Table of Contents

Preface

Sarah Font, PhD[1]
Yo Jackson, PhD, ABPP[2]

[1] , Pennsylvania State University Department of Sociology and Criminology, Child Maltreatment Solutions Network
[2] Pennsylvania State University Department of Psychology

Suggested Citation: Font, Sarah & Jackson, Yo, *Preface*, in The Future of Foster Care: New Science on Old Problems by the Penn State Child Maltreatment Solutions Network (Sarah Font ed. & Yo Jackson ed., 2021). https://doi.org/10.26209/fostercare0

Most developed countries worldwide have a foster care system that provides temporary care to children who cannot remain safely in their familial homes, due to abuse, neglect, abandonment, or other issues. In the US, approximately 4-6% of all children will experience foster care before reaching the age of majority (Putnam-Hornstein et al., 2021; Yi et al., 2020). Many of these children return to their families of origin, while others are adopted, live permanently will relatives, or remain in foster care until reaching adulthood (U.S. Department of Health and Human Services, 2020).

In the US and elsewhere, foster care is widely criticized as a failed intervention. Agencies tasked with administering foster care face challenges in recruiting and retaining safe, stable, foster families, providing appropriate health and education supports for children in care, and making appropriate decisions about how and to whom children exit care (Font & Gershoff, 2020). These problems are not new. Indeed, despite numerous federal and state policy reforms, the same concerns arise in decades of class-action lawsuits (Strassburger, 2018), federal evaluations (Administration for Children and Families, 2017), investigative reports (Braga et al., 2020), and state audits (DePasquale, 2017). Although states vary a great deal in how they use foster care and what that experience entails, no state consistently provides children with the quality of care and support that they need to thrive.

Despite these challenges, societies continue to encounter children for whom there are no appropriate alternatives to foster care. As such, improving the quality of foster care is an urgent and crucial responsibility. The Child Maltreatment Solutions Network at the Pennsylvania State University convened a conference in 2019 to revisit these longstanding challenges and discuss the best evidence on how to overcome them. In the ensuing chapters, experts define these challenges in greater detail and discuss the best practices in a range of areas. Our opening chapter by Dr. Fred Wulczyn, provides an overview of variability in state policy and practice, highlighting differences in the uses of foster care, racial disproportionality, and patterns of congregate (group-based) foster care. In Chapter 2, Drs. Pecora and Gabrielli provide an overview of case practices that help to track and promote child wellbeing in foster care. The remaining five chapters narrow their focus to specific topics of importance for foster care policy and practice: leveraging technology (Atwood and Cooley), mental health care (Leathers), integrated health services (Stone, Pollard, and Moore), foster parent training (Buchanan), and improving educational outcomes (Peeler and McGuire).

References

Administration for Children and Families. (2017). *Child and Family Services Reviews Round 3 Findings 2015-2016*. https://www.acf.hhs.gov/sites/default/files/documents/cb/cfsr_round3_findings_2015_2016.pdf

Braga, M., Beall, P., Chen, D., & Salman, J. (2020). *Florida took thousands of kids from families, then failed to keep them safe*. USA Today. https://www.usatoday.com/in-depth/news/investigations/2020/10/15/flooded-foster-kids-florida-failed-find-safe-homes/3624505001/

DePasquale, E. (2017). *State of the Child: A look at the strengths and challenges of Pennsylvania's child-welfare system and the safety of at-risk children*. Auditor General. https://www.paauditor.gov/Media/Default/Reports/RPT_CYS_091417_FINAL.pdf

Font, S., & Gershoff, E. T. (2020). Foster care: How we can, and should, do more for maltreated children. *Social Policy Report, 33*(3), 1–40.

Putnam-Hornstein, E., Ahn, E., Prindle, J., Magruder, J., Webster, D., & Wildeman, C. (2021). Cumulative Rates of Child Protection Involvement and Terminations of Parental Rights in a California Birth Cohort, 1999–2017. *American Journal of Public Health*, *111*(6), 1157–1163. https://doi.org/10.2105/AJPH.2021.306214

Strassburger, Z. (2018). Crafting complaints and settlements in child welfare litigation. *University of Pennsylvania Journal of Law & Social Change*, *21*(3), 219–265.

U.S. Department of Health and Human Services. (2020). *The AFCARS Report: Preliminary FY 2019 estimates as of June 23, 2020* (No. 27). https://www.acf.hhs.gov/sites/default/files/documents/cb/afcarsreport27.pdf

Yi, Y., Edwards, F. R., & Wildeman, C. (2020). Cumulative prevalence of confirmed maltreatment and foster care placement for US children by race/ethnicity, 2011–2016. *American Journal of Public Health*, *110*(5), 704–709. https://doi.org/10.2105/AJPH.2019.305554

Chapter 1. State of the U.S. Foster Care System

Fred Wulczyn MSW, Ph.D.[1]

[1] Center for State Child Welfare Data, Chapin Hall Center for Children, University of Chicago

Suggested Citation: Wulczyn, Fred, MSW, Ph.D, *State of the U. S. Foster Care System,* in The Future of Foster Care: New Science on Old Problems by the Penn State Child Maltreatment Solutions Network (Sarah Font ed. & Yo Jackson ed., 2021). https://doi.org/10.26209/fostercare1

Abstract

In this chapter, I examine trends in the underlying utilization of foster care, drawing a connection between those changes and the fundamental problem of placement disparity. The narrative is organized around two themes. The first addresses the question of disparity. Much of what we have learned about disparity has come about from research that examines whether we find disparity when we look for differences in the experiences of Black, Hispanic, and White children and young people. Less attention, I argue, has been given to the question of variation in disparity rates. To highlight why this is an important question, given the interest in reducing if not eliminating disparity, I show how disparity varies using measures that capture disparity from a spatial and temporal perspective. I then ask whether supply induced demand for placement services influences placement utilization. Though the evidence is not per se conclusive, the inquiry does show how why it is important to study system effects as a distinct empirical problem. I close by calling for a foster care research agenda motivated by conceptualization rather than research method.

Introduction

The title of this chapter—State of the U.S. Foster Care System—hints at a paper of both breadth and depth. However, as even a casual observer surely understands, such ambitions are beyond the boundaries of a single chapter. In the U.S., the federal government grants states considerable latitude when it comes to state policy so long as policy fits within the federal framework. Even something as seemingly straightforward as the standard of proof needed to substantiate a claim of maltreatment differs dramatically between states, with some states requiring clear and convincing proof, others requiring a preponderance of evidence, and still others requiring credible, reasonable, or probable cause of abuse or neglect (Kahn et al., 2017; Provencher et al., 2014). Though there is a body of evidence that suggests the standard of proof used affects substantiation rates, there is no empirical research of which I am aware that extends that line of inquiry beyond substantiation and considers how the standard of proof affects time in foster care, placement stability, permanency rates, or reentry rates, even though child protective services serve as the front door to the foster care system. There is also the fact that nine states operate what are called county administered systems.[1] In those states, the county child welfare agency relates to the state child welfare agency in ways that mimic how states relate to the federal government. The state sets policy boundaries and counties, as the system administrator, exercise discretion within those boundaries. There are, as well, states that have created intermediate organizations to operate their foster care systems. Florida is a prominent example. Rather than a state-supervised, county-administered system, structurally and functionally, Florida operates a state-supervised, private agency-operated system in which private, non-governmental organizations (the Community Based Care organizations or CBCs) have been assigned functions that resemble county responsibilities in other states. Even in Florida, where some CBCs operate as administrative services organizations (i.e., they provide no direct services) and others look more like network model HMOs (Health Maintenance Organization), diversity of form is the key to understanding how foster care is organized in the U.S. In sum, there *is* a U. S. foster care system, but it is often best viewed from the bottom-up, with a clear understanding of how local variation adds up to the national profile, rather than the other way around.

