A Multiple Indicator Analysis of Heroin Use in the Chicago Metropolitan Area: 1995 to 2002

> Kathleen Kane-Willis Stephanie Schmitz-Bechteler

> > Institute for Metropolitan Affairs Roosevelt University 430 South Michigan Avenue Chicago, IL 60605

Acknowledgements

This paper was made possible with the encouragement and support of Roosevelt University and its Institute for Metropolitan Affairs Executive Director James Lewis. The analyses detailed in the paper would not have been possible without the contributions of the Institute's research assistants including: Angela Braggs, Brad Ray, Noah Viernes, and Tracey Thompson.

Orland Forshee from the Illinois Department of Public Heath was generous enough to run data on hospital discharges due to opiates in the Chicago metropolitan area. Without this data, comparisons between the city and the suburbs would not have been possible.

Publicly available data provided by the Drug Abuse Warning Network (DAWN) was collected by the Substance Abuse and Mental Health Services Administration (SAMHSA), of the U.S. Department of Health and Human Services. DAWN provided the information for mortality and Emergency Department Mentions.

The publicly available data file of the Treatment Episode Data Set (TEDS), 1992 to 2000, was investigated by United States Department of Health and Human Services, Substance Abuse and Mental Health Services Administration (SAMHSA) at the Office of Applied Studies.

The National Institute of Justice's Arrestee Drug Abuse Monitoring (ADAM) program tracks trends in the prevalence and types of drug use among booked arrestees in urban areas.

TABLE OF CONTENTS

Lis	List of Tables	
Exe	ecutive Summary	page iv
Int	roduction	page 1
I.	Increase in Heroin Use: Chicago Metropolitan Area in the National Perspective Emergency Department Rates per Population Mortality Data from DAWN Arrestee Data from ADAM Summary	page 3 page 4 page 5 page 6 page 7
11.	Comparison of State and Metropolitan Area Data Increases in Statewide Treatment Admissions Increases in Suburban Hospital Discharges Increases in Poisonings, Abuse and Dependency Summary	page 8 page 8 page 9 page 9 page 12
III.	Difference in Populations: Age, Race, Gender Age Differences Age of Hospital Discharges and Area Increases Gender Differences Racial and Gender Differences Racial Differences Age Differences Among Racial Groups Summary	page 13 page 13 page 15 page 18 page 20 page 20- page 21 page 23
IV.	Routes of Administration: Changes in Injection and Inhalation Use Different Racial Groups and Routes of Administration Age and Injection Drug Use Age, Race and Injection Drug Use	page 25 page 26 page 27 page 28
v.	Treatment: The Decline of Methadone	page 31
Pol	icy Recommendations	page 34

LIST OF TABLES

Table 1: Heroin Emergency Department Mentions, by Number and USMetropolitan area 1995 to 2002 percentage increase

Table 2: Emergency Department Mentions for Heroin by rate per 100,000, byMetropolitan Area, 1995 to 2002

Table 3: Drug Abuse Warning Network Mortality Incidents: ChicagoMetropolitan Statistical Area, 1996 to 2001

Table 4: Heroin Mortality Rates by Number and US Metropolitan area, 1996 to2001

Table 5: Heroin (and Synthetic Opiate) Treatment Admissions 1997 to 2000

 Table 6: Total Hospital Discharges, by Metro Area 1995 to 2002

Table 7: Total Hospital Discharges for Opiate Poisoning, by Metro Area, 1995 to2002

Table 8: Total Hospital Discharges for Opiate Abuse, by Metro Area, 1995 to2002

Table 9: Total Hospital Discharges for Opiate Dependency, by Metro Area, 1995to 2002

Table 10: Total Hospital Discharges for Opiate Dependency in Combination, byMetro Area, 1995 to 2002

Table 11: Treatment Episode by Age, 1997-2000

Table 12: Hospital Discharges for 15 to 19 year olds by Chicago Metro Area, 1995 to 2002

Table 13: Hospital Discharges for 20-25 year olds by Chicago Metro Area, 1995 to 2002

Table 14: Hospital Discharges for 25-29 year olds by Chicago Metro Area, 1995 to 2002

Table 15: Hospital Discharges for 30 to 39 year olds by Chicago Metro Area, 1995 to 2002

Table 16: Hospital Discharges for 40 to 49 year olds by Chicago Metro Area, 1995 to 2002

Table 17: Hospital Discharges for those aged 50 and over, Chicago Metro Area, 1995 to 2002

Table 18: Female Heroin Admissions Rates for Selected Metropolitan Area, 1995to 2002

Table 19: Episode by Gender, 1997-2000

Table 20: Heroin Treatment Admissions by Race and Gender, 1997-2000

Table 21: Heroin (and Synthetic Opiate)Treatment Admissions By Race, 1997-2000

 Table 22: Year 2000 Illinois Heroin Treatment Admissions by Age and Race

 Table 23: Heroin Drug Use by Route of Administration 1997-2000

Table 24: Route of Administration Illinois 1997-2000, by race

Table 25: Percentage Increase in Injection Drug Use Admissions, by age

Table 26: Percentage Increase in Injection Drug Use Admissions, by age and race,1997-2000

Table 27: Injection Drug Users Episodes: by Proportion of Racial Groups within each age cohort, Illinois 2000

Table 28: Heroin Treatment Admissions, Planned Use of Methadone, 1997-2000

Table 29: Heroin Treatment Admissions, Illinois, Planned Use of Methadone byRace, 1997-2000

Table 30: Heroin Treatment Admission, Illinois, Planned Use of Methadone byAge, 1997-2000

Executive Summary

This report provides multiple indicator analysis from a variety of data sources to uncover how the Chicago metropolitan area fares in terms of heroin use both historically and in comparison to other urban areas across the country. The report also analyzes where heroin use is growing throughout the state, with particular attention paid to Chicago and the surrounding suburbs. Multiple indicator analysis allows identification of new demographic trends in individuals treated for heroin use. The report explores use patterns among racial groups, tabulating the dramatic differences present in the separate populations. Finally, we analyzed routes of administration and changes in treatment modalities. While these indicators cannot state the absolute number of heroin users in the Chicago metropolitan area, in combination they support other evidence indicating heroin use is rising among particular demographic populations and within particular areas in Illinois and the Chicago metropolitan region.

Chicago in the National Perspective

Data suggest that the Chicago metropolitan area is in the midst of a heroin epidemic—one of the worst in the country at this time. The area ranks highest in Emergency Department mentions in the nation for heroin and has the highest rates per 100,000 persons. Mortality data also indicate that heroin is causing increased deaths within the metropolitan area.

Several data sources indicate that heroin is an extremely serious problem in the Chicago area. The heroin problem, rather than abating, appears to be increasing.

- Chicago is a primary heroin market that has experienced an increase in purity levels from 2 to 4 percent in the 1980s to an average of 25 to 30 percent purity in 1995.
- The Chicago metropolitan area recorded the highest number of emergency department mentions for heroin in the nation in 1998, and this rate has continued to rise through 2002.
- The Chicago MSA ranked second in the nation for the number of deaths due to opiates in 2001.
- In 2000, Cook County ranked highest in the country for the percentage of male and female arrestees testing positive for opiates.

Metropolitan Chicago and State of Illinois

Several data sources indicate that heroin use is growing outside of the city of Chicago. Although much data is aggregated at the metropolitan level, it is clear from this analysis that use is growing fastest outside of the central city. Further, analysis of metropolitan area data indicates that the area with the highest increases for opiate poisoning, abuse, and dependency are DuPage, Lake, Kane, McHenry, and Will Counties.

Suburban rates for opiate discharges are increasing faster than in Chicago, which means that the suburbs are not immune from the heroin problem that has infiltrated the Chicago area. The greatest increases in hospital discharges have occurred outside of Cook County. However, Chicago has not been exempt from the current heroin crisis, having the largest number of cases in the metropolitan area, and in the state as a whole. While heroin use is increasing in the suburbs, it is also dramatically increasing in the City of Chicago.

- The number of Illinois treatment admissions for heroin from 1997 to 2000 increased more than 200 percent.
- According to public health data, hospitalizations due to opiate poisoning, abuse and dependency increased most rapidly in the Collar Counties, followed by suburban Cook County and the city of Chicago.
- Overdoses in the Collar Counties increased by over 150 percent from 1995 to 2002, bringing the number of opiate poisonings up to Chicago levels.

Sociodemographic Changes in Heroin Use

There has been a significant rise in the metropolitan area in patients under age 25 treated for heroin in emergency departments and treatment facilities. The suburbs experienced the largest increase in this age group. The city of Chicago has had significant decreases in every age group under thirty.

This information indicates that there are new users present in the suburban population and that these users are already being added to the group of current heroin addicts. This data suggests that public health measures should be focused in the suburbs at this time, in order to curb the heroin resurgence.

- Children in the suburbs were more likely to be admitted to the hospital for opiate related dependency, abuse and poisoning than children in the city
- Among teens, the Collar Counties have experienced an over 450 percent rise in hospitalizations due to opiates, while suburban Cook County had over a 200 percent increase in this group. In contrast, Chicago experienced a 20 percent decline in hospitalizations among those under age 20.

- Absolute numbers of youth hospitalized for heroin were highest in the Collar Counties. Suburban Cook County ranked second, while Chicago had the fewest teens hospitalized for heroin.
- The Collar Counties experienced the highest rate of growth for hospitalizations of individuals aged 20-29. The second highest increase occurred in suburban Cook County, while Chicago experienced a decrease in hospitalizations.
- Chicago had the greatest absolute numbers of individuals hospitalized for opiates, except for teens.

Whites had the highest rates of treatment episode increases of any racial group in all three areas' analyses, the Chicago metropolitan area, the State of Illinois and downstate Illinois, which suggests that whites might comprise more of the opiate using population in the future.

African Americans have historically been the most well represented group in Chicago and this group continues to remain the most represented in treatment episodes and emergency department mentions. However, younger users are much less present among African Americans, which might mean that in the future, black users may eventually age out of use.

- In Illinois, African American users comprised the largest group of treatment admissions for heroin, but whites have the largest percentage increase in treatment admissions, followed by blacks and Latinos.
- Whites tended to be significantly younger than any other racial group treated for heroin in Illinois. Fifty-eight percent of white treatment admissions were younger than age 30, while 85 percent of African American admissions were older than age 30.

Changes in Routes of Administration and Treatment

Injection drug use carries severe health consequences, particularly contraction of a blood-borne illness like HIV/AIDS and hepatitis B as well as chronic Hepatitis C (HCV). Sharing needles and drug injecting paraphernalia can increase the spread of HIV and hepatitis into the general population via sexual activity.

