

Opioid Use Disorder, Treatment, and Barriers to Employment Among TANF Recipients

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Executive Summary

This report identifies the state of current research on the prevalence of opioid use disorder and treatment services among Temporary Assistance for Needy Families (TANF) participants and the TANF-eligible population. Additional emphasis is provided on how opioid use disorder negatively affects work-readiness and employment attainment. Funded by the U.S. Department of Health and Human Services' Administration for Children and Families, this project aims to improve economic well-being and increase TANF agencies' knowledge base. This report is based on a literature review of opioid use disorder treatment strategies and information on the effects of opioids in the TANF, TANF-eligible, and low-income populations.

Opioid use disorder in the United States has skyrocketed since 2010. Opioids contributed to 42,249 American overdose deaths in 2016, and this rate continues to swell. Little contemporary research has been conducted on the effects of this surge on the TANF population. Existing research about the opioid crisis primarily focuses on its effects on the general population, while TANF-centered studies almost exclusively examine general substance use disorder. Available research suggests that opioid and substance use disorders are significant barriers to employment for low-income individuals. Treatment and prevention strategies that consider substance use disorders as one of many social, economic, and psychological barriers to employability tend to be more effective in promoting recovery and integration within the labor market.

Key takeaways of this report include the following:

- To date, limited research exists on the magnitude of opioid use disorder within the TANF and TANF-eligible populations. However, individuals in poverty are more likely to be dependent on opioids than those with incomes over 200% of the federal poverty line. This appears disproportionately harmful to the TANF population, although geographic trends should also be considered.
- Opioid use disorder falls within a web of coexisting problems that exacerbate low-income individuals' difficulties in securing employment.
- Promising strategies for opioid use disorder include medication-assisted treatment (MAT), prescription drug monitoring and national prescribing guidelines, contingency management, and community prevention coalitions.
- Few opioid use disorder programs tailor their assessment, treatment, prevention, or recovery services specifically to TANF recipients' needs.

While this review identified substantial information about the extent of opioid use disorder and the barriers to employment it creates, it also revealed gaps, especially the lack of strategies targeting TANF and TANF-eligible populations. Information about opioid treatment strategies targeted at employment and work-readiness for TANF recipients is limited. Some strategies have shown promise—sometimes using non-experimental methods or with different populations—and could be evaluated for TANF. This includes better screening and assessment tools, Intensive Case Management (ICM), treatment addressing coexisting issues, and the Individualized Placement and Support (IPS) model of supported employment.

Introduction

Since 2010, opioid use disorder in the United States has grown to an unprecedented level and garnered significant public attention due to its widespread socioeconomic consequences. As the American opioid crisis worsens, the U.S. Department of Health and Human Services has a renewed interest in how this issue affects the TANF and TANF-eligible populations. Preliminary data from the Office of the Assistant Secretary for Planning and Evaluation reveals that opioid dependence is twice as prevalent among individuals in poverty than individuals with incomes above 200 percent of the poverty line.² Yet these rates may understate the scope of the crisis; social stigma, drug screening for welfare recipients, and past trauma lessen individuals' willingness to disclose their substance use disorder.³

This difficulty in collecting accurate information is exacerbated by the lack of research specifically focused on opioids and TANF recipients. Studies on TANF clients and substance use disorder—with most of this research dating back to the late 1990s and early 2000s—concentrated on general substance use disorder rather than opioid use disorder specifically. Contemporary studies that do focus on opioid use disorder target the general population, not just TANF recipients or low-income individuals. This scarcity of updated research has sparked a need for better information about the scope of the opioid crisis, how it affects the employability of low-income Americans, and the availability of services for TANF recipients addicted to opioids. To address these issues, this report examines the following questions:

- What is the current research on the prevalence and severity of opioid use disorder among TANF participants and the TANF-eligible population?
- What are some barriers to employability among individuals with substance use disorders?
- How is opioid use disorder and its respective barriers to employability different from other substance use disorders?
- What are emerging or promising strategies for screening, assessing, and treating individuals with opioid use disorder?

To answer these questions, this report summarizes findings from a literature review of opioid use disorder treatment strategies and current information on the effects of opioids in the TANF and TANF-eligible populations. It begins with an examination of the prevalence of opioid use disorder in the general, low-income, and TANF populations. Next, this report overviews how substance and opioid use disorders act as powerful barriers to employment for low-income individuals. The third section details the variety of strategies that the medical community, governments, and other stakeholders engage in to prevent and curb opioid use disorder, with distinct attention given to low-income and TANF populations. This report concludes with a discussion of challenges facing TANF policymakers, practitioners, and service providers attempting to mitigate the opioid crisis.

Prevalence of Opioid Use Disorder

Opioid Use Disorder versus Other Forms of Substance Use Disorder

Opioids are a category of drugs that includes heroin, fentanyl, and certain prescription painkillers (e.g., oxycodone, hydrocodone, and morphine). The Fifth Edition of the Diagnostic and Statistical Manual of Mental Disorders defines opioid use disorder as "a problematic pattern of opioid use leading to clinically significant impairment or distress," as shown by a set of specific criteria. Although prescription opioid use disorder has steadily increased in the last 15 years, the abuse of heroin and illegally-made synthetic opioids has soared since 2010. Prescription opioids can be ripe for abuse, as

individuals often take out multiple prescriptions or use medications intended for other people. However, many people misusing prescriptions eventually turn to heroin due to limited prescription supplies or heroin's cheaper price.⁸

Opioid use disorder influences individuals and communities differently than other forms of substance use disorder. Taken primarily for pain reduction, opioids can result in lethal overdoses due to the substance's tendency to create drowsiness, respiratory depression, and a high tolerance. Opioid prescriptions have also largely contributed to the 500 percent increase of neonatal abstinence syndrome—a condition where newborn babies are born addicted to a substance—in the United States from 2000 to 2012. Furthermore, prescription opioids' availability and the widespread need to alleviate chronic pain have distinctly catalyzed opioid use in recent decades.

Pain—and opioids' assistance in relieving it—is key to understanding how opioids connect to unemployment. Forty percent of nonworking men aged 25-54 claim that pain prevents them from securing a job. ¹² Furthermore, regions with greater opioid medication rates have also experienced declining labor force participation. ¹³ Other forms of substance use disorder have similar effects on employment. A 2000 study revealed that the probability of TANF recipients working over 20 hours per week was 20 percent lower for people experiencing drug dependence. ¹⁴ While many substance use disorders may have similar, negative effects on employment, opioids' availability through legal means and Americans' need for chronic pain relief distinguish treatment and prevention methods for opioid use disorder.

Opioid Use Disorder in the General Population

As of 2015, two million Americans had a substance use disorder involving prescription opioids, while over 590,000 Americans experienced a heroin use disorder. Apart from those with a use disorder, 10.5 million other Americans took a prescription opioid other than prescribed, took someone else's prescription, or used a prescription to get high. Even more worrisome, deaths caused by opioids have more than quadrupled since 1999 and continue to increase. Heroin was involved in over 15,000 deaths, natural and semi-synthetic opioids contributed to more than 14,000 deaths, and synthetic, non-methadone opioids led to over 19,400 deaths in 2016. The latter category was only involved in approximately 3,000 deaths three years earlier. A 2017 Centers for Disease Control and Prevention (CDC) report revealed that opioid-related overdoses led to 42,249 American deaths in 2016, over 9,000 more than the 33,091 opioid-involved deaths in 2015. These deaths constituted over two-thirds of all drug overdose deaths in 2016, while only making up 45 percent in 2010.

Regionally, rural towns and middle-class suburbs are the hardest hit by the opioid crisis. ²¹ Rural areas experience 45 percent more drug-related deaths per capita than urban centers and also have higher rates of opioid overdoses. ²² Researchers believe these discrepancies stem from rural areas' economic difficulties and higher average rates of opioid prescription. ²³ Geographically, opioid-related deaths occur most often in New England, the Midwest, and rural Appalachia. ²⁴ In 2015, West Virginia, New Hampshire, Ohio, Rhode Island, and Massachusetts made up the top five states for opioid deaths per capita. While the average opioid overdose death rate for the United States is 10.4 per 100,000 people, West Virginia's death rate—the highest in the country—is 36 per 100,000. ²⁵ Moreover, recent increases in opioid use disorder have occurred in similar, primarily rural areas, with Maine, Massachusetts, and New Hampshire experiencing some of the largest increases in opioid overdose deaths between 2014 and 2015. ²⁶

Demographically, although individuals who are 45-54 years old experience the greatest frequency of opioid overdoses, adults 55-64 years old have experienced the greatest increase in overdose deaths since 1999.²⁷ Almost twice as many men experienced opioid overdose deaths as women in 2015.²⁸ However, women are more likely to use prescription opioid medications for longer periods, use in higher doses, and develop addictions quicker than men. Subsequently, heroin and prescription opioid use disorder rates have increased much faster for women in the last 15 years.²⁹ This is increasingly important when examining opioids' effects on TANF recipients, since over 85 percent of adult TANF recipients are women.³⁰ These gender differences likely stem from a combination of social, biological, and psychological factors.³¹ Although non-Hispanic whites make up 61.3 percent of the American population,³² they experience over 80 percent of all opioid overdose deaths.³³ In addition to non-Hispanic whites being more likely to experience rural economic stressors—over three-quarters of rural residents are non-Hispanic whites—³⁴ physicians increase the chance for abuse by prescribing them opioids for back and abdominal pain more often than racial minorities.³⁵

Opioid Use Disorder in the TANF and Low-Income Populations

To date, limited research is available about the prevalence of opioid use disorder within the TANF and TANF-eligible populations. Much of the existing data is at least 10 years old and prior to the current opioid crisis. Stemming from multiple social and legal factors, the inaccuracy of substance use disorder rates clouds such research about the TANF population. Many researchers believe that precise rates are difficult to obtain because people with substance use disorders may hide their abuse. For example, while studies have consistently confirmed that low-income women use illicit drugs more often than their higher-income peers, a 2006 study claimed that little accurate data exists on their exact prevalence rates.³⁶ Individuals across all income levels hide their substance use, while lower-income individuals may also misreport due to the stigma attached to substance use disorders and fears that welfare recipients will lose their benefits if they reveal their addiction.³⁷ As of 2005, over 75 percent of state welfare offices still relied on recipients' self-disclosure of substance use disorder concerns—often followed by referrals to a substance use assessment—instead of comprehensive screening tools.³⁸ Although 96 percent of states that screened TANF recipients for substance use disorders referred individuals to substance use assessments, a 2002 study revealed only 59 percent of states screened TANF recipients for substance use at all.³⁹ Furthermore, a 2011 brief from the Office of the Assistant Secretary for Planning and Evaluation noted how TANF agencies screen and refer far fewer individuals to treatment than prevalence rates would imply. 40 Concerns over drug testing exacerbate the fear of disclosure; 15 states had versions of mandatory drug testing for public assistance recipients as of March 2017. Depending on the state, positive drug tests can lead to mandatory treatment, reduction in assistance, or even a temporary denial of assistance. 41 Therefore, the frequency of substance use disorders among the TANF population may be higher than reported, which underscores the need for more research, screening options, and policies that reduce incentives to hide abuse.

As noted earlier, individuals in poverty are twice as likely to be dependent on opioids as those with incomes above 200 percent of the poverty line. ⁴² Although more specific information is needed, research into Medicaid can help draw limited parallels to the TANF system—albeit without a focus on work—due to the programs' overlapping membership base. In 2009, approximately 98 percent of TANF cases also received Medicaid. ⁴³ Medicaid provides coverage for three out of 10 nonelderly individuals with an opioid use disorder, ⁴⁴ which is double what the program covered in 2005. ⁴⁵ About 636,000 Medicaid enrollees had an opioid use disorder in 2013, and subsequent Medicaid expansion likely increased this number. ⁴⁶ When examining substance use disorders overall, studies have shown that drug addiction is 10 times higher among Medicaid recipients than the general population. However, a need to

alleviate pain and subsequent substance use disorders may have contributed to individuals' need for Medicaid in the first place. Physicians prescribe painkillers to Medicaid enrollees twice as often as they do for other patients, increasing their exposure to opioids in the process. Moreover, Medicaid patients, including both elderly and non-elderly, are three to six times more likely to experience a prescription painkiller overdose than the overall population. Hollie all state Medicaid programs cover some form of MAT, states with less coverage may hinder access to treatment. Although Medicaid recipients' opioid use disorders provide valuable insight into the scope of the opioid crisis in low-income communities, more research still needs to be conducted specifically about TANF recipients.

