Diminishing Capacity:

The Heroin Crisis and Illinois Treatment in National Perspective

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MISSION

The Consortium's primary objectives are to promote discussion of alternatives to Illinois' current drug policies and to serve as a forum for the open, honest, and thoughtful exchange of ideas. We aspire to serve both the general public and populations significantly affected by drug policies through careful analysis of current policies in the areas of housing, employment, education, social services, healthcare and economics. We aim to offer sensible, prudent, just and economically viable alternatives to ineffective policies. The Consortium seeks meaningful change by increasing dialogue, heightening public awareness, meeting with legislators, organizing individuals and communities, and expanding outreach to other organizations that are also impacted by drug policies. The Consortium views individuals and communities that have been directly impacted by drug policies as an integral component for change.

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EXECUTIVE SUMMARY

National Trends

This rise of heroin use has been a major focus of concern among government agencies such as the Centers for Disease Control (CDC), the Substance Abuse Mental Health Services Administration (SAMHSA), and the Office of National Drug Control Policy (ONDCP) and data verify these concerns:

- In 2013, the number of individuals (681,000) reporting past year heroin use was significantly higher than in 2007 (314,000), nearly doubling over the six year period.
- In 2012, those entering treatment reporting heroin as this primary substance of abuse increased to 16% of all treatment admissions, the highest level since data collection began in 1992.
- Heroin overdoses (poisonings) have nearly quadrupled from 2002 to 2013, with 8,200 deaths in 2013.

Illinois Trends

While heroin treatment episodes are reaching historic highs nationally, in Illinois treatment admissions for heroin are significantly higher than the nation as a whole, for example:

- Nationally, heroin treatment admissions comprised 16.4% of total state funded treatment in 2012, while in Illinois heroin admissions make up one-quarter of all treatment admissions for the state, and are 56% greater than the nation as a whole;
- In 2012, the Chicago Metropolitan Area percentage of treatment admissions for heroin was more than double the national average (35.1% vs 16.4%).
- From 2006 to 2012, heroin was the second most common reason for Illinoisans to enter state publicly funded treatment, after alcohol. In 2000, it was the 4th most common reason.

Heroin use is not only rising in urban areas area but is also dramatically increasing in rural and suburban counties.

- In 2007, treatment episodes for heroin comprised just 4% of total publicly funded treatment in Metro East Illinois, but by 2012, heroin made up 18% of all treatment episodes – a fourfold increase in just 5 years.
- In 2007, treatment admissions in Decatur for heroin comprised just 3% of the total, spiking to 23% in 2012, representing a 6-fold increase.
- In 2007, treatment admissions in Peoria-Pekin for heroin were 7% and by 2012 it was 16%, a 119% increase.
- Between 2007 and 2012, treatment episodes for heroin more than doubled in Bloomington-Normal and Champaign- Urbana from 5% to 11% and 6% to 13% respectively.

According to survey data heroin use is increasing especially among young people in Illinois.

- In 2007, 2.5% of Illinois youth reported using heroin in the past year, while in 2013, that number increased to 3.8%, a nearly 50 percent increase in just six years.

- The greatest percentage increase occurred among females – a 90% increase over that time period. Males were more likely to report using heroin – nearly six percent in 2013.

The Chicago Metropolitan Area ranks in the top for both emergency department mentions for heroin and number of individuals who were arrested and tested positive for heroin.

- Arrestees from Cook County tested positive for opiates (including heroin) at a rate of 18.6%, higher than any other area in the nation.
- Arrestees from Cook County also self-reported using heroin more times per month than those from any other jurisdiction, (26.8 days per month).
- Arrestees from Cook County reported using heroin in the last three days more than those from any other region (15.7%).
- The Chicago Metropolitan area ranked first in the country for the total number of mentions for heroin (23,627) nearly double the number for New York City.
- Chicago also reported the highest number of heroin mentions among African American mentions (13,178), nearly four times more than New York City (3,463) and nearly 6 times higher than Detroit (2,311).
- Among whites, only Boston had more ED mentions for heroin (10,045), but Chicago was second (7,024).
- Chicago ranked highest in the number of ED mentions for both women and men. Adjusting for population, Chicago ranked 2nd highest in the number of mentions overall, behind Boston.

Declining Treatment Capacity: Illinois in National Perspective

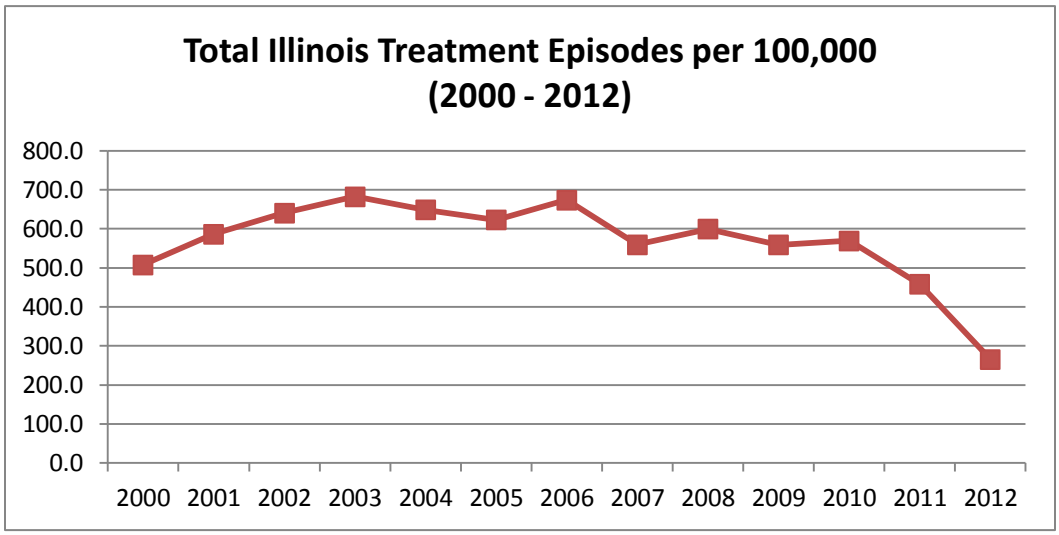
While heroin use is increasing in every area of the state, there has been an alarming and dramatic decrease in treatment from 2007 to 2012.

- Illinois ranked *first* in the US for the decline in treatment capacity over this period, a loss of more than half of its treatment episodes, 52% decrease over the five year period.
- In 2007, Illinois ranked 28th in state funded treatment capacity, but in 2012 Illinois ranked 44th, or 3rd worst in the nation; only Tennessee and Texas ranked lower.
- In 2012, Illinois's state funded treatment rate was (265 per 100K) more than 50% lower than the US rate.
- When compared to other Midwestern states, Illinois had the lowest rate of state funded treatment. Minnesota's rate was 2.7 times Illinois's rate (982.1 vs 256.6), Ohio's rate was twice as high as Illinois, Wisconsin rate was 1.8 times greater, and Indiana's rate, which was lower than that for any Midwestern state, aside from Illinois, was *still* 43% higher than Illinois.

Illinois State funding for addiction treatment decreased significantly:

- From 2007 to 2012, General Revenue Funding decreased by nearly 30% ($111M vs $79M), while Medicaid funding decreased by 4% over this time period.

- These decreases in funding continue in FY 16, where the proposed budget represents a 61% decrease in state funded addiction treatment;
- Including Medicaid increases from FY13 to FY16, addiction treatment funding (including Medicaid), still dropped by 28% overall ($163M in 2007 to $116M in the proposed FY16 budget)



According to the CDC States can:

1. Expand treatment for those with heroin and opiate use disorder, especially Medication Assisted Treatment (MAT, including methadone and buprenorphine), which would lower crime and save taxpayer money:
   - Each dollar spent on methadone maintenance yields a cost saving in terms of crime reduction between $4 and $7. When health care costs are included, the benefits returned are $12 for each $1 invested;
   - Ensure that all medication assisted treatment is covered by Medicaid, without time limits.
   - The benefits of providing methadone for just 2,500 people could save the State about $82.5-$100M in reduced crime and health care consequences (including the cost of the treatment).
   - Expansion of MAT could reduce the prison population among class 4 offenders alone by approximately 1,000 cases per year.
2. Increase access to and training for administering naloxone to reduce heroin and other opioid overdose deaths.
   - The State of Illinois should invest funding in existing naloxone programs since naloxone kits are significantly cheaper than an overdose death about $25-$40 and $30,000, respectively.
3. Ensure that state funded drug courts are following evidence based practices as is required with federally funded drug courts, especially the inclusion of MAT.
4. Increase availability of syringes and knowledge of syringe access laws and harm reduction practices in Illinois.
5. Address the strongest risk factor for heroin addiction: addiction to prescription opioid painkillers.

METHODOLOGY

This brief report is an update to *Heroin Use: National and Illinois Perspectives, 2008 to 2010*[1]. This update examines public treatment data, emergency department statistics, and arrest data using the most recent and complete years available. Data was gathered from the National Household Survey on Drug Use and Health, the Treatment Episode Data Set, the Drug Abuse Warning Network, the Youth Risk Behavior Surveillance System, and the Arrestee Drug Abuse Monitoring program. The following methodological notes regarding the data sets will provide additional information on the data contained within this report.

