How Can Research Improve Foster Care Policy and Practice?

Kroeger, Sarah and Monahan, Tess and Perry, Brendan

University of Notre Dame

1 August 2022

How Can Research Improve Foster Care Policy and Practice?

Sarah Kroeger, Tess Monahan and Brendan Perry*

Abstract

Foster care in childhood predicts lower education levels and employment rates in adulthood relative to non-foster care children, including higher rates of incarceration, and adverse mental and physical health outcomes. These differences persist even after controlling for racial, economic, and neighborhood effects. Given these disparities and that 4-6 percent of the United States population experiences foster care at some point in childhood, there is a clear need to identify policies and programs that are effective in improving outcomes for individuals during and after foster care. This paper surveys the existing research and policy landscape to highlight what approaches are being taken and what is currently known about effective services for children and youth in foster care. We identify high priority foster care research questions and offer suggestions for how to best pursue these questions. The majority of published research papers related to foster care programs or best practices lack the requisite design or minimum sample size to identify causal impact.

Keywords: Child welfare, foster care, best practices, current research landscape, impact analysis

* Wilson Sheehan Lab for Economic Opportunities, the University of Notre Dame. Contact: skroeger@nd.edu. We thank Heather Reynolds, Bill Evans, and Jim Sullivan for helpful comments and guidance. Brigid Meisenbacher and Vivian Crumlish provided excellent research assistance for this paper.

I. Introduction

Children who have spent time in foster care are at much higher risk for a wide range of long-term problems in adulthood than the general public.[1] They are more likely to live in poverty (Slack et al., 2004; Courtney et al., 2010; Mersky and Janczewski, 2013), experience a teen pregnancy (Noll and Shenk, 2013; Garwood et al., 2015; Dowrsky and Courtney 2010; Combs et al., 2018), use alcohol or other drugs (Narendorf and McMillen, 2010), get arrested (Courtney et al., 2001; Ryan et al., 2007; Barn, 2010; Yang et al., 2017), struggle in school (Barrat and Berliner, 2013; Berger et al., 2014), and much less likely to enroll in or complete college (Pecora, et al., 2006) than their peers who have never been placed in care. Several studies have also documented that foster care experience predicts an increased risk of long term mental and physical health problems (Hussey et al., 2006; Keller et al., 2010; Kools et al., 2013). Similarly, children with foster care contact are at substantially higher risk of incarceration, disability, and preventable death than children who did not experience foster care (see Doyle and Aizer, 2018, for an overview).

Table 1 Panel A summarizes income and education outcomes among two large samples of former foster care youth and the general adult population. Foster care summary statistics were generated within two large samples of foster care alumni surveyed by Pecora et al. (2003; 2006).[2] Prior foster care experience is associated with individual income levels 33 percent less than the national population median, and college education rates that are 60 percent less than the U.S. overall (Pecora et al., 2003). Among the Northwest Alumni sample, college graduation rates were

[1] Throughout this paper, we use the term "foster care" to broadly refer to all out-of-home care provided by public child protective service agencies.

[2] In the early 2000s the Casey Family Programs conducted two broad surveys of foster alumni who had been in one of their programs. The Casey National Alumni Study (Pecora et al., 2003) surveyed over a thousand former foster care youth across the country who were served by a Casey program between 1966 and 1998. The Casey National study documented the responses of these alumni on outcomes related to education, employment, income and homelessness. The Casey Northwest Foster Care Alumni Study (Pecora et al., 2005) surveyed nearly 500 alumni of Casey programs in Oregon and Washington. The Northwest study focused on mental health, education, and employment outcomes.

extraordinarily low at 2.7 percent of surveyed adults age 25 and older. For comparison, we also provide data for a group that has been historically disadvantaged, African American adults living in the rural south. This group had college completion rates of 15 percent in the 2000 U.S. Census, substantially higher than either of the foster care alumni samples. Panel B shows that foster alumni also experience overwhelmingly higher rates of mental illness and substance abuse. In general, the outcomes of foster care alumni are comparable to some of the most historically disadvantaged groups in America.

More than 250,000 children in the United States enter foster care each year and approximately 400,000 are in care at any given point in time (U.S. Department of Health and Human Services, 2020). Of these, more than half were placed in care at age six or younger, with infants under one year of age comprising the single largest category of child removals at 20 percent (Children's Bureau, 2020; Annie E. Casey Foundation, 2000). In total, about 2.6 percent, or over 3 million adults currently aged 18-44 experienced foster care during their childhood (Nugent et al., 2020). Current foster care rates project that this number will continue to rise disproportionately: about 6 percent, or over 4 million current American children, will enter foster care at least once before they turn 18 (Wildeman and Emanuel, 2014, p. 5). This rate is higher for minorities: 10 percent of African American children and 15 percent of Native Americans will be placed in care before their 18th birthday (Wildeman and Emanuel, 2014, p. 5).

Given the large number of children and parents affected by foster care and the severe long-term consequences associated with this experience, there is a clear need to identify programs and interventions that are effective at improving outcomes within this vulnerable population. Empirically, a history of foster care is a strong predictor of adverse adult outcomes. The mechanism behind this relationship is likely a combination of trauma experienced both before and after removal into care, and potentially exacerbated by the inherent instability that is typical of foster care

placement. Determining whether foster care itself is harmful to children is difficult since the neglect and abuse that necessitates removal is also a strong predictor of long-term harm (Widom, 1989; Appel and Holden, 1998; Holt et al., 2008; Currie and Tekin, 2012). While some previous research has worked to separate these channels by isolating the impact of the initial placement into care on long term outcomes, these findings are mixed and arguably only relevant for a small subset of the foster care population. In this paper, we call for a foster care research agenda that prioritizes rigorous evaluation of scalable, replicable interventions for children and youth in foster care. These studies would offer the clearest implications for policy makers, service providers, and public foster care agencies.

This paper aims to lay out the current landscape of research that is available to inform foster care practice and policy and to highlight the most critical gaps in the literature. In particular, we note the extreme paucity of sufficiently powered studies showing effective methods for combatting child maltreatment: we found only two. We assess the rigor of the current research and emphasize findings from well-identified causal impact studies on both general foster care practices as well as specific evaluations of frequently implemented policies and practices by child protective services, including both parental interventions and child therapies. We also summarize research that informs the allocation of public resources. While the direct costs of foster care create a large public finance burden, it is possible that reducing foster care and associated services would result in even larger public costs in the long run through increased crime, incarceration, mental and physical health problems, and decreased education levels and earnings among former foster care children.

II. Background of Foster Care in the United States

Foster care is a protective service provided by the state when it is determined that children cannot safely live with their current caregivers. Although foster care practices differ somewhat from

state to state, virtually all states and tribal nations rely on a public agency charged with child protection to determine when children need to be removed from their homes and placed in protective custody. The typical sequence of events is the following. An allegation of child maltreatment is made through either a court-mandated reporter or a child abuse hotline. A public inspector makes a visit to the child's home to determine whether the allegation is substantiated by evidence, and if so, whether the level of maltreatment requires that the child be removed from the home. If a child needs to be removed from her home, there is generally a deadline of approximately 48 hours to find an appropriate foster placement for the child. Foster care can take the form of a supervised placement with a child's relative, a non-relative family, or in a group home, emergency shelter, or independent living situation. In the United States, nearly 80 percent of children in foster care are placed with relatives or in non-relative homes, and most of the remaining placements are older children placed in group homes. The state is responsible for the wellbeing and safety of the child until the child exits foster care, which can occur due to reunification with the biological family, adoption, or because a child becomes too old to be eligible for foster care. Once the child is in protective custody, the public agency assigns a case worker to devise a goal for the child's exit from foster care, while also receiving services or treatment as needed.

According to national foster care records collected by the Children's Bureau and available in the Adoption and Foster Care Analysis and Reporting System (AFCARS), the majority of foster children (64 percent) are removed from their homes of origin because of parental neglect (Children's Bureau, 2020). Characteristics of children in care are summarized in Table 2. The child's case goal, which is the planned exit from foster care chosen by the child's case manager, is most often stated as reunification with the child's birth parent(s), with adoption out of care being the second most common answer. Children in care are disproportionately African American, Native American, and clinically disabled. The mean age at the time of first removal is about 5.8 years, and the mean age of

all children currently in care is 6.4 years. The average foster episode duration is 18.6 months, however, there are a significant number of children who remain in foster care much longer. Five percent of foster children have been in care for more than five years.[3]

III. Major Foster Care Policy and Legislation

Although foster care in the United States is implemented and regulated at the state level, federal funding through the U.S. Department of Health and Human Services plays a significant role in shaping foster care policy and practices. The total public costs of child welfare services paid across federal, state, and local governments are around $33 billion annually, with one-third of this amount coming from the federal government (Congressional Research Services, 2018).[4] Over the course of the last century, the federal government's financial involvement in state-level foster care has steadily increased. Figure 1 depicts the landmark pieces of federal foster care legislation over time, along with the numbers of children in care (for all years with available data). The first official federal funding devoted to child welfare services was introduced by the 1935 Social Security Act, which then authorized $1.5 million annually to enable the U.S. Children's Bureau to work with state agencies to improve child welfare services, particularly in rural areas. While this grant through the Children's Bureau was relatively small, it motivated states to create child welfare agencies and begin to deliver services at the local level. Specifically, each cooperating state would receive a base allotment of $10,000 and additional funding was distributed in proportion to each state's rural population.

[3] Authors' calculations using the NDACAN Foster Care 6-month files, September 2015 -March 2020, Children's Bureau, 2020.

[4] The $33 billion in child welfare costs are paid through a wide range of funding sources. These sources include Title IV-E of the Social Security Act, Temporary Assistance for Needy Families (TANF), Social Services block grants, Medicaid, other federal funds such as Title IV-B, state and local funds. This amount does not include private funding for child welfare.

As federal funding for child welfare grew and amendments were added to the Social Security Act, states were increasingly required to match federal grants with state funds. Later legislation increased the channels for federal funding in support of child welfare, including the 1961 amendment of the Aid to Families with Dependent Children (AFDC) Act, which first allowed foster care to be federally funded. The 1974 Child Abuse Prevention and Treatment Act (CAPTA) expanded federal funding for child welfare and highlighted the federal government's role in providing technical assistance and overseeing data collection pertaining to child protection.

The 1980s and 90s saw a legislative push for moving children out of foster care and into permanent placement or independence: major laws during this period include the Adoption Assistance and Child Welfare Act (AACWA) of 1980, the Adoption and Safe Families Act (ASFA) in 1997, and the Foster Care Independence Act (FCIA) of 1999. AACWA expanded the Social Security Act with a new section referred to as Title IV-E, which established and funded an independent federal foster care authority and a federal adoption assistance program. It also mandated incentive payments to support adoptions of special needs children in foster care. ASFA significantly revamped Title IV-E, in particular by establishing protocols for ensuring the safety and stability of adoption placements, placing tighter limits on the time that children can spend in indefinite foster care and requiring more timely reviews and checks to ensure safety for foster placements and adoptions. The current form of Title IV-E is now the largest source of funding through which states and tribes receive federal reimbursements for the cost of providing foster care, kinship care, or adoption assistance.[5] Title IV-E also supports case management, social worker training, data collection, foster care administrative costs, and other related activities.[6]

[5] In 2018, states reported spending a total of 8.1 billion in Title IV-E funds (Child Trends, 2021). This included funds from the Title IV-E Foster Care Program as well as other Title IV-E child welfare streams.

[6] The programs now funded by Title IV-E are the following:

The 1999 FCIA created a new source of funding under Title IV-E, the John H. Chafee Foster Care Independence Program, which can be used to pay for a wide range of services to older youth in foster care and transitioning out of care and is designed to aid foster care youth in moving towards self-sufficiency. The Chafee program funds activities and interventions for foster care youth in the areas of education, job training, housing, financial management skills, and emotional support. Chaffee program funds are used for many programs that support children and youth who are not eligible for other Title IV-E supported programs. FCIA initially allocated $140 million to the Chafee Program.

