C virus (Franciscus, 2006). Each year, approximately 8,000-10,000 individuals die from its related complications (Center for Disease Control and Prevention, 2002).

Injection drug users are particularly at risk for developing HCV. Within 5 years of beginning injection drug use, approximately 50-80 percent will become infected with HCV. Nationally, it is estimated that 70-80 percent of HCV-infected individuals acquired the disease through sharing needles (National Institute on Drug Abuse, 2006). Roughly 2-6 percent of individuals who acquire hepatitis B (HBV) will become chronically infected. However, 75-85 percent of those who acquire HCV will be chronically infected. Progression of HCV antibodies are increased in those who consume alcohol (Center for Disease Control and Prevention, 2002).

### Hepatitis C

The table below shows the number of acute cases of HCV reported to the NC Division of Public Health. Currently, only acute HCV cases are reported to the NC Division of Public Health (North Carolina Department of Health and Human Services, 2006). **The numbers below in no way reflect the population in Durham suffering from hepatitis C.** There are many individuals with chronic hepatitis C, but this condition is currently not reported in North Carolina. The number of reported cases of acute hepatitis C is just that, reported cases only. Diagnosed cases under a doctor's care might never be reported to the local public health authority.

#### **Acute Cases of Hepatitis C**

	2002	2003	2004	2005
North Carolina	29	13	12	21
Durham County	0	0	0	0

### Understanding HCV

Because HCV is typically caused by injection drug use, sudden spikes in new infections could provide information on fluctuations in the types of drugs in the community. The community could also be better prepared to educate Durham residents about HCV if they were aware that rates were particularly high in North Carolina.

#### **Next Steps:**

Health officials should consider whether chronic HCV should be tracked.

Could we acquire information on acute and chronic HCV information from the Durham County Health Department to add to report?

### **Indicator: Death rate from cirrhosis of the liver**

#### **Relevance:**

Alcohol-induced cirrhosis is caused by years of binge drinking or heavy drinking. This is sometimes known as non-viral hepatitis C. After years of heavy or binge drinking, the liver becomes unable to clean the blood of toxins produced from alcohol. In the United States, approximately 10 to 15 percent of alcoholics will develop cirrhosis (National Institute on Alcohol Abuse and Alcoholism, 2004).

**Data:** Mortality statistics from the North Carolina Center for Health Statistics.

#### **Findings:**

From the years 2000-2004, the death rate due to liver disease or cirrhosis was 6.8 deaths per 100,000 in Durham (relative to 9 deaths per 100,000 in North Carolina) (North Carolina State Center for Health Statistics, 2004). Approximately 40 percent of uncategorized liver disease deaths are a result of alcohol abuse in the United States (National Institute on Alcohol Abuse and Alcoholism).

## *Substance Use Effects and the Social Service System*

### Domestic Violence

**Indicator:** The number and percent of domestic violence cases involving alcohol or illicit substances

**Relevance:**

It is estimated that, in the United States, 1 out of 4 women will be affected by domestic violence during their lifetime. In North Carolina in 2005, 69 homicides were due to domestic violence (North Carolina Coalition Against Domestic Violence).

Domestic violence is defined as the willful abusive behavior resulting in assault or battery against an intimate partner. For some individuals, the use of alcohol and drugs promotes aggression and impulsive behaviors. Substance abuse may result in the batterer misinterpreting a comment or action from a spouse or child, leading to outbursts and lashing out (Fazzone, Holton, & Reed, 1997). Together, these side effects of alcohol and drug use may increase the likelihood of domestic violence.

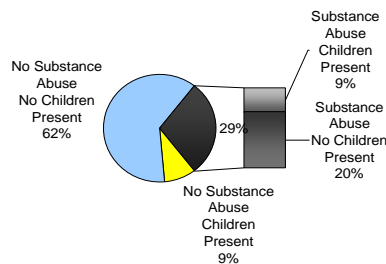
**Data:**

In 2004, the Durham Police Department began tracking the number of calls to service for domestic violence cases. In 2005, they began to track detailed information on the calls that they responded to in order to identify repeat offenders.

**Findings:**

In 2004, there were 1,935 domestic violence cases investigated by the Durham Police Department. In 2005, there were 1,858 domestic violence cases. Of these cases, 537 (29%) were related to substance abuse. Children resided in the home for 165 cases that involved substance use (31% of substance abuse cases or 9% of all cases) (Gruber, 2006).

### 2005 Domestic Violence Cases Reported





### Coordinating Efforts Across Agencies

These numbers presented above are from the Durham Police Department. However, the Sheriff's office also investigated 636 cases in 2004 and 665 cases in 2005 (Lane, K.D.). In future years, it would be helpful to know the percent of these cases involved substances. It would also be helpful if Durham Police and Sheriff's Department coordinated data collection efforts.

#### Next Steps:

What additional information would be helpful to prevent substance use related domestic violence cases?

## Child Maltreatment, Abuse and Neglect

**Emerging Indicator: Number of Child Protective Services investigations where substance/alcohol abuse by a parent or child is a contributing factor**

#### Relevance:

Federal law defines child maltreatment as "any recent act or failure on the part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation; or an act or failure to act which presents an imminent risk of serious harm." Children who are maltreated are at risk for a number of negative outcomes, including depression, aggression, and problems with socialization. Moreover, they may experience academic problems which in turn impact their lifelong earnings.

Parents who abuse substances are more likely to abuse or neglect their children. Neglect may arise because the parent is spending time seeking drugs or is incapacitated due to inebriation. Abuse may be more likely due to the specific effect of the drug on the parent's decision making process. For example, common side effects of drugs like cocaine may include depression, hallucinations, and paranoia. These effects can last hours during the high or longer if they are the effects of withdrawal (Child Welfare Information Gateway, 2003). Parents who have been investigated for child maltreatment may be at increased risk of losing parental rights (*see section on foster care*).

**Data:** In 2005, the North Carolina Department of Social Services began collecting information on whether substance/alcohol abuse was a contributing factor in investigations by child protection services.

**Findings:** Not currently available.

**Limitations:**

These data only provide information on children and family members who come into contact with child protection services. Many children and families with substance abuse problems are not involved with social service agencies thus the problem tends to be underreported.

## Foster Care

**Indicator:** Number of children removed from their homes due to a) parent substance abuse, b) parental alcohol use, c) child substance abuse, and d) child alcohol use

**Relevance:**

Foster care is often a last resort for child protective services. As a result, only small subsets of children who experience maltreatment are placed into foster care. Parental substance abuse places a child at risk for being removed from his or her home and having a longer length of stay once placed into foster care (US General Accounting Office, 1998). Parents who are working toward providing a more stable environment for their children after they have been placed into foster care face state mandates, as well as the challenge of fighting their addiction.

The 1997 Adoption and Safe Families Act states that parental rights are to be terminated if the youth has been in foster care for 15 of the last 22 months. Parents who are substance abusers and do not wish to have their parental rights terminated face special challenges. For instance, in many counties the foster care system and the treatment systems are not well coordinated; thus, parents may be responsible for finding their own treatment options. Many substance abusers are reluctant to initiate treatment and the course of treatment may take years before the person is fully recovered. Thus, parents who abuse substances may be more likely to lose custody of their children.

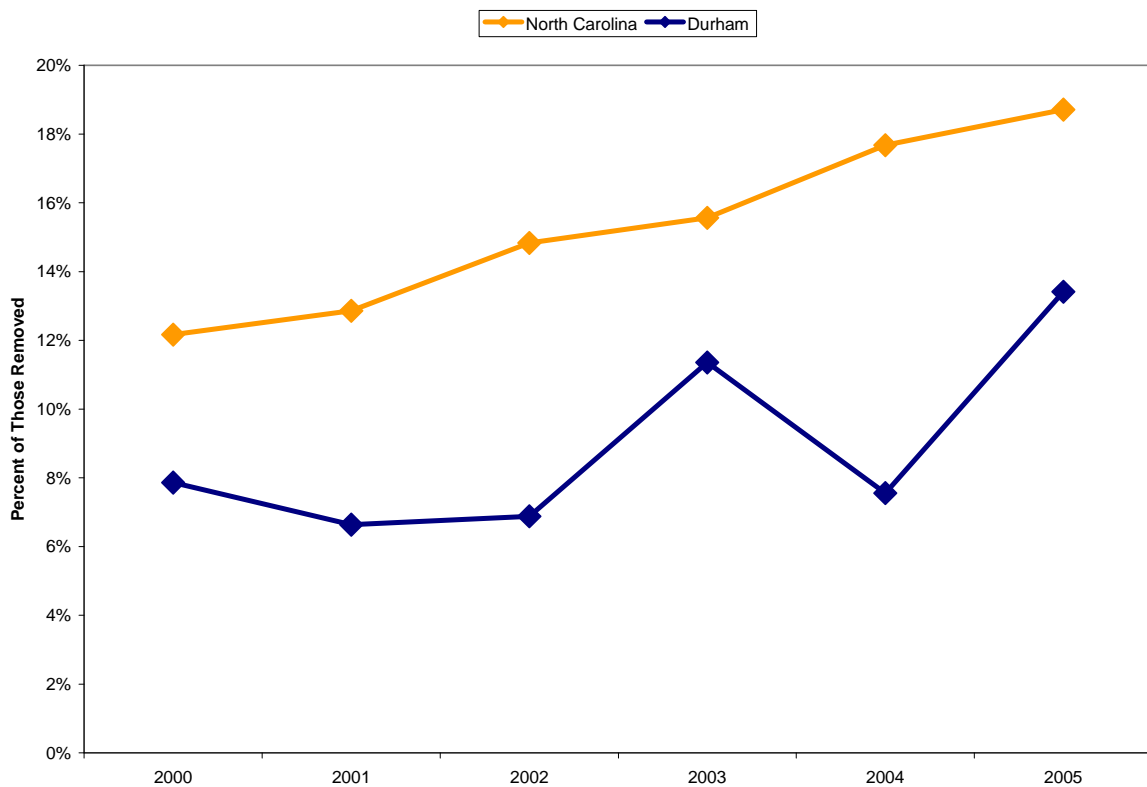
**Data:**

The Department of Social Services tracks youth who have been removed from their homes and placed in kinship care or state custody by the reason that the youth was removed. As part of maltreatment and abuse, there are 4 categories related to alcohol and substance abuse which may contribute to a child being removed from home. These include parental substance abuse, parental alcohol abuse, child substance abuse, and child alcohol abuse.

**Findings:**

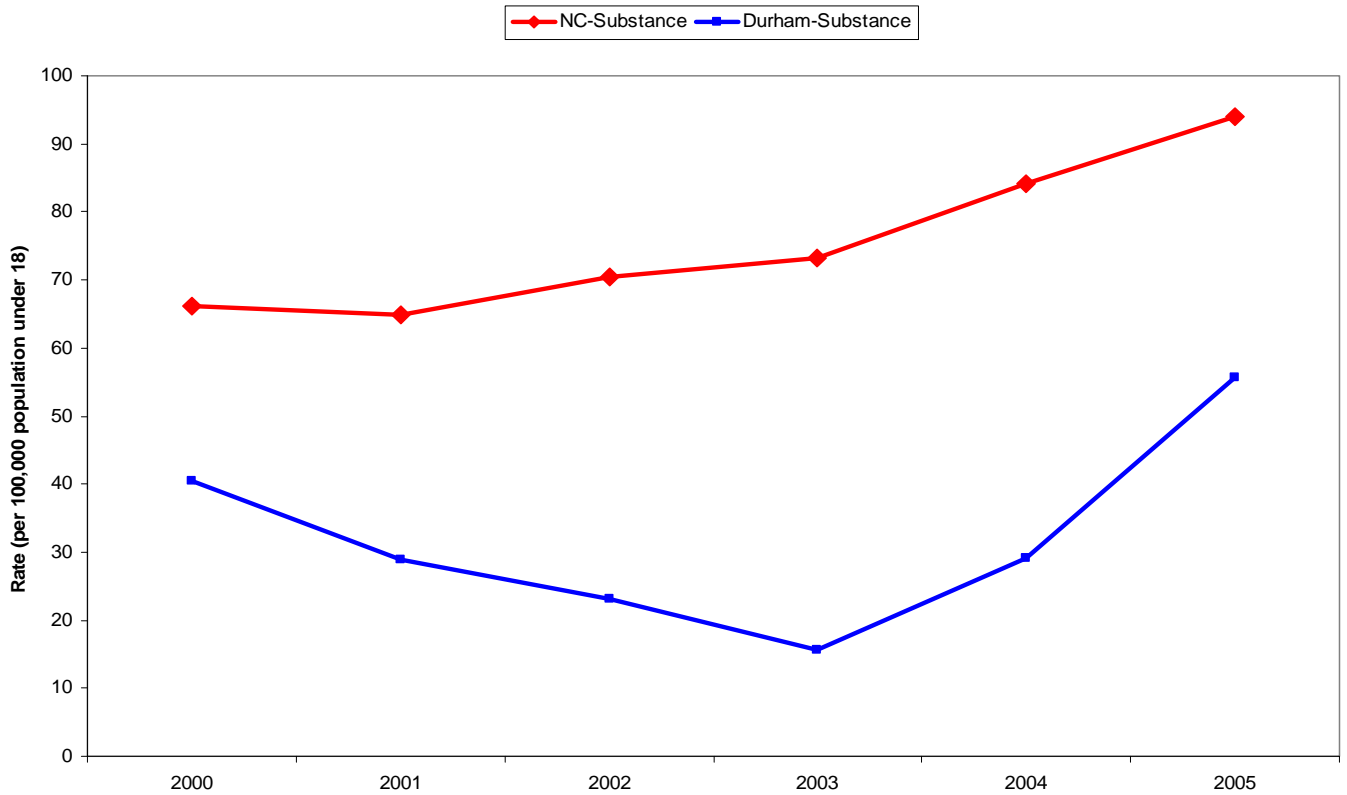
In 2005 there were 10,892 youth placed in foster care in North Carolina. Nearly one-fifth of these youth were placed into foster care due to a substance related issue. In Durham County there were 246 youth removed from their homes, and only in 13 percent of these cases was substance abuse a contributing factor. This pattern of results appears consistent across the years 2000-2005.

**Foster Care Youth: Percent Removed Due to Parental Substance Abuse, 2000-2005**



Some might be concerned that these figures are misleading—that perhaps Durham has a high rate of youth entering foster care for other reasons (ex. high percent entering due to neglect), and thus the percent who enter foster care due to alcohol and substance abuse appears artificially low. However, the figure below demonstrates that the rate of youth being placed into foster care relative to the percent of children under the age of 18 in the population is actually lower in Durham than in the rest of the state.