Injection drug use has dramatically increased throughout Illinois and there have been significant changes in treatment modalities during the period from 1997 to 2000.

• In Illinois, the fastest growing route of administration is injection use, increasing over 200 percent from 1997 to 2000.

- Whites were significantly more likely to inject drugs than any other group admitted to treatment, while blacks were the least likely to inject and the most likely to inhale heroin.
- From 1997 to 2000, individuals under age 20 admitted to treatment for injection drug use increased by 760 percent while those aged 21 through 24 increased over 700 percent.
- Whites comprised the largest group of injectors among those aged 34 and under, while blacks constituted 82 percent of injection drug users aged 55 and older.
- The largest increase in injection drug use among any racial group under age 25 occurred among whites. These users increased by over 700 percent from 1997 to 2000.
- In Chicago, in 1997, about half of those admitted to treatment planned on using methadone as an aid to recovery, but in 2000 only about one quarter of users admitted to treatment stated that they planned on using methadone.
- Younger users were much less likely to use methadone than older users, and African Americans were more likely than whites and Latinos to plan methadone use.

Introduction

This report provides a multiple indicator analysis (MIA)¹ from several existing data sources to uncover how the Chicago metropolitan area fares in terms of heroin use both historically and in comparison to other urban areas across the country. The focus on heroin stems from the fact that heroin is the illegal drug with the most serious consequences from a public health vantage point. Dependence on heroin (or any other opiate) results in a withdrawal syndrome, which is characterized by specific illness when heroin use abruptly ceases. Heroin addiction is also extremely costly to society since many users must turn to illegal activities to earn enough money to support their habits. For injections drug users, there is the additional risk of the spread of blood-borne illnesses like HIV and Hepatitis B and C as well as risk of overdose resulting in death.

One aspect of a metropolitan area analysis is the context within the national picture. The public health implications of heroin use are immense. If Chicago's profile for heroin use were significantly different from the nation's, one would want to consider reasons why, and the implications.

Another important issue to consider is where use is occurring throughout a particular region. The inner city has long been the central site of heroin use and sales, but this pattern must be analyzed with quantitative data to determine whether the pattern has continued or has changed. If the pattern has changed, and if there are substantial increases in heroin hospitalizations in the suburbs, this suggests two important things: 1) the stigma related to heroin may have decreased and 2) suburban residents have increased access to heroin. Policymakers and treatment practitioners need to know where heroin use is occurring in order to effectively target treatment in particular locations.

Changes in regional heroin use might also indicate whether different socioeconomic groups are using heroin. Heroin use peaked in the 1970s when the largest number of people became addicted to opiates. Following this epidemic, new heroin users were relatively scarce and older users comprised the majority of the heroin-using population. It was assumed for some time that these users would either age out of heroin use, recover, or eventually die as a result of the effects of long-term use, HIV and/or Hepatitis C. If new users were present (represented as young users), this data would indicate that heroin is still a serious drug threat. Use among the very young indicates that heroin is experiencing a resurgence that could pose a problem among a new cohort of users. The emergence of new heroin users means that pro-active measures related to the dangers of heroin use must now be emphasized through education and prevention strategies. Continued use by new, younger users means that the heroin problem will not disappear of its own accord, as was once believed.²

Because heroin has historically been associated with urban minority groups, many policy makers may lack understanding of the new profile of heroin addiction, which encompasses both the city and suburbs and is not tied to race or socio-economic status. Changes in racial group usage may indicate that heroin use is spreading throughout a new population of users who might be unaware of the drug's impact on the user and the community. Young, white users might have not been exposed to educational programs and real-life examples that demonstrated the consequences associated with heroin use.

The risk of heroin use is borne by the public as well as by the users. Though heroin is an extremely dangerous drug to those who use it, it becomes more of a public threat when administered through injection. Injection drug use increases the chance of contracting HIV and hepatitis infections within the injecting subculture, as well as the non-using community through sexual contact with infected partners.

I. Increase in Heroin Use: Chicago Metropolitan Area in the National Perspective

ne of the questions that this report attempts to answer is how the Chicago metropolitan area compares to other large metropolitan areas with regard to heroin use. Chicago is the third largest city in the country. As such, one might expect that heroin use might be higher than the national average due to concentrated poverty levels associated with high crime rates, increased substance use, and drug selling.

According to the National Drug Intelligence Center, Chicago is a primary heroin market due to the significant rates of distribution and use of the drug within the metropolitan area. The primary market status is a factor in the presence of a diverse heroin network importing drugs from Mexico, South America, Southeast Asia and Southwest Asia.⁴

Changes in the Chicago area heroin market have resulted in wider distribution and dramatically increased purity levels. In 1985, the DEA implemented a sting operation intent on neutralizing the Herrera organization, the prime movers of Mexican heroin in the Chicago region. This operation ended the Herrera stranglehold on heroin sales, and resulted in a considerable reduction in heroin availability in the region. Nigerian organizations used this opportunity to introduce their Southeastern Asian (SEA) and Southwestern Asian (SWA) heroin to the Chicago market, which dominated the market until the introduction of South American (SA) heroin in the early 1990s.⁵ Currently, the popularity of the high purity SA heroin has resulted in an increasing demand for the product. On the whole, prices have been declining, while purity has been rising, and competing dealers are offering a more pure product to increase competition in the drug market. ⁶ Heroin purity has been increasing in Chicago since the 1980s, from 2 to 4 percent purity to an average of 25 to 30 percent purity in 1995.⁷

Drug Abuse Warning Network data indicates that Chicago is a primary and expanding heroin market. Nationally the number of heroin mentions in the Emergency Department ⁸ has increased by 34 percent from 1995 to 2002. In Chicago, the number of heroin mentions increased by over 176 percent during the same time period. Chicago had the most heroin mentions in 2002 of any metropolitan area within the United States—almost 13,000 mentions. The Chicago metro area also had the most heroin admission mentions for the years 1998-2002, surpassing New York City by 100 mentions in 1998 and rising steadily thereafter.⁹ (Table 1).

Table 1: Selected Heroin Emergency Department Mentions*,
by Number and US Metropolitan area
1995 to 2002 percentage increase
Drug Abuse Warning Network

Metropolitan Area	Total	Total
	1995	2002
Total US*	69,556	93,519
Chicago	4,702	12,982
New York	10,706	10,397
Philadelphia	3,839	4,918
Baltimore	8,207	4,715
Boston	2,956	3,999
Detroit	2,390	3,881
Newark	5,681	3,731
Seattle	2,023	2,779
San Francisco	3,113	2,672
Los Angeles	3,060	2,525
Miami	333	1,784
Washington D.C	1,295	1,597
St. Louis	369	1,167

*Areas with less than 1,000 mentions were not included in this chart.

Emergency Department Rate per population

In 2002, the Chicago metropolitan area had the highest rate for opiate Emergency Department Mentions per 100,000 people in the United States, which indicates that Chicago's heroin problem is now increasing. Chicago had a rate of 220 heroin mentions per 100,000 persons. Only Newark and Baltimore had a rate over 200 mentions per 100,000 people but these two cities have experienced declines in the period from1995 to 2002. The areas of the country with the most significant increases in heroin emergency department mentions tend to be concentrated in the Midwest and the South (Table 2).

Metropolitan Area	Total	Total	Percent Change
1	1995	2002	1995 to 2000
	Rate per	Rate per	Rate per 100,000
	100,000	100,000	-
Total US*	30	36	21.9%
Chicago	83	220	166.9%
Newark	327	214	Not significant
Baltimore	366	203	-44.6%
San Francisco	202	171	Not significant
Seattle	109	128	Not significant
Boston	83	111	Not significant
Philadelphia	84	109	Not significant
New York	132	123	Not significant
Buffalo	41	93	124.7%
Detroit	58	93	Not significant
Miami	18	85	366.1%
New Orleans	23	53	136.0%
St. Louis	16	51	215.2%

Table 2: Selected Emergency Department Mentions* for Heroin by rate per 100,000by Metropolitan Area, 1995 to 2002Drug Abuse Warning Network

*Only Cities with a rate of at least 50 mentions per 100,000 persons were included in this analysis.

Mortality Data from DAWN¹⁰

Mortality data demonstrated a large increase in the number of deaths in the Chicago metropolitan area due to opiates, which also suggests that the Chicago area is in the midst of a serious heroin crisis. The number of people who died from heroin or other opiates increased from 224 in 1996 to 352 in 2001, representing a 57 percent increase in deaths related to heroin usage. These data indicate that heroin use is increasing throughout the metropolitan area. This increase is probably more significant than the numbers make it appear. For example, Table 3 shows that the deaths related to opiates rose steadily upward, peaked in 2000, and then declined in 2001.

Table 3: Drug Abuse Warning Network Mortality Incidents: Chicago Metropolitan Area 1996 to 2001 Drug Abuse Warning Network SAMHSA

Year	1996	1997	1998	1999	2000	2001	Percent Increase
Number	224	359	404	457	499	352	57%

Although Chicago ranked second to Philadelphia in the number of heroin deaths, Philadelphia's increase in opiate deaths was just over 1 percent while Chicago experienced a 57 percent increase in mortality mentions from 1996 to 2001. Although Detroit shows larger increases during this same time period, the absolute numbers in Chicago are higher, and would have appeared more significant but for the unexpected downward shift in mortality mentions occurring in Chicago between 2000 and 2001. (Table 4)

Table 4: Heroin Mortality Rates by Number and US Metropolitan area, 1996 to 2001 Drug Abuse Warning Network

Metropolitan Area	Total	Total	Percent Change
	1996	2001	1996 to 2001
Total US*	2,717	2.984	9.8%
Philadelphia	385	391	1.6%
Chicago	224	352	57.1%
Baltimore	302	349	15.6%
Detroit	157	285	81.5%
Boston	141	195	38.3%
Newark	119	177	48.7%
Phoenix	116	140	20.7%
San Francisco	213	117	-45.1%
San Diego	165	111	-32.7%

* Communities with less than 100 mortality mentions were not included in this chart

Arrestee Data from ADAM¹¹

The Chicago metropolitan area ranks highest in the nation among male arrestees testing positive for opiates, with 27 percent of this pool showing opiate use prior to arrest, and Chicago also places highest in female arrestee opiate use in the country, with 40 percent of female arrestees testing positive for opiates. The largest percentage of male and female arrestees who tested positive for opiate use were arrested for drug violations. ¹²⁻¹⁸

It is important to understand that the arrestee sample is only as representative as the diversity of the arrestee pool. Arrestees were overwhelmingly African American, which might not be representative of the entire heroin using population. Interviews with law enforcement officials have verified that users not arrested for criminal activity remain a "hidden population" and are therefore not represented in arrestee data. Since more affluent users can support their habit without criminal activity, or may be purchasing drugs outside of areas targeted by law enforcement officials, these users are much less likely to be represented in ADAM data.

