ASPE Research Brief
Office of the Assistant Secretary for Planning and Evaluation
U.S. Department of Health and Human Services

Substance Use, the Opioid Epidemic, and the Child Welfare System: Key Findings from a Mixed Methods Study

By Laura Radel, Melinda Baldwin, Ph.D., Gilbert Crouse, Ph.D., Robin Ghertner and Annette Waters, Ph.D.

This brief presents key takeaway messages from a mixed methods study examining how substance use affects child welfare systems across the country. Top-level findings are as follows:

- **Caseloads:** Nationally, rates of drug overdose deaths and drug-related hospitalizations have a statistical relationship with child welfare caseloads (that is, rates of child protective services reports, substantiated reports, and foster care placements). Generally, counties with higher overdose death and drug hospitalization rates have higher caseload rates. In addition, these substance use indicators correlate with rates of more complex and severe child welfare cases.
- **Availability and use of substance use treatment:** Several major challenges affect how child welfare agencies and families interact with substance use treatment options, including medication-assisted treatment for opioid use disorder. Family-friendly treatment options are limited, and caseworkers, courts, and other providers often misunderstand how treatment works and lack guidelines on how to incorporate it into child welfare practice.
- **System response:** Child welfare agencies and their community partners are struggling to meet families' needs. Haphazard substance use assessment practices, barriers to collaboration with substance use treatment providers and other stakeholders, and shortages of foster homes and trained staff undermine the effectiveness of agencies' responses to families.

INTRODUCTION

After more than a decade of sustained declines in the national foster care caseload, the number of children entering foster care began to rise in 2012. Between 2012 and 2016, the number of children in foster care nationally rose by 10 percent, from 397,600 to 437,500. Although the experience of individual states varied, more than two-thirds (36 states) experienced caseload increases. Hardest hit have been six states whose foster care populations rose by more than 50 percent over this four-year period.[1]

Many in the child welfare field think that parental substance use—including prescription drugs, illicit drugs, and alcohol, but especially opioids—has been the primary cause of the increase in foster care placements. Thus far there has been little empirical evidence to support this assertion at the national level.

One study suggests that in 10 states there has been an exponential growth in the number of reports of maltreatment for infants with neonatal abstinence syndrome (Lynch et al., 2018). To better understand how substance use interacts with the child welfare system, the Office of the Assistant Secretary for Planning and Evaluation (ASPE) carried out a research study that included both quantitative analysis and qualitative data collection. We were assisted by Mathematica Policy Research, which collected and summarized most of the qualitative interviews for the study.

The quantitative portion of the study examines the strength of the relationship between child welfare caseloads and two indicators of substance use at the county level. The qualitative portion of the study documents the perspectives and experiences of child welfare administrators and practitioners, substance use treatment administrators and practitioners, judges and other legal professionals, law enforcement officials, and other service providers who work on a

[1] Alaska, Georgia, Minnesota, Indiana, Montana, and New Hampshire.

day-to-day basis with families struggling with substance use disorders. Combined, the quantitative and qualitative results describe how the child welfare system interacts with community partners to serve an increasing population of parents whose substance use has impaired their ability to parent, placing their children at risk.

This research brief is the first of a series of reports that present the study's findings. This brief identifies the key takeaway messages gleaned from the range of qualitative and quantitative data analyzed.

A full list of the available briefs can be found at https://aspe.hhs.gov/child-welfare-and-substance-use.

HOW WE CONDUCTED THE STUDY

This study combined statistical modeling and qualitative data collection to answer the broad question: how does parental substance use currently affect child welfare systems? We conducted statistical modeling to examine how two indicators of substance use prevalence relate to child welfare caseload rates. Child welfare caseloads include reports of maltreatment, substantiated reports in which child protection investigators have confirmed that maltreatment occurred, and foster care entry rates. We used two measures of substance use: rates of drug overdose deaths, and rates of hospital stays and emergency department visits related to substances (referred to as drug hospitalizations). Both measures include all substances, except alcohol and tobacco. We used multiple years of data for most counties in the U.S. and accounted for a variety of demographic, economic, and other factors that confound the relationship between substance use and child welfare caseloads.