## 2000-2005: Rate of Removal Due to Substance Abuse



Source: North Carolina Department of Social Services

## Substance Use among the Homeless

**Indicator:** Number of homeless individuals who are substance abusers

### **Relevance:**

Durham is involved in an ambitious plan to address homelessness. Knowing the changing substance abuse patterns among the homeless population is essential when planning to meet the treatment and housing needs of that population. Both treatment and enforcement planners will be able to use this information.

**Data:** Each year, the Durham Affordable Housing Coalition leads a concerted effort to count the homeless individuals in Durham County on a given day. This involves a) teams of individuals going out into the streets in the early hours of the morning to count homeless

individuals (people living under viaducts and bridges, in the woods, in abandoned houses, etc.), and b) agencies that submit information regarding the number of homeless individuals receiving services for emergency relief and transitional shelter.

### **Findings:**

On January 26, 2005, 502 individuals were living in emergency shelter or transition housing in Durham. Among these individuals, roughly half (262 individuals) were chronic substance abusers and 93 had dual diagnoses of both substance abuse and mental health problems.

## ***Substance Abuse and Law Enforcement***

### **Uniform Crime Report**

#### **Indicators: Arrests for possession and sales of illicit substances by age**

##### **For Juveniles**

- Arrests for sales of illicit substances by year and type of drug.
- Arrests for possession of illicit substances by year and type of drug.
- Arrests by offense category by race.

##### **For Adults**

- Arrests for sales of illicit substances by year and type of drug.
- Arrests for possession of illicit substances by year and type of drug.

#### **Relevance:**

Arrests for possession or sales of substances are one of the best sources of information that we have on illicit substances by population characteristics. The data include information on the arrestee such as age, gender, and type of substance. This information is available by county since at least 1999. Because there has been a national effort to collect data uniformly, this information can be compared with other counties, the state, or national level data.

#### **Data:**

The Federal Bureau of Investigation coordinates a national effort to collect arrest data in a consistent format from all law enforcement agencies across the country. Beginning in 1973, law enforcement agencies across North Carolina have voluntarily submitted information to the State Bureau of Investigation on specific crimes committed in their area of jurisdiction on arrests by age, gender, and race of the perpetrator. For Durham, the Durham Police Department, County Sheriff's Office, Eno River State Park, North Carolina Central University, and Duke University each report arrests. The information below comes from arrests reported to the State Bureau of

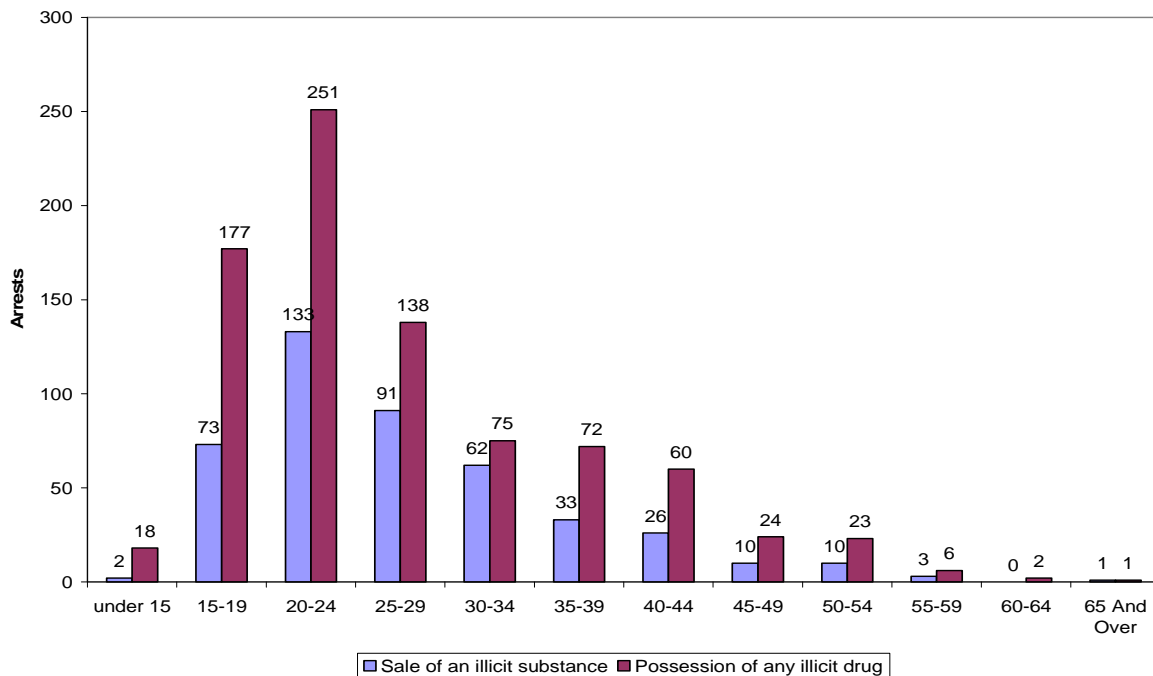
Investigation.

**Findings:**

*Arrests Related to Possession and Sales of Illicit Substances*

According to 2004 data, arrests for possession and sales of illicit substances are highest between the ages of 15-30 and peak between the ages of 20-24.

**2004 Durham County Arrests for Possession and Sales of Illicit Substances by Age**

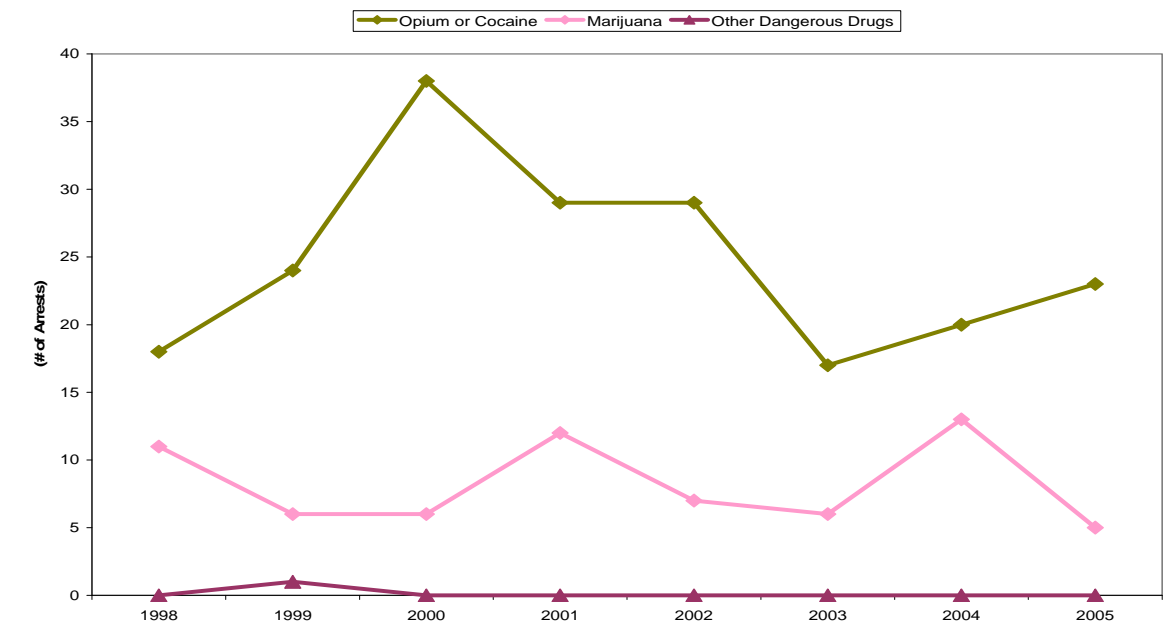


***Juvenile Arrests***

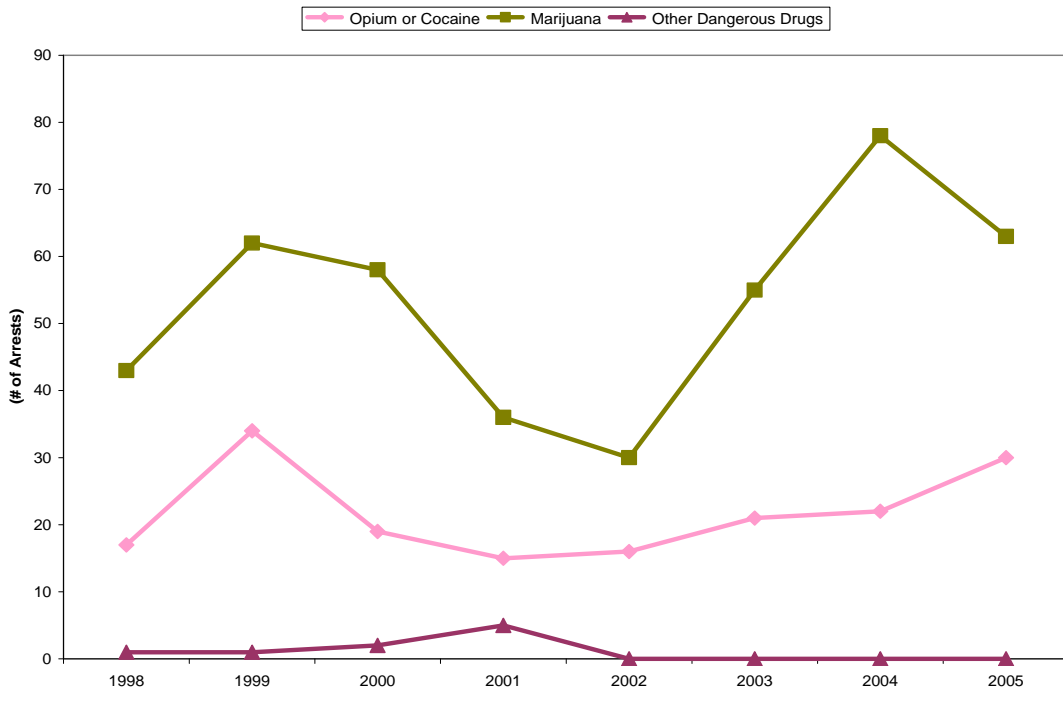
In Durham County from 1999-2004, the number of arrests among juveniles for sales and possession of illicit substances fluctuated from year to year. However, patterns emerged. There are typically more arrests for sales of cocaine or opium than marijuana or other illicit drugs, but there were more arrests for possession of marijuana than any other drug.

Differences by race are apparent in the arrest data. In 2004, relative to Whites, African-American youth had more arrests for violation of liquor laws (4 vs. 6), possession of marijuana (22 vs. 56), possession of opium (5 vs. 17), sales/manufacturing of marijuana (3 vs. 10), and sales/manufacturing of opium or cocaine (0 vs. 20). However, White youth had more arrests for driving under the influence than African-American youth (8 vs. 2).

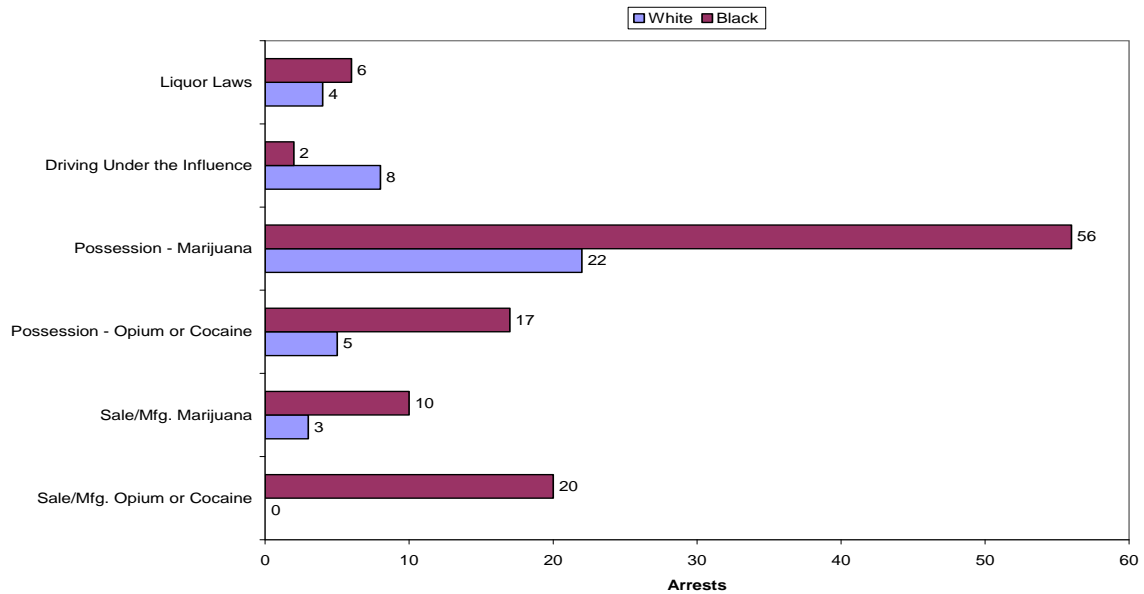
### Durham Juveniles 1998-2005: Arrests for Sales of Illicit Substances