FCIA was followed by the Family First Prevention Services Act of 2018 (FFPSA) that reformed aspects of Title IV-E funding as well as Title IV-B of the Social Security Act to provide preventive services to families at particular risk of entering the child welfare system.[7] FFPSA was a response to longstanding criticism that federal support for child welfare through the Title IV-E Foster Care Program was only available after a child had been removed from her home. Families First now allowed Title IV-E Foster Care funding to pay for up to one year of support services to any family with a child determined to be at imminent risk of removal. These services included counseling and mental health services, substance abuse treatment, and in-home parenting skills

1) Foster care (can also be used for preventive services following the Families First Prevention Services Act of 2018)
2) Adoption Assistance
3) Guardianship Assistance (for providing kinship guardianship)
4) John H. Chafee Foster Care Program for Successful Transition to Adulthood/Education and Training Vouchers
5) Waiver demonstration projects: can be used for services that do not follow specific Title IV-E requirements as long as such services are eligible under a state's approved Title IV-E waiver.

[7] Titles IV-B and IV-E of the SSA both provide funding for preventing and addressing child maltreatment, however, Title IV-E funds must meet certain federal eligibility requirements. These requirements include stipulations that the child must be under age 18 or (in most states) expected to graduate protective care before turning 19, a United States citizen or tribal equivalent, experiencing confirmed parental deprivation, removed from a home that falls below a stated income level, and living in a licensed foster home that has undergone all required federal checks. Title IV-E recipients are also subject to certain court order standards. In contrast, Title IV-B spending is not subject to any individual federal eligibility requirements, and states determine which child welfare programs are eligible to receive Title IV-B funds. States must provide a 25% match for federal funds received through Title IV-B.

training. Additionally, the law limited reimbursement to states and tribes for children placed in group homes, incentivizing them to reduce placements of children in congregate care. The law also established an electronic inter-state case-processing system to simplify the processes of interstate adoptions or transfers of guardianship in order to decrease the burden on the state foster care systems.

Another key component of the Families First Act was that it expanded eligibility for transitional age youth who experienced foster care as teenagers. Specifically, it built on the above-mentioned Chafee program and the complementary Chafee Education and Training Vouchers (ETV) program. Eligibility for the ETV program was changed from children who "are likely to remain in foster care until their 18th birthday" to those who "experience foster care at age 14 or older." In states that serve foster care youth until age 21, the Chafee program was extended until age 23. The Chafee Education and Training Vouchers (ETV) program eligibility was extended to age 26 compared to age 21 previously, and ETV funds can now be used to attend any institution of higher education for up to five years. These changes were adopted by 28 states, 9 tribal nations, and the District of Columbia. The Children's Defense Fund estimates that 186,000 former foster youth are now eligible for Chafee Program transitional support services (Children's Defense Fund, 2020).[8]

Figure 2 identifies which states and tribes expanded their extended foster care services as a result of the 2018 Families First legislation. The states shown in white continue to limit foster care eligibility to children under age 18, although most do provide some transitional services after this point. These states do not offer Title IV-E funded extended foster care in any form. Areas that are light or dark blue on the map generally offer extended foster care through age 21 (age 20 in Indiana), and Title IV-E education benefits through age 23. The dark blue states did adopt the expanded

[8] In 2019, over 672,000 children spent time in U.S. foster care (U.S. Dept. of Health and Human Services, 2020).

Chafee program benefits, but they have somewhat stricter eligibility requirements for these benefits than they maintain for regular foster care. The states that implemented the Chafee program expansions were serving about 160,000 youth aged 14-21 through extended foster care and services for older youth at the time the law was signed, which amounted to roughly one quarter of all children in foster care in 2019 (U.S. Department of Health and Human Services, 2020). Currently just over 4 percent, or 26,000, of children and youth in care are age 18 or older (AFCARS 6-month files, 2019). This number is relatively low in part due to the fact that extended foster care benefits are underutilized: in states that offer extended foster care, only 25 percent of eligible youth participate in this service (Rosenberg and Abbott, 2019).

Finally, FFPSA established the Prevention Services Clearinghouse, which is intended to identify which specific family services have evidence of effectiveness. The law mandates that states intending to use Title IV-E Foster Care Program funding for preventive care must move towards relying on programs that are "well-supported" by rigorous evidence. States are also required to each submit a five-year plan to the Department of Health and Human services describing how they will achieve this standard. In practice, the Prevention Services Clearinghouse currently lists about 70 programs, 11 of which are rated as "well-supported" according to the Clearinghouse standards. As of year-end 2021, 35 states and the District of Columbia had submitted their five-year plan to Health and Human Services, and 17 states plus D.C. had been approved.[9]

Notably, FFPSA was signed into law as part of the 2018 Bipartisan Budget Act (Public Law (P.L.) 115-123) and was designed to be budget neutral. It did not create new funding streams for child welfare but rather it changed the requirements for the types of programming that could tap into approximately $5 billion of the Foster Care Program funding allocated annually to Title IV-E of

[9]Current status available at: https://www.acf.hhs.gov/cb/data/status-submitted-title-iv-e-prevention-program-five-year-plans

the Social Security Act. In Fiscal Year 2020, Title IV-E Foster Care grants to all states, territories, and tribes totaled $5.35 billion (Health and Human Services, 2021, p. 329).[10]

IV. Previous Research and Existing Data on Foster Care

A. *Evaluations of foster care policy and legislation*

With the passage of CAPTA in 1974, the Federal Government identified the need to collect and monitor data pertaining to child welfare. The Adoption and Foster Care Analysis and Reporting System (AFCARS) collects case-level data and information from state and tribal Title IV-E agencies on all children who are in foster care or have been adopted with Title IV-E agency involvement. AFCARS came into operation in 1995, but it was not until 1998 that the majority of states began to submit relatively complete data. These data have supported a few evaluations of specific foster care legislative policy changes.

For example, AFCARS data was used in studies by Hansen (2007) and Buckles (2013) to analyze the impact of the 1980 Adoption Assistance and Child Welfare Act (AACWA). AACWA was designed to increase adoption rates, especially for children with disabilities. The law mandated an increase in monthly subsidies for high-needs adoptions in all states but allowed individual states to choose the age at which children were classified as high needs.[11] As a result, state-specific age cutoffs varied between age 0 to 12. Buckles exploits the state-level variation in minimum age requirements for higher subsidy eligibility and finds that the law did increase the number of adoptions and that conditional on adoption, eligibility did decrease the length of time in foster care.

[10] The initial Families First law was later followed by the Families First Transition Act (FFTA) of 2019 that strengthened incentives to states for prioritizing family preservation and reunification of removed children. It provided a one-time grant of $500 million to assist states in implementing the FFPSA.

[11] In addition to the higher subsidies for high-needs adoptions, ASFA created incentive payments to states for increasing adoption rates overall and provided additional funding that states could use for adoption-related fees and post-adoption services, as well as discretionary grants for programs that supported adoption goals.

However, Buckles also shows that the policy change tended to delay the adoption until the child reached the state-specified age for high-needs designation. Hansen's (2007) identification is based on state-level variations in the mean subsidy received by adoptive families. Average subsidies varied due to differences in cross-state composition of adoptions as well as differences in state coverage of fees. This analysis shows a positive association between the subsidy generosity and the adoption rate within a state, but did not use any exogenous measures to capture the state's choice of subsidy payments. Using the average subsidy payment as a policy measure is also problematic because this level varies according to the number of special-needs adoptions within the state.

Stoltzfus (2013) also tracks adoption exits out of foster care and notes a sharp increase in the number of adoptions out of foster care following the passage of the Adoption and Safe Families Act (ASFA) in 1997, followed by a large decline in the average years to adoptions from about 4 years to less than three.[12] The time series data show an acceleration in the rate of adoptions out of foster care that appear to correspond closely to the timing of ASFA. While these trends do strongly suggest that ASFA increased adoption rates, a pre-post comparison of adoptions at the national level cannot identify a causal link with the policy change or estimate the magnitude of any causal effect. Notably, although data on adoption exits is limited prior to 1995, the adoption rate out of care was rising before the passage of ASFA and has continued to increase moderately in the two decades since this law, indicating that other factors besides the ASFA subsidies could play a role. A second limitation of this analysis is that because it does not isolate an exogenous variation in adoption exits, it also cannot speak to the effect of the policy change on child wellbeing or developmental outcomes that could plausibly be affected by shorter wait times for adoptions and greater adoption success rates.

[12] Adoptions out of foster care rose from 31,000 in 1997 to over 51,000 in 2000. Adoption exits as a rate of all children in foster care rose from 6.1 percent to 9 percent over this time period.

Hayduk (2014) uses AFCARS data to carry out an evaluation of state level policies to favor kinship foster care over traditional (non-relative) foster care. The identification strategy exploits state and time level differences in laws that either encourage or require case workers to attempt placing children with relatives before they can be placed in a traditional foster home. Hayduk finds that kinship placement significantly increases stability and safety while in care and decreases the time to permanent placement. The study was also able to examine mental and physical health metrics, but did not find a significant difference in these outcomes resulting from kinship placement.

Apart from these few studies, there remains a substantial knowledge gap in the literature related to foster care policy evaluation, especially with respect to the most recent laws. Although the Families First legislation mandates that this funding is only eligible for evidenced-based programming, in many instances this evidence is limited by studies of small sample sizes and research designs that lack identification of causal impacts. Furthermore, the overall impact of FFPSA and FFTA on the quality of child protective services and child welfare outcomes has not been evaluated. There is a particular lack of rigorous evidence on the impact of family preservation or expedited exit from foster care on short- and long-term child welfare outcomes, as well as on the costs or benefits of extending the time a child spends in foster care. Given the large number of children that were affected by the 2018 funding expansion and the shifts in practice priorities following both the 2018 and 2020 legislation, these are feasible and consequential areas of future research. Much of the gap in the literature is primarily due to the limited availability data linking foster care outcomes to other administrative outcomes such as education, criminal justice, health, and labor market events. The process of linking and sharing these data are currently possible in most states but faces bureaucratic barriers and resource constraints.

B. Causal impact of placement into foster care

Understanding how placement into foster care can directly impact later life outcomes is a high-priority research topic, especially in the case of children for whom this removal decision is equivocal. Foster care experience during childhood is a leading predictor of adverse outcomes later in life. However, this correlation is driven at least in part by the early life circumstances that then lead to removal into foster care and as a result identifying the causal impact of removal itself is not straightforward. Since placement into foster care is a highly non-random event, comparing children in and out of foster care is a problematic strategy for isolating the direct effects of placement into foster care.

Several papers on this question identify the impact of foster care on child outcomes using an instrumental variables approach that exploits the quasi-random assignment of individual investigators to each allegation of child maltreatment (Doyle, 2007a, 2008; Bald et al. 2019; Gross and Baron, 2020). This strategy uses the fact that in most cases the removal decision is made by an as-good-as-randomly assigned investigator.[13] Because these investigators have substantial levels of discretion in deciding whether to remove a child for placement into foster care, there is variability in the propensity of individual investigators to order foster placement. Using the predicted placement outcome for the investigator in each case as an instrument, researchers can identify the impact of foster care placement in marginal cases where investigators discretion is likely to play a role and subsequently disentangle the impact of abuse and neglect from the impact of the foster care experience itself.

[13] This identification strategy has since been used in a wide range of contexts including criminal justice outcomes (Aizer and Doyle, 2015; Mueller-Smith, 2015; Bhuller et al., 2016; Dobbie et al.,, 2018), educational attainment (Eren and Mocan, 2017), disability insurance (Dahl et al., 2014), child maltreatment (Bald et al. 2019; Gross and Baron, 2020), and evictions (Collinson and Reed, 2019; Humphries et al., 2019).

Doyle's seminal papers on this question (2007a, 2008) studied foster care cases in Illinois between 1990 and 2003 and showed that in marginal cases, children assigned to investigators who were more likely to recommend removal from their homes for placement into foster care experienced poorer long-term outcomes including: higher rates of teenage pregnancy, increased likelihood of juvenile justice system involvement, decreased likelihood of holding a job in early adulthood, and a three-fold increase in the risk of arrest, conviction, and imprisonment. Moreover, in later research Doyle found that removal from children's homes did not appear to offer short-term protection from injury among these marginal cases. In fact, those assigned to the high propensity investigators were significantly more likely to require emergency room care in the 3-12 months following removal (Doyle, 2013).

However, recent papers following Doyle's methodology have not found similarly harmful effects of foster care in other datasets. Gross and Baron (2020) apply Doyle's methodology to child maltreatment allegations in Michigan administrative records for the years 1996-2017. In contrast to the results from Illinois, Gross and Baron find that placement in foster care has significant positive effects for child outcomes for marginal child maltreatment cases. In particular, school attendance increases significantly, and student math scores are improved by over a third of a standard deviation. They also find suggestive (but imprecise) evidence that placement into care reduces, rather than increases, the risk of juvenile delinquency within this sample.

