

REENTRY:

New Jersey Opioid

Addiction Report: A Modern Plague

"For the moment I know this: there are sick people and they need curing."

-Albert Camus, The Plague

3,000 will die this year

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REENTRY: New Jersey Opioid Addiction Report: A Modern Plague

Introduction

The opioid epidemic has become the defining public health crisis of our time. New Jersey witnessed **9,512 drug overdose fatalities** from January 2014 to June 2018,¹ and the number of overdose deaths is projected to exceed 3,000 in 2018 alone.² The overwhelming majority of fatalities are now opioid-related.³ Annual overdose deaths in New Jersey due to the unwavering rise of opioid prevalence in the state are **nearly five times those both from car crashes⁴ and from firearms⁵ respectively.**

The state has consequently seen

rising costs associated with drug use, disorders, and overdoses. In the past year, nearly **90 percent** of addiction treatment costs expended were utilized by individuals who had already received some treatment but for whom initial treatment was ineffective.⁶ Additionally, the state is losing an estimated **\$1.2 billion** in productivity costs every year⁷ as a result of the inability of individuals to contribute to the workforce who have died⁸ from addiction, or who are in halfway houses,⁹ treatment programs,¹⁰ hospitals,¹¹ and prisons¹² due to addiction. Over **\$145 million** is spent every year on incarceration costs for those who are in prison as a result of primarily drug-related

crimes,¹³ and **\$635 million** per year on inpatient and emergency department overdose visits¹⁴ alone.

The opioid epidemic was declared a national public health emergency in 2017,¹⁵ with **over 200,000 deaths in the last two decades** caused by prescription opioid addiction.¹⁶ In 2016, total overdose deaths in the United States exceeded 64,000.¹⁷ The number has since risen to over 70,000 with an opioid overdose death now occurring less than every **11 minutes:**¹⁸ a rate that exceeds that of the HIV/AIDS epidemic at its peak.¹⁹ The President's Commission on Combating Drug Addiction and the Opioid Crisis developed

1 Extrapolated from data gathered by NJCares: NJ Office of the Attorney General, Department of Law & Public Safety, 2014-2018.

2 Ibid.

3 NJCares, 2014-2018.

4 New Jersey State Police (NJSP). "Fatal Accident Statistics." NJSP, State of New Jersey Department of Law and Public Safety, Office of the Attorney General. 2018.

5 National Center for Health Statistics. "Stats of the State of New Jersey." Centers for Disease Control and Prevention (CDC). 2016.

6 New Jersey Substance Abuse Monitoring System (NJSAMS) Admissions Records

7 Daily value was taken as the average cost per lost day based on a \$50,000/year salary for 52 5-day weeks per year, and equalled total daily value per person of \$192.31. Total daily value was then multiplied by average length of stay per year in each facility: halfway house, long-term residential treatment, short-term residential treatment, detox-free standing residential, death, hospitalization, and incarceration. This is assuming average income and average length of stay per year for every individual.

8 NJCares, 2018.

9 NJSAMS, Admission Records

10 Ibid.

11 Ibid.

Number of visits generated from Healthcare Costs and Utilization Project: New Jersey Opioid-Related Hospital Use Rate of ED visits per 100,000 Population and the relative population size

12 Department of Corrections Offender Statistics Report 2018

13 Cost of incarceration for one individual calculated through extrapolation from FY 2018 Department of Corrections budget 2017 Adjusted Appropriations, and the number of inmates reported in the Department of Corrections Offender Statistics Report 2017.

Number of individuals incarcerated for drug-related offenses taken from Department of Corrections Offender Statistics 2018.

14 Costs per visit taken from: Electricwala, B., "Prevalence, Incremental Cost, and Resource Utilization Associated with Opioid overdoses." Virginia Commonwealth University.

15 Kounag, N. "Opioids Now Kill More People than Breast Cancer." CNN. 21 December 2017.

16 Seth, P. "Overdose Deaths Involving Opioids, Cocaine, and Psychostimulants—United States." Centers for Disease Control and Prevention. 2015-2016.

17 Ahmad FB, Rossen LM, Spencer MR, Warner M, Sutton P. Provisional drug overdose death counts. National Center for Health Statistics. 2018. Available at: <https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm>

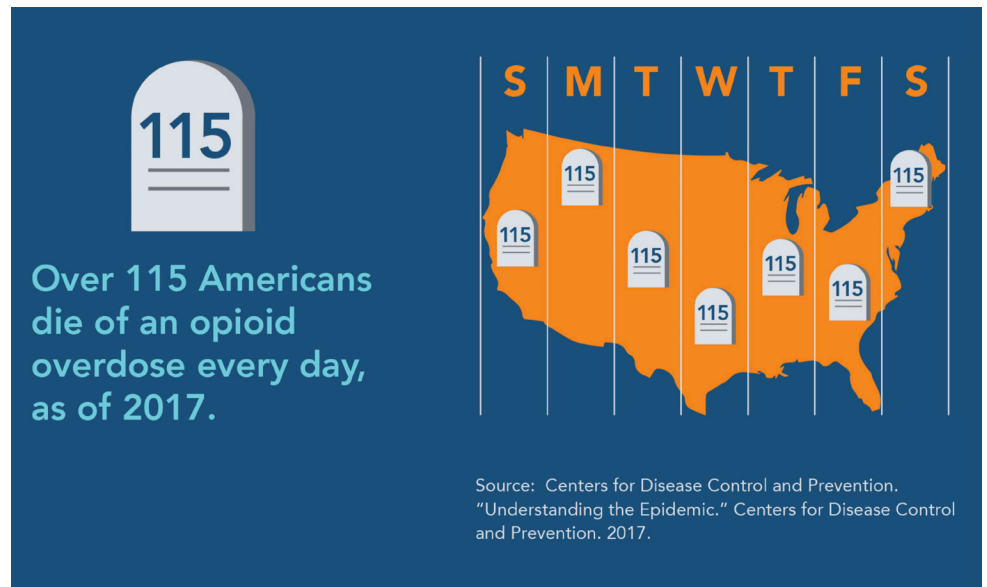
18 Lopez G. "In one year, drug overdoses killed more Americans than the entire Vietnam War did." Vox News. 8 June 2017.

19 Ibid

a detailed blue print for a robust national response to the crisis.²⁰ Its recommendations, however, have gone largely unimplemented.

In the absence of federal action, several states have taken the lead in responding to the epidemic. A number of such states have been successful and now represent the leading edge of efforts to combat the crisis. Yet as these other states have seen marked improvement in treatment and survival rates in recent years, New Jersey's death toll continues to rise and outpace the national average.²¹ Given the high correlation between addiction and justice system involvement, rising opioid usage has particularly impacted New Jersey Reentry Corporation (NJRC), where a disproportionate number of clients suffer from a substance use disorder and most commonly opioid use disorder (SUD).

This report aims to address the state's opioid crisis by answering three interrelated questions regarding addiction: **Where are we now? Where do we go from here? How do we get there?** The report opens by reviewing the state of the opioid crisis in New Jersey – its scale, scope, drivers, and costs – and, in turn, the existing infrastructure to combat the crisis in the state. It then identifies best practices based on national models and case studies of responses by states that have made significant headway against the opioid crisis. Based on these insights, the report then proposes an evidence-based model to implement proven best



practices in the state.

The fierce urgency with which these three questions must be answered and acted upon cannot be understated. While evidence and models from other states are nationally recognized as effective, New Jersey is actively backsliding, unnecessarily losing lives and resources to the unwavering crisis. The implementation of the recommendations here outlined will improve productivity, strengthen communities and local economies, dramatically reduce state spending, and, most importantly, save thousands of lives.

The Opioid Crisis in New Jersey

Scale and Scope

The national rate of opioid-related overdose death has sharply increased over the last decade—over 115 Americans die of an opioid overdose every day as of 2017.²²

Prescription opioid overdoses are now the leading cause of accidental death,²³ the rate of heroin-related deaths has nearly tripled since 2010,²⁴ and the rate of fentanyl-related deaths has risen even more sharply in recent years. These deaths, however, represent a small – albeit devastating – subset of those caught in the grips of the opioid epidemic. Based on estimates by Substance Abuse and Mental Health Services Administration (SAMHSA), **over 2.1 million Americans currently suffer from opioid use disorder (OUD)**²⁵.

Notably, the national crisis seems to be gradually slowing. The number of overdose deaths was reported to be declining in 2018 for the first time since 2011. According to provisional data from the Centers for Disease Control and Prevention, total estimated drug overdose deaths peaked at approximately 73,000 for a 12-month period ending in September 2017.²⁶ This national decrease in death count

²⁰ The President's Commission on Combating Drug Addiction and the Opioid Crisis. 2017. Available at: https://www.whitehouse.gov/sites/whitehouse.gov/files/images/Final_Report_Draft_11-1-2017.pdf

²¹ NJCares, 2014

²² Centers for Disease Control and Prevention. "Understanding the Epidemic." Centers for Disease Control and Prevention. 2017.

²³ Governor's Council on Alcoholism and Drug Abuse (GCADA). "Confronting New Jersey's New Drug Problem: A Strategic Action Plan to Address a Burgeoning Heroin/Opiate Epidemic Among Adolescents and Young Adults." Governor's Council on Alcoholism and Drug Abuse. 2014.

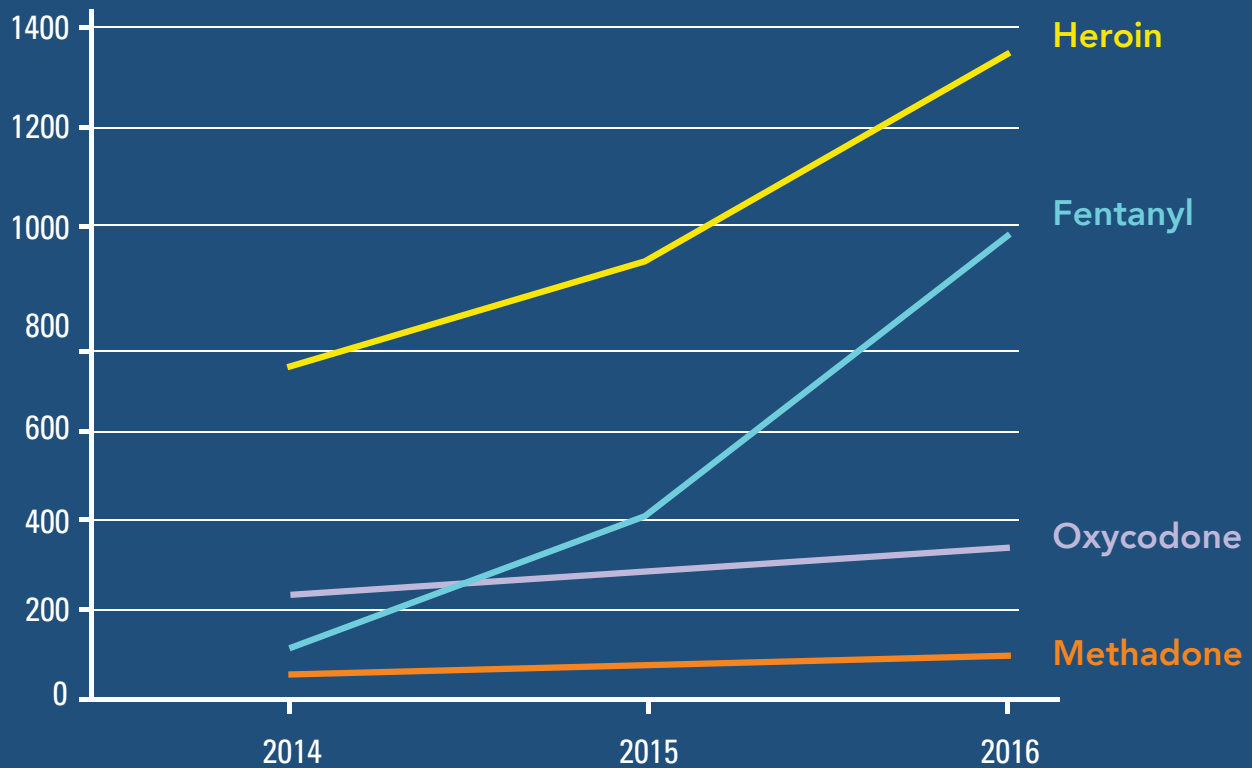
²⁴ Ibid.

²⁵ McCance-Katz, E. "An Update on the Opioid Crisis." SAMHSA/HHS. 2018.

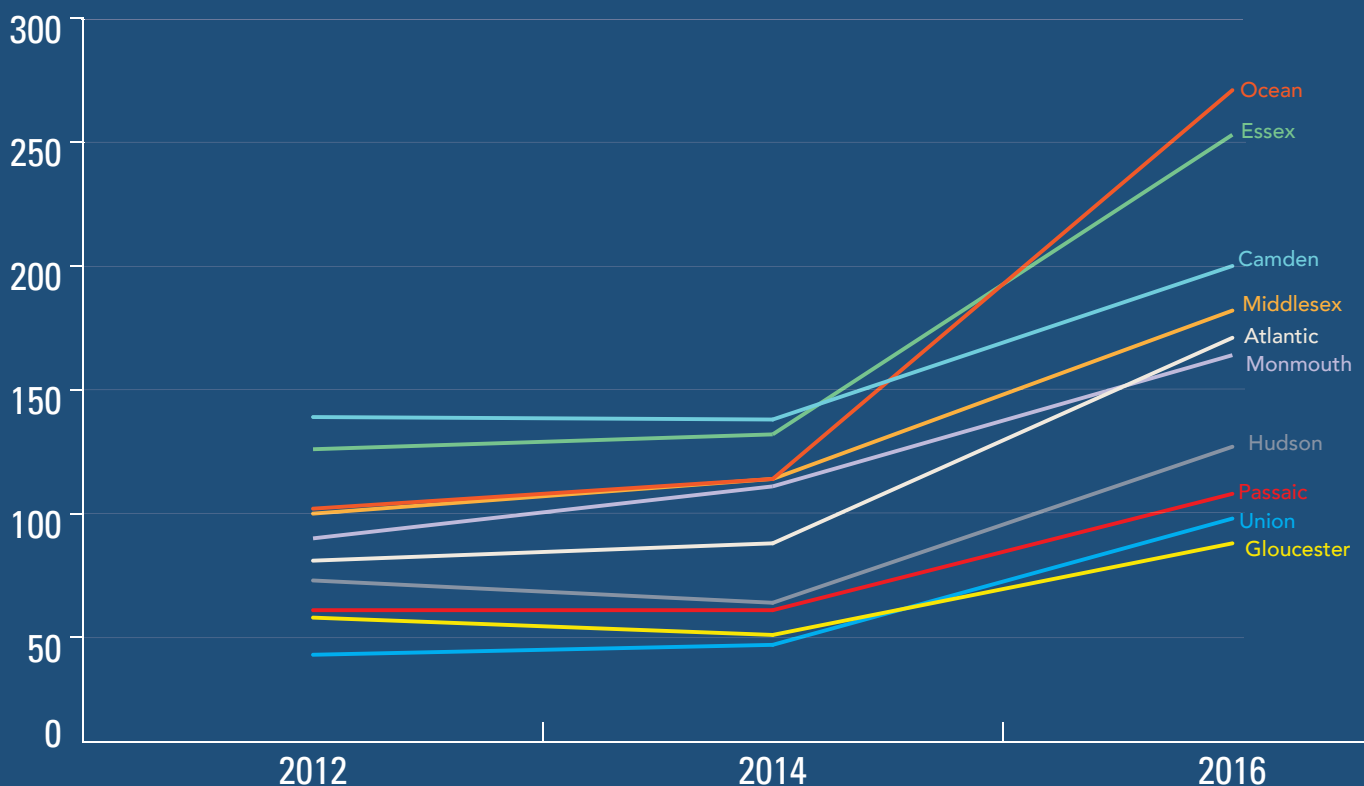
²⁶ Serrano, K. "NJ drug deaths continue to soar as national numbers decline." Asbury Park Press. 14 June 2018.

Centers for Disease Control and Prevention (CDC). "Vital Statistics Rapid Release: Provisional Drug Overdose Death Counts." National Center for Health Statistics. CDC. 2018.