Chicago as a National Primary Heroin Market: A Summary

The proceeding data sources suggest that the Chicago metropolitan area is in the midst of a heroin resurgence—one of the worst in the country at this time. The area ranks highest in the country in emergency department mentions for heroin and for emergency department mention rates per 100,000 persons. Mortality data also indicate that heroin is causing increased deaths within the metropolitan area. The heroin problem, rather than abating, appears to be increasing.

One reason for the resurgence of heroin in the area could be increased purity levels, which have effectively made heroin much cheaper over the last decade. Increased competition on the part of drug suppliers has also contributed to the low cost of heroin in the Chicago area.

The demand for heroin, particularly for high-purity heroin, is rising in the area. Heroin use has increased across the country but in Chicago it has increased more rapidly. It is hard to understand what would drive the demand for such a dangerous drug, but it is possible that there has been a shift in the way that heroin is perceived by users. The fact that higher purity heroin can be inhaled may have helped to encourage the perception that heroin use is not as dangerous as it was once thought to be. ¹⁹

II. Comparison of State and Metropolitan Area Data

If heroin use has spread outside of the city and into the suburbs and downstate Illinois, this suggests the presence of a new heroin user who defies the traditional stereotype of the urban heroin addict. Policymakers need to understand the changing dynamics of heroin use so that prevention, treatment and law enforcement resources can be targeted effectively. One reason that the public may be unaware of the new non-urban users is that heroin is often perceived to be an inner-city drug of abuse, related to high concentrations of poverty.

Since heroin in Chicago is distributed and sold by street gangs, ²⁰ and if distribution methods in suburbs are similar to those typically found in cities, then increasing heroin use in the suburbs indicates that problems, like crime, gangs, and substance abuse are not confined to the central city. A rise in dangerous substance use, specifically heroin use, could be a harbinger of other social problems often related to the inner city that might be expected to eventually rise as well, particularly since opiate addicts often commit crimes to maintain their habits. ²¹

Several sources indicate that heroin use is rising in the suburbs as well as in the city. The first source is an in-depth data analysis of a public use data file from the Treatment Episode Data Set (TEDS) study conducted by The Office for Applied Studies collected by the Substance Abuse and Mental Health Services Administration (SAMHSA). This database allows for comparisons between the Chicago metropolitan area, the state of Illinois, and downstate Illinois. The second source of data was provided by the Illinois Department of Public Health and consisted of hospital discharges for opiate abuse, dependency, and poisoning. These data were aggregated at the city of Chicago, suburban Cook County and the Collar County levels, which allowed for comparisons between the city of Chicago and the suburbs.

Increases in Statewide Treatment Admissions

The trend of increased treatment admissions occurring outside of the metropolitan area suggests that access to opiates is increasing throughout Illinois and is not confined to the central city, or to the metropolitan area as a whole. According to the Treatment Episode Data Set²² treatment admissions have risen 200 percent from 1997 to 2000 in the state of Illinois—the latest year for which data were available for analysis. The majority of treatment admissions occur within the Chicago metro area, approximately 86 percent. The highest rates of increase have occurred in downstate Illinois, where treatment admissions have risen nearly 300 percent (Table 5).

Area	1997	1998	1999	2000	Percent Increase
Illinois Total	3,161	4,196	5,003	9,508	200.79%
Chicago Metro	2,831	3,790	4,455	8,248	191.35%
Downstate Illinois	330	406	548	1,260	281.82%

Table 5: Heroin (and Synthetic Opiate) Treatment Admissions 1997 to 2000Treatment Episode Data Set

Increases in Suburban Hospital Discharges

Analysis of Illinois Department of Public Health discharge data, which includes patient residence location, indicates that while Chicago has a serious heroin problem, the greatest increases are occurring outside of the city proper.²³ While Chicago has incurred a 66 percent increase in the rate of hospital discharges, Suburban Cook County has experienced over a 100 percent increase and the Collar Counties (DuPage, Lake, Kane, McHenry, and Will Counties) have registered more than a 250 percent increase since 1995 (Table 6).

Chicago has had the highest share of hospital discharges in the metropolitan area as a whole, with 80 percent of the hospital discharges in the metropolitan area occurring in Chicago. While the suburban hospitalization rates for opiates are increasing more quickly than in the city, suburban Cook County had slightly less than 12 percent of the total hospital discharges for the area, and the Collar Counties represent a little more than 7 percent of the area total.

Area	Number 1995	Number 2002	Percent Change
Chicago	12,334	20,527	66.43%
Suburban Cook	1,470	2,967	101.84%
Collar Counties	502	1,776	253.78%

Table 6: Total Hospital Discharges, by Metropolitan Area 1995 to 2002 Illinois Department of Public Health

Increases in Poisonings, Abuse and Dependency

The Collar Counties had the highest increase in the number of opiate poisonings or overdoses among the three metropolitan area subsets, bringing the number of overdoses up to Chicago levels. Suburban Cook County ranked second in opiate poisonings, while Chicago had the smallest increase in the number of opiate poisonings or overdoses of the three metropolitan area subsets. Suburban Cook County hospital discharges increased by 114 percent and the Collar Counties had nearly a 160 percent rise in overdoses. The increase in opiate poisoning is likely related to the higher-quality heroin that is now available throughout the Chicago metropolitan area. (Table 7).

Table 7:	Total Hospital Discharges for Opiate Poisoning, by Metro Area
	1995 to 2002
	Illinois Donartmont of Public Health

minois Department of Fubic Health					
Area	Number 1995	Number 2002	Percent Change		
Chicago	151	172	13.91%		
Suburban Cook	43	92	113.95%		
Collar Counties	63	162	157.14%		

Increases in Opiate Abuse

Abuse data also indicates that the fastest increases are occurring outside Chicago. Since 1995, Chicago experienced a 40 percent increase in those discharged from the hospital for opiate abuse, while suburban Cook County had an increase of nearly 75 percent and the Collar Counties had an increase of nearly 225 percent. (Table 8)

Table 8: Total Hospital Discharges for Opiate Abuse, by Metro Area 1995 to 2002 Illinois Department of Public Health

Area	Number 1995	Number 2002	Percent Change
Chicago	3,002	4,217	40.47%
Suburban Cook	401	696	73.57%
Collar Counties	110	355	222.73%

Increasing Dependency

Dependency is easily identified in heroin and opiate use because physical withdrawal symptoms help to mark dependency. The withdrawal syndrome is characterized by stomach upset, vomiting, insomnia, anxiety and painful aches, and flu-like symptoms such as a runny nose, sneezing and watery eyes. The increase in dependency can be construed as more disturbing than an increase in abuse since dependency indicates that the opiate user must regularly use heroin in order to keep withdrawal symptoms at bay.

Dependency discharge data indicate that heroin and opiate use results in increased addiction to opiates in all three of the metropolitan sub-areas, but is increasing most rapidly in the suburbs. Discharges in the Collar Counties have increased nearly 275 percent while Chicago's increase was about 95 percent. The suburban Cook County increase in opiate dependent discharges was slightly higher than Chicago's at just over 101 percent. Again, the Collar Counties have had the highest increase over 1995 numbers. (Table 9).

Table 9:	Total Hospital Discharges for Opiate Dependency, by Metro Area
	1995 to 2002
	Illinois Department of Public Health

Area	Number 1995	Number 2002	Percent Change
Chicago	6,027	11,654	93.36%
Suburban Cook	813	1,638	101.48%
Collar Counties	286	1,062	271.33%

Opiate Dependency in Combination with Other Drugs

Opiate dependency in combination with other drugs has increased much more rapidly in the suburbs than in the city. The highest increase in the Collar Counties and suburban Cook County occurred among those patients discharged from the hospital for opiate addiction combined with another drug addiction. Other opiate categories - poisoning, abuse and opiate dependency – produced smaller increases overall. Chicago had an increase of just over 40 percent for this category of opiate hospitalization discharges, while suburban Cook had increases of over 150 percent. The Collar Counties discharge rates increased by over 350 percent, and were the most significant increase for opiate discharge mentions. Chicago, however, still has the highest absolute numbers for those patients discharged for opiate dependency in combination with other drugs. (Table 10)

Table 10: Total Hospital Discharges for Opiate Dependency in Combination, by Metro Area, 1995 to 2002 Illinois Department of Public Health

Area	Number 1995	Number 2002	Percent Change
Chicago	3,154	4,484	42.17%
Suburban Cook	213	541	153.99%
Collar Counties	43	197	358.14%

<u>Metropolitan Chicago and the State of Illinois: A Summary</u>

The Treatment Episode Data Set (TEDS) supports the evidence that heroin use is growing outside of the city of Chicago. Although the TEDS data is aggregated at the metropolitan area level, it is clear from the analysis that use is growing fastest outside of the metropolitan area. Analysis of metropolitan area data provided by the Illinois Department of Public Health indicates that the areas with the highest increases for opiate poisoning, abuse, and dependency are DuPage, Lake, Kane, McHenry, and Will Counties. The area ranking second in percentage increase for opiate discharge is suburban Cook County. Both suburban areas, the Collar Counties and suburban Cook, have had increased rates of dependency, which indicates that some suburban users have become addicted to heroin and/or other opiates.

That suburban rates for opiate discharges are increasing faster than in Chicago means that the suburbs are not immune to the heroin problem that has infiltrated the metropolitan area. The greatest increases in hospital discharges have occurred outside of Cook County. However, Chicago has not been exempt from the current heroin crisis, having the largest number of cases in the metropolitan area, and in the state as a whole. While analysis shows that heroin use is increasing in the suburbs, it is also dramatically increasing in the City of Chicago.

III Difference in Populations: Age, Race and Gender

T t is important to understand patterns pertaining to age, race and gender because demographic changes can have important public policy implications. One of the important demographic indicators is age. If new, young users are added to the pool of current heroin addicts, these individuals may be found in the addicted population for a long period of time. It was once believed that the previous generation of heroin users, those who became addicted during the 1960s and 1970s, would eventually age-out of use or die. Instead most users from this time period had heroin careers that often lasted more than 30 years.²⁴

Men have typically used heroin and other opiates in much higher numbers than have women. Increasing female use is particularly problematic because of the dangers associated with children born to drug dependent mothers. Additionally, addicted women who engage in sex work may spread HIV into the general population.