Two other recent papers also find some beneficial effects of foster care placement on selective outcomes. Bald et al. (2019) examine data from Rhode Island and find positive academic effects for girls, but no discernible academic effects of foster care placement for boys. Roberts (2019) shows similarly positive academic effects in South Carolina, as well as strong positive benefits for juvenile delinquency outcomes for male and black foster children. Notably, the Rhode Island and South Carolina studies do not include the full universe of child maltreatment allegations in their

states, but only the substantiated allegations. Gross and Baron demonstrate that this type of censored data leads to a bias of the estimated impact towards zero, suggesting that these two studies may be underestimating the benefits of foster care.[14]

The mixed findings within this set of papers likely reflect systemic differences across states and over time in foster care practices and family-level interventions, and differences in sample characteristics. The studies are based on three distinct administrative datasets. Doyle's data comprise of Illinois abuse investigation cases from the period 1990 to 2001; Gross and Baron's data from Michigan covered the period 1996 to 2017; Bald et al. use Rhode Island administrative records of child maltreatment investigations occurring between 2000 and 2015. There are several observable state level differences in the practice of foster care across these three states, as well as changes in implementation practices that occurred between the 1990s and 2000s. For example, within the earlier Illinois sample the median duration of foster care was nearly four times longer than other states at the time, and stability while in care was significantly lower than the country overall (Gross and Baron, p. 25). In contrast, the Michigan and Rhode Island foster care sample both had a median duration of stay and number of moves while in stay that were lower and comparable to national averages (U.S. Department of Health and Human Services, 2019). If longer and less stable foster care stays leads to worse outcomes for children, this could contribute to the different findings from the two samples. In addition, the children found in the Illinois sample were considerably older than those in the more recent studies, which could alter how they are impacted by foster care.

[14] In both the Michigan and Rhode Island studies, the randomly assigned investigator determines first whether or not to substantiate abuse allegations and then whether or not to remove a child in cases of substantiated abuse. However, Gross and Baron observed the full universe of child maltreatment allegations while Bald et al. only had access to the substantiated allegations, that is, after the initial investigator decision has occurred. Gross and Baron use replication to show that IV estimates using only this truncated dataset will dampen the estimated effects of removal on welfare when the initial substantiation decision is also relevant for child welfare outcomes.

There were also federal changes to foster care policy in the late 1990s that reshaped the foster care environment at the national level between the Doyle studies and the later works by Bald et al. (2019) and Gross and Baron (2020): these included ASFA in 1997 and the 2003 and 2010 amendments to CAPTA that all moved to encourage shorter stays in foster care, greater reliance on kinship placement, and more programming for abuse prevention and family reunification. These legislative changes were accompanied by an increased number of available parental support services and child maltreatment prevention programs (U.S. Department of Health and Human Services, 2017a). Typical services ordered for parental reunification plans include parenting courses, substance abuse rehabilitation, job training, job search support, housing services, or recovery coach services (U. S. Department of Health and Human Services, 2017b). Parents are now typically required to engage with all court-ordered support programs before reunification with their child(ren) can take place, which may have improved long term success in preventing reabuse rates (D'Andrade and Chambers, 2012; D'Andrade and Nguyen, 2014). In general, the national changes and current prevalence of family support services suggest that the more recent set of findings may be more broadly generalizable to the current foster care environment than the earlier Illinois studies.

While additional studies replicating this methodology could shed more light on the causal effects of placement in various foster care environments, it is clearly not possible to fully predict the effects of placement in every setting. The available studies on the causal impact of placement into foster care apply only to cases of marginal child maltreatment for which it is reasonable that two qualified officers or child welfare judges might make different decisions on whether to remove a child from her home. In many respects these are precisely the cases where we would expect the biggest variation in outcomes across studies. These papers do not address how to best serve the majority of children placed into care for whom the severity of maltreatment is unambiguous. We discuss research that examines outcomes for this group of children in the remainder of this section.

C. Program-specific impact evaluations

While we found over fifty research studies have been conducted on specific foster-care interventions and programming, there is little high-quality evidence of effectiveness in this body of work, either due to small sample sizes or study methodology that does not identify the causal impact of the intervention. Only a handful of randomized or experimental studies have been completed that are able to show evidence of impact on the foster care population. We summarize the existing randomized controlled trials on foster care services in Table 3. The table includes studies on services for populations at risk of, currently in, or previously in foster care, with sample sizes that were large enough to provide statistically meaningful estimates for a foster-care relevant outcome. Only seven programs have been evaluated with studies that meet our criteria for informative evidence: the Positive Parenting Program, Parent Management Training—Oregon Model, SafeCare, Keeping Foster and Kin Parents Supported and Trained, Wendy's Wonderful Kids, (Multidimensional) Treatment Foster Care, and Homebuilders. It should be noted that the last two of these have only been evaluated in very small samples and may not be replicable on a larger scale.

Positive Parenting Program (Triple P) is a well-known parent support program that is designed to improve parenting skills of birth parents whose children have been removed or are at risk of removal. Triple P was evaluated by a county-level randomized controlled trial in South Carolina (Prinz et al., 2009). The researchers found statistically significant reductions in county-wide rates of child maltreatment, hospital visits for maltreatment injuries, and foster-care placements in locations provided with Triple P. [15]

[15] Triple P may have limited benefits in the most challenging child maltreatment cases. Akin et al. (2017) found no discernible effect of the Triple P program on foster care reentry rates among highly dysfunctional families that were specifically struggling with active addiction. In these cases, more intensive interventions may be needed. Ryan et al. (2008) conducted an agency-level randomized controlled trial of an intensive substance abuse recovery program that provided birth parents with a personalized recovery coach and showed the intervention led to an increase in family reunifications, reduction in active foster care cases, and net savings to the state.

Other parenting interventions that have demonstrated effectiveness in randomized controlled trials include the Parent Management Training–Oregon Model (PMTO), evaluated by Fisher et al. (2005), SafeCare (Chaffin et al., 2012), and KEEP (Keeping Foster and Kin Parents Supported and Trained (KEEP) (Price et al., 2008).[16] The researchers generally concluded that these interventions were effective in improving various foster care outcomes. Specifically, PMTO was shown to shorten foster care duration and improve birth family reunification rates, SafeCare significantly decreased the chance of reentry into foster care, and KEEP nearly doubled birth family reunification rates. One limitation of these studies is that they only examine the nature of the foster care outcome and lack any data related to ongoing child welfare outcomes such as education or health measures.

Another common type of intervention is targeted at teens in foster care and extended foster care youth, designed to mitigate the predicted adverse outcomes linked to foster care. Taussig et al. (2012) showed that mentoring and skills coaching for youth in foster care can improve placement stability and permanency outcomes. Moreover, this type of intervention can benefit longer term outcomes for foster youth. One of the most well-known and widely employed interventions is the Multidimensional Treatment Foster Care approach (developed and documented by Chamberlain, 2003). MTFC is designed to decrease deviant behavior and to increase pro-social behavior (e.g., complying with social norms, behaving legally, attending school, improved communication). In this program, foster families are professionally trained on how to provide this therapy to their foster youth, and they are also provided with a clinical team (usually including specialized therapists and social workers). MTFC is an intensive and comprehensive intervention, and several randomized controlled trials have shown improved behavior and outcomes for foster children and teens who

[16] SafeCare was implemented at the agency level, and as a result was less costly to provide compared to in-home, personalized family coaching programs.

participate (Green et al., 2014; Saldana et al., 2019; Leve et al 2013; Kerr et al., 2009, Chamberlain et al., 2007; Leslie and Chamberlain, 2007). These studies showed encouraging results, finding improvements in academic outcomes, decreased juvenile delinquency and adult criminal behavior, and a decrease in teen pregnancy rates for girls. The main limitation of these studies is that they were based on extremely small sample sizes and these results have not been replicated in larger samples.

Another program that has demonstrated measurable effects for foster children is Wendy's Wonderful Kids (WWK), a foster care resolution program created by the Dave Thomas Foundation. Rather than reunification it focuses on increasing the number of adoptions from foster care. WWK provided greater resources for adoption matching and was evaluated by a randomized controlled trial by Vandivere et al. (2015). The experiment demonstrated that treatment improved successful adoption rates by 50 to 300 percent. The impact of WWK was shown to be especially large among older children and children with psychological disorders.

A small randomized controlled trial was conducted on the Homebuilders program, also referred to as intensive family-based services (IFBS) (Fraser et al., 1996; Walton, 1998). Homebuilders is a 90-day family reunification program, during which birth families and caseworkers develop a reunification plan, children return to the home for supervised visits, and caregivers are taught communication, parenting, and problem-solving skills. The intervention is very intensive, including 24-7 on-call access to caseworkers for crisis management, frequent visitation by caseworkers as often as several times per week, and a low case load of only no more than six families per caseworker. In spite of the small sample size of 120 families, the program showed significant, positive effects on family reunification 12 months after the intervention period (Fraser et al., 1996). The experiment also found evidence of sustained impact. Walton (1998) tracked the study participants in administrative records six years after the intervention and found that the treatment group had a significantly lower median number of days in out-of-home care and more days spent in

the parental home after reunification. No difference was found with respect to the number of transitions while in foster care.

In addition to the six papers that evaluate the programs listed above, we found 12 other foster care programs that were evaluated by 16 studies using randomized control groups. However, we believe that these 16 studies are not able to meaningfully inform service providers or foster care practitioners, due to one of two reasons: (i) either the study sample size is too small to offer statistically significant results, null or otherwise, or (ii) the study only considers subjective, participant-reported outcomes, specialized psychological metrics, or survey outcomes that are unavailable in administrative data. These additional studies are included in the online appendix, along with 19 other studies that are not directly focused on the foster care population but concern programs or services that could be applied in a foster care setting.[17]

Finally, several randomized studies have evaluated the effectiveness of programs for foster care youth supported by the federal Chafee program, however, the studied programs have had no discernible impacts on most relevant youth outcomes.[18] Fernandes-Alcantara (2019) reviews the HHS findings regarding the effectiveness of four training programs in California and Massachusetts designed to build life skills and prepare youth for employment. These programs were in Kern County, California, LA County, California, and several sites in Massachusetts, and were evaluated through randomized controlled trials. Three of the four programs were found to have no significant impact on youth outcomes (these were known as the Independent Living – Employment Services

[17] A full catalogue of the studies we reviewed is available at: https://docs.google.com/spreadsheets/d/1O7576s0XrpLOJfp9yJOTjk1NlwnEJ-NA/edit?usp=sharing&ouid=115044484460249267970&rtpof=true&sd=true

[18] Because of space constraints, these experimental evaluations of programs that have not demonstrated significant impact are not listed in Table 3.

Program of Kern County, Early Start to Emancipation in LA County, and the Life Skills Training Program of LA).

The fourth program, a mentoring program in California known as Outreach, was a similar one-on-one intensive and individualized life skills training program that focuses on empowering youths to develop the skills of an independent adult, participate in higher education, and create a network of supportive and permanent adults. It was offered to youth in both regular and intensive foster care and was found to measurably increase the probability of college enrollment, and of persisting in college for more than one year (Courtney et al., 2011). However, there was no impact of the program on college completion, employment, economic well-being, housing, delinquency, pregnancy, or self-reported preparedness for independence. The researchers did find that youths in the Outreach group were more likely to have remained in foster care than those in the control group but were also more likely to enroll in college than individuals in the control group. Treatment group individuals were also more likely to have a birth certificate and driver's license than individuals in the control group, but there were no statistically significant differences found between the treatment group and the control group.

D. Nonexperimental program studies

In this subsection, we review three other highly cited studies of well-known child welfare interventions; these three studies compare program participants with a matched control group, but there are limitations to these studies that potentially bias their findings.

In lieu of randomized control groups, there are many studies on foster care practices that rely on non-experimental, matched control groups. Individuals for the matched control groups are usually selected by propensity score matching on observable characteristics. For example, three well known interventions that are often referred to as "evidence-based" are the programs 30 Days to Family, the Iowa Parent Partnership, and the Teaching-Family Model, but these models have only

been studied with matched control group designs. Matched control group studies are limited in their ability to ensure comparability between treatment and control groups, both with respect to participant characteristics and overall support received by individuals. We summarize below the most widely cited studies pertaining to these three interventions, and briefly describe the limitations of the matched control group design.