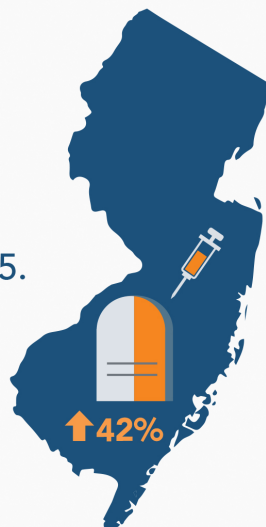
Total Opioid Overdose Deaths by Cause in New Jersey, 2014 to 2016



New Jersey: Total Number of Drug Overdose Deaths



New Jersey saw 2,221 total **overdose deaths** in 2016—an **increase of 42 percent** from 2015.



Source: AmeriHealth New Jersey: "Confronting the Opioid Epidemic." AmeriHealth, New Jersey. 2018. amfAR: "Opioid and Health Indicators Database." amfAR. 2018.

is largely due to the success of innovative states such as Vermont, Massachusetts, and Rhode Island.

No such plateau is in sight in New Jersey, however, which saw 2,221 total overdose deaths in 2016²⁷ — an **increase of 42 percent** from 2015,²⁸ and comprising over 3 percent of total opioid related deaths nationally that year.²⁹ This trend has continued since, with an estimated 2,838 deaths in 2017, and **3,000 deaths projected for 2018**.³⁰ Provisional data from the CDC reports that New Jersey had the highest annual percentage increase in overdose deaths in the nation as of November 2017;³¹ and from January 2017 to January 2018, annual counts of overdose deaths increased by a projected 21.1 percent, compared to an overall national increase of only 6.6 percent.³²

An analysis of data from the state medical examiner provides three additional insights into the scale and scope of the crisis in New Jersey. First, it reveals clear geographic clusters of opioid

overdose deaths. In terms of number of lives lost, Ocean County appears to be the epicenter of the opioid epidemic in New Jersey with **375 opioid overdose deaths in 2016**. This cluster extends into nearby Middlesex and Monmouth Counties with 268 and 227 opioid overdose deaths in 2016, respectively. Camden and Essex Counties have also been hit hard by the crisis with 296 and 280 opioids deaths in 2016, respectively.

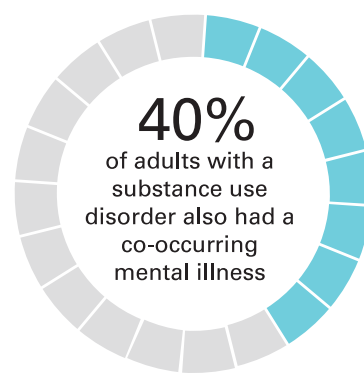
Second, when the number of opioid overdose deaths is expressed per 100,000 residents, it appears that the epidemic has an outsized impact in several of the less densely populated counties of South Jersey. Examining opioid overdose deaths through this lens shifts the geographic center of the opioid crisis south to Atlantic County, with **75 opioid overdose deaths per 100,000 residents** in 2016 followed by Ocean, Camden, Gloucester, and Cumberland Counties with 65, 55, 43, and 41 opioid overdose deaths per 100,000 residents, respectively.

Third, opioid overdose deaths are increasingly driven by heroin, fentanyl, and fentanyl analogs. The epicenters of Ocean and Atlantic Counties have been bellwethers in this regard, with **opioid overdose deaths from heroin rising two-fold, from fentanyl rising eight-fold**, and from prescription opioids such as oxycodone nominally increasing. This pattern is also reflected in statewide opioid deaths, though not nearly as early or as dramatically as seen in Ocean and Atlantic Counties. Such trends suggest that the crisis has entered a newer and deadlier phase in which deaths are driven by synthetic opioids as opposed to prescription drugs.

Population Affected

The opioid epidemic has spread across all demographics both at the national level and in New Jersey. The director of the Centers for Disease Control and Prevention reports that heroin usage is expanding rapidly across all demographic groups, including many groups traditionally less affected by addiction.³³

Nevertheless, there are a number of psycho-social, medical, and personal factors which shape the profile of individuals with a SUD, and which identify additional



27 NJCares, 2018.

28 AmeriHealth New Jersey: "Confronting the Opioid Epidemic." AmeriHealth, New Jersey. 2018. amfAR: "Opioid and Health Indicators Database." amfAR. 2018.

29 amfAR: "Opioid and Health Indicators Database." amfAR. 2018.

30 NJCares, 2018.

31 Serrano, 2018.

32 CDC, 2018.

33 Stirling, S. "N.J. Heroin Overdose Death Rate is Triple the Soaring U.S. Rate." NJ.com. 2015.

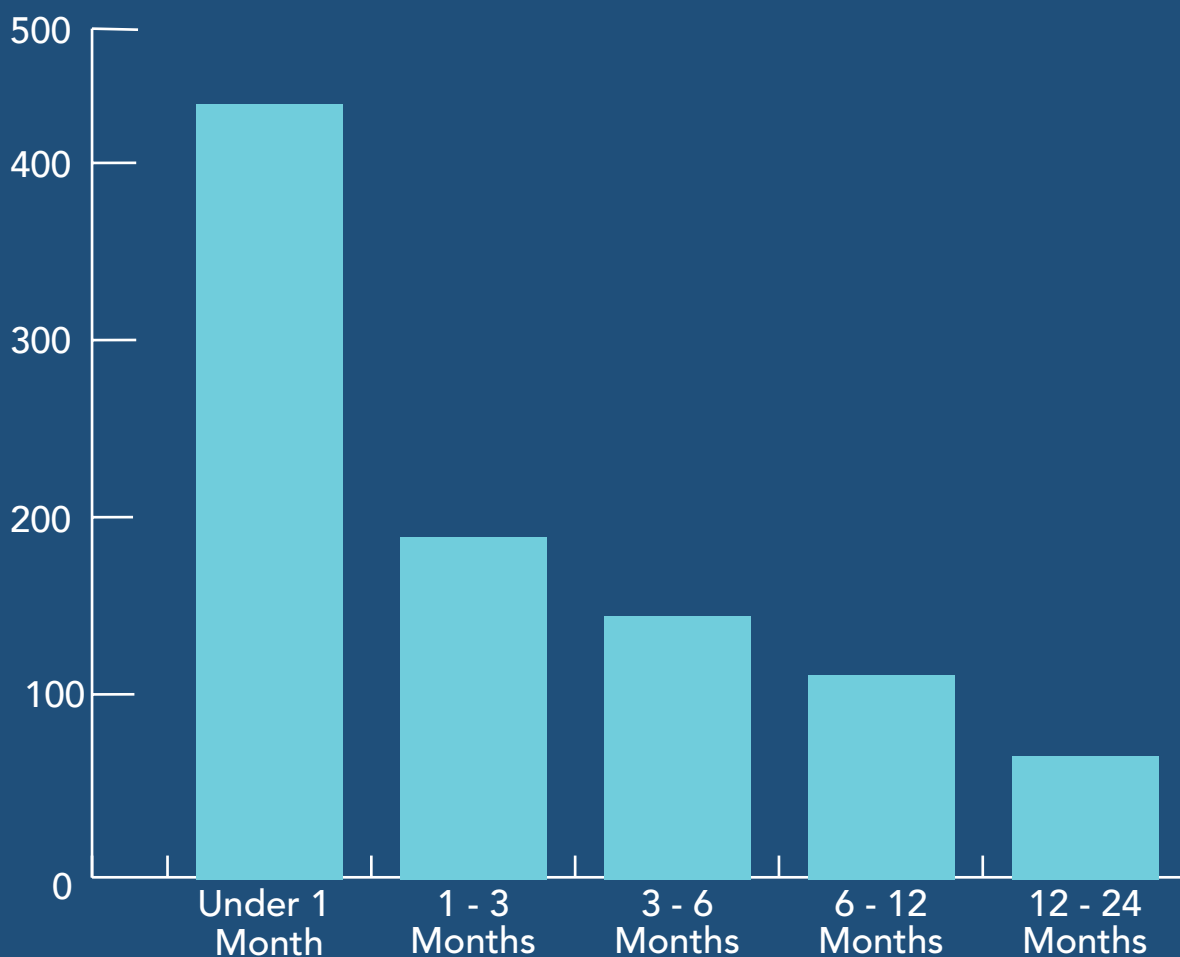
barriers to treatment and recovery. First, many addicted individuals suffer from co-occurring disorders of some kind. Mental health issues are particularly prevalent among the addicted population. A recent SAMHSA study reported that **40 percent** of adults with a substance use disorder also had a co-occurring mental illness,³⁴

a correlation confirmed by numerous other studies.³⁵ Co-occurring physical illnesses are also found at significantly higher rates in the addicted population, as individuals with a substance use disorder exhibit a range of diseases,³⁶ from obesity and diabetes to hepatitis C and other infectious diseases (largely through

injection transmission³⁷), at much higher rates than in the general population.³⁸

Additionally, the burden of opioid use disorder and its co-occurring conditions is particularly acute among the justice-involved population. Approximately **70 percent** of the incarcerated

Opioid Deaths Among Those Released from a State Correctional Facility, by Time Since Release (2013-2014)



³⁴ Hedden, S., Kennet, J., Lipari, R., Medley, G., Tice, P., Copello, E., & Kroutil, L. "Behavioral Health Trends in the United States: Results from the 2014 National Survey on Drug Use and Health." Substance Abuse and Mental Health Services Administration. September 2015.

³⁵ McGovern, M., Xie, H., Segal, S., Siembab, L., & Drake, R. "Addiction treatment services and co-occurring disorders: Prevalence estimates, treatment practices, and barriers." Journal of Substance Abuse Treatment. Vol. 31, Issue 3. October 2006.

Kessler, R., Nelson, C., McGonagle, K., Edlund, M., Frank, R., & Leaf, P., "The Epidemiology of Co-occurring Addictive and Mental Disorders: Implications for Prevention and Service Utilization." American Journal of Orthopsychiatry. Vol. 66, Issue 1. 1996.

³⁶ Walters, V. & Fulman, A. "Whitepaper 1: Models of Integrated Patient Care through OTPs and DATA 2000 Practices." Section 3: "Integration of Health Homes in Maryland OTPs." American Association for the Treatment of Opioid Dependence, Inc. 2016.

³⁷ National Institute on Drug Abuse. "Effective Treatment for Opioid Addiction." National Institute on Drug Abuse. November 2016.

³⁸ Foundations Recovery Network. "Co-occurring Disease Rates in Addicts."

population is addicted,³⁹ and at least **25 percent** is addicted to opioids.⁴⁰ Rates for co-occurring mental health and physical conditions appear significantly higher among the incarcerated population, even before factoring in the added disparity of addiction.⁴¹ Incarceration typically compounds the dangers of opioid use disorder. **Fewer than 30** out of the over 5,100 prisons and jails in the United States currently provide medication-assisted treatment (MAT) which is now considered the standard of care for effective opioid treatment.⁴² Risk for relapse typically skyrockets for recently incarcerated individuals due to their lowered tolerance and lack of access to medication.

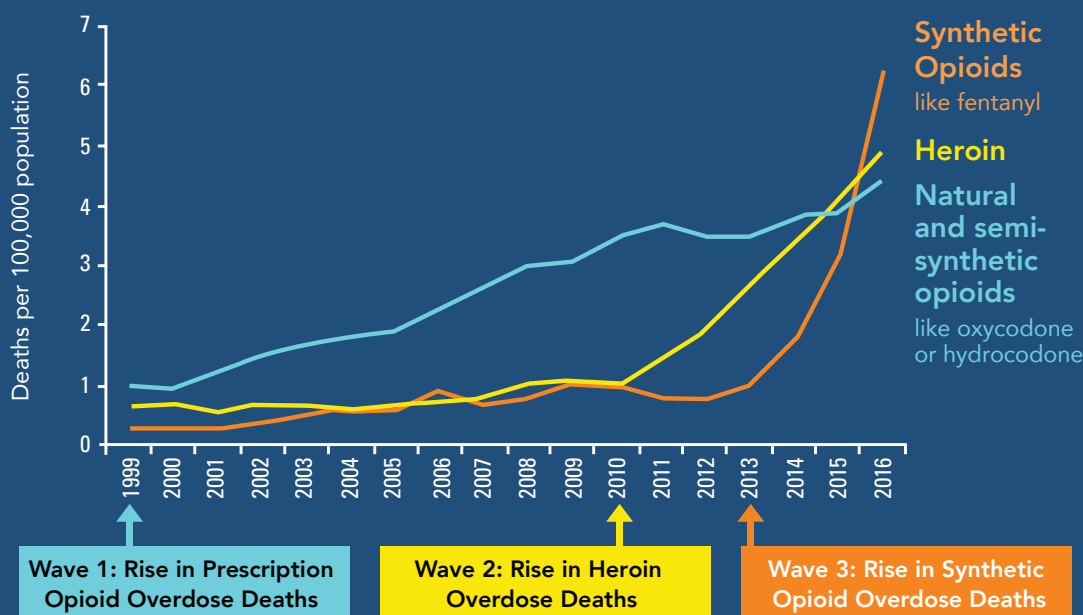
Nearly **75 percent of those with opioid use disorder relapse within three months** of release and fewer than 10 percent enter treatment post-release.⁴³

There is a significant discrepancy in treatment access and continuity across demographics groups. Hispanics and African American users experience greater levels of negative consequences of drug use than their white counterparts. Disproportionately experienced consequences may range from health disparities (such as higher incidences of HIV/Aids and Hepatitis C) to social consequences (such as higher rates of incarceration and sentencing).⁴⁴ Racial disparities

in treatment range from initial access to the type of treatment accessed to the continuity of care available— such discrepancy can be attributed to a number of factors including language barriers and access to healthcare in traditionally disadvantaged populations.⁴⁵ In New Jersey, the ratio of African Americans to Whites in prison is more than twice the national average at **12.2 to 1**; the ratio of Hispanics to Whites is 2.2 to 1.⁴⁶

The end result of the lack of treatment in prison is as predictable as it is devastating. Upon release, **the risk of overdose death for the previously incarcerated is approximately 130 times greater**

3 Waves of the Rise in Opioid Overdose Deaths



39 GCADA, 2014.

40 Rich, J. & Satel, S. "Access to Maintenance Medications for Opioid Addiction is Expanding." *Slate*. 8 May 2018.

41 Maruschak, L.M., Berzofsky, M., & Unangst, J., "Medical Problems of State and Federal Prisoners and Jail Inmates, 2011-12. U.S. Department of Justice Office of Justice Programs, Bureau of Justice Statistics. 2015.

42 Williams, T. "Opioid user are filling jails: why don't we treat them?" *The New York Times*. 4 August 2017.

43 State of New Jersey Department of Corrections. "Medication Assisted Treatment for Substance Use Disorder in the New Jersey County Jails." NJDOC. 2017.

44 Lundgren, L., & Krull, I. "The Affordable Care Act: New Opportunities for Social Work to Take Leadership in Behavioral Health and Addiction Treatment." *Journal of the Society for Social Work and Research*. Vol. 5 Issue 4 pg 317. December 2014.

45 Bebinger, M. "Opioid Overdoses are Rising Faster Among Latinos than Whites or Blacks. Why?" *Kaiser Health News*. 17 May 2018.

46 Nellis, A., *The Color of Justice: Racial and Ethnic Disparity in State Prisons*. The Sentencing Project. 2016.

than that of the general population; many reentry clients die within weeks of re-joining the community.⁴⁷ As highly-potent synthetic opioids such as fentanyl increasingly penetrate the heroin supply, the risk will likely climb further. Coupled with the social obstacles – such as food insecurity, housing instability, legal challenges, poverty, and unemployment – faced by the justice-involved population, reentry clients with opioid use disorder represent some of the most socially and medically complex patients in our communities. Their stories bring the full scale, scope, and malice of the opioid epidemic in New Jersey into stark relief.