Research examining the TANF population tends to emphasize findings about the frequency and implications of general substance use disorders, including those involving alcohol. One study employing a quasi-experimental research design estimated that the 1996 introduction of TANF correlated to a 10-21 percent reduction in illicit drug use by women at risk of welfare. ⁴⁹ TANF's drug sanctions, work incentives, and a strong economy likely contributed to this result. ⁵⁰ Past studies estimate that approximately five percent of TANF clients are addicted to an illicit substance and 10 percent have used an illicit drug in the past month. ⁵¹ Long-term welfare recipients are more likely to experience a substance use disorder than short-term recipients. ⁵² TANF recipients with a substance use disorder may also have worse socioeconomic measures than non-abusing TANF clients. A 2001 Office of Planning, Research and Evaluation report found that women on TANF with a substance use disorder had less income and more limited job skills than women on TANF without a substance use disorder. ⁵³

These studies do not, however, argue for a causal link between welfare receipt and substance use disorders. Most research investigating causation is outdated and has not found definitive results. Some researchers have suggested that substance use disorders make it more likely an individual will enter the welfare system. A 1998 study claimed previous-year drug use was associated with a higher chance of welfare receipt, ⁵⁴ while a 2006 study noted that welfare was a "major access point to identify and serve" low-income individuals with a substance use disorder. ⁵⁵ However, more research is needed to make and validate similarly causal claims about substance use disorders and welfare receipt.

Barriers to Employment

Opioid use disorder creates obstacles to the attainment and maintenance of secure, gainful employment. For those that do have jobs, an opioid use disorder contributes to economic and employment insecurity. Opioid use has a direct relationship to higher workers' compensation claims, costlier medical expenses, and fewer days worked. As of 2011, opioid use disorders led to \$25.6 billion in lost work productivity annually. The University of Chicago's NORC research group discovered that 42 percent of individuals with an opioid use disorder have worked for more than one employer in the past year, which is twice the national average. Moreover, Alan B. Krueger, Bendheim Professor of Economics and Public Affairs at Princeton University, suggests that the increase in opioid prescriptions from 1999-2015 could account for nearly 20 percent of the decline in American males' labor force participation rate and 25 percent of American women's. Opioid use disorder also poses great costs to the individual, as people with an opioid use disorder have eight times the healthcare costs as those not addicted to opioids. Such large costs harm workers' employment stability and the workforce's economic capacity.

Opioids and other illicit substances also pose a threat to the unemployed and underemployed. Compared to full-time workers, prescription painkiller abuse was nearly twice as high among unemployed Americans in 2015. Even part-time employment correlated to lower rates of abuse. While 9.1 percent of unemployed Americans abused prescription painkillers, only 5.4 percent of part-time

workers did the same. ⁶² Unemployment rates correlate strongly with opioid use disorder rates; the National Bureau of Economic Research found in early 2017 that opioid death rates increased by 3.6 percent for every one percent increase in county unemployment rates. ⁶³ This is increasingly alarming when almost half of working-age men not in the labor force take pain medications daily, two-thirds of which are prescribed. ⁶⁴

In addition to its economic effects on employment, opioid use disorder falls within a web of coexisting problems that worsen low-income individuals' difficulties in securing employment. Many studies conducted on this issue have focused on low-income women. A 2003 study found that female TANF recipients who participated in CASAWORKS For Families—a program created to provide collaborative, interagency case management services to low-income people with substance use disorders—displayed an average of six different potential barriers to employment. Some of these barriers included limited work experience, domestic violence, low levels of education, and mental health disorders. Other research on overlapping barriers to employment found that substance-abusing women on TANF experienced such coexisting problems twice as frequently as women on TANF without a substance use disorder problem.

Employment also has a distinct relationship to coexisting problems and substance use disorders. The preceding study further argued that women enrolled in TANF would be more likely to successfully transition to employment through substance use disorder programs that integrated employment training than through welfare-to-work programs. ⁶⁷ There is mixed evidence whether employment alone can decrease substance use disorders. For example, the National Center for Children in Poverty recommends using both treatment services and employment access to address substance use disorders. ⁶⁸ Multiple studies have also indicated that employment before or during substance use disorder treatment can increase retention and success. ⁶⁹ Therefore, substance use disorder treatment methods that consider coexisting problems may help decrease barriers to employment and abstinence.

Treatment and Prevention Strategies

Few opioid use disorder programs tailor their assessment, treatment, prevention, or recovery services specifically to TANF-eligible populations. However, some opioid use disorder programs change how they provide services for TANF recipients. Illinois and Washington's state programs, for example, prioritize TANF recipients and their families for treatment services, while New Jersey's Department of Human Services funds TANF recipients' substance use disorder assessment and treatment needs.⁷⁰

TANF recipients and other low-income individuals with substance use disorders typically utilize a variety of medical, behavioral, case management, and community-based treatment options designed with the general population in mind. This review notes a selection of strategies, which are not representative of all treatment and prevention approaches currently used. Many strategies are used in tandem with others, each focusing on prevention, treatment, and recovery differently. Additionally, as evidence of these strategies' cost-effectiveness is limited, it is important to continue researching the physical, economic, and social effects of each treatment.

Opioid Use Disorder Strategies

MAT combines counseling with medication designed to normalize body functions and relieve opioid withdrawal symptoms. For those with an opioid use disorder, medical treatments—typically administered through regular methadone, buprenorphine, or naltrexone—often provide the best chance at recovery. MAT has been clinically proven to reduce the need for inpatient detoxification and

increase patients' ability to gain employment, among other benefits, yet is not used as widely as experts recommend. The Lower than recommended MAT usage may stem from several factors, including misconceptions about drug substitutions, inadequate physician training, and the need for daily clinical visits for patients using methadone. These make it difficult for TANF participants to meet work requirements if their treatment is not an allowable activity under their state's TANF program. Among other efforts, the 21st Century Cures Act, the recently-established Medicaid Innovation Accelerator Program, and 29 states' expansions of MAT funding have aimed to improve opioid treatment quality and mitigate MAT's accessibility problems during the past three years.

Strategies aimed at curbing improper prescribing practices, including prescription drug monitoring programs and national prescribing guidelines, have also become widespread. As of March 2017, Guam, the District of Columbia, and all states except Missouri have kept track of controlled substance prescriptions. Some states require practitioners to check their respective state database before prescribing opioids to patients, while others have enacted opioid prescribing limits. ⁷⁵ A small number of states have also passed pill mill laws that heavily regulate providers who prescribe opioids improperly or for non-medical purposes. ⁷⁶ Along similar lines, the CDC collaborated with the American Pain Society in March 2016 to create recommendations for providers about proper opioid prescribing habits. ⁷⁷

Contingency Management (CM)—based on incentive-based, positive reinforcement—⁷⁸ is effective at increasing the length of time an individual spends in treatment, yet is often expensive in resource-limited communities. CM practitioners provide people with an opioid use disorder with vouchers or prizes when they attend counseling sessions, pass a drug test, or perform other activities promoting abstinence.⁷⁹ Behavioral approaches like CM have been shown to help increase treatment attendance and completion, especially when combined with medical treatments. Even lower-cost versions of CM using voucher-based incentives have improved opioid treatment attendance and completion for female welfare recipients.⁸⁰

Community Prevention Coalitions (CPCs) initiate collaboration between a variety of stakeholders dedicated to decreasing opioid use disorder and overdose rates in their local community. These organized groups of community members help pool resources to prevent further negative effects of the opioid crisis in their neighborhood, city, or county. Common CPC members include hospitals, medical societies, law enforcement agencies, public health Non-Governmental Organizations, school districts, court systems, first responders, addiction treatment centers, and government officials. CPCs focus more on public engagement and treatment cohesion than other strategies. By entrenching treatment and prevention within multiple avenues in affected communities, this model provides more opportunities for low-income individuals with opioid use disorders to encounter treatment options (see Program Highlight box).

Substance Use Disorder Strategies Targeting Specific Populations

While there are few opioid use disorder treatment and prevention strategies specifically targeted to the TANF and TANF-eligible populations, relevant strategies may be identified by examining practices used to address issues of general substance use disorders and services tailored to related populations.

TANF Recipients

Screening and assessment procedures help identify individuals who need assistance to address their substance addiction. Low-income populations, especially those on TANF, are often hesitant to report drug use due to concerns over legal ramifications or loss of public benefits. While generic screening methods—caseworkers relying on welfare recipients filling out

self-disclosure forms—have limited effectiveness, specialized screening raises the chance that a TANF recipient will disclose their substance use disorder. In this method, higher-risk populations receive more screening, and trained caseworkers conduct oneon-one interviews. Although this method is generally used to supplement generic screening, it has been shown to increase substance use disorder referral of New Jersey welfare recipients from 4.4 percent to 10.3 percent.82 The University of Kentucky builds off this method through the Targeted Assessment Program (TAP). Established in 1999, TAP uses the Addiction-Severity Index, Beck Depression Inventory, and the DSM-IV to identify substance use disorders and other obstacles that hinder self-sufficiency. Restricted to those eligible or receiving TANF, TAP aims to break down the disclosure barrier for welfare recipients by treating substance use disorders as a coexisting problem.83

Intensive Case Management (ICM), which involves long-term, personal monitoring and social service assistance, has been shown in a 2006

Program Highlight: Project Lazarus

North Carolina's Project Lazarus exemplifies many of the non-behavioral approaches used in the opioid crisis by merging CPCs with a hub-and-spoke model of treatment. The former method grounds engagement in collaborative, non-governmental programs while the latter surrounds a public awareness campaign with different treatment access points, including harm reduction practices, ER policy refinement, and diversion control. Furthermore, Project Lazarus collaborates with state Medicaid infrastructure to reduce costs. Preliminary unadjusted data revealed that overdose deaths in Project Lazarus's county jurisdiction decreased from 46.6 per 100,000 in 2009 to 29 per 100,000 one year later.² These findings should be interpreted with caution until results from an ongoing rigorous evaluation are published.

¹ Brason II, Fred W. et al. "Lessons Learned from Implementing Project Lazarus in North Carolina." University of North Carolina at Chapel Hill, Injury Prevention Research Center. 2016. Accessed July 27, 2017.

https://iprc.unc.edu/files/2016/08/Lessons-Learned-White-Paper-FINAL-8-15-16.pdf.

² Albert, Su et al. "Project Lazarus: Community-Based Overdose Prevention in Rural North Carolina." 2011. *Pain Medicine* 12: S77-S85. Accessed August 31, 2017. https://www.ncbi.nlm.nih.gov/pubmed/21668761.

random assignment study to improve TANF recipients' employment, substance abstinence, and treatment attendance outcomes. By meeting with participants multiple times a month and covering their child care, transportation, and housing needs before treatment, ICM caseworkers successfully reduced substance use disorder rates for women on TANF. After 15 months of treatment, 43 percent of ICM participants were abstinent compared to 26 percent of the control group that received the usual care of basic screening and referral. A 2009 random assignment study confirmed that after one year, ICM was more effective in improving employment outcomes than screen-and-refer services.

Programs that combine treatment methods are promising for TANF recipients with a substance use disorder and coexisting problems. CASAWORKS for Families merged ICM with individualized service provision, close agency collaboration, and a goal of removing multiple barriers to employment for substance-abusing women receiving public assistance who possess a substance use disorder. Using a pre-post research design, participants showed a statistically significant increase of 60 percent in abstinence after 12 months. Moreover, employment among

these women more than doubled.⁸⁶ Although this is promising, more rigorous and more recent research is needed to confirm any seemingly beneficial or effective impacts.

The IPS model of supported employment has proven effective in randomized controlled trials to improve employment outcomes. Successful IPS programs have assisted individuals with financial management, mental health, substance use disorder, and vocational services, and encourage employment that promotes recovery. While it has most commonly been evaluated among individuals with mental health concerns, a 2017 randomized controlled trial showed IPS was a promising strategy to help secure employment for people with opioid use disorders. After one year, 50 percent of individuals with opioid use disorders who received IPS secured competitive employment, compared to 22 percent of the control group. A 2013 evaluation revealed that IPS also held promise at improving employment outcomes for TANF recipients with disabilities. It is important to continue examining whether IPS can be successful for a broader range of low-income individuals with substance use disorders.