Substantial changes in the racial composition of heroin users today suggest that the Chicago region is experiencing a pattern of drug use different from the epidemic that occurred in the 1960s and 1970s. Treatment and prevention communities will be challenged to address these new patterns of use. During the previous heroin epidemic, heroin was considered an urban drug and the majority of users were low-income minority males. ²⁵ Higher rates of increase among whites may indicate that the profile of heroin use has changed within the metropolitan area. Public health officials must target their initiatives to reflect the heroin using population. If public health officials perceive the heroin problem to be one that is found only in Latinos and African American persons then treatment targeted specifically at these populations makes sense. However, the substantial change in usage patterns among white users suggests treatment as well as prevention efforts must be directed towards this group as well.

Several data sources were analyzed to explore differences between age groups, gender and racial groups among heroin users. These data sources consisted of: 1) the Treatment Episode Data Set (TEDS) study conducted by The Office for Applied Studies at SAMHSA; 2) hospital discharge data provided by the Illinois Department of Public Health; and 3) Emergency Department Mentions, gathered under the Drug Abuse Warning Network (DAWN), collected by the Substance Abuse and Mental Health Services Administration (SAMHSA).

Age Differences

Starting in the mid 1990s, a new group of young heroin users began to be identified by several sources. In 1996, Chicago ethnographers noted a considerable increase in the number of users under age 26. For the years 1997 and 1998, ethnographers reinforced their earlier observations that heroin use was increasing and that there was a visible cohort of new, young users.²⁶ The National Household Survey on Drugs and Health from the period 1995 to 2001 also supported ethnographers' reports as survey data indicated that lifetime heroin use increased for both teens and young adults. The number of heroin initiates between 1989 and 1992 was about 55,000 new users for each year. By 1994, the Household Survey on Drug Abuse indicated that the number of new users rose to about 100,000 a year throughout the late 1990s. During the year 2000, almost 150,000 people had tried heroin for the first time and this pattern has continued into 2001.²⁷

Within the Treatment Episode Data Set, at least two distinct cohorts can be identified. The first group, referred to as the "heroin purity generation," consists of relatively new initiates to heroin while the second group is comprised of the "traditional-aged" user, the "heroin epidemic generation," which began to use heroin in the late 1960s or early 1970s. This information is supportive of ethnographer claims that there are at least two heroin-using populations in the Chicago area. The two cohorts are significant because in both groups purity levels have an impact on use, since the younger cohort came into existence after high purity heroin became available in the Chicago market. ²⁸ Evidence of the two cohorts indicates that treatment and prevention strategies must take both groups, the new users and the older users, into consideration.

The importance of these cohorts in relation to the increase in demand for heroin cannot be understated. The availability of high-quality heroin has attracted a new generation of users, "the high purity generation" and has reactivated the interest of the "heroin epidemic generation." The increased availability of a high-quality and less expensive product has provoked interest in using heroin among both cohorts. ²⁹⁻³⁰

The highest increase in treatment admissions from 1997 to 2000 occurred among the 17 to 20 year old individuals in the "high purity generation," but there have been significant increases among every age group. For those under 17, treatment admissions increased nearly 450 percent over 1997 numbers. Treatment admissions for those aged 18 to 20 increased nearly 400 percent. These numbers provide quantitative evidence that the use among young people is rapidly increasing. One of the issues related to young users is whether they will have long heroin using "careers" like the older generation of heroin users. If this proves to be the case, these users will show up in data sources for 20 years or more. The third highest gain occurred in those aged 50 to 54, the "heroin epidemic generation" with treatment admissions increasing by more than 300 percent. (Table 11)

Despite the dramatic increases among the younger and older, the majority of users were aged 25 to 44. This cohort did not have the dramatic increases in treatment admissions compared to the youngest and oldest users. (Table 11)

Age Group	1997	2000	Percent
			Change
17 and under	12	65	442%
18 through 20	82	404	393%
21 through 24	211	683	224%
25 through 29	546	1223	124%
30 through 34	642	1760	174%
35 through 39	627	1883	200%
40 through 44	527	1552	194%
45 through 49	297	994	235%
50 through 54	114	489	329%
55 and over	66	226	242%
Total	3124	9279	197%

Table 11: Illinois Treatment Episode by Age, 1997-2000Treatment Episode Data Set

Age of Hospital Discharges and Area Increases

Children in the suburbs are more likely to be admitted to the hospital for opiate related dependency, abuse and poisoning than are children in the city. While heroin hospitalizations are rapidly increasing in the suburban areas among teens, they are slowly decreasing in the city. These data support ethnographer observations that heroin use by young, suburban users is rising. Suburban Cook County hospital discharges for opiates increased over 200 percent, while the Collar Counties have demonstrated a gain of nearly 500 percent in those aged 15 to 19. This trend shows that heroin use and dependency are not a uniquely central city phenomenon. (Table 12).

Area	Number1995	Number 2002	Percent Change
Chicago	107	85	-20.56%
Suburban Cook	52	157	201.92%
Collar Counties	33	186	463.64%

Table 12: Hospital Discharges for 15 to 19 year olds by Chicago Metro Area, 1995 to 2002 Illinois Department of Public Health

Increases in hospital discharges among those aged 20 to 25 were found exclusively outside of the city of Chicago. Suburban Cook County had over a 100 percent increase in discharges among those aged 20 to 25, while the Collar Counties had over a 700 percent increase among this group. While Chicago had higher numbers of hospital discharges among those aged 20 to 25, these numbers represented a decrease of over 50 percent compared to 1995 data. The suburbs as a whole (suburban Cook and the Collar Counties combined) had more hospitalizations for those aged 20 to 25 than did the city. Analysis of this data suggests that though the numbers have peaked among this age group in the city, discharges among 20 to 25 year olds probably have not peaked in the suburbs. (Table 13).

Table 13: Hospital Discharges for 20-25 Year Olds by Chicago Metro Area, 1995 to 2002 Illinois Department of Public Health

Area	Number 1995	Number 2002	Percent Change
Chicago	953	442	-53.62%
Suburban Cook	141	299	112.06%
Collar Counties	32	260	712.50%

Among those aged 25 to 29, the increases in the suburbs were not as dramatic as among younger users. From 1995 to 2002, there was an increase in this group of over 100 percent in Suburban Cook and nearly 200 percent in the collar counties. Chicago, however, still experienced a significant decline, over 35 percent, in the number of discharges from 1995 to 2002 among this age group. (Table 14)

Table 14: Hospital Discharges for 25-29 Year Olds by Chicago Metro Area, 1995 to 2002 Illinois Department of Public Health

Area	Number 1995	Number 2002	Percent Change
Chicago	1,842	1,161	-36.97%
Suburban Cook	209	314	122.70%
Collar Counties	72	215	198.61%

Although there were marked increases in 30 year olds discharged from the hospital, these rates were much lower than for other segments of the population. Among 30 year olds, the Collar Counties had the largest increase, nearly 95 percent, with suburban Cook County experiencing increases just under 50 percent. Among any Chicago age groups that experienced an increase in treatment admissions, the rate of increase for 30 year olds was the lowest. (Table 15)

As the high purity heroin generation ages, and those now in their twenties enter their thirties, this group may experience more sizable increases in the future, particularly in the suburbs. If the current trends continue, it is likely that over the next five to ten years Chicago will experience declines in hospital discharges among individuals in their thirties, while the suburbs might experience greater increases among those in this age group.

Table 15: Hospital Discharges for 30 to 39 Year Olds by Chicago Metro Area, 1995 to 2002 Illinois Department of Public Health

Area	Number 1995	Number 2002	Percent Change
Chicago	4,500	6,631	47.36%
Suburban Cook	601	893	48.59%
Collar Counties	256	499	94.92%

While the suburbs have experienced significant gains in hospital discharges among all populations, Chicago hospital discharges have significantly declined through age 29, and then increased upwards after age thirty. Chicago has a larger proportion of the "heroin epidemic generation" compared to the "high purity generation." In Chicago, hospital discharges among those in their 40s increased over 130 percent since 1992. Forty year olds are the largest age cohort in Chicago.

The Collar counties had the highest increases of any of the metropolitan areas, nearly 350 percent from 1995 to 2002. Suburban Cook County tended to have similar increases as the city, and as a whole, increases in Cook were not as dramatic as those in the Collar Counties. (Table 16)

Table 16: Hospital Discharges for 40 to 49 year olds by Chicago Metro Area, 1995 to 2002 Illinois Department of Public Health

Area	Number 1995	Number 2002	Percent Change
Chicago	3,466	8,130	134.56%
Suburban Cook	401	978	143.89%
Collar Counties	103	459	345.63%

Among all the age cohorts, individuals over 50 had the largest increase from 1995 to 2002 in Chicago, as well as in the suburbs. This group likely consists of persons who began to use in the 1970s as well as those who began to use during a much earlier heroin epidemic that occurred after World War II. The dramatic increase among this demographic group indicates that the Chicago heroin discharge population consists of a mostly aging population, which accounts for these large percentage increases. Suburban Cook County had a gain of over 1,000

percent in patients over 50 discharged from hospitals, while the Collar Counties experienced a more dramatic gain of over 2,500 percent. Much of this gain, particularly in the suburbs, is the result of low numbers of discharges in the 1995 period, which, over time, will generate a large percentage increase in hospital discharges. (Table 17)

Table 17: Hospital Discharges for those aged 50 and over, Chicago Metro Area, 1995 to 2002 Treatment Episode Data Set

Area	Number 1995	Number 2002	Percent Change
Chicago	966	4,072	321.53%
Suburban Cook	28	326	1064.29%
Collar Counties	6	157	2516.67%

Gender Differences

More men than women have generally consumed heroin in the past. Women usually have lower rates of use across all substances, regardless of type, although this may be changing among younger persons.³¹ This gender gap appears to closing in terms of heroin use in the Chicago area.

Chicago had the highest rate for female heroin emergency department mentions in the country. There are only four urban areas with female heroin ED rates greater than 100 per 100,000 persons. Only Baltimore, Newark, and San Francisco had female ED rates over 100, but all of these metropolitan areas experienced either a decline or leveling off of female emergency department admissions for heroin. In addition to having the highest rate for female heroin admissions, Chicago experienced over a 236 percent increase in the rate of these admissions. There are other metropolitan areas where the changes are more dramatic: Miami and St Louis had over a 300 percent increase in the rate of female heroin admissions. However, these increases, while significant, occurred in cities with fewer mentions historically. While the percentage increase demonstrates that heroin admissions are rising among females in many areas, it appears that the Chicago metropolitan area has both the highest rate in the country combined with one of the largest increases over 1995 rates (Table 18).