Drivers of the Crisis

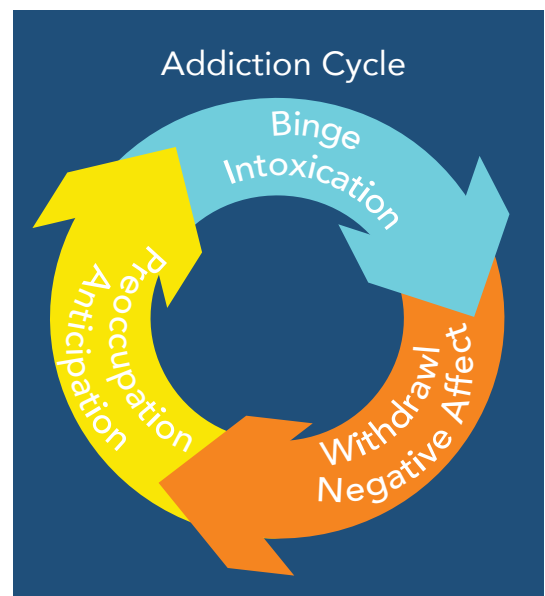
In recent decades, there have been two clear shifts in the drivers of the opioid crisis: from prescription painkillers to heroin, and from heroin to synthetic opioids such as fentanyl. An understanding of the nature and extent of these shifts is an essential step in reversing the epidemic.

According to the National Governors Association, **legal sales of prescription opioid painkillers nearly quadrupled** from 1999 to 2014, despite the relatively unchanged amount of pain reported by Americans;⁴⁸ and in 2012 alone, health care providers wrote enough opioid prescriptions – for drugs such as oxycontin, percocet, percodan, and vicodin– for every American adult to have a bottle of pills.⁴⁹ These drugs ultimately proved highly addictive; and their increasing prescription contributed

to the ready availability of opioids on the black market,⁵⁰ providing prolonged access to individuals who become addicted while on a prescription. In the US prescription opioids now account for more overdose deaths than heroin and cocaine combined.⁵¹ Further, prescription opioids act as gateway drugs to heroin and other illicit opioids. In 2016, the American Society of Addiction Medicine (ASAM) estimated that “four in five new heroin users started out misusing prescription painkillers.”⁵² Similar studies have reported that three out of four people who used heroin in the past year misused prescription opioids first, and seven out of ten people who used heroin in the past year also misused prescription opioids within the same year.⁵³

In the 2010s, annual overdose deaths from prescription painkillers were supplanted by those from heroin. The reasons for this shift are complex but may partly reflect the observation that, for an individual who is dependent on opioids and struggling to stave off withdrawal, it is often easier and cheaper to obtain heroin than it is to obtain prescription painkillers. Making matters worse locally, New Jersey has some of the **least expensive, highest purity street heroin in the nation.**⁵⁴

In recent years, a second shift has taken place due to the introduction of synthetic opioids such as fentanyl into the heroin supply. Fentanyl is **fifty times more potent than heroin,**⁵⁵



and is often mixed into heroin and other drugs by sellers. Accordingly, the presence of fentanyl in heroin and other drugs has increased substantially in New Jersey. The Ocean County prosecutor’s office reported that 10 percent of heroin bags seized by law enforcement contained fentanyl in 2014. This figure increased to **30 percent and 65 percent** in 2015 and 2016, respectively. Nearly all heroin seized in the county today contains fentanyl.⁵⁶ Again making matters worse locally, the Drug Enforcement Agency (DEA) has found that heroin purity varies widely across the state and, often, supplies of cocaine and other non-opioid drugs are cut with fentanyl. The result is that individuals previously addicted to heroin and other non-opioid drugs become addicted to primarily fentanyl and other similar synthetic opioids.

The unpredictability of the presence

⁴⁷ World Health Organization. “Preventing overdose deaths in the criminal-justice system.” WHO. 2014.

⁴⁸ National Governors Association. “Finding Solutions to the Prescription Opioid and Heroin Crisis: A Roadmap for States.” National Governors Association. July 2016.

⁴⁹ Ibid.

⁵⁰ Governor’s Council on Alcoholism and Drug Abuse. Confronting New Jersey’s New Drug Problem: A Strategic Action Plan to Address a Burgeoning Heroin/Opiate Epidemic among Adolescents and Young Adults. Governor’s Council on Alcoholism and Drug Use. 2014.

⁵¹ New Jersey Division of Consumer Affairs. “New Jersey Prescription Monitoring Program.” New Jersey Division of Consumer Affairs. 23 February 2017.

⁵² American Society of Addiction Medicine (ASAM). “Opioid Addiction 2016 Facts & Figures.” ASAM. 2016

⁵³ Jones, C.M. “Heroin use and heroin use risk behaviors among nonmedical users of prescription opioid pain relievers—United States, 2002-2004 and 2008-2010.” Drug Alcohol Depend. 2013.

⁵⁴ GCADA, 2014.

⁵⁵ Racioppi, D. “Heroin, fentanyl fuel 40 percent spike in drug deaths in NJ amid opioid crisis.” Northjersey.com 22 February 2018.

⁵⁶ Napoliello, A. “In this New Jersey county, overdose deaths continue to ‘spiral out of control.’” NJ Advance Media. 30 October 2016.

of synthetic opioids, coupled with their extreme potency, appears to be fueling the opioid epidemic in New Jersey today.⁵⁷ In 2015, **417 New Jerseyans died from an overdose involving fentanyl**. In 2016, that number over doubled to 818 New Jerseyans.⁵⁸ Fentanyl and its analogs are rapidly outpacing other opioids in terms of overdose deaths. They have effectively unmoored the opioid crisis from its roots in opioid-based prescription painkillers, rendering efforts to curb prescribing painkillers less effective and pushing the epidemic into a qualitatively different and deadlier phase.

Neurobiology of Opioid Use Disorder⁵⁹

There have been substantial advances in neurophysiological science, genetics and brain imaging over the past three decades that have provided conceptual refinement to the disease processes associated with addiction – and thereby informed and updated medical models of treatment for addiction. These advances have changed the scientific and clinical outlook on addiction – both what it is and how to treat it. Most contemporary science now indicates that addictions are best considered as **acquired, chronic illnesses of the brain**, rather than

bad habits or moral failings. Addiction primarily affects the brain regions responsible for behavioral, motivational, perceptive, and active functions. It is considered an “acquired” illness because the disease process begins with repeated self-administrations of alcohol, nicotine, opioids, stimulants, sedatives and/or marijuana, usually during the adolescent years; too often under circumstances that have the potential for immediate harm to the user or to those around the user – e.g. drunk driving; drug-related injuries, accidents and harmful social interactions. This has been defined as “substance misuse” and although quite prevalent, dangerous, and costly in its own right, is considered pre-morbid and not yet an illness.

Initial use begins a process of deterioration of the neural reward system that includes three sub-processes: an increase in the amount of dopamine and other chemicals released into the brain both resting and when exposed to substances; a direct deterioration of neuro-anatomy as a result of the presence of drugs or alcohol in the brain; and a further deterioration process caused by the increased prevalence of dopamine and related chemicals. As this process begins, individuals develop a drug

“dependence,” during which they become reliant on the drug, and experience withdrawal upon cessation of use. Importantly, this stage is not considered equivalent to addiction, though often extremely harmful on its own, since a dependent individual can often still effectively function (similar to an individual with a caffeine dependence), and the deterioration of neural processes has not yet reached a clinical level. However, dependence begins what is referred to as the **“cycle of addiction”**: preoccupation/anticipation leads to binge/intoxication, which leads to withdrawal/negative affect, which leads back to preoccupation/anticipation, and so on.

This cycle can, and too often does, result in progressive insult and injury to the brain due to the processes outlined above, which affect neural circuits controlling inhibition, motivation, cognition, reward sensitivity, and stress tolerance. The gradual accumulation of injury to brain circuitry underlies the transition from dependence into the illness of “addiction,” which is, unlike dependence, a condition characterized by **significant destruction of neural structures and processes**, which are accompanied by symptoms such as emotional and motivational volatility, reduced

2015	Total Cost	Medicaid	Medicare	Private
Inpatient	\$104,827,354	\$55,558,498	\$1,572,410	\$9,434,462
Emergency Department	\$528,431,066	\$280,068,465	\$7,962,466	\$47,558,796
Total	\$633,258,420	\$335,626,963	\$9,498,876	\$56,993,258

⁵⁷ GCADA, 2014.
⁵⁸ NJCares, 2015-2016.

⁵⁹ Information in this section represents a wide scientific and medical consensus regarding the nature of addiction. Its accuracy was verified by a number of experts in the field and is reflected in all contemporary literature on addiction. See Surgeon General’s Report. U.S. Department of Health and Human Services (HHS), Office of the Surgeon General, Facing Addiction in America: The Surgeon General’s Report on Alcohol, Drugs, and Health. Washington, DC: HHS, November 2016.

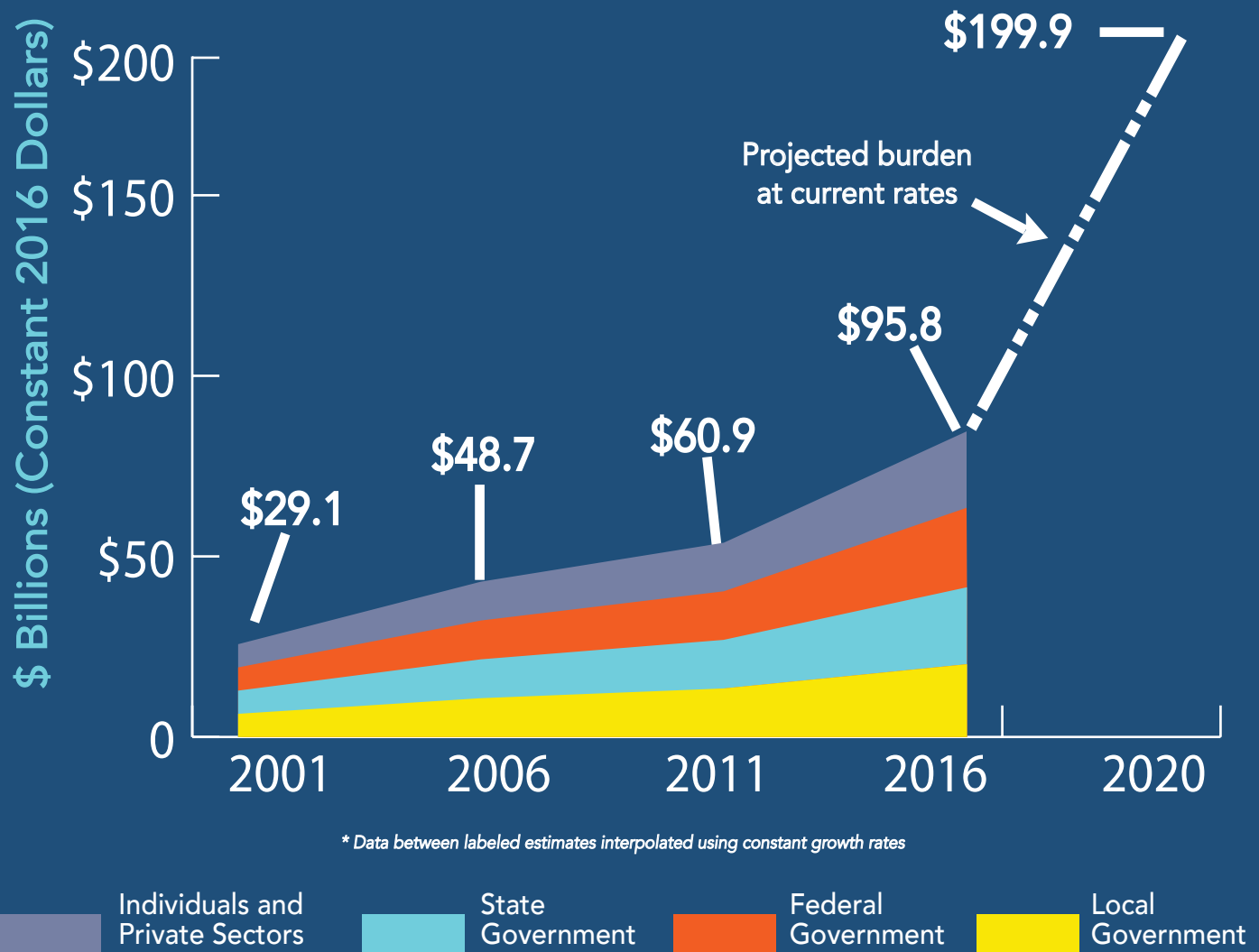
interest in previously rewarding social and vocational activities, and reduced behavioral control of substance use. It is often the failure to recognize this distinction between dependence and addiction which results in personal and societal reservations regarding the characterization and treatment of addiction as a disease. The frequency, intensity, and duration of substance use needed to effect these changes in brain function and disease onset differ appreciably across individuals and drug types. Likewise, the time and intensity of treatment required for these brain changes to resolve and return to

“normal” also varies appreciably.

Imaging studies of adults addicted to opioids and other stimulants have reliably shown significant morphological and functional changes in the brain circuits of these individuals. Because these studies have only been done with individuals already addicted, it was not possible to tell whether the observed damage to specific brain circuits was due to drug-induced changes that might correct with abstinence; to pre-existing abnormalities that might not be correctable and would continue to convey vulnerability; or to a

combination of these possibilities. To help clarify understanding, researchers took repeated brain images of these individuals following 30, 60 and 120 days of abstinence. Findings showed significant progress towards normalization of the circuits, yet even following 120 days of abstinence from all substance use, the brain circuits of previously addicted adults still differed from those of “normal” control subjects. Because of these enduring deficits in specific brain circuit function, the absence of any reliable medication or other treatment to consistently normalize these deficits, and the

Cost of the Opioid Epidemic by Year and Payers



availability of a growing number of pharmacological and behavioral therapies to halt and control the disease process, addiction is now considered an acquired chronic illness that, like other chronic illnesses such as diabetes, asthma, hypertension, can be effectively managed but not cured.