- **National Household Survey on Drug Use and Health (NSDUH)** - The 2013 data set was used for this report to provide information on heroin initiates and use patterns in the United States. Downloaded July, 2015.
- **Treatment Episode Data Set (TEDS)** – The 2007 and 2012 data sets were used for this report to provide information on use of public treatment services for heroin problems in the United States and Illinois. It is important to note that one person can undergo multiple treatment episodes. Data were not reported for Alabama (2007), Mississippi (2012), Pennsylvania (2012), and West Virginia (2012). Downloaded July, 2014.
- **Drug Abuse Warning Network (DAWN)** - The 2011 data set was used for this report to provide details on the number and rates of individuals receiving emergency medical services for heroin problems throughout the United States and the Chicago Metropolitan Area. The research team also analyzed this data by race, comparing white and African American individuals who received emergency medical services due to heroin use. Data for Miami and Miami – Ft. Lauderdale Division were omitted due to lack of data and disproportionately small sample size, respectively. DAWN is currently being restructured; up to date data will not be released until 2017. The 2011 data was downloaded July, 2015.
- **Youth Risk Behavior Surveillance System (YRBSS)** – The research team conducted online analysis of the 2007 and 2013 data, which were compared to provide information on the use of heroin among male and female youth. Accessed July, 2015.
- **Arrestee Drug Abuse Monitoring Program (ADAM)** – The 2011 data set was used for this report to provide information on the use of heroin and other opiates among adult male arrestees in major United States cities. The 2011 data set was chosen over the more recent 2012 data set because the latter omitted a number of cities and was therefore less meaningful than 2011 in our analysis. Downloaded July, 2015.

INTRODUCTION

The Illinois Consortium on Drug Policy has trended the rise in heroin use since 2004. The last time the Consortium analyzed data related to heroin use in Illinois was in 2012, using data from 2010. Initially, our research team began to look at public treatment overall and found that the number of criminal justice referred treatments for marijuana represented a significant portion of treatment admissions both in Illinois and across the nation. Since the heroin and opioid crisis had been increasing in severity, we considered the impact of these admissions for marijuana, as publicly funded treatment is by its nature limited. The nature of opioid and heroin addiction is associated with many negative societal impacts including crimes of acquisition (e.g. theft), while with marijuana, use does not have the same effects on public safety.[2] Heroin and opioid can lead to overdose and death, and the risk of blood borne pathogen transmission (HIV and Hepatitis C) that have dire impacts on both those with addictions, their family members and society as a whole.

At that time, we noticed an odd decrease when analyzing the demographic changes. These peculiarities in the data, which had been trended since 1996, required further analysis. The researchers concluded it might have been a reporting error in the 2011 data, but this pattern persisted over time, into 2012.

Because of these changes in treatment episodes, we decided to look and compare Illinois to other states in terms of publicly funded treatment episodes and compare them to the rest of the nation. This comparison seemed timely as it has been well established by government agencies and others that the heroin and opioid crisis in Illinois were still growing across the nation.

HEROIN USE IN NATIONAL PERSPECTIVE

This rise of heroin use has been featured extensively in news reports, community forums, among law enforcement, public health officials, and government agencies, especially over the past 5 years. According to both the Consortium's research and the Centers for Disease Control (CDC), across the nation, heroin use has increased among most demographic groups, genders, ages and income levels. What has garnered perhaps the most attention, particularly in the media, is the increase among groups not historically associated with heroin use, including women, individuals with insurance and those from higher SES households.[3] Among those aged 18-24, heroin use doubled over the last ten years[4].

Survey data demonstrate that the number of people who use heroin in the United States has continued to rise since 2002. In 2013, the number of individuals (681,000) reporting past year heroin use was significantly higher than in 2007 (314,000), nearly doubling over that six year period. While first time use of heroin remained stable over this time period, with 169,000 new initiates in 2013. The age of first use or initiation increased slightly from 23 years in 2012 to 24.5 years in 2013.[5]

The rise in heroin use has also been accompanied by a rise in heroin mortality: heroin-related overdoses (poisonings) have nearly quadrupled from 2002 to 2013, with 8,200 individuals dead in 2013.[6] Many of these poisonings involving heroin and other opioids are caused by the use of these drugs in combination with other drugs, like alcohol, benzodiazepines, and cocaine.[7] However, heroin-related deaths are likely undercounted. Heroin is metabolized in the body as morphine, and toxicology screens often detect the presence of morphine metabolites in tissue samples. [8]However, there is only a small window of opportunity in which heroin can be identified as contributing to death through the morphine marker *6-monoacetylmorphine.*[9] Many medical examiners lack the resources to perform these very specific tests, opting instead to screen for morphine and code the death as an opiate death.

Heroin overdoses need not be fatal. Heroin and other opiate poisonings can be reversed with naloxone (Narcan®) and there have been advances in getting the overdose reversal drugs more available to law enforcement and the general public, so that no one need die from an overdose, if individuals are trained in overdose prevention and naloxone is available.[10]

ILLINOIS YOUTH HEROIN USE RATES

Heroin use is also increasing among young people in Illinois according to survey data. The Youth Risk Surveillance System, a survey of Illinois youth, showed an increase in high school youth reporting heroin use. In 2007, 2.5% of Illinois youth reported using heroin in the past year, while in 2013, that number increased to 3.9%, a more than 50 percent increase in just six years. The greatest percentage increase occurred among females – a 90% increase over that time period.[11] Males were more likely to report using heroin – nearly six percent in 2013[i] [12] (Table 2).

Table 2: Illinois Youth Reporting Heroin Use in 2007 and 2013

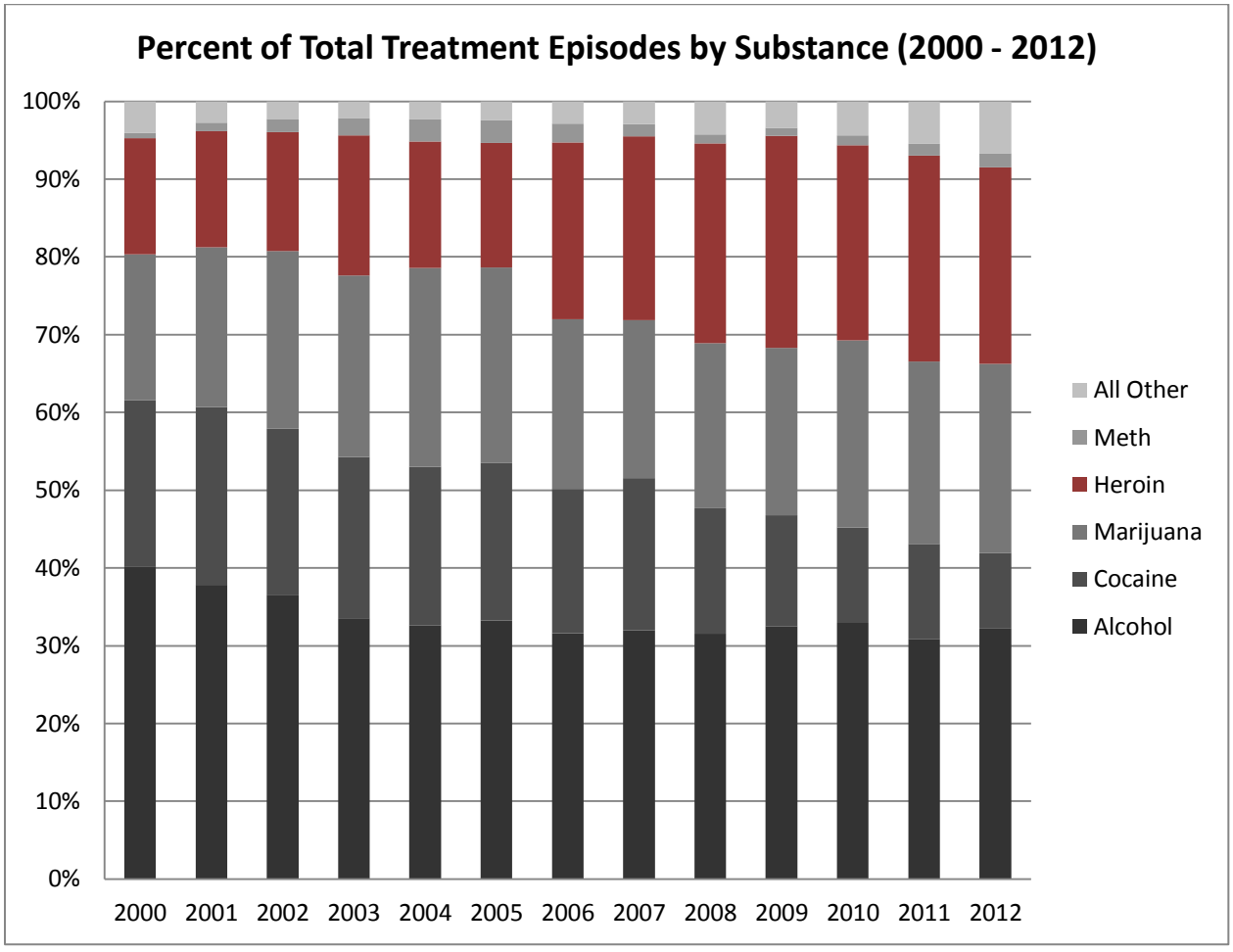
Past Year Use	2007	2013	Absolute Change	% Change
Total	2.5%	3.9%	1.4%	56%
Female	1.0%	1.9%	0.9%	90%
Male	4.0%	5.6%	1.6%	40%

[i] YBRSS analyses are conducted every two years; therefore 2013 was utilized for this analysis.