	Females		Percent Change
	1995	Females	1995 to 2000
Metropolitan Area	Rate per 100,000	2002	Rate per
		Rate per 100,000	100,000
Total US	17	24	41.0%
Chicago	54	182	236.9%
Newark	215	166	Not significant
Baltimore	256	144	-43.9%
San Francisco	133	109	Not significant
Seattle	74	94	Not significant
Boston	51	72	Not significant
Detroit	36	69	91.5%
Philadelphia	39	65	Not significant
New York	58	48	Not significant
Buffalo	22	49	125.6%
St. Louis	8	35	321.7%
Miami	7	34	347.5%

Table 18: Selected* Female Heroin Admissions Rates for Selected Metropolitan Area 1995 to 2002 Drug Abuse Warning Network

*Only areas with at least 30 mentions were included in this table.

Although there have been substantial increases in treatment admissions overall, the proportion of women to men admitted into treatment has changed as well, so that nearly half of all heroin treatment admissions are now female. Though the proportion of females admitted into treatment is about 40 percent in downstate Illinois, the rate of females entering treatment has increased the most within this area. More women are seeking treatment for heroin and opiate addiction in Illinois, with 2000 data suggesting that women are seeking treatment as often as men (Table 19). In 1992 in Illinois women were 39 percent of treatment admissions overall. In 2000, women made up 46 percent of Illinois treatment admissions.

Gender	Chicago			Illinois		Non-Metro Illinois	
Year	1997	2000	1997	2000	1997	2000	
	(n=2,803)	(n=8,037)	(n=3,127)	(n=9,281)	(n=324)	(n=1,244)	
Male	57%	53%	58%	54%	65%	59%	
Female	43%	47%	42%	46%	34%	41%	

Table 19: Episode by Gender, 1997-2000 Treatment Episode Data Set

Racial and Gender Differences

To effectively plan treatment, it is important to understand whether disparities in gender exist across different racial groups. Treatment providers need to be able to attend to various gender-related treatment issues. For instance, if one racial group has a different proportion of males to females in treatment, then treatment centers servicing that particular group may wish to have a corresponding ratio of male and female counselors.

While all racial groups had growth or stabilization of female admissions, not all racial groups have the same proportion of females to males admitted to treatment. For example, in 1997 across Illinois, nearly 80 percent of Latinos admitted to treatment were male, but by the year 2000, less than three quarters were male. Among African Americans, females were a significant proportion of treatment admissions, with a rate that has been increasing since 1997. By 2000, females constituted nearly half of all treatment admissions in the African American group. Among Whites, the rate of female admissions remained stable during the period from 1997 to 2000 (Table 20).

I reatment Episode Data Set							
Gender	Whites		African American		Latinos		
Year	1997	2000	1997	2000	1997	2000	
	(n=554)	(n=1,972)	(n=2,257)	(n=6,568)	(n=316)	(n=741)	
Male	56%	57%	56%	52%	78%	73%	
Female	44%	43%	44%	48%	22%	27%	

Table 20: Heroin Treatment Admissions by Race and Gender,	1997-2000
Treatment Episode Data Set	

Racial Differences

The pattern of treatment admissions differs among racial groups. All racial groups have increased treatment admissions for heroin, but whites have the highest rate of increase, nearly 210 percent, in the years 1997 to 2000 in the Chicago metropolitan area (Table 21).

Across Illinois there is a more dramatic increase in treatment admissions among whites than among any other racial group. From 1997 to 2000 heroin treatment admissions rose by more than 250 percent among whites, while the percentage of African Americans in treatment rose by about 190 percent and Latino treatment admissions rose by over 130 percent (Table 21).

The increase in treatment admissions among whites for heroin or synthetic opiates is even more dramatic in downstate Illinois. Treatment admissions for whites rose by nearly 400 percent from 1997 to 2000. Latino admissions rose rapidly as well, but because they represent a smaller treatment population the

increase, while dramatic, is not as significant. African Americans also had significant increases in heroin treatment admissions (Table 21).

Treatm	nont Enico	do Doto (Sot	
Area	Group	<u>ue Data 3</u> 1997	2002	Percent Change
Chicago Metropolitan				
Area				
Total Admissions		2,803	8,039	187%
	Whites	408	1,256	208%
	Blacks	2,098	6,092	190%
	Latinos	303	688	127%
Illinois				
Total Admissions		3,127	9281	197%
	Whites	554	1,972	256%
	Blacks	2,257	6,568	191%
	Latinos	316	741	134%
Downstate				
Total Admissions		324	1244	284%
	Whites	146	716	390%
	Blacks	165	475	188%
	Latinos	13	53	308%

Table 21: Heroin (and Synthetic Opiate) Treatment Admissions by Race:1997-2000

Age Differences among Racial Groups

Racial groups that use at a younger age likely compromise a cohort that will persist in using for many years, while groups where the majority of users are older might age out over time. Therefore, in the future, the racial composition of heroin users will probably change as younger users age and prevalence shifts from one racial group to another.

There were significant differences between racial groups and the treatment age of patients in 2000 in Illinois with whites having significantly younger usage patterns. Nineteen percent of whites entering treatment were aged 20 or younger compared to less than 1 percent of African Americans and 6 percent of Latinos. Forty-three percent of whites admitted to treatment were under age 25, while about 2 percent of African Americans were under age 25 and 21 percent of Latinos were under age 25. (Table 22)

Whites tended to be significantly younger than any other racial group in regard to treatment admissions—58 percent were under age 30. In contrast to the young

age of white users, the majority of African American treatment admissions were over age 30, with over 85 percent of treatment admissions occurring after this age. Latino admissions under age 30 represented about 40 percent of treatment admissions. While whites had the youngest treatment admissions and African Americans had the oldest, Latinos ranked somewhere in the middle (Table 22).

		-		
Age Group	Total	Percent	Percent	Percent
		White	Black	Latino
17 and under	52	1.8%	0.2%	0.8%
18 through 20	338	17.e%	0.5%	4.6%
21 through 24	683	23.9%	1.5%	15.3%
25 through 29	1,223	15.1%	11.7%	21.1%
30 through 34	1,760	10.0%	21.7%	18.9%
35 through 39	1,883	11.1%	23.7%	14.7%
40 through 44	1,552	10.6%	19.0%	13.5%
45 through 49	994	6.9%	12.3%	6.6%
50 through 54	489	2.3%	6.4%	3.4%
55 and over	226	1.1%	3.0%	1.2%
Total	9,266	100.0%	100.0%	100.0%

Table 22: Year 2000 Illinois Heroin Treatment Admissionsby Age and RaceTreatment Episode Data Set

Sociodemographic Considerations: A Summary

There has been a significant rise in the metropolitan area in those patients under age 25 treated for heroin in emergency departments and treatment facilities. The suburbs demonstrated the largest increase in this age group. The city of Chicago has had significant decreases in every age group under thirty.

These data indicate that there are new users present in the suburban population and that these users are already being added to the group of current heroin addicts. This suggests that public health measures should be focused in the suburbs at this time in order to curb the heroin resurgence among youth.

The youngest generation of heroin users, found predominately in the suburbs, began to use when heroin purity levels were at their highest. Since high-purity heroin can easily be inhaled, this might have lessened the stigma related to heroin use. This route of administration may have contributed to the idea that heroin use, particularly when inhaled, is not dangerous or addictive. Young users may not associate sniffing heroin with the stereotype of the low-income inner city "junkie," thereby changing the perception of heroin as a drug for hard-core injection users to one that could be considered more "stylish."

Young women may have been influenced by the "heroin chic" culture, which began in the early 1990s and probably peaked in the late 1990s. The heroin chic movement was found in movies, music, advertising and most notably, fashion. Fashion models indicated that heroin was the "wonder drug" that helped to keep their weight down in order to achieve the waif-like appearance considered essential for work.³² Gender differences have historically been more pronounced in the heroin using populations, but recently, the proportion of men to women has become nearly equal. The rise of "heroin chic" may have helped to entice more women into using opiates. ³³⁻³⁴

Different racial groups demonstrated different patterns in terms of male and female use. Whites and blacks had nearly an equal proportion of men and women in treatment, while Latinos had significantly more men than women. One reason why Latina women might not use as often as whites or blacks could be related to the familial role expectations of women in the Latino family. ³⁵

Whites had the highest rate of treatment episode increases of any racial group in all three areas analyzed, the Chicago metropolitan area, the state of Illinois and downstate Illinois, which suggests that whites might comprise more of the opiateusing population in the future.

African Americans have historically been over-represented in Chicago and this group continues to remain the most represented in treatment episodes and emergency department mentions. However, younger users are much less present among African Americans, which might mean that in the future, black users may eventually age out of use. Latinos had the slowest rate of increase out of the three racial groups studied, except in downstate Illinois where Latino treatment episodes increased significantly. This suggests that in the future Latinos might become a more sizeable part of heroin users in downstate Illinois. Latinos users were younger than African Americans but older than whites.

IV. Routes of Administration: Changes in Injection Use

It is important to understand emerging patterns in routes of administration because these changes can have important public policy implications. A rise in injection drug use, particularly among the young, could indicate that more users are transitioning from "casual" use to increased dependency. Injection drug use carries severe health consequences, particularly contraction of blood-borne illnesses like HIV/AIDS and Hepatitis B, as well as chronic Hepatitis C. Injection drug use is more costly to society than other modes of administration because of the higher risk of overdose, infections of the skin, muscles, and heart as well as the possibility of spreading HIV to drug-using or sexual partners. In order to target treatment efforts effectively, it is important to know among which age and racial groups injection drug use may be rising.

Beginning in 1995, ethnographers in Chicago began to note an increase in heroin use, as well as the increase of injection as method of administration.³⁶ In Illinois, the fastest growing route of administration is injection use. In four years, the number of injection drug users entering treatment has increased dramatically, over 175 percent in the Chicago metropolitan area alone (Table 23).

Inhalation use increased by more than 200 percent in the Chicago metropolitan area as well as Illinois as a whole, possibly because inhalation is often perceived as less dangerous and less addictive than injecting. Additionally, users might lack awareness that sharing sniffing paraphernalia can lead to chronic hepatitis. In downstate Illinois, inhalation use rose by more than 270 percent, which represented the fastest growing area in Illinois for inhaling heroin (Table 23).