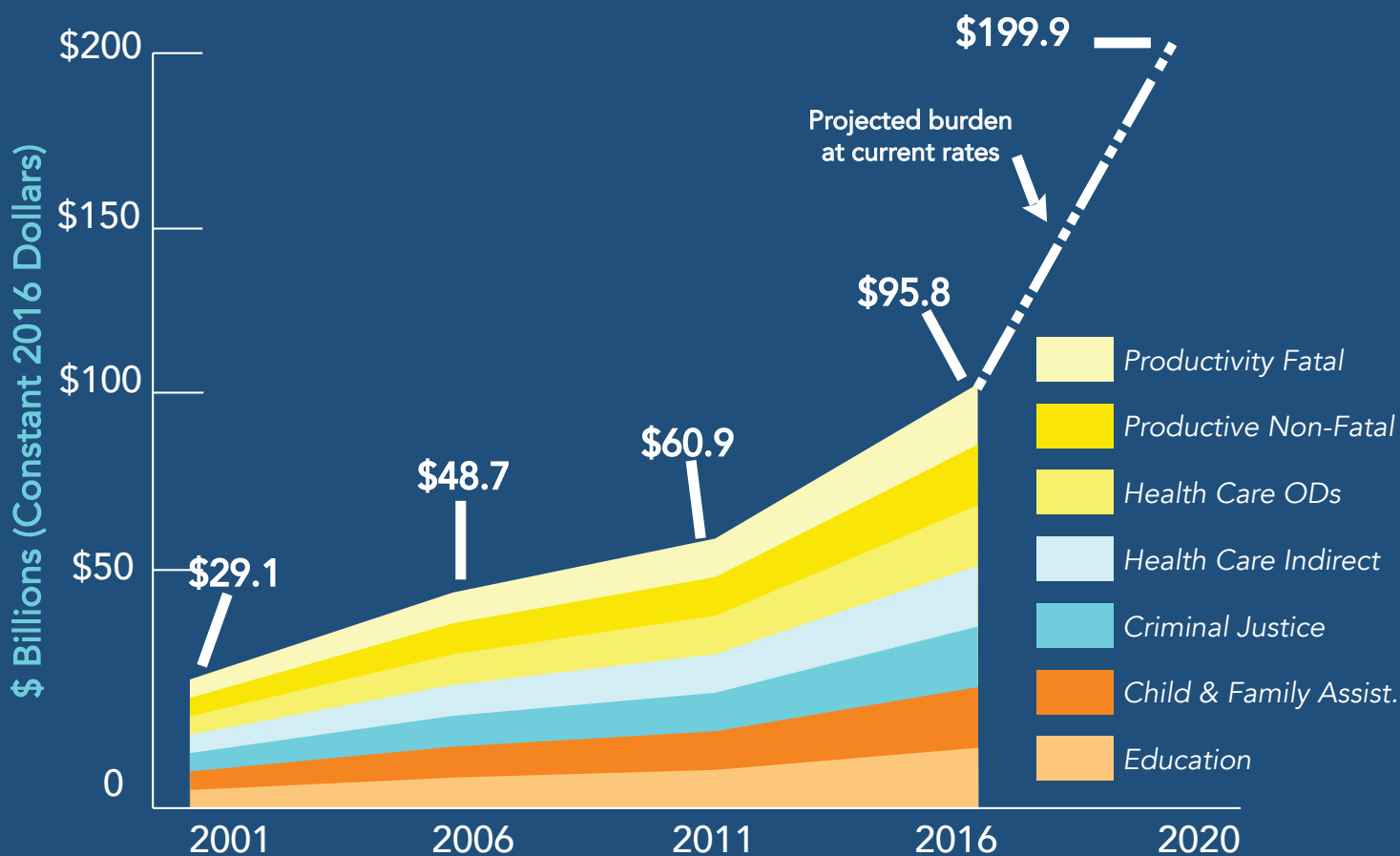
Financial Expenditures of the Opioid Epidemic

As the opioid epidemic continues

to grow across New Jersey, its associated expenditures simultaneously mount. In assessing the total economic impact of the opioid crisis, it is important to note that the price tag not only includes direct treatment costs – most often borne by Medicaid – but also costs associated with related and co-occurring barriers to sobriety, such as markedly high rates of expensive inpatient and emergency department visits, medical costs associated with highly prevalent co-occurring conditions associated

with OUD, addiction-driven crime, subsequent tax-funded imprisonment and recidivism, and loss of workforce participation in the age group statistically most important to labor force production. As detailed below, we estimate that – beyond the costs of direct treatment – the state annually loses an estimated **\$1.2 billion in productivity**⁶⁰ as a result of the inability of individuals to contribute to the workforce who have died⁶¹ from addiction, or who are in halfway houses,⁶² treatment

Cost of the Opioid Epidemic by Year and Type



* Data between labeled estimates interpolated using constant growth rates

⁶⁰ Daily value was taken as the average cost per lost day based on a \$50,000/year salary for 52.5-day weeks per year, and equalled total daily value per person of \$192.31. Total daily value was then multiplied by average length of stay per year in each facility: halfway house, long-term residential treatment, short-term residential treatment, detox-free standing residential, death, hospitalization, and incarceration. This is assuming average income and average length of stay per year for every individual.

⁶¹ NJCares, 2014.

⁶² NJSAMS Admissions Records

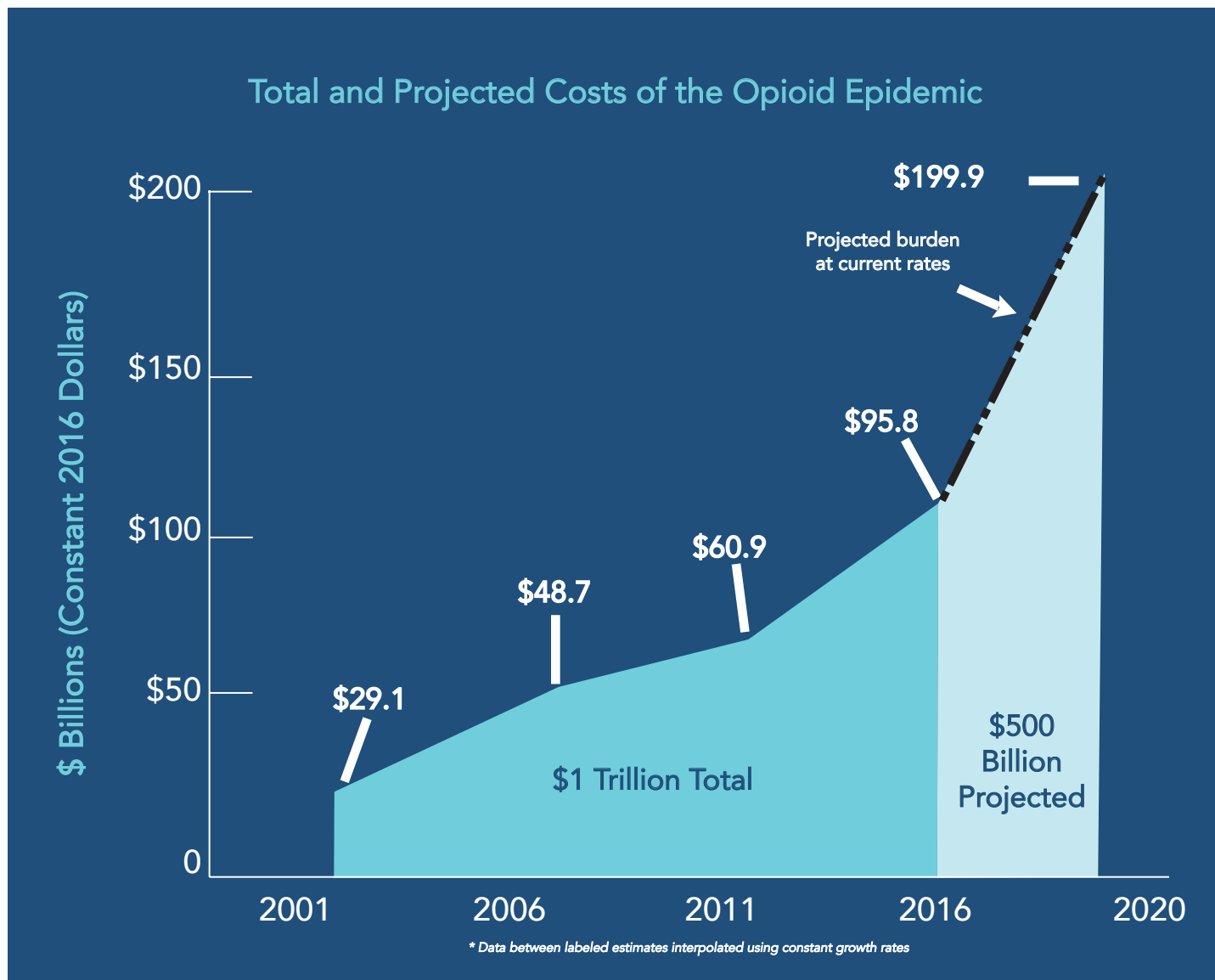
programs,⁶³ hospitals,⁶⁴ and prisons⁶⁵ due to addiction; **\$146 million on incarceration** as a result of those who are in prison as a result of primarily drug-related crimes;⁶⁶ **\$52 million on parole** as a result of drug-related crimes;⁶⁷ **\$20 million on probation**,⁶⁷ and **\$635 million on emergency department visits and inpatient hospitalizations** for overdose.⁶⁸ It is important to note that these estimates primarily serve to illustrate the

magnitude of likely costs borne by the state but are inherently limited by several shortcomings in the available data and underlying assumptions.

1. Direct Costs

Due to the high rates of addiction in the state, the cost of treatment alone is considerable, and has risen significantly in recent years. The total number of admissions into

Opioid Use Disorder (OUD) treatment programs increased from 24,095 in 2015 to nearly 37,000 in 2017.⁶⁹ There was a simultaneous **increase from 57 to 86 percent among those receiving OUD treatment who had been treated previously**.⁷⁰ Effectively this means that 86 percent of statewide OUD treatment expenditures could have been avoided had initial treatment been successful. Further, several conclusions can be drawn from



⁶³ Ibid.

⁶⁴ Ibid.

Number of visits generated from Healthcare Costs and Utilization Project: New Jersey Opioid-Related Hospital Use Rate of ED visits per 100,000 Population and the relative population size

⁶⁵ Department of Corrections Offender Statistics Report 2018

⁶⁶ Cost of incarceration for one individual calculated through extrapolation from FY 2018 Department of Corrections budget 2017 Adjusted Appropriations, and the number of inmates reported in the Department of Corrections Offender Statistics Report 2017.

Number of individuals incarcerated for drug-related offenses taken from Department of Corrections Offender Statistics 2018.

⁶⁷ Based on average per day costs of probation and parole nationally, taken from: U.S. Department of Justice. "Probation and Parole in the United States. USDOJ.

Number of individuals on probation and parole for drug-related offenses taken from NJ Department of Corrections Offender Statistics Report 2018.

⁶⁸ Costs per visit taken from: Electricwala, B., "Prevalence, Incremental Cost, and Resource Utilization Associated with Opioid overdoses." Virginia Commonwealth University.

⁶⁹ NJSAMS Admissions Records

⁷⁰ Ibid.

Further Costs of the Opioid Epidemic



The total expenditure of the criminal justice system in New Jersey on individuals whose base offense is drug related is **\$217 million per year**, not including arrest and adjudication costs.



The total cost of direct medical costs due to opioid overdose events in that year alone likely exceeded **\$633 million**.



Estimates total a lost productivity cost per year of **\$1.2 billion** -likely a low estimate.

these statistics: (a) there exist parallel positive trends in New Jersey both in residents needing OUD treatment and in patients who are not receiving adequate care; (b) significant waste resulting from these readmissions offers an opportunity to curtail projected increases in overall costs; (c) more effective treatment would result, over time, in a significant decrease in admission rates and their associated costs. Furthermore, largely due to the treatment volume exacerbated by repeat patients, the number of patients who need treatment and do not receive it has increased steadily in recent years, with **41.4 percent** of those who sought any substance use treatment self-reporting that they did not receive it in 2016.⁷¹

The total health utilization costs, both for addiction treatment itself and for comorbidities and related medical issues, are significantly higher among the addicted population than among the general population. The cost to insurance companies, averaged across private insurers, Medicare and Medicaid, for an individual with no mental health or substance use disorder is \$525 per month, or \$6,300 per year.⁷² The equivalent cost for an individual with a mental health or substance use disorder (often co-occurring in the addicted population) is \$1,400 per month or \$16,800 per year, **more than double** the cost for those without these disorders.⁷³

One of the most expensive causes of this disparity is the overutilization of emergency resources, both for addiction itself and for co-occurring disorders. Inpatient and emergency department visits resulting from opioid overdoses in the state totaled 27,732 and 22,650 respectively in 2015.⁷⁴ These costs are disproportionately borne by Medicaid, which covers over 50 percent of the addicted population in the state.⁷⁵ Furthermore, the respective cost per overdose event in inpatient and ED settings were \$3,832 and \$25,330,⁷⁶ and the total cost of direct medical costs due to opioid overdose events in that year alone likely exceeded **\$633 million,⁷⁷ over \$335 million of which was incurred by Medicaid beneficiaries.**

There is likely a substantial additional cost to New Jersey for ED visits associated with co-occurring and related disorders, with Medicaid again bearing a disproportionate percentage of the burden. From 2014 to 2015, there was an approximate increase of 118,000 in total emergency room visits in New Jersey, according to a report from the New Jersey Hospital Association, and half of these visits were mental health or substance use disorder related.⁷⁸ Addicted individuals often make up a high proportion of “over-utilizers,” individuals who exhibit frequent but avoidable ED admissions, and who are also most often Medicaid beneficiaries. A report from the

Center for Medicaid and CHIP Services says that only five percent of Medicaid beneficiaries nationally account for **54 percent of total Medicaid expenditures.**⁷⁹

Additionally, since addicted individuals disproportionately make up the incarcerated population, a significant proportion of incarceration costs can be attributed to addiction. For instance, 2,717 incarcerated individuals, or 14 percent of the total current prison population in New Jersey, had a drug charge as their base offense. With the state’s average annual cost of \$53,681⁸⁰ for each incarcerated individual, this means that approximately \$146 million will be spent this year on individuals in New Jersey prisons whose base offense is drug-related. Similarly, yearly parole expenditures spent on those whose base offense is drug related is \$20 million,⁸¹ and the same probation expenditures total \$51 million.⁸² This means that the total expenditure of the criminal justice system in New Jersey on individuals whose base offense is drug related is over **\$217 million per year**, not including arrest and adjudication costs, nor accounting for other drug-related factors.

2. Indirect Costs

In addition to immediate costs, there are a number of personal and societal factors that contribute to the financial impact of addiction. Most notably, the vast majority of

71 NJ Department of Human Services, Division of Mental Health and Addiction Services, Office of Planning, Research, Evaluation and Prevention. “New Jersey Drug and Alcohol Abuse Treatment: Substance Abuse Overview 2016 Statewide.” NJDHS. 2017

72 Melek, S.P., “Potential Economic Impact of Integrated Medical-Behavioral Healthcare.” Millman Research Report. 2017.

73 Ibid.

74 Number of visits generated from Healthcare Costs and Utilization Project: New Jersey Opioid-Related Hospital Use Rate of ED visits per 100,000 Population and the relative population size

75 NJSAMS Admission Records

76 Electricwala, Batul, Prevalence, Incremental Cost and Resource Utilization Associated with Opioid Overdoses. Virginia Commonwealth University. 2016.

77 Extrapolated from data cited above, assuming all or most opioid-related ED admissions are overdose admissions.

78 Pugliese, N. “Christie-backed insurance mandate advances despite concerns.” Northjersey.com. 2017.

79 Mann, C. “Targeting Medicaid Super-Utilizers to Decrease Costs and Improve Quality.” CMCS Informational Bulletin. Centers for Medicare and Medicaid Services: Center for Medicaid and CHIP Services. Department of Health and Human Services. 2013.