Atkinson et al. (2019) tracks placement outcomes for children served by 30 Days to Family, which encourages kinship placement. Compared to the matched control group, the study found that children in the program experienced shorter and more stable stays in foster care. However, a major shortcoming in the study design is the lack of comparable support between the kinship foster homes in the treatment group and the nonkinship homes in the control group. The intervention provides an intensive, 30-day counseling program to relatives encouraging them to become guardians of the child in need of care and preparing them to act as stable and nurturing caregivers. This counseling was not provided to non-relative prospective foster parents, so the study is not able to differentiate between the causal effect of being related and the effect of the preparatory counseling,

The second program, the Iowa Parent Partnership was a birth family reunification program studied by Chambers et al. (2019). The study found higher reunification rates among program participants than among the matched control group, but there are significant treatment group selection concerns. Eligible parents had to request participation in the program and then voluntarily accept these services. This high degree of self-selection into the program is likely tied to other unobservable differences between the treatment and control groups, and as a result the study is not able to confirm significant effectiveness of the program.

The Teaching-Family Model (TFM) was studied by Lee and Thompson (2008), who concluded that the program improved group-home discharge outcomes, increased rates of reunification with biological parents, and decreased the rate of reentry into care. A weakness of the

study is the lack of comparability in other non-TFM services received by the treatment and control groups. The full control group were receiving additional support services from an organization called Girls and Boys Town, that offered additional services besides the TFM program and provided the actual residential center for some of the treatment group. As a result, it is not possible to differentiate whether differences in outcomes are due to the TFM model specifically or the additional support services provided by Girls and Boys Town.

Following FFPSA, federal funding mandates require that a majority of foster care service services supported by Title IV-E must show research-based evidence of effectiveness, but in spite of these requirements little high-quality evidence of program impact is available. This is largely due to the fact that existing studies are either too small to generate precise estimates, or they do not look at ongoing measures of welfare during childhood or adulthood, or they are not designed to capture causal impact. There is a clear need for providers and researchers to engage in experimental or quasi-experimental evaluations of programs targeted to foster care youth, birth parents, and foster or adoptive parents. Moreover, of the 44 programs that we reviewed, only Triple P and MTFC have been evaluated for impact with respect to post-care child wellbeing outcomes such as physical injury, education, delinquency, or teen pregnancy.

V. Key questions to be addressed in future research

Given the sizeable population that experiences foster care during childhood and the lack of evidence as to which programs or services are effective in improving life outcomes following foster care, there is an unmet need for research that informs how foster care can be implemented in a way to minimize harm and improve life trajectories. In particular, we emphasize that the following topics have not been adequately addressed by the existing literature.

1. *Can we identify interventions that decrease the need for foster care?*

Many service providers are starting to focus more on preventing the need for foster care by acting to support birth parents so that initial rates of child abuse and neglect are lower, decreasing the need for child removal in the first place. State and federal agencies have also increased efforts in family preservation, in particular through the funding flexibility allowed by the Families First Transition Act. As mentioned previously, only the Triple P intervention has a high level of evidence supporting its effectiveness in decreasing the probability that at-risk children enter foster care. However, organizations employ a wide range of other family-based interventions aimed at decreasing the rates of child maltreatment and out-of-home placements. For example, Homebuilders, Family Group Decision Making and the Strengthening Families Program are examples of interventions that are designed to decrease parental stress and improve intrafamily communication and cohesion. Parents are taught de-escalation and gentle parenting techniques. Homebuilders has been the focus of several studies including a randomized controlled trial that found promising effects for family stabilization after an initial removal event (Wood et al., 1988). Walton (1998) used a pre-post analysis to show the program was linked to lower placements into foster care and corresponding lower placement costs among the treatment families. However, both these studies are limited by very small sample sizes that were predominantly white and did not represent the high rate of racial minorities seen in current foster care populations.

Other research has shown that certain maternal characteristics are predictors of child maltreatment. In particular, very young maternal age at first birth, maternal exposure to family or community violence during childhood, psychiatric distress and exposure to intimate partner violence all predict a pattern of perpetuating child abuse (Valentino et al., 2012; Anderson et al., 2018). These studies suggest that in the cases of young, single mothers who likely experienced maltreatment when they themselves were children, a trauma-informed intervention could be a promising strategy to

interrupt intergenerational patterns of maltreatment and foster care placement. This approach has not been directly tested in the context of foster care prevention.

2. *Which programs improve outcomes for foster care alumni?*

Children who enter or remain in foster care after age 12 are less likely to be adopted and in some cases cannot be reunited with their biological parent(s). Some descriptive, non-experimental research has shown that the foster care experience of these youth is predictive of teen and young adult outcomes such as crime, education, teen pregnancy, and employment. Courtney and Barth (1996) documented that greater foster placement stability while in care was correlated with more successful exits or permanency rates for teens in foster care. Johnson-Reid and Barth (2000a) studied a cohort of school aged children from California who entered foster care between 1988 and 1996 and found that future arrest and incarceration rates were highest for children who entered foster care in middle school compared to elementary or high school, and this correlation was strongest for African-Americans, Latinos, and females.

Several studies have highlighted the importance of supportive programs for older children during and after foster care. Kerman et al. (2002) showed that extended foster care was associated with better outcomes for former foster care youth compared to exiting foster care at age 18. This study also relied on non-experimental methods and cannot be used to identify a causal relationship between foster care experiences and later life outcomes.

A few longitudinal studies have tracked foster children and foster youth and compared their outcomes to those of children in the general population. The Northwest Foster Care Alumni Study (Pecora et al., 2005) and the Midwest Evaluation of the Adult Functioning of Former Foster Youth (Courtney et al., 2011) both showed that youth who were in foster care during their teenage years displayed worse education and labor market outcomes than their counterparts in the general

population. Since 2010, the Department of Health and Human Services (HHS) has required all states to report on characteristics and outcomes of foster care youth through the National Youth in Transition Database (NYTD). The NYTD collects biannual data at the cohort level; the first cohort was 17 years old in 2010 and a new cohort has been added every three years. Data from the first NYTD cohort showed that by age 21, 43 percent of these youth had experienced homelessness and 25 percent had struggled with addiction. Johnson-Reid and Barth (2000 a, b) find that prolonged and less stable foster care placements of preteens and young teenagers is predictive of violent crime and incarceration. These descriptive studies highlight the unique challenges faced by transition age foster youth.

While most localities offer extended foster care support as well as a variety of transitional services, these services and their effectiveness have not been well studied. randomized controlled trials of interventions for foster teens and transition age youth is difficult to implement because of idiosyncratic methods of referral to various service providers. However, identifying and quantifying these effects could help providers reduce rates of homelessness, crime, and unemployment in the local community. A few examples of commonly used models of foster youth support that have not been rigorously evaluated are the Transition to Independence Process (TIP), LifeSet, Better Futures, and Generations of Hope.

Finally, even less is known about how to support adult alumni of childhood foster care, who are documented to have extremely low levels of education, higher rates of poverty, and higher incidence of physical and mental illness (Table 1 summarizes many of these outcomes). For the most part, this population is served by general support programs rather than interventions designed for foster care alumni. One strategy to improve the evidence for this group is to include questions about childhood foster care experiences in intake forms in any evaluation of these general support

interventions. In large studies, the specific impact for the subpopulation of foster care alumni can be examined.

3. *How has the expansion of extended foster care impacted outcomes for older youth in care?*

Several policies have increased the availability for extended foster care specifically for teens and transitional age youth (typically defined as youth aged 18-21, or 18-26 in certain cases). The most substantial increase in funding for extended foster care came in 2018 with the passage of the Families First Prevention Services Act, which allocated an additional $75 million over five years to fund programs and care for transitional aged youth through the Chafee program and related supports. While there have been mandated evaluations of the Chafee program (see III. D), we are unaware of any completed study of the overall funding expansions for older teens in foster care and extended foster care services. The challenges of such a study include the fact that the actual amount of additional funding is not overly large at $10-20 million annually (CBO, 2018), there is widespread underutilization of extended foster care services (Child Trends, 2019), and it would not be possible to randomize treatment. One option for researchers would be to compare youth in each expansion state who were just under the eligibility cutoffs with youth who were just over the cutoffs, during a period of time following the 2018 and 2019 Families First laws. First order outcomes such as utilization of foster care services are easily accessible in the AFCARS data. Secondary outcomes of interest for this population would include housing instability or homelessness, post-secondary education, and job market outcomes.

4. *What is the impact of kinship placement and what programs make kinship care more successful?*

Kinship placement refers to situations in which a relative or close friend of a child becomes that child's foster parent. Most child welfare agencies show a preference for placing children with relatives rather than traditional foster care, believing that placement with familiar adults will be less

traumatic and lead to less instability for children (Green, 2004). In fact, a majority of states now have laws requiring that agencies prioritize relative caregivers over unrelated foster parents when children need to be put in protective custody (Hayduk, 2014). Currently, about 32 percent of foster children in the United States are placed in kinship foster care (AFCARS, 2019).

While most descriptive studies have shown fewer behavioral problems and better placement stability from kinship care compared to traditional foster care (Chamberlain et al., 2006; Koh and Testa, 2008; Rubin et al., 2008; Kinsey and Schlösser, 2009; Bell and Romano, 2017), children in kinship care and their related caregivers differ substantially from the general foster care population (Berrick et al., 1994; Keller et al., 2001).[19] In particular, children in kinship placement are more likely to be minorities, and less likely to have a disability. Their kinship caregivers are older, less educated, and more economically disadvantaged than traditional foster parents, and children placed in their care are more likely to experience food insecurity (Ehrle and Green, 2002). The factors behind the child's initial removal are also not comparable: kinship placement is more likely in cases where the main cause for placement was parental substance abuse or neglect (Beeman et al., 2000; Grogan-Kaylor, 2000). Although there do not appear to be any measurable differences in reunification rates, children in non-kinship foster care are more likely to be adopted while children in kinship foster care are more likely to be placed in a permanent guardianship following foster care, often with the relative foster caregiver (Winokur et al., 2018; Atkinson et al., 2019).

It is reasonable to expect that relatives with a pre-existing relationship to a child could provide a more secure and nurturing environment than an unrelated foster parent, and this emotional benefit may outweigh the socioeconomic disadvantages that are observed in kinship caregivers as a group. However, given the differences in the characteristics of kinship caregivers and

[19] Many of the descriptive studies listed here use propensity score matching to compare children in kinship and non-kinship foster placements and adjust for demographic differences when comparing permanency outcomes.

the foster children in their care, comparing outcomes between kinship placements and general foster care, or even matched control groups, cannot generate unbiased estimates of the causal impact of foster care. Clearly, this issue cannot be studied using a randomized control, but there are options for using quasi-experimental research designs to identify the causal effect of kinship care. Two studies have used quasi-random variation in state laws regarding kinship care to isolate the differential impact of kinship placement over traditional placement on children's outcomes. Doyle (2007b) studies kinship care following a 1995 Illinois state law that decreased foster care subsidies for many kinship caregivers, resulting in a 15 percent decline in kinship care placement rates. Doyle examines the impact of the exogenous shift in kinship care on child welfare outcomes, and finds no significant impact on children's healthcare utilization or test scores. Hayduk (2014) uses state and time level variation in laws mandating preferential placement with kinship caregivers, and finds positive benefits of kinship care with respect to placement stability and foster care duration, but no difference in mental or physical health measures.

While these two studies offer valuable contributions to the literature on kinship foster care, it is clear that more quasi-experimental research is needed. Doyle (2007) uses data from the 1990s within one state, a setting that has limited generalizability with the rest of the country today (Gross and Baron, 2020). The outcomes examined in Hayduk (2014) are limited to those available in the AFCARS public use files; a more complete study could be accomplished with access to state-level administrative datasets linking foster care history to education and labor market outcomes.

Kinship care policy is also in need of better quality research on program-specific impacts. In spite of the lack of evidence that kinship placement has significant welfare effects for children, there may be qualitative reasons to favor kinship placements over traditional foster care, when this option is available. For example, children and relatives might express a preference for a kinship placement over a placement with an unknown foster home. In some cases, kinship caregivers live close to the

child's original home or neighborhood, so the child is able to stay in the same school and maintain social connections. In light of these reasons and given the pervasive institutional preferences for kinship foster care, another important area of research is to investigate best practices for kinship care service providers and identify programs that effectively support kinship foster care children and their caregivers. McCallion et al. (2004) used a randomized controlled trial to study the effect of support programs for grandparents caring for children with developmental delays and found that the treatment group caregivers exhibited reduced symptoms of depression and improved caregiving skills. This was a relatively small study with fewer than 100 caregivers, and no child outcomes were included in the study. Wheeler and Vollet (2017) compare child maltreatment outcomes in a group of caregivers who received the Kinship Supports Intervention with two matched control groups (one with non-kinship placements, and one kinship placement group who did not receive the intervention). They found that the program was associated with fewer incidents of subsequent maltreatment, increased placement stability, and shorter time to permanency.