With that said, I do think it is possible to both pose and answer questions that address themes with broad relevance. In doing so, I am not asking the reader to accept the evidence presented as illustrative of what's true locally. Rather, my goal is to promote local inquiry organized around a rather simple refrain: Is that true where I live? To that end, this chapter is organized around these questions:

---

[1] Two states Wisconsin and Nevada operate hybrid systems. In Nevada, child welfare services in the rural counties are administered by the state, whereas the larger counties (Reno and Clark) operate their child welfare systems locally. In Wisconsin, Milwaukee county child welfare services are state administered; elsewhere the services are county administered and state supervised.

- Who uses foster care?
- What about disparity in the use of foster care?
- Should researchers, policymakers, and practitioners be worried about supply-induced demand?

In posing these questions, I want to broaden how we think about the evidence base used to guide child welfare policy and practice. The child welfare system is increasingly focused on the "what works" question that asks whether the services provided by child welfare agencies have their intended effect.[2] That interest has spawned a particular emphasis on evidence-based interventions and what we know from randomized clinical trials. The focus on evidence-based interventions is understandable. Resources are scarce and public investments should target services with known benefits. Having said that, it is important to note that evidence-based interventions answer the *what* question behind public policy: as a policymaker, what type of service investment I should make?[3] It is an important question but does not touch the *how much* or *where* questions that are equally important to the task of allocating resources. How much evidence-based service capacity (i.e., service slots for lack of a better term) should we buy, and where we should locate those services geographically given our desire to improve well-being at a public health level? Among other issues, what is important about these questions is that they are far less amenable to randomized clinical trials from an evidence development perspective (Nagin & Sampson, 2019). Put another way, the science of building effective service delivery *systems* requires more than the evidence derived from experiments. With a few simple examples, I hope to illustrate what that evidence looks like.

Who Is Placed in Foster Care?

In this section, I offer a simple overview of admissions to foster care between 2000 and 2018 with the aim of showing that foster care utilization has over the past 20 years shifted dramatically when viewed from a geographic and life course perspective. To do this, I start with the group of states with data for each of the following years: 2000, 2005, 2010, 2015, and 2018. From this collection of 15 states, I identified each child admitted to care for the first time for the listed years. In total, the evidence presented is based on the unduplicated records of 424,652 children.

---

[2] See for example the Family First Prevention Services Act of 1918 (Family First Prevention Services Act, 2018). To secure federal funding for certain prevention services, states must invest in interventions that pass an evidence threshold.

[3] I use the word purchase here advisedly. Public policy and the fiscal decisions that flow from policy decisions lead services to be provided. In the case of preventive services, those services are often secured through the social sector. In that sense, the public agency purchases those services. The idea is that policy causes the service capacity to be built.

From this base, I group children into two categories: age at admission and county of placement. Age at admission is further organized into three groups: children who were less than 31 days of age at the time of placement, children who were 31 to 365 days old at the time of placement, and children older than 365 days at placement. I refer to these groups as newborns, infants, and older children and youth, respectively. The counties are categorized using the National Center for Health Statistics' urban/rural classification scheme (Ingram & Franco, 2014). That scheme groups counties into six categories: large central metro counties, large fringe metro counties, medium metro counties, small metro counties, micropolitan counties, and noncore counties.

Number of Admissions by Age

The total number of admissions by age and year is displayed in Table 1. Overall, comparing admissions in 2000 with those in 2018 shows a modest decline, from 83,091 to 82,586, a drop of just 505 children. Between those years, the number of admissions fluctuated. Over the 5 separate years shown in Table 1, the number of admissions reached a high point of 91,914 in 2005 and a low point in 2010 when there slightly fewer than 82,000 admissions.

In Table 1, the most important changes in admission patterns are tied to age at admission. Among children between the ages of 1 and 17 when admitted (older children & youth), admissions are down from 66,604 to 62,605. In contrast, the number of newborns and infants admitted increased relative to 2000. In 2000, there were 7,938 newborns admitted; in 2018, the number was 10,183. For infants, the change was less pronounced. Nevertheless, the number of infants (children between 31 and 365 days old) admitted in 2018 also exceeded the number admitted in 2000.

Table 1.

Number of First Admissions to Foster Care by Age and Year

	Year of Admission				
Age at Admission	2000	2005	2010	2015	2018
Total	83,091	91,914	81,818	85,243	82,586
Newborns	7,938	10,261	8,097	9,758	10,183
Infants	8,549	10,451	10,353	10,358	9,798
Older Children & Youth	66,604	71,202	63,368	65,127	62,605
Total	100%	100%	100%	100%	100%
Newborns	10%	11%	10%	11%	12%
Infants	10%	11%	13%	12%	12%
Older Children & Youth	80%	77%	77%	76%	76%

Admissions and Urbanicity

Along with the changes in the age structure of the population of children entering care between 2000 and 2018, there has been a significant shift away from the large central urban counties (see Table 2). In 2000, 50% of all children admitted to foster care for the first time came from the main urban counties in the state or what National Center for Health Statistics (NCHS) calls the large urban core counties. By 2018, those counties only accounted for 39% of all the admissions. On a percentage basis, the most significant increase was in the medium metro counties. In 2000, those counties accounted for 18% of the admissions; in 2018 the comparable figure was 22%. Though smaller, the proportionate share increased over the period from 2000 to 2018 in the remaining county types.

Table 2.

Number of First Admissions to Foster Care by Urbanicity and Year

	Year of Admission				
Urbanicity	2000	2005	2010	2015	2018
Total	83,091	91,914	81,818	85,243	82,586
Large Central	41,146	42,437	37,207	36,264	32,254
Large Fringe	12,644	14,280	13,132	14,224	13,832
Medium Metro	15,294	17,969	16,114	17,562	17,922
Small Metro	5,760	6,815	6,141	6,902	7,086
Micropolitan	4,912	6,115	5,532	6,035	6,728
Noncore	3,335	4,298	3,692	4,256	4,764
Total	100%	100%	100%	100%	100%
Large Central	50%	46%	45%	43%	39%
Large Fringe	15%	16%	16%	17%	17%
Medium Metro	18%	20%	20%	21%	22%
Small Metro	7%	7%	8%	8%	9%
Micropolitan	6%	7%	7%	7%	8%
Noncore	4%	5%	5%	5%	6%

Age and Urbanicity

The combined effects of changing demographics and the shift away from urban areas are displayed in Table 3. In the large central counties, admissions were lower in 2018 than in 2000. Among older children & youth, the change in admissions (-25%) was the most pronounced. In every other area, admissions were higher in 2018 than in 2000, with changes in admissions well

in excess of 50% for some county groups. For example, in noncore counties, the number of children & youth increased by 31%, 66% for infants, and 210% for newborns.

Table 3.

Number of First Admissions to Foster Care by Age, Urbanicity, and Year

	Year of Admission					
Age and Urbanicity	2000	2005	2010	2015	2018	Change from 2000-2018
Newborns						
Large Central	4,584	5,144	3,926	4,438	4,212	-8%
Large Fringe	1,080	1,514	1,201	1,560	1,677	55%
Medium Metro	1,410	2,074	1,680	1,978	2,154	53%
Small Metro	420	713	607	793	874	108%
Micropolitan	287	529	468	660	780	172%
Noncore	157	287	215	329	486	210%
Infants						
Large Central	4,362	4,859	4,676	4,461	4,030	-8%
Large Fringe	1,292	1,579	1,659	1,763	1,619	25%
Medium Metro	1,554	2,066	2,014	2,124	2,016	30%
Small Metro	563	820	790	778	816	45%
Micropolitan	473	677	744	719	810	71%
Noncore	305	450	470	513	507	66%
Older Children & Youth						
Large Central	32,200	32,434	28,605	27,365	24,012	-25%
Large Fringe	10,272	11,187	10,272	10,901	10,536	3%
Medium Metro	12,330	13,829	12,420	13,460	13,752	12%
Small Metro	4,777	5,282	4,744	5,331	5,396	13%
Micropolitan	4,152	4,909	4,320	4,656	5,138	24%
Noncore	2,873	3,561	3,007	3,414	3,771	31%

In the large fringe counties, the number of newborns admitted to care increased by 55%. Although small in number, admissions involving infants from micropolitan and noncore counties increased by more than 66%. In general, the admission increase was larger as one moves away from the large central urban counties. Within those areas, the largest increases involved the youngest children.