ILLINOIS STATE FUNDED TREATMENT EPISODES FOR HEROIN CONTINUE TO RISE

Along with the rise in youth use, and other indicators, analyses of the Treatment Episode Data Set (TEDS) demonstrate the rise of individuals entering publicly funded treatment for heroin across Illinois. In 2000, the most common reason to enter publicly funded treatment was alcohol, followed by cocaine, marijuana, and heroin. From 2005 to 2006, treatment admissions for heroin increased by nearly 54% (from 12,387 to 19,652). From 2006 to 2012 heroin was the second most common reason Illinoisans entered publicly funded treatment, behind alcohol (Figure 1).[13]

Figure 1: State Funded Treatment Admissions by Substance and Percent of Total (2000-2012)



HEROIN INCREASES IN RURAL ILLINOIS AND SMALLER METRO AREAS

One might think that heroin use is confined mainly to the Chicago Metropolitan Area, including the suburbs and collar counties but that is not the case, particularly in recent years. Nearly all of the smaller Metro Areas and even rural areas have seen the proportion of treatment episodes for heroin increase. For example, in 2007, treatment episodes for heroin comprised just 4% of total publicly funded treatment in Metro East Illinois, but by 2012, heroin made up 18% of all treatment episodes – a fourfold increase in just 5 years. Decatur demonstrated a similar rise in 2007, treatment admissions for heroin comprised just 3% of the total, spiking to 23% in 2012, representing a 6-fold increase. Rural Illinois has been similarly impacted (Figures 2-3).[14]

Figure 2: Percent of State Funded Treatment Admissions for Heroin in Selected Illinois Metro and Rural Areas (2007 to 2012)

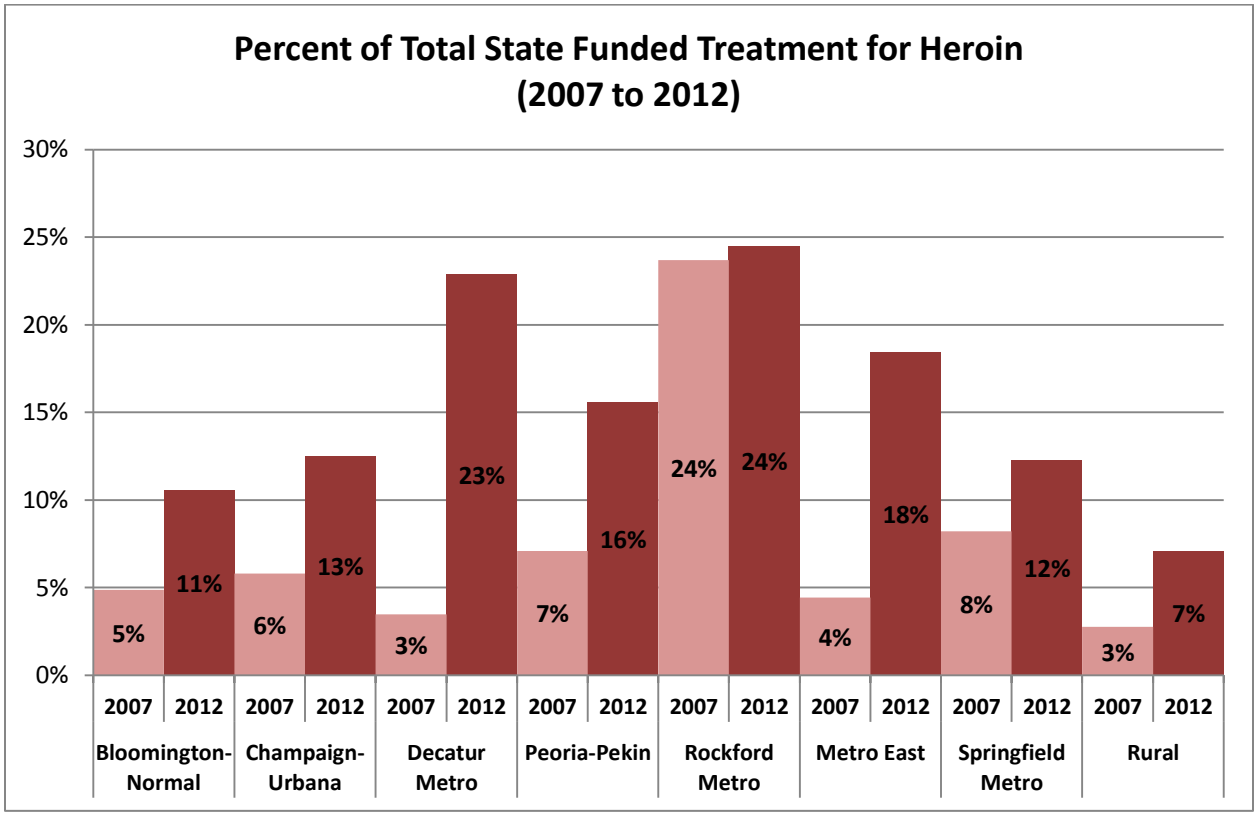
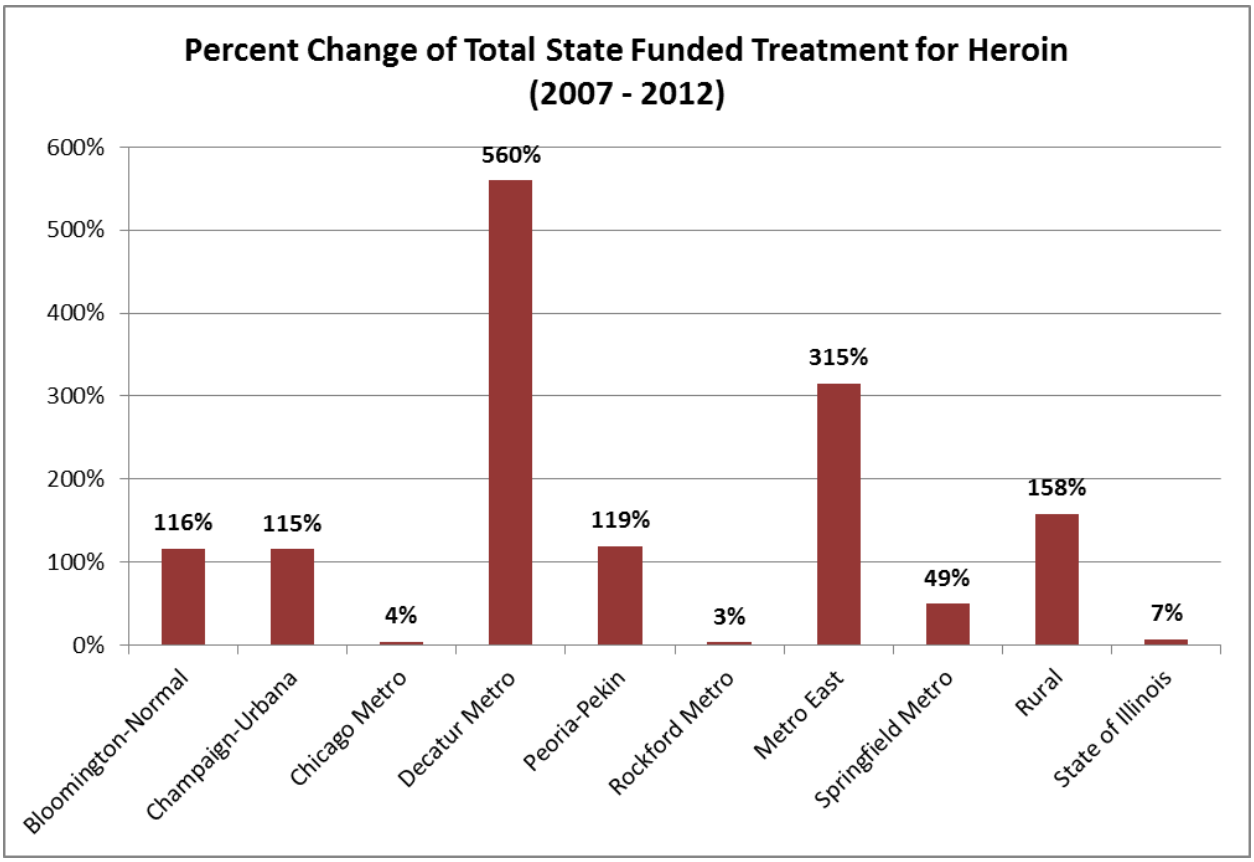


Figure 3: Percent Change in Proportion of State Funded Treatment Admissions for Heroin in Selected Illinois Metro and Rural Areas (2007 - 2012)



CHICAGO METROPOLITAN AREA IN NATIONAL PERSPECTIVE

The Chicago Metropolitan Area has long been aware of the rise of heroin use. In numerous reports, the Consortium has identified Chicagoland as ranking among the worst in the nation among other cities for heroin use indicators. According to epidemiologists, heroin overdose deaths in the collar counties represent the most important drug related issue in 2011 and 2012. Additionally, heroin indicators have increased or remained at extremely high elevated levels since 2000.[15]