Both the Kinship Supports Intervention and Support Groups for Grandparent Caregivers of Children with Developmental Disabilities and Delays (evaluated by McCallion et al.) are commonly used interventions for kinship caregivers with suggestive but non-rigorous evidence of improved outcomes for caregivers and children. These programs should be evaluated via randomized controlled trials that are large enough to determine not only aggregate impact but also impact within racial minorities, specific age groups, or at given caregiver socioeconomic levels.

5. *What is the impact of privatization of foster care?*

This research area is especially important as several states have now at least partially privatized their foster care in an attempt to reduce costs and meet excess demand for care. Florida and Kansas have fully privatized foster care: the state contracts all foster placements out to private

agencies. Texas and West Virginia are in the process of actively moving towards a privatized system, also referred to as community-based care. Other states currently operate a hybrid approach, with some portion of foster homes, case management, or both, operated by private providers. Examples of hybrid foster care environments include Arizona, Colorado, Michigan, Missouri, Ohio, South Dakota, Tennessee, Wisconsin, Georgia, the District of Columbia, Illinois, Indiana, and New York. Figure 3 maps out the foster care sectors by state; states that are moving towards full privatization are color coded with the other privatized states.

The cost-saving rationale for privatization is that public foster care agencies may experience a principal-agent problem that results in higher than necessary costs (Savas, 2000). This could occur because public agencies do not face the same incentives to minimize costs as private firms: in the case of foster care, public funding will generally increase with foster care duration or moves. In this scenario there is no cost-based incentive to decrease duration or the number of placement changes. Additionally, cost incentives faced by private agencies may lead them to decrease overhead expenses or staffing costs. Proponents of privatized care argue that the private sector is more flexible and better equipped to decrease costs while still providing safe and effective care to a large volume of children. However, the available descriptive evidence does not appear to support the theoretical cost and efficiency benefits of privatization.

Descriptive studies such as Zell (2006) and Hollingsworth et al. (2010) have compared case worker characteristics among private and public foster care agencies and drawn largely similar conclusions. Overall, these studies find that, compared to the private sector, case managers employed by public foster care agencies have more years of experience and higher salaries and are more likely to be African American. However, public sector foster care workers are also more likely to report low morale, and a belief that their agencies were under-resourced. In spite of this, studies have not found higher turnover rates for public sector foster care workers, and some have even

found lower turnover among the public sector (see Jayaratne and Faller, 2009; Zell, 2006; Huggins-Hoyt et al., 2019).

Descriptive research on child outcomes such as permanency and reunification has also failed to show any clear support for privatization, and even found higher state-wide abuse rates in Florida following full privatization (Steen and Smith, 2012). An analysis of AFCARS data by Huggins-Hoyt et al. (2019) showed that African-American and indigenous children in privatized foster care did experience decreased lengths of stay compared to public foster care systems. This difference was not found for white children in care. However, this shortened length of stay for children of color was not shown to be associated with any child safety or welfare outcomes (these outcomes were not studied), and children of color still had worse placement stability, a measure that has been linked to behavioral and emotional problems in foster children (James et al., 2004; Newton et al., 2000; and Smith et al., 2001). Importantly, these studies are comparisons of county to county differences or pre-and-post statewide differences and as a result they are unable to fully control for underlying differences in characteristics between populations in different counties or concurrent changes over time.

High quality cost studies of child welfare privatization are also rare. The most comprehensive study in this area gathered survey responses from child welfare administrators and identified 39 privatized child welfare programs across the United States. About 75 percent of agencies surveyed said that initiatives were costlier than their pre-privatization counterparts (McCullough and Schmitt, 2003).[20] In the majority of the remaining programs, the cost difference before and after privatization was not known or could not be accurately estimated. Only 8% of the 39 privatization initiatives surveyed were associated with cost savings. Collins-Camargo et al. (2011)

[20] These estimates understate the true cost of the privatized services if non-profit, private organizations and individuals are subsidizing the programs without public reimbursement.

similarly found that most states that privatized foster care services reported significantly higher costs and less than optimal outcomes. However, an ideal study of privatization and cost would measure cost effectiveness rather than just absolute changes in program costs. To do this one would need to measure the identified impact of privatization (for example, on increased reunification rates or improved child outcomes) per the change in total program costs.

6. *What are the effects of services on objective child welfare outcomes?*

As mentioned previously, the existing evaluations of foster care programming focus almost exclusively on foster care statistics such as duration, frequency, stability while in care and adoption without connecting these outcomes to broader measures of welfare. In terms of key outcomes, studies need to look at whether interventions can lower the risk of homelessness, crime, substance abuse, and improve outcomes in education and employment. We have found no large-scale studies of services provided to foster care children that meet this criterion, although there were several HHS evaluations of services for foster care alumni (Courtney et al., 2008a and 2008b; Courtney et al., 2011). Both data limitations and challenges associated with implementing rigorous research designs have made studies of these outcomes difficult.

7. *Heterogeneity of program impacts*

More work is also needed to determine differences in program effectiveness by child characteristics, especially race and ethnicity. Quasi-experimental and experimental evaluations are sometimes only able to measure to the average intervention impact among individuals who participate in the program under study (the local average treatment effect). However, it is often critically important for providers to know how to best allocate limited program spots among eligible participants. Knowing which interventions are best suited for racial minorities, or children who have experienced physical trauma, or children who have already spent extensive time in foster care, can allow scarce resources to be used in the most impactful way. The challenge for carrying out this type

of research is that heterogeneous impact analysis can only be carried out on programs that are sufficiently large and serve a wide variety of demographic groups, or on programs that are being implemented by many service providers in a variety of settings and geographic locations. A possible solution is to carry out multi-site, multi-provider studies, either through a large collaboration or through access to administrative datasets.

VI. Discussion

In fiscal year 2019, there were 656,000 officially confirmed cases of child abuse and neglect, and 1,840 children in the U.S. died as a result of the maltreatment (U.S. Department of Health and Human Services, 2021). Survey data suggests that true rates of child maltreatment are likely much higher, showing that as many as 30 percent or more of U.S. children are victims of some form of abuse or neglect from their caregiver (Hussey et al., 2006). About 37 percent of children will experience a child welfare investigation before they turn 18 (Kim et al., 2017), and the national economic burden of addressing the tangible and intangible consequences of child abuse have been estimated as high as $2-$3 trillion annually (Peterson et al., 2018; Klika et al., 2020).

In spite of the magnitude and severity of this problem, we could only identify five randomized controlled trials of child welfare services that had sample sizes over 500, and out of these only two studied objective measures of child wellbeing (Prinz et al., 2009, and Chafin et al., 2012). In contrast, there have been 27 large-scale randomized controlled trials on the effects of welfare reform (Hendren and Sprung-Keyser, 2020).

Descriptive studies show definitively that a history of foster care predicts poorer life outcomes in both childhood and later in life, but the literature on child welfare and welfare-related programs is lacking in two major dimensions. The first is a need for more programmatic impact evaluation, not only for programs offered at the time that children are in care but also for adults who

previously experienced foster care. Such evaluations are arguably more policy relevant than identifying the impact of foster care itself: this research is limited to impact of foster care in marginal cases and as result does not speak to the vast majority of children in either foster care or maltreating homes. For these children, the pertinent policy questions are how to help them once they have experienced abuse, neglect, or removal, or how to prevent recurrence of maltreatment.

The second gap in the literature is the need for foster care-related research that addresses a broader range of welfare outcomes such as education, employment, criminal justice outcomes, and physical and mental health. Connecting the direct effects of foster care practices with these broader outcomes will offer means for direct comparisons of programs across different environments as well as clear policy implications for practitioners and lawmakers. The Prinz and Chafin studies cited earlier were carried out on families at risk for removal into foster care but to date no interventions have been shown to definitively improve the odds of these adverse outcomes once children have entered care. The sufficiently-powered studies that exist on interventions for foster children have looked exclusively at either placement characteristics or caregiver-reported measures as outcomes.[21]

There are certainly obstacles to pursuing research that can address these shortcomings in the literature, but these challenges are not insurmountable. Randomized controlled trials provide the cleanest identification for the causal effect of programs, especially when followed by replication studies. Situations in which new interventions are being introduced or expanded are generally well suited to experimental research. These studies offer the greatest value when they address programs that are scalable, replicable, or follow widely used models of transformation (for example, mentoring programs, dual generational models, or trauma-informed care). Causal studies of broader foster care policy such as the Families First legislation is also needed. The impact of federal or state policies is

[21] Researchers did document potentially promising results from small randomized controlled trial of a two-generational coaching intervention known as the Multidimensional Treatment Foster Care model (Chamberlain, 2003). These results have not been successfully replicated since the original trial.

more difficult to evaluate experimentally, but quasi-experimental methods could offer an identification strategy. Feasible methodology options for this line of research include exploiting state and time variation in laws that mandate certain foster care policies, or comparing outcomes of individuals eligible and ineligible for new funding streams.

Collaboration between researchers and state agencies can offer well-powered studies to inform best practices. Linking across administrative datasets will allow research that not only looks at outcomes within the foster care experience but also at objective measures of child well-being that can be gauged against a non-foster care population. Current research in this area is limited largely because of data restrictions as well as scarce opportunity to carry out randomized studies. State agencies are often hesitant to share micro-level foster care data with researchers, or to allow identifiable data to be matched with other data such as educational outcomes. Even without randomization, valuable research could be carried out if national and state leaders could support greater access for researchers to administrative records on foster care, and simplify the process for linking these records to other relevant datasets such as public school records, post-secondary academic outcomes, unemployment insurance and labor market records.

Finally, both public and private sources of child welfare funding can improve the quantity and quality of research on foster care policy by requiring ongoing, high-quality research to guide best practices and inform new legislation. The Families First Prevention Clearinghouse is a step in this direction but does not go far enough. We recommend that researchers actively work with policy makers to establish a stronger standard for what constitutes evidence of effectiveness and that both funders and providers build an expectation for evidence-supported services.

References

Aizer, A., and Doyle Jr, J. J. 2015. Juvenile incarceration, human capital, and future crime: Evidence from randomly assigned judges. *Quarterly Journal of Economics*, 130(2): 759-803.

Akin, B.A., Brook, J., Lloyd, M.H. and McDonald, T.P., 2017. Effect of a parenting intervention on foster care reentry after reunification among substance-affected families: A quasi-experimental study. *Child Maltreatment*, *22*(3): 194-204.

Akin, B.A. and McDonald, T.P., 2018. Parenting intervention effects on reunification: A randomized trial of PMTO in foster care. *Child Abuse & Neglect*, 83: 94-105.

Anderson, R.E., Edwards, L.J., Silver, K.E. and Johnson, D.M., 2018. Intergenerational transmission of child abuse: Predictors of child abuse potential among racially diverse women residing in domestic violence shelters. *Child Abuse & Neglect*, 85: 80-90.

Annie E. Casey Foundation and Center for the Study of Social Policy. 2000. *Kids Count Data Book*. Washington, D.C.: Center for the Study of Social Policy.

Appel, A. E., and Holden, G. W. 1998. The co-occurrence of spouse and physical child abuse: a review and appraisal. *Journal of Family Psychology*, 12(4): 578-599.

Atkinson, A.J., 2019. 30 Days to Family®: Confirming Theoretical and Actual Outcomes. *Child Welfare,* 97(4): 97-129.

Bald, A., E. Chyn, Hastings, J. S., and Machelett, M. 2019. The causal impact of removing children from abusive and neglectful homes. National Bureau of Economic Research Working Paper 25419.

Barrat, V. X., and Berliner. B. 2013. *The Invisible Achievement Gap: Education Outcomes of Students in Foster Care in California's Public Schools.* San Francisco, CA: WestEd.

Beeman, S.K., Kim, H. and Bullerdick, S.K., 2000. Factors affecting placement of children in kinship and nonkinship foster care. *Children and Youth Services Review*, *22*(1): 37-54.

Berger, L.M, Cancian, M., Han, E., Noyes, N., and Rios-Salas, V. 2014. "Children's academic achievement and foster care." *Pediatrics,* 135(1): 109–116.