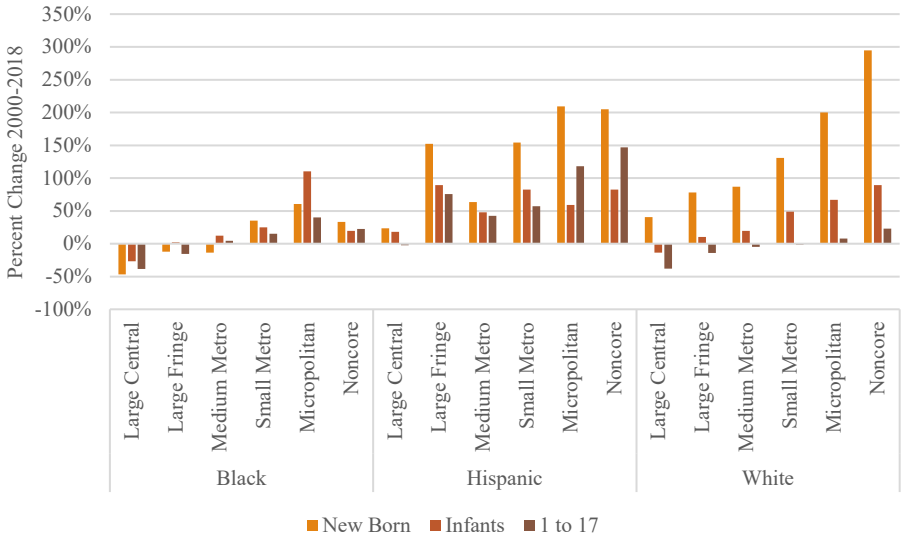
Of course, the shifting age composition and geographic distribution suggests that the racial and ethnic makeup of children entering foster care may also be changing. Figure 1 shows

the extent to which this is true. Displayed is the percentage change in the number of children admitted to care for the first time in 2018 as compared to 2000 by age, race/ethnicity, and urbanicity. Generally, the changes described previously affected Black, Hispanic, and White children and youth similarly. For example, admission changes are more dramatic as one moves away from the large central urban core counties and toward the non-urban counties (i.e., the micropolitan and noncore counties). However, these changes are especially pronounced with regard to Hispanic and White newborns. Although small in number, the percentage increases were in excess of 150% for Hispanic newborns outside the urban core counties. Among Whites, the increase in newborn admissions was substantial (+200%) in the micropolitan and noncore counties.

For Blacks, admissions declined in the large central and large fringe counties and increased in other counties, with the largest increases affecting the very youngest children. For both Hispanics and Whites, the largest increase involved newborn children, regardless of the urban character of the county.

What do these trends mean? All-in-all, it is too soon to attach much meaning to what has happened without further analysis, which may strike some as a frustrating answer. Nevertheless, because we know that during this same period, rates of poverty in all parts of America have been on the rise but especially so in non-urban areas (Kneebone, 2017), it is premature to speculate too deeply without first understanding how trends in poverty correlate with trends in foster care. A preliminary review of the poverty data shows an increase in poverty in urban core counties but a decline in foster care placement. In the most rural parts of the country, foster care placement rates are up and so too are poverty rates. This presents a conundrum of sorts: in some places poverty is up but placement rates are down; in other places both poverty and placement are higher today than before. If poverty is somehow tied to the demand for foster care, then these data suggest that that relationship is more complicated than what we often hear: where you find more poverty, you will find the utilization of foster care is also higher. That observation begs the follow-up question, what is it about the places with growing poverty rates and falling placement utilization that differentiates them from other places? Are those differences important from policy, finance, and practice perspectives? Scott Allard (2017), among others, thinks the connection has to do with the service infrastructure available in places where both poverty and demand are growing.

Figure 1.
Percentage Change in the Number of Children Admitted to Care by Race/Ethnicity and Urbanicity: 2000 and 2018



Disparity and Foster Care

> "Knowing that a given inequality exists provides little information for those seeking to remedy it. Knowing the process that generates inequality, however, indicates possible points for policy intervention."
> (Knight & Winship, 2013)

The foregoing points to the deeper problem of disparity within the child welfare system generally and the foster care system specifically. The simple fact is the experience of Black children in foster care compared to children of other races and ethnicities stands apart. Because of what those differences say about how we as a nation support families, it is important to ask whether what we are doing now is aligned with what the science tells us is prudent from a public investment perspective.

I believe the answer to those difficult questions lies in what we can say about disparity, the way it varies over place and time, and what that variation says about the underlying causes of disparity. Surely bias, racism, and injustice are implicated but it is important to understand not only *whether* it is true but *how* it is true so that more targeted efforts are applied to problem both in terms of what has happened and, going forward, what is likely to happen (Reskin, 2003).

Toward that end, it is important to lay out what I mean when I ask about the ways in which disparity varies. By and large, based on the research that's been done, it is quite clear that what happens in the child welfare system to the families who encounter the system is correlated with race and ethnicity. There are two research summaries that provide an overview of what is known about disparity and child welfare (Fluke et al., 2011; Hill, 2006), so I will not repeat what those authors have already said except to say that at every point along the pathway through the

child welfare system—maltreatment reporting, investigation, placement, and so on—it is extremely important to pay attention to how those experiences differ depending on whether the family is White, Black, Hispanic, Native American, Asian, or a child of some other ethnic, racial, or cultural group. It is only by asking and answering those diverse questions that is possible to say whether families are being treated equitably.

Strategically, there are two interrelated ways to approach the disparity question. The first asks whether there are differences based on race/ethnicity for a given outcome. Most research looks to answer this question: all things considered, is there a difference in the experiences of children connected to their race or ethnicity? For example, we might ask whether the likelihood of placement following a substantiated allegation of maltreatment differs for White as compared to Black children. If, after adding information about the family, the child, and whatever other attributes the researcher has at their disposal, the race effect persists, then we have substantial support for the claim that one group is having a different experience than another. To the extent we see differences that persist across various outcomes (e.g., reporting of abuse, placement, permanency), those differences become the foundation of what we know about disparity.

The second approach uses what we learn when we ask whether disparity is present to ask whether disparity is always the same no matter where one looks. It is this latter style of question I want to consider next. To illustrate this point, I consider both placement rate and length of stay disparities in one state. In doing, I only mean to illustrate the ways in which our understanding of disparity is dependent on how we choose to look at the issue.

In the first example, I note whether Black and White children enter care at different rates (rates per 1,000 children) at the state level. This is more broadly known as the statewide disparity rate. I add to that a substate view that asks whether the disparity rate as measured at the state level varies at the county level. To shine an even brighter light, I ask whether the size of the Black population living in the county is connected in any way to the level of disparity. I do so because I want to demonstrate that the observed level of disparity is a function of where one looks. Simply put, the statewide rate does not provide a necessarily accurate picture of disparity in places within the state.

The next question looks at how children leave care using a similar lens. The first question asks: at the state level, do Black children and youth leave foster care (i.e., adoption rates, reunification rates, etc.) in ways that differ from how White children and youth leave foster care (i.e., the exit rate disparity)? I follow that first question with a second: how is the state-wide disparity reflected in what happens at the county level?

To this second question, I add one additional twist. Most of the time, when researchers report on exit rate disparity, they will note that one group of children and youth leave foster care at a rate that is different than the rate reported for some other group (e.g., Black and White, male and female, urban and rural). Analytical strategies that fit this mold report the *average* effect of race on time spent in care. Though very useful its own right, the average effect does not address what might be interesting nuances. For example, given entry into care, what is the probability a White child and a Black child will leave custody within 6 months of entry? Is the

level of disparity the same as the average or is observed disparity somehow more or less substantial? What about children who have been in care for more than 2 years?