Child Welfare System

By working with courts involved in the child welfare system, Family Treatment Drug Courts promote treatment through incentives and intensive judicial supervision. A 2008 study found that these specialized courts led to longer treatment participation. The Sobriety Treatment and Recovery Team (START) program—currently used in Kentucky, Ohio, and other states—deploys a similar drug court-treatment partnership that combines individualized coaching, child abuse services, and MAT. When studied, the more time that START participants with opioid use disorders engaged in MAT, the more likely they were to retain custody of their children. ⁹²

Non-court-based, substance use disorder treatment programs working alongside the child welfare system have shown mixed engagement and accessibility results. The Title IV-E Illinois Alcohol and Other Drug Abuse waiver demonstration study examined programs involving a Recovery Coach who conducted repeated, intensive outreach, facilitated access to services, and ensured patients were engaged in treatment. Study authors discovered that treatment needs and completion outcomes differed based on each participant's age, employment, and drug of choice. Compared to caregivers who abused alcohol, cocaine, and marijuana, caregivers addicted to heroin were the least likely to finish their assigned treatment. Study authors and fellow researchers suggested that completion rates could be improved through services targeting coexisting problems, drug of choice-tailored treatment, and additional employment assistance. Other common strategies include case management—which is effective at increasing engagement and access to treatment—and TANF participants' use of substance use disorder counselors provided by child welfare agencies.

Women with Dependent Children

Family-centered treatment shows promise at addressing substance use disorders among women with dependent children. Seventy percent of women entering substance use disorder treatment programs have children, making them a crucial demographic to study when it comes to substance use disorders. Family-centered treatment includes parenting education, employment readiness, behavioral therapies, and close collaboration with the child welfare, criminal justice, and social service systems. The Children and Recovering Mothers (CHARM) Collaborative uses such an approach to address Vermont women with opioid use disorders by focusing on early engagement with mothers, pre-natal care, MAT, and substance use disorder counseling. According to a 2012 study that retroactively identified participating mothers, the

increased access to MAT that the CHARM Collaborative provided improved newborn birth weight. ⁹⁸ However, many mothers are afraid of seeking treatment because they believe they could lose custody of their children. Treatment approaches allowing children to stay with their mothers encourage women to enter and consistently participate in treatment. ⁹⁹ A retrospective study of a treatment program at the Kentucky Children's Hospital witnessed a decrease in infants' need for MAT when treated with their mother. ¹⁰⁰ Moreover, a 2017 Yale-New Haven Children's Hospital study using multiple plan-do-study-act cycles discovered that infants with opioid withdrawal symptoms recover faster when near their mothers. ¹⁰¹ The CHARM Collaborative's services also showed a statistically significant increase in the proportion of infants discharged to their mother. ¹⁰²

Challenges

TANF service providers and welfare policymakers face many challenges when examining how the opioid crisis affects the TANF and TANF-eligible populations. Below are some of the most salient:

There is limited information about opioid treatment strategies targeted at employment and work-readiness for TANF recipients. Since there is a scarcity of research about the effects of the opioid crisis on the TANF population, it is difficult to determine ways to reduce employment barriers. Opioid use disorder treatment and prevention programs also rarely mention TANF. More information about opioid use disorders within the TANF and TANF-eligible populations or more studies that evaluate promising programs with TANF populations are required to effectively implement program strategies with promising employment outcomes.

Coexisting barriers may hinder the accessibility of effective treatment services, especially MAT.

Methadone-based MAT requires a patient to visit a clinic daily. A 2004 study of New York City.

Methadone-based MAT requires a patient to visit a clinic daily. A 2004 study of New York City methadone-based MAT programs discovered that bureaucracy, tension between treatment providers and welfare administrators, work schedules, mental health issues, family situations, social stigma, and discrimination all hindered patients' access to treatment. This is especially relevant for TANF recipients, since low-income individuals are more likely to receive methadone for treatment instead of buprenorphine, which does not require daily clinic visits. These and other challenges pose barriers to people with opioid use disorder seeking MAT who are employed or in programs with work requirements unless their TANF employment responsibility plans can accommodate treatment. Even without coexisting barriers, MAT may be hard to access. A 2015 study indicated there were over 910,000 more individuals with opioid use disorder than opioid treatment programs had the ability to serve. MAT programs need to have the capacity and delivery options that accommodate transportation, child care, employment, and other pressing responsibilities in participants' lives.

Different populations may require different treatment options. While needs resulting from low incomes and employment barriers are commonly shared, the unique circumstances of TANF recipients, individuals involved in the child welfare system, and women with dependent children present distinct needs that certain strategies are best suited to address. To ensure these needs are met, the Substance Abuse and Mental Health Services Administration recommends a "highly individualized approach to treatment decision making" among opioid treatment programs. Different individuals may also experience different coexisting problems, including polysubstance use, that exist alongside opioid use disorder. Making specialized treatment options available, researching the effects of coexisting problems, and addressing multiple barriers to treatment in treatment strategies may help improve effective practices' accessibility and effectiveness.

Limited collaboration across social service systems can hinder screening and treatment. Public assistance agencies, treatment providers, courts, and public health organizations often collaborate with each other to serve individuals with opioid use disorders, yet they may not be doing it enough. Without sufficient collaboration, it is difficult to identify and monitor individuals requiring treatment. Different systems also have different perspectives towards MAT. For example, while child welfare caseworkers may support MAT for clients, judges may not, which could jeopardize treatment completion or family reunification. ¹⁰⁸

Opioid use disorder harms individuals throughout the entire workforce system. In addition to hindering unemployed individuals' entry into the workforce, opioid use disorder decreases work productivity and job tenure. ¹⁰⁹ To improve employment outcomes and economic costs for TANF recipients and TANF-eligible individuals, it is important to promote opioid use disorder services for incumbent workers.

Individuals at risk of losing public assistance or custody of their children fear disclosing their opioid use disorder. It is difficult to craft effective services for the TANF or TANF-eligible populations if individuals are discouraged from disclosing their substance use disorder. To understand the actual prevalence of opioid use disorder among these groups and to provide appropriate treatment services, comprehensive screening measures and policies reducing incentives to hide abuse are needed.

Summary

Key Takeaways

- To date, limited research is available about the magnitude of opioid use disorder within the TANF and TANF-eligible populations. However, individuals in poverty are more likely to be dependent on opioids than those with incomes over 200% of the federal poverty line. This appears disproportionately harmful to the TANF population, although geographic trends should also be considered during any future actions.
- Opioid use disorder falls within a web of coexisting problems that exacerbate low-income individuals' difficulties in securing employment.
- Effective treatment for opioid use disorder includes MAT, prescription drug monitoring and national prescribing guidelines, contingency management, and community prevention coalitions.
- Few opioid use disorder programs tailor their assessment, treatment, prevention, or recovery services specifically to TANF recipients' needs.

Implications for Future Research

- There is a need for more research on the prevalence of opioid use disorder within the TANF and TANF-eligible populations.
- There is limited information about opioid treatment strategies targeted at employment and work-readiness for TANF recipients.
- Some strategies have been shown to be effective (sometimes using non-experimental methods or with different populations) and could be evaluated for TANF:
 - Better screening and assessment tools;
 - Intensive case management;
 - Treatment addressing coexisting issues;

- Family-centered treatment; and
- IPS supported employment.

References

"6.7 Substance Abuse." Washington State Department of Social and Health Services: Economic Services Administration. Accessed July 27, 2017. https://www.dshs.wa.gov/esa/chapter-6-resolving-issues/67-substance-abuse.

"About the Epidemic: The U.S. Opioid Epidemic." U.S. Department of Health and Human Services. 2017. Accessed November 3, 2017. https://www.hhs.gov/opioids/about-the-epidemic/index.html.

Albert, Su, Fred W. Brason II, Catherine K. Sanford, Nabarun Dasgupta, Jim Graham, and Beth Lovette. "Project Lazarus: Community-Based Overdose Prevention in Rural North Carolina." 2011. *Pain Medicine* 12:S77-S85. Accessed August 31, 2017. https://www.ncbi.nlm.nih.gov/pubmed/21668761.

"Alternative Treatment Approach for Neonatal Abstinence Syndrome May Shorten Hospital Stay." American Academy of Pediatrics. 2017. Accessed July 26, 2017. http://www.aappublications.org/news/2017/05/04/PASNAS050417.

"America's Opioid Epidemic Is Worsening." *The Economist*. 2017. Accessed June 1, 2017. http://www.economist.com/blogs/graphicdetail/2017/03/daily-chart-3.

Andrews, Cynthia, Roseana Bess, Amy Jantz, and Victoria Russell. "Collaboration between State Welfare and Child Welfare Agencies." The Urban Institute. 2002. Accessed August 11, 2017. http://www.urban.org/sites/default/files/publication/60216/310563-Collaboration-between-State-Welfare-Agencies.PDF.

Becker, Deborah R., Robert E. Drake, and W.J. Naughton, Jr. "Supported Employment for People with Co-Occurring Disorders." 2005. *Psychiatric Rehabilitation Journal* 28(4):332-338. https://www.ncbi.nlm.nih.gov/pubmed/?term=Naughton%20WJ%20Jr%5BAuthor%5D&cauthor=true&cauthor_uid=15895916.

Benoit, Ellen, Rebecca Young, Stephen Magura, and Graham L. Staines. "The Impact of Welfare Reform on Methadone Treatment: Policy Lessons from Service Providers in New York City." 2004. *Substance Use & Misuse* 39(13, 14):2355-2390. https://www.ncbi.nlm.nih.gov/pubmed/15603008.

Bernstein, Amy. "Prescription Opioid Use in the Medicaid Population." Medicaid and CHIP Payment and Access Commission. 2016. Accessed August 9, 2017. https://www.macpac.gov/wp-content/uploads/2016/10/Prescription-Opiod-Use-in-the-Medicaid-Population.pdf.

Bicket, Mark C., Jane J. Long, Peter J. Pronovost, G. Caleb Alexander, and Christopher L. Wu. "Prescription Opioid Analgesics Commonly Unused After Surgery: A Systematic Review." 2017. *JAMA Surgery*. Online. https://jamanetwork.com/journals/jamasurgery/article-abstract/2644905.

Birnbaum, Howard G., Alan G. White, Matt Schiller, Tracy Waldman, Jody M. Cleveland, and Carl L. Roland. "Societal Costs of Prescription Opioid Abuse, Dependence, and Misuse in the United States." 2011. *Pain Medicine* 12(4):657-667. https://www.asam.org/docs/advocacy/societal-costs-of-prescription-opioid-abuse-dependence-and-misuse-in-the-united-states.pdf.

Blackman, Kate. "Preventing Opioid Misuse: Legislative Trends and Predictions." National Conference of State Legislatures. 2017. Accessed June 6, 2017. http://www.ncsl.org/blog/2017/01/31/preventing-opioid-misuse-legislative-trends-and-predictions.aspx.

Bloom, Dan, Pamela J. Loprest, and Sheila R. Zedlewski. "TANF Recipients with Barriers to Employment." Urban Institute, OPRE. 2011. Accessed July 27, 2017.

http://www.mdrc.org/sites/default/files/TANF%20Recipients%20with%20Barriers%20to%20Employment.pdf.

Brason II, Fred W., Tessie Castillo, Nabarun Dasgupta, Nora Ferrell, Jennie Irwin, Karin Mack, Sara McEwen, Ashwin Patkar, Allen Smart, Anne Thomas, and Donnie Varnell. "Lessons Learned from Implementing Project Lazarus in North Carolina." University of North Carolina at Chapel Hill, Injury Prevention Research Center. 2016. Accessed July 27, 2017. https://iprc.unc.edu/files/2016/08/Lessons-Learned-White-Paper-FINAL-8-15-16.pdf.

Bride, Brian E. and Michael N. Humble. "Increasing Retention of African-American Women on Welfare in Outpatient Substance User Treatment Using Low-Magnitude Incentives." 2008. Substance Use & Misuse 43: 1016-1026. https://www.ncbi.nlm.nih.gov/pubmed/18649227.

Brodwin, Erin. "Deaths from Opioid Overdoses Have Jumped - and One Age Group is being Affected at Stark Rates." *Business Insider*. 2017. Accessed November 1, 2017. http://www.businessinsider.com/opioid-overdose-death-statistics-2017-2016.