## Durham Juveniles 1998-2005: Arrests for Possession of Illicit Substances



## 2004 Durham Juvenile Arrests for Drug and Alcohol Offenses

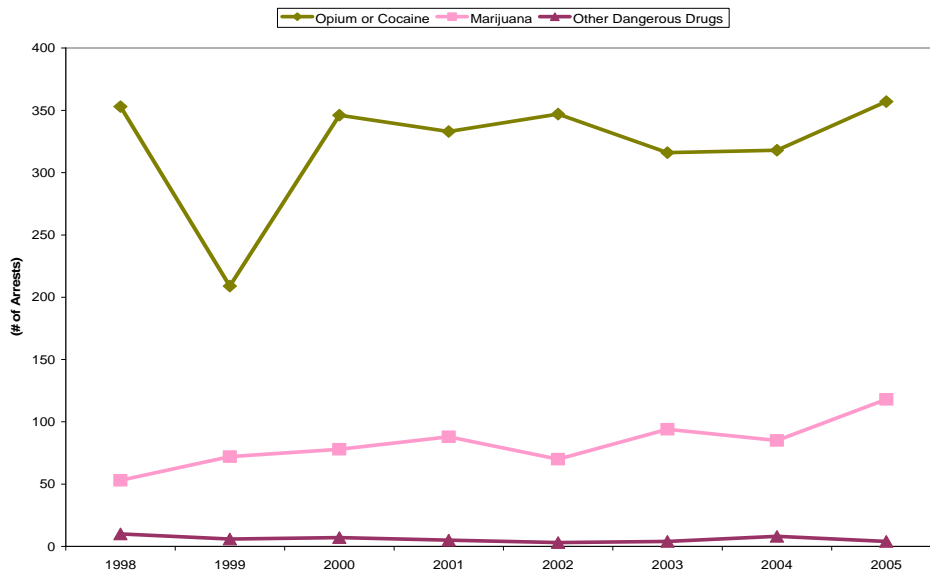




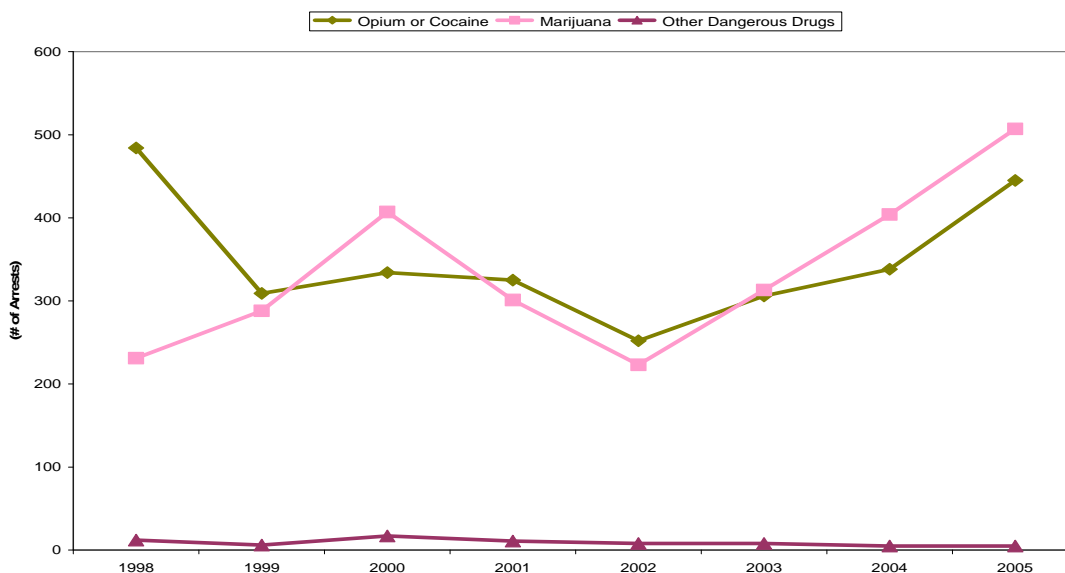
## Adult Arrests

In Durham in 2004, there were 411 arrests for sales or manufacturing of an illicit substance and 748 for possession of an illicit substance. Almost all arrests for sales and manufacturing of illicit substances were for either cocaine (77%) or marijuana (21%). Similarly arrests for possession of an illicit substance were primarily for possession of cocaine (45%) or marijuana (54%).

### Durham Adults 1998-2005: Arrests for Sales of Illicit Substances



### Durham Adults 1998-2005: Arrests for Possession of Illicit Substances



## *Community Questions*

*Are African-American youth in Durham more likely than White youth to use illicit substances?*

The arrest data suggest that African-American juveniles are more likely to be arrested for possession and sales of illicit substances. However, we do not currently have information on self reported drug use. Therefore, we do not know if drug use is greater among African-American youth than White youth. Also the data from the State Bureau of Investigation do not provide information on the Hispanic ethnicity of youth in Durham.

*Are there ways to obtain this information from local agencies? Would this information be useful?*

*What other information could we deduce from arrests for possession and sales of illicit substances?*

*Is there additional information that the Police Department or Sheriff's Office could provide?*

For example, the police and sheriff's office may provide information on where the arrests occurred and where the arrestee lived. This may help identify prevention strategies. Similarly, the data from the State Bureau of Investigation do not include information on adult arrestees' race or ethnicity.

*Would this information be useful?*

## **Reports of Substance Abuse among Inmates**

**Indicators:** The types of drugs used by inmates

**Relevance:**

Tracking substance abuse patterns among inmates entering the North Carolina Department of Corrections provides a picture of the kinds of drugs used by those committing the most serious crimes in Durham. A change in use patterns has implications for enforcement and drug interdiction strategies. Drug use among one cohort of inmates can also be used to plan for community-based treatment for that cohort when it leaves prison.

**Data:**

Data come from the North Carolina Department of Corrections. When inmates enter prison they are screened for their need for substance abuse treatment using the Chemical Dependency Screening Test, Short Michigan Alcohol Screening Test (prior to 2002) or the Substance Abuse Screening Inventory (after 2002).

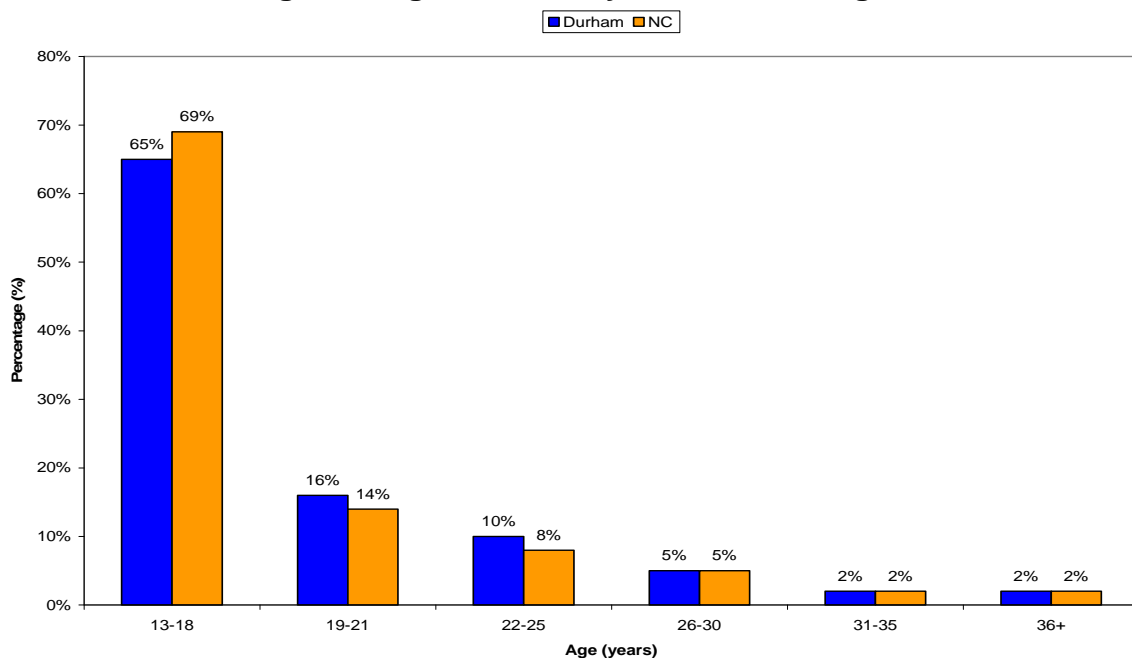
**Findings:**

During 2000-2005, approximately 60 percent of inmates met the criteria for needing substance abuse treatment in Durham County. This is similar to the percent of all prisoners in North Carolina.

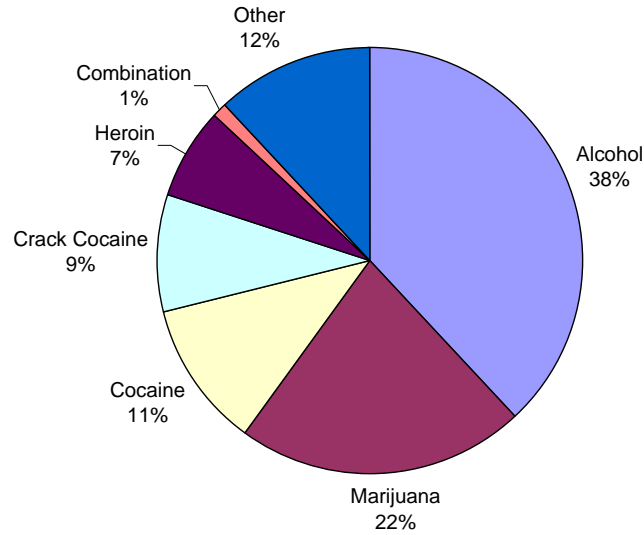
On average, from 2000-2005, 37 percent of inmates from Durham County entered prison with a drug conviction, relative to 42 percent of inmates from the other counties in North Carolina. Similarly, 41 percent of inmates in Durham reported that their crime was committed while under the influence of drugs and/or alcohol (42% of inmates from the rest of the state).

The North Carolina Department of Corrections surveys inmates when they enter prison. According to this survey, the primary drugs of choice among Durham inmates who use substances are alcohol (38%), marijuana (22%), cocaine/crack (20%), heroin (7%), and combination of drugs (1%). A fair proportion of inmates (12%) reported using other substances. Overall, Durham inmates appear to be fairly similar to inmates in the rest of the state with respect to age and the types of drugs being used. The exception is that Durham inmates appear to be slightly more likely to use heroin (7% in Durham vs. 1% in the rest of the state) and less likely to consume alcohol (38% in Durham vs. 46% in the rest of the state).

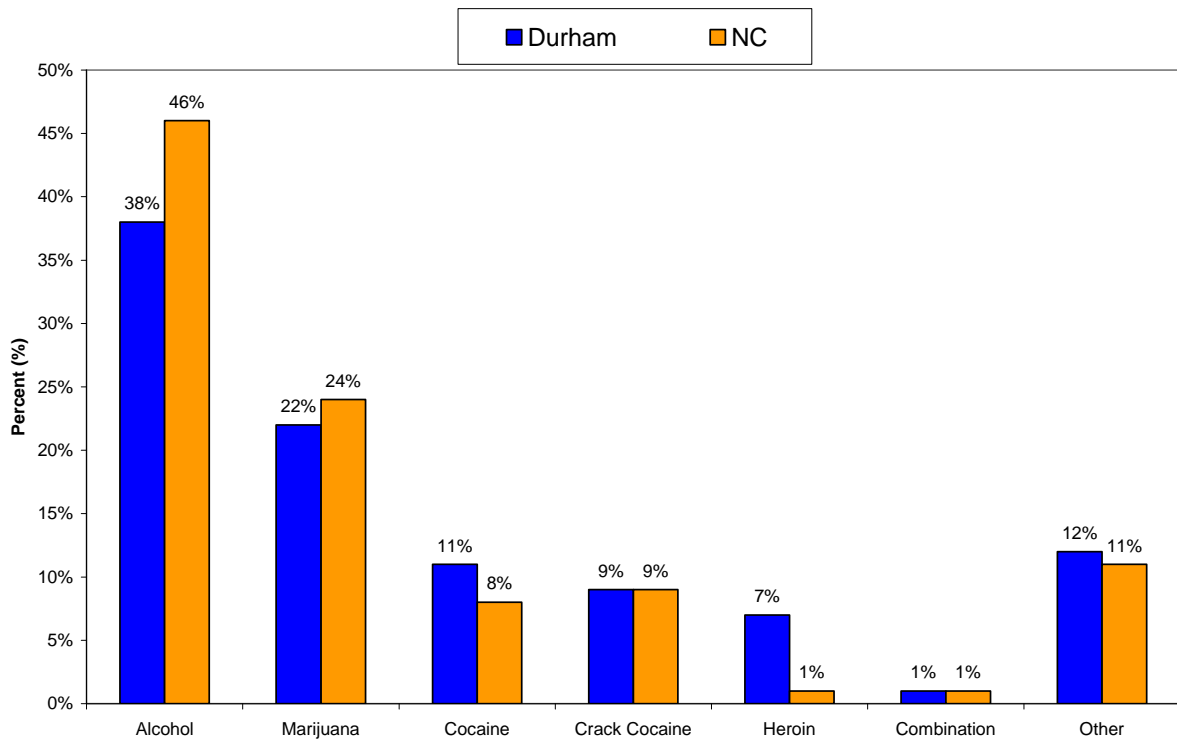
**Inmates' Drug Use: Age When They First Tried Drugs, 2000-2005**



### Prison Entries by Drug Choice among Durham Inmates, 2005



### Prison Entries by Drug of Choice in 2005



## Substance Abuse among Adjudicated Juveniles

### Indicators:

- **Number of adjudicated youth with a substance abuse disorder**
- **Number of adjudicated youth with a substance abuse disorder who are not receiving treatment**

### Relevance:

Tracking substance abuse by adjudicated youth is essential for both prevention and treatment planning. These are some of our most troubled youth. Prevention messages work best when they are targeted to specific needs. Therefore, prevention planners need to know which drugs this group is using. Treatment planning will also benefit if we have a better picture of the kinds of drugs these youth are using.