To accompany our quantitative analysis, we held interviews and focus groups in sites that all had high rates of opioid sales (as measured in volume of morphine equivalents) and overall drug overdose deaths but had varying changes in foster care rates. We explored the changes these local professionals were seeing in their service populations, their approaches to substance use assessment and treatment, collaborative activities among key partners in addressing families' complex needs, areas of success, and barriers to success. This methodology provides insights into the experiences of practitioners working with families in these communities. However, findings from these interviews are not generalizable nationally, and the opinions of those we interviewed may not always correspond to objective measures of the community's circumstances.

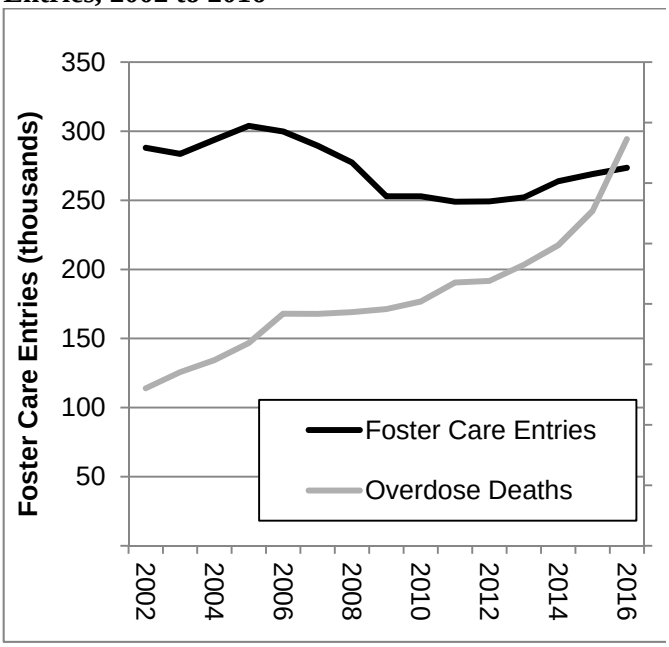
Key informants in each site included staff of child welfare agencies, substance use treatment agencies, judges and court personnel, and staff of other agencies or programs that these informants identified as an important partner in their approach to these issues. Each site was either a single county or a small cluster of contiguous counties. Interviews were conducted in person in half of the sites and by telephone in the rest. A total of 188 respondents participated in individual interviews or small group discussions. Sites included the following locations: Clark, Floyd, and Jefferson Counties in Indiana; Bristol County, Massachusetts; Marion, Pearl River, Hancock, and Harrison Counties in Mississippi; Guilford County, North Carolina; Santa Fe County, New Mexico; Wagoner and Tulsa Counties and the Cherokee Nation jurisdiction in Oklahoma; Multnomah and Washington Counties in Oregon; Hawkins, Sullivan, and Washington Counties in Tennessee; Salt Lake County, Utah; Rutland and Bennington Counties in Vermont; and Cabell, McDowell, and Raleigh Counties in West Virginia.

More details on the methodology used in this study can be found in another brief in this series, *Substance Use, the Opioid Epidemic, and the Child Welfare System: Methodological Details from a Mixed Methods Study.*

RELATIONSHIP BETWEEN SUBSTANCE USE INDICATORS AND CHILD WELFARE CASELOADS

Foster care entries and overdose deaths are related nationally but show substantial variation within the U.S. Figure 1 shows that prior to 2012, foster care entries were generally declining while overdose deaths rose. After 2012, foster care entry rates began increasing. Around the same time, drug overdose deaths began climbing at a faster rate.