Caliber Associates. "Addressing Substance Abuse Issues Among TANF Recipients." U.S. Department of Health and Human Services: Substance Abuse and Mental Health Services Administration. 2000. Accessed August 7, 2017.

https://peerta.acf.hhs.gov/sites/default/files/public/uploaded_files/Sub%20Abuse.pdf.

"CASAWORKS for Families: A Promising Approach to Welfare Reform and Substance-Abusing Women." The National Center on Addiction and Substance Abuse at Columbia University. 2001. Accessed September 21, 2017. https://www.centeronaddiction.org/addiction-research/reports/welfare-reform-substance-abusing-women.

"Characteristics and Financial Circumstances of TANF Recipients, Fiscal Year 2016." Office of Family Assistance, Administration for Children and Families, U.S. Department of Health and Human Services. 2017. Accessed January 18, 2018.

https://www.acf.hhs.gov/sites/default/files/ofa/fy16 characteristics.pdf.

Choi, Same and Joseph P. Ryan. "Completing Substance Abuse Treatment in Child Welfare: The Role of Co-Occurring Problems and Primary Drug of Choice." 2006. *Child Maltreatment* 11(4):313-325. https://www.ncbi.nlm.nih.gov/pubmed/17043316.

"Contingency Management Interventions/Motivational Incentives (Alcohol, Stimulants, Opioids, Marijuana, Nicotine)." National Institute on Drug Abuse. 2012. Accessed September 26, 2017. https://www.drugabuse.gov/publications/principles-drug-addiction-treatment-research-based-guide-third-edition/evidence-based-approaches-to-drug-addiction-treatment/behavioral-0.

Corman, Hope, Dhaval M. Dave, Dhiman Das, and Nancy E. Reichman. "Effects of Welfare Reform on Illicit Drug Use of Adult Women." 2013. *Economic Inquiry* 51(1):653-674. http://onlinelibrary.wiley.com/doi/10.1111/j.1465-7295.2012.00459.x/full.

Corman, Hope et al. "Effects of Welfare Reform on Illicit Drug Use of Adult Women." 2010. National Bureau of Economic Research Working Paper 16072. http://www.nber.org/papers/w16072.pdf.

Delva, Jorge, Yehuda D. Neumark, Carolyn D. M. Furr, and James C. Anthony. "Drug Use Among Welfare Recipients in the United States." 2000. *The American Journal of Drug and Alcohol Abuse* 26(2):335–42. https://www.ncbi.nlm.nih.gov/pubmed/10852365.

Dews, Fred. "How the Opioid Epidemic has Affected the U.S. Labor Force, County-by-County." Brookings Institution. 2017. Accessed September 11, 2017. https://www.brookings.edu/blog/brookings-now/2017/09/07/how-the-opioid-epidemic-has-affected-the-u-s-labor-force-county-by-county/.

"Division of Alcoholism and Substance Abuse - IDHS 4650." Illinois Department of Human Services. Accessed September 28, 2017. http://www.dhs.state.il.us/page.aspx?item=32300.

"Drug Testing for Welfare Recipients and Public Assistance." National Conference of State Legislatures. 2017. Accessed August 7, 2017. http://www.ncsl.org/research/human-services/drug-testing-and-public-assistance.aspx.

"Drug Testing Welfare Recipients: Recent Proposals and Continuing Controversies." U.S. Department of Health and Human Services: Office of the Assistant Secretary for Planning and Evaluation. 2011. Accessed June 21, 2017. https://aspe.hhs.gov/system/files/pdf/76316/ib.pdf.

"Opioid Use Disorder: Diagnostic Criteria." Providers Clinical Support System. 2014. Accessed June 12, 2018. https://pcssnow.org/wp-content/uploads/2014/02/5B-DSM-5-Opioid-Use-Disorder-Diagnostic-Criteria.pdf.

"Families in Crisis: The Human Service Implications of Rural Opioid Misuse." HRSA: National Advisory Committee on Rural Health and Human Services. 2016. Accessed July 26, 2017. https://www.hrsa.gov/advisorycommittees/rural/publications/opioidabuse.pdf.

Farrell, Mary, Peter Baird, Bret Barden, Mike Fishman, and Rachel Pardoe. "The TANF/SSI Disability Transition Project: Innovative Strategies for Serving TANF Recipients with Disabilities." 2013. OPRE Report 2013-51. Administration for Children and Families, U.S. Department of Health and Human Services. https://www.acf.hhs.gov/sites/default/files/opre/tanf_ssi_final_report_fixed.pdf.

Federal Guidelines for Opioid Treatment Programs. Substance Abuse and Mental Health Services Administration. 2015. Accessed February 6, 2018. https://store.samhsa.gov/shin/content/PEP15-FEDGUIDEOTP.pdf.

Frohlich, Lauren. "Community-Based Strategies for Preventing Opioid Abuse" Presentation. 2017 Linking TANF Families to Employment and Economic Opportunities Meeting, Arlington, VA, August 14-16, 2017.

Fudin, Jeffrey. "The Economics of Opioids: Abuse, REMS, and Treatment Benefits." 2015. *American Journal of Managed Care* 21: S188-S194. Accessed September 11, 2017. http://www.ajmc.com/journals/supplement/2015/ace0029 aug15 painrems s fudin.

Grossman, Matthew R., Adam K. Berkwitt, Rachel R. Osborn, Yaqing Xu, Denise A. Esserman, Eugene D. Shapiro, and Matthew J. Bizzarro. "An Initiative to Improve the Quality of Care of Infants With Neonatal Abstinence Syndrome." 2017. *Pediatrics* 139(6):pii. https://www.ncbi.nlm.nih.gov/pubmed/28562267.

Ghertner, Robin and Lincoln Groves. "The Opioid Epidemic and Economic Opportunity." Office of the Assistant Secretary for Planning and Evaluation. Draft Working Paper 2017.

Gutman, Marjorie A., James McKay, Robert D. Ketterlinus, and A. Thomas McLellan. "Potential Barriers to Work for Substance-Abusing Women on Welfare: Findings from the CASAWORKS for Families Pilot Demonstration." 2003. *Evaluation Review* 27(6):681–706.

http://journals.sagepub.com/doi/abs/10.1177/0193841X03259030?journalCode=erxb.

Hall, Martin T., Jordan Wilfong, Ruth A. Huebner, Lynn Posze, and Tina Willauer. "Medication-Assisted Treatment Improves Child Permanency Outcomes for Opioid-Using Families in the Child Welfare System." 2016. *Journal of Substance Abuse Treatment* 71:63-67. https://www.ncbi.nlm.nih.gov/pubmed/27776680.

Hansen, Helena B., Carole E. Siegel, Brady G. Case, David N. Bertollo, Danae DiRocco, and Marc Galanter. "Variation in Use of Buprenorphine and Methadone Treatment by Racial, Ethnic and Income Characteristics of Residential Social Areas in New York City." 2014. *The Journal of Behavioral Health Services and Research* 40(3). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3818282/.

Hedegaard, Holly, Margaret Warner, and Arialdi M. Miniño. "Drug Overdose Deaths in the United States, 1999-2015." Centers for Disease Control and Prevention. 2017. Accessed August 2, 2017. https://www.cdc.gov/nchs/products/databriefs/db273.htm.

Hollingsworth, Alex, Christopher J. Ruhm, and Kosali Simon. "Macroeconomic Conditions and Opioid Abuse." 2017. National Bureau of Economic Research Working Paper No. 23192. Accessed September 7, 2017. http://www.nber.org/papers/w23192.

"How is Heroin Linked to Prescription Drug Abuse?" National Institute on Drug Abuse. 2014. Accessed September 19, 2017. https://www.drugabuse.gov/sites/default/files/heroinrrs 11 14.pdf.

Integrating Substance Abuse Treatment and Vocational Services. Substance Abuse and Mental Health Services Administration. 2000. Accessed November 2, 2017. https://store.samhsa.gov/product/TIP-38- Integrating-Substance-Abuse-Treatment-and-Vocational-Services/SMA12-4216.

Jones, Christopher M., Melinda Campopiano, Grant Baldwin, and Elinore McCance-Katz. "National and State Treatment Need and Capacity for Opioid Agonist Medication-Assisted Treatment." 2015. *American Journal of Public Health* 105(8):e55-e63. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4504312/.

Katz, Josh. "The First Count of Fentanyl Deaths in 2016: Up 540% in Three Years." *The New York Times*. 2017. Accessed November 2, 2017. https://www.nytimes.com/interactive/2017/09/02/upshot/fentanyl-drug-overdose-deaths.html.

Keyes, Katherine M., Magdalena Cerdá, Joanne E. Brady, Jennifer R. Havens, and Sandro Galea. "Understanding the Rural-Urban Differences in Nonmedical Prescription Opioid Use and Abuse in the United States." 2014. *American Journal of Public Health* 104(2):e52-e59. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3935688/.

Krueger, Alan B. "Where Have all the Workers Gone? An Inquiry into the Decline of the U.S. Labor Force Participation Rate." Brookings Institution. 2017. Accessed September 11, 2017. https://www.brookings.edu/bpea-articles/where-have-all-the-workers-gone-an-inquiry-into-the-decline-of-the-u-s-labor-force-participation-rate/.

Kuhl, Emily. "Mitigating the Effects of Opioid Use Among Workers." American Psychiatric Association Foundation: Partnership for Workplace Mental Health. 2016. Accessed August 8, 2017. https://psychiatry.org/File%20Library/PWMH/Mitigating-Effects-Opioid-Use-Among-Workers.pdf.

Lawrence, Sharmila, Michelle Chau, and Mary Clare Lennon. "Depression, Substance Abuse, and Domestic Violence: Little is Known About Co-Occurrence and Combined Effects on Low-Income Families." Columbia University: National Center for Children in Poverty. 2004. Accessed July 28, 2017. http://nccp.org/publications/pdf/text 546.pdf.

Lones, Carrie E., Gary R. Bond, Mark P. McGovern, Kathryn Carr, Teresa Leckron-Myers, Tim Hartnett, and Deborah R. Becker. "Individual Placement and Support (IPS) for Methadone Maintenance Therapy Patients: A Pilot Randomized Controlled Trial." 2017. *Administration and Policy in Mental Health and Mental Health Services Research* 44: 359-364. https://www.ncbi.nlm.nih.gov/pubmed/28213673

Lyapustina, Tatyana, Lainie Rutkow, Hsien-Yen Chang, Matthew Daubresse, Alim F. Ramji, Mark Faul, Elizabeth A. Stuart, and George Caleb Alexander. "Effect of a 'Pill Mill' Law on Opioid Prescribing and Utilization: The Case of Texas." 2016. *Drug and Alcohol Dependence* 159:190-197. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4976392/.

"Medicaid and the Opioid Epidemic." Medicaid and CHIP Payment and Access Commission. 2017. Accessed August 9, 2017. https://www.macpac.gov/wp-content/uploads/2017/06/Medicaid-and-the-Opioid-Epidemic.pdf.

"Medicaid's Role in Addressing the Opioid Epidemic." Kaiser Family Foundation. 2017. Accessed February 6, 2018. https://www.kff.org/infographic/medicaids-role-in-addressing-opioid-epidemic/.

"Medication and Counseling Treatment." Substance Abuse and Mental Health Services Administration. 2017. Accessed August 10, 2017. https://www.samhsa.gov/medication-assisted-treatment/treatment.

Metsch, Lisa R, and Harold A. Pollack. "Welfare Reform and Substance Abuse." 2005. *The Milbank Quarterly* 83(1):65–99. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2690384/.

Meyer, Marjorie, Anna Benvenuto, Diantha B. Howard, Anne Johnston, Dawn Plante, Jerilyn Metayer, and Todd Mandell. "Development of a Substance Abuse Program for Opioid-Dependent Nonurban Pregnant Women Improves Outcome." 2012. *Journal of Addiction Medicine* 6(2):124-130. https://www.ncbi.nlm.nih.gov/pubmed/22517450.

"Misuse of Prescription Drugs." National Institute on Drug Abuse. 2017. Accessed November 13, 2017. https://www.drugabuse.gov/publications/research-reports/misuse-prescription-drugs/summary.