### Data:

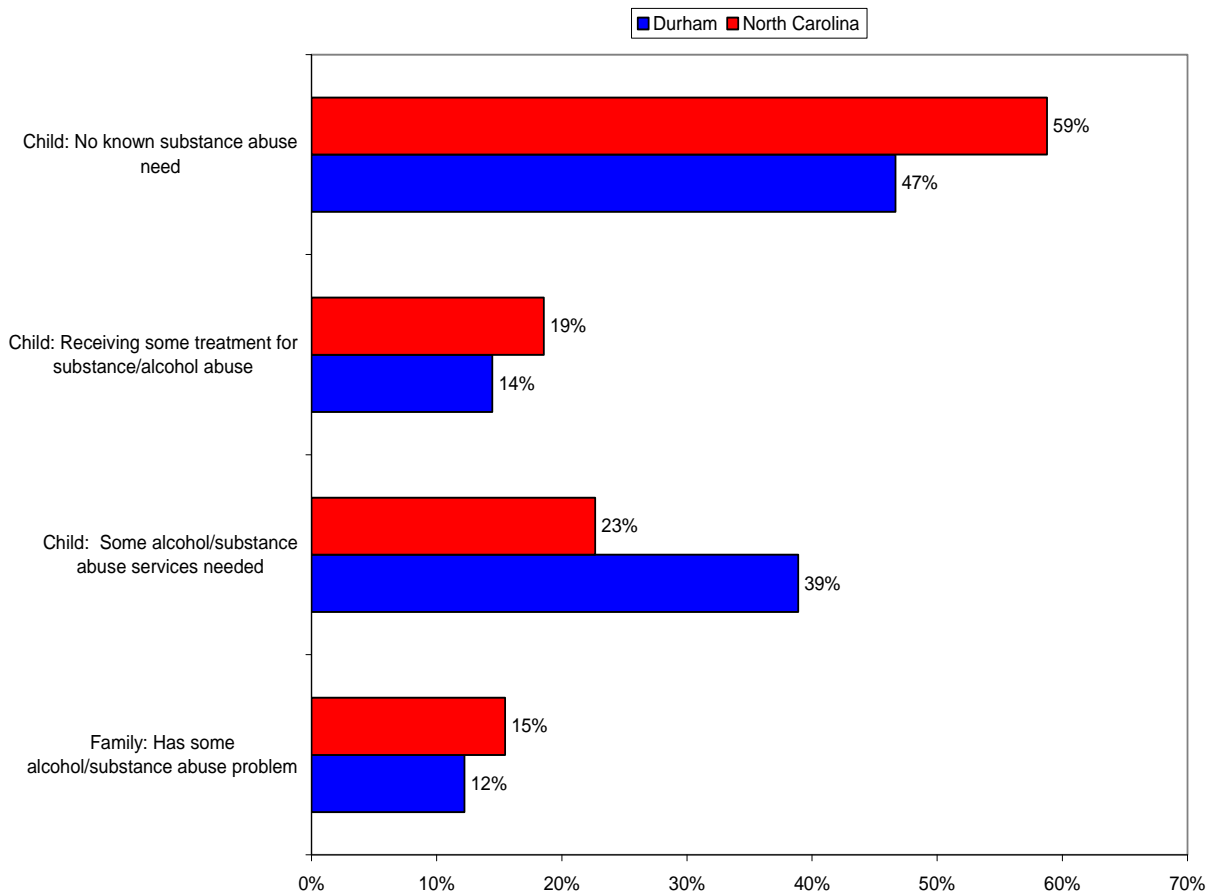
North Carolina conducts a needs assessment with youth at their disposition (there is a 97% completion rate, meaning that essentially all disposed youth are screened). This assessment identifies a variety of potential risk factors related to delinquency. The assessment is designed to determine the types of services, supports, and supervision the youth will need in the various settings (social, family, school, etc). Included in this needs assessment are substance abuse problems such as, a) whether the youth's family has substance abuse problems, and b) whether the youth has substance abuse problems.

### Findings:

Among those assessed, youth in Durham are more likely than youth statewide to have a substance abuse problem (53% vs. 42%). Also, disposed youth in Durham were less likely than the rest of the state to receive services for alcohol or substance abuse (14% vs. 19%).

Among disposed youth who were assessed, 15 percent of individuals statewide came from a family with substance abuse problems compared to 12 percent of disposed youth in Durham. However, it should be noted that for the family assessment, 10 percent of the Durham assessments were missing, relative to 4 percent of the rest of the state.

## Disposed Youth



## Substance Abuse Arrests in Durham Public Schools

**Indicator:** Number of arrests for possession of an illicit substance or alcohol on school property<sup>6</sup>

### **Relevance:**

Drug patterns may vary by school and by neighborhood. Drug epidemics can spread across schools and neighborhoods. School officials need to know which drugs to look for in their schools. School-generated information that tracks changes across schools can inform law enforcement and treatment planning.

Currently, there are very few indicators on substance use among our youth. However, schools are required to report possession of alcohol and illicit substances on school property.

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<sup>6</sup> Three year averages were used because the number of arrests in anyone year is typically small. A single event that generated several arrests may skew the data. Thus, three year averages would be more stable.

Unfortunately, we can not distinguish whether the arrestee was a youth at the school or someone else on school property. Nonetheless, the arrests for illicit possessions provide a picture of where illicit substances are physically available.

**Data:** Since 1995, schools in North Carolina have been required to report on 17 different offenses that occur on school property, including possession of alcohol and illicit substances.

**Findings:**

The table below includes the total number of arrests for possession of an illegal substance or alcohol on school property during school years 2002-2003, 2003-2004, and 2004-2005. Not surprisingly, high schools have a higher number of arrests for illicit substances and alcohol than middle or elementary schools. Among high schools, Hillside High had the highest rate of arrests (20.5 arrests per 1,000 students), while Jordan High had the lowest (5.2 arrests per 1,000 students). Among middle schools, Roger-Herr and Brogden Middle Schools had rates of less than 1, while Chewning Middle School had the highest rate of arrests (13.8 per 1,000 students). The rate of arrest for possession of substance abuse and alcohol at Chewning Middle School is more similar to the rate among North Carolina high schools than among other middle schools.

## Substance Use in Durham Public Schools

Durham County Schools	3 year Totals (2002-2003; 2003-2004; 2004-2005)					3 year Totals (2002-2003; 2003-2004; 2004-2005)			
	PS <sup>1</sup>	PA <sup>2</sup>	Adm <sup>3</sup>	Rate of PA+PS <sup>1</sup> per 1,000 students		PS <sup>1</sup>	PA <sup>2</sup>	Adm <sup>3</sup>	Rate of PA <sup>2</sup> +PS <sup>1</sup> per 1,000 students
<u>Elementary Schools</u>					<u>Middle Schools</u>				
Bethesda	1		726	0.46	Brogden	2		781	0.9
Burton Geo-World Magnet			354		Carrington	7		1264	1.8
C.C. Spaulding Biosphere Magnet			229		Chewning	20	10	724	13.8
Club Boulevard Early Magnet			485		Githens	4	2	985	2.0
Creekside			139		Lowe's Grove	6		738	2.7
Hope Valley			839		Neal	11	1	812	4.9
E.K. Powe			449		Roger-Herr	1		581	0.6
Easley			643		Shepard	5		419	4.0
Forest View			843		<u>High Schools</u>				
George Watts			336		Hillside	77	4	1315	20.5
Glenn			692		Jordan	19	8	1729	5.2
Hillandale	2		684	0.97	Northern	52	7	1498	13.1
Holt			596		Riverside	47	9	1647	11.3
Lakewood			222		Southern	31	1	1365	7.8
Little River	2		527	1.27	Middle College at DTCC			Not available	
Mangum			341		J.D. Clement Early College				
Merrick-Moore			583		<u>Other</u>				
Morehead Montessori			195		Durham School of the Arts	6	5	1347	2.7
Oak Grove			944		Lakeview	6		186	10.7
Parkwood			910						
Pearsontown			841						
R.N. Harris Integrated Arts & Core Knowledge Magnet			286						
Southwest			824						
W.G. Pearson			230						
Y.E. Smith Science & Technology Magnet			318						

<sup>1</sup>PS=Possession of Substances, <sup>2</sup>PA=Possession of Alcohol, <sup>3</sup>ADM=Average daily membership



## Drinking and Driving in Durham

### Indicators:

- Number of motor vehicle accidents involving alcohol or substances
- Number of fatal motor vehicle accidents involving alcohol or substances
- Percent of Durham residents self reporting driving after having consumed too much alcohol
- Traffic stops
- Arrests for DUI by State Bureau of Investigation

### Relevance:

According to a review of the literature by the National Highway Traffic Safety Administration, across the United States in 2005 (National Highway Traffic Safety Administration, 2004):

- 7% of all traffic crashes were alcohol related but 39% of fatal crashes were alcohol related.
- Approximately one-fifth of children aged 1-14 years who died in a motor vehicle accident died in alcohol-related crashes. Approximately half of the children killed in alcohol-related crashes were riding in vehicles with drivers who had been drinking.
- Nearly half of pedestrian motor vehicle deaths involved alcohol.
  - In approximately a third of these deaths, the pedestrian had a .08 blood alcohol count (BAC) or higher.
  - In approximately half of pedestrian deaths among individuals aged 21-24 years, the pedestrian had a .08 BAC or higher.

**Data:** The data come from the North Carolina Alcohol Facts web site (North Carolina Alcohol Facts, 2005). This web site includes information on impaired driving cases from the North Carolina Administrative Office of the Courts (AOC) and motor vehicle crashes from the North Carolina Division of Motor Vehicles for the years 2000-2005.

### Findings:

While drinking and driving is a problem in most communities, Durham problems are in line with North Carolina averages. For Durham County residents during the years 2000-2004, motor vehicle accidents were the third leading cause of death for youth aged 0-19 (rate=7.3), the second leading cause of death for individuals aged 20-39 (rate=15.6) and the seventh leading cause of death for individuals aged 40-64 (rate=13.8) (North Carolina State Center for Health Statistics, 2006). According to the North Carolina Division of Motor Vehicles, one-quarter of these fatal accidents involved alcohol (North Carolina Alcohol Facts, 2006). Approximately 300 injuries a year in Durham County are related to traffic accidents involving alcohol.

Based upon statistics regarding the number of deaths while driving, the number of court cases

for drinking and driving, and the number of arrests for drinking and driving, Durham seems to be in line with or performing slightly better than the state of North Carolina. However, according to self-reported information, Durham residents are slightly more likely to report drinking and driving than North Carolina as a whole.

### Motor Vehicle Accidents

	Durham	North Carolina	United States
Number of Deaths in 2004	28	1,675	45,380
Age-adjusted Death Rate 2000-2004	12.5	19.6	15.7

*Note: The United States data are for the year 2002 only.*

*Rates are per 100,000 population*

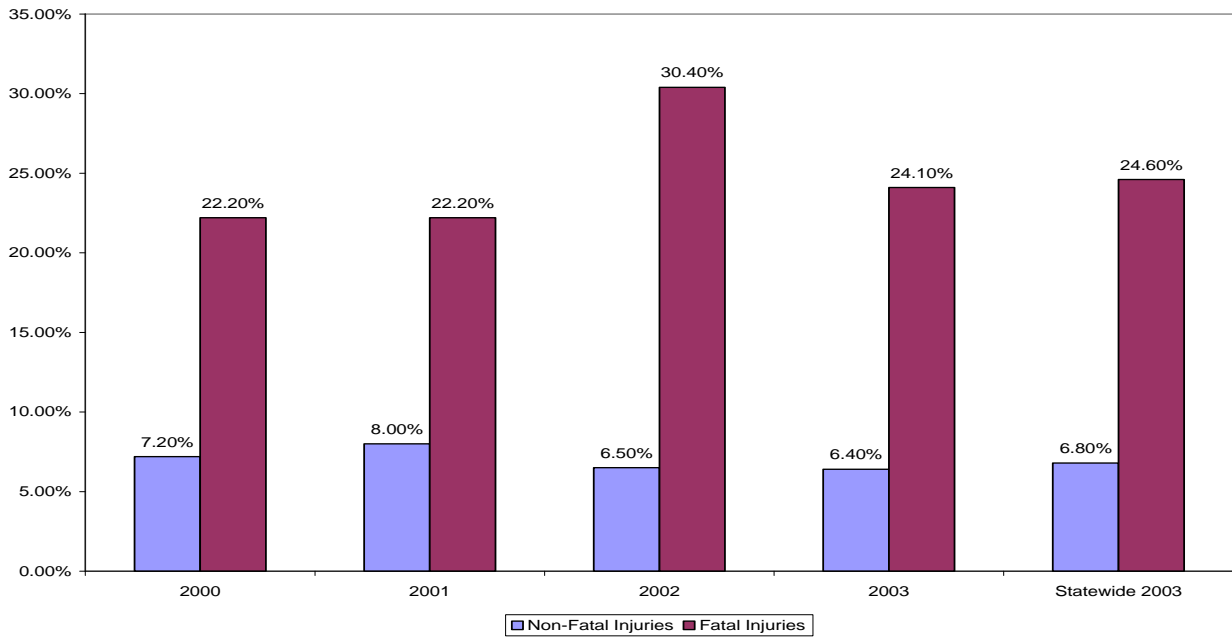
*Source: Centers for Disease Control and Prevention, 2004; North Carolina State Center for Health Statistics*

### 2000-2004 Durham County Traffic Accidents Involving Injuries

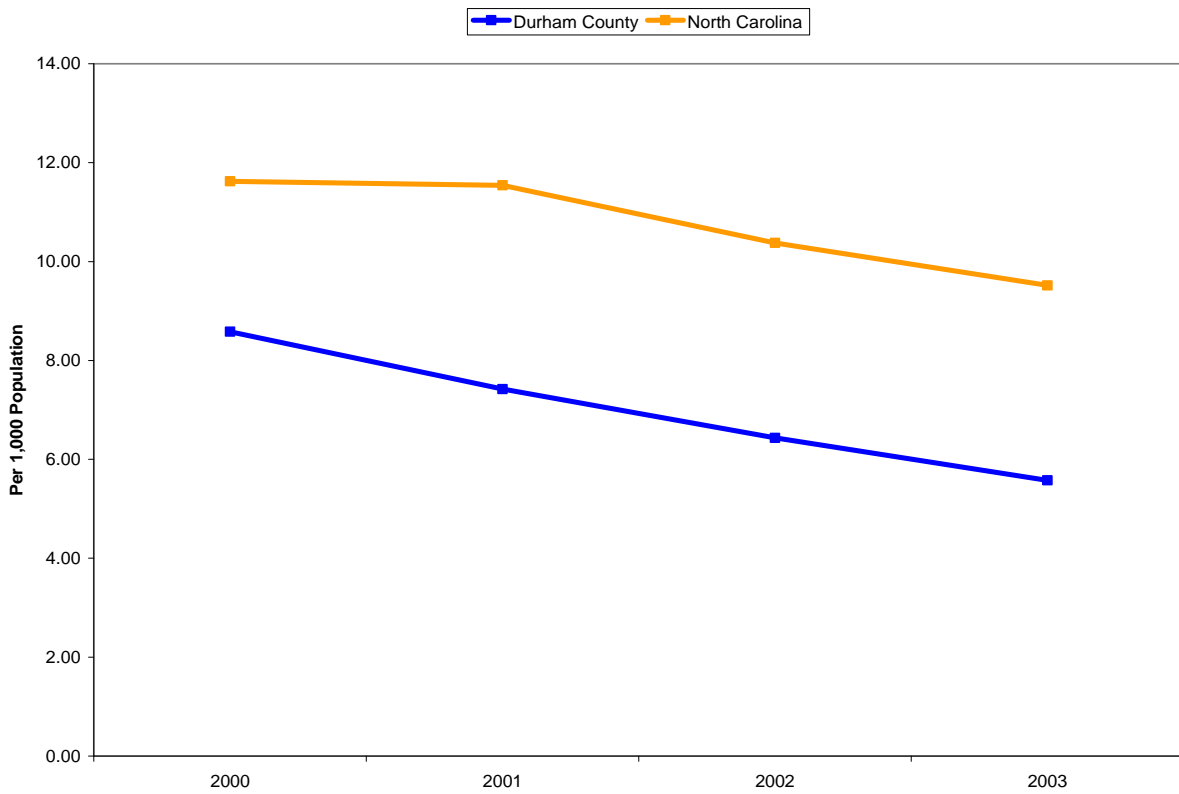
	2000	2001	2002	2003	2004	Statewide 2004
<b>Reported Crash Injuries</b>						
Non-Fatal Injuries	4,284	4,291	4,081	4,156	4,017	132,825
Fatal Injuries	27	36	23	29	32	1,577
Total Injuries	4,311	4,327	4,104	4,185	4,049	134,402
						<b>Statewide 2004</b>
<b>Percent Alcohol Related</b>						
Non-Fatal Injuries	7%	8%	7%	6%	6%	7%
Fatal Injuries	22%	22%	30%	24%	22%	26%
Total Injuries	7%	8%	7%	7%	6%	7%