Berrick, J.D., Barth, R.P. and Needell, B., 1994. A comparison of kinship foster homes and foster family homes: Implications for kinship foster care as family preservation. *Children and Youth Services Review*, *16*(1-2): 33-63.

Bhuller, M., Dahl, G. B., Loken, K. V., and Mogstad, M. 2018. Intergenerational effects of incarceration. *AEA Papers and Proceedings* 108: 234-40.

Bhuller, M., Dahl, G. B., Løken, K. V., and Mogstad, M. 2020. Incarceration, recidivism, and employment. *Journal of Political Economy,* 128(4): 1269-1324.

Buckles, K. S. 2013. Adoption subsidies and placement outcomes for children in foster care. *Journal of Human Resources*, *48*(3), 596-627.

Chaffin, M., Hecht, D., Bard, D., Silovsky, J.F. and Beasley, W.H., 2012. A statewide trial of the SafeCare home-based services model with parents in Child Protective Services. *Pediatrics*, *129*(3): 509-515.

Chamberlain, P., Price, J.M., Reid, J.B., Landsverk, J., Fisher, P.A. and Stoolmiller, M., 2006. Who disrupts from placement in foster and kinship care?. *Child abuse & Neglect*, *30*(4): 409-424.

Chamberlain, P., Leve, L. D., & DeGarmo, D. S. 2007. Multidimensional Treatment Foster Care for girls in the juvenile justice system: 2-year follow-up of a randomized clinical trial. *Journal of Consulting and Clinical Psychology*, *75*: 187–193.

Chambers, J.M., Lint, S., Thompson, M.G., Carlson, M.W. and Graef, M.I., 2019. Outcomes of the Iowa Parent Partner program evaluation: Stability of reunification and re-entry into foster care. *Children and Youth Services Review*, *104*, p.104353.

Child Trends. 2021. Title IV-E Spending by Child Welfare Agencies in SFY 2018. https://www.childtrends.org/wp-content/uploads/2021/01/Title_IVE_SFY2018.pdf

Children's Bureau, Administration On Children, Youth And Families, Administration For Children And Families, U. S. Department Of Health And Human Services. 2020. *AFCARS Foster Care File, 6-month periods (FY2015B - 2020A)* [Dataset]. National Data Archive on Child Abuse and Neglect. https://doi.org/10.34681/rf96-fh32

Collinson, R., and Reed, D. 2018. The effects of evictions on low-income households. Working Paper.

Combs, K.M., Begun, S., Rinehart, D.J. and Taussig, H., 2018. Pregnancy and childbearing among young adults who experienced foster care. *Child Maltreatment*, *23*(2): 166-174.

Congressional Budget Office. 2018. Estimated Direct Spending and Revenue Effects of Division E of Senate Amendment 1930, the Bipartisan Budget Act of 2018. Available at https://www.cbo.gov/system/files/115th-congress-2017-2018/costestimate/divisione.pdf# Last accessed on October 7, 2021.

Congressional Research Service. 2018. Child Welfare: Purposes, Federal Programs, and Funding. CRS report. https://sgp.fas.org/crs/misc/IF10590.pdf

Courtney, M. E., Dworsky, A., Lee, J. S., and Rapp, M. 2010. *Midwest Evaluation of the Adult Functioning of Former Foster Youth: Outcomes at ages 23 and 24*. Chicago, IL: Chapin Hall at the University of Chicago.

Courtney, M., Zinn, A., Johnson, H., and Malm, K. 2011. Evaluation of the Massachusetts Adolescent Outreach Program for Youths in Intensive Foster Care: Final Report. (no. 2011-14).

Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Combs, K.M., Begun, S., Rinehart, D.J. and Taussig, H., 2018. Pregnancy and childbearing among young adults who experienced foster care. *Child Maltreatment*, *23*(2): 166-174.

Courtney, M.E., Zinn, A. et al. 2008a. *Evaluation of the Early Start to Emancipation Preparation Tutoring Program: Los Angeles County*. Washington, D.C. : Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Courtney, M.E., Zinn, A. et al. 2008b. *Evaluation of the Life Skills Training Program: Los Angeles County*. Washington, D.C. : Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Courtney, M., Zinn, A., Koralek, R., and Bess, R. 2011. *Evaluation of the Independent Living – Employment Services Program, Kern County, California: Final Report.* OPRE Report # 2011-13. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Currie, J., and Tekin, E. 2012. Understanding the cycle of childhood maltreatment and future crime. *Journal of Human Resources,* 47(2): 509-549.

Dahl, G. B., Kostøl, A. R., and Mogstad, M. 2014. Family welfare cultures. *Quarterly Journal of Economics,* 129(4): 1711-1752.

D'Andrade, A. C., and Chambers, R. M. 2012. Parental problems, case plan requirements, and service targeting in child welfare reunification. *Children and Youth Services Review*, 34: 2131–2138.

D'Andrade, A. C., and Nguyen, H. 2014. The relationship between use of specific services, parental problems, and reunification with children placed in foster care. *Journal of Public Child Welfare*, 8: 51–69.

Dobbie, W., Goldin, J., and Yang, C. S. 2018. The effects of pretrial detention on conviction, future crime, and employment: Evidence from randomly assigned judges. *American Economic Review,* 108(2): 201-40.

Dobbie, W., Grönqvist, H., Niknami, S., Palme, M., and Priks, M. 2018. The intergenerational effects of parental incarceration. National Bureau of Economic Research Working Paper 24186.

Dworsky, A. and Courtney, M.E., 2010. The risk of teenage pregnancy among transitioning foster youth: Implications for extending state care beyond age 18. *Children and Youth Services Review*, *32*(10): 1351-1356.

Doyle Jr, J. J. 2007a. Child protection and child outcomes: Measuring the effects of foster care. *American Economic Review,* 97(5), 1583-1610.

Doyle Jr, J. J. 2007b. Can't buy me love? Subsidizing the care of related children. *Journal of Public Economics*, *91*(1-2), pp.281-304.

Doyle Jr, J. J. 2008. Child protection and adult crime: Using investigator assignment to estimate causal effects of foster care. *Journal of Political Economy,* 116(4): 746-770.

Doyle Jr, J. J. 2013. Causal effects of foster care: An instrumental-variables approach. *Children and Youth Services Review,* 35(7): 1143-1151.

Doyle Jr, J. J., & Aizer, A. 2018. Economics of child protection: Maltreatment, foster care, and intimate partner violence. *Annual Review of Economics*, 10: 87-108.

Dworsky, A. and Courtney, M.E., 2010. The risk of teenage pregnancy among transitioning foster youth: Implications for extending state care beyond age 18. *Children and Youth Services Review*, *32*(10), pp.1351-1356.

Ehrle, J. and Geen, R., 2002. Kin and non-kin foster care—findings from a national survey. *Children and Youth Services Review*, *24*(1-2): 15-35.

Eren, O., and Mocan, N. 2017. Juvenile punishment, high school graduation and adult crime: Evidence from idiosyncratic judge harshness. *Review of Economics and Statistics*, 103(1), 34-47.

Fisher, P.A., Burraston, B. and Pears, K., 2005. The early intervention foster care program: Permanent placement outcomes from a randomized trial. *Child Maltreatment*, *10*(1): 61-71

Fernandes-Alcantara, A. L. 2019. *Youth Transitioning from Foster Care: Background and Federal Programs*. Washington, DC: Congressional Research Service.

Garwood, S.K., Gerassi, L., Jonson-Reid, M., Plax, K. and Drake, B. 2015. More than poverty: The effect of child abuse and neglect on teen pregnancy risk. *Journal of Adolescent Health*, 57(2): 164-168.

Geen, R., 2004. The evolution of kinship care policy and practice. *The Future of Children*, 14(1): 131-149.

Green, J. M., Biehal, N., Roberts, C., Dixon, J., Kay, C., Parry, E., and ... Sinclair, I. 2014. Multidimensional Treatment Foster Care for Adolescents in English care: Randomised trial and observational cohort evaluation. *The British Journal Of Psychiatry, 204*(3): 204-214.

Grogan-Kaylor, A., 2000. Who goes into kinship care? The relationship of child and family characteristics to placement into kinship foster care. *Social Work Research*, *24*(3): 132-141.

Gross, M. and Baron, E.J. 2020. Temporary Stays and Persistent Gains: The Causal Effects of Foster Care. http://dx.doi.org/10.2139/ssrn.3576640

Hansen, M. E. 2007. Using subsidies to promote the adoption of children from foster care. *Journal of Family and Economic Issues*, *28*(3); 377-393.

Hayduk, I., 2014. The effect of kinship placement on foster children's well-being. Working Paper.

Hendren, N. and Sprung-Keyser, B., 2020. A unified welfare analysis of government policies. *The Quarterly Journal of Economics*, *135*(3): 1209-1318.

Holt, S., Buckley, H., and Whelan, S. 2008. The impact of exposure to domestic violence on children and young people: A review of the literature. *Child abuse & Neglect*, 32(8): 797-810.

Huggins-Hoyt, K. Y., Briggs, H. E., Mowbray, O., and Allen, J. L. 2019. Privatization, racial disproportionality and disparity in child welfare: Outcomes for foster children of color. *Children and Youth Services Review*, 99: 125-131.

Humphries, J. E., Mader, N. S., Tannenbaum, D. I., and Van Dijk, W. L. 2019. Does eviction cause poverty? Quasi-experimental evidence from Cook County, IL. National Bureau of Economic Research Working Paper 26139.

Hussey, J.M., Chang, J.J. and Kotch, J.B., 2006. Child maltreatment in the United States: Prevalence, risk factors, and adolescent health consequences. *Pediatrics*, *118*(3): 933-942.

Jayaratne, S. and Faller, K.C., 2009. Commitment of private and public agency workers to child welfare: How long do they plan to stay? *Journal of Social Service Research*, 35(3): 251-261.

Johnston, R. 2017. Historical Statistics on Adoption in the United States, plus Statistics on Child Population and Welfare. Available at https://www.johnstonsarchive.net/policy/adoptionstats.html. Last accessed on October 7, 2021.

Jones, M. B. 1989. Crisis of the American orphanage, 1931-1940. *Social Service Review*, *63*(4): 613-629.

Keller, T.E., Wetherbee, K., Le Prohn, N.S., Payne, V., Sim, K. and Lamont, E.R., 2001. Competencies and problem behaviors of children in family foster care: Variations by kinship placement status and race. *Children and Youth Services Review*, *23*(12): 915-940.

Keller, T.E., Salazar, A.M. and Courtney, M.E., 2010. Prevalence and timing of diagnosable mental health, alcohol, and substance use problems among older adolescents in the child welfare system. *Children and Youth Services Review*, *32*(4): 626-634.

Kelly, J. 2020. Who Cares 2020: A National Count of Foster Homes and Families. *The Imprint*, 10 Dec. 2020. https://imprintnews.org/child-welfare-2/who-cares-2020-executive-summary/49243.

Kerr, D. C., Leve, L. D., and Chamberlain, P. 2009. Pregnancy rates among juvenile justice girls in two randomized controlled trials of multidimensional treatment foster care. *Journal of Consulting and Clinical Psychology*, *77*(3): 588-593.

Kessler, R. C. National Comorbidity Survey: Baseline (NCS-1), 1990-1992. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2008-09-12. https://doi.org/10.3886/ICPSR06693.v6

Klika, J.B., Rosenzweig, J. and Merrick, M., 2020. Economic burden of known cases of child maltreatment from 2018 in each state. *Child and Adolescent Social Work Journal*, *37*(3): 227-234.

Koh, E. and Testa, M.F., 2008. Propensity score matching of children in kinship and nonkinship foster care: Do permanency outcomes differ? *Social Work Research*, *32*(2): 105-116.

Kools, S., Paul, S.M., Jones, R., Monasterio, E. and Norbeck, J., 2013. Health profiles of adolescents in foster care. *Journal of Pediatric Nursing,* 28(3): 213-222.

Lee, B.R. and Thompson, R., 2008. Comparing outcomes for youth in treatment foster care and family-style group care. *Children and Youth Services Review*, *30*(7): 746-757.

Leve, L. D., Kerr, D. C., and Harold, G. T. 2013. Young adult outcomes associated with teen pregnancy among high-risk girls in a randomized controlled trial of multidimensional treatment foster care. *Journal of Child & Adolescent Substance Abuse*, *22*(5): 421-434.

McCallion, P., Janicki, M. P., and Kolomer, S. R. 2004. Controlled evaluation of support groups for grandparent caregivers for children with developmental disabilities and delays. *American Association on Mental Retardation, 109*(5): 352–361.