Morgenstern, Jon, Annette Riordan, Barbara S. McCrady, Kimberly Blanchard, Katharine H. McVeigh, and Thomas W. Irwin. "Barriers to Employability Among Women on TANF With a Substance Abuse Problem." U.S. Department of Health and Human Services: Office of Planning, Research and Evaluation. 2001. Accessed August 7, 2017. https://www.acf.hhs.gov/opre/resource/barriers-to-employability-among-women-on-tanf-with-a-substance-abuse.

Morgenstern, Jon, Kimberly A. Blanchard, Barbara S. McCrady, Katharine H. McVeigh, Thomas J. Morgan, and Robert J. Pandina. "Effectiveness of Intensive Case Management for Substance-Dependent Women Receiving Temporary Assistance for Needy Families." 2006. *American Journal of Public Health* 96(11): 2016-2023. https://www.ncbi.nlm.nih.gov/pubmed/17018819.

Morgenstern, Jon, Charles J. Neighbors, Alexis Kuerbis, Annette Riordan, Kimberly A. Blanchard, Katharine H. McVeigh, Thomas J. Morgan, and Barbara McCrady. "Improving 24-Month Abstinence and Employment Outcomes for Substance-Dependent Women Receiving Temporary Assistance for Needy Families with Intensive Case Management." 2009. *American Journal of Public Health* 99(2):328-333. https://www.ncbi.nlm.nih.gov/pubmed/19059855.

Morgenstern, Jon, Annette Riordan, Dominick Dephilippis, Thomas W. Irwin, Kimberly A. Blanchard, Barbara S. McCrady, Katharine H. McVeigh. "Specialized Screening Approaches Can Substantially Increase the Identification of Substance Abuse Problems Among Welfare Recipients." U.S. Department of Health and Human Services: Office of the Assistant Secretary for Planning and Evaluation. 2001. Accessed August 11, 2017. http://aspe.hhs.gov/hsp/njsard00/screening-rn.htm.

Mueser, Kim T., Kikuko Campbell, and Robert E. Drake. "The Effectiveness of Supported Employment in People with Dual Disorders." 2011. *Journal of Dual Diagnosis* 7(1-2):90-102. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3530026/.

"Neonatal Abstinence Syndrome." MedlinePlus. 2017. Accessed November 13, 2017. https://medlineplus.gov/ency/article/007313.htm.

"NIH Analysis Shows Americans are in Pain." National Institutes of Health. 2015. Accessed November 3, 2017. https://www.nih.gov/news-events/news-releases/nih-analysis-shows-americans-are-pain.

Noguchi, Yuki. "Opioid Crisis Looms Over Job Market, Worrying Employers and Economists." *NPR*. 2017. Accessed September 7, 2017. http://www.npr.org/2017/09/07/545602212/opioid-crisis-looms-over-job-market-worrying-employers-and-economists.

NORC. "White Paper: Opioid Use, Misuse, and Overdose in Women." Office on Women's Health. 2016. Accessed July 26, 2017. https://www.womenshealth.gov/files/documents/white-paper-opioid-508.pdf.

"Opioid Abuse Prevention." Community Health Partnership. 2017. Accessed September 22, 2017. https://www.ppchp.org/programs/chp-initiatives/opioid-abuse-prevention/.

"Opioid Addiction 2016 Facts & Figures." American Society of Addiction Medicine. 2016. Accessed July 26, 2017. https://www.asam.org/docs/default-source/advocacy/opioid-addiction-disease-facts-figures.pdf.

"Opioid Data Analysis | Drug Overdose | CDC Injury Center." Centers for Disease Control and Prevention. 2017. Accessed July 26, 2017. https://www.cdc.gov/drugoverdose/data/analysis.html.

"Opioid Overdose Deaths by Gender." The Henry J. Kaiser Family Foundation. 2017. Accessed August 2, 2017. http://www.kff.org/other/state-indicator/opioid-overdose-deaths-by-gender/.

"Opioid Overdose Deaths by Race/Ethnicity." The Henry J. Kaiser Family Foundation. 2017. Accessed August 2, 2017. http://www.kff.org/other/state-indicator/opioid-overdose-deaths-by-raceethnicity/.

"Opioid Overdose Death Rates and All Drug Overdose Death Rates per 100,000 Population (Age-Adjusted)." The Henry J. Kaiser Family Foundation. 2017. Accessed July 26, 2017. http://www.kff.org/other/state-indicator/opioid-overdose-death-rates/.

"Opioids." National Institute on Drug Abuse. 2017. Accessed August 2, 2017. https://www.drugabuse.gov/drugs-abuse/opioids.

"Overdose Death Rates." National Institute on Drug Abuse. 2017. Accessed November 3, 2017. https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates.

"PAS 2017 Program - Abstracts and Speakers: A Novel Approach to Evaluating and Treating Infants with Neonatal Abstinence Syndrome." Pediatric Academic Societies. 2017. Accessed November 17, 2017.

"Policy Brief: Substance Abuse & Welfare Reform." Substance Abuse Policy Research Program. 2017. Accessed June 1, 2017. http://www.saprp.org/knowledgeassets/knowledge_brief.cfm?KAID=5.

Pollock, Harold A., and Peter Reuter. "Welfare Receipt and Substance-Abuse Treatment Among Low-Income Mothers: The Impact of Welfare Reform." 2006. *The American Journal of Public Health* 96(11):2024-2031. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1751816/.

"Provisional Counts of Drug Overdose Deaths, as of 8/6/2017." Centers for Disease Control and Prevention. 2017. Accessed September 19, 2017.

https://www.cdc.gov/nchs/data/health policy/monthly-drug-overdose-death-estimates.pdf.

Radel, Laura, Kristen Joyce, and Carli Wulff. "Drug Testing Welfare Recipients: Recent Proposals and Continuing Controversies." Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. 2011. Accessed December 21, 2017. https://aspe.hhs.gov/basic-report/drug-testing-welfare-recipients-recent-proposals-and-continuing-

controversies.

Reuters Staff. "Opioid Crisis Trims U.S. Life Expectancy, Boosts Hepatitis C: CDC." *Reuters*. 2017. Accessed December 21, 2017. https://www.reuters.com/article/us-usa-healthcare-cdc/u-s-life-expectancy-fell-in-2016-as-opioid-overdoses-surged-cdc-idUSKBN1EF1TF.

Richardson, Lindsey, Evan Wood, Julio Montaner, and Thomas Kerr. "Addiction Treatment-Related Employment Barriers: The Impact of Methadone Maintenance." 2012. *Journal of Substance Abuse Treatment* 43(3):276-284. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3345299/.

Rockhill, Anna, Beth L. Green, and Linda Newton-Curtis. "Accessing Substance Abuse Treatment: Issues for Parents Involved with Child Welfare Services." 2008. *Child Welfare* 87(3):63-93. https://www.ncbi.nlm.nih.gov/pubmed/19189805.

"Rural Research Brief: Race and Ethnicity in Rural America." Housing Assistance Council. 2012. Accessed September 20, 2017. http://www.ruralhome.org/storage/research notes/rrn-race-and-ethnicity-web.pdf.

Rutkow, Lainie, Hsien-Yen Chang, Matthew Daubresse, Daniel W. Webster, Elizabeth A. Stuart, and George Caleb Alexander. "Effect of Florida's Prescription Drug Monitoring Program and Pill Mill Laws on Opioid Prescribing and Use." 2015. *JAMA Internal Medicine* 175(10):1642-1649. https://www.ncbi.nlm.nih.gov/pubmed/26280092.

Saint Louis, Catherine. "A Tide of Opioid-Dependent Newborns Forces Doctors to Rethink Treatment." *The New York Times*. 2017. Accessed July 27, 2017. https://www.nytimes.com/2017/07/13/health/opioid-addiction-babies.html? r=0.

"SAMHSA to Award Nearly \$1 Billion in New Grants to Address the Nation's Opioid Crisis." Substance Abuse and Mental Health Services Administration. 2016. Accessed February 5, 2018. https://www.samhsa.gov/newsroom/press-announcements/201612141015.

Singhal, Astha, Yu-Yu Tien, and Renee Y. Hsia. "Racial-Ethnic Disparities in Opioid Prescriptions at Emergency Department Visits for Conditions Commonly Associated with Prescription Drug Abuse." 2016. *Public Library of Science ONE* 11(8). https://www.ncbi.nlm.nih.gov/pubmed/27501459.

"Substance Abuse Initiative." State of New Jersey Department of Human Services: Division of Family Development. Accessed July 27, 2017.

http://www.state.nj.us/humanservices/dfd/programs/workfirstnj/sai/.

"The Opioid Epidemic and Medicaid's Role in Treatment: A Look at Changes Over Time." The Henry J. Kaiser Family Foundation. 2017. Accessed November 2, 2017. https://www.kff.org/slideshow/the-opioid-epidemic-and-medicaids-role-in-treatment-a-look-at-changes-over-time/.

"The State of American Jobs: How the Shifting Economic Landscape is Reshaping Work and Society and Affecting the Way People Think about the Skills and Training They Need to Get Ahead." Pew Research Center. 2016. Accessed September 20, 2017. http://www.pewsocialtrends.org/2016/10/06/1-changes-in-the-american-workplace/.

Thielking, Megan. "Missouri is the Only State Not Monitoring Prescription Drug Use. Will It Finally Create a Database?" *STAT News.* 2017. Accessed September 19, 2017. https://www.statnews.com/2017/03/07/missouri-prescription-drug-database/.

"University of Kentucky Targeted Assessment Program." Kentucky Equal Justice Center. 2017. Accessed July 26, 2017. http://www.kyequaljustice.org/file/view/TAP+Program+Description+-+SFY+2010.pdf.

"U.S. Census Bureau QuickFacts: United States." United States Census Bureau. 2016. Accessed September 20, 2016. https://www.census.gov/quickfacts/fact/map/US/INC110216.

Volkow, Nora D. "What Science tells us About Opioid Abuse and Addiction." National Institute on Drug Abuse. 2016. Accessed November 3, 2017. https://www.drugabuse.gov/about-nida/legislative-activities/testimony-to-congress/2018/what-science-tells-us-about-opioid-abuse-addiction.

Wachino, Vikki. "Best Practices for Addressing Prescription Opioid Overdoses, Misuse, and Addiction." Center for Medicaid and CHIP Services (CMS) Informational Bulletin. 2016. Accessed June 7, 2017. https://www.medicaid.gov/federal-policy-guidance/downloads/cib-02-02-16.pdf.

Werner, Deborah, Nancy K. Young, Kim Dennis, and Sharon Amatetti. "Family-Centered Treatment for Women with Substance Use Disorders – History, Key Elements, and Challenges." U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. 2007. Accessed July 27, 2017. https://www.samhsa.gov/sites/default/files/family_treatment_paper508v.pdf.

Wickramatilake, Shalini, Julia Zur, Norah Mulvaney-Day, Melinda Campopiano von Klimo, Elizabeth Selmi, and Henrick Harwood. "How States are Tackling the Opioid Crisis." 2017. *Public Health Reports*, Vol. 132(2):171-179. http://journals.sagepub.com/doi/abs/10.1177/0033354916688206.

Worcel, Sonia D., Carrie J. Furrer, Beth L. Green, Scott W. M. Burrus, and Michael W. Finigan. "Effects of Family Treatment Drug Courts on Substance Abuse and Child Welfare Outcomes." 2008. *Child Abuse Review* 17(6):427-443. http://onlinelibrary.wiley.com/doi/10.1002/car.1045/abstract.

Young, Katherine and Julia Zur. "Medicaid and the Opioid Epidemic: Enrollment, Spending, and the Implications of Proposed Policy Changes." The Henry J. Kaiser Family Foundation. 2017. Accessed

November 2, 2017. https://www.kff.org/medicaid/issue-brief/medicaid-and-the-opioid-epidemic-enrollment-spending-and-the-implications-of-proposed-policy-changes/.

Young, Nancy K., Sally Borden, and Karen Shea. "Opioid Use in Pregnancy: A Community's Approach, The Children and Recovering Mothers (CHARM) Collaborative." National Center on Substance Abuse and Child Welfare. 2014. Accessed August 24, 2017. http://www.cffutures.org/files/webinar-handouts/CHARM%20Webinar%20-%20Final-s 0.pdf.

Zedlewski, Sheila. "TANF and the Broader Safety Net." Urban Institute. 2012. Accessed November 2, 2017. https://www.urban.org/sites/default/files/publication/25406/412569-TANF-and-the-Broader-Safety-Net.PDF.