*Source: North Carolina Alcohol Facts, 2006*

### Percent of Injuries in Durham County from Traffic Accidents Attributable to Alcohol

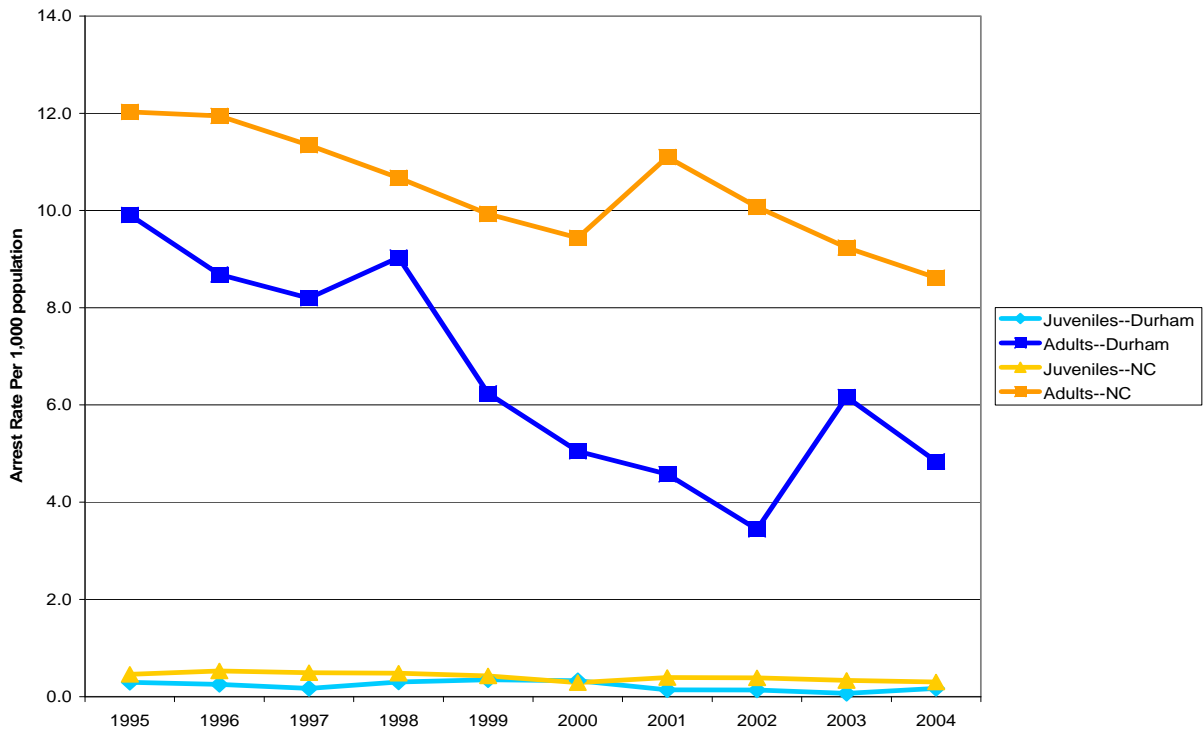


### Total Dispositions for Impaired Driving



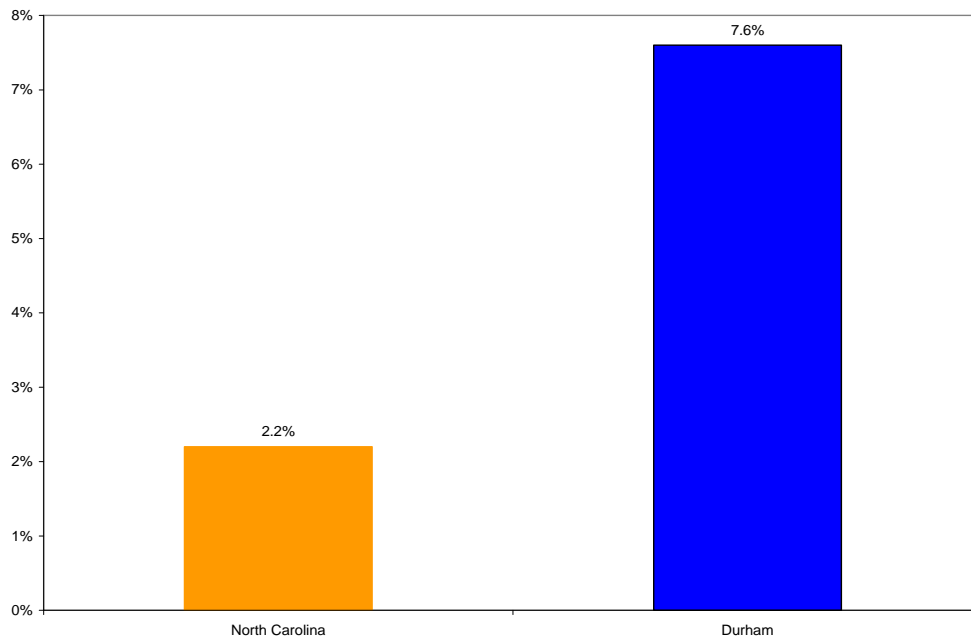
Source: North Carolina Alcohol Facts, 2006

### DWI Arrests, 1995-2004



Source: State Bureau of Investigation, 2006

### Durham vs. North Carolina 2004: Percent Population Who Reported Driving After Drinking Too Much



Source: North Carolina State Center for Health Statistics, 2004

## *Alcohol*

### **Indicators:**

- **Number and percent of individuals who have participated in binge drinking in the past 30 days**
- **Number and percent of individuals who report heavy drinking**

### **Relevance:**

Alcohol abuse is associated with binge drinking (adults having 5 or more drinks on 1 occasion), and heavy drinking (averaging more than 1 drink per day for women or 2 drinks per day for men) and underage drinking. While consumption of alcohol during pregnancy is not always classified, it has been shown to have serious consequences for young children.

**Data:** Survey research on alcohol consumption in Durham County comes from the Behavioral Risk Factor Surveillance Survey (BRFSS) published by the CDC.

### **Findings:**

Roughly 21 percent of males and 6 percent of females reported binge drinking in 2005. An even smaller percentage of the population reported heavy drinking (2.5% of males and 1.8% of females).

Using binge drinking and heavy drinking as measures to assess potentially unhealthy behaviors, there are few differences between Durham residents and the rest of the state. Binge drinking among Durham residents was similar to that of the rest of the state (13.2% vs. 10.5%) and is more common among males than females (20.8% vs. 6.2%). The rate of binge drinking did not differ by race (White vs. minorities). Heavy drinking is less prevalent than binge drinking. The rate of heavy drinking in Durham County does not differ much from that of North Carolina (2.1% vs. 2.9%). Among Durham residents, heavy drinking does not differ by gender or race.

## Alcohol Consumption among Durham Adults: 2005

	Nation	North Carolina		Durham			
		Mean	CI(95%)	Mean	CI(95%)	White	Minority
<b>Binge Drinking in last 30 days (5 or more drinks)</b>							
None	85.6%	74.9%	73.3-76.4	73.1%	65.2-79.8	72.6%	73.8%
Once		10.3%	9.4-11.4	12.4%	8.1-18.5	13.5%	10.6%
Twice		5.8%	5.0-6.7	6.1%	3.0-12.0	5.8%	6.8%
3-7 times		6.2%	5.4-7.2	7.3%	3.9-13.2	7.5%	6.9%
8-30 times		2.8%	2.2-3.5	1.1%	.2-4.5	0.6%	1.9%
<b>Heavy drinkers (adult men having more than two drinks per day and adult women having more than one drink per day)</b>							
Yes	4.9%	2.9%	2.6-3.3	2.1%	1.2-3.9	3.7%	0.8%

Source: *The Behavioral Risk Factor Surveillance Survey (BRFSS)*

### *Costs of Illegal Drugs in Durham*

The price of illegal drugs is the result of supply and demand. Rising prices result from a decrease in supply which is usually caused by more effective drug enforcement efforts. Increases in price may increase street crime (ex. addicts may need more money to meet their needs), or medical needs (ex. price affects drug quality, which in turn affects the medical problems that are being seen). Decreasing prices can lead to more users, users purchasing larger doses, and increased drug purity, which will also affect prevention, treatment, and medical resources. One of the benefits of the surveillance system is that, by sharing information, the community will be in a better position to respond to such changes.

#### **Heroin (Dope or “He-ron”)**

According to the Durham County Sheriff’s Office, the heroin that is sold in Durham County comes primarily from Asia (Martin, 2006). It is sold on the street after being cut and packaged in bindles. For most of 2006, a bindle, or 1 dosage sold for \$20 (or 10 bindles=1 bundle and is sold for \$150). Bindles vary in purity from .1 gram heroin to as little as .04 grams and can be cut with a variety of substances, including lidocaine, caffeine, lactose, acetaminophen, or others.

#### **Cocaine**

On the streets of Durham, cocaine is usually cut with a variety of possible substances and then sold. After being cut, 1 ounce of cocaine sells for approximately \$1,000 in Durham. An “eight-ball,” which is 3.5 grams, generally sells for \$125. A “biggie eight,” which is 4.5 ounces, generally sells for \$4,000-\$4,500. However, the actual amount that the buyer receives is often less than advertised.

### Crack

According to the Durham County Sheriff's Office, 1 gram of cocaine can produce 5 dosage units (also known as rocks) of crack. One rock usually sells for \$20.

(Crack and cocaine: a kilogram of cocaine can be purchased for between \$18,000 and \$20,000. When this same amount of cocaine is cooked into crack, it can generate as much as \$100,000 on the street.)

### Next Steps

It would help to have prices for additional drugs such as marijuana. By getting the information on a quarterly basis, we could track changes and inform necessary parties of issues that may be arising.

## *Smoking: Basic Health Information*

### Indicator:

- **Number of adults (individuals age>18) who smoke**
- **Number of pregnant women who smoke**
- **Rate of lung and bronchial cancer deaths (long-term indicator)**

### Relevance:

Smoking is the leading cause of preventable death (National Center for Chronic Disease Prevention and Health Promotion, 2004). Across the nation, approximately 20 percent of deaths each year are attributable to smoking or secondhand smoke (National Center for Chronic Disease Prevention and Health Promotion, 2004).

The following is a partial list of the negative consequences of tobacco use:

- **Cancer:** Cancer is the second leading cause of death in the U.S, North Carolina, and Durham.
  - Lung cancer is the most common form of cancer. Smoking is an attributing factor in the majority of lung cancer deaths (90% for males and 80% for females).
  - Smoking increases the risk of a variety of cancers including cancer of the oral cavity, pharynx, larynx, esophagus, lung, bladder, stomach, cervix, kidney, and pancreas, as well as myeloid leukemia.

- **Coronary Heart Disease and Stroke:** Coronary heart disease is the leading cause of death and stroke, and is the third leading cause of death in the United States.

- **Other Health Effects**

- Smoking leads to reproductive health problems.
  - Reduces women's fertility
  - Leads to complications in pregnancy, premature birth, low-birth-weight infants, still birth, and infant death.
- Decreases the immune system's ability to fight infections leading to:
  - More missed work
  - Higher rates of medical care use
  - More admissions to the hospital

**Data:** Survey data collected by the Centers for Disease Control and Prevention (BRFSS)

**Findings:**

According to data from the Behavioral Risk Factor Surveillance Survey (BRFSS), approximately 19 percent of Durham residents over the age of 18 were current smokers in 2004. This is roughly the same percentage of adults who smoke across both the state and the nation. A slightly larger percentage of North Carolina adults smoked every day (17.2%) than either Durham adults (13.1%) or adults in the United States (15.8%).

Whether the mother smoked during pregnancy is recorded on the newborn's birth certificate. In 2003, a rate of 4.6 pregnant women in Durham smoked. This compares with a rate of 12.7 pregnant women across the state (North Carolina State Center for Health Statistics, 2005). Both White and minority Durham women are less likely to smoke during pregnancy than their counterparts across the state. However in Durham County, minority women are more likely to have reportedly smoked during pregnancy versus White women from across the state.. The table below shows the percent of pregnant women who reportedly smoked during pregnancy from 1998 to 2004. Over time, there has been a decline in smoking rates among pregnant women in both Durham and the state.

According to data from the 2006 County Health Data Book, the second leading cause of death for Durham residents was cancer (North Carolina Department of Health and Human Services, State Center for Health Statistics and Education, 2006). The leading type of cancer was lung cancer. This pattern was true for White males, minority males, White females, and minority females alike. From 2000-2004, the Durham County and state death rates for cancers of the trachea, bronchus, and lung, were similar at around 60 deaths per 100,000, attributable to this cause.