Figure 1. Overdose Deaths and Foster Care Entries, 2002 to 2016



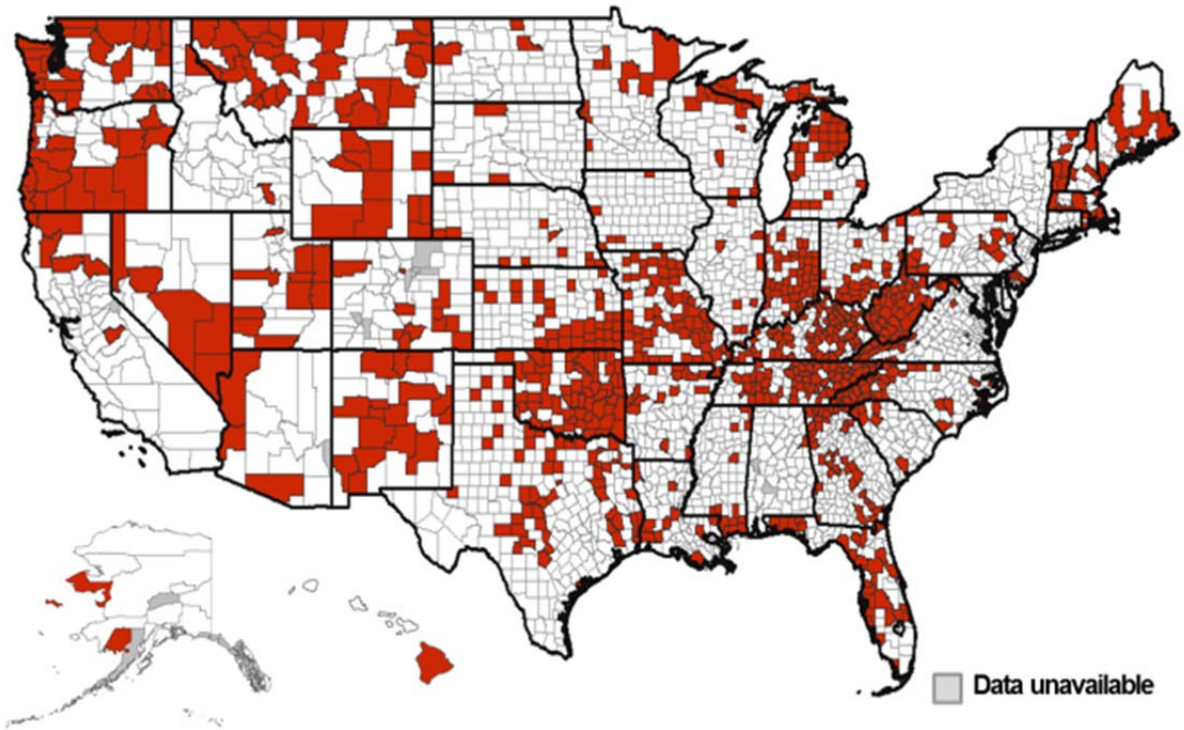
Sources: CDC/NCHS, National Vital Statistics System, Mortality; HHS/ACF, Adoption and Foster Care Analysis and Reporting System.

Some parts of the U.S. show a stronger relationship between the two, as shown in Figure 2. In 2016, Appalachia, parts of the Pacific Northwest, parts of the Southwest, Oklahoma, and New England experienced a particularly strong positive relationship between overdose death rates and foster care entry rates. Other parts of the country did not see a strong relationship in 2016.

Many factors that differ across counties influence child welfare practices, child maltreatment, and substance use. These factors make it difficult to identify the extent to which substance use and child welfare are related in the average county. For example, poverty is a strong predictor of both child welfare involvement and substance use. Since not every county has the same poverty rate, not taking poverty into account may mask the true relationship between child welfare and substance use prevalence. We used statistical models that account for a range of factors to more precisely estimate this relationship.

Higher rates of overdose deaths and drug hospitalizations correspond with higher child welfare caseload rates. We estimate that in the average county nationwide, a 10 percent increase in the overdose death rate corresponded to a 4.4 percent increase in the foster care entry rate. Similarly, a 10 percent increase in the average county's drug-related

Figure 2. Counties with Rates of Drug Overdose Deaths and Foster Care Entries Both above the National Median in 2016



Sources: CDC/NCHS, National Vital Statistics System, Mortality; HHS/ACF, Adoption and Foster Care Analysis and Reporting System.