The percentage of publicly funded treatment admissions for heroin in the Chicago Metro Area increased slightly from 2007 to 2012. In 2007, treatment admissions for heroin comprised 33.9% of the total, in 2012, these rose by 1.3% to 35.1% (Table 3). In 2012, treatment admissions for heroin nationally comprised 16.4% of the total admissions. The Chicago Metropolitan Area's percentage of treatment admissions was more than *double* the national average.[16]

Table 3: State Funded Treatment Admissions for Heroin in in the Chicago Metro Area and US by Percent of Total 2007 to 2012

Year	Chicago Metro % Total	US %Total
2007	33.9	13.5
2012	35.1	16.4

HEROIN USE AMONG COOK COUNTY ARRESTEES: NATIONAL PERSPECTIVE

Chicagoland (Cook County) ranked first in the nation for heroin use among arrestees in 2011, according to multiple indicators. According to the Arrestee Drug Use Monitoring Program (ADAM), arrestees from Chicago tested positive for opiates (including heroin) at a rate of 18.6%, higher than any other city in the nation while Portland ranked 2nd ,Washington DC 3rd, and New York City 7th (Table 4). Arrestees from Cook County also self-reported using heroin more times per month than those from any other area, (26.8 days per month) while Minneapolis ranked 4th, and Indianapolis ranked last (15.2 days per month) (Appendix B, Table B.2) in this respect. Finally, arrestees from Chicagoland reported using heroin in the last three days more than those from any other city (15.7%), while Indianapolis ranked 6th and Indianapolis ranked 8th. Comparatively, New York City ranked 7th in this analysis—3.1% of arrestees reported using heroin in the last three days (Appendix B, Table B.3).[17]

Table 4: Percent of Adult Male Arrestees Testing Positive for Opiates (including heroin) in Urine Tests by City, 2011 (ADAM)

Rank	City	Percent
1	Chicago	18.6
2	Portland	14.4
3	Washington DC	11.3
4	Indianapolis	10.3
5	Denver	10.1
6	Sacramento	9.6
7	New York	8.1
8	Minneapolis	7.7
9	Atlanta	6.6
10	Charlotte	1.8

EMERGENCY DEPARTMENT MENTIONS FOR HEROIN IN THE CHICAGO METROPOLITAN AREA: NATIONAL PERSPECTIVE

According to the Drug Abuse Warning Network, the Chicago Metropolitan Area ranked first or second in a number of key indicators for heroin among individuals using the emergency room (emergency department or ED) in the nation. Chicago ranked first in the country for the total number of mentions for heroin (23,627), nearly double the number for New York City (12,015) (Table 5). Chicago also reported the highest number of heroin mentions among African American mentions (13,178), nearly four times more than New York City (3,463) and nearly 6 times higher than Detroit (2,311) (Appendix C, Table C.3). Among whites, only Boston had more ED mentions for heroin (10,045) than Chicago (7,024) (Appendix C, Table C.4). Chicago ranked highest in the number of ED mentions for both women and men (Appendix C, Tables C.5 and C.7). Adjusting for population, Chicago ranked 2nd highest in the number of mentions overall, behind Boston (Appendix C, Tables C.6 and C.8).[18]

Table 5: Total Emergency Department Mentions[19] for Heroin, by City 2011

Rank	Metro Area	Mentions
1	Chicago	24,627
2	Boston	14,057
3	New York	12,015
4	Detroit	6,643
5	Seattle	6,208
6	Phoenix	4,092
8	Minneapolis	3,493
7	Denver	1,894
9	San Francisco	731

DECLINING TREATMENT CAPACITY: ILLINOIS IN NATIONAL PERSPECTIVE

While heroin use is increasing in every area of the state, there has been an alarming and dramatic decrease in treatment from 2007 to 2012. Illinois ranked first in the US for the percent decline in treatment capacity over this period, a loss of more than half of its treatment episodes— a 52% decrease (Table 6) in just 5 years. In 2007, Illinois ranked 28th in state funded treatment capacity. In 2012, Illinois fell to 44 out of 46 states available for analysis[ii] ranking above only Tennessee and Texas (Tables, 7-8).[20]

Illinois's publicly funded treatment rate, adjusted for population, was well below the national average. In 2012, the average national publicly funded treatment rate was 593 per 100,000. Illinois's rate was just 265 per 100,000, less than half of the US rate.[21]

As compared to other neighboring or Midwestern states, Illinois had the lowest rate of state funded treatment. South Dakota's treatment rate, ranked first in the nation, was more than 6.5 times greater than Illinois's (1741.9 vs. 265.6), Minnesota's rate was 2.7 times Illinois's rate (982.1 vs 265.6), Ohio's rate was twice as high as Illinois's, and Wisconsin's rate was 1.8 times greater. Indiana's rate, which was lower than that of any Midwestern state, aside from Illinois, was *still* 43% higher than Illinois (Table 9). Figure 4 shows the decline in Illinois treatment episodes from 2000-2012.[22]

Illinois State funding for addiction treatment decreased significantly. From 2007 to 2012 General Revenue Funding decreased by nearly 30% ($111M vs $79M), while Medicaid funding decreased by 4% over this time period.[23] These decreases in funding continue in FY 16, where the proposed budget represents a 61% decrease in state funded addiction treatment (not including Medicaid).[24] Including the increases in Medicaid from FY13 to FY16, addiction treatment funding (including Medicaid), still dropped by 28% overall ($163M in 2007 to $116M in the proposed FY16 budget (Figure 5)).[25]

[ii] Several states did not report either in 2007 or 2012, and were not included in these tables. These states include Alabama, Pennsylvania, Mississippi and West Virginia.

Table 6: State Funded Treatment Admissions with the Ranked by Largest Percent Decrease (Top 10) (2007-2012)

Rank	State	%Change
1	**Illinois**	**-52%**
2	New Mexico	-48%
3	Louisiana	-44%
4	Ohio	-42%
5	Kentucky	-33%
6	South Carolina	-29%
7	Arkansas	-25%
8	Oklahoma	-25%
9	New Hampshire	-25%
10	California	-24%
	US Total	-11%

Table 7: Highest State Funded Treatment Admissions by Rate, including Illinois and US (2007)

Rank	State	Rate per 100k
1	South Dakota	1,981.1
2	Colorado	1,633.1
3	New York	1,599.2
4	Massachusetts	1,417.1
5	Oregon	1,406.4
6	Vermont	1,309.9
7	Connecticut	1,277.9
8	Maine	1,213.6
9	Maryland	1,200.0
10	Rhode Island	1,074.7
28	**Illinois**	**552.9**
NA	US TOTAL	668.6

Table 8: Highest State Funded Treatment Admissions by Rate, including Illinois and US (2012)

Rank	State	Rate
1	South Dakota	1,741.9
2	Connecticut	1,726.6
3	Colorado	1,688.6
4	New York	1,503.6
5	Vermont	1,402.9
6	Massachusetts	1,320.3
7	Oregon	1,152.7
8	Maryland	1,101.4
9	Maine	1,037.2
10	Rhode Island	1,026.4
44	**Illinois**	**265.6**
45	Tennessee	209.5
46	Texas	161.6
	US Total	595.3

Table 9: Midwestern State Funded Treatment Admissions by Rate per 100K (2012)

Rank	State	Rate
1	South Dakota	1,741.9
11	Minnesota	982.1
12	Nebraska	949.1
13	Iowa	907.9
19	Missouri	749.0
20	Michigan	553.0
22	Ohio	515.7
24	Wisconsin	495.7
27	Kansas	457.4
33	Indiana	382.8
44	**Illinois**	**265.6**

Figure 4: State Funded Treatment Admissions Rate (2000-2012)