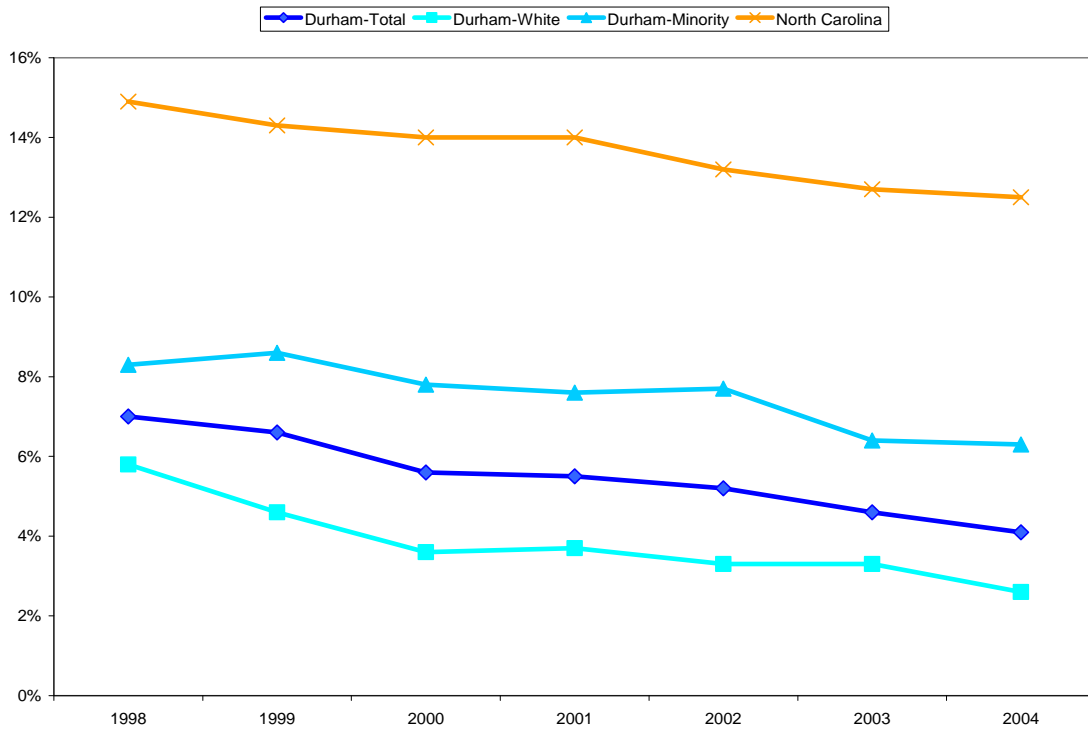
**Smoking Statistics in Durham County  
(compared with the state and nation)**



	Durham		North Carolina		Nation	
	Mean	Confidence Interval	Mean	Confidence Interval	Mean	Confidence Interval
<b>Tobacco Use 2005</b>						
Adults who are current smokers	18.5	14.3-23.7	22.5	21.7-23.4	20.8	
<u>Four levels of smoking status</u>						
Smoke every day	13.1	9.7-17.4	17.2	16.5-18.0	15.6	
Smoke some days	5.4	3.0-9.6	5.3	4.8-5.8	5.3	
Former smoker	22.4	18.0-27.7	23.3	22.5-24.1	23.9	
Never smoked	59.1	53.3-64.6	54.2	53.2-55.2	54.9	
<b>Mother Smoked During Pregnancy-2003</b>						
	Rate		Rate			
Total	4.6		12.7			
White Mothers	3.3		13.4			
Minority Mothers	6.4		10.6			
<b>Mortality Rates</b>						
Cancer - Trachea, Bronchus, and Lung: Age-adjusted death rate 2000-2004	60.8		59.6			
Cancer - Trachea, Bronchus, and Lung: Death Rate 2004	55.7		58.8			

Source: North Carolina Center for State Health Statistics, 2003, 2004

## 1998-2004: Percent of Mothers Who Smoked During Pregnancy



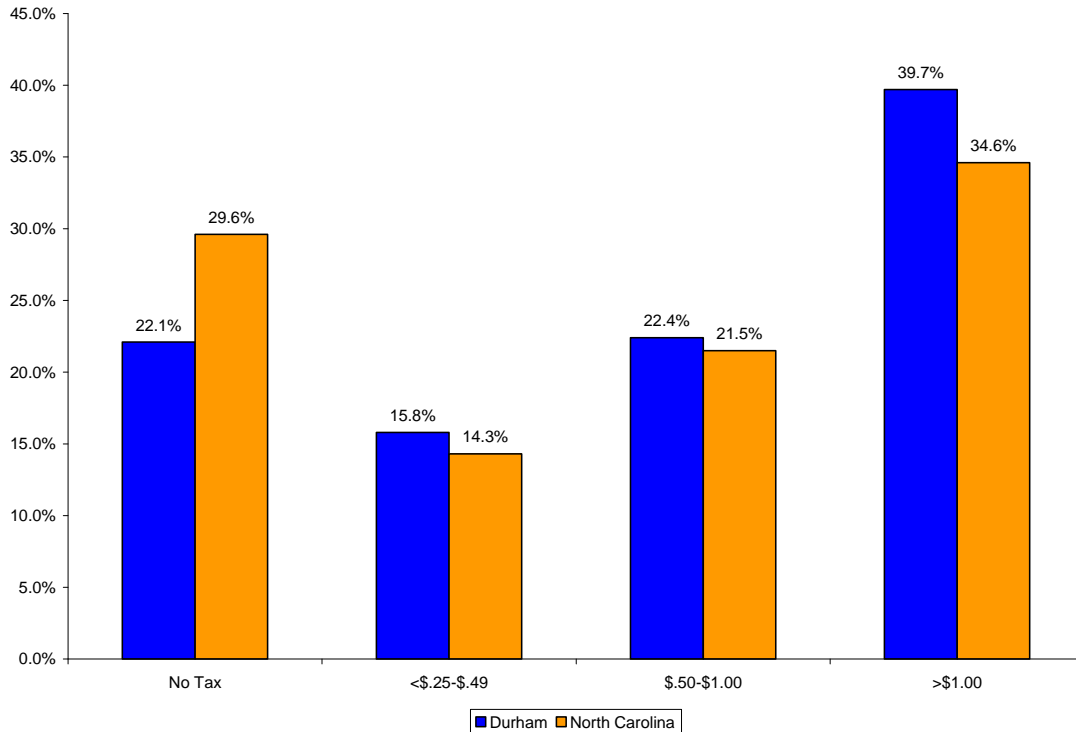
## Attitudes toward Prevention

Currently, North Carolina taxes a pack of cigarettes by \$.35 relative to the national average of \$.90 per pack (median is \$.79 per pack).

In 2004, the BRFSS included a question that asked residents the following: “States add a special tax to cigarettes. The national average is \$0.59, and the NC tax is \$0.05. How much additional tax on a pack of cigarettes would you be willing to support if a considerable portion of the money raised was used to fund smoking prevention programs for our youth and provide treatment options for tobacco users who want to quit?”

## States Cigarette Tax

*The national average is \$.59 and the NC tax is \$.05. How much additional tax would you support if a considerable portion of the proceeds went to youth prevention and treatment programs for current smokers?*

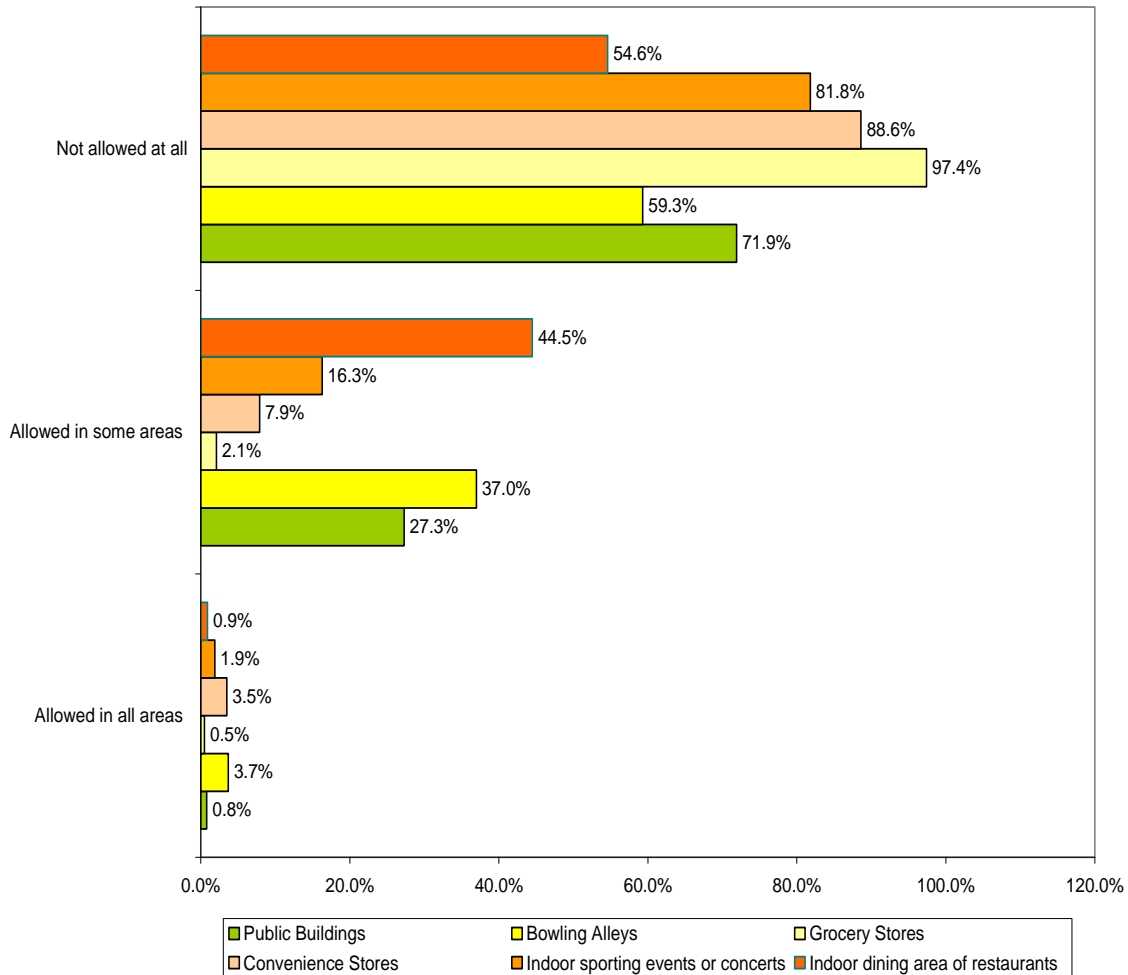


## Attitudes toward Secondhand Smoke

The BRFSS also asked approximately 400 Durham residents several questions regarding their feelings toward secondhand smoke. For instance, one question asked respondents about rules that they had for smoking inside their home. Three-quarters of respondents replied that smoking was not allowed in their homes. Eight percent replied that smoking was allowed in some places, 6 percent said that it was allowed anywhere in the home, and an additional 11 percent had no rules regarding smoking in their homes. Durham residents responded similarly to North Carolina residents.

In general, Durham residents seem to feel that smoking should either be not allowed or limited to certain areas. In 2004, the BRFSS asked Durham residents whether smoking should be allowed in indoor dining areas of restaurants, indoor sporting events, convenience stores, grocery stores, bowling alleys, and public buildings. Durham residents typically felt that smoking should be completely excluded from these places. Less than 4 percent of Durham residents felt that smoking should be allowed in all public areas at these locations or events.

## Durham Residents' Perceptions Regarding Whether Smoking Should Be Allowed in Public



### Quitting Smoking

When an individual stops smoking, he or she will experience immediate benefits such as reduced risks of stroke, coronary heart disease, and many cancers (National Center for Chronic Disease Prevention and Health Promotion, 2005). When pregnant women quit by the first trimester of pregnancy, the chance of having a low birth weight baby is the same as for nonsmokers.

## **Resources for Quitting**

### **State and Local Resources:**

- **Quit Now NC!** is a statewide tobacco use cessation partnership that provides resources to help North Carolinians quit tobacco. The Quit Now NC! web site (<http://www.quitnownc.org/>) provides information on quitting tobacco, such as who to call, a directory of local providers, internet resources, and information about various medicines that are designed to help individuals quit.

**National:** <http://www.cdc.gov/tobacco/news/QuitSmoking.htm>

### • **Quit lines:**

- 1-800 QUIT NOW (1-800-784-8669)
- Available 8 a.m.- midnight; 7 days a week
- Available in English, Spanish, and other languages
- For deaf/hard-of-hearing: TTY 1-877-777-6534

### • **Quit line for pregnant smokers:**

- American Legacy Foundation 1-866-667-8278
- Available Monday-Friday 8 am until 8 pm
- Spanish interpreters and materials are available

# Treatment Services in Durham County

**Indicator:** The number of individuals expected to need treatment relative to the number actually served

**Relevance:**

Many individuals who actually need substance abuse services never actually receive the needed services.

**Data:**

The analysis on the following page was conducted by Janice Stroud of The Durham Center. The main source of data was from the 2004 National Survey on Drug Use and Health (NSDUH).

First, prevalence of individuals who have a diagnosable substance abuse disorder was estimated using the NSDUH. Column A is based on national data from the NSDUH, while column B is based on North Carolina-specific data from the NSDUH.

Second, the proportion of people with the disorder who will seek treatment was estimated.<sup>7</sup> Applying these percentages to the number of people in Durham with the disorder yields the number expected to access treatment (row 5). Relative to the NSDUH model, the LME cost model projects that a much higher percentage of people will access treatment (35% vs. 9%).

Finally, the number expected in treatment is compared to the actual number served by The Durham Center during FY 2005-06. To estimate the county penetration rate for publicly funded substance abuse services, data on the numbers served by other agencies or programs which utilize public funds would be necessary, and a method of removing duplication of consumers served by different agencies would be desirable.

**Findings:**

Estimates from The Durham Center reveal that between 15,675-19,000 Durham residents will need treatment in FY 2005-2006. Between 9.2-35 percent of these individuals will seek treatment at The Durham Center.

***Next Steps***

The following model may be useful to other agencies who are trying to predict the number of individuals who will seek treatment in a given year. If other treatment providers in Durham use this same model, it may be helpful for identifying the percentage of individuals who are not receiving treatment at all.

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<sup>7</sup> This is known as the penetration rate, the percent of individuals who need treatment that actually seek treatment.