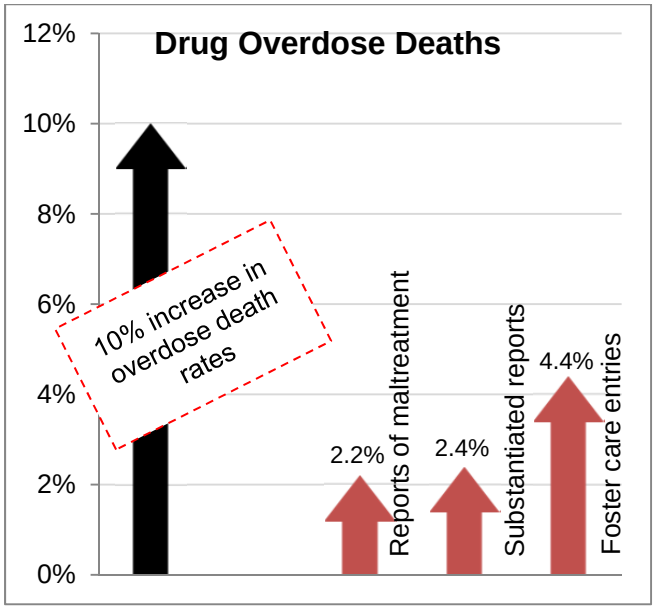
hospitalization rate corresponded to a 2.9 percent increase in its foster care entry rate. As Figure 3 shows, higher drug overdose death rates also predicted higher rates of maltreatment reports and substantiated maltreatment reports.

Higher indicators of substance use correspond to more complex and severe child welfare cases. As cases became more severe—from report to substantiation to foster care placement—the relationship with substance use increased. Higher indicators of substance use predict a greater proportion of children with maltreatment reports that are removed from their homes. For example, a 10 percent increase in overdose death rates is associated with a 1.8 percent increase in the proportion of children with maltreatment reports who are placed in foster care.

The higher rate of placement into foster care suggests that the cases in areas with higher indicators of substance use may have distinctive characteristics. Experienced case workers, judges, and others noted several factors that they perceived as contributing to higher caseloads and greater difficulty in reunifying families relative to previous eras, including the methamphetamine crisis of the mid- to late 1990s and the crack epidemic in the 1980s. In past drug epidemics, family members and community institutions shielded many children from some of the consequences of parental substance use. In the communities we visited that suffered most from the opioid epidemic, agencies report that other family members across multiple generations are more frequently using substances themselves, making substitute caregivers within the family more difficult to find and causing the child welfare system to more frequently take and retain custody of children.

Community institutions are also perceived as weaker and less able to support children when families cannot. Respondents reported that families were less likely than in the past to be engaged with churches or other social institutions. Often hospitals and schools had closed, diminishing the presence of institutions that had bound communities together. The institutions that remained were more strained in their ability to take on new roles.

Figure 3. Relationship between Overdose Death Rates and Child Welfare Caseload Rates, 2011-2016



Note: All results are statistically significant, $p < 0.01$. Each estimate is from a separate model, with sample sizes ranging from 14,539 to 14,560. Source: ASPE modeling.

In addition, key informants reported that the opioid epidemic affects families across a wider range of demographic groups than previous drug epidemics had. This perception is supported by statistics showing that "the greatest increases in heroin use [between 2002 and 2013] occurred in demographic groups that historically have had lower rates of heroin use: doubling among women and more than doubling among non-Hispanic whites" (Jones et al., 2015; see also Jones, 2017).