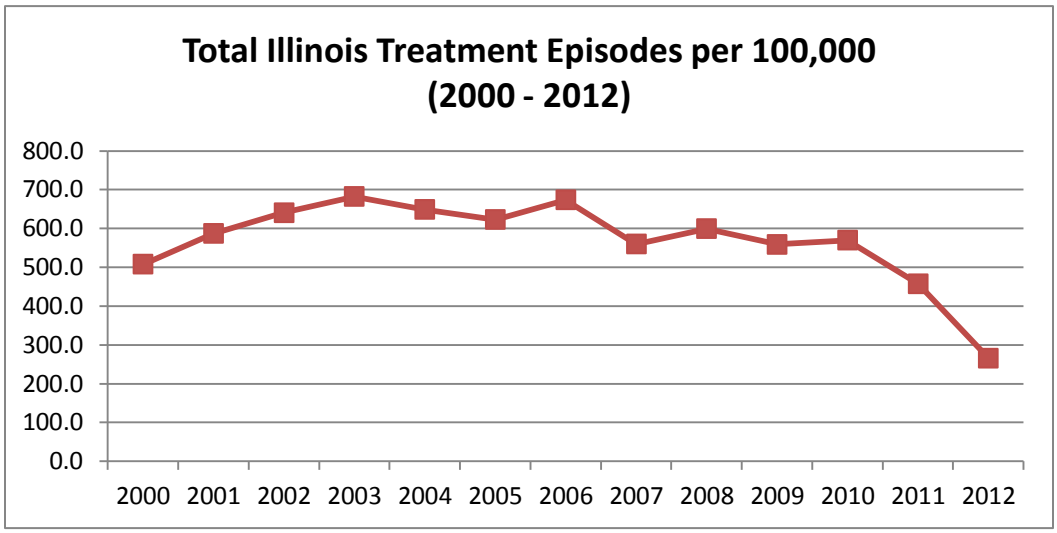
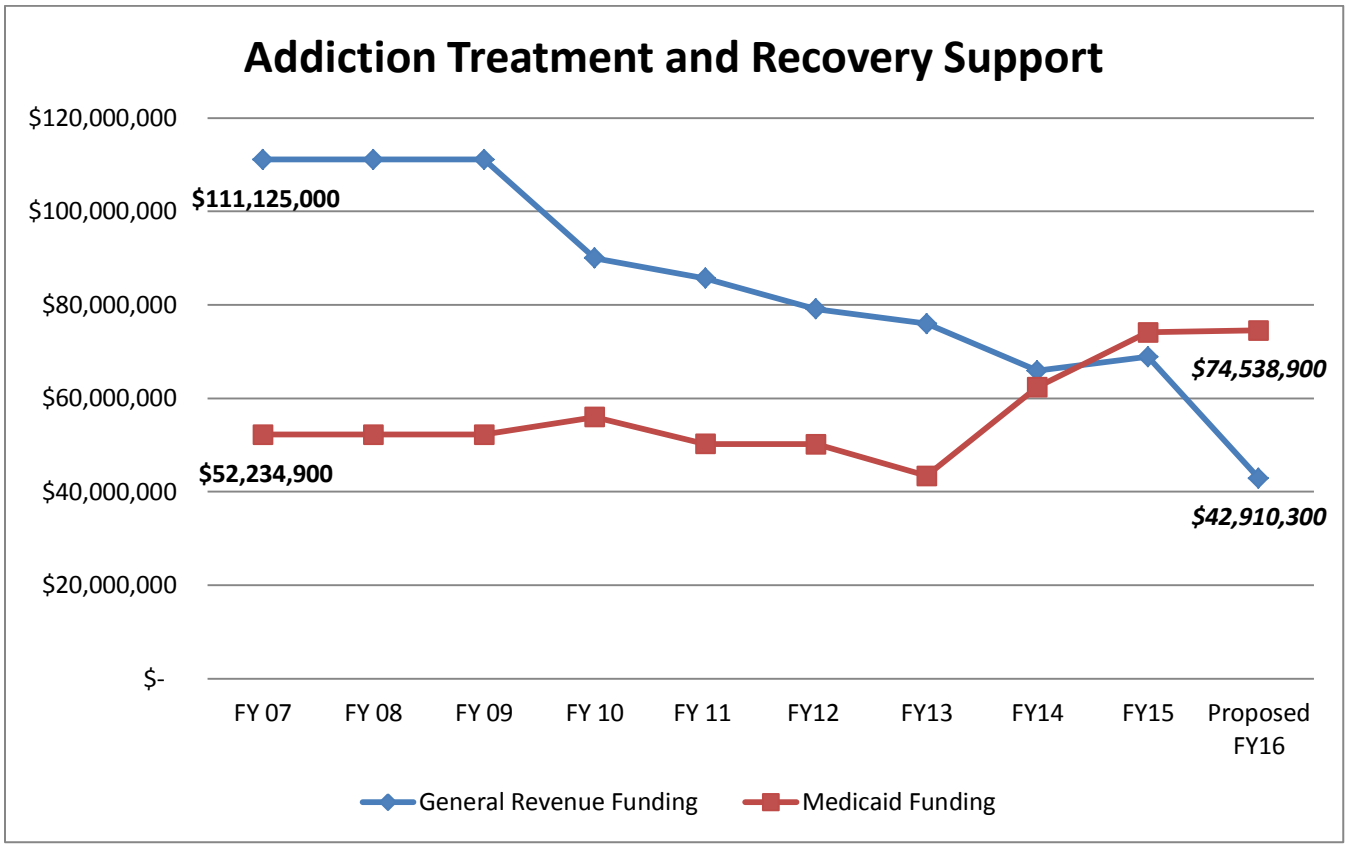


Figure 5: Illinois Treatment Funding by Type (2007- 2016)



THE IMPACT OF DIMINISHED CAPACITY, DECLINING STATE FUNDING AND MEDICAID

According the Centers for Disease Control, expanding access to treatment, especially medication assisted treatment (MAT), like methadone and buprenorphine, is essential to reducing the heroin epidemic.[26] In Illinois, methadone is currently not covered under Medicaid for addiction treatment and Medicaid coverage for buprenorphine treatment is limited to just one year.[27] Currently, the only way for Illinoisans to receive MAT coverage is through state funded programs, which have been cut by more than 50 percent, or to pay out of pocket. This creates a scenario which makes the heroin crisis significantly worse.

Providing Treatment Saves Money and Increases Publicly Safety

Research demonstrates that treatment- overall - for substance use disorder is cost effective and saves money. For every $1 spent on treatment, society as a whole saves $7. Some of these taxpayer savings come from crime reduction benefits, including reductions in: 1) jail and prison time; 2) law enforcement costs; 3) crime victims; and 4) court costs. People in treatment also spend less time in hospitals, emergency rooms, and mental health services, saving taxpayers even more. In this way treatment not only improves the health and quality of life of those who use it, but it also saves money.[28]

MAT, specifically methadone and buprenorphine, save significantly more money than other forms of treatment. Methadone and buprenorphine are only used to treat opiate use disorders, and their effectiveness in lowering both criminal activity and illicit drug use has been well documented across studies conducted in the United States and abroad. The United Nations Office of Drug Use and Crime indicates that each dollar spent on methadone maintenance yields a cost saving in terms of crime reduction between $4 and $7. When health care costs are included, the benefits returned are $12 for each $1 invested.[29]

Currently the time limits on buprenorphine and the lack of methadone coverage under Medicaid have disastrous consequences for Illinoisans. Illinois's lifetime limits of just one year on buprenorphine maintenance are the most restrictive in the nation.[30] Time in treatment does matter, as some of the benefits of MAT are time related. For example, researchers have found an over 70% decline in criminal activities within the first four months of methadone maintenance treatment.[31] Criminality decreased significantly for each year the individual stayed in treatment, stabilizing at year 6. In fact, across all treatment modalities, "time in treatment" is the biggest predictor of good outcomes including abstinence and crime reduction.[32]

Additional Benefits of MAT – HIV and HCV Reductions

Many states are now seeing the incidence of HIV infections rise among those who inject drugs. This is a significant concern, especially among the newer initiates to heroin, who are more likely to inject drugs than older cohorts.[33] Methadone and buprenorphine reduce the incidence of blood-borne pathogen infections by decreasing the frequency of injection and sharing practices.[34] Consistent drug treatment plays a significant role in overall harm reduction practices. Drug use risk reduction is more likely to occur among individuals who remain in drug treatment, but those who discontinue treatment and those who continue to inject while in treatment may also benefit.[35]

The benefits of providing methadone for just 2,500 people could save the State about $82.5-$100 million in reduced crime and health care consequences (including the cost of the treatment). Providing more treatment, especially opioid agonist therapies, could reduce the prison population among class 4 offenders alone by approximately 1,000 cases per year, based on analysis of Cook County arrestee patterns and Illinois' prison release statistics in 2013.[36]

Considering the state's dire fiscal circumstance as well as the Governor's focus on criminal justice reform a heightened focus on substance use treatment and expanded support for MAT would set Illinois on the right track. Substance use treatment (especially MAT) saves Illinois millions of dollars, reduces the incidence of blood-borne pathogens like HIV and HCV, takes a major cut out of Illinois's crime rate, and will reduce the impact that the heroin crisis is having on Illinois's citizens and taxpayers.

POLICY RECOMMENDATIONS

1. Address the strongest risk factor for heroin addiction: Addiction to prescription opioid painkillers.
It is important for families, individuals and doctors to understand that prescription opioid misuse can lead to heroin use.[37] It is essential that those who are caught misusing prescription opioids be directed to medication assisted treatment programs, which work very well for individuals with opioid pill addiction. Cutting these individuals off from the supply of opioids – without a connection to treatment – is a recipe for *increased* heroin use.

2. Increase access to and training for administering naloxone to reduce heroin and other opioid overdose deaths.
Naloxone (Narcan®) is a substance that has been legal for non-medical persons to use in Illinois since 2009, when the Overdose Prevention Act was signed into law. Heroin and opiate overdose deaths are preventable. Thousands of lives have been saved as a direct result of trained laypersons using naloxone on an overdosing person.[38] Research shows that when naloxone is distributed in communities it can reduce overdose deaths in those communities by 50 percent.[39] Naloxone is safe.[40] Naloxone is as nontoxic as water and has no potential for addiction. Naloxone does not have any effect on a person that has not used heroin or other opiates. Naloxone distribution has been endorsed by the American Medical Association, the Substance Abuse and Mental Health Services Administration (SAMHSA), the National Institute on Drug Abuse (NIDA) and many others. Naloxone is also cost effective.[41] It costs between $20-$40 dollars for a full naloxone kit, which includes everything a person would need to reverse an overdose.[42]Money spent distributing naloxone provides tremendous value for every dollar spent. An overdose death by comparison costs taxpayers about $30,000.[43] In Illinois, anyone can be trained to administer naloxone. Family, friends, first responders - all laypeople - can be taught to recognize an overdose and administer naloxone during an overdose emergency. Illinois has a law that allows for laypersons to use this lifesaving drug.