80 Extrapolated from FY 2018 Department of Corrections budget 2017 Adjusted Appropriations, and the number of inmates reported in the Department of Corrections Offender Statistics Report 2017

81 Department of Corrections Offender Statistics Report 2018

82 Ibid.

addicted individuals are between the ages of 18 and 54, resulting in significant losses in workforce participation, taxable income, and spending in local economies. A cost analysis of potential productivity, standardized using a \$50,000 average salary,⁸³ shows that those in halfway houses in one year could have contributed \$23 million total in productivity value to the labor force⁸⁴; those in long-term residential could have contributed \$33 million⁸⁵; those in short-term residential \$12 million⁸⁶; those in detox-free standing residential \$14 million⁸⁷; those hospitalized for overdoses \$32 million⁸⁸; those incarcerated \$695 million⁸⁹; those who died of opioid overdose \$71 million⁹⁰ in the year of

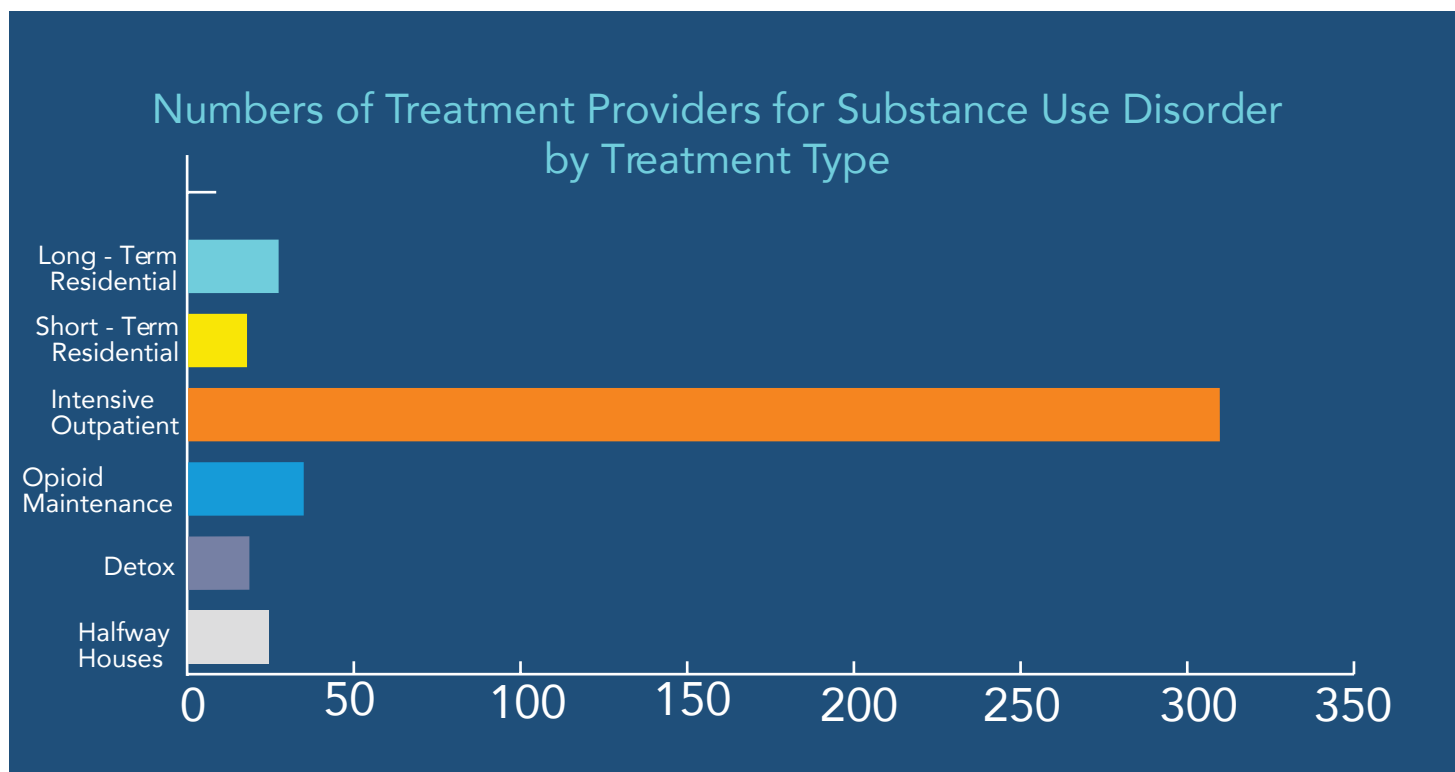
their death alone, not accounting for those who died years before⁹¹; and those who are addicted and received no treatment \$328 million⁹². These estimates together total a **lost productivity cost per year of over \$1.2 billion**, likely a low estimate.

Current NJ Treatment Structures

1. General Population

There have been a number of efforts in recent years to improve treatment and access in New Jersey. Most notably, in 2017, the state passed the New Jersey Substance Use Disorder Law, under Governor Christie's leadership⁹³. This legislation was

designed to improve access to residential Medication Assisted Treatment (MAT) largely through a mandate that insurance companies cover the first 28 days of treatment with no concurrent review, when the patient's medical provider deems it necessary⁹⁴. Additionally, an Interim Managing Entity (IME) was funded as a partnership between the Department of Human Services and Rutgers University Behavioral Health Care under the Christie administration. This entity was designed to facilitate effective addiction treatment and integration. Third, the Medicaid Institutions for Mental Diseases (IMD) exclusion was waived for the state as of 2018,



⁸³ Daily value was taken as the average cost per lost day based on a \$50,000/year salary for 52 5-day weeks per year, and equalled total daily value per person of \$192.31. Total daily value was then multiplied by average length of stay per year in each facility: halfway house, long-term residential treatment, short-term residential treatment, detox-free standing residential, death, hospitalization, and incarceration. This is assuming average income and average length of stay per year for every individual.

⁸⁴ NJCares, 2014

⁸⁵ Ibid.

⁸⁶ Ibid.

⁸⁷ Ibid..

⁸⁸ NJSAMS, Admission Records

⁸⁹ NJCares, 2014

⁹⁰ Figure obtained through same analysis, using \$25,000 to standardize for deaths taking place throughout the year.

⁹¹ NJCares, 2014.

⁹² NJSAMS, Admission Records

⁹³ See N.J.S.A. 17:48-6nn.

⁹⁴ The benefits for inpatient treatment after 28 days and up to 180 days are subject to concurrent review by a medically qualified reviewer. Requests for approval of inpatient care beyond the first 28 days must be submitted for review before the expiration of the initial 28-day period. If an insurance company determines that continued care is not medically necessary, the patient and his/her physician will be notified within 24 hours and are given the right to file an expedited internal appeal. If appeal is denied, the patient and physician have the right to file an expedited external appeal with the Independent Health Care Appeals Program.

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Patients with serious substance use disorder are recommended to stay engaged for at least 1 year in the treatment process

- Surgeon General Report

allowing short-term residential addiction treatment to be funded through Medicaid as of July 1, and long-term residential treatment as of October 1.

While all of these measures are essential to the advancement of the statewide conversation regarding addiction and treatment, best practices indicate that they are not enough to improve outcomes significantly. Private insurance is currently mandated to pay for treatment **only up to 28 days**; and the average length of all residential treatment covered by Medicaid is mandated to be **30 days or less**. Additionally short-term treatment covered by Medicaid after the IMD Exclusion Waiver begins at 7 days, and long-term is expected to be approximately 30 days. However, research⁹⁵ indicates that much longer treatment is needed for most of the addicted population to obtain and maintain sobriety, with a best practice template of yearlong

care. Notably, these limits placed on addiction treatment by payers constitute an effective failure to implement the Mental Health Parity and Addiction Equity Act of 2008 (MHPAEA). This act mandates that when mental health and/or SUD treatment is offered by a group health plan or insurance issuer, financial caps or length of treatment limitations must not fall below the predominant restrictions that apply to other medical care.

The entity authorized to oversee addiction treatment in the state (currently the IME) is currently managed by a private provider. However, in order to collaborate with all state-approved treatment providers, inform legislative decisions, and connect to state and federal funding sources, this entity should be a public body, consisting of a collaboration among providers from throughout the state, experts on addiction treatment, members of the public who receive treatment, and legislators. In 2012, New York state created such an entity, the Behavioral Health Services Advisory Council, through a legislative amendment. The Council now oversees all operations and changes to the behavioral health system in the state, including addiction treatment services and standards⁹⁶.

According to the New Jersey Substance Abuse Monitoring System, there are **384 total providers of substance use disorder treatment** in the state, 244 of which are fee-for-service (FFS), state contracted sites. Among all 384 providers, 27 offer long-term

residential treatment, 18 short-term residential, 309 intensive outpatient, 35 opioid maintenance outpatient, 18 detox, and 24 are halfway houses.⁹⁷

Only 56 the 244 FFS providers offer any form of MAT. Further, ancillary services offered in New Jersey facilities are lacking. Under 50 percent offer mentoring or peer support; only 60 percent refer patients to social services; 40 percent offer employment counseling or training; and 45 percent offer housing assistance. The Governor's Council on Alcoholism and Drug Abuse (GCADA) criticizes the state for insufficient treatment capacity and quality standards, insufficient access to effective and affordable treatment, lack of implementation of evidence-based standards of care, and insufficient intervention and support services for those populations most vulnerable to addiction⁹⁸.

In addition to SUD treatment providers, New Jersey has 23 Federally Qualified Health Centers (FQHCs) located in 21 counties of the State. These community health centers are important resources for addressing the opioid epidemic, as the primary care setting can be a window of opportunity for initiating treatment, can ameliorate stigma, and can increase access to care for opioid use disorder. Currently, FQHCs are too often overlooked and improperly reimbursed for providing the integrated care of which they are uniquely capable. Funding and technical support should be provided so that all NJ FQHCs are able to provide standardized,

⁹⁵ Surgeon General's Report

Shatterproof National Principles of Care (see Principles section of this report)

National Institute on Drug Abuse. "Principles of Drug Addiction Treatment: A Research-Based Guide." National Institute on Drug Abuse. January 2018.

See Models section of this report

⁹⁶ Behavioral Health Services Advisory Council, NY Office of Mental Health. "Overview of the Behavioral Health Services Advisory Council." Office of Mental Health.

⁹⁷ Division of Mental Health and Addiction Services. "Addiction Services Treatment Directory (Licensed Agency Only). NJ Department of Health.

⁹⁸ Governor's Council on Alcoholism and Drug Use. Confronting New Jersey's New Drug Problem: A Strategic Action Plan to Address a Burgeoning Heroin/Opiate Epidemic among Adolescents and Young Adults. GCADA. 2014.

multidimensional assessment for opioid and other substance use disorders, rapid access to MAT, and integrated behavioral health care. FQHCs in particular need payment reform to cover reimbursement for group counseling and peer specialist services, as these are not necessarily covered but are vital components of a comprehensive approach.

Additionally, as noted by a recent report released by the New Jersey Health Care Quality Institute (NJHCQI)⁹⁹, the current licensing system in New Jersey does not provide adequate support for effective, integrated care. There are currently **three separate licensing procedures**, administered by two different agencies: physical health care licenses are authorized by the Department of Health, while mental health and addiction care licenses are each controlled

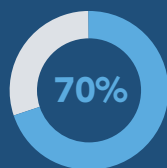
separately by the Department of Human Services. Due to the disconnected nature of this system, it is currently difficult for any one provider to offer integrated physical, mental, and addiction services. This stands in sharp contrast to the needs of the population, especially the addicted population, who are at a high risk of physical and mental comorbidities.

2. Incarcerated Population

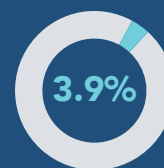
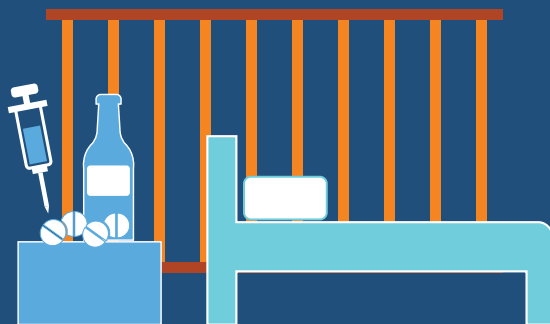
Additional measures have been taken by New Jersey to begin to improve the availability of care during incarceration. In April of 2017, the Christie administration re-opened Mid-State Correctional Facility as the first licensed clinical drug treatment facility run by the New Jersey Department of Corrections. The facility houses 696 men, who request

addiction treatment at their intake assessment. An equivalent program for women was established at Edna Mahan Correctional Facility, and houses 65 individuals who request treatment. Treatment is provided by the Gateway Foundation, a national addiction treatment organization, and includes outpatient, intensive outpatient, short-term residential, and long-term residential treatment. In addition to programming by Mid-State and Edna Mahan, the NJDOC offers peer-based addiction programs regularly at all of its locations. These programs include Alcoholics Anonymous, Narcotics Anonymous, Gamblers Anonymous, Responsible Parenting, Living in Balance, Smart Recovery, and Engaging the Family. The average treatment length for patients at Mid-State is 191 days, or approximately 6 months. After treatment, patients are returned to the general population, where they

Addiction vs. Treatment Availability Among the Incarcerated Population in New Jersey



Prevalence of addiction among the incarcerated population



Percent of available treatment beds in prison/jail

Sources: GCADA, 2014; 761 total treatment spots (men and women)/19,453 individuals in DOC custody
Number in DOC custody from: NJ Department of Corrections (NJDOC). "Offender Statistics." NJDOC. 2018.

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Research and best practices indicate that personalized wrap-around services facilitate stability and long-term success of treatment

can participate in the programming cited above. Additional programming is available for individuals on parole, including the Mutual Agreement Program (MAP), which has been operational since 1984. MAP facilities are non-profit entities throughout the state that provide residential SUD treatment to parolees, often as a special condition of parole. Services provided at MAP facilities include counseling, cognitive behavioral therapy, life skills training, relapse prevention, and drug testing. These measures taken in recent years are admirable, and move the state in the right direction in regard to addiction treatment within the criminal justice system; however, data indicates that these practices are not sufficient for the level of care needed by the population. Studies indicate that at least **70 percent** of the incarcerated population is addicted,¹⁰⁰ yet the current system provides treatment beds for **only**

3.9 percent of the prison population in the state.¹⁰¹ Additionally, drug use in prison is punished with administrative segregation, so that if an individual relapses once back in the general population, he or she will be put in detention rather than being given the opportunity for treatment. This is particularly troubling, given that the average 6 months of treatment offered is not considered long enough based on national standards and experts to maintain sobriety. The result is a dangerous fragmentation and inconsistency of care and support.

Recent statewide efforts to advance in addiction treatment practices both in general and within the incarcerated population has created precedent indicating the importance of improved care. It has additionally advanced the statewide conversation regarding addiction considerably, providing a basis for substantial improvement. However, in order to see meaningful results, the state must continue to move forward in implementing policies and standards that conform with evidence-based best practices and proven solutions to the opioid crisis.

Best Practices and National Models Addiction Treatment

Medication Assisted Treatment (MAT), has become the national standard of care for opioid addiction treatment in recent years. MAT is defined by the U.S. Department of Health and Human Services' Center

for Substance Abuse Treatment as “the use of medications, in combination with counseling and behavioral therapies to provide a whole patient approach to the treatment of substance abuse disorders.” MAT programs constitute a “whole patient” approach through the combination of medication and behavioral care¹⁰² for comprehensive integrated treatment. MAT programs provide a carefully monitored and controlled level of medications that relieve the withdrawal symptoms and psychological cravings that cause chemical imbalances in the body,¹⁰³ and patients so stabilized can engage effectively in counseling and other behavioral interventions essential to recovery.¹⁰⁴

There are two main types of MAT medication. Opioid agonists, such as Buprenorphine and Methadone, mimic the effects of opioids. Antagonists, such as extended-release Naltrexone, bind to opioid receptors in order prevent the high resulting from opioid abuse.¹⁰⁵ Given the many factors which influence the uniqueness and heterogeneous needs of addicted individuals, the availability of all FDA- approved of medication is essential for effective treatment.¹⁰⁶

Multiple studies¹⁰⁷ have shown that adherence to MAT **cuts the risk of a fatal overdose in half and doubles the chance of recovery.** A Massachusetts report showed that only 1.1 percent of those who started methadone or buprenorphine treatment after a nonfatal overdose died of a subsequent overdose,

¹⁰⁰ GCADA, 2014

¹⁰¹ 761 total treatment spots (men and women)/19,453 individuals in DOC custody

Number in DOC custody from: NJ Department of Corrections (NJDOC). “Offender Statistics.” NJDOC. 2018.

¹⁰² National Institute on Drug Abuse. “Effective Treatments for the Opioid Addiction.” National Institute on Drug Abuse. November 2016.

¹⁰³ Substance Abuse and Mental Health Services Administration. “Medication and Counseling Treatment.” SAMHSA. 2015.

¹⁰⁴ National Institute on Drug Abuse. “Opioid Addiction” in Principles of Drug Addiction Treatment: A Research-Based Guide (Third Edition). 2018

¹⁰⁵ Beckman, N., Bliska, H., & Schaeffer, E.J. “Medication Assisted Treatment Programs in Vermont State Correctional Facilities.” The Nelson A Rockefeller Center at Dartmouth College. 2018.

¹⁰⁶ CommonHealth. “Some Mass Jails to Offer Inmates Meds, Like Vivitrol and Suboxone.” CommonHealth. 2017.

¹⁰⁷ Sees KL, Delucchi KL, Masson C, et al. “Methadone maintenance versus 180-day psychosocially enriched detoxification for treatment of opioid dependence: a randomized controlled trial.” The Journal of the American Medical Association. February 2000.