Notes

¹ Reuters Staff. "Opioid Crisis Trims U.S. Life Expectancy, Boosts Hepatitis C: CDC." " Reuters. 2017. Accessed December 21, 2017. https://www.reuters.com/article/us-usa-healthcare-cdc/u-s-life-expectancy-fell-in-2016-as-opioid-overdoses-surged-cdc-idUSKBN1EF1TF.

² Ghertner, Robin and Lincoln Groves. "The Opioid Epidemic and Economic Opportunity." Office of the Assistant Secretary for Planning and Evaluation. Draft Working Paper 2017.

³ "Policy Brief: Substance Abuse & Welfare Reform." Substance Abuse Policy Research Program. 2017. Accessed June 1, 2017. http://www.saprp.org/knowledgeassets/knowledge_brief.cfm?KAID=5.

⁴ Caliber Associates. "Addressing Substance Abuse Issues Among TANF Recipients." U.S. Department of Health and Human Services: Substance Abuse and Mental Health Services Administration. 2000. Accessed August 7, 2017. https://peerta.acf.hhs.gov/sites/default/files/public/uploaded_files/Sub%20Abuse.pdf; Delva, Jorge et al. "Drug Use Among Welfare Recipients in the United States." 2000. *The American Journal of Drug and Alcohol Abuse* 26 (2):335–42. https://www.ncbi.nlm.nih.gov/pubmed/10852365; Morgenstern, Jon et al. "Specialized Screening Approaches Can Substantially Increase the Identification of Substance Abuse Problems Among Welfare Recipients." U.S. Department of Health and Human Services: Office of the Assistant Secretary for Planning and Evaluation. 2001. Accessed August 11, 2017. https://aspe.hhs.gov/hsp/njsard00/screening-rn.htm.

⁵ "Opioids." National Institute on Drug Abuse. 2017. Accessed August 2, 2017. https://www.drugabuse.gov/drugs-abuse/opioids.

⁶ "Opioid Use Disorder: Diagnostic Criteria." Providers Clinical Support System. 2014. Accessed June 12, 2018. https://pcssnow.org/wp-content/uploads/2014/02/5B-DSM-5-Opioid-Use-Disorder-Diagnostic-Criteria.pdf.

⁷ "Opioid Data Analysis | Drug Overdose | CDC Injury Center." Centers for Disease Control and Prevention. 2017. Accessed July 26, 2017. https://www.cdc.gov/drugoverdose/data/analysis.html.

⁸ "How is Heroin Linked to Prescription Drug Abuse?" National Institute on Drug Abuse. 2014. Accessed September 19, 2017. https://www.drugabuse.gov/publications/research-reports/heroin/how-heroin-linked-to-prescription-drug-abuse.

⁹ Volkow, Nora D. "What Science tells us About Opioid Abuse and Addiction." National Institute on Drug Abuse. 2016. Accessed November 3, 2017. https://www.drugabuse.gov/about-nida/legislative-activities/testimony-to-congress/2018/what-science-tells-us-about-opioid-abuse-addiction.

¹⁰ Volkow, Nora D. "What Science tells us About Opioid Abuse and Addiction." National Institute on Drug Abuse. 2016. Accessed November 3, 2017. <a href="https://www.drugabuse.gov/about-nida/legislative-activities/testimony-to-congress/2018/what-science-tells-us-about-opioid-abuse-addiction; "Neonatal Abstinence Syndrome." MedlinePlus. 2017. Accessed November 13, 2017. https://medlineplus.gov/ency/article/007313.htm.

¹¹ Bicket, Mark C. et al. "Prescription Opioid Analgesics Commonly Unused After Surgery: A Systematic Review." 2017. *JAMA Surgery*. Online. https://jamanetwork.com/journals/jamasurgery/article-abstract/2644905; "NIH Analysis Shows Americans are in Pain." National Institutes of Health. 2015. Accessed November 3, 2017. https://www.nih.gov/news-events/news-releases/nih-analysis-shows-americans-are-pain.

Dews, Fred. "How the Opioid Epidemic has Affected the U.S. Labor Force, County-by-County." Brookings Institution. 2017. Accessed September 11, 2017. https://www.brookings.edu/blog/brookings-now/2017/09/07/how-the-opioid-epidemic-has-affected-the-u-s-labor-force-county-by-county/.

¹³ Krueger, Alan B. "Where Have all the Workers Gone? An Inquiry into the Decline of the U.S. Labor Force Participation Rate." Brookings Institution. 2017. Accessed September 11, 2017. https://www.brookings.edu/bpea-articles/where-have-all-the-workers-gone-an-inquiry-into-the-decline-of-the-u-s-labor-force-participation-rate/.

http://www.mdrc.org/sites/default/files/TANF%20Recipients%20with%20Barriers%20to%20Employment.pdf.

- ¹⁹ Reuters Staff. "Opioid Crisis Trims U.S. Life Expectancy, Boosts Hepatitis C: CDC."" Reuters. 2017. Accessed December 21, 2017. <a href="https://www.reuters.com/article/us-usa-healthcare-cdc/u-s-life-expectancy-fell-in-2016-as-opioid-overdoses-surged-cdc-idUSKBN1EF1TF;" Provisional Counts of Drug Overdose Deaths, as of 8/6/2017." Centers for Disease Control and Prevention. 2017. Accessed September 19, 2017. https://www.cdc.gov/nchs/data/health-policy/monthly-drug-overdose-death-estimates.pdf; "Overdose Death Rates." National Institute on Drug Abuse. 2017. Accessed November 3, 2017. https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates.
- ²⁰ Reuters Staff. "Opioid Crisis Trims U.S. Life Expectancy, Boosts Hepatitis C: CDC." Reuters. 2017. Accessed December 21, 2017. https://www.reuters.com/article/us-usa-healthcare-cdc/u-s-life-expectancy-fell-in-2016-as-opioid-overdoses-surged-cdc-idUSKBN1EF1TF; Hedegaard, Holly, Margaret Warner, and Arialdi M. Miniño. "Drug Overdose Deaths in the United States, 1999-2015." Centers for Disease Control and Prevention. 2017. Accessed August 2, 2017. https://www.cdc.gov/nchs/products/databriefs/db273.htm.
- ²¹ Keyes, Katherine M. et al. "Understanding the Rural-Urban Differences in Nonmedical Prescription Opioid Use and Abuse in the United States." 2014. *American Journal of Public Health* 104(2):e52-e59. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3935688/; "America's Opioid Epidemic Is Worsening." *The Economist*. 2017. Accessed June 1, 2017. https://www.economist.com/blogs/graphicdetail/2017/03/daily-chart-3.
- ²² "Families in Crisis: The Human Service Implications of Rural Opioid Misuse." HRSA: National Advisory Committee on Rural Health and Human Services. 2016. Accessed July 26, 2017. https://www.hrsa.gov/advisorycommittees/rural/publications/opioidabuse.pdf.
- NORC. "White Paper: Opioid Use, Misuse, and Overdose in Women." Office on Women's Health. 2016. Accessed July 26, 2017. https://www.womenshealth.gov/files/documents/white-paper-opioid-508.pdf; Keyes, Katherine M. et al. "Understanding the Rural-Urban Differences in Nonmedical Prescription Opioid Use and Abuse in the United States." 2014. American Journal of Public Health 104(2):e52-e59. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3935688/.

¹⁴ Bloom, Dan, Pamela J. Loprest, and Sheila R. Zedlewski. "TANF Recipients with Barriers to Employment." Urban Institute, OPRE. 2011. Accessed July 27, 2017.

¹⁵ "About the Epidemic: The U.S. Opioid Epidemic." U.S. Department of Health and Human Services. 2017. Accessed November 3, 2017. https://www.hhs.gov/opioids/about-the-epidemic/index.html; "Misuse of Prescription Drugs." National Institute on Drug Abuse. 2017. Accessed November 13, 2017. https://www.drugabuse.gov/publications/research-reports/misuse-prescription-drugs/summary.

¹⁶ "Opioid Addiction 2016 Facts & Figures." American Society of Addiction Medicine. 2016. Accessed July 26, 2017. https://www.asam.org/docs/default-source/advocacy/opioid-addiction-disease-facts-figures.pdf.

¹⁷ Reuters Staff. "Opioid Crisis Trims U.S. Life Expectancy, Boosts Hepatitis C: CDC." *Reuters*. 2017. Accessed December 21, 2017. https://www.reuters.com/article/us-usa-healthcare-cdc/u-s-life-expectancy-fell-in-2016-as-opioid-overdoses-surged-cdc-idUSKBN1EF1TF.

¹⁸ Katz, Josh. "The First Count of Fentanyl Deaths in 2016: Up 540% in Three Years." *The New York Times*. 2017. Accessed November 2, 2017. https://www.nytimes.com/interactive/2017/09/02/upshot/fentanyl-drug-overdose-deaths.html.

Although per capita opioid overdose rates are higher in these areas, the frequency of opioid overdoses is highest in metropolitan areas. "America's Opioid Epidemic Is Worsening." *The Economist*. 2017. Accessed June 1, 2017. http://www.economist.com/blogs/graphicdetail/2017/03/daily-chart-3.

²⁵ "Opioid Overdose Death Rates and All Drug Overdose Death Rates per 100,000 Population (Age-Adjusted)." The Henry J. Kaiser Family Foundation. 2017. Accessed July 26, 2017. http://www.kff.org/other/state-indicator/opioid-overdose-death-rates/.

²⁶ The opioid overdose death rate increased by 54 percent in the District of Columbia in a single year. "Opioid Overdose Death Rates and All Drug Overdose Death Rates per 100,000 Population (Age-Adjusted)." The Henry J. Kaiser Family Foundation. 2017. Accessed July 26, 2017. http://www.kff.org/other/state-indicator/opioid-overdose-death-rates/.

²⁷ Brodwin, Erin. "Deaths from Opioid Overdoses Have Jumped - and One Age Group is being Affected at Stark Rates." *Business Insider*. 2017. Accessed November 1, 2017. http://www.businessinsider.com/opioid-overdose-death-statistics-2017-2016.

²⁸ "Opioid Overdose Deaths by Gender." The Henry J. Kaiser Family Foundation. 2017. Accessed August 2, 2017. http://www.kff.org/other/state-indicator/opioid-overdose-deaths-by-gender/.

²⁹ NORC. "White Paper: Opioid Use, Misuse, and Overdose in Women." Office on Women's Health. 2016. Accessed July 26, 2017. https://www.womenshealth.gov/files/documents/white-paper-opioid-508.pdf.

³⁰ "Characteristics and Financial Circumstances of TANF Recipients, Fiscal Year 2016." Office of Family Assistance, Administration for Children and Families, U.S. Department of Health and Human Services. 2017. Accessed January 18, 2018. https://www.acf.hhs.gov/sites/default/files/ofa/fy16 characteristics.pdf.

³¹ NORC. "White Paper: Opioid Use, Misuse, and Overdose in Women." Office on Women's Health. 2016. Accessed July 26, 2017. https://www.womenshealth.gov/files/documents/white-paper-opioid-508.pdf.

³² "U.S. Census Bureau QuickFacts: United States." United States Census Bureau. 2016. Accessed September 20, 2016. https://www.census.gov/quickfacts/fact/map/US/INC110216.

³³ "Opioid Overdose Deaths by Race/Ethnicity." The Henry J. Kaiser Family Foundation. 2017. Accessed August 2, 2017. http://www.kff.org/other/state-indicator/opioid-overdose-deaths-by-raceethnicity/.

³⁴ "Rural Research Brief: Race and Ethnicity in Rural America." Housing Assistance Council. 2012. Accessed September 20, 2017. http://www.ruralhome.org/storage/research_notes/rrn-race-and-ethnicity-web.pdf.

³⁵ Singhal, Astha, Yu-Yu Tien, and Renee Y. Hsia. "Racial-Ethnic Disparities in Opioid Prescriptions at Emergency Department Visits for Conditions Commonly Associated with Prescription Drug Abuse." 2016. *Public Library of Science ONE* 11(8). https://www.ncbi.nlm.nih.gov/pubmed/27501459.