The Chicago metro area saw the biggest increases in hospital admissions for smoking heroin, though increases were observed throughout the entire state. In downstate Illinois, the number of patients admitted for smoking opiates increased nearly 150 percent, while the state of Illinois had more than 175 percent increase in these patients (Table 23).

The oral use of opiates has increased in downstate Illinois, the Chicago metro area and the state as a whole. The highest increase in patients admitted to the hospital for the oral use of opiates occurred in downstate Illinois, which experienced an increase of nearly 250 percent. Oral use increased the least in the Chicago metropolitan area. The rapid increase in oral use in downstate Illinois may be due to increasing supplies of prescription opiates like oxycodone (Table 23)

Area	Administration	1997	2000	Percent
				Change
Chicago MSA				
	Injection	566	1,561	176%
	Inhalation	2,082	6,168	196%
	Smoking	85	256	201%
	Oral	83	168	102%
Illinois				
	Injection	678	2,051	203%
	Inhalation	2,229	6,713	201%
	Smoking	105	302	188%
	Oral	136	328	141%
Downstate Illinois				
	Injection	109	490	350%
	Inhalation	147	545	271%
	Smoking	19	46	142%
	Oral	47	160	240%

Table 23: Heroin Drug Use by Route of Administration 1997-2000Treatment Episode Data Set

Different Racial Groups Use Different Routes of Administration

Whites were significantly more likely to inject drugs than any other group admitted to treatment. In Illinois between 1997 and 2000, nearly half of all white heroin treatment admissions admitted injecting drugs, while only about onethird of Latinos stated that injection was their primary route of administration. African Americans were the least likely to inject drugs, with a rate below 15 percent. African Americans used inhalation almost exclusively—over four fifths of those admitted into treatment inhaled heroin. (Table 24)

Smoking seemed relatively stable across the three racial groups and did not change significantly over the 1997 to 2000 period. Oral use of opiates declined slightly during the same period. Whites are the group most likely to use opiates orally and this use is most likely due to misuse of prescription opiates like hydrocodone or oxycodone. (Table 24)

Route	Whites African American			American	Latinos	
Total	1997	2000	1997	2000	1997	2000
	(n=545)	(n=1,927)	(n=2,247)	(n=6,508)	(n=315)	(n=734)
Injection	45%	45%	12%	14%	36%	35%
Inhalation	41%	41%	83%	81%	59%	62%
Smoking	3%	3%	3%	4%	3%	1%
Oral	11%	11%	2%	1%	3%	2%

Table 24: Route of Administration Illinois 1997-2000, by Race*Treatment Episode Data Set

*Totals might not equal 100% percent due to rounding.

Age and Injection Drug Use

If the largest group of injectors is young, then this presents several public policy problems. The possibility of contracting HIV or hepatitis may be higher, since these users have just started their opiate using careers. If these users continue to inject for 20 to 30 years, there is a greater probability that HIV and Hepatitis C rates among these users could reach extremely high levels if they share needles and/or engage in unprotected sex. Youth are more susceptible to the influences of peer culture, so that needle use may spread throughout younger users more quickly than in older populations. Injecting heroin has often been stigmatized, so use among the very young indicates that needles may have lost some of their negative associations.

While the majority of injection drug users are older than 35, the largest increase in the rate of injection drug use was for those aged 24 and younger. From 1997 to 2000, those under age 20 admitted to treatment for injection drug use increased by 760 percent, while those aged 21 through 24 increased over 700 percent. In absolute numbers, the largest group of injection users was aged 40 through 49, although their rates of increase from 1997 did not reach two hundred percent (Table 25).

The rate of increase among younger users is unusual as inhalation is the most common route in administration for heroin in the Chicago area. More young people (in absolute numbers) sniffed heroin than injected it. Among the youngest users, those aged 24 or younger, 453 injected heroin while 598 inhaled it.

Age Group	1997	2000	Percent
			Increase
20 and under	20	172	760%
21 through 24	35	281	703%
25 through 29	52	175	237%
30 through 34	73	191	162%
35 through 39	122	220	80%
40 through 44	170	360	112%
45 through 49	124	351	183%
50 through 54	46	200	335%
55 and over	36	100	178%
Total	685	2057	202%

Table 25: Percentage Increase in Injection Drug Use Admissions, by AgeTreatment Episode Data Set

Age, Race and Injection Drug Use

If a particular cohort injects drugs, then policy makers need to be aware of these patterns so that proactive steps can be taken to curb this use through a combination of educational programs, treatment and law enforcement efforts.

Blacks and whites both experienced an increase of over 200 percent in injection use, while Latinos experienced a 125 percent increase. The racial groups differ in terms of what age cohort has the greatest increases. (Table 26)

The largest increase in injection drug use among any racial group under age 25 occurred among whites. These users increased by over 700 percent from 1997 to 2000. Latino treatment episodes for those under age 20 were very small, producing a statistically anomalous high increase. Latinos aged 20 to 24 represented over a 700 percent increase in injections drug users. While blacks also had increased rates among these age groups, these percentage increases are somewhat misleading because the numbers are so low between 1997 and 2000 that an increase of 4 cases might result in a 400 percent increase. (Table 26)

The highest increase in injection drug use among whites occurred among individuals aged 24 and younger, while the highest increases among blacks occurred in those aged 50 to 54. The highest increase reported among Latino injection drug users (IDUs) seeking treatment occurred among those aged 20 to 24. Among Latinos, as age increased, the rate of injection drug use decreased. (Table 26)

	Age Group	1997	2000	Percent
				Increase
	Total Black	279	891	219%
	20 and under	1	5	400%
	21 through 24	2	10	400%
	25 through 29	8	22	175%
African Americans	30 through 34	21	69	229%
	35 through 39	40	99	148%
	40 through 44	90	203	126%
	45 through 49	69	246	257%
	50 through 54	26	157	504%
	55 and over	22	80	264%
	Total White	271	966	2160/
	20 and under	2/4 16	142	21070 7040/
	20 and under 21 through 24	27	143	79470
	21 through 24	27	112	72270
Whites	20 through 34	30	75	1210/
vv mues	35 through 39	5 4 61	96	57%
	A0 through 44	50	111	122%
	40 through 49	38	70	12270 84%
	50 through 54	90	24	167%
	55 and over	9	13	10770 44%
	55 and 6ver	,	15	
	Total Latino	112	253	126%
	20 and under	3	12	300%
	21 through 24	5	43	760%
	25 through 29	13	36	177%
Latinos	30 through 34	18	42	133%
	35 through 39	19	31	63%
	40 through 44	25	42	68%
	45 through 49	15	25	67%
	50 through 54	10	17	70%
	55 and over	4	5	25%

Table 26: Percentage Increase in Injection Drug Use Admissions in Illinois, by Age and Race: 1997-2000 Treatment Admissions Data Set

Whites comprised the largest group of injectors among those 34 and under. Whites constituted almost 90 percent of those IDUs under age 20 seeking treatment within the state of Illinois. White users represented 80 percent of IDUs aged 21 to 25, 66 percent of those aged 25 through 29, and 40 percent of those aged 30 through 34. After age 40, the proportion of white IDUs seeking treatment fell steadily, with the lowest rates among the older cohort (Table 27).

Blacks had an inverse relationship to whites in regard to injection drug use and age, with the majority of black IDUs concentrated in the older age groups. African Americans constituted 82 percent of the IDU cohort aged 55 and older and the proportion of injection users decreased along with age. The age cohort with the least number of black injection drug users was under age 20 (Table 27).

The proportion of Latino IDUs followed a simple bell curve, peaking among those aged 30 to 34. The proportion of Latino IDUs decreased for individuals younger than 30 as well as for those older than 35. (Table 27)

Age Group	Black	White	Latino	Total
20 and under				
(n=160)	3%	89%	8%	100%
21 through 24				
(n=275)	4%	81%	16%	100%
25 through 29				
(n=170)	13%	66%	21%	100%
30 through 34				
(n=186)	37%	40%	23%	100%
35 through 39				
(n=226)	44%	42%	14%	100%
40 through 44				
(n=356)	57%	31%	12%	100%
45 through 49				
(n=341)	72%	21%	7%	100%
50 through 54				
(n=198)	79%	12%	9%	100%
55 and over				
(n=198)	82%	13%	5%	100%

Table 27: Injection Drug Users Episodes: by Proportion of Racial GroupsWithin Each Age Cohort: Illinois 2000Treatment Episode Data Set

V. Treatment: the Decline of Methadone

The use of methadone has been demonstrated to be extremely beneficial in dealing with opiate addiction. The number of patients who decided to use methadone declined during the period from 1997 to 2000 signaling that patients either do not have access to methadone or are choosing not to utilize this valuable resource.

Between 1997 and 2000, methadone became less widely used, particularly in the Chicago metropolitan area. In Chicago, in 1997, about half of those admitted to treatment planned on using methadone as an aid to recovery, but in 2000 only about one-quarter of users stated that they planned on using methadone. The entire state of Illinois had similar decreases in planned methadone treatment. Downstate Illinois also declined in those treatment admissions who planned on using methadone, but only by about 9 percent. Across the state, in 2000, the rate of planned methadone use was about the same regardless of locality (Table 28).

Table 28: Opiate Treatment Admissions, 1997-2000 Planned Use of Methadone Treatment Episode Data Set

Plan to use	1997	2000	1997	2000	Percent
Methadone	Number	Number	Percent	Percent	Change
Chicago	1462	2089	52%	25%	-27%
Whole State of Illinois	1565	2364	50%	25%	-25%
Downstate	103	275	31%	22%	-9%

There were substantial differences between racial groups for the planned use of methadone. In 1997 the differences between African Americans and whites who planned to use methadone were about the same, at 49 percent and 45 percent respectively. Latinos had the highest proportion of treatment admissions who planned on using methadone at 58 percent. A comparison of 2000 data indicates that whites are the least likely group to use methadone, followed by Latinos.

Between 1997 and 2000, the number of whites planning to use methadone decreased more than 30 percent. Latinos planning to use methadone decreased by the largest amount of all racial groups—more than 40 percent. Among African Americans the decrease in planned methadone treatment was 20 percent. (Table 29).