It is important to both pose and answer these types of questions from a causal perspective because, in the early days of care, the bureaucratic processes that shape the experience of young people (i.e., the things caseworkers must do to provide high-quality, purposeful care) are very different than the bureaucratic processes that control cases that have been in the system longer given the elevated likelihood of adoption as time passes. For that reason alone, proposed solutions for racial disparities must pinpoint opportunities for change within the relevant bureaucratic process.

Entry Rate Disparities

Almost any conversation about race and ethnicity has to start at the population level. For essential context, it is important to know how many people we are taking about. In the state discussed in this section, at the time, 22% of all children living in the state were Black, whereas 28% of foster children were Black.[4] The disparity rate tied to the over-representation of Blacks relative to Whites is manifest in entry rate differences. The Black child admission rate was 3.78 placements per 1,000 thousand children as compared to 2.99 placements per 1,000 White children, which is a difference in the admission rate of 1.27.

Because the state's child population, when divided by race, is concentrated in different parts of the state, it is important to ask whether the disparity rates in counties separated into groups based on the size of the Black child population would reveal potentially important differences. To illustrate the point, I organized counties into three groups: counties where I thought of the population as small on a percentage basis, counties that occupied the middle ground given the overall distribution in the state; and a third group of counties with the largest populations.[5] There were 24 counties out of 95 that fit into this last group—the counties with the largest Black child populations on a percentage basis. Of those 24 counties, four accounted for about 70% of the Black children living in the state. Put another way, 70% of the Black children live in just four counties. When we use a statewide average to describe disparity, we are glossing over the reality that children are exposed to the system that operates where they live. Other children, children who live elsewhere, are exposed to a similar but different system. Breaking

---

[4] For the observations I am making their level of generality it is not important to know that state.

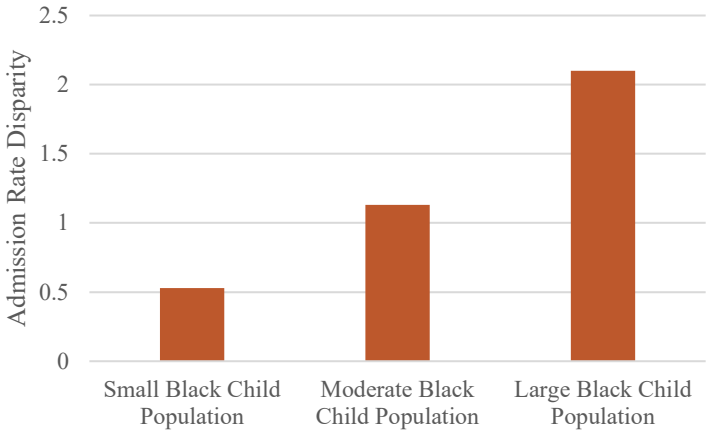
[5] I have not reported the thresholds used to categorize the counties because I want to focus the conversation on the concept of the average and its applicability to lower levels of geography. The point is this: even an arbitrary classification of counties reveals substantial variation around the average. What does this mean? The answer to that question requires more careful thought and some understanding of the cutoffs. Here, the question is much easier. If I divide counties into three groups organized around small, medium, or large in size, will a single disparity rate emerge, one that describes small, medium, and large counties, or do large counties where most Blacks live have a disparity rate that differs from the state disparity rate?

disparity rate calculations into smaller parts, to understand what is behind the average, more readily reveals the importance of context where many of the structural causes of disparity likely reside.

The findings highlight the reasons why this is an important point (see Figure 2). In the counties with small Black child populations, White children were more likely to go into foster care than Black children, not less likely. In counties with a Black child population of moderate size, there was near parity, with a slightly higher risk among Blacks. Only in the counties with large Black child population was the entry rate for Black children substantially higher than the entry rate for Whites. In those counties, the rate of entry for Black children were twice the rate of those for Whites. That figure is, of course, substantially higher than the statewide average. To the extent the modest statewide rate would have led someone to conclude that the issue of disparity is somehow less troublesome than in a state with a disparity rate that is substantially higher, then an important opportunity to act would have been missed.

Figure 2.

Admission Rate Disparities by Population Size as Proportion of Total Child Population



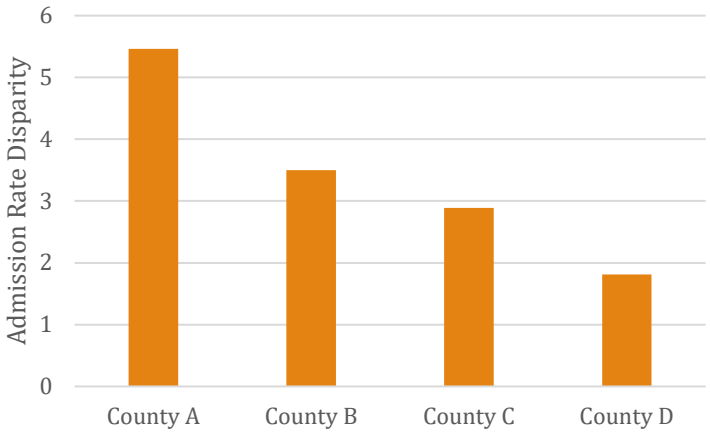
It also important to bear in mind that, even in the counties that contribute to higher-than-average disparity rates in the so-called large counties, there is nevertheless substantial variation between the counties that belong to the larger cluster. Figure 3 illustrates this point. Here, I am showing the disparity rates for the five largest counties in the cluster of counties with the largest populations of Black children. From this view, it is quite clear that, even in a cluster of counties with higher-than-average disparity rates, the contributing counties themselves have rates of disparity that are substantially different from one another. Specifically, county A has a disparity rate of 5.5 as compared to county D, where the disparity rate is 1.8. The disparity in the disparity rates is 3.05 (5.5/1.8), which is larger than the statewide disparity rate.

To put it most simply, the one overall statewide disparity rate is made up many disparity rates measured at the county-level. With these simple data, I cannot say why that is the case and it is certainly possible that these differences are not substantively meaningful.

Whether the differences are substantively meaningful is an empirical question. Given the issues in play, it is important that that work be done.

Figure 3.

Admission Rate Disparities in the Four Counties With the Largest Black Child Populations



Exit Rate Disparities

Over-representation of one group relative to another happens because there are differences in the rate of entry and differences in the probability of exit. I have already covered the entry dynamic (albeit in very modest detail). My attention now turns to children leaving care and whether disparity is a function of placement duration. Specifically, I want to know whether disparity measured as the likelihood of leaving placement to permanency within the first months of placement is substantially different than it is at other times during the placement process.

Figure 4 below highlights the basic point. For the figure, I calculated the conditional probability of achieving permanency based on how long a young person has been in care. I did this by dividing the time spent in care into discrete intervals of time, 6 months in this case. At the start of each interval, I ask who is in care at the beginning of the interval and who leaves during the interval. At the start of each interval, the only people still in care are the young people who have yet to leave. I refer to this as the period-specific likelihood of permanency.

Before delving into what Figure 4 shows, it is important to set the context using statewide data. Although not shown specifically, when state-level exit probabilities for Black children and White children are compared, the difference (i.e., the average effect) is not