Increasing naloxone access can be achieved in a number of ways:

- Legislation has passed both houses that would allow pharmacists to initiate naloxone prescribing, thus making the drug more available;
- In areas where law enforcement are the first responders to an overdose incident, it is essential that they are trained and have access to this life saving drug;
- Doctors who are prescribing prescription opioid pills should always co-prescribe naloxone;
- Treatment agencies should train their patients in the use of naloxone, and patients should leave treatment with an overdose prevention plan in place and naloxone in hand, since an individual faces the greatest chance of dying from an overdose when he or she loses tolerance to heroin or other opioids. Patients need to understand these risks so that a treatment lapse does not end in death;
- The State of Illinois should invest funding in existing naloxone programs since, as indicated above, naloxone kits are significantly cheaper than an overdose death about $25-$40 and $30,000, respectively.

3. Ensure that all medication assisted treatment (MAT) is covered by Medicaid, without time limits.
MAT, specifically methadone and buprenorphine, save significantly more money than other forms of treatment. Methadone and buprenorphine are only used to treat opiate use disorders, and their effectiveness in lowering both criminal activity and illicit drug use has been well documented across studies conducted in the United States and abroad. The United Nations Office of Drug Use and Crime indicates that each dollar spent on methadone maintenance yields a cost saving in terms of crime reduction between $4 and $7. When health care costs are included, the benefits returned are $12 for each $1 invested[44].

Currently, the time limits on buprenorphine and the lack of methadone coverage under Medicaid have disastrous consequences for Illinoisans. Illinois's lifetime limits of just one year on buprenorphine maintenance are the most restrictive in the nation. Time in treatment does matter, as some of the benefits of MAT are time related. For example, researchers have found an over 70% decline in criminal activities within the first four months of methadone maintenance treatment.[45] Criminality decreased significantly for each year the individual stayed in treatment, stabilizing at year six. In fact, across all treatment modalities, "time in treatment" is the biggest predictor of good outcomes including abstinence and crime reduction.[46]

- Providing methadone for just 2,500 people could save the State of Illinois about $82.5-$100 million in reduced crime and health care consequences (including the cost of the treatment).[47]

4. Ensure that state funded drug courts are following evidence based practices as is required with federally funded drug courts, especially the inclusion of MAT.
In keeping with evidenced based practices, the United States Department of Justice will not fund drug courts that prohibit or deny any participant the use of medication assisted treatment for a substance use disorder, like methadone and buprenorphine.[48] In order for Illinois's drug courts to best serve their participants, the federal model must be applied at the state level. Illinois drug courts seeking state funding should not deny participants access to the program based on their use of medications for opiate and heroin use disorders. This approach ensures that more Illinoisans in need are able to make use of the state's drug court program, and also saves a great deal of money since each dollar invested in methadone saves taxpayers $12 in reduced health care and crime costs.

5. Expand access to MAT in county jails and state prisons and strengthen linkages between correctional facilities and MAT providers.
As has been discussed, medication assisted treatment (MAT) saves Illinois taxpayers millions of dollars, and has been proven effective in treating opioid and heroin use disorders. MAT is especially important in jails and prisons, where it has been linked to decreases in recidivism and drug-related diseases, including blood borne pathogens like HIV and Hepatitis C.[49] Some correctional systems, although not in Illinois, currently supply individuals with buprenorphine, methadone or Vivitrol ® (long acting naltrexone, an opioid antagonist). However, Vivitrol® is not nearly as well-researched as methadone or buprenorphine, since it was only approved by the FDA in 2010.[50] In order for Illinois jails and prisons to get the most out of MAT, they must provide all forms of medications for addiction treatment to incarcerated and/or detained individuals, and link them to MAT services outside of jail or prison. Indeed, research suggests that formerly incarcerated people who continued MAT upon release were, six months later, more likely

to be in treatment and be heroin-free than those who received counseling alone.[51] Expanding access to MAT in jails and prisons and linking prisoners with substance use disorders to MAT outside correctional facilities will reduce Illinois's prison population, reduce recidivism, prevent the spread of drug-related diseases, and save the state millions of dollars in crime and health care costs.

6. Increase the availability of syringes and knowledge of syringe access laws and harm reduction practices in Illinois.

Increases in injection drug use across the state, particularly in areas that have historically not had a large injection drug using population, should be countered by interventions to prevent individuals from contracting blood-borne pathogens and experiencing other health problems associated with injection drug use. The risk of contracting Hepatitis B, Hepatitis C or HIV increases when individuals do not have clean equipment each time they inject a substance.[52] Added to these health risks are other illnesses such as "cotton fever", abscesses and other infections that may occur because of using old, used or improper injection equipment.[53] Individuals that inject substances should be informed of the potential health risks associated with their injection drug use and be given guidelines to help them minimize these risks. Education campaigns, in conjunction with providing sterile injection equipment to individuals, will greatly reduce the health risks of injection drug use.

7. Increase state funded treatment capacity for individuals with heroin or opiate use disorders.

The decrease in state funded treatment is making the heroin crisis worse. Currently, marijuana treatment admissions, referred by the criminal justice system, take up about 15% of total treatment capacity in Illinois.[54] Considering the connections between opioid and heroin use disorders and acquisitive crimes such as theft, the risk of overdose, and the risk of acquiring blood borne pathogens, a large percentage of treatment should be set aside for individuals with opioid and heroin use disorders; treatment capacity through state funded systems should be increased for this population.

8. Improve data collection around heroin and opioid indicators.

There is a lack of integrated data collection in Illinois for heroin and opioid indicators. A system needs to be set up to more accurately capture the number of non-fatal and fatal overdoses. Data collection provides a systematic way of pinpointing areas where heroin and opioid use disorders are increasing. These data can be utilized for the following purposes that would help reduce the opioid crisis in Illinois:

1) Determining the need vs availability of Medication Assisted Treatment (MAT);
2) Increasing access to naloxone in areas which show patterns of non-fatal and fatal overdoses;
3) Increasing syringe distribution and linkage to other services like MAT and naloxone access;
4) Better assessment of whether fatal overdoses are caused by prescription opioids or heroin, since heroin overdoses are generally undercounted.

There is pending legislation that addresses most of these issues including focus on treatment parity, access to treatment, naloxone expansion, improved data collection, and increased heroin and opioid education. The Heroin Crisis Act would address most if not all of these issues, and should be considered as a step forward in curbing the Illinois heroin and opioid epidemic.

APPENDIX A
Treatment Episode Data Set (TEDS) Analysis

Table A.1 Percent of State Funded Treatment Admissions for all Substances in Selected Illinois Metro and Rural Areas (2007 vs 2012)

	Year	Alcohol	Cocaine	Marijuana	Heroin	Meth	All Other Drugs
Bloomington-Normal	**2007**	29%	16%	44%	**5%**	1%	5%
	2012	33%	7%	36%	**11%**	2%	12%
Champaign-Urbana	**2007**	46%	22%	17%	**6%**	2%	7%
	2012	31%	10%	36%	**13%**	3%	8%
Decatur Metro	**2007**	41%	29%	20%	**3%**	3%	3%
	2012	40%	17%	9%	**23%**	2%	10%
Peoria-Pekin	**2007**	48%	17%	19%	**7%**	1%	8%
	2012	39%	9%	23%	**16%**	2%	12%
Rockford Metro	**2007**	33%	15%	24%	**24%**	0%	5%
	2012	29%	9%	28%	**24%**	0%	9%
Metro East	**2007**	32%	25%	30%	**4%**	3%	6%
	2012	27%	10%	32%	**18%**	3%	10%
Springfield Metro	**2007**	38%	27%	21%	**8%**	2%	4%
	2012	28%	9%	39%	**12%**	3%	9%
Rural	**2007**	46%	12%	28%	**3%**	7%	5%
	2012	41%	6%	27%	**7%**	7%	13%

Table A.2 Percent Change in Proportion of State Funded Treatment Admissions for Heroin in Selected Illinois Metro and Rural Areas (2007 – 2012)

	Alcohol	Cocaine	Marijuana	Heroin	Meth	All Other Drugs
Bloomington-Normal	12%	-57%	-18%	**116%**	28%	164%
Champaign-Urbana	-34%	-56%	112%	**115%**	24%	15%
Chicago Metro	7%	-46%	31%	**4%**	41%	84%
Decatur Metro	-3%	-42%	-55%	**560%**	-52%	226%
Peoria-Pekin	-18%	-50%	20%	**119%**	33%	53%
Rockford Metro	-13%	-37%	18%	**3%**	-3%	106%
Metro East	-16%	-62%	9%	**315%**	-8%	63%
Springfield Metro	-26%	-67%	87%	**49%**	40%	114%
Rural	-12%	-53%	-3%	**158%**	0%	179%
State of Illinois	1%	-50%	20%	**7%**	16%	129%

Figure A.1 Total Illinois Rate in Treatment Admissions per 100,000 (2000-2012)