Kakko J, Svanborg KD, Kreek MJ, et al. “One-year retention and social function after buprenorphine-assisted relapse prevention treatment for heroin dependence in Sweden: A randomized, placebo-controlled trial.” The Lancet. June 2003.

compared with 2.3 percent of those who did not receive treatment – **a risk reduction of over 50 percent.**¹⁰⁸ Heroin overdose deaths decreased by 37 percent after buprenorphine became available in Baltimore.¹⁰⁹ Among the addicted reentry population, MAT maintenance has been shown to reduce the risk of re-offense by 36.4 percent.¹¹⁰

In order for MAT to be effective in achieving and maintaining sobriety, research indicates that **treatment should be provided on a long-term basis**,¹¹¹ and that participation in treatment for less than 90 days significantly limits the efficacy of residential or outpatient treatment.¹¹² Given the extreme nature of opioid addiction, patients have a very high risk of relapse if they are not given long term maintenance therapy; this is especially true of those with particularly severe addiction who require longer treatment and more comprehensive wrap-around services.¹¹³ For instance, a recent report released by the Surgeon General says: “... patients with serious substance use disorder are recommended to stay engaged for at least 1 year in the treatment process, which may involve participation in three to four different programs or services at reduced levels of intensity, all of which are ideally designed to help the patient prepare for continued self-management after treatment end.”¹¹⁴

While this report does not seek to be prescriptive, indeed the critical need is for multidimensional assessment so that individuals access treatment, which is unique to their personal care and treatment demands. The cardinal requirement is for there to be a studied engagement which is premised upon the ASAM Criteria: quality care, MAT access, peer support, housing, and vocational training. Treatment length of time must necessarily respond to patient substance abuse, as well as, related social consequences that can contribute to the risk of relapse.

The efficacy of long-term treatment is supported the success of other models. American Addiction Centers enrolled more than 4,000 patients as part of a study conducting 12 month SUD treatment. By the end of the year, **63 percent of patients were abstinent** from all substances, frequency of heroin use decreased by 88 percent overall, frequency of other opiate use decreased by 95 percent, frequency of significant family conflict decreased by 87 percent, frequency of physical health problems decreased by 44 percent, and frequency of mental health problems decreased by 56 percent.¹¹⁵

The costs of longer treatment based on best practices, although higher than traditional detoxification methods in the short-term, is far

more cost-effective than traditional detoxification methods in the long term. A number of studies¹¹⁶ have confirmed this assertion, including a 2010 study which found that over a five-year period, those who received MAT had **50 percent lower total annual health plan costs** than those who had two or more visits to an addiction treatment department but no MAT, and **62 percent lower** than those with zero to one visit and no MAT.¹¹⁷

Wrap-around Services and Whole Person Care – NJRC

In order to effectively recover and maintain long-term sobriety, best practices indicate that addicted individuals need a robust support structure and comprehensive wrap-around services. Since 2014, the NJRC has provided such services for its clients, focusing on the needs of the reentry population. The NJRC model includes seven critical services:

1. **Referral for addiction treatment through partnership with Integrity House**
2. **Sober transitional housing**
3. **Training and employment**
4. **Medicaid registration through Federally Qualified Health Centers and hospitals**
5. **Motor Vehicle Commission identification**

108 Voelker, R. “Support for Treating Opioid Addiction with Medication.” News from the Food and Drug Administration. 5 December 2017.

109 National Institute on Drug Abuse. “Effective Treatments for Opioid Addiction.” National Institute on Drug Abuse. November 2016.

110 Chang, Z., Lichtenstein, P., Langstrom, N., Larsson, H., & Fasel, S. “Association Between Prescription of major Psychotropic Medications and Violent Reoffending After Prison Release.” Journal of the American Medical Association. American Medical Association. 2016.

111 See Vermont, Texas, Massachusetts, Rhode Island models.

112 National Institute on Drug Abuse. “Principles of Drug Addiction Treatment: A Research-Based Guide.” National Institute on Drug Abuse. January 2018.

113 National Institute on Drug Abuse. “Principles of Drug Abuse Treatment for Criminal Justice Populations--A Research-Based Guide.” National Institute on Drug Abuse. 2014.

114 Surgeon General's Report

115 Centerstone Research Institute. “American Addiction Centers Outcome Study.” American Addiction Centers. 2018.

116 McCarty, D., Perrin, N., Green, C., Polen, M., Leo, M. & Lynch, F. “Methadone maintenance and the cost and utilization of health care among individuals dependent on opioids in a commercial health plan.” Drug and Alcohol Dependence. ScienceDirect. Vol. 111, Issue 3, 1 October 2010.

Mohlman, M., Tanzman, B., Finison, K., Pinette, M., & Jones, C. “Impact of Medication-Assisted Treatment for Opioid Addiction on Medicaid Expenditures and Health Services Utilization Rates in Vermont.” Journal of Substance Abuse Treatment. 67:9-14. 2016.

Baser, O., Chalk, M., Fiellin, D.A., & Gastfriend, D.R. “Cost and utilization outcomes of opioid-dependence treatment.” The American Journal of Managed Care. Vol. 17. 2011.

117 McCarty, D., Perrin, N., Green, C., Polen, M., Leo, M. & Lynch, F. “Methadone maintenance and the cost and utilization of health care among individuals dependent on opioids in a commercial health plan.” Drug and Alcohol Dependence. ScienceDirect. Vol. 111, Issue 3, 1 October 2010.

6. **Legal services working through the New Jersey State Bar Association, Young Lawyers Division**
7. **Mentoring through partnership with faith-based and professional associations**

These essential services are provided through individual case management and partnership with the community.

Given the broad range of needs accompanying addiction, it is critical that wrap-around services be offered on a personal basis. The intersection between the addicted and incarcerated populations indicates that the needs of and barriers facing each often coincide. Moreover, research and best practices indicate that personalized wrap-around services facilitate stability and long-

term success of treatment.¹¹⁸

Swift, Certain, and Fair – Effective Sanctioning

In an effort to curb the effects of addiction among the justice-involved population, the NJRC has partnered with the New Jersey State Parole Board (NJPB) on a pilot program that will be implemented October 1 in Ocean County. The program is designed to provide MAT to individuals on parole who have historic or current opioid use disorder, and is based on the national Swift, Certain, and Fair principles.

While on parole, individuals who overdose or test positive for opioids will be given the option of enrolling in the pilot program instead of facing

normal sanctions for a drug violation. All those who opt in will be enrolled in the program, and those who choose not to participate are automatically included in the control group for program evaluation. Those who opt in are assigned a recovery coach and are connected to MAT treatment through the NJRC. Recovery coaches will meet with patients one-on-one at a neutral location to track progress and needs. Regular monitoring by parole will continue, but Swift, Certain, and Fair principles will be used to institute sanctions for any drug-related violations. Metrics will track drug-related parole violations and overall addiction and medical progress.

Swift, Certain, and Fair (SCF)¹¹⁹ is a method of parole and probation which has been shown in a number of states

Vermont Hub and Spoke Model

Hubs

(Specialized treatment centers throughout the state, which are connected to spokes)



- High Intensity MAT
- Methadone, Buprenorphine, Naltrexone
- Regional Locations
- All Staff Specialize in Addiction Treatment



Spokes

(An array of satellite treatment and service providers based in the community)



- Maintenance MAT
- Buprenorphine, Naltrexone
- Community Locations
- Lead Provider + Nurse and LADC/MA Counselor

¹¹⁸ See all below successful models, as well as Shatterproof National Principles of Care and the Surgeon General's report
¹¹⁹ Swift, Certain, and Fair. "Why Swift Certain and Fair?" BOTEC. 2017.

to be effective in reducing violations and re-offense. SCF programs are based on **three principles of sanctioning**: sanctions are delivered immediately following the detection of a violation; sanctions are consistent and clearly defined at the beginning of supervision; supervised individuals are made aware, often through a contract, of the conditions of supervision and potential sanctions that will follow an infraction. These principles have been shown to reduce violation considerably and consistently.

Most notably, Hawaii implemented in 2004 the Hawaii Opportunity Probation with Enforcement (HOPE), a large-scale SCF program, that is still operational today. The program includes regular random drug tests to lower rates of undetected drug use, and sanctions, when needed, are administered within days of a violation. Since its institution, **50 percent of participants never tested positive** after an initial warning hearing, and a further 25 percent tested positive only one time. The rate of missed tests and positive tests **decreased overall by over 80 percent**.¹²⁰

Further studies indicate that similar sanction models have significant positive effects on addiction treatment outcomes. A 2009 study analyzed treatment outcomes of long-term treatment 904 on addicted physicians, a population that tends to have a higher risk for addiction and more severe addiction than the general population, due to their greater access to prescription drugs. All participants in the study were enrolled in programs, in addition to

their mandated treatment, designed to provide care management, monitoring, and supervision long-term, either on a residential or an intensive outpatient basis, followed by continued, less intensive outpatient care. After five years, **78 percent** did not have a single positive test result for any substance, and 72 percent were still licensed and practicing. These results indicate that long-term intensive monitoring, frequent random drug testing, active management of relapses, and continued supervised care create a structure and stability necessary for successful long-term recovery.¹²¹

Successful Models

A number of other states have implemented successful addiction treatment programs that provide models and best practices for both the general population and the incarcerated/reentry populations. Importantly, the models outlined below do not represent individual outliers, but present examples of a consistent trend among a much larger group of state models – including those in Massachusetts, California, Missouri, and parts of New Mexico and Ohio, among others – that demonstrate consistent effectiveness of the best practices they espouse.

1. Vermont

Vermont integrated a state-wide **“hub-and-spoke” model** of care in 2012, through a partnership among the Vermont Blueprint for Health,¹²² the Department of Health’s Access Medicaid Health Services and Managed Care Division, and the

Department of Health’s Division of Alcohol and Drug Abuse Programs. These three governmental agencies additionally partnered with local service providers, addiction specialists, and doctors to design and implement the hub-and-spoke system.¹²³

The model consists of a network of nine specialized treatment centers (“hubs”) spread throughout the state, with each hub connected to an array of satellite treatment and service providers based in the community (“spokes”). On entrance into the program, patients are screened and receive intensive MAT-based treatment at a hub, where a personalized long-term treatment program is developed. Once stabilized, participants are referred to a spoke, designed to coordinate a continuum of care. Through the spoke, patients receive MAT maintenance treatment and Intensive Outpatient (IOP) treatment as needed, and are additionally connected to service providers for any other needs identified at their intake. Such additional services may include treatment for co-occurring disorders, community-based therapy, cognitive behavioral therapy, drug and alcohol counseling, social service referrals, and wrap-around case management.¹²⁴

Each spoke consists of a three-person primary care team of a care coordinator, clinician,¹²⁵ and physician.¹²⁶ For each 100 clients, the spoke is supported by a MAT team, made up of a full-time equivalent registered nurse and a master’s-level licensed behavioral health provider. This MAT team

120 Ibid.

121 DuPont, R.L., McLellan, A.T., White, W.L., Merlo, L.J., & Gold, M.S. “Setting the standard for recovery: Physicians’ Health Programs.” *Journal of Substance Abuse Treatment*. 36:159-171. 2009.

122 A statewide initiative that designs community-led strategies for improving health and well-being.

123 Addiction Policy Forum. “Spotlight: Care Alliance for Opioid Addiction the Hub and Spoke Model.” *Addiction Policy Forum*. 2017.

124 Casper, K.L. & Folland, A. “Essential Elements of Vermont’s ‘Hub-and-Spoke’ Health Homes Model.” *Models of Integrated Care through OTPs and DATA 2000 Practices*. 2016.

125 The clinician is a licensed behavioral health care provider, similar to an alcohol or drug counselor.

126 *Addiction Policy Forum*, 2017.

consults with new patients, reviews contracts and consents, arranges for insurance authorization and urine drug testing, regularly meets with spoke physicians, and authorizes Buprenorphine refills. It is further responsible for overseeing diversion control through random call-backs and monitoring of Vermont's Prescription Monitoring System.

Practice settings for a spoke include: primary care centers, ob-gyn practices, psychiatry practices, federally qualified health centers (FQHCs), family practices, pediatric care centers, solo practices and pain management practices.¹²⁷ Individuals who do not have a primary care provider are linked to a medical home for ongoing health care and outpatient MAT maintenance. Most spokes coordinate with office-based opioid treatment (OBOT) providers, but where lacking, the MAT team offers training and certification to physicians in the area through the Care Alliance.

Integral to the hub-and-spoke model is a **bidirectional exchange of information**. Hubs refer patients to spokes and provide all personal and medical information necessary for continued treatment, and patients who destabilize while receiving care from a spoke can be referred back to the hub by the behavioral health provider for stabilization and treatment modifications. These return transfers from the spoke back to the hub are prioritized to ensure that spoke providers are supported and patients continue to receive coordinated care. Spoke providers

have direct access to hubs for consultation on referrals, screenings, and induction logistics.

Also essential is the **personalization of treatment** provided by the model. Each patient undergoing MAT has a medical health home, a single MAT prescriber, a pharmacy home, and access to nurses and clinicians; and can additionally be referred to mental health treatment, job placement, and family and recovery support services. This variety of resources allows for a unique plan to be developed and carried out for each individual.¹²⁸

This capacity for individualization of care is demonstrated in the Treatment Needs Questionnaire (TNQ), which was developed to identify the treatment setting best suited to each patient. The survey accounts for several variables affecting the patient's needs, including areas of psychosocial functioning such as justice system involvement, drug and alcohol use, transportation capabilities, chronic pain, and social support structures.¹²⁹

These measures contribute to a standard of care consistency that is definitive of the hub-and-spoke system. In conjunction with information exchange and personalization of care, the Vermont model implemented a number of additional support structures to ensure this consistency. For example, a learning collaborative, consisting of in-person and web-based lectures to spoke physicians and MAT staff on safe prescribing, use of evaluation tools, treatment plan development, responses to relapse, patient

noncompliance, and diversion control, was developed to support statewide implementation of the model.¹³⁰

Further, evidence-based practices have been published as the Vermont MAT Practice Guidelines in order to promote consistency across hubs and spokes.¹³¹

As a result of the implementation of these best practices, the hub-and-spoke model has seen substantial success in expansion of care, addiction prevention, addiction treatment efficacy, and cost savings. Vermont now has the nation's highest capacity for treating OUD, with **13.8 potentially treated per 1,000, and 10.56 actually treated**. All regions of the state have seen significant reductions in waiting lists and times for treatment, with the Southeast and Southwestern hubs nearly eliminating their wait lists. There has been a 64 percent increase in physicians waived to prescribe buprenorphine, a 50 percent increase in patients served per waived physician, and a "robust bidirectional transfer of patients between hubs and spokes based upon clinical need,"¹³² indicating that the system of information exchange and personalized care has been successfully implemented. Since 2012, opioid related deaths across the state have remained consistent, defying the upward trend in years prior,¹³³ and the state has seen a decline in all age groups reporting misuse of prescription pain relievers.¹³⁴ In addition to this improvement of treatment, the hub-and-spoke model has also been responsible for the implementation of

127 Casper et. al., 2016.

128 Netherland, J., Botsko, M., & Egan, J.E. "Factors affecting willingness to provide buprenorphine treatment." *Journal of Substance Abuse Treatment*. 36:244-251. 2009.

129 Brooklyn, J.R., & Sigmon, S.C. "Vermont Hub-and-Spoke Model of Care for Opioid Use Disorder: Development, Implementation, and Impact." *Journal of Addiction Medicine*. Vol. 11 Issue 4. 2017.

130 Nordstrom, B.R., Saunders, E.C., McLeman, B., Meier, A., Xie, H., Lambert-Harris, C., Tanzman, B., Brooklyn, J., King, G., Kloster, N., Lord, C.F., Roberts, W., & McGovern, M.P. "Using a Learning Collaborative Strategy with Office-based Practices to Increase Access and Improve Quality of Care for Patients with Opioid Use Disorders." *Journal of Addiction Medicine*. 10(2): 117-123. 2016.

131 Vermont Department of Health Access. "Managed care entity: Vermont buprenorphine clinical practice guidelines." DVOHA. 2015.