McCullough, C., and Schmitt, B. 2003. Systems Integration Management Institute 2000–2001 management, finance, and contracting survey, final report. Washington, DC: Child Welfare League of America Press.

Mersky, J.P. and Janczewski, C., 2013. Adult well-being of foster care alumni: Comparisons to other child welfare recipients and a non-child welfare sample in a high-risk, urban setting. *Children and Youth Services Review*, *35*(3), pp.367-376.

Mueller-Smith, M. 2015. The criminal and labor market impacts of incarceration. Unpublished Manuscript.

Narendorf, S.C. and McMillen, J.C., 2010. Substance use and substance use disorders as foster youth transition to adulthood. *Children and Youth Services Review*, *32*(1):113-119.

Nugent CN, Ugwu C, Jones J, Newburg-Rinn S, and White T. 2020. Demographic, health care, and fertility-related characteristics of adults aged 18–44 who have ever been in foster care: United States, 2011–2017. National Health Statistics Reports; no 138. Hyattsville, MD: National Center for Health Statistics.

Pecora, Peter J., Jason Williams, Ronald C. Kessler, A. Chris Downs, Kirk O'Brien, Eva Hiripi, and Sarah Morello. 2003. *Assessing the effects of foster care: Early results from the Casey National Alumni Study.* Seattle, WA: Casey Family Programs.

Pecora, P.J., Kessler, R.C., O'Brien, K., White, C.R., Williams, J., Hiripi, E., English, D., White, J. and Herrick, M.A., 2006. Educational and employment outcomes of adults formerly placed in foster care: Results from the Northwest Foster Care Alumni Study. *Children and Youth Services Review*, *28*(12): 1459-1481.

Pecora, P.J., Williams, J., Kessler, R.C., Hiripi, E., O'Brien, K., Emerson, J., Herrick, M.A. and Torres, D., 2006. Assessing the educational achievements of adults who were formerly placed in family foster care. *Child & Family Social Work*, *11*(3): 220-231.

Peterson, C., Florence, C. and Klevens, J., 2018. The economic burden of child maltreatment in the United States, 2015. *Child Abuse & Neglect*, *86*, pp.178-183.

Price, J.M., Chamberlain, P., Landsverk, J., Reid, J.B., Leve, L.D. and Laurent, H., 2008. Effects of a foster parent training intervention on placement changes of children in foster care. *Child Maltreatment*, *13*(1): 64-75.

Prinz, R.J., Sanders, M.R., Shapiro, C.J., Whitaker, D.J. and Lutzker, J.R., 2009. Population-based prevention of child maltreatment: The US Triple P system population trial. *Prevention Science*, *10*(1): 1-12.

Roberts, K. V. 2019. Foster care and child welfare. Working paper.

Rosenberg, R. and Abbott, S., 2019. Supporting older youth beyond age 18: Examining data and trends in extended foster care. *Child Trends*. https://www.childtrends.org/publications/supporting-older-youth-beyond-age-18-examining-data-and-trends-in-extended-foster-care

Rubin, D.M., Downes, K.J., O'Reilly, A.L., Mekonnen, R., Luan, X. and Localio, R., 2008. Impact of kinship care on behavioral well-being for children in out-of-home care. *Archives of Pediatrics & Adolescent Medicine*, *162*(6): 550-556.

Ruggles, S., Flood, S., Foster, S., Goeken, R., Pacas, J., Schouweiler, M., and Sobek, M. 20201. IPUMS USA: Version 11.0 [dataset]. Minneapolis, MN: IPUMS. https://doi.org/10.18128/D010.V11.0

Savas, E. S. 2000. *Privatization and public–private partnerships*. New York, NY: Chatham House.

Saldana, L., Campbell, M., Leve, L., and Chamberlain, P. 2019. Long-term economic benefit of Treatment Foster Care Oregon (TFCO) for adolescent females referred to congregate care for delinquency. *Child Welfare*, *97*(5): 179.

Slack, K. S., Holl, J. L., McDaniel, M., Yoo, J., and Bolger, K. 2004. Understanding the risks of child neglect: an exploration of poverty and parenting characteristics. *Child Maltreatment*, 9(4): 395–408.

Steen, J. A., and Smith, S. 2012. An organizational view of privatization: Is the private foster care agency superior to the public foster care agency? *Children and Youth Services Review*, *34*(4): 851-858.

Stoltzfus, E. 2013. Child Welfare: The Adoption Incentive Program and Its Reauthorization. Report no. r43025, Congressional Research Service.

Taussig, H.N., Culhane, S.E., Garrido, E. and Knudtson, M.D. 2012. RCT of a mentoring and skills group program: Placement and permanency outcomes for foster youth. *Pediatrics*, *130*(1: e33-e39.

U.S. Department of Health and Human Services. 2017a. Child Maltreatment Prevention: Past, Present, and Future. Children's Bureau Issue Brief, July 2017.

U.S. Department of Health and Human Services. 2017b. Supporting successful reunifications. Children's Bureau Bulletin, October 2017.

U.S. Department of Health and Human Services. 2019. Child Welfare Outcomes Report Data. https://cwoutcomes.acf.hhs.gov/cwodatasite/byState

U.S. Department of Health and Human Services. 2020. The AFCARS Report (FY 2019). https://www.acf.hhs.gov/sites/default/files/documents/cb/afcarsreport27.pdf

U.S. Department of Health and Human Services. 2021a. Administration for Children and Families FY 2022 Justification of Estimates for Appropriations Committees. https://www.acf.hhs.gov/sites/default/files/documents/olab/fy_2022_congressional_justification.pdf

U.S. Department of Health and Human Services. 2021b. Child Maltreatment 2019. Children's Bureau Report. https://www.acf.hhs.gov/cb/report/child-maltreatment-2019

Valentino, K., Nuttall, A.K., Comas, M., Borkowski, J.G. and Akai, C.E. 2012. Intergenerational continuity of child abuse among adolescent mothers: Authoritarian parenting, community violence, and race. *Child Maltreatment*, *17*(2): 172-181.

Vandivere, S., Malm, K.E., Zinn, A., Allen, T.J. and Mcklindon, A. 2015. Experimental evaluation of a child-focused adoption recruitment program for children and youth in foster care. *Journal of Public Child Welfare*, *9*(2): 174-194.

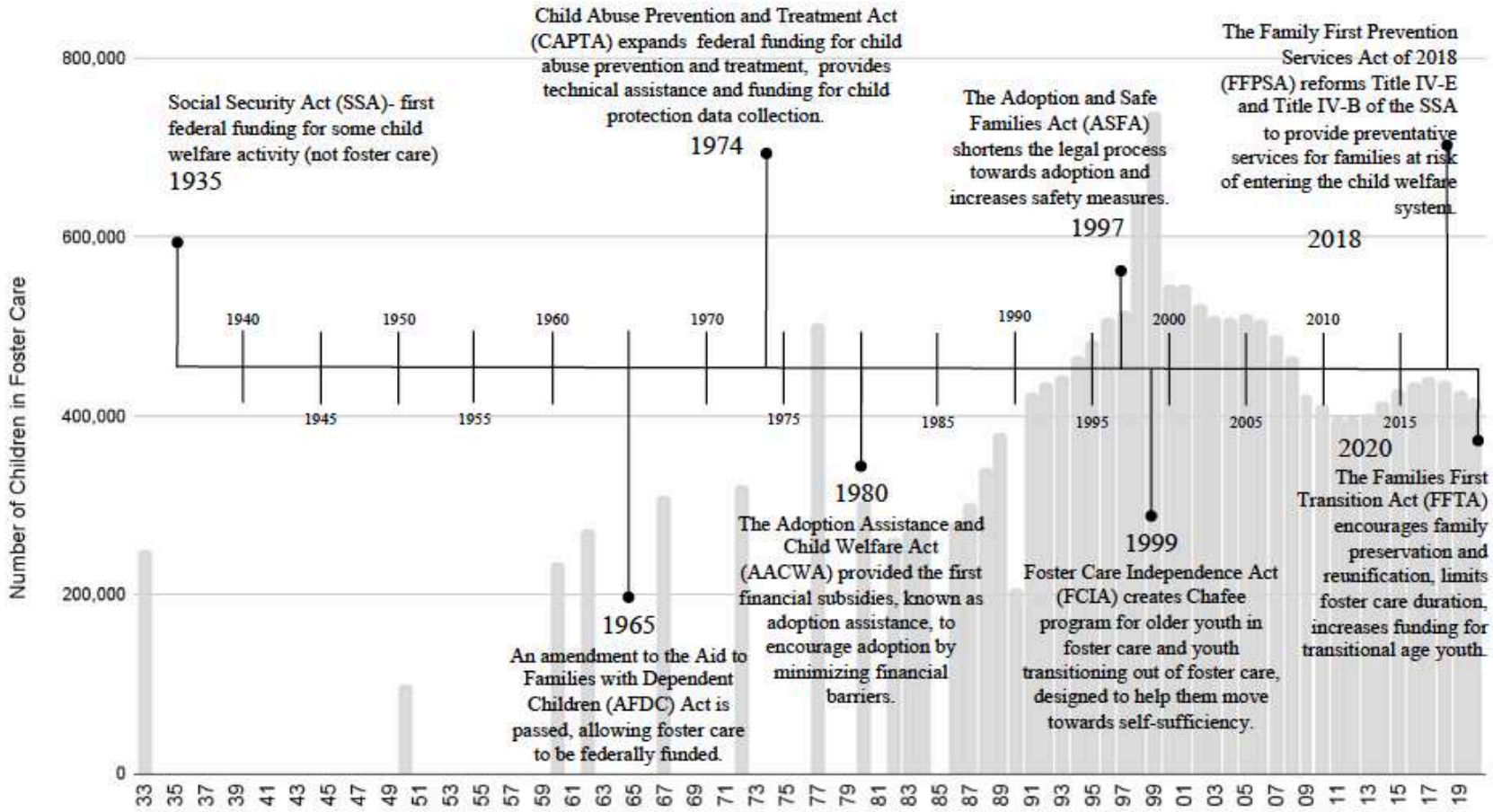
Widom, C. S. 1989. Child abuse, neglect, and adult behavior: Research design and findings on criminality, violence, and child abuse. *American Journal of Orthopsychiatry*, 59(3): 355-367.

Wildeman, C., and Emanuel, N. 2014. Cumulative risks of foster care placement by age 18 for US children, 2000–2011. *PloS One*, 9(3): e92785.

Winokur, M. A., Holtan, A., and Batchelder, K. E. 2018. Systematic review of kinship care effects on safety, permanency, and well-being outcomes. *Research on Social Work Practice*, *28*(1), 19-32.