Hospitalization rates varied by substance, but different substances had similar relationships with foster care entry rates. Use of any substance can put children at risk, and statistical analysis found that hospitalization due to different categories of substances have comparable relationships with foster care entry rates. Opioids, stimulants (including cocaine and methamphetamine), and hallucinogens had dramatically different hospitalization rates, with the rate of opioid-related stays being the largest. Despite the differing prevalence across substance types, their relationships with foster care entry rates were practically identical. In the average county, a 10 percent increase in hospitalizations due to any of these substance types corresponded with approximately a 2 percent increase in foster care entry

rates. This increase is smaller than the relationship for all drug-related hospitalizations, as reported above. Alcohol-related hospitalizations—over four times more prevalent than opioid hospitalizations—had a slightly stronger relationship with foster care entry. A 10 percent increase in alcohol-related hospitalizations predicted a 2.7 percent increase in foster care entry rates.

More detail on these and other findings from the statistical analysis may be found in another brief in this series, *The Relationship between Substance Use Indicators and Child Welfare Caseloads.*

TREATMENT NEEDS AND CHALLENGES IN THE CHILD WELFARE SYSTEM

Scope of the Problem

Although substance use is a serious problem in all sites studied, in some sites the problem was not primarily an opioid crisis. The current drug epidemic involves a range of substances. Drugs other than opioids (e.g. methamphetamine) are the primary concern in many places. Polysubstance use—use of multiple substances by the same individual—is a significant issue and the norm in most places studied. Polysubstance use complicates treatment and recovery.

Parents using substances have multiple issues. Families come with a range of interrelated issues and needs. The predominant issues include domestic violence, mental illness, and long histories of traumatic experiences. Addressing substance use alone is unlikely to be effective in producing the desired child welfare outcomes. For reunification to succeed, supportive services must address co-occurring problems to support both the parent's recovery and the child's safety and well-being. These services could include, for example, family therapy, programs building parenting skills, child development services, and interventions addressing domestic violence. In addition, many community leaders and service providers view substance use, and the opioid epidemic in particular, as being rooted in diminished economic opportunities, unresolved emotional pain resulting from adverse experiences, and pervasive feelings of hopelessness from which substance use (at least initially) provides an escape.

The problem has continued to intensify. Many key informants told us in 2017 that their local situations had deteriorated considerably beyond what our data showed for 2015. Some informants in places that had seen foster care decreases through 2015 told us in 2017 that their caseload numbers had actually increased since then. Others reported worsening conditions in terms of overdose deaths and other indicators of illicit drug use in their communities. None reported recent improvements in the situation on the ground.

Challenges of Treatment

Timeliness of substance use assessments and treatment remains a significant concern. Assessment of parents' substance use was often cursory and lagged behind placement decisions. Because of widespread treatment shortages, treatment matching (that is, referring each client to a specific treatment program that matches the client's therapeutic needs) was virtually nonexistent in the communities that participated in the study. Clients received available services, whatever they may be. Often the treatment course was different or shorter than would be indicated. Some clients received repeated detoxification without ongoing treatment or are offered self-help programs without clinically oriented treatment services. The lack of timely, appropriate treatment set families up for failure.

Misunderstanding and mistrust of medication-assisted treatment (MAT) exist within the child welfare field. Medication-assisted treatment is an evidence-based approach to treatment that combines medication with counseling and behavioral therapies. Research has clearly shown that MAT is more effective than other treatment approaches for opioid use disorder—at least doubling rates of opioid abstinence in randomized controlled trials comparing MAT with treatment approaches involving placebo or no medication (Connery, 2015). The use of MAT also reduces the likelihood that patients will experience drug overdoses or infections such as HIV or hepatitis C (Tsui et al., 2014).

Yet MAT is not always understood or accepted by practitioners across fields or even within the substance use treatment field. Many informants interviewed did not understand that MAT is an evidence-based way to treat parents with opioid use disorder, and even when they did some did not

understand what effective MAT looks like. Some judges, for example, expected MAT patients to be stepped down from methadone or buprenorphine rapidly. Others were concerned that long term use of MAT may not be compatible with successful parenting.