## Models for Estimating Penetration Rates of Publicly-funded Substance Abuse Services

National, State, or LME Cost Model Data Applied to Durham	Source of One-Year Prevalence of Diagnosable SA Disorder (SA) and Number Receiving or Expected in Treatment			
	A. 2004 National Study on Drug Use & Health (NSDUH), National Findings*	B. 2004 NSDUH, Findings for NC** (Average of 2003 & 2004)	C. LME Cost Model Based on National Prevalence	D. LME Cost Model Based on NC Prevalence
% of Population Age 12+ with Diagnosable SA Disorder (Prevalence of SA)	9.4%	7.8%	9.4%*	7.8**
Durham County Population Age 12+, 7/1/05; Source: State Data Center****	202,191	202,191	202,191	202,191
Durham County: Estimated Prevalence of SA, Age 12+	19,000	15,675	19,000*	15,675**
% with SA Who Received Specialty Treatment (NSDUH) or Expected in Treatment (Cost Model)	9.2%	9.2%*	35%	35%
Durham County: Estimated N Expected in Treatment FY 05-06	1,748	1,442	6,650	5,846
The Durham Center: Actual N with SA Served, FY 05-06	1,862	1,862	1,862	1,862
Criminal Justice Resource Center: Actual N with SA Served, FY05-06				
STARR: Actual N with SA Served, FY 05-06				
Duke Inpatient/Outpatient/ED: Durham residents with SA (Medicaid or indigent) Served				
Durham residents with SA served in State Hospitals				
<b>TOTAL RESIDENTS SERVED (by formula to sum rows above)</b>	<b>1,862</b>	<b>1,862</b>	<b>1,862</b>	<b>1,862</b>
Note.* and ** in the table indicates the source is NSDUH national or NC data, used when other sources were unavailable.				
*Indicates national data from Substance Abuse and Mental Health Services Administration. (2005). <i>Results from the 2004 National Survey on Drug Use and Health: National Findings</i> (Office of Applied Studies, NSDUH Series H-28, DHHS Publication No. SMA 05-4062				
***The State Data Center age group 10-12 was adjusted to approximate the NSDUH age of 12+.				

## *Local Management Entities*

**Indicator:** Types of drugs specified by individuals treated for substance abuse in Durham local management entities (LMEs)

**Relevance:**

Information from the LMEs provides information on individuals in treatment for substance abuse. In particular, this is a good source of information on the types of drugs that individuals in Durham are exposed to and for which they need treatment.

**Data:** These data come from the LME. An LME is a county-run program or public authority that manages the public policy for the citizens that it supports and serves.

**Findings:**

According to data reported from Durham LMEs, 1,919 Durham residents were served in 2005, of which 55 were adolescents and 1,864 were adults.

*Youth in Treatment*

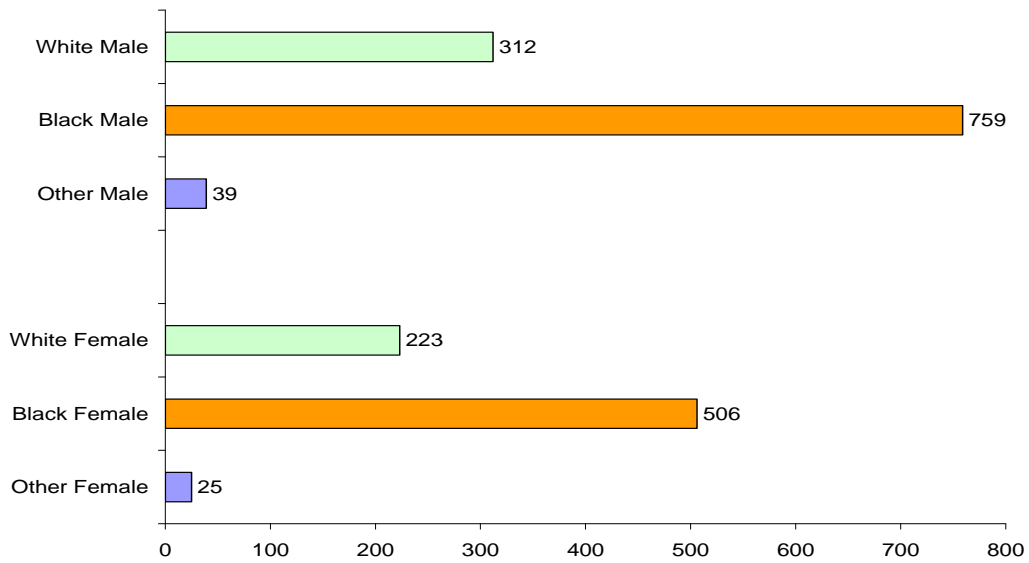
Among youth in treatment, 80 percent were male, 73 percent were African-American, and 18 percent were White. Marijuana was the primary drug reported for 85 percent of youth in treatment in Durham.

*Adults in Treatment*

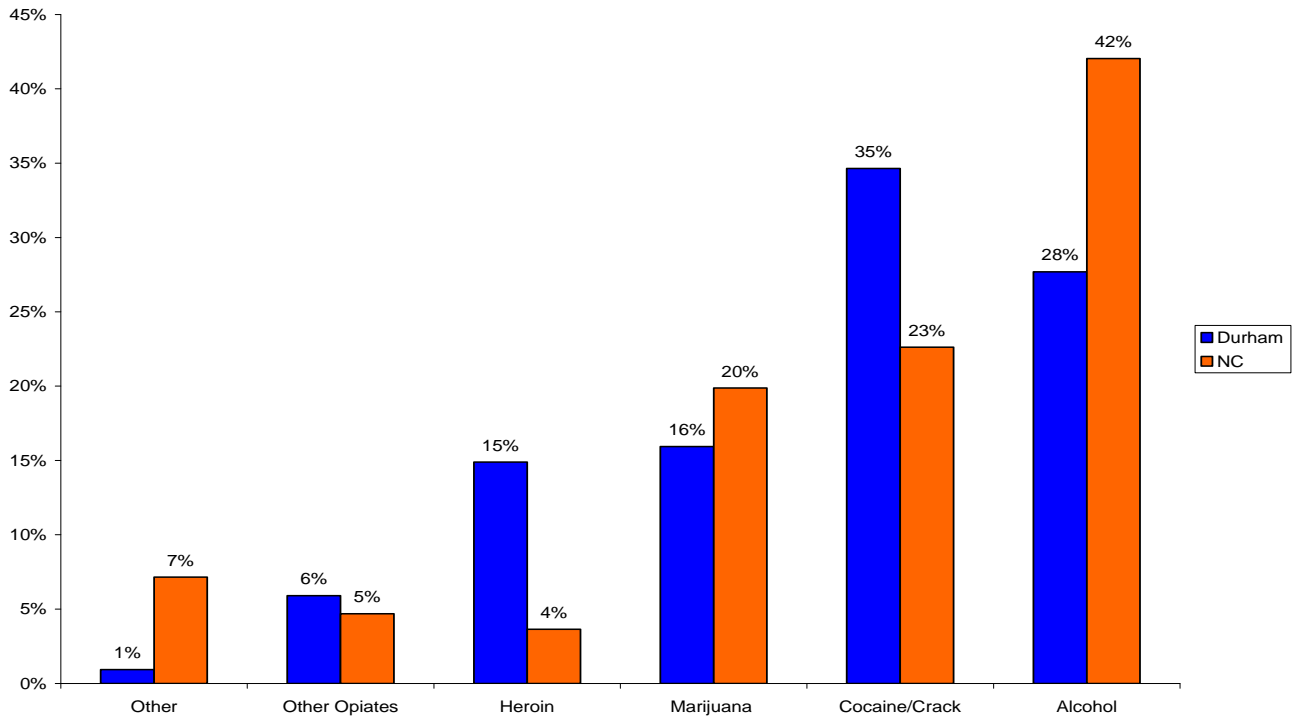
The majority of individuals treated by LMEs were over the age of 18. Sixty percent of Durham residents in treatment were male, 68 percent were African-American, and 28 percent were White. The primary drug used by adults in treatment was crack cocaine (35%), followed by alcohol (28%), marijuana (16%), and other opiates (6%). Among adults in treatment, Durham appears to have a relatively high percentage of individuals receiving treatment for heroin and crack cocaine, and a relatively low percentage of individuals receiving treatment for alcohol (*see figure below*).



### FY 2005: Adults in Durham Receiving Alcohol and Substance Abuse Services through LMEs



### FY 2005: Primary Drug Use by Adults Treated for Substance Abuse by LMEs



## *North Carolina Treatment Outcomes and Program Performance System (NCTOPPS)*

**Indicator:** Drug mentions of Durham adolescents (aged 12-17 years) who are treated for substance abuse or mental health issues

**Relevance:**

There are few data sources that provide information on the types of substances Durham youth are using. By knowing what substances youth have access to, prevention and treatment strategies can be better planned.

**Data:** Data for this report comes from NCTOPPS data regarding patients receiving treatment from July 1, 2005-June 30, 2006. Two different reports were examined:

- Adolescents in substance abuse treatment (aged 12-17) (n=54), and
- Adolescents in mental health treatment (12-17) (n=848).

The response rate of the LMEs is low and therefore these numbers do not reflect all youth treated by Durham LMEs but rather youth treated by LMEs that are participating in the NCTOPPS data collection effort.

**Findings:**

*Adolescents and illicit substances*

Among adolescents' receiving mental health services in Durham, 27 percent reported using illicit substances (vs. 21% of similar youth in the rest of the state). When asked to report the types of illicit drugs used in the past 12 months, the most commonly cited was marijuana (26%), while a small number of individuals reported cocaine (2%), other opiates (1%), and OxyContin (1%).

Among adolescents receiving treatment for substance abuse in Durham, clients reported using the following in the past 12 months: marijuana (83%), cocaine (15%), heroin (2%), other opiates (9%), methamphetamine (2%), over-the-counter (2%), benzodiazepine (2%), and OxyContin (7%).

In the NCTOPPS data for FY 2005-2006, those in substance abuse treatment were comprised of African-American males (56%), White males (19%), African-American females (13%), White females (4%), and other males (9%). Hispanics constituted 6 percent of the sample.

### *Adolescents and Smoking*

Among adolescents receiving treatment for mental health services in Durham County:

- 36% have reported ever smoking compared to 32% of adolescents receiving treatment for mental health in North Carolina.
- 17% reported smoking in the past month.
- 1% reported smoking a pack a day or more.

Among Durham adolescents in substance abuse treatment:

- 59% reported smoking cigarettes in the past month.
- 6% reported smoking a pack or more a day.

### *Adolescents and Alcohol*

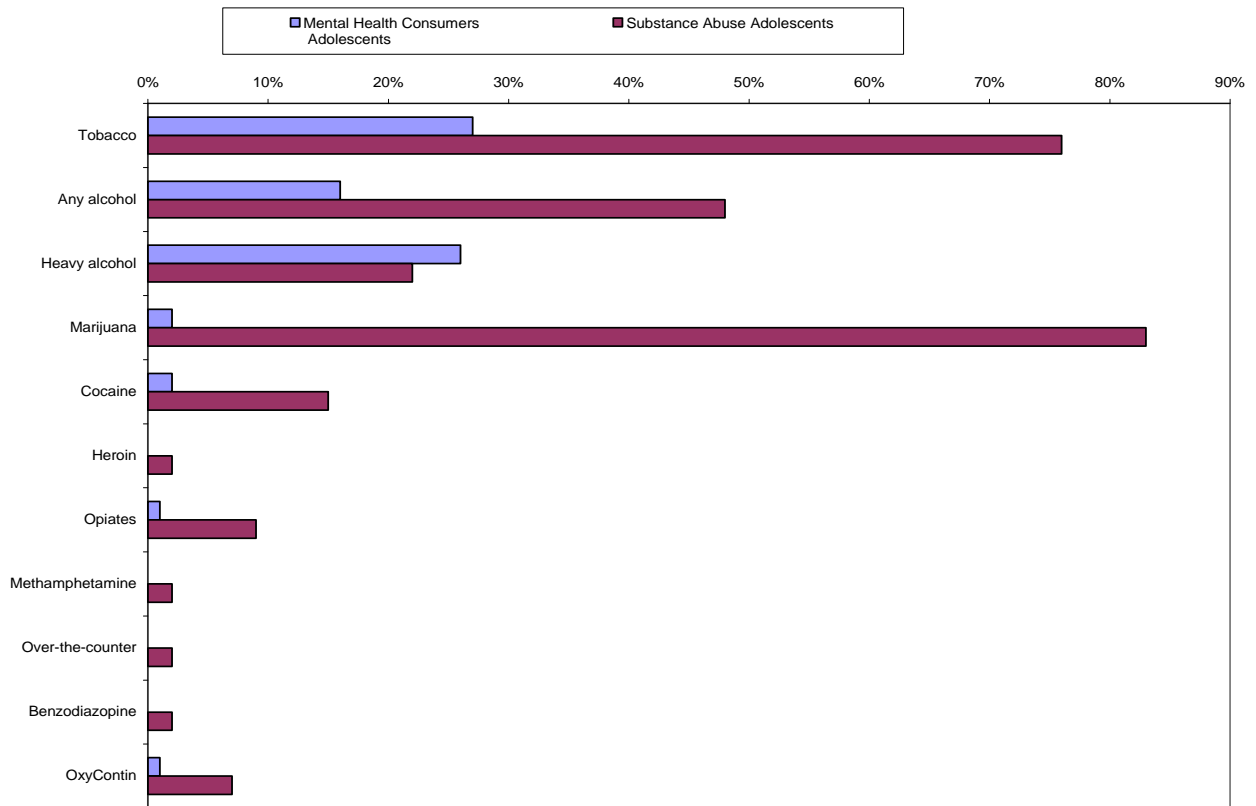
Among Durham adolescents receiving mental health treatment during FY 2005-2006:

- 16% reported having used alcohol in the previous 12 months.
- 5% reported heavy drinking.

Among Durham adolescents receiving mental health treatment during FY 2005-2006:

- 48% reported drinking alcohol in the previous 12 months.
- 22% reported heavy drinking.

## NCTOPPS Clients in Durham: Reports of Substance Use



### Next Steps

Currently the response rate among LMEs in Durham is fairly low. This means that the data in NCTOPPS neither reflect the entire population of substance abusers in Durham nor a representative sample. Thus, it is difficult to use this data to monitor trends over time or make generalizations about substance use in the population in mental health or substance abuse treatment.

## TROSA

Triangle Residential Options for Substance Abusers, Inc. (TROSA) is a long-term residential substance abuse recovery program located in Durham County. This program offers a host of services, including counseling, support for obtaining a GED or obtaining college credit, vocational training, housing, and aftercare services to individuals committed to changing their lifestyle. It is the largest residential therapeutic community in the state.

In the last 3 years, TROSA has admitted 76 Durham residents into its program. The table below describes the characteristics of Durham residents who have sought treatment at TROSA.