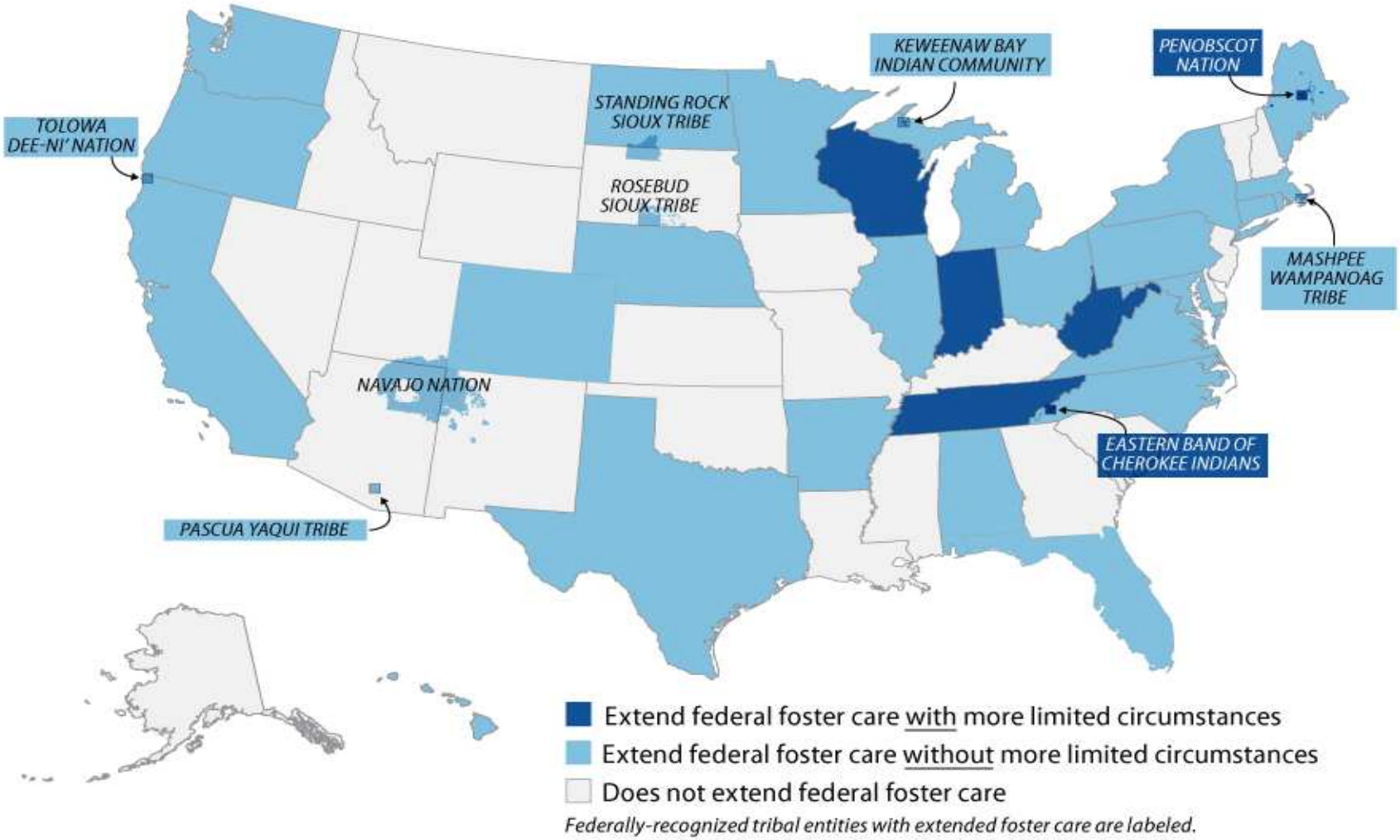
Zell, M.C., 2006. Child welfare workers: Who they are and how they view the child welfare system. *Child Welfare*, 85(1): 83-103.

Figure 1: Key Foster Care Legislation in the United States



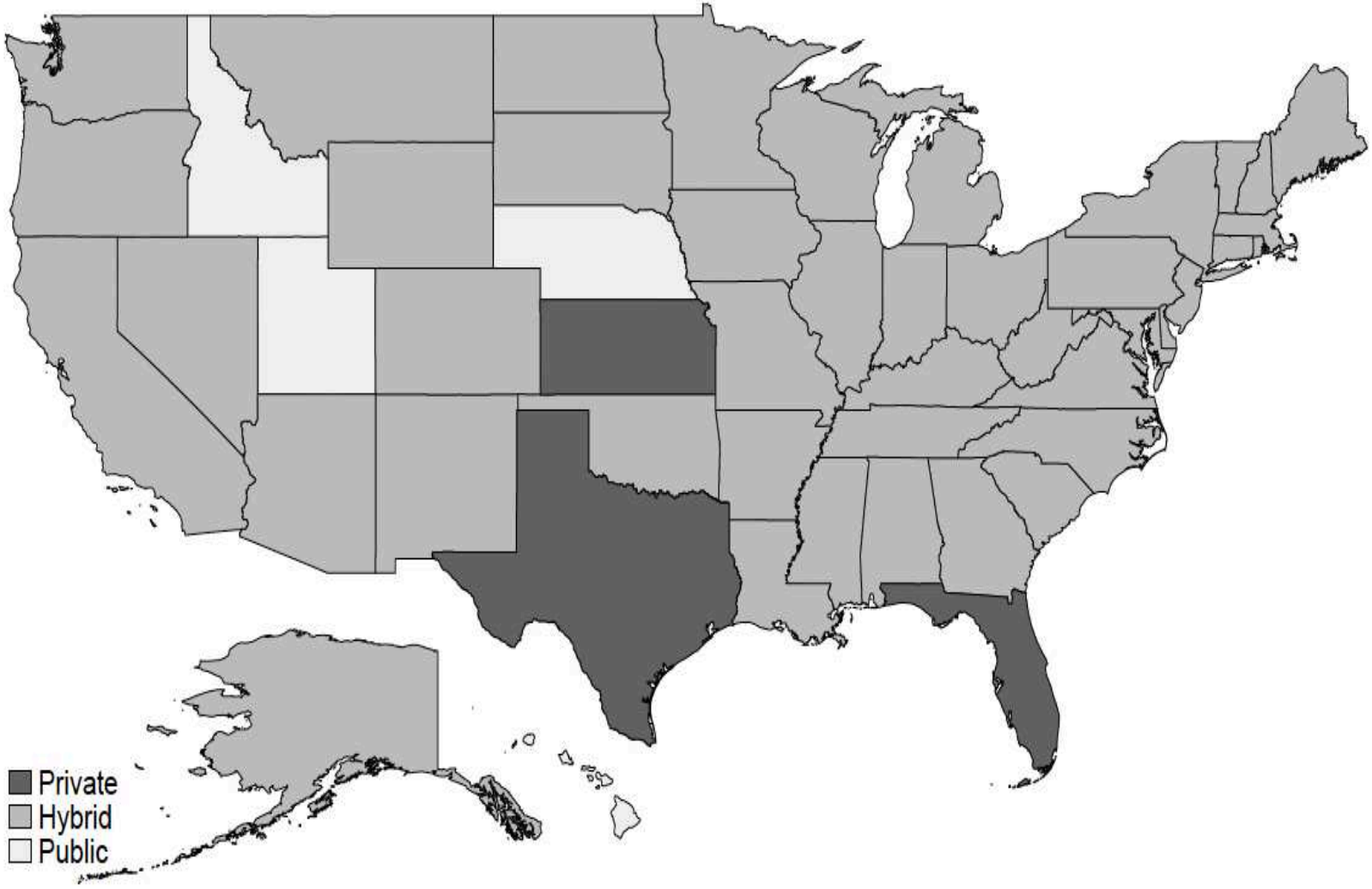
Source: Number of children in care calculated from AFCARS data for years 1998-2019 (Children's Bureau, 2020). Earlier counts from Jones (1989), Johnston (2017), and Kelly (2020).

Figure 2: States and Tribes that Extend Federal Foster Care Beyond Age 19



Source: Congressional Research Service, 2019.

Figure 3: Public and Private Foster Care in the United States



Source: Authors' own findings

Table 1: Characteristics of Foster Care Alumni

Panel A: Income and Education

Outcome	Casey National Alumni Study Sample[1]	Northwest Alumni Sample[2]	2000 Census[3]	Rural blacks in the deep south, 2000 Census[3]
% in poverty		33.2%	11.4%	28.8%
Median income	$16,500		$24,600	$15,000
HS Graduate	87.8%		84.8%	77.4%
Any college	43.7%	42.7%	57.7%	47.8%
BA degree or more	10.8%	1.8%	26.7%	15.5%

Panel B: Mental Health Disorders

Outcome	Northwest Alumni[4]	NCS General Population[5]
Major depression episode	41.1%	10.0%
Generalized anxiety disorder	19.1%	3.2%
Alcohol dependence	11.3%	2.5%
Drug dependence	21.0%	4.2%
PTSD	30.0%	4.0%

Sources:

1. Pecora et al., 2003. Income reported in current dollars for survey years 2000-2002. Education questions were for adults age 25 or older.
2. Pecora et al., 2006. NW Alumni were interviewed at ages 18 and older. BA completion was 2.7% for the subset that were 25 or older.
3. Ruggles et al., 2021. Adults age 25 and older.
4. Pecora et al., 2006.
5. Kessler, 2008.

Table 2: Characteristics of Children in Foster Care, 2015-2020

	Mean
Child is Female	0.485
Child is a Minority	0.519
Child has a Clinical Disability	0.258
Age (years)	8.4
Age at First Removal (years)	5.81
Duration of FC Episode, in Months	18.6
Total Number of Removals	1.20
Placement Settings in Current FC Episode	2.51
Case Goal*	
Reunify with Parents or Principal Caretaker(s)	0.560
Live with Other Relatives	0.034
Adoption	0.221
Long Term Foster Care	0.015
Emancipation	0.041
Guardianship	0.039
Case Plan Not Yet Established	0.074
Removal Reason*	
Physical Abuse	0.131
Sexual Abuse	0.040
Neglect	0.635

*Case Goals are mutually exclusive; removal reasons are not.

Source: Underlying data are from NDACAN Foster Care 6-month files, September 2015 - March 2020 (Children's Bureau, 2020).

Table 3: Randomized Controlled trials of Programs for Foster Care

Program/Study	Methodology	Location	Study Period	Sample Size	Main Findings
Triple P -Positive Parenting Program®; Prinz et al. (2009)	Treatment was randomly assigned across 18 participating counties. Total of 649 community service providers within treatment counties were provided with the Triple P curriculum and training modules.	Undisclosed southeastern state	2 years (undisclosed)	85,000 children at risk of removal, across 18 counties	Significant reduction of county-wide rates of substantiated child maltreatment, hospital/ER visits for maltreatment injuries, and out of home placements
Parent Management Training – the Oregon Model (PMTO); Akin and McDonald (2018)	Child-level random assignment through the electronic data entry system (REDCap). PMTO was delivered in-home to treatment group birth families by specially trained practitioners.	Undisclosed	2012-2014	918 families with children in foster care	Higher reunification rates and shorter time spent in foster care. Note: ITT results were only marginally significant, program completers saw better outcomes.
SafeCare; Chafin et al. (2012).	Agency-level randomization across six participating CPS agencies: parents served by treatment agencies received group sessions on safe parenting. Within each of the six clusters, parents randomized to receive in-home coaching.	6 CPS administrative regions, 2 urban and 4 rural	2003-2006	2,175 families with prior maltreatment records, within 6 CPS agencies	Significantly lower CPS engagement and abuse reoccurrence rates found for families exposed to SafeCare group programming. Coaching effects were smaller and not consistently significant.
KEEP (Keeping Foster and Kin Parents Supported and Trained); Price et al. (2008)	Child-level randomization, foster parents of children in treatment group were given training and supportive	San Diego County, CA	1999-2004	700 children in out-of-home care, and their	Significantly increased the number of positive exits from current placement (defined as reunification or adoption) especially for

	intervention, particularly regarding placement changes			foster/kin caregivers	children with a history of multiple placements. Unable to rule out null effects on negative exits (defined as moves to another foster home, institutional care, or runaway)
Child-Focused Adoption Recruitment – Wendy's Wonderful Kids; Vandivere et al. (2015)	Child level randomization; researchers also examined heterogeneity by age and mental health status	21 locations served by WWK agencies across 18 states	2006-2011	956 children in foster care waiting for adoption	Results could not confirm a significant increase adoption rates for the general sample (positive but imprecisely estimated impact). Among older children and children with psychological disorders, positive effect of program on adoption probability was significant.
Homebuilders/Intensive Family Based Services; Fraser et al. (1996), Walton (1998)	Two randomized controlled trials using the same sample; all participants were families with children in foster care. Treatment group families underwent 90-day program and participants were followed at 12 months and 6 years after the intervention.	Utah	Unspecified	120	Treatment group significantly more likely to be reunified at 12-month follow-up. Beneficial impact on days spent in foster care still observed at 6-year follow-up. There was no discernible difference in total number of foster care placements.
Treatment Foster Care Oregon- Adolescents (TFCO-A); Green et al. (2014)	Child-level randomization, treatment group was assigned to counseling that followed the Multidimensional Treatment Foster Care	England	2005-2008	219 teens (aged 11-16 years) in foster care in the UK, at	There was no evidence that use of TFCO-A resulted in better overall outcomes than usual care on the primary outcome

	(MTFC) model, which involves coaching for both the child/youth and biological parents. Goal is to improve prosocial behavior. See original studies on MTFC below.			risk of placement breakdown	of adaptive functioning or on secondary education or offending outcomes.
Multidimensional Treatment Foster Care (MTFC); Multiple papers including Saldana et al. (2019); Leve et al (2013); Kerr et al. (2009), Chamberlain et al. (2007).	Randomized controlled trial; (multiple papers look at one randomized group)	Oregon State	Subjects enrolled between 1997 and 2002	Studies relied on two cohorts of MTFC, sample sizes 81 and 85. Subjects were teenage girls in foster care or juvenile group homes	Treatment group showed better academic outcomes, decreased juvenile delinquency and adult criminal behavior, and a decrease in teen pregnancy rates. Samples were very small with a maximum size of 166 and statistical significance of the various results is not clear.