³⁶ Morgenstern, Jon et al. "Effectiveness of Intensive Case Management for Substance-Dependent Women Receiving Temporary Assistance for Needy Families." 2006. *American Journal of Public Health* 96(11):2016-2023. https://www.ncbi.nlm.nih.gov/pubmed/17018819.

³⁷ Morgenstern, Jon et al. "Effectiveness of Intensive Case Management for Substance-Dependent Women Receiving Temporary Assistance for Needy Families." 2006. *American Journal of Public Health* 96(11):2016-2023. https://www.ncbi.nlm.nih.gov/pubmed/17018819.

³⁸ Metsch, Lisa R, and Harold A. Pollack. "Welfare Reform and Substance Abuse." 2005. *The Milbank Quarterly* 83 (1):65–99. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2690384/.

³⁹ 86 percent of state TANF agencies responded to this survey researching their screening procedures. Metsch, Lisa R, and Harold A. Pollack. "Welfare Reform and Substance Abuse." 2005. *The Milbank Quarterly* 83(1):65–99. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2690384/.

⁴⁰ Radel, Laura, Kristen Joyce, and Carli Wulff. "Drug Testing Welfare Recipients: Recent Proposals and Continuing Controversies." Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. 2011. Accessed December 21, 2017. https://aspe.hhs.gov/basic-report/drug-testing-welfare-recipients-recent-proposals-and-continuing-controversies.

⁴¹ "Drug Testing for Welfare Recipients and Public Assistance." National Conference of State Legislatures. 2017. Accessed August 7, 2017. http://www.ncsl.org/research/human-services/drug-testing-and-public-assistance.aspx.

⁴² Ghertner, Robin and Lincoln Groves. "The Opioid Crisis and Economic Opportunity: Geographic and Economic Trends." Office of the Assistant Secretary for Planning and Evaluation. Research Brief 2018.

⁴³ Zedlewski, Sheila. "TANF and the Broader Safety Net." Urban Institute. 2012. Accessed November 2, 2017. https://www.urban.org/sites/default/files/publication/25406/412569-TANF-and-the-Broader-Safety-Net.PDF.

⁴⁴ "Medicaid's Role in Addressing the Opioid Epidemic." The Henry J. Kaiser Family Foundation. 2017. Accessed February 6, 2018. https://www.kff.org/infographic/medicaids-role-in-addressing-opioid-epidemic/.

⁴⁵ "The Opioid Epidemic and Medicaid's Role in Treatment: A Look at Changes Over Time." The Henry J. Kaiser Family Foundation. 2017. Accessed November 2, 2017. https://www.kff.org/slideshow/the-opioid-epidemic-and-medicaids-role-in-treatment-a-look-at-changes-over-time/.

⁴⁶ Young, Katherine and Julia Zur. "Medicaid and the Opioid Epidemic: Enrollment, Spending, and the Implications of Proposed Policy Changes." The Henry J. Kaiser Family Foundation. 2017. Accessed November 2, 2017. https://www.kff.org/medicaid/issue-brief/medicaid-and-the-opioid-epidemic-enrollment-spending-and-the-implications-of-proposed-policy-changes/.

⁴⁷ Bernstein, Amy. "Prescription Opioid Use in the Medicaid Population." Medicaid and CHIP Payment and Access Commission. 2016. Accessed August 9, 2017. https://www.macpac.gov/wp-content/uploads/2016/10/Prescription-Opiod-Use-in-the-Medicaid-Population.pdf.

⁴⁸ "Medicaid's Role in Addressing the Opioid Epidemic." Kaiser Family Foundation. 2017. Accessed February 6, 2018. https://www.kff.org/infographic/medicaids-role-in-addressing-opioid-epidemic/.

⁴⁹ Corman, Hope et al. "Effects of Welfare Reform on Illicit Drug Use of Adult Women." 2013. *Economic Inquiry* 51(1):653-674. http://onlinelibrary.wiley.com/doi/10.1111/j.1465-7295.2012.00459.x/full.

⁵⁰ Corman, Hope et al. "Effects of Welfare Reform on Illicit Drug Use of Adult Women." 2010. National Bureau of Economic Research Working Paper 16072. http://www.nber.org/papers/w16072.pdf.

⁵¹ "Drug Testing Welfare Recipients: Recent Proposals and Continuing Controversies." U.S. Department of Health and Human Services: Office of the Assistant Secretary for Planning and Evaluation. 2011. Accessed June 21, 2017. https://aspe.hhs.gov/system/files/pdf/76316/ib.pdf.

⁵² Caliber Associates. "Addressing Substance Abuse Issues Among TANF Recipients." U.S. Department of Health and Human Services: Substance Abuse and Mental Health Services Administration. 2000. Accessed August 7, 2017. https://peerta.acf.hhs.gov/sites/default/files/public/uploaded files/Sub%20Abuse.pdf.

Morgenstern, Jon et al. "Barriers to Employability Among Women on TANF With a Substance Abuse Problem." U.S. Department of Health and Human Services: Office of Planning, Research and Evaluation. 2001. Accessed August 7, 2017. https://www.acf.hhs.gov/opre/resource/barriers-to-employability-among-women-on-tanf-with-asubstance-abuse.

⁵⁴ Metsch, Lisa R., and Harold A. Pollack. "Welfare Reform and Substance Abuse." 2005. *The Milbank Quarterly* 83 (1):65–99. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2690384/.

⁵⁵ Pollock, Harold A., and Peter Reuter. "Welfare Receipt and Substance-Abuse Treatment Among Low-Income Mothers: The Impact of Welfare Reform." 2006. *The American Journal of Public Health* 96(11):2024-2031. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1751816/.

⁵⁶ Kuhl, Emily. "Mitigating the Effects of Opioid Use Among Workers." American Psychiatric Association Foundation: Partnership for Workplace Mental Health. 2016. Accessed August 8, 2017. https://psychiatry.org/File%20Library/PWMH/Mitigating-Effects-Opioid-Use-Among-Workers.pdf.

⁵⁷ Fudin, Jeffrey. "The Economics of Opioids: Abuse, REMS, and Treatment Benefits." 2015. *American Journal of Managed Care* 21: S188-S194. Accessed September 11, 2017. http://www.ajmc.com/journals/supplement/2015/ace0029 aug15 painrems/ace0029 aug15 painrems fudin.

⁵⁸ Noguchi, Yuki. "Opioid Crisis Looms Over Job Market, Worrying Employers and Economists." *NPR*. 2017. Accessed September 7, 2017. http://www.npr.org/2017/09/07/545602212/opioid-crisis-looms-over-job-market-worrying-employers-and-economists.

- ⁵⁹ "The State of American Jobs: How the Shifting Economic Landscape is Reshaping Work and Society and Affecting the Way People Think about the Skills and Training They Need to Get Ahead." Pew Research Center. 2016. Accessed September 20, 2017. http://www.pewsocialtrends.org/2016/10/06/1-changes-in-the-american-workplace/.
- ⁶⁰ Krueger, Alan B. "Where Have all the Workers Gone? An Inquiry into the Decline of the U.S. Labor Force Participation Rate." Brookings Institution. 2017. Accessed September 11, 2017. https://www.brookings.edu/bpea-articles/where-have-all-the-workers-gone-an-inquiry-into-the-decline-of-the-u-s-labor-force-participation-rate/.
- ⁶¹ Fudin, Jeffrey. "The Economics of Opioids: Abuse, REMS, and Treatment Benefits." 2015. *American Journal of Managed Care* 21: S188-S194. Accessed September 11, 2017. http://www.ajmc.com/journals/supplement/2015/ace0029_aug15_painrems/ace0029_aug15_painrems_fudin.
- ⁶² "Medicaid and the Opioid Epidemic." Medicaid and CHIP Payment and Access Commission. 2017. Accessed August 9, 2017. https://www.macpac.gov/wp-content/uploads/2017/06/Medicaid-and-the-Opioid-Epidemic.pdf.
- ⁶³ Hollingsworth, Alex, Christopher J. Ruhm, and Kosali Simon. "Macroeconomic Conditions and Opioid Abuse." 2017. National Bureau of Economic Research Working Paper No. 23192. Accessed September 7, 2017. http://www.nber.org/papers/w23192.
- ⁶⁴ Krueger, Alan B. "Where Have all the Workers Gone? An Inquiry into the Decline of the U.S. Labor Force Participation Rate." Brookings Institution. 2017. Accessed September 11, 2017. https://www.brookings.edu/bpea-articles/where-have-all-the-workers-gone-an-inquiry-into-the-decline-of-the-u-s-labor-force-participation-rate/.
- ⁶⁵ Gutman, Marjorie A. et al. "Potential Barriers to Work for Substance-Abusing Women on Welfare: Findings from the CASAWORKS for Families Pilot Demonstration." 2003. *Evaluation Review* 27(6):681–706. http://journals.sagepub.com/doi/abs/10.1177/0193841X03259030?journalCode=erxb.
- ⁶⁶ Morgenstern, Jon et al. "Barriers to Employability Among Women on TANF With a Substance Abuse Problem." U.S. Department of Health and Human Services: Office of the Assistant Secretary for Planning and Evaluation. 2015. Accessed July 27, 2017. https://aspe.hhs.gov/pdf-report/barriers-employability-among-women-tanf-substance-abuse-problem.
- ⁶⁷ Morgenstern, Jon et al. "Barriers to Employability Among Women on TANF With a Substance Abuse Problem." U.S. Department of Health and Human Services: Office of the Assistant Secretary for Planning and Evaluation. 2001. Accessed July 27, 2017. https://aspe.hhs.gov/pdf-report/barriers-employability-among-women-tanf-substance-abuse-problem.
- ⁶⁸ Lawrence, Sharmila, Michelle Chau, and Mary Clare Lennon. "Depression, Substance Abuse, and Domestic Violence: Little is Known About Co-Occurrence and Combined Effects on Low-Income Families." Columbia University: National Center for Children in Poverty. 2004. Accessed July 28, 2017. http://nccp.org/publications/pdf/text 546.pdf.
- ⁶⁹ Integrating Substance Abuse Treatment and Vocational Services. Substance Abuse and Mental Health Services Administration. 2000. Accessed November 2, 2017. https://store.samhsa.gov/product/TIP-38-Integrating-Substance-Abuse-Treatment-and-Vocational-Services/SMA12-4216.
- ⁷⁰ "Division of Alcoholism and Substance Abuse IDHS 4650." Illinois Department of Human Services. Accessed September 28, 2017. http://www.dhs.state.il.us/page.aspx?item=32300; "Substance Abuse Initiative." State of New Jersey Department of Human Services: Division of Family Development. Accessed July 27, 2017. http://www.state.nj.us/humanservices/dfd/programs/workfirstnj/sai/; "6.7 Substance Abuse." Washington State Department of Social and Health Services: Economic Services Administration. Accessed July 27, 2017. https://www.dshs.wa.gov/esa/chapter-6-resolving-issues/67-substance-abuse.
- ⁷¹ "Medication and Counseling Treatment." Substance Abuse and Mental Health Services Administration. 2017. Accessed August 10, 2017. https://www.samhsa.gov/medication-assisted-treatment/treatment/.
- ⁷² "Medication and Counseling Treatment." Substance Abuse and Mental Health Services Administration. 2017. Accessed August 10, 2017. https://www.samhsa.gov/medication-assisted-treatment/treatment.