### All Durham Residents who Entered TROSA between June 2004-June 2006: 76

<b>Avg # of years using drugs:</b>	16 Years
<b>% w/ Past Incarceration:</b>	87%
<b>% On Probation:</b>	26%
<b>% Parents:</b>	64%
<b>% Married*:</b>	8%

\* Reflects Marital Status Upon Entry

#### Age Ranges

18 - 30	25%
31 - 40	36%
41 - 50	34%
51 - 55	5%

#### Race:

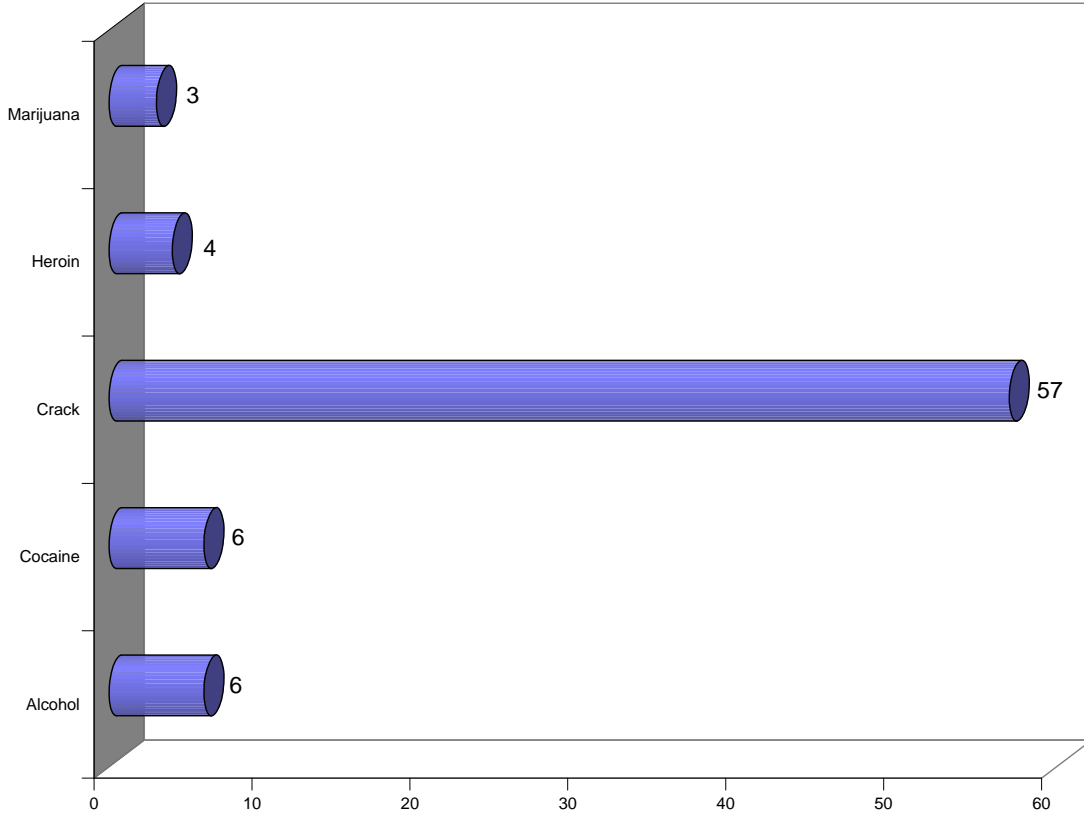
African-American	80%
Native American	1%
Caucasian	18%

#### Gender:

Male	78%
Female	22%

<b>% w/ GED/HS Diploma:</b>	75%
<b>% Self Reported as Homeless:</b>	38%

### TROSA Residents 2004-2006: Primary Drug of Choice



#### **Providers May Have Key Insight for Understanding Local Patterns of Substance Abuse**

Data such as the ones provided by TROSA present a picture of the individuals who are in treatment and where they seek treatment. If more service providers were to report similar statistics we may be able to identify the types of clients who are being underserved (because they don't show up in the statistics). Other treatment providers include:

*Care Clinic Group Inc., Duke Adolescent Substance Use Treatment Program, Duke University Medical Center, The Durham Center, Durham Treatment Center, Durham VA Medical Center, Freedom House, and New Leaf*

## Conclusions

The goal of the first report of the surveillance network is to identify data resources and indicators of substance abuse that Durham leaders can track over time. By using these resources, the expectation is that Durham will be better able to monitor progress in reducing substance abuse in the community.

This is the first step at pulling together the data resources that are available on substance abuse in Durham County. If this project is to be a success, it will require a committed group of individuals who are willing to help improve this document.

*The entire picture of substance abuse in Durham County is not yet being told.*

For example, we have little information on substance abuse among our youth. The only data on youth that we currently observe are from arrests, courts, emergency rooms, treatment facilities, and deaths. Many more youth are trying substances that remain invisible to these systems.

Little information on prevention activities in Durham County is available, yet we know that these activities may be particularly important at preventing the negative outcomes associated with substance abuse.

## Next Steps

We developed this document largely with available administrative data. Other groups have information that could add to this report. Below are some ideas about information that could help us paint a more concise picture of substance use and abuse in Durham County.

- **Better Use of Current Resource**

This report is a first effort to compile data on substance use. Ideally, a committee should go through each indicator and determine what is most valuable and whether there are better ways to examine the data.

- **Survey Treatment Providers**

Through their conversations with their clientele, treatment providers may be aware of fluctuations in the types of substances available in Durham as well as the purity of substances. For example, anecdotal evidence from treatment providers suggests that methadone abuse may be a problem among individuals in treatment. Data from the state medical examiner revealed 6 deaths from methadone, yet we currently have little other information on the drug. A regular survey of their perspectives may provide valuable insight into emerging trends.

- **Survey Medical Professionals**

There is little information in this report about prescription drug abuse, which we know from research in other states and from death report, takes a toll on Durham citizens. Through conversations with patients, medical professionals can learn about the drugs being used and abused.

- **Survey Individuals Currently in Recovery**

Individuals who are currently in recovery would potentially have valuable information such as what types of drugs are available and where to buy drugs in Durham. These individuals could provide insight regarding the community. They would be able to share their stories about when they were first exposed and what they had wished they had known before trying substances. This information may help better plan prevention efforts.

- **The Faith-based Community**

The Faith-based community may be aware of both ongoing and arising problems among their congregants. Thus, they may be able to help identify trends early. A short regular survey of this community may provide valuable insight.

- **Gather More Information on Hispanic Populations**

The Hispanic population is rapidly growing in Durham, particularly among the youth. Currently there are few data sources that capture information on Hispanics. Many may be uninsured and thus less likely to contact the health system. Some data sources like the Behavioral Risk Factor Surveillance Survey (BRFSS) do not have large enough samples of Hispanics to provide information about behaviors in this group. In addition, agencies should include Hispanic ethnicity in their collection and reporting of information.

- **Survey Students**

Currently, there is little information on the school-aged population in Durham. Information on illicit substances comes from arrests and medical records, but we know that many of our youth who try substances will not contact any of these agencies. We also know that many individuals who are exposed to substances at a young age have a harder time quitting than individuals exposed later in life. Monitoring trends in adolescents is particularly valuable for the community.

- **Prevention Efforts**

As we are better able to identify change over time, it would be helpful to know what may be promoting various changes. For example, police efforts to decrease DWIs may lead to more DUI arrests and fewer car accidents involving alcohol. Similarly, school-based programs that teach youth strategies for avoiding drugs and alcohol may promote a decrease in the number of youth who are smoking. It would be valuable to track the community's effort to promote healthy change.



### *The Success of this Surveillance Network!*

In order to benefit from the work that has been done and to continue, we need to draw in an active body of individuals who are dedicated to substance abuse issues in Durham County.

#### **Key questions that need to be answered include:**

- How should this report be disseminated?
- What community partners would benefit from having this information?
- How do we add new sources of information?
- What else do key stakeholders want to know?

## References

- Center for Disease Control and Prevention. (2002). Viral hepatitis and injection drug users. from [http://www.cdc.gov/idu/hepatitis/viral\\_hep\\_drug\\_use.htm](http://www.cdc.gov/idu/hepatitis/viral_hep_drug_use.htm)
- Center for Disease Control and Prevention. (2006). Basic Statistics. from <http://www.cdc.gov/hiv/topics/surveillance/basic.htm#ddaids>
- Centers for Disease Control and Prevention. (2004). Table 29. Number of deaths, death rates and age-adjusted death rates for major causes of death for the United States, and each state, Puerto Rico, Virgin Islands, Guam, American Samoa, and the Northern Marinas. *National Vital Statistics Report*, 52(5).
- Child Welfare Information Gateway. (2003). Substance Abuse and Child Maltreatment. from [http://www.childwelfare.gov/pubs/factsheets/subabuse\\_childmal.cfm](http://www.childwelfare.gov/pubs/factsheets/subabuse_childmal.cfm)
- Fazzone, P. A., Holton, J. K., & Reed, B. G. (1997). *Substance abuse treatment and domestic violence treatment improvement protocol (TIP) series 25. Chapter 3: Barriers and Overview* (No. DHHS Publication No. (SMA) 97-3163): US Department of Health and Human Services.
- Franciscus, A. (2006). Hepatitis C Information: Dispelling HCV myths. from [http://www.hcvadvocate.org/hepatitis/factsheets\\_pdf/Myths\\_2006.pdf](http://www.hcvadvocate.org/hepatitis/factsheets_pdf/Myths_2006.pdf)
- Green, M. (2006). Duke University's Health Inequalities Expansion Project for Substance Abuse Treatment Services for People Living with HIV/AIDS. Durham.
- Gruber, A. P. (2006). Durham Police Department domestic violence responses. Durham.
- Health Resource and Service Administration HIV/AIDS Bureau. (2004). A guide for primary care for people with HIV/AIDS: Management of Substance Abuse. 2004. from <http://hab.hrsa.gov/tools/primarycareguide/PCGchap13.htm#PCGchap13e>
- Martin, P. (2006). Cost of Drugs in Durham County. In E. Gifford (Ed.). Durham: Durham County Sheriff's Department.
- National Center for Chronic Disease Prevention and Health Promotion. (2004). Tobacco Information and Prevention Source (TIPS): The health consequences of smoking: a report of the Surgeon General.
- National Center for Chronic Disease Prevention and Health Promotion. (2005). The benefits of quitting.
- National Highway Traffic Safety Administration. (2004). *Traffic Safety Facts 2004 Data* (No. DOT HS 809 905). Washington, DC: National Highway Traffic Safety Administration, National Center for Health Statistics.
- National Institute of Drug Abuse. (1998). Assessing Drug Abuse within and across communities: Community Epidemiology Surveillance Networks on Drug Abuse. from <http://www.drugabuse.gov/DESPR/Assessing/GuideIndex.html>
- National Institute on Alcohol Abuse and Alcoholism. from <http://www.niaaa.nih.gov/>
- National Institute on Alcohol Abuse and Alcoholism. (2004). The epidemiology of alcoholic liver disease. from <http://pubs.niaaa.nih.gov/publications/arh27-3/209-219.htm>
- National Institute on Drug Abuse. (2006). Research report series heroin abuse and addiction. from <http://www.drugabuse.gov/ResearchReports/heroin/heroin4.html>
- North Carolina Alcohol Facts. (2005). Alcohol Effects. Retrieved October 1, 2006, from <http://www.hsnc.unc.edu/ncaf/>
- North Carolina Alcohol Facts. (2006). Crash injury and DWI court cases data. from <http://www.hsnc.unc.edu/ncaf/>
- North Carolina Center for State Health Statistics. (2003). Selected Vital Statistics for 2003 and 1999-2003: Durham County from <http://www.schs.state.nc.us/SCHS/vitalstats/volume1/2003/durham.html>

- North Carolina Center for State Health Statistics. (2004). 2000-2004 NC Resident Race-Specific and Sex-Specified Age Adjusted Death Rates: Durham. from <http://www.schs.state.nc.us/SCHS/deaths/lcd/2004/>
- North Carolina Coalition Against Domestic Violence. North Carolina: Domestic violence facts. from <http://www.ncadv.org/files/northcarolina.pdf>
- North Carolina Department of Health and Human Services. (2005). North Carolina epidemiologic profile for HIV/STD prevention and care planning. from <http://www.epi.state.nc.us/epi/hiv/pdf/profile2005.pdf>
- North Carolina Department of Health and Human Services. (2005, 7/2005). North Carolina epidemiological profile for HIV/STD prevention & care planning. from <http://www.epi.state.nc.us/epi/hiv/surveillance.html>  
[http://www.epi.state.nc.us/epi/hiv/regional04/Reg\\_Tables\\_Durham\\_co.pdf](http://www.epi.state.nc.us/epi/hiv/regional04/Reg_Tables_Durham_co.pdf)
- North Carolina Department of Health and Human Services. (2006). Durham County HCV statistics. Kristina Simeonsson, MD.
- North Carolina Department of Health and Human Services, State Center for Health Statistics, & Education, O. O. H. C. H. (2006). *2006 County Health Data Book: North Carolina Community Health Assessment Process*.
- North Carolina State Center for Health Statistics. Mortality Statistics Summary for 2004 North Carolina Residents: Motor Vehicle Injuries. from <http://www.schs.state.nc.us/SCHS/deaths/lcd/2004/motorvehicle.html>
- North Carolina State Center for Health Statistics. (2004). 2004 BRFSS Survey Results: Durham County: Alcohol Consumption. from <http://www.schs.state.nc.us/SCHS/brfss/2004/durh/DRINKDRI.html>
- North Carolina State Center for Health Statistics. (2004). Mortality statistics summary for 2004 North Carolina residents: chronic liver disease and cirrhosis from <http://www.schs.state.nc.us/SCHS/deaths/lcd/2004/livercirrhosis.html>
- North Carolina State Center for Health Statistics. (2006). 2000-2004 Ten leading causes of death by county of residence and age group: Ranking, number of deaths, and unadjusted death rates. In *North Carolina County Health Data Book 2006*. Raleigh: NC Department of Health and Human Services.
- Office of National Drug Control Policy. (2000). Methadone fact sheet. from <http://www.whitehousedrugpolicy.gov/publications/factsht/methadone/index.html>
- Shults, R. A. (2004). *Child passenger deaths involving drinking drivers—United States 1997-2002*. Atlanta: Centers for Disease Control and Prevention.
- State Bureau of Investigations. (2006). County Arrests: Arrests by Offence and Adult Juvenile Status. from <http://sbi2.jus.state.nc.us/crp/public/Default.htm>
- North Carolina State Center for Health Statistics. (2005). North Carolina Selected Vital Statistics Volume 1-2004. from <http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm>
- US Census Bureau. State and County Quick Facts: Durham County, North Carolina.