Treatment Episode Data Set							
1997 Total	2000 Total	1997 Whites	2000 Whites	1997 African	2000 African	1997 Latinos	2000 Latinos
Number 3,123	Number 8,446	46%	13%	Americans 49%	Americans 29%	58%	17%

Table 29: Heroin Treatment Admissions, Illinois 1997-2000 Planned Use of Methadone, by Race Treatment Episode Data Set

Various age groups differed in the planned use of methadone. Younger users were much less likely to use methadone than older users. Only about 20 percent of the youngest users planned to use methadone in 1997, while nearly threequarters of the oldest users planned on using methadone (Table 30).

Even though planned use of methadone decreased substantially in 2000, age groups still differed substantially in the use of methadone. The group that was least likely to use methadone was the youngest and the group most likely to use methadone was the oldest (Table 30).

One of the reasons for the decrease in methadone use could be availability. Unless significantly more treatment slots were created between 1997 and 2000, even those who wanted to use methadone might not have been able to receive it.

	1007	2000	1007	2000	
Age	Total	2000 Total	Percentage	Percentage	Percent
Group	Number	Number	Methadone	Methadone	Change
20 and under	94	461	20%	3%	-17%
21 through 24	211	683	27%	13%	-14%
25 through 29	545	1223	38%	18%	-20%
30 through 34	642	1760	35%	25%	-10%
35 through 39	627	1883	52%	26%	-26%
40 through 44	527	727	60%	22%	-38%
45 through 49	297	994	67%	33%	-34%
50 through 54	114	489	75%	37%	-38%
55 and over	66	226	71%	42%	-29%

Table 30: Heroin Treatment Admission, Illinois 1997-2000 Planned Use of Methadone, by Age Treatment Episode Data Set

The drop in the use of methadone could be problematic as methadone maintenance is the most effective treatment modalities for opiate addiction. Methadone is considered to be more effective for opiate addiction than any abstinence based treatment, including 12-step, hospital inpatient, or therapeutic communities. In 1997, a panel at the National Institutes of Health (NIH) Consensus Development Conference on Effective Medical Treatment of Heroin Addiction concluded that methadone was a very effective treatment for heroin addiction, and urged an increase in funding for methadone treatment. Further research has validated these findings. ³⁷⁻³⁸

Policy Recommendations

We believe that the information contained in this report has important public policy implications for reversing the trend of increased use among new initiates and assisting those already dependent on opiates. The implications of a continued rise in heroin use by young users includes a larger drug-using population that may, in time, evolve into a larger addicted population similar to the 1960s/1970s epidemic; an increased burden on public health resources; the possibility of an increase in the number of property and vice-related crimes (e.g. prostitution); and a possible increase in the transmission of blood borne pathogens, such as HIV and Hepatitis C, through needle injection use and unprotected sex. While a number of these users will drop out of the using population, a significant percentage will remain, creating long-term public policy concerns as these addicts continue through a lengthy heroin career. We believe the following recommendations would contribute to decreasing heroin use rates in Illinois.

Increase parental awareness of heroin use outside of central cities. Heroin has not yet lost its stigma of being a central city drug located in lowincome neighborhoods, but evidence from this report, as well as ethnographer studies, shows that heroin use is occurring in affluent areas and among the very young. Since heroin is the drug most associated with serious consequences for the user, it is necessary for parents to be made aware of the growing problem within their communities. Community newspapers can discuss the short and long-term affects of heroin use, and should reinforce the evidence that heroin is present in the community. Community groups and local public health and law enforcement organizations may wish to hold community-wide discussions and question and answer sessions for concerned parents. The following topics should be addressed:

- Parents should be made aware of the risks and dangers involved in heroin use, both from the immediate use of the drug and possible long-term health complications resulting from use. Immediate risks include opiate poisoning (overdosing), infections of the veins and skin, and possibly fatal heart problems caused by particles inadvertently injected along with the drug. Long-term complications include opiate addiction, generalized health problems related to drug use, and the possibility of acquiring a communicable blood borne disease through injection and inhalation practices.
- Parents should also be informed of the warning signs for heroin use, including: increased sleepiness ('nodding out'), irritability, depression, mood instability, a change in behavior, injection marks, and inflamed nostrils. If use has evolved into addiction, parents should also be aware of symptoms of withdrawal, including: runny nose, chills, tremors, nausea, stomach cramps, vomiting, shaking or jitters, and muscle cramps.

- Parents should be shown examples of paraphernalia specifically related to heroin use, such as: needles, bent spoons, aluminum foil or cellulose packets, straws, burned bottle caps, cotton balls, and filtered cigarettes with the filter removed.
- Parents who have children who have become dependent should be aware that teens often sell their belongings to get money for heroin use. Teens and young adults will often sell CDs, electronic equipment, jewelry, clothes and other belonging in order to finance their heroin use.

Increased focus on heroin in drug education programs.

Similar to the education program designed for parental awareness, youth drug education programs should include a thorough definition of heroin or other opiate use and the long-term complications that can arise. Heroin awareness campaigns can be added to the existing drug education curriculum, and can expand upon programs already in place in elementary, middle and high school settings. Specifically, strong drug education programs emphasize the often lethal dangers associated with needle use, including HIV, Hepatitis B and C, and heroin overdose. Additionally, to counter any misconceptions that only needle use is dangerous, youth must be made aware that any method of administration – injection, inhalation, or smoking – can result in opiate dependence. Since peers can be an excellent source of support for one another, students should also be made aware of the heroin use warning signs and heroin paraphernalia, as they may be able to more easily intervene and assist a friend in need.

Increased funding for needle exchange programs.

Needle exchange programs (NEPs) are an important element in reducing the harm incurred by injecting heroin, and were initially designed to reduce transmission of blood-borne pathogens. During the course of their development, they have also been shown to be an excellent portal between the addict and the various treatment services available in a community.

One of the first tasks necessary in increasing NEP presence in a community is to dispel myths about the NEPs and to garner additional public support. Community newspapers and public health officials can be active participants in emphasizing the benefits of needle exchange while addressing some of the more common concerns and misconceptions. For instance:

- NEPs have not been shown to increase the number of injecting heroin users, nor have they precipitated a shift from inhalation or smoking to injection drug use. ³⁹
- NEPs do not increase the number of needles present in a community. On the contrary, NEPs have been shown to reduce the number of needles found in public places, reducing the public safety hazards stemming from improperly disposed syringes.

 Research conducted by public health organizations has determined that needle exchange programs are effective in reducing the spread of HIV, and with increased attention being paid to Hepatitis C (HCV), it is likely that the NEPs will be equally effective in reducing the spread of Hepatitis C. ⁴⁰

To maximize the potential of needle exchange programs, more NEP sites should be established across the metropolitan area. While the city of Chicago is currently served by a mobile needle exchange van, resources in the suburbs are almost nonexistent. The Chicago NEP could serve as a model in the creation of permanent or mobile sites in the Collar and suburban Cook counties. In addition to needle exchange, these sites should have the resources necessary to link users to a comprehensive range of services, including treatment facilities and provider recommendations, HIV and HCV testing, and healthy lifestyle coaching. NEPs also provide the unique opportunity to teach users how to recognize the symptoms of overdose and the proper response to this emergency, perhaps preventing the death of a user.

Increased funding for methadone treatment.

A substantial body of evidence from public health, private treatment and government agencies has shown that methadone maintenance therapy (MMT) is an extremely effective mode of treatment for heroin addicts. ⁴¹⁻⁴² In spite of the success of MMT, planned use of this treatment has declined, and fewer users are relying on MMT in their recovery process. One of the issues may be the stigma and misconceptions surrounding MMT, a barrier not uncommon to the needle exchange programs. Another issue may be a reduction in the placement of patients into MMT programs due to an increase in users and a lack of corresponding increases in funding.

Increased methadone funding may be resisted at the community level if the misperceptions are not adequately addressed. Again, community newspapers and community health organizations could provide accurate MMT information that may ameliorate some of these concerns. One of the most noted concerns regarding methadone treatment is that heroin is simply replaced by methadone as the drug of choice. It is important to note that MMT blocks the high of illicit opiates and should not be perceived as "trading one addiction for another." When maintained on an adequate dose, methadone maintenance patients feel no effects from the use of illicit opiates, which helps methadone patients to stop using heroin. Used in the context of treatment, including therapy and behavioral modification techniques, MMT allows the user to work and to participate in treatment without suffering the symptoms of withdrawal.

Opiate dependent users may also indirectly contribute to the lack of urgency for increased MMT funding by failing to select it as a treatment option if their own perceptions regarding its use are inaccurate. Many of the more common myths surrounding methadone include fears that methadone harms the body in a variety of ways, that methadone is more addictive than heroin, and that it is

impossible for patients to withdraw from methadone without again resorting to illegal drugs. An important task for metropolitan treatment facilities will be to reduce the stigma surrounding methadone therapy and to encourage participation by the young, high purity heroin users, as they are the individuals most likely to shun methadone treatment.

Persons seeking methadone treatment may be denied service due to a limited availability of spots in an MMT program. As the number of users increases, funding for these programs will also need to increase, or the demand will outweigh the availability of service. Opiate dependent people should not be turned away from the most effective form of treatment due to a lack of funding.

Further research on new users in the High Purity Heroin Epidemic.

Research on this new generation of users should be conducted since this is a population of users that can potentially be members of the heroin using population for a period of thirty years or more. It is important to fully understand their unique characteristics to gauge the extent of the problem and predict possible future outcomes. This research should include the following:

- Age of first use and place of initiation. Understanding the setting in which use first occurred could help educators understand where hard-drug use is most likely to take place.
- Methods of administration. Knowledge of how heroin users administer drugs can increase our knowledge about whether needles pre-date heroin use, and better understanding of why particular routes of administration are appealing to particular groups
- Where users purchase their drugs. This question is importance foro city and suburban residents and policy makers. Users may have sources of heroin within their own communities, and only a portion of addicts may travel to Chicago to purchase drugs. Understanding where users purchase heroin may lead law enforcement to better target their resources within areas that have heroin suppliers.
- How this group finances its habit is of concern because heroin addiction is costly to the users. Youth may support their habits through various illegal activities, such as property crimes or trading sex for drugs in order to earn money for heroin use.
- The effect of drug education on shaping youth attitudes to heroin. What drug education does this group remember receiving, and did they recall an emphasis on opiates? Are drug education programs adequately addressing the serious consequences of heroin use?

- Better understanding of sub-cultural trends. Does this group in any way mirror the earlier heroin generations? Is there an element of "chic" related to the concept of heroin use?
- Perceptions of differing types of treatment modalities. Do young people believe that methadone is not effective? What type of treatment do they desire?