132 Brooklyn et. al., 2017.

133 Addiction Policy Forum, 2017

134 Ibid.

regional prevention efforts, drug take back programs, intervention services through prescription monitoring, recovery services, and distribution kits for overdose reversal.¹³⁵

It is important to note that these successes are largely attributable to the method in which the Vermont model was implemented. Rather than the creation of new systems of care, the model was primarily effective in creating **linkage and synthesis of already existing infrastructure** – namely FQHCs, methadone clinics, office-based opioid treatment, among others -- and improving the quality of care within the resulting integrated system.¹³⁶

The Vermont model has seen significant cost savings, through effectiveness of care as well as Medicaid expansion and political and governmental support. Before the creation of the model in 2012, the health care costs for individuals in Vermont with at least two claims for opioid use disorder or dependence in a calendar year were higher than those without claims.¹³⁷ Since 2013, these overall costs have dropped by between 7 and 10 percent.¹³⁸ In addition, the Department of Vermont Health Access estimated in a testimony to the state legislature in March 2014, that for the 2,164 patients estimated to be enrolled in the program statewide, the savings would be approximately **\$6.7 million**.¹³⁹

2. Maryland¹⁴⁰

In 2013, Maryland implemented a health home State Plan Amendment, which, through a provision in the

Affordable Care Act, allowed the state to reimburse opioid addiction treatment agencies that provide care coordination and health promotion services, with a particular focus on the treatment of **addicted persons with co-occurring chronic disorders**.

Participating Maryland Medicaid providers are equipped with a team of a health home director, nurse care manager, and a consultant physician or nurse practitioner. Individuals who enter the program must be enrolled in Medicaid, and must be either currently receiving care from the health home provider, or at significant risk for a co-occurring chronic condition (eg. current or past alcohol, tobacco, or other non-opioid substance use). Participation is on an opt-in basis, but high risk individuals and high utilizers of emergency and inpatient services are often referred to a health home by the state, a managed care organization, or an accountable care organization.

In order for the health home to receive reimbursement, each participant must receive **at least two services** from the provider. These services include: “comprehensive care management to assess, plan, monitor, and report on participant health care needs and outcomes; care coordination to assure appropriate linkage to care and follow-up; health promotion to aid participants in implementation of their care plans; comprehensive transitional care to ease the transition when discharged from inpatient settings; individual and family support services to provide support and information that is

language-, literacy-, and culturally-appropriate; referral to community and social support services.” Providers must report health home services and patient health and social indicator outcomes every six months. This is facilitated through Maryland’s eMedicaid system, which additionally records intake assessment data, service delivery, and social and clinical indicator outcomes. Providers are linked to a regional health information exchange for hospital encounter alerts and a prescription drug monitoring program for pharmacy data. The use of this **health information exchange** again indicates the importance of continuum of care through the effective communication of information among disparate providers.

To further maximize this communication, Maryland has implemented a series of educational and community partnerships. The Health Home Learning Collaborative was one such partnership that was initiated to provide a means of communication among health home staff to share best practices. Health homes also joined the Community Behavioral Health Association of Maryland, an organization that served as a liaison with the state in addition to offering technical assistance. Some treatment centers have additionally developed formal partnerships with local universities’ schools of nursing and public health, and have hosted panel discussions for future health professionals on prejudice regarding addiction treatment.

¹³⁵ Ibid.
¹³⁶ Ibid.
¹³⁷ Brooklyn et. al., 2017
¹³⁸ Ibid.
¹³⁹ Ibid.

¹⁴⁰ Walters, V. & Fulman, A. “Whitepaper 1: Models of Integrated Patient Care through OTPs and DATA 2000 Practices.” Section 3: “Integration of Health Homes in Maryland OTPs.” American Association for the Treatment of Opioid Dependence, Inc. 2016.



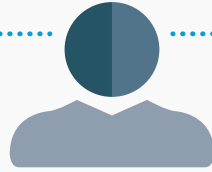
Maryland's Health Home State Plan Amendment

Maryland's health home State Plan Amendment demonstrates the importance of continuum of care through the effective communication of information among disparate providers.

This model places a focus on the treatment of addicted persons with co-occurring chronic disorders



Addiction



Participant qualifications

- enrolled in Medicaid,
- receiving care from health home provider,
- OR at significant risk for a co-occurring chronic condition



Co-occurring disorders

Many addicted individuals suffer from co-occurring disorders, such as mental health issues and/or physical illnesses.

A team is assigned to the participant



Health home director



Nurse care manager



Consultant physician/
nurse practitioner

Two or more of the following services must be utilized by the participant



Comprehensive care management



Care coordination and follow-up



Health promotion



Comprehensive transitional care

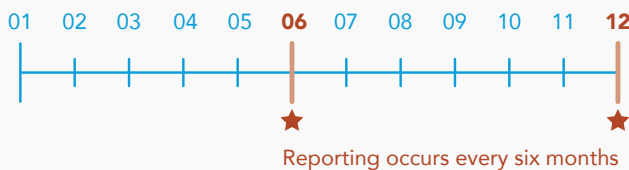


Individual and family support services



Referral to community/
social support services

Providers report health home services, patient health, and social indicator outcomes



Alerts via health information exchange (HIE)

Providers are notified of participant's hospital visits and prescription drug usage.

3. Rhode Island

Rhode Island has implemented a program which combines elements of both the Vermont and the Maryland models in order to facilitate the linkage of Buprenorphine prescribing in Medical Health Homes.¹⁴¹ Through the same ACA-based reimbursement program that Maryland utilizes, Rhode Island established a system of health homes that provide access to behavioral health care, medical care, and community based social services for those with chronic conditions. Services are again available for those with Medicaid enrollment who suffer from at least two chronic conditions, have one condition with a high risk of developing a second, or have one serious mental health condition.¹⁴² In accordance with guidelines set out by the Centers for Medicare and Medicaid Services, the Rhode Island model abides by **six standard principles**: comprehensive care management, care coordination and health promotion, comprehensive transitional care from inpatient to other settings, individuals and family support, referral to community support services, and the use of health information technology to link services.¹⁴³

A further aim of the Rhode Island model is to establish positive relationships between health care providers and patients. Many individuals undergoing MAT in opioid treatment programs are hesitant to use traditional medical services due to fear of discriminatory or hostile behavior from providers. Accordingly, studies have shown that positive patient experience with medical staff

is associated with improved health outcomes and better medication adherence.¹⁴⁴

Additionally, Rhode Island is a national leader in addiction treatment within corrections. A new model of MAT within the Rhode Island Department of Corrections was launched in 2016 and operationalized in 2017. Through a partnership with CODAC Behavioral Health, a community vendor with statewide capacity to provide MAT post-release, **Buprenorphine, Methadone, and Naltrexone are offered to individuals within DOC custody.** Those who enter Corrections while receiving MAT are maintained on their respective medications, and those who enter Corrections not on MAT are screened and provided MAT as needed.

A key element of the model is **continuity of care** post-release. 12 Centers of Excellence in MAT were established, through a repurposing of an existing network of CODAC outpatient facilities, as community based locations for continued care for reentering individuals.¹⁴⁵ These facilities are scattered throughout the state to enable inmates to seamlessly continue treatment regardless of their location post-release. In order to further facilitate this transition, incarcerated individuals are coached on Medicaid application prior to their release.

Rhode Island further implemented statewide pre-arrest diversion programs at law enforcement agencies in which mental health counselors help divert people with

SUD into treatment and away from the criminal justice system.¹⁴⁶

As a result of these measures, Rhode Island saw a **statewide reduction of 12.3 percent in total overdose deaths**,¹⁴⁷ and a 60 percent reduction (26 to 9) in overdose deaths among those recently incarcerated,¹⁴⁸ from a comparative time frame of January 1 to June 30, 2016, and January 1, 2017 to June 30, 2017. Ten of the 26 overdose deaths in 2016 occurred within 30 days of the inmate's release. Over half died within four months of release.¹⁴⁹

Expert accounts agree that the success of the Rhode Island model provides evidence for national best practices. Traci Green, an associate professor at Brown University and physician at Boston Medical Center, states that "this program is the first in the country to offer all three medications behind the walls in a patient-centered fashion... The Rhode Island Correctional System was able to align and learn and create a protocol that reduced concerns about diversion, improved patient safety, and gave a clear sense of public safety within the facilities. These data show it's possible to do this in a large state setting."¹⁵⁰

Josiah Rich, a doctor at the Rhode Island Department of Corrections in Cranston, attributes continuum of care outside of the prison wall as a significant factor in Rhode Island's success, arguing that "you can have the best program inside the correctional institute, but if you don't connect to treatment on the outside, it will have no impact. In fact, it may

141 Walters et al. 2016

142 Sorti, S. "Integration of Health Homes in Rhode Island OTPs." Models of Integrated Patient Care Through OTPs and DATA 2000 Practices. 2016.

143 Ibid.

144 Ibid.

145 Jama Psychiatry. "Post incarceration Fatal Overdoses After Implementing Medications for Addiction Treatment in a Statewide Correctional System." Jama Psychiatry. 2018.

146 Raimondo, G. and Alexander-Scott, N. "Executive Order: Taking Further Actions to Address the Opioid Overdose Crisis." 2017.

147 Jama, 2018

148 Becker, D. "Rhode Island Study Shows Benefit to Medication-Assisted Addiction Treatment in Jails." WBUR News. 2018.

149 Parloff, R. "How Rhode Island Cut Opioid Overdose Deaths; Slashed Those of Recently Released Inmates 60%." Opioid Watch. 16 March 2018.

150 Ibid.

even have a negative impact.”¹⁵¹

4. Texas

Texas has one of the lowest opioid death rates in the nation, at **4.90 deaths in every 100,000**, as of 2016.¹⁵² This is likely due to a number of measures taken between 2009 and 2014 that moved the standard of care in the state towards a more evidence-based model.

In 2009, the state authorized a substance abuse benefit in Medicaid extending from outpatient to residential services.¹⁵³ This prompted Texas’ treatment field to move away from an acute care model of brief treatment episodes to a long-term, sustained recovery model that encompasses the whole health and well-being of individuals. Accordingly, in 2010, the Texas Health and Human Services Commission (HHSC) implemented the **Recovery Oriented Systems of Care**, through which the state gathers information and recommendations for designing protocols that implement holistic, recovery-oriented models of care for use within the behavioral health community. This model incorporated the development of a multidisciplinary and individualized recovery plan in partnership with the patient, and established a series of local community networks across the state, emphasizing the need for community collaboration of government agencies at all levels in order to ensure a continuum of care.¹⁵⁴

In 2014, the HHSC took a further step and developed a state-

wide initiative focused on the development of long-term **recovery support services (RSS)** within community-based organizations in local communities across Texas. The collective resulting network of 22 RSS service providers is known as the Recovery Support Services Project. The Project emphasizes recovery support systems through peer recovery coaches, peer-run groups, development of recovery homes and schools.¹⁵⁵ The initiative makes a substantial investment in recruiting peers in recovery to become “recovery coaches,” who complete a 46 hour HHSC-approved Texas Recovery Coach Training Curriculum and then work under supervision of community programs to provide support for others in recovery.¹⁵⁶ The services additionally include a variety of non-clinical services including training in life skills such as financial management, parenting, employment and stress management, educational support, and connections to mutual aid support groups.¹⁵⁷

Between the implementation of the project on May 1, 2014 and August 31, 2016, the 22 Texas RSS programs provided 86,000 hours of coaching including in-person, telephone, internet based, traveling companion, and recovery support group services. 1,900 individuals received one-on-one recovery coaching that emphasized long-term recovery for a minimum of 12 months.¹⁵⁸ **83 percent of participants** were abstinent or had significant reductions in substance use at a 12-month check-up. 71 percent had improved recovery capital at

the same time. Healthcare service utilization decreased over the first 12 months of recovery coaching in outpatient settings (3,824 visits at enrollment; 649 visits at 12-month check-up), inpatient settings (8,564 days at enrollment; 1,064 days at 12-month check-up), and emergency room visits (422 visits at enrollment; 150 visits at 12-month check-up).

Furthermore, the decreased usage of services is **estimated to have saved \$3,260,464** in healthcare costs. This represents a 74 percent reduction in healthcare costs for 1,123 individuals between enrollment (\$4,384,325) and 12 months (\$1,123,863).¹⁵⁹ Long-term recovery coaching participants also improved in a variety of life domains. 54 percent of long-term coaching participants owned or rented their own living quarters at a 12-month check-up, in comparison to a 32 percent housing rate at enrollment. Overall employment improved from 23 percent at enrollment to 57 percent at a 12-month check-up. Average monthly wages of employed participants increased from \$249 per month at enrollment to \$865 at a 12-month check-up.¹⁶⁰

5. Kentucky

Kentucky offers MAT at eight prisons (out of twelve prison facilities) and 24 jails (out of 76). Individuals who would benefit from substance abuse programming are contacted six months prior to their release date. Though participation is voluntary, the DOC offers a ninety-day reduction in sentence length for cooperation. While in custody, program participants go through

151 Ibid.

152 NIDA, 2018.

153 Mangrum, L., Spence, R., Nichols, M., & Petersen, C. “Recovery Support Services Project, Fiscal Year 2016.” The University of Texas at Austin Addiction Research Institute. 2017.

154 Texas Health and Human Services. “Texas Recovery Initiative.” Texas Health and Human Services. 2 March 2017.

155 Mangrum et al. 2017.

156 Ibid.

157 Ibid.

158 Ibid.

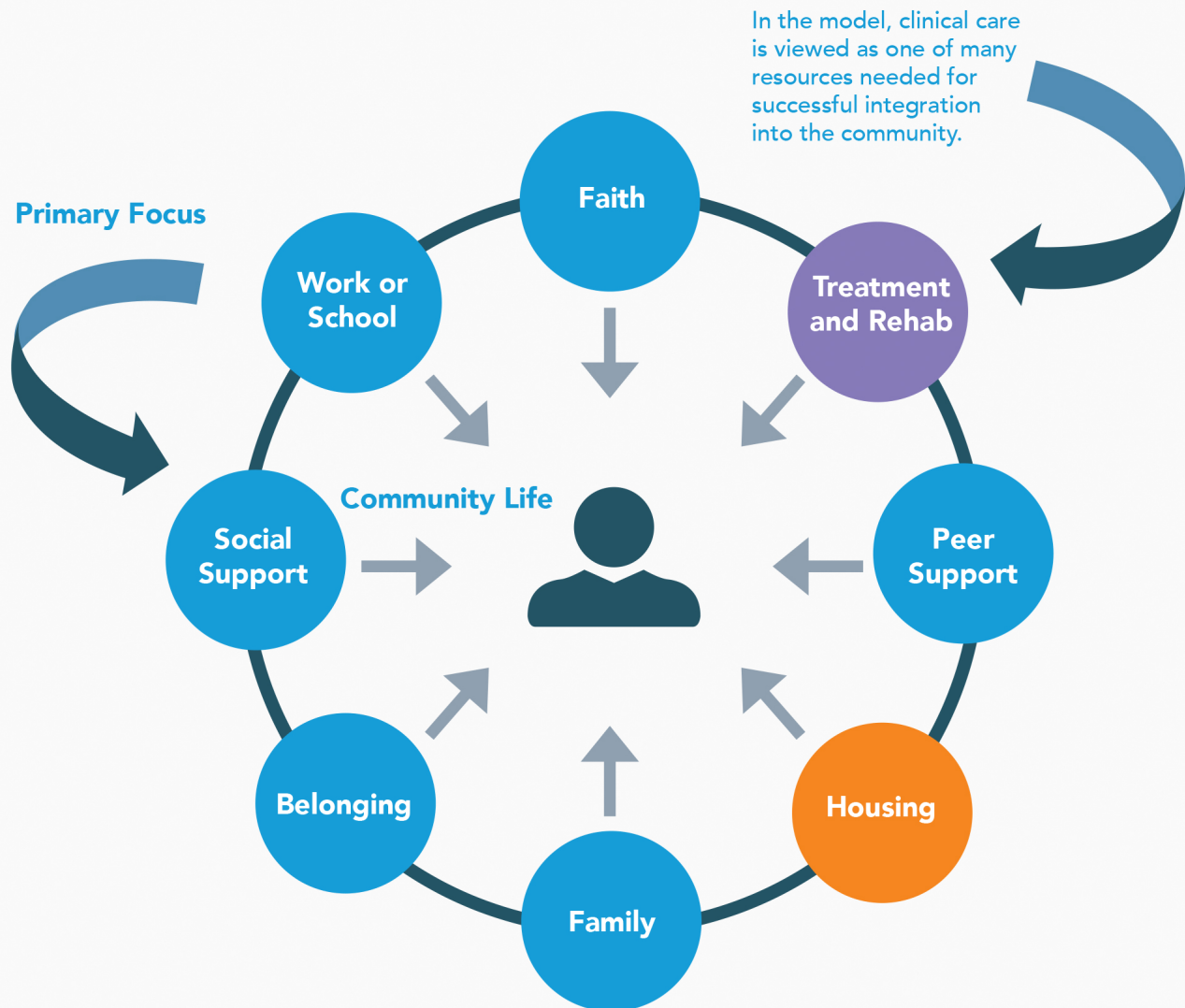
159 Ibid.