- ⁷⁴ "SAMHSA to Award Nearly \$1 Billion in New Grants to Address the Nation's Opioid Crisis." Substance Abuse and Mental Health Services Administration. 2016. Accessed February 5, 2018. https://www.samhsa.gov/newsroom/press-announcements/201612141015. Wickramatilake, Shalini et al. "How States are Tackling the Opioid Crisis." 2017. https://journals.sagepub.com/doi/abs/10.1177/0033354916688206; Wachino, Vikki. "Best Practices for Addressing Prescription Opioid Overdoses, Misuse, and Addiction." Center for Medicaid and CHIP Services (CMS) Informational Bulletin. 2016. Accessed June 7, 2017. https://www.medicaid.gov/federal-policy-guidance/downloads/cib-02-02-16.pdf.
- ⁷⁵ Blackman, Kate. "Preventing Opioid Misuse: Legislative Trends and Predictions." National Conference of State Legislatures. 2017. Accessed June 6, 2017. http://www.ncsl.org/blog/2017/01/31/preventing-opioid-misuse-legislative-trends-and-predictions.aspx; Thielking, Megan. "Missouri is the Only State not Monitoring Prescription Drug Use. Will it Finally Create a Database?" *STAT News.* 2017. Accessed September 19, 2017. https://www.statnews.com/2017/03/07/missouri-prescription-drug-database/.
- ⁷⁶ Lyapustina, Tatyana et al. "Effect of a 'Pill Mill' Law on Opioid Prescribing and Utilization: The Case of Texas." 2016. *Drug and Alcohol Dependence* 159:190-197. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4976392/; Rutkow, Lainie et al. "Effect of Florida's Prescription Drug Monitoring Program and Pill Mill Laws on Opioid Prescribing and Use." 2015. *JAMA Internal Medicine* 175(10):1642-1649. https://www.ncbi.nlm.nih.gov/pubmed/26280092.
- ⁷⁷ Blackman, Kate. "Preventing Opioid Misuse: Legislative Trends and Predictions." National Conference of State Legislatures. 2017. Accessed June 6, 2017. http://www.ncsl.org/blog/2017/01/31/preventing-opioid-misuse-legislative-trends-and-predictions.aspx.
- ⁷⁸ "Contingency Management Interventions/Motivational Incentives (Alcohol, Stimulants, Opioids, Marijuana, Nicotine)." National Institute on Drug Abuse. 2012. Accessed September 26, 2017. https://www.drugabuse.gov/publications/principles-drug-addiction-treatment-research-based-guide-third-edition/evidence-based-approaches-to-drug-addiction-treatment/behavioral-0.
- ⁷⁹ "Contingency Management Interventions/Motivational Incentives (Alcohol, Stimulants, Opioids, Marijuana, Nicotine)." National Institute on Drug Abuse. 2012. Accessed September 26, 2017. https://www.drugabuse.gov/publications/principles-drug-addiction-treatment-research-based-guide-third-edition/evidence-based-approaches-to-drug-addiction-treatment/behavioral-0.
- ⁸⁰ Bride, Brian E. and Michael N. Humble. "Increasing Retention of African-American Women on Welfare in Outpatient Substance User Treatment Using Low-Magnitude Incentives." 2008. *Substance Use & Misuse* 43: 1016-1026. https://www.ncbi.nlm.nih.gov/pubmed/18649227.
- ⁸¹ "Opioid Abuse Prevention." Community Health Partnership. 2017. Accessed September 22, 2017. https://www.ppchp.org/programs/chp-initiatives/opioid-abuse-prevention/.
- ⁸² Morgenstern, Jon et al. "Specialized Screening Approaches Can Substantially Increase the Identification of Substance Abuse Problems Among Welfare Recipients." U.S. Department of Health and Human Services: Office of the Assistant Secretary for Planning and Evaluation. 2001. Accessed August 11, 2017. http://aspe.hhs.gov/hsp/njsard00/screening-rn.htm.
- ⁸³ "University of Kentucky Targeted Assessment Program." Kentucky Equal Justice Center. 2017. Accessed July 26, 2017. http://www.kyequaljustice.org/file/view/TAP+Program+Description+-+SFY+2010.pdf.
- ⁸⁴ Morgenstern, Jon et al. "Effectiveness of Intensive Case Management for Substance-Dependent Women Receiving Temporary Assistance for Needy Families." 2006. *American Journal of Public Health* 96(11):2016-2023. https://www.ncbi.nlm.nih.gov/pubmed/17018819.

⁷³ Benoit, Ellen et al. "The Impact of Welfare Reform on Methadone Treatment: Policy Lessons from Service Providers in New York City." 2004. *Substance Use & Misuse* 39(13, 14):2355-2390. https://www.ncbi.nlm.nih.gov/pubmed/15603008.

- Morgenstern, Jon et al. "Improving 24-Month Abstinence and Employment Outcomes for Substance-Dependent Women Receiving Temporary Assistance for Needy Families with Intensive Case Management." 2009. *American Journal of Public Health* 99(2):328-333. https://www.ncbi.nlm.nih.gov/pubmed/19059855.
- ⁸⁶ "CASAWORKS for Families: A Promising Approach to Welfare Reform and Substance-Abusing Women." The National Center on Addiction and Substance Abuse at Columbia University. 2001. Accessed September 21, 2017. https://www.centeronaddiction.org/addiction-research/reports/welfare-reform-substance-abusing-women.
- ⁸⁷ Mueser, Kim T., Kikuko Campbell, and Robert E. Drake. "The Effectiveness of Supported Employment in People with Dual Disorders." 2011. *Journal of Dual Diagnosis* 7(1-2):90-102. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3530026/.
- ⁸⁸ Becker, Deborah R., Robert E. Drake, and W.J. Naughton, Jr. "Supported Employment for People with Co-Occurring Disorders." 2005. *Psychiatric Rehabilitation Journal* 28(4):332-338. https://www.ncbi.nlm.nih.gov/pubmed/?term=Naughton%20WJ%20Jr%5BAuthor%5D&cauthor=true&cauthor_uid=15895916.
- ⁸⁹ Lones, Carrie E. et al. "Individual Placement and Support (IPS) for Methadone Maintenance Therapy Patients: A Pilot Randomized Controlled Trial." 2017. *Administration and Policy in Mental Health and Mental Health Services Research* 44:359-364. https://www.ncbi.nlm.nih.gov/pubmed/28213673.
- ⁹⁰ Farrell, Mary et al. "The TANF/SSI Disability Transition Project: Innovative Strategies for Serving TANF Recipients with Disabilities." 2013. OPRE Report 2013-51. Administration for Children and Families, U.S. Department of Health and Human Services. https://www.acf.hhs.gov/sites/default/files/opre/tanf-ssi-final-report-fixed.pdf.
- ⁹¹ Worcel, Sonia D. et al. "Effects of Family Treatment Drug Courts on Substance Abuse and Child Welfare Outcomes." 2008. *Child Abuse Review* 17(6):427-443. http://onlinelibrary.wiley.com/doi/10.1002/car.1045/abstract.
- ⁹² Hall, Martin T. et al. "Medication-Assisted Treatment Improves Child Permanency Outcomes for Opioid-Using Families in the Child Welfare System." 2016. *Journal of Substance Abuse Treatment* 71:63-67. https://www.ncbi.nlm.nih.gov/pubmed/27776680.
- ⁹³ Choi, Same and Joseph P. Ryan. "Completing Substance Abuse Treatment in Child Welfare: The Role of Co-Occurring Problems and Primary Drug of Choice." 2006. *Child Maltreatment* 11(4):313-325. https://www.ncbi.nlm.nih.gov/pubmed/17043316.
- ⁹⁴ Rockhill, Anna, Beth L. Green, and Linda Newton-Curtis. "Accessing Substance Abuse Treatment: Issues for Parents Involved with Child Welfare Services." 2008. *Child Welfare* 87(3):63-93. https://www.ncbi.nlm.nih.gov/pubmed/19189805; Andrews, Cynthia et al. "Collaboration between State Welfare and Child Welfare Agencies." The Urban Institute: Series A, No. A-54. 2002. Accessed August 11, 2017. http://www.urban.org/sites/default/files/publication/60216/310563-Collaboration-between-State-Welfare-and-Child-Welfare-Agencies.PDF.
- ⁹⁵ NORC. "White Paper: Opioid Use, Misuse, and Overdose in Women." Office on Women's Health. 2016. Accessed July 26, 2017. https://www.womenshealth.gov/files/documents/white-paper-opioid-508.pdf.
- ⁹⁶ Werner, D. et al. "Family-Centered Treatment for Women with Substance Use Disorders History, Key Elements, and Challenges." U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. 2007. Accessed July 27, 2017.
- https://www.samhsa.gov/sites/default/files/family_treatment_paper508v.pdf.
- ⁹⁷ Young, Nancy K., Sally Borden, and Karen Shea. "Opioid Use in Pregnancy: A Community's Approach, The Children and Recovering Mothers (CHARM) Collaborative." National Center on Substance Abuse and Child Welfare. 2014. Accessed August 24, 2017. http://www.cffutures.org/files/webinar-handouts/CHARM%20Webinar%20-%20Final-s-0.pdf.

- ⁹⁸ Meyer, Marjorie et al. "Development of a Substance Abuse Program for Opioid-Dependent Nonurban Pregnant Women Improves Outcome." 2012. *Journal of Addiction Medicine* 6(2):124-130. https://www.ncbi.nlm.nih.gov/pubmed/22517450.
- ⁹⁹ NORC. "White Paper: Opioid Use, Misuse, and Overdose in Women." Office on Women's Health. 2016. Accessed July 26, 2017. https://www.womenshealth.gov/files/documents/white-paper-opioid-508.pdf.
- ¹⁰⁰ "Alternative Treatment Approach for Neonatal Abstinence Syndrome May Shorten Hospital Stay." American Academy of Pediatrics. 2017. Accessed July 26,2017.
- http://www.aappublications.org/news/2017/05/04/PASNAS050417; "PAS 2017 Program Abstracts and Speakers: A Novel Approach to Evaluating and Treating Infants with Neonatal Abstinence Syndrome." Pediatric Academic Societies. 2017. Accessed November 17, 2017.
- ¹⁰¹ Saint Louis, Catherine. "A Tide of Opioid-Dependent Newborns Forces Doctors to Rethink Treatment." *The New York Times*. 2017. Accessed July 27, 2017. https://www.nytimes.com/2017/07/13/health/opioid-addiction-babies.html?r=0; Grossman, Matthew R. et al. "An Initiative to Improve the Quality of Care of Infants With Neonatal Abstinence Syndrome." 2017. *Pediatrics* 139(6):pii. https://www.ncbi.nlm.nih.gov/pubmed/28562267.
- ¹⁰² Meyer, Marjorie et al. "Development of a Substance Abuse Program for Opioid-Dependent Nonurban Pregnant Women Improves Outcome." 2012. *Journal of Addiction Medicine* 6(2):124-130. https://www.ncbi.nlm.nih.gov/pubmed/22517450.
- ¹⁰³ Benoit, Ellen et al. "The Impact of Welfare Reform on Methadone Treatment: Policy Lessons from Service Providers in New York City." 2004. *Substance Use & Misuse* 39(13, 14):2355-2390. https://www.ncbi.nlm.nih.gov/pubmed/15603008.
- Hansen, Helena B. et al. "Variation in Use of Buprenorphine and Methadone Treatment by Racial, Ethnic and Income Characteristics of Residential Social Areas in New York City." 2014. *The Journal of Behavioral Health Services and Research* 40(3). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3818282/.
- ¹⁰⁵ Richardson, Lindsey et al. "Addiction Treatment-Related Employment Barriers: The Impact of Methadone Maintenance." 2012. *Journal of Substance Abuse Treatment* 43(3):276-284. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3345299/.
- ¹⁰⁶ Jones, Christopher M. et al. "National and State Treatment Need and Capacity for Opioid Agonist Medication-Assisted Treatment." 2015. *American Journal of Public Health* 105(8):e55-e63. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4504312/.
- ¹⁰⁷ Federal Guidelines for Opioid Treatment Programs. Substance Abuse and Mental Health Services Administration. 2015. Accessed February 6, 2018. https://store.samhsa.gov/shin/content/PEP15-FEDGUIDEOTP.pdf.
- ¹⁰⁸ Ghertner, Robin and Lincoln Groves. "The Opioid Epidemic and Economic Opportunity." Office of the Assistant Secretary for Planning and Evaluation. Draft Working Paper 2017.
- ¹⁰⁹ Fudin, Jeffrey. "The Economics of Opioids: Abuse, REMS, and Treatment Benefits." 2015. *American Journal of Managed Care* 21:S188-S194. Accessed September 11, 2017.
- http://www.ajmc.com/journals/supplement/2015/ace0029_aug15_painrems/ace0029_aug15_painrems_fudin; Noguchi, Yuki. "Opioid Crisis Looms Over Job Market, Worrying Employers and Economists." NPR. 2017. Accessed September 7, 2017. http://www.npr.org/2017/09/07/545602212/opioid-crisis-looms-over-job-market-worrying-employers-and-economists; "The State of American Jobs: How the Shifting Economic Landscape is Reshaping Work and Society and Affecting the Way People Think about the Skills and Training They Need to Get Ahead." Pew Research Center. 2016. Accessed September 20, 2017. http://www.pewsocialtrends.org/2016/10/06/1-changes-in-the-american-workplace/.