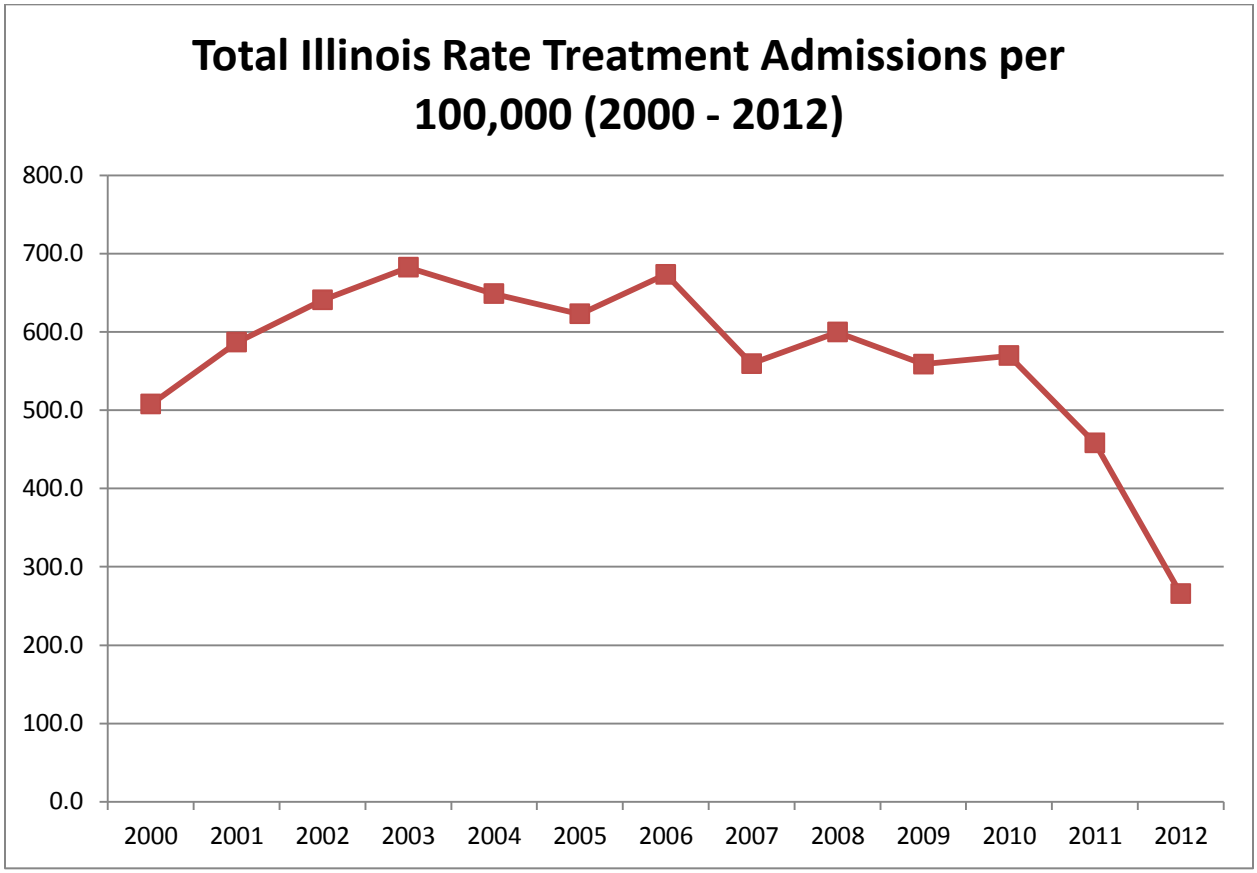


Table A.3 Percent of Total Illinois Treatment Admissions per Substance (2000-2012)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Alcohol	40%	38%	37%	34%	33%	33%	32%	32%	32%	33%	33%	31%	32%
Cocaine	22%	23%	21%	21%	20%	20%	19%	20%	16%	14%	12%	12%	10%
Marijuana	19%	21%	23%	23%	26%	25%	22%	20%	21%	22%	24%	23%	24%
Heroin	**15%**	**15%**	**15%**	**18%**	**16%**	**16%**	**23%**	**24%**	**26%**	**27%**	**25%**	**27%**	**25%**
Meth	1%	1%	2%	2%	3%	3%	2%	2%	1%	1%	1%	2%	2%
All Other	4%	3%	2%	2%	2%	2%	3%	3%	4%	3%	4%	5%	7%
Total n	62,591	72,910	78,953	84,209	80,519	77,471	84,757	71,047	76,431	71,479	72,896	57,770	34,198

Figure A.2 Percent of Total Treatment Admissions per Substance (2000-2012)

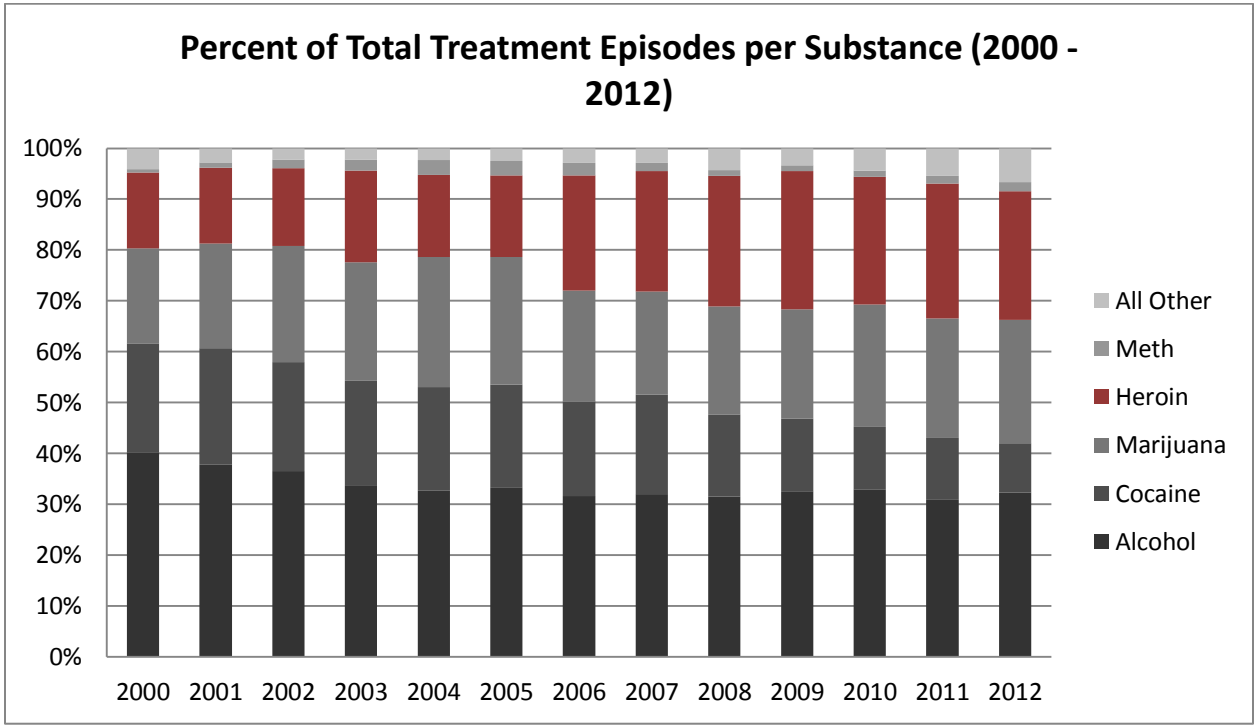


Table A.4 Rank of State Funded Treatment Admissions by Greatest Decline (2007 – 2012)[iii]

Greatest Decline to Greatest Increase (Rank 1-34)		
Rank	**State**	**% Change**
1	**Illinois**	-52%
2	New Mexico	-48%
3	Louisiana	-44%
4	Ohio	-42%
5	Kentucky	-33%
6	South Carolina	-29%
7	Arkansas	-25%
8	Oklahoma	-25%
9	New Hampshire	-25%
10	California	-24%
11	Virginia	-19%
12	Oregon	-18%
13	Michigan	-17%
14	Indiana	-16%
15	Washington	-16%
16	Kansas	-16%
17	Maine	-15%
18	Montana	-14%
19	Texas	-13%
20	Nevada	-13%
21	Delaware	-13%
22	Utah	-12%
23	South Dakota	-12%
24	Hawaii	-10%
25	Maryland	-8%
26	Idaho	-8%
27	Wisconsin	-7%
28	Massachusetts	-7%
29	Missouri	-7%
30	New York	-6%
31	Rhode island	-4%
32	Wyoming	-2%
33	North Dakota	-2%
34	Iowa	1%

Greatest Decline to Greatest Increase Rank 35-46		
Rank	**State**	**% Change**
35	Georgia	1%
36	Arizona	2%
37	Nebraska	2%
38	Minnesota	3%
39	Colorado	3%
40	Vermont	7%
41	Florida	9%
42	New Jersey	19%
43	Tennessee	25%
44	Connecticut	35%
45	Alaska	42%
46	North Carolina	105%
NA	Alabama	NA
NA	Mississippi	NA
NA	Pennsylvania	NA
NA	West Virginia	NA
	US Total	-11%

[iii] States not included in overall ranking include Alabama for not reporting in 2007 and Mississippi, Pennsylvania, and West Virginia for not reporting in 2012.