Many professionals we interviewed expressed skepticism about the use of methadone or buprenorphine for extended periods and opined that clients receiving MAT "were simply trading one addiction for another." We also heard about substance use treatment programs that refused clients on methadone or buprenorphine because of their view that "you're not actually in recovery until you're off medication." This view was shared by some judges and caseworkers as well.

The availability of MAT is limited for numerous reasons, and even where it is available, respondents emphasized that MAT is frequently implemented in ways that are not consistent with the evidence base and best practices. In particular, informants in some sites told us that buprenorphine was frequently provided in their communities simply as a prescription without counseling or recovery supports. In addition, some child welfare staff and judges expressed reservations about reunifying children with parents who were stabilized on methadone or buprenorphine.

Buprenorphine was widely perceived to be at risk of abuse and diversion. Indeed, child welfare officials in some sites identified buprenorphine as the community's primary drug of abuse. According to local practitioners we spoke with, some of the diversion apparent in these communities may be the result of insurance gaps or stigma leading patients to self-medicate via the black market. In addition, clients not in treatment may seek to treat withdrawal symptoms with black-market buprenorphine if they have difficulty acquiring their preferred opiate (Lofwall & Walsh, 2014). Respondents also reported clients who used buprenorphine or methadone to satisfy child welfare case plans while continuing to misuse other substances not treated by MAT, such as methamphetamine or benzodiazepines.

These views were not universally held. In nearly all the communities there were professionals that asserted that MAT represents the best chance for parents with opioid use disorders whose children are in foster care to make meaningful changes in their lives and reunify with their children.

Substance use assessment is haphazard. The practice of assessing substance use in child welfare cases is extremely inconsistent and in many places inadequate to successfully identify the extent of substance use. Assessment identifies the substances being used and how the use may affect the safety and well-being of children. Substance use by itself may not be a sufficient reason to remove children from the home.[2] However, substance use often underlies behaviors that place children at risk. Therefore, a thorough assessment of the family must be completed to determine if substance use is impairing a parent's judgment and ability to provide a minimally safe level of care to the child. However, case plans are frequently created without solid clinical information about substance use or other important factors relevant to the family's situation.

Communities experience continued shortages of family-friendly treatment. Specialists who focus on substance use disorder treatment for women with children frequently emphasize that treatment must also address family issues and parenting. Treatment that includes components addressing family issues and that supports parenting roles is often referred to as "family-friendly." These services may include family therapy, parenting classes, child care, and developmental services. In the context of residential treatment programs, the term also refers to programs that allow children to reside with their parent in treatment. While most counties included in the study had at least one family-friendly treatment program to which they could refer parents with substance use disorders, only one site had an outpatient program considered family-friendly. Nearly all family-friendly programs were residential, and those were in short supply because of their intensity and cost. Most treatment programs available to child welfare agencies had little in the way of family-oriented services or programming.

Some child welfare agencies bypass the "regular" substance use treatment system. Several child welfare agencies in communities participating in the study conducted substance use assessments in house, co-locating substance use specialists within the

[2] Some states have laws considering substance use during pregnancy to be child abuse.

agency to improve the timeliness of assessments and their responsiveness to particular child welfare concerns. Sometimes this insourcing was accomplished in cooperation with a local public behavioral health agency, while in other cases it resulted from frustration with insufficient services from that agency. Child welfare practitioners and administrators generally thought these arrangements helped them better ensure that the treatment programs addressed family issues, including child safety, by increasing their role in helping clients access substance use disorder treatment. They also thought that insourced substance use specialists, as well as substance use treatment providers with referral and/or funding arrangements with the child welfare agency as described below, were more willing to provide updates on treatment adherence (with clients' consent) that could be used in child welfare proceedings.