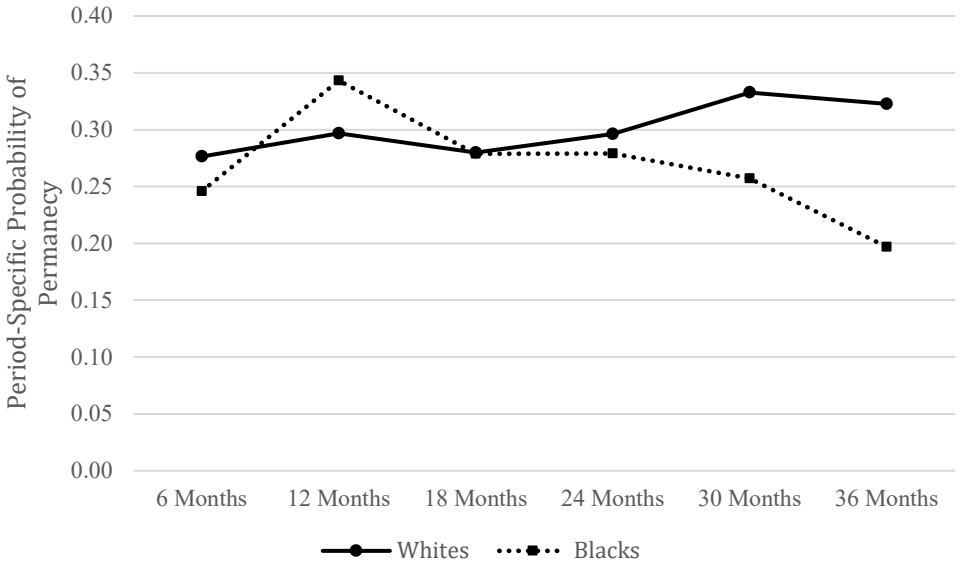
statistically meaningful. *Black children are as likely to leave care as White children* are. This finding is itself interesting in the national context. However, as before, when we look deeper, we see the sort of nuances we should be considering when thinking about the mechanisms that give rise to disparity. Specifically, within 6 months of admission to foster care, Black children are less likely to achieve permanency, but only slightly so. In the second 6 months, when the Black children still in care are compared with the White children still in care, Black children are actually more likely to achieve permanency than White children. Among children still in care at the start of the third and fourth person-periods (children in care for at least 1 year), there are negligible reunification differences. That is, there is no disparity in exit rates among children in the specific group—children in care for at least one year. Thereafter (2 years and onward), disparity grows through person-periods 5 and 6, such that we see two distinct exit processes: early on, the Black/White disparity is negligible and only in the third year do sharp differences emerge.[6]

Of course, this is but one state. These patterns may describe what is true in some states but not others. Or we might find patterns in those other states that are altogether different. Either way, the field is left with a fundamental question in need of an answer: what else goes along with these differences and how should that evidence weigh on the decisions that must be made to *solve* the injustices embedded in our social institutions?

[6] The analysis here is focused on permanency rate disparities. Of course, one would want to know more about reunification disparities, guardianship disparities, and adoption disparities. Those data were analyzed and are covered in a report that can be found here: (Wulczyn et al., 2019)

Figure 4.

Period-Specific Probability of Permanency by Race



Supply-Induced Demand

I am going to continue with this theme—variation in fundamental measures of disparate treatment—but shift the focus and consider whether Black youth are more likely than White youth to be placed in congregate care, a form of disparity that is rarely studied. Following the rationale already laid out, my questions have three related dimensions: (1) is there disparity in the use of congregate care?; (2) does the disparity vary from place to place?; and (3) regarding the places where disparity tends to run above average, is there anything else about those places worthy of further consideration empirically? For answers to that last question, I take a systems view with an emphasis on resource constraints (Sugihara et al., 2012; Wulczyn & Halloran, 2017). Everyone knows that systems operate under conditions of resource constraints—money, people's time—but social scientists working on child welfare problems have not done much to show how resources constraints affect children and families directly. I want to demonstrate one such pathway with what follows and then tie that pathway back to disparity. I do not have the space to make all the connections, but there is an emergent narrative that is important to consider.

The discussion hinges on the notion of supply-induced demand. In health care, the formal term is supply-induced demand elasticity (Gooch & Kahn, 2014), which alludes to a connection between the supply of services and the utilization of those services. For example, if beds are in short supply, the threshold of who gets a service becomes a judgment that must be made. It is possible under those constraints that some who needs a service will not get it, as we have seen with COVID-19 and ICU beds. There is, however, evidence that suggests the opposite

is also true, even in the case of ICU beds (Delamater et al., 2013; Gooch & Kahn, 2014; Roemer, 1961). At times when there is an over-supply of a service relative to demand, the over-supply of beds influences who gets the service because the net tends to widen, especially if services provided are reimbursed on a fee-for-service basis (as most congregate care in this country is). Supply-induced demand reinforces a dynamic that affects both the mix of cases served and the outcomes of those served (Rice & Labelle, 1989; Stelfox et al., 2012; Valley & Noritomi, 2020).

To see the connection more clearly, it is important to see congregate care, especially under fee-for-service conditions, as a system that tends toward bed utilization levels that yield the revenue needed to keep the organization operating, an outcome that is, under the current business model, in everyone's interest. Public agencies rely on stable providers able to sustain the service quality standards set by the public agency; financial stability allows providers to retain the staff they need to support program quality commensurate with the expectations of their public agency partners. Nevertheless, when revenue is tied to bed utilization, it is easy to see why, under these conditions, utilization tends toward targets that promote organizational stability.

If we characterize bed capacity as the number of beds in the system at any given time and utilization as the number of those beds occupied by a young person, we see that utilization is a simple function of admissions and discharges. When a young person is admitted, utilization rises closer to the limit of capacity; when a young person is discharged, then utilization falls relative to capacity. On balance, utilization is maintained through a balance of admissions and discharges, at least theoretically. More importantly, if utilization of bed capacity is set with a target in mind (the target being the utilization needed to realize a certain level of revenue), then one should expect to find a link between admissions and discharges such that, as young people are discharged, beds open and admissions rise.

To test whether such an assertion is true—that admissions and discharges in the congregate care system are linked—my colleague John Halloran and I borrowed methods from the biological sciences (Wulczyn & Halloran, 2017). In population biology or population ecology, scientists have been grappling with the problem of population growth and decline relative to resource constraints for quite a few years (Goel et al., 1971; Takeuchi, 1996). Although that science is more complicated than I have room for here, I will draw the straightest line between the problem of congregate care utilization and population biology that I can.

Fundamentally, we analogize admissions to and exits from foster care as the birth/death processes found in classical population models. Drawing from population theory, we then argue that if foster care is a resource constrained system similar to a biological eco-system, then the behavior of the population over time should provide evidence of carrying capacity and feedback mechanisms that represent adaptive behavior within the system. That adaptive behavior is observed through changes in admissions and discharges that operate in unison with each other. In short, if demand (i.e., admissions) for congregate care is tied to the supply of beds, then we should see admission and discharges move together, as one balances off the other to achieve utilization targets (Fama & French, 2000; May, 1974; Nielsen & Hannan, 1977; Sugihara et al., 2012; Tuma & Hannan, 1984; Wulczyn, 1996).

The details of how we went about searching for evidence of supply-induced demand can be found in our paper (Wulczyn & Halloran, 2017). As a summary, I will point to where we started the analysis. We constructed weekly counts of how many children were admitted to congregate care and how many were discharged. We used data going back 15 years at the state level and compiled the data for 728 weeks of continuous time series data.

With that data, we needed to answer two fundamental questions. First, do the time series data for admissions and discharges exhibit structure, or is the time series random? That is, what do we see when we look at admissions from week to week and discharges from week to week? If those individual time series data are random—the change from one week to the next has no rhyme or reason—then the likelihood we will find structures within the data related to the resource constraint (i.e., beds) is unlikely if not impossible. The second question requires a more direct assessment of admissions and discharges. Although we go into much more detail in the paper as to how we went about answering the second question, especially with regard to the references, here I will simply report the correlation coefficient to answer the relatively simple question: are admissions and discharges correlated? We regard this as preliminary evidence that a resource constraint exists. In the paper, we strengthen that conclusion with additional evidence using the methods adopted by population ecologists.