Answering these questions has important public health implications. Initiatives can be directed at populations at risk for heroin use and understanding the culture of use may provide insight on how to treat this population. Increased understanding of the heroin purity generation may help to prevent or curtail heroin use in the future, as well as to direct treatment and prevention efforts where they are most needed.

¹ Multiple Indicator Analysis is a research methodology that involves trending patterns of drug use through the tabulation of data from different sources. SAMHSA recommends the use of several data sources to most accurately examine the populations of illicit drug users. Each data set can be viewed as one piece of the overall picture, which, when fit together, can provide a clearer understanding of the drug using population in a particular area.

² Johnson, Bruce D. and Andrew Golub. "Generational Trends in Heroin Use and Injection in New York City." <u>One Hundred Years of Heroin</u>. Westport: Auburn House. 2002. p113-4.

⁴ US Department of Justice. <u>National Drug Threat Assessment 2003</u>. "Heroin- Primary Market Areas." Retrieved from USDOJ website at http://www.usdoj.gov/ndic/pubs3/3300/

⁵ National Drug Intelligence Center. <u>Illinois Drug Threat Assessment</u>. (January 2001). "Heroin –

Availability." Retrieved from NDIC website at http://www.usdoj.gov/ndic/pubs/652/index.htm

⁶ National Drug Intelligence Center. <u>Heroin Distribution in Three Cities</u>. "Appendix A – Three Cities Compared and Contrasted." Retrieved from NDIC website at http://www.usdoj.gov/ndic/pubs/ 648/index.htm

⁷ National Drug Intelligence Center. <u>Illinois Drug Threat Assessment</u>. (January 2001). "Heroin – Availability." Retrieved from NDIC website at http://www.usdoj.gov/ndic/pubs/652/index.htm

⁸ The Drug Abuse Warning Network is based on the number of Emergency Department Mentions caused by drug use. Caution must be used when analyzing these data because the mentions represent a sample of the Emergency Department mentions for the metropolitan area. The fact that Emergency Departments are sampled means that the data are not absolute numbers. Some sampling error can occur and this has been factored into the calculations for ED rates and ED mentions. Charts that have notations of finding of "not significant" means an analyst cannot state with 95 percent certainty that the increase is representative of the population.

⁹ SAMHSA, Office of Applied Studies. Drug Abuse Warning Network (DAWN) <u>Emergency Department Trends From DAWN: Final Estimates 1995 – 2002.</u> "Tables for Metropolitan Areas." Retrieved from DAWN website at http://dawninfo.samhsa.gov/pubs_94_02/edpubs/2002final/default.asp#publishedtables ¹⁰ In addition to the Emergency Room department mentions, the Drug Abuse Warning Network collects information on mortality from opiate use.

¹¹ The Arrestee Drug Abuse Monitoring (ADAM) data is collected by the National Institute of Justice, the research arm of the Department of Justice. The standardized collection of drug usage rates among arrestees in cities throughout the United States attempts to tabulate the pattern of drug use in selected communities. For the 2000 ADAM Annual Report, the Chicago ADAM site provided male and female arrest information from three facilities in Cook County for the third quarter of 2000

¹² National Institute of Justice. <u>Arrestee Drug Abuse Monitoring (ADAM) 2000 Annual Report</u>. 21.

¹³ National Institute of Justice. <u>Arrestee Drug Abuse Monitoring (ADAM) 2000 Annual Report</u>. 21.

¹⁴ National Institute of Justice. <u>Arrestee Drug Abuse Monitoring (ADAM) 2000 Annual Report</u>. 22.

¹⁵ National Institute of Justice. "Arrestee Drug Abuse Monitoring (ADAM) 2000 Adult Program Findings for Male Quarter 3." Retrieved from ADAM website at http://www.adam-nij.net/files/public/CH/Data/CH003QT1.xls

¹⁶ National Institute of Justice. <u>Arrestee Drug Abuse Monitoring (ADAM) 2000 Annual Report</u>. 95.

¹⁷ National Institute of Justice. <u>Arrestee Drug Abuse Monitoring (ADAM) 2000 Annual Report</u>. 107.

¹⁸ National Institute of Justice. "Arrestee Drug Abuse Monitoring (ADAM) 2000 Adult Program Findings For Female Quarter 3." Retrieved from ADAM website at http://www.adam-nij.net/files/public/CH/Data/ CH003QT2.xls

¹⁹ Office of National Drug Control Policy. <u>Pulse Check</u>. (Winter 1995). "Summary of Findings." Retrieved from the ONDCP website at http://www.whitehousedrugpolicy.gov/publications/drugfact/pulsechk/winter95/p_5wsumm.html

²⁰ National Drug Intelligence Center. <u>Illinois Drug Threat Assessment (January 2001)</u>. "Heroin – Violence" Retrieved from NDIC website at http://www.usdoj.gov/ndic/pubs/652/heroin.htm#Top

²¹ Uggen, Christopher and Melissa Thompson. "The Socioeconomic Determinants of Ill-Gotten Gains: Within-Person Changes in Drug Use and Illegal Earnings." <u>American Journal of Sociology</u>. V. 109, Issue 1 (July 2003). p146, 40p.

²² The Treatment Episode Data Set (TEDS) is collected by The Office of Applied Studies at SAMHSA and includes records of treatment admissions data regularly collected by the states in an effort to monitor their state-funded treatment programs. TEDS is an admissions-based dataset signifying the number of admissions recorded and does not represent the number of unique individuals. Thus it is possible for an individual to be counted twice in the database should the individual have recurring treatment admissions during the calendar year. Treatment agencies that are private for-profit, federal/state corrections and private hospital facilities may be excluded from the data collection. This treatment data is aggregated at the state and Metropolitan Statistical Area (MSA) level.

²³ Discharge Data provided by the Illinois Department of Public Health demonstrates the increase in the number of hospital discharges for opiate dependency, poisoning, or abuse. These data were collected from acute care hospitals, along with rehabilitation and psychiatric hospitals but do not include veterans' hospitals, or mental asylums.

²⁴ Johnson, Bruce D. and Andrew Golub. "Generational Trends in Heroin Use and Injection in New York City." <u>One Hundred Years of Heroin</u>. Westport: Auburn House. 2002. p92-7.

²⁵ Moynihan, Daniel Patrick. "One Hundred Years of Heroics." <u>One Hundred Years of Heroin</u>. Westport: Auburn House. 2002. p26.

²⁶ Office of National Drug Control Policy. <u>Pulse Check</u>. (Spring 1996) "Table 1: Ethnographers – Heroin." Retrieved from ONDCP website at http://www.whitehousedrugpolicy.gov/publications/drugfact/pulsechk/spring96/p_6spuls.html

²⁷ Office of Applied Studies, SAMHSA. <u>2001 Household Survey on Drugs and Health</u>. "Trends in Initiation of Substance Use – Heroin." Retrieved from SAMHSA website at

http://www.samhsa.gov/oas/NHSDA/2k1NHSDA/vol1/Chapter5.htm

²⁸ Office of National Drug Control Policy. <u>Pulse Check</u>. (Winter 1995) "Summary of Findings – Heroin." Retreived from ONDCP website at http://www.whitehousedrugpolicy.gov/publications/drugfact/ pulsechk/winter95/p_5wsumm.html

²⁹Office of National Drug Control Policy. <u>Pulse Check</u>. (Summer 1997) "Heroin" Retrieved from ONDCP website at http://www.whitehousedrugpolicy.gov/publications/drugfact/pulsechk/summer97/pctrend1.html

³⁰ Office of National Drug Control Policy. <u>Pulse Check</u>. (Winter 1997) "Heroin" Retrieved from ONDCP website at http://www.whitehousedrugpolicy.gov/publications/drugfact/pulsechk/winter97/trend1.html

³¹ Maxwell, Jane Carlisle. "Changes in Drug use in Australia and the United States: Results from the 1995 and 1998 National Household Surveys." <u>Drug and Alcohol Review</u>. Vol. 20, Issue 1 (2001). p37-48. National Household Survey reports that the younger users have a closer proportion of male to female users, in terms of illicit drug use. This reverses previous trends indicating that young males used drugs disproportionately more than young females.

³² Jonnes, Jill. "Hip to be High: Heroin and Popular Culture in the Twentieth Century." <u>One Hundred Years</u> of Heroin. Westport: Auburn House. 2002. p232-3.

³³ Gordon, Susan M. "Adolescent Drug Use: Trends in Abuse, Treatment and Prevention." (2000). p7. Retrieved from Caron Foundation website at http://www.caron.org/pdf/Adol_Drug_Report.pdf

³⁴ National Center for Addiction and Substance Abuse CASA Conference. Retrieved from CASA website at http://www.casacolumbia.org/absolutenm/templates/articles.asp?articleid=237&zoneid=31

³⁶ Office of National Drug Control Policy. <u>Pulse Check</u>. (Fall 1995) "Table 1: Ethnographers – Heroin." Retrieved from ONDCP website at http://www.whitehousedrugpolicy.gov/publications/drugfact/pulsechk/fall95/p_5fpuls.html

³⁷ National Institute on Drug Abuse (NIDA). "NIDA Notes – November/December 1997" Retrieved from NIDA website at http://www.drugabuse.gov/NIDA_Notes/NNVol12N6/NIHPanel.html

³⁸ National Institute on Drug Abuse (NIDA). "NIDA Notes – December 1999." Retrieved from NIDA website at http://www.drugabuse.gov/NIDA_Notes/NNVol14N5/HighDose.html

³⁹ Satcher, David. "Evidence-based findings on the efficacy of syringe exchange programs: an analysis of the scientific research completed since April 1998" Retrieved from http://www.dogwoodcenter.org/references/Satcher00.html

⁴⁰ National Institute of Health. <u>Consensus Statements-Interventions to Prevent HIV Risk Behaviors.</u> "Needle Exchange Programs." Retrieved from NIH website at http://consensus.nih.gov/cons/ 104/104_statement.htm

⁴¹ National Institute on Drug Abuse. "NIDA News Release." Retrieved from NIDA website at http://www.nida.nih.gov/MedAdv/00/NR3-7.html

⁴² Sees, Karen L. et al. "Methadone Maintenance vs 180-Day Psychosocially Enriched Detoxification for Treatment of Opioid Dependence" <u>Journal of American Medicine</u>. Vol. 283, Issue 10 (March 2000). p1303-10.

³⁵ Moore, Joan and Mary Devitt. "The Paradox of Deviance in Addicted Mexican American Mothers." <u>Gender And Society</u>. Vol. 3, No. 1 (March 1989). p53-70.