In some sites, child welfare agencies reported that they frequently arrange and sometimes pay for clients' substance use treatment, due to limited availability of publicly funded treatment and a lack of other financing for these services. This service seems to be a relatively new phenomenon and reflects frustration with lack of availability and payment options for treatment in the systems that are theoretically responsible for it. In some communities, Medicaid expansion increased clients' access to treatment, and child welfare staff helped clients obtain Medicaid-funded services. However, officials feared that proposals to scale back Medicaid expansion or make substance use treatment coverage optional in health plans could have negative consequences for their efforts. Treatment efforts were also limited by the fact that while MAT drugs were usually covered by Medicaid, often the physicians who prescribed them did not accept Medicaid as payment for their services.

CHILD WELFARE RESPONSE: PRACTICE AND RESOURCE ISSUES

Scope of the Problem

Agencies and caseworkers are overwhelmed. Caseworkers are overwhelmed by the volume of cases, the lack of treatment resources, and the sheer magnitude of the problem. These factors all lead to high stress, burnout, and turnover. While this consequence is not a new phenomenon in child welfare practice, community leaders see it as worse now than in the past. Actual and threatened violence against caseworkers was also frequently cited. In two sites studied, interviews with child welfare officials were interrupted by worker safety emergencies in which police needed to be called to defuse situations between parents and child welfare staff. Child welfare staff also expressed concern about coming into contact with hazardous substances when investigating maltreatment in homes in which methamphetamine was being manufactured.

Child welfare agencies face increasing shortages of foster homes. While recruiting and retaining foster parents has always been challenging, key informants in the communities studied believe that the problem has intensified. Caseworkers and child welfare administrators reported children remaining in care longer, thus keeping existing foster homes full and unable to accept new placements. Children are often placed long distances from their parents, and placing large sibling groups together is difficult. Some respondents reported that multigenerational substance use has made it more difficult to identify viable kinship placements in their communities.

Caseworker and Agency Perspectives

Pessimism about opportunities for family success prevails. In many sites, the child welfare staff at the nexus of these issues believe that cases involving serious substance misuse or disorders overwhelmingly require the removal of children from the home and are very likely to end in termination of parental rights. The strong inclination in many places is to remove children from the home in cases with significant parental substance use, often regardless of other factors. This view is particularly prevalent among judges, district attorneys, and court personnel, especially regarding substance-exposed newborns.

Child welfare agencies are not sure whether or how to address reports of parental marijuana use. In part because of recent changes to federal child maltreatment laws that require health care providers to notify child protective services of all infants identified as affected by parental substance use, agencies are seeing families affected by substances, particularly marijuana, who in the past may not have come to the agency's attention and in which the

children may or may not be at substantial risk. The child welfare agency is responsible for assessing the level of risk to the child and determining whether the circumstances constitute child abuse or neglect under state law. Knowledge of how to apply specific state policies and procedures as they relate to substance use disorders in general has become more complicated because of the legalization of marijuana in some places as well as increased medical marijuana use.

Caseworkers find the differential response approach inappropriate for cases involving significant parental substance use. Differential response, a supportive, non-investigation alternative some child welfare systems use to respond to many low- to moderate-risk child maltreatment reports, is widely viewed in these sites as inadequate for cases in which substance use disorders are central to the maltreatment. This view is largely based on the unpredictability of recovery, the often severe nature of child maltreatment resulting from parental substance use disorders, and the voluntary nature of services offered through differential response.

While recognizing challenges, participants supported the Adoption and Safe Families Act (ASFA) timelines. The limited availability of treatment and difficulties engaging clients in treatment continue to make timeliness in achieving family reunification a challenge. Nonetheless, staff expressed support for the permanency timelines established in ASFA and, since their implementation in the late 1990s, have internalized the need for timely action toward permanency. These timelines require earlier decision making in child welfare cases than was previously the norm and mandate that, with some notable exceptions, child welfare agencies file a petition to terminate parental rights once a child has resided in foster care for 15 of the previous 22 months. Judges and court personnel interviewed in these communities use available discretion to extend ASFA timelines when families are making progress but not yet ready for reunification, but they recognize the need for the child to attain permanency elsewhere if the parent has not made significant strides toward recovery. Treatment professionals in some communities reported that reunification may lag significantly behind parental progress in treatment.