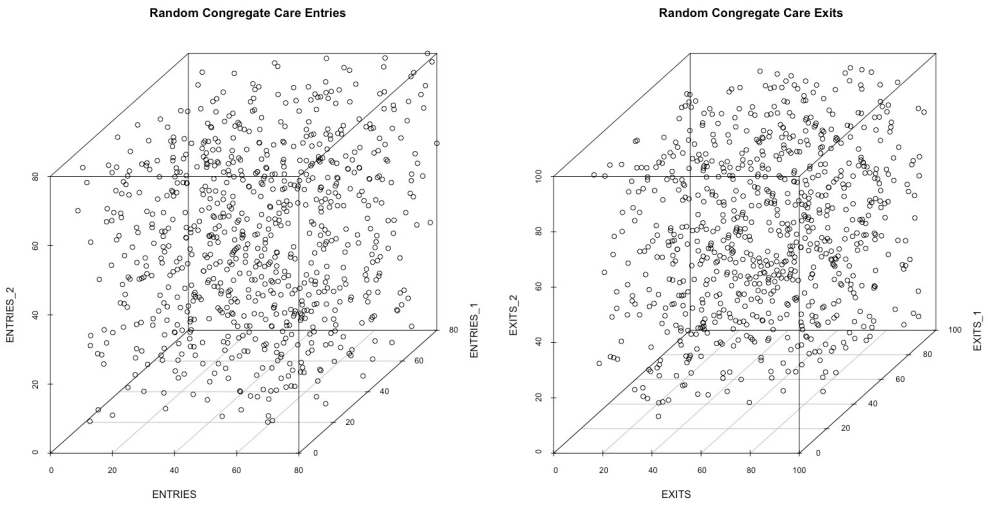
Suffice it to say that when admissions and discharges are viewed on a weekly basis, the resulting time series is rather jagged. To the naked eye, there are patterns there, but the overwhelming visual impression is disarray. It *appears* that the number of admissions is as likely to go up one week to the next as it to go down. In two dimensions, any structure that is there is difficult to see.

Another way to examine structure within the times series is to project the data into what is called three-dimensional state space. If the time series is random, it will seemingly fill the space evenly; more structured data will form a cloud with structure. To illustrate the distinction between a random time series and time series data with structure, I will start with three-dimensional time series plots using random data for a single state taken directly from the paper.

The random data are generated from a time series data for admissions and discharges taken from the actual weekly count of admissions and discharges. In other words, we reshuffled the points into a random order. As displayed, the points represent the number of admissions (or discharges) to congregate care at time = 0, (x), time = $t - 1$, (y), and time = $t - 2$, (z) with the time points lagged from each other by a certain number of weeks, which in this case was 1. The results are in Figure 5.

Figure 5.

Three-dimensional lag plot of the variable of interest (x-axis) compared to the variable position in the first-order lag (y-axis) and second-order lag (z-axis). In the entries plot (a) and the exits plot (b) the data is randomly generated using the observed parametric bounds of the time series.



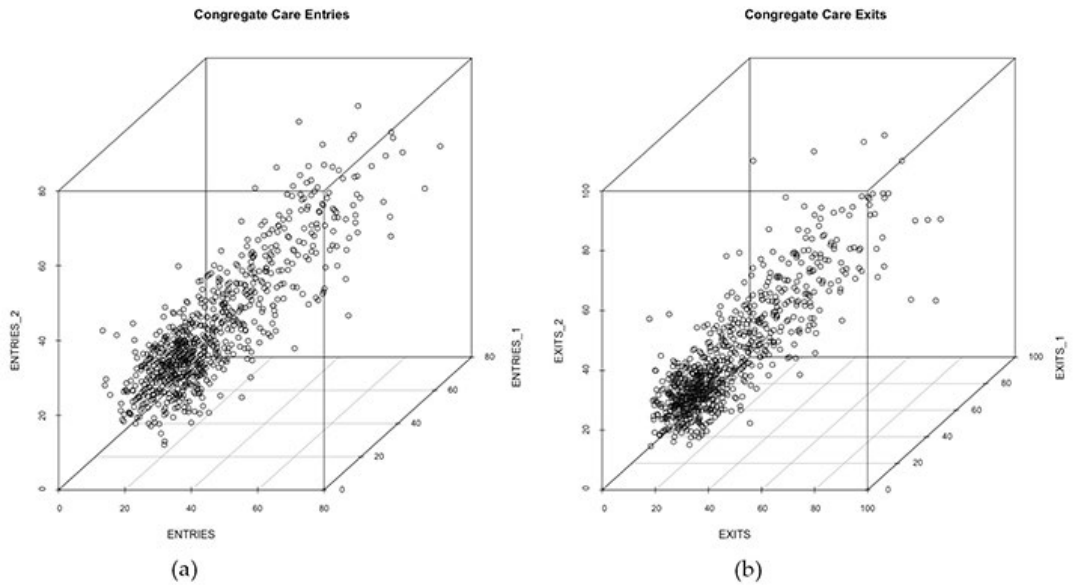
(a) (b)

As expected, the random plot shows no structure, which means that the next value for admissions in the time series is as likely as any other value, provided it falls within the range of values ever produced. The same is true for the discharges. Among other things, the random time series means that there is no apparent force within the system compelling the number of admissions or discharges in some direction: the number of admissions and discharges from one week to the next is random.

In Figure 6, we show three-dimensional scatter plots for the observed admissions and discharges to congregate care in their actual temporal order (i.e., as they happened). The admission and discharge counts are displayed as before, along the x-, y-, and z-axes with a lag of 1 week. As hypothesized, the data for the congregate care series are more tightly patterned than the random time series. This means that the next point is more likely to fall within a specific region of the three-dimensional space. The non-random nature of the plot is, we believe, a marker for structures that have explanatory power pertaining to the system that generates the time series data. One such structure is the proposed relationship between admissions, discharges, utilization, and revenue targets.

Figure 6.

Three-dimensional lag plot of the observed entries (a) and exits (b) to congregate care, 2000 to 2015, in their state at time zero (x-axis) compared to the variable position in the first-order lag (y-axis) and second-order lag (z-axis).



Regarding the correlation coefficient, using the same data used to generate Figure 6 we found that admissions were correlated with discharges at a .6898 level. If that's translated into explained variance, the r-square suggests that about 47.5% of the variance in discharges is explained by the variance in admissions. On a theoretical level, although there are other reasons why admissions and discharges go up and down over time, I do not see a more powerful predictor of admissions and discharges than discharges and admissions, depending how one thinks about the causal arrow. In either case, the data strongly suggests that at the system level there are bed constraints that act on who is admitted into congregate care. It is best to think of this constraint as a range rather than a point estimate. That is, utilization over time will move between an upper and lower bound. As utilization approaches the upper bound, access goes down; when utilization moves downward, access goes up. It is important that we know how these constraints work in the context of case-level decision making. In health care, as I said, they have labeled this dynamic as supply-induced demand elasticity. The evidence in that context is rather strong. I think there are reasons to further explore how resources constraints affect what happens and to whom in the child welfare system. We tend to see case-level decisions as based

on the merits of the individual case. This notion of supply-induced demand elasticity, because it flies in the face of that conventional thinking, ought to be studied more carefully.

What does this have to do with disparity? I start with assumption that supply-induced demand is more common in some parts of states than others. For convenience, using counties as a unit of analysis (rather than states), I asked whether the admission/discharge patterns observed at the county level are similar to each other: is supply-induced demand uniform or is there variability in how strong the supply effect is? To get an answer to that question, John Halloran replicated the calculations in our paper using admission and discharge data for 1,271 counties. We found that the supply-demand dynamic is a complicated one. In some counties, admissions and discharges are very close to zero, which means that there is no meaningful connection between supply and demand. In urban counties, the signal that corresponds to the supply effect on demand tends to be much stronger although the signal is often detected in smaller counties between the rural and urban extremes.

To make what we found more useable, we divided the counties into three groups: counties with a statistically distinct signal, counties with a signal that did not cross the threshold of statistical significance, and counties with no real signal at all. We then asked whether disparities in the use of congregate care were connected in any way to supply's effect on demand.

More work is needed before we fully understand the causal mechanisms at work, but the initial results are interesting if not provocative: disparity and supply-induced demand are probably linked. To see the pathway, we started with simple unadjusted odds ratios showing that Black youth were more likely to be placed in congregate care than either White or Hispanic youth (50%, 44.5%, and 39.6%, respectively). In keeping with how we talked about the average disparity ratios, these differences reflect what's true without regard to state or county boundaries.