Table A.5 Highest State Funded Treatment Admissions, by Rate per 100,000 in the US (2007)[iv]

Ranked from highest to lowest (1-36)		
Rank	**State**	**Rate Per 100k**
1	South Dakota	1,981.1
2	Colorado	1,633.1
3	New York	1,599.2
4	Massachusetts	1,417.1
5	Oregon	1,406.4
6	Vermont	1,309.9
7	Connecticut	1,277.9
8	Maine	1,213.6
9	Maryland	1,200
10	Rhode Island	1,074.7
11	Montana	1,010.7
12	Delaware	974.1
13	Minnesota	953.1
14	Nebraska	930.3
15	Wyoming	920
16	Iowa	901.2
17	Ohio	884.3
18	Missouri	803.9
19	New Jersey	696.2
20	Michigan	664.6
21	New Mexico	607.5
22	South Carolina	597.3
23	Washington	588.6
24	Alaska	580.6
25	Louisiana	569
26	Kentucky	567.6
27	California	555.6
28	**Illinois**	**552.9**
29	Hawaii	543
30	Kansas	541.5
31	Utah	538.7
32	Wisconsin	532.3
33	Arkansas	529.5
34	Indiana	457.4

Ranked from highest to lowest (37-46)		
Rank	**State**	**Rate Per 100k**
37	New Hampshire	429.1
38	Idaho	415.7
39	Virginia	408.3
40	Nevada	383.8
41	North Dakota	378.8
42	Arizona	333.8
43	Florida	288.5
44	North Carolina	257.6
45	Texas	186.5
46	Tennessee	167.2
NA	Alabama	Missing
NA	Mississippi	Missing
NA	Pennsylvania	Missing
NA	West Virginia	Missing
	US TOTAL	668.6

[iv] States not included in overall ranking include Alabama for not reporting in 2007 and Mississippi, Pennsylvania, and West Virginia for not reporting in 2012.

Table A.6 Highest State Funded Treatment Admissions, by Rate per 100,000 in the US (2012)[v]

Ranked from highest to lowest (1-36)		
Rank	**State**	**Rate Per 100k**
1	South Dakota	1,741.9
2	Connecticut	1,726.6
3	Colorado	1,688.6
4	New York	1,503.6
5	Vermont	1,402.9
6	Massachusetts	1,320.3
7	Oregon	1,152.7
8	Maryland	1,101.4
9	Maine	1,037.2
10	Rhode island	1,026.4
11	Minnesota	982.1
12	Nebraska	949.1
13	Iowa	907.9
14	Wyoming	898.1
15	Montana	874.2
16	Delaware	850.6
17	New Jersey	829.4
18	Alaska	822.6
19	Missouri	749.0
20	Michigan	553.0
21	North Carolina	528.9
22	Ohio	515.7
23	Washington	496.8
24	Wisconsin	495.7
25	Hawaii	490.0
26	Utah	473.1
27	Kansas	457.4
28	Georgia	449.2
29	California	424.4
30	South Carolina	421.9
31	Arkansas	395.9
32	Idaho	384.3
33	Indiana	382.8
34	Kentucky	378.2
35	North Dakota	370.3
36	Oklahoma	341.5

Ranked from highest to lowest (37-46)		
Rank	**State**	**Rate Per 100k**
37	Arizona	340.3
38	Nevada	334.8
39	Virginia	328.8
40	New Hampshire	323.2
41	Louisiana	315.9
42	New Mexico	315.6
43	Florida	315.4
44	**Illinois**	**265.6**
45	Tennessee	209.5
46	Texas	161.6
NA	Alabama	Missing
NA	Mississippi	Missing
NA	Pennsylvania	Missing
NA	West Virginia	Missing
	US Total	595.3

[v] States not included in overall ranking include Alabama for not reporting in 2007 and Mississippi, Pennsylvania, and West Virginia for not reporting in 2012.

APPENDIX B
Arrestee Drug Abuse Monitoring Program (ADAM) Analysis

Table B.1 Percent of Adult Male Arrestees Testing Positive for Opiates (including heroin) in Urine Tests by City (2011)

Rank	City	Percent
1	**Chicago Metro**	**18.6%**
2	Portland Metro	14.4%
3	Washington DC Metro	11.3%
4	Indianapolis Metro	10.3%
5	Denver Metro	10.1%
6	Sacramento Metro	9.6%
7	New York Metro	8.1%
8	Minneapolis Metro	7.7%
9	Atlanta Metro	6.6%
10	Charlotte Metro	1.8%

Table B.2 Average Number of Days of Self-Reported Use of Heroin among Adult Male Arrestees in the past 30 days (2011)

Rank	City	Days
1	**Chicago Metro**	**26.8**
2	Sacramento Metro	23.2
3	Charlotte Metro	20.4
4	Minneapolis Metro	20.4
5	Washington DC Metro	20.1
6	Portland Metro	17.8
7	Atlanta Metro	17.2
8	New York Metro	16.6
9	Denver Metro	16.4
10	Indianapolis Metro	15.2

Table B.3 Average Number of Days of Self-Reported Use of Heroin among Adult Male Arrestees in the past 3 days (2011)

Rank	City	Percent
1	**Chicago Metro**	**15.7%**
2	Portland Metro	13.7%
3	Sacramento Metro	5.5%
4	Washington DC Metro	5.4%
5	Denver Metro	4.2%
6	Indianapolis Metro	3.6%
7	New York Metro	3.1%
8	Minneapolis Metro	2.7%
9	Atlanta Metro	1.4%
10	Charlotte Metro	0.4%

APPENDIX C
Drug Abuse Warning Network (DAWN) Analysis

Table C.1 Total Emergency Department Mentions for Heroin, by City (2011)

Rank	Metro Area	Mentions
1	**Chicago Metro**	**24,627**
2	Boston Metro	14,057
3	New York Metro	12,015
4	Detroit Metro	6,643
5	Seattle Metro	6,208
6	Phoenix Metro	4,092
8	Minneapolis Metro	3,493
7	Denver Metro	1,894
9	San Francisco Metro	731

Table C.2 Total Emergency Department Mentions for Heroin, by City by Rate per 100,000 (2011)

Rank	Metro Area	Rate (100k)
1	Boston Metro	306.2
2	**Chicago Metro**	**259.1**
3	Seattle Metro	177.4
4	Detroit Metro	155.0
5	New York Metro	145.7
6	Minneapolis Metro	105.3
8	Denver Metro	72.9
7	Phoenix Metro	96.0
9	San Francisco Metro	40.7

Table C.3 Total African American Emergency Department Mentions for Heroin, by City (2011)

Rank	Metro Area	Mentions
1	**Chicago Metro**	**13,178**
2	New York Metro	3,462
3	Detroit Metro	2,311
4	Boston Metro	958
5	Seattle Metro	386
6	Minneapolis Metro	329
7	San Francisco Metro	125
8	Denver Metro	84
NA	Phoenix Metro	No Data

Table C.4 Total White Emergency Department Mentions for Heroin, by City (2011)

Rank	Metro Area	Mentions
1	Boston Metro	10,045
2	**Chicago Metro**	**7,024**
3	Seattle Metro	4,716
4	Detroit Metro	3,709
5	Phoenix Metro	3,207
6	New York Metro	2,652
7	Minneapolis Metro	1,575
8	Denver Metro	1,166
9	San Francisco Metro	490

Table C.5 Total Male Emergency Department Mentions for Heroin, by City (2011)

Rank	Metro Area	Mentions
1	**Chicago Metro**	**16,886**
2	New York Metro	9,723
3	Boston Metro	9,474
4	Detroit Metro	4,057
5	Seattle Metro	3,892
6	Phoenix Metro	2,820
7	Minneapolis Metro	2,425
8	Denver Metro	1,273
9	San Francisco Metro	474

Table C.6 Total Male Emergency Department Mentions for Heroin, by City and by Rate per 100,000 (2011)

Rank	Metro Area	Rate (100k)
1	Boston Metro	426.0
2	**Chicago Metro**	**363.4**
3	New York Metro	247.7
4	Seattle Metro	222.9
5	Detroit Metro	195.2
6	Minneapolis Metro	147.9
7	Phoenix Metro	132.9
8	Denver Metro	98.4
9	San Francisco Metro	52.9

Table C.7 Total Female Emergency Department Mentions for Heroin, by City (2011)

Rank	Metro Area	Mentions
1	**Chicago Metro**	**7,731**
2	Boston Metro	4,582
3	Detroit Metro	2,586
4	Seattle Metro	2,316
5	New York Metro	2,285
6	Phoenix Metro	1,272
7	Minneapolis Metro	1,068
8	Denver Metro	621
9	San Francisco Metro	257

Table C.8 Total Female Emergency Department Mentions for Heroin, by City and by Rate per 100,000 (2011)

Rank	Metro Area	Rate (100k)
1	Boston Metro	193.6
2	**Chicago Metro**	**159.2**
3	Seattle Metro	132.1
4	Detroit Metro	117.1
5	Minneapolis Metro	63.6
6	Phoenix Metro	59.4
7	New York Metro	52.9
8	Denver Metro	47.5
9	San Francisco Metro	28.6

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