Practice varies regarding the level of progress considered "good enough" for reunification. In the communities included in this study, there is considerable inconsistency in practice about how much progress toward recovery from substance use should be observed before reunification is recommended by child welfare agencies and approved by judges, when other safety risks have been addressed. Participants reported frequent disagreements between caseworkers, judges, and substance use treatment professionals on this issue.

Difficulty of Collaboration

Systemic barriers hinder collaboration between child welfare agencies, substance use disorder treatment programs, and courts. These hindrances include barriers to sharing data (such as regulations related to confidentiality), clashes in agency missions and priorities, and tensions between efforts to engage clients in treatment and clients' mistrust of child protective services. Differences in attitudes across systems about the value and role of MAT were also evident in some sites.

Cross-state issues abound. Working across state borders adds a layer of complexity to cases in counties that border other states. Issues include difficulty in placing children in foster care across state lines (e.g., with the non-custodial parent or a relative); lack of access to other states' prescription drug monitoring systems, allowing substance users to evade scrutiny by getting prescriptions across state lines; and Medicaid payment complications in accessing substance use treatment in another state.

CONCLUSION

Increased levels of substance use, including but not limited to opioids, have devastated many American families, and the child welfare system has felt the effects. Child welfare caseloads nationally increased by 10 percent between fiscal years 2012 and 2016 (the most recent years for which data are available). The situation is not uniform, however. While many states saw considerable increases, in some states the number of children in foster care actually decreased during this period. The sites included in this study were particularly hard hit; nine of the 25 counties had seen caseload increases of more than 50 percent between 2012 and 2015.

Many of the findings of this study focus on places especially hard hit by substance use. While the experiences of these communities may not be

representative of the nation as a whole, the high levels of opioid sales and drug overdose deaths spreading across the nation in recent years raise the concern that additional counties may experience increased child welfare caseloads in the coming years.

On the positive side, professionals across service systems widely recognized that substance use disorders are chronic diseases, not simply moral failures. Staff actively sought more and better treatment options for parents. In addition, justice system interventions such as family treatment drug courts actively engaged judges and court personnel in supporting treatment, recovery, and family reunification.

While the misuse of drugs has always been part of the constellation of issues affecting parenting in families involved in the child welfare system, the current crisis has affected communities more broadly than past epidemics have. Child welfare agencies in many parts of the country are struggling to respond.

ACKNOWLEDGEMENTS

This research could not be possible without the *voices from the field*. Thank you to everyone who participated in the study. Your perspectives and knowledge were invaluable. Thank you also to Mathematica Policy Research for your data collection efforts.

REFERENCES

Connery, H. S. (2015). Medication-assisted treatment of opioid use disorder: Review of the evidence and future directions. *Harvard Review of Psychiatry, 23*(2), 63-75.

Jones, C. M. (2017). The paradox of decreasing nonmedical opioid analgesic use and increasing abuse or dependence—an assessment of current demographic trends, United States, 2003-2014. *Addictive Behaviors, 65*, 229-235.

Jones, C. M., Logan, J., Gladden, R. M., & Bohm, M. K. (2015). Vital signs: Demographic and substance use trends among heroin users – United States, 2001-2013. *Morbidity and Mortality Weekly Report, 64*(26), 719-725.

Lofwall, M. R., & Walsh, S. L. (2014). A review of buprenorphine diversion and misuse: The current evidence base and experiences from around the world. *Journal of Addiction Medicine, 8*(5), 315-326.

Lynch, S., Sherman, L., Snyder, S., & Mattson, M. (2018). Trends in infants reported to child welfare with neonatal abstinence syndrome (NAS). *Children & Youth Services Review, 86*, 135-141.

Tsui, J. I., Evans, J. L., Lum, P. J., Hahn, J. A., & Page, K. (2014). Association of opioid agonist therapy with lower incidence of hepatitis C virus infection in young adult injection drug users. *JAMA Internal Medicine, 174*(12), 1974-1981.