The next step involved linking our measure of supply-induced demand to disparity. Using counties grouped according to the measured effect of supply on demand, we computed the average disparity ratio for each group of counties after considering the mix of cases served in each county. From those results, we observed higher rates of placement among older youth and males, regardless of race and ethnicity. Rates of congregate care placement were also much higher in counties where the supply signal was strong as compared to weak even after controlling for child-level factors linked to utilization. To some extent, urbanicity was implicated in whether a young person would be placed into congregate care, but the urban effect was undone by the supply effect. That is, the thing about urban areas that the contributes higher congregate care utilization is tied to the supply effect. Urban areas and the supply of congregate care are likely correlated, but in non-urban areas (e.g., suburban counties), the supply effect is likewise observable. Taken together, the supply effect seems more important than the simple notion of urbanicity.

For the last step in the analysis, we asked whether the supply effect altered the Black/White and Hispanic/White disparity ratios. It is an interesting question because of how the populations of White, Black, and Hispanic foster children are distributed among the counties. Put simply, in the counties where the supply signal is weak, 70% of the children entering care

are White. In the counties where the signal is strong, two-thirds of the children are either Black or Hispanic. That means, to the extent supply affects demand, Black and Hispanic children face greater exposure to those systemic conditions than White children do. With regard to disparity, the question shifts: what is the placement rate for White youth in counties with a strong supply effect, and what is the placement rate for Black and Hispanic youth in counties with a weak supply effect? These are the contributing streams of influence that give rise to what we see at a multi-state level.

To summarize what we found, it is probably easiest to work from the highest level downward and then draw some simple inferences. Before going down that road, I want to add one additional variable to the model. Supply effects are not the only source of macro or institutional influence within child welfare systems. States differ with regard to how they regulate the congregate care industry. In fact, the ways in which states differ from a regulatory perspective, as noted at the outset, is itself highly variable. By extension, we can and should expect that policy differences exert a causal influence such that what we observe in a state with a given policy is different than what we observe in a state without that policy.

To make sense of the policy morass, we looked for policies in the states that sought to control access to congregate care through the use of an assessment. From that data, we created a binary variable: the state (and the counties in the state) was assigned one if we found statutory language that crossed our threshold and zero if no such language could be found. Then, the risk of being placed in congregate care was assessed at the county level alongside information about the young person (e.g., their age) and other features of the county including the strength of the supply signal.

Viewed through that particular lens—how much does context influence the level of disparity we observe—the findings are substantial. The unadjusted disparity rate for Blacks relative to Whites was 1.43; for Hispanics, the unadjusted disparity rate was .69. With proper statistical controls for county size and other county attributes (the policy and supply effects), unmeasured state and county characteristics, and characteristics of the child included in the model, the lowest Black/White disparity rates were found in counties where we found supply effects along *with* a policy preference for conducting assessments. The same could be said for the Hispanics with one exception. Hispanics are generally less likely to use congregate care, and the biggest differences relative to Whites are in counties with both a supply and a policy effect.

I should also point out that in counties without a supply effect and no expressed policy preference for assessments, disparity was much higher, but not because the risk of using congregate care is much higher in those places. Rather, counties where there is no real supply signal have low placement rates. The actual disparity arises from these low base rates so it is important to remember that low base rates for Whites and Blacks are sometimes if not always associated with considerable disparity. The reverse is also true: counties that use a lot of congregate care may have low disparity, relatively speaking. Those differences, I would argue, should weigh on how experts approach the solution phase of the problem-solving process.

Although there is more here worth exploring, I return now to a theme raised earlier in the chapter when I mentioned there are two ways to study disparity. In the first, Black/White

differences are the independent variable in the model used to explain the variation in outcomes. Question of this sort answer the question: do we find disparity when we look for it? The second type of question moves the Black/White differences to the dependent variable side of the model and asks, more directly, what causes disparity. Too often the answers to the first question are taken as an answer to the second. I have tried to show here how analysis that considers both questions yields a more fruitful line of inquiry. On the one hand, we know that there is disparity; on the other, we know that the measured level of disparity stands out in some places more than it does in others. From a structural perspective, we linked supply/demand dynamics to the level of disparity, a path that is tied to an important feature of the underlying system: how the system is funded exerts a casual influence on what happens to children. If we hope to reduce disparities, a specific proposal to undo the structural mechanisms linked to how the system is financed would be a step in the right direction.

Foster Care and the Science of Investment

The collection of organizations interested in improving the nation's foster care system is a large one. There are, nevertheless, core problems that persist despite the efforts of that assembly to make improvements. To say the persistence of those problems is a source of political frustration is no doubt an understatement. For sure there has been progress, but work remains.

To start, because child protection systems operate at an institutional level, one does need a comprehensive, active understanding of where the demand for child protection services is greatest, how the demand is changing, and why. To the extent these explorations help us understand the causal mechanisms underlying why some families struggle, we have to think about what these observations tell us about the prospects of policy and practice changes.

These broader types of questions—questions motivated by, among other things, a clear conceptualization of context and its influence on families and child protection outcomes—are increasingly important to the science behind the evidence-base policy makers need to make smarter decisions. Starting with the changing face of foster care, I will simply note that the demand for foster care—measured as the rate of placement—is growing in non-urban areas. In terms of investing in better outcomes, we have to ask ourselves whether the service infrastructure in areas of growth exists in sufficient, cost-effective quantities to slow the demand for foster care in those places. Among others, Scott Allard thinks the social services infrastructure found in suburban and rural areas of America lags behind the geographic redistribution of vulnerable populations, an insight with profound implications for how we carry out social welfare investments and with what benefit (Allard, 2017).

With regard to disparity, we have to acknowledge that the form disparity takes, even in the case of injustice and bias, is likely more nuanced than we often consider. In one state, we found places in that state where White children and youth were more likely to be placed than

Black children and youth. Even in the places where the majority of Black children live, admission rate disparities varied considerably. This is one state. What about the others? Are there generalizations we might make from that sort of comparative research? Investments in the solutions that address disparity have to take these systematic, contextually grounded differences into account lest we risk investing in ways that undermine our good intentions.

Last, we found evidence of system effects (Forrester, 1971; Jervis, 1998) that speak to how the organization of services affects the interventions. Put simply, if we fail to consider system structure (e.g., the mechanism of finance) in our efforts to reform the system, we will likely find ourselves continually frustrated by a system that is resilient to our efforts to induce change, as many systems are (Forrester, 1971). If we fail to recognize the role of structure, both theoretically and empirically, our investments in systems change will result in lower returns.

The theme that runs through these examples ties back to whether randomized experiments are the gold-standard way to know what we need to know about the workings of the complex, whole-of-government systems we have built to lift up the well-being of children. None of the empirical examples discussed here were derived from randomized experiments, yet the evidence provided reveals a system in the midst of changes that surely shape how we should think about devising an approach to child protection and foster care that is both more effective and efficient.

Conclusion

Setting aside the politicization of social policy in the U.S. and elsewhere, we do not need a new science of foster care as much as we need greater diversity in the science we apply to problems building a better foster care system. We have witnessed a growing commitment to the evidence-base in child welfare, and the shift is laudable. However, if the emphasis remains centered around interventions that work, we are likely to encounter disappointment, for the evidence of what works represents only a portion of the evidence we need to operate a more effective and efficient foster care system (Deaton & Cartwright, 2018; Nagin & Sampson, 2019). A broadened view of the foster care system as a system that affects the lives of children is what we need. For that, a research agenda motivated by conceptualization rather than research method is essential.

Acknowledgments

I would like to acknowledge the state child welfare directors who have supported the Center for State Child Welfare Data for the past 17 years. Without their support, the work of the Center would not be possible. I also want to thank all of my colleagues at the State Data Center. It is an extraordinary group of individuals whose commitment to finding a better way to serve young people and their families is always inspiring.