160 Ibid.



"Recovery Oriented Systems of Care" (Texas Health and Human Services Commission)

The Texas Health and Human Services Commission (HHSC) implemented the Recovery Oriented Systems of Care. This model incorporated the development of a multidisciplinary and individualized recovery plan in partnership with the person receiving treatment. It also established a series of local community networks across the state, emphasizing the need for ensuring a continuum of care.



a twelve-step therapy program, attend classes about chemical dependency, and receive cognitive behavioral therapy. Inmates may additionally choose to receive an initial injection of naltrexone five weeks prior to release and a second injection one week prior to release. Patients continue to receive monthly injections of naltrexone for a minimum of six months. Additional therapies are determined by the patient's social service clinician; the DOC offers day programs, intensive outpatient programs, general aftercare, and relapse prevention support groups.

Kentucky **saved \$4.46 for every dollar** spent on corrections-based substance abuse treatment. Individuals with untreated addictions cost the community corrections facilities far more than does treatment. Additional cost savings are made possible through reductions in the recidivism rate of program participants. Those who participated in substance abuse programming—normally, a high-risk population with a higher recidivism rate—had a recidivism rate of 28.5 percent. Those who participated in treatment while on parole were more likely to stay out of prison, with a recidivism rate of 11.6 percent. One year post-release, **52.1 percent were sober** and 76.6 percent were attending twelve-step meetings. 55.2 percent of people in this study were opioid users.¹⁶¹

Principles

These national models exemplify a number of **guiding principles for addiction treatment** both within the incarcerated population and in general. Such principles are synthesized by Shatterproof,

a national leader in addiction treatment advocacy and research, in their recently released National Principles of Care:¹⁶²

1. **Universal screening for substance use disorders across medical care settings**
2. **Rapid access to appropriate Substance Use Disorder care**
3. **Personalized diagnosis, assessment, and treatment planning**
4. **Engagement in continuing long-term outpatient care with monitoring and adjustments to treatment**
5. **Concurrent, coordinated care for physical and mental illness**
6. **Access to fully trained and accredited behavioral health professionals**
7. **Access to FDA-approved medications**
8. **Access to non-medical recovery support services**

In order for New Jersey to successfully address its addiction crisis, the state must implement a new model that operationalizes each of these best practices.

Implementation in New Jersey -- Recommended Program Proposal

In order to best implement these practices and, in so doing, to improve addiction treatment and cost efficacy in New Jersey, the state must move aggressively and immediately to establish an integrated approach to coordinated addiction treatment. To this end, the

NJRC recommends the **creation of a new statewide standard of care and an integrated addiction treatment program**, with program sites in each county. As the program is planned and implemented statewide, the NJRC will conduct a demonstration project, providing the proposed model of care to its clients through its eight reentry sites across the state, in order to demonstrate efficacy.

Following best practices and other state models, the proposed program will be structured similarly to the hub-and-spoke model, with intensive treatment offered at centralized MAT treatment facilities, and long-term continued treatment and wrap-around services offered through community-based programs. In order to further support individualized care and to facilitate a continuum of personalized care, this basic structure will be overlaid with the coordination of navigators, who will be assigned to participants on an individual basis and guide them through the disparate services.

Addicted individuals will access the program through enhanced collaboration among various state departments including the Department of Corrections, the Department of Human Services, and the Department of Health, as well as hospitals and treatment centers across the state. All those with a SUD who enter correctional facilities, emergency departments, primary care practices, treatment centers, or any other service provider, will be referred to the proximate participating MAT treatment center for admission to the program.

¹⁶¹ Beckman, N., Bliska, H., Schaeffer, E.J., "Medication Assisted Treatment Programs in Vermont State Correctional Facilities: Evaluating H.468 through a State by State Comparison." The Class of 1964 Policy Research Shop, The Nelson A. Rockefeller Center at Dartmouth College, The Center for Public Policy and the Social Sciences. 2018.

¹⁶² Shatterproof. Shatterproof National Principles of Care. 2018. Found at <https://www.shatterproof.org/shatterproof-national-principles-of-care>.

These best practices are corroborated by numerous sources including the recent Surgeon General's Report.

National Principles of Care for Addiction Treatment Within the Incarcerated Population and in General*

In order for New Jersey to successfully address its addiction crisis, the state must implement a new model that operationalizes each of these best practices

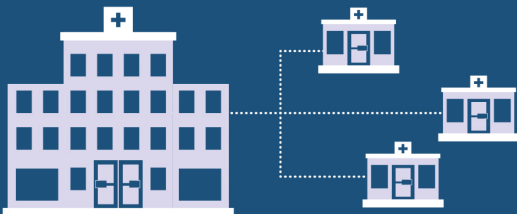
- 1** Universal screening for substance use disorders across medical care settings



- 3** Personalized diagnosis, assessment, and treatment planning



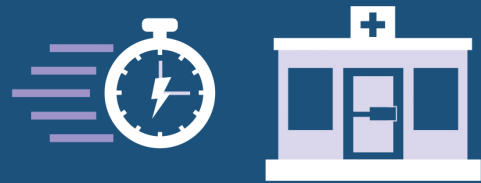
- 5** Concurrent, coordinated care for physical and mental illness



- 7** Access to FDA-approved medications



- 2** Rapid access to appropriate Substance Use Disorder care



- 4** Engagement in continuing long-term outpatient care with monitoring and adjustments to treatment



- 6** Access to fully trained and accredited behavioral health professionals



- 8** Access to Non-medical recovery support services



*These principles were synthesized by Shatterproof, a national leader in addiction treatment advocacy and research.

In accordance with the successes seen by other state models, the proposed program will largely repurpose and incorporate existing New Jersey infrastructure. Currently, there are 244 state contracted substance use disorder treatment sites, of which 56 provide MAT. All counties, with the exception of Bergen, Gloucester, Hunterdon, Salem, and Sussex, house facilities that provide MAT. In order to implement the proposed program, partnering hospitals, or, where lacking, approved MAT treatment sites, will act as the centralized MAT treatment facilities, and the remaining treatment facilities will act as local coordinators for continued treatment. In those counties in which a MAT facility is lacking, training will be provided to at least one substance use disorder site, to ensure that continuity of care is maintained. Wrap-around services will be provided through partnership with providers such as the NJRC, and through the coordination of services by the personal navigator. Funding for the statewide program will come from various state and national sources, including state Medicaid, federal Medicaid, SAMHSA funding, grants, and private insurers.

Program Elements

There are **six elements** integral to the program which will facilitate its effectiveness: MAT-based treatment, long term continuity care, navigators, peer support/recovery coaches, a health information exchange, and evaluation.

1. MAT-Based Treatment

Upon entrance into the program, each patient will receive a

comprehensive screening at his or her MAT treatment center to locate both addiction needs and any co-occurring disorders. Multidimensional determination of addiction treatment needs will be based on the ASAM Criteria, and all levels of care will be available.¹⁶³ According to needs, the patient will then be enrolled in a personalized MAT treatment program, including whatever medication is deemed most applicable, as well as addiction therapy, counseling, and any other services necessary for stabilization. The ASAM Criteria will be utilized to determine the appropriate level of care for an individual when presenting for evaluation. When a patient is in need of some form of residential treatment based on ASAM review, they will be placed in a residential program in order to promote long-term stability and structure.

All forms of MAT will be offered in order for treatment to be effective and to meet the needs of each patient. This includes all medications— Buprenorphine, Methadone, and Naltrexone – as well as all types of treatment – long- and short-term residential, standard outpatient, intensive outpatient (IOP) and detox. In accordance with best practices, the treatment plan will also include **regular urine testing**, in accordance with ASAM's Appropriate Use of Drug Testing in Clinical Addiction Medicine guidance. Recognizing that relapse is part of recovery, part of the disease, an appropriate response to a positive test is to quickly reengage through the hub and to clinically intensify services. A positive test may result in possible sanction, including a wide array of responses. For those on parole or probation, it is recommended that any sanction

be according to Swift, Certain, and Fair principles.

After stabilization at the intensive MAT treatment center, each patient will be **referred to a community provider**, and will continue maintenance treatment on a regular basis determined by need. In the event of a relapse, the patient will immediately be referred back to the treatment center, where his or her treatment will be re-evaluated and updated as needed, and he or she will be stabilized again before referral back to the community provider.

2. Continuity of Care

Each participant will remain in the program and receive services for a **minimum of 6-12 months** with continued support provided beyond that, as required. This is in accordance with best practices and experts, including the Surgeon General's report.¹⁶⁴ During this time, each participant will continue to receive MAT, opioid-maintenance therapy, and addiction counseling as needed. In addition, through the local coordinating treatment center, and through personalized assistance by the navigators, patients will be linked to all other services as needed – such as treatment for any mental, physical, or behavioral co-occurring disorder; community and peer-based services such as Alcoholics Anonymous and Narcotics Anonymous; housing, employment, and food assistance; and wrap-around services like those offered by the NJRC.

It is essential that these services be offered and provided **consistently and according to the patient's personal needs and treatment plan**. Warm hand-offs between service

¹⁶³ American Society of Addiction Medicine (ASAM). The ASAM Criteria. ASAM 2013.

¹⁶⁴ U.S. Department of Health and Human Services (HHS), Office of the Surgeon General, Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health. Washington, DC: HHS, November 2016.

providers through the centralized system will ensure that patients receive timely, appropriate, and situation-specific care.

3. Navigators

Integral to the structure of the program are **navigators, who will work on an individual basis with participants** to coordinate and implement their personalized treatment plan, and to maintain a continuum of care throughout the year. Each navigator will work one-on-one with at most 100 patients. They will meet with participants post initial assessment and once a treatment plan is in place to develop a relationship with the participants and their support system; they will also be responsible for monitoring progress made during the period of intensive treatment, through collaboration with the health care providers in the program. Following intensive treatment, the navigator will remain in contact with the patient for as long as the patient needs to be engaged based on their own unique needs with meetings at least once a week and with periodic face-to-face meetings.

The navigator will be responsible for **coordination with local service providers** and for assisting the patient in setting up appointments and communicating with necessary providers. In addition, the navigator will assist the patient in any administrative tasks, accompany the patient to doctor's appointments, and ensure that the patient continues to take any prescribed medication as needed. The prevention of relapse and other medical or personal issues that result from failure to take medication will prevent unnecessary emergency department use and consequently will reduce associated healthcare costs.

4. Health Information Exchange

A health information exchange (HIE) will be implemented for the program to maintain a high standard of communication among service providers and navigators. This will ensure, in accordance with best practices and national models, a bidirectional flow of information between the intensive MAT treatment facility and community providers, as well as between all service providers and navigators. All participating service providers and staff will be trained to report information through a coordinated HIE that will funnel all information into a central database, and will then release information as needed according to the needs of following providers. In addition to reports by service providers, navigators will periodically input information regarding the progress of each patient. In accordance with HIPAA and 42 CFR Part 2 standards, patients will be informed of and consent to the collection of data before any identifying information is recorded.

The Department of Health and the New Jersey Innovation Institute (NJII), a division of the New Jersey Institute of Technology (NJIT), have jointly spearheaded recent efforts to implement a statewide HIE. These efforts are essential to the wellbeing of both addiction treatment and all medical record-keeping across the state. **The proposed program can integrate with this HIE once developed**, allowing participating providers to access information at one location, and in accordance with all privacy laws and standards. The benefits of an HIE are numerous. First, electronic medical records can be **easily held and accessed** by physicians and medical professionals in disparate locations, as will be necessary as the patient moves

through different stages and locations of the MAT program. Second, relevant information not traditionally held in an electronic record system, such as social determinants of health, can be **easily communicated** among service providers. Third, a **centralized location** for information will prevent the duplication of records or miscommunications often responsible for inappropriate prescribing, including through communication with the state's Prescription Monitoring System (NJMPMP). Fourth, **highly personalized treatment plans** can be recorded and updated as needed, and progress can be tracked. Finally, information held in an HIE can be used, provided the relevant privacy measures are taken, to **track and evaluate metrics** of success of the program.

5. Peer Support/Recovery Coaching

The engagement of **peer support workers** who have themselves experienced OUD recovery processes is a vital practice in numerous state models. Peer support/recovery coaching extends beyond the clinical environment and offers advocacy, sharing of resources, development of healthy community and relationships, participation with Narcotics Anonymous, Alcoholics Anonymous, and other recovery groups, goal setting and mentoring services.

Peer support/recovery coaching is an evidence based practice, which requires the development of core competencies to provide **critically need services** to recovering persons and their families. SAMHSA has recognized peer support advanced recovery from substance abuse disorders in the role of recovery support services in the recovery orientated system of care. Peer support/recovery coaching may support those with mental health and

or substance abuse disorders. Peer support has also provided assistance to address health disparities of those in the recovery process from Latino and African American communities.

6. Evaluation

Data will be gathered throughout the program from each participant's intake to five years post-completion. After implementation of the demonstration project, a **comprehensive formative analysis** will be performed before implementation statewide; and following implementation, **longitudinal and comparative analyses** will be performed to assess overall success. Metrics will include: relapse rate, death rate, rate of readmission to intensive treatment, rate of emergency department use, recidivism and re-offense rate, employment, housing stability, and food stability. Additionally, an **overall cost analysis** will be done by evaluating the costs of MAT, treatment for SUD, treatment for co-occurring conditions, emergency department visits, reincarceration costs, food stamps and welfare costs, and contributions to the workforce.

Next Steps

New Jersey should take a number of steps that will bolster existing addiction treatment infrastructure and further progress towards the implementation of a more effective model.

1. **Following the New York model, create an independent commission charged with facilitating the addiction treatment program. This commission would then be responsible for reporting to the governor and the state**

legislature.

2. **Adopt a long term template for addiction treatment in New Jersey, in accordance with best practices, and in compliance with Federal Parity Law standards.**
3. **Make MAT the standard of addiction care throughout the state, and provide access to all FDA-approved medications at every treatment center.**
4. **Improve and expand access to effective, MAT-based addiction treatment in New Jersey prisons and jails.**
5. **Integrate physical, mental, and behavioral health care systems through a unified single-license system, as a collaboration between the NJ Department of Health and the NJ Department of Human Services.**
6. **Continue efforts, begun by the Department of Health in conjunction with NJII to create a statewide health information exchange.**
7. **Reinforce existing MAP programs for parolees by including MAT, peer support/recovery coaching, long term and step down treatment options according to individual needs, and treatment for co-occurring disorders. Modify payment structures to seek and accept alternative means of payment such as Medicaid as the primary payer. Also, review mandatory post-release supervision to improve addiction treatment compliance. In 2011, Kentucky, which had a max-out rate similar to New Jersey's, passed legislation including a mandate for a period of post-release**

supervision ed in correction costs¹⁶⁵.

Conclusion

New Jersey must reform its standard of care and implement a statewide evidence-based model of addiction treatment in order to change the trajectory of the worsening opioid epidemic. The treatment model proposed in this report synthesizes best practices drawn from scientific research and the successes of other state models. Decreasing in relapse, overdose, and death rates will result in improved public health, lowered incarceration and recidivism rates, and sustainable long-term state savings. The implementation of these practices and the creation of a robust, evidence-based template of addiction treatment care in New Jersey is thus a matter – quite literally – of life and death.

¹⁶⁵ Pew Charitable Trusts. "Mandatory Reentry Supervision: Evaluating the Kentucky Experience." Pew Charitable Trusts. 2014.

Implementation in New Jersey: Recommended Program Proposal

In order to improve addiction treatment and cost efficacy in New Jersey, NJRC recommends the creation of a new statewide standard of care and an integrated addiction treatment program. The following elements are integral to facilitating the program's effectiveness.