References

Allard, S. W. (2017). *Places in Need: The Changing Geography of Poverty*. Russell Sage Foundation. https://doi.org/10.1111/padr.12109

Deaton, A., & Cartwright, N. (2018). Reflections on Randomized Control Trials. *Social Science and Medicine*, *210*, 86–90. https://doi.org/10.1016/j.socscimed.2018.04.046

Delamater, P. L., Messina, J. P., Grady, S. C., WinklerPrins, V., & Shortridge, A. M. (2013). Do More Hospital Beds Lead to Higher Hospitalization Rates? A Spatial Examination of Roemer's Law. *PLOS ONE*, *8*(2), e54900-17. https://doi.org/10.1371/journal.pone.0054900

Fama, E. F., & French, K. R. (2000). Forecasting profitability and earnings. *Journal of Business*, *73*(2), 161–175. https://doi.org/10.1086/209638

Family First Prevention Services Act, § 50701-50772 (2018).

Fluke, J., Jones, B., Jenkins, M., & Ruehrdanz, A. (2011). *Research Synthesis on Child Welfare: Disproportionality and Disparities*. American Humane Association.

Forrester, J. W. (1971). Counterintuitive behavior of social systems. *Theory and Decision*, *2*(2), 109–140. https://doi.org/10.1007/bf00148991

Goel, N. S., Maitra, S. C., & Montroll, E. w. (1971). On the Volterra and Other Nonlinear Models of Interacting Populations. *Reviews of Modern Physics*, *43*(2), 231–276. https://doi.org/10.1103/revmodphys.43.231

Gooch, R. A., & Kahn, J. M. (2014). ICU Bed Supply, Utilization, and Health Care Spending. *JAMA: Journal of the American Medical Association*, *311*(6), 567–2. https://doi.org/10.1001/jama.2013.283800

Hill, R. B. (2006). Synthesis of Research on Disproportionality in Child Welfare: An Update. *Casey-CSSP Alliance for Racial Equity in the Child Welfare System*, 60.

Ingram, D. D., & Franco, S. J. (2014). *NCHS Urban-Rural Classification Scheme for Counties* (2(166); Vital Health Stat, pp. 1–81). National Center for Health Statistics. https://www.cdc.gov/nchs/data_access/urban_rural.htm

Jervis, R. (1998). *System Effects: Complexity in Political and Social Life*. Princeton University Press.

Kahn, N. E., Gupta-Kagan, J., & Hansen, M. E. (2017). The Standard of Proof in the Substantiation of Child Abuse and Neglect. *Journal of Empirical Legal Studies*, *14*(2), 333–369. https://doi.org/10.1111/jels.12149

Kneebone, E. (2017). *The Changing Geography of US Poverty* (pp. 1–18). The Brookings Institution.

Knight, C., & Winship, C. (2013). *The Causal Implications of Mechanistic Thinking: Identification Using Directed Acyclic Graphs* (S. Morgan, Ed.). Springer.

May, R. (1974). Biological Populations with Nonoverlapping Generations: Stable Points, Stable Cycles, and Chaos. *ScienceNew Series*, *186*(4164), 645–647. http://www.jstor.org/stable/1739196

Nagin, D. S., & Sampson, R. J. (2019). The Real Gold Standard: Measuring Counterfactual Worlds That Matter Most to Social Science and Policy. *Annual Review of Criminology*, *2*(1), 123–145. https://doi.org/10.1146/annurev-criminol-011518-024838

Nielsen, F., & Hannan, M. T. (1977). The Expansion of National Educational Systems: Tests of a Population Ecology Model. *American Sociological Review*, *42*(3), 479. https://doi.org/10.2307/2094752

Provencher, A. J., Gupta-Kagan, J., & Hansen, M. E. (2014). The Standard of Proof at Adjudication of Abuse or Neglect. *Social Work and Social Sciences Review*, *17*(2), 22–56.

Reskin, B. F. (2003). Including Mechanisms in Our Models of Ascriptive Inequality: 2002 Presidential Address. *American Sociological Review*, *68*(1), 1. https://doi.org/10.2307/3088900

Rice, T. H., & Labelle, R. J. (1989). Do Physicians Induce Demand for Medical Services? *Journal of Health Politics, Policy and Law*, *14*(3), 587–600. https://doi.org/10.1215/03616878-14-3-587

Roemer, M. (1961). Bed Supply and Hospital Utilization: a Natural Experiment. *Hospitals*, *35*, 36–42.

Stelfox, H. T., Hemmelgarn, B. R., Bagshaw, S. M., Gao, S., Doig, C. J., Nijssen-Jordan, C., & Manns, B. (2012). Intensive Care Unit Bed Availability and Outcomes for Hospitalized Patients With Sudden Clinical Deterioration. *Archives of Internal Medicine*, *172*(6), 467. https://doi.org/10.1001/archinternmed.2011.2315

Sugihara, G., May, R., Ye, H., Hsieh, C., Deyle, E., Fogarty, M., & Munch, S. (2012). Detecting causality in complex ecosystems. *Science*, *338*(6106), 496–500. https://doi.org/10.1126/science.1227079

Takeuchi, Y. (1996). *Global dynamical properties of Lotka-Volterra systems*. World Scientific Publishing Co.

Tuma, N. B., & Hannan, M. (1984). *Social Dynamics: Models and Methods*. Academic Press.

Valley, T. S., & Noritomi, D. T. (2020). ICU beds: less is more? Yes. *Intensive Care Medicine*, 1–3. https://doi.org/10.1007/s00134-020-06042-1

Wulczyn, F. (1996). A Statistical and Methodological Framework for Analyzing the Foster Care Experiences of Children. *Social Service Review*, *70*(2), 318–329. https://www.jstor.org/stable/30012892

Wulczyn, F., & Halloran, J. (2017). Foster Care Dynamics and System Science: Implications for Research and Policy. *International Journal of Environmental Research and Public Health*, *14*(10), 1181–12. https://doi.org/10.3390/ijerph14101181

Wulczyn, F., Huhr, S., & McClanahan, J. (2019). *African American/White Disparities in the Tennessee Foster Care System* (pp. 1–26). Center for State Child Welfare Data, Chapin Hall, University of Chicago.

Chapter 2. Defining, Assessing, and Promoting Adolescent Well-Being for Youth in Out-of-Home Care

Peter J. Pecora, M.S.W., Ph.D [1]
Joy Gabrielli, Ph.D.[2]

[1]Professor, School of Social Work, University of Washington
[2]Assistant Professor, Department of Clinical and Health Psychology, University of Florida

Suggested Citation: Pecora, Peter J. & Gabrielli, Joy, *Defining, Assessing, and Promoting Adolescent Well-Being for Youth in Out-of-Home Care*, in The Future of Foster Care: New Science on Old Problems by the Penn State Child Maltreatment Solutions Network (Sarah Font ed. & Yo Jackson ed., 2021). https://doi.org/10.26209/fostercare2

Abstract

This chapter presents strategies at the youth, family, community, and general public levels for promoting adolescent well-being for youth and families served by child welfare. It builds on recent research from the National Transition Funders Group regarding principles and strategies for helping youth in care thrive and succeed in the community. Specifically, the six domains of youth well-being (cognitive development; social and emotional well-being; mental health and wellness; physical well-being; safety; and economic well-being) are used to guide discussion on the unique needs of adolescents served by child welfare. The chapter closes with a brief overview of how youth well-being is affected by the recently passed Family First Prevention and Services Act, and some considerations for youth, parent, and family assessment.

Introduction

While most youth placed in out-of-home care in the United States are reunified or adopted within one year of placement, 32% of the 391,098 youth in care in 2021 were ages 12 and older. Further, over 19,000 youth were emancipated from care without achieving legal permanence (reunification, adoption, or legal guardianship) (US DHHS, 2022). These adolescents, the young adults up to age 20 served by child welfare in extended foster care, and those youth that are likely to emancipate require not only efforts to ensure their safety from child maltreatment, but services to help them grow and develop in healthy ways to maximize their well-being. Adolescence is a time of emerging identity, experimentation with risk behaviors, and development of autonomy by learning independent living skills. Most adolescents lean heavily on familial and community supports for successful transition to independence. Adolescents residing in out-of-home placements often do not receive adequate support for transition to independence, and thus, require interventions from multiple systems. This chapter focuses on defining, assessing, and promoting child and adolescent well-being within the context of youth and families served by child welfare. It builds on recent research, principles, and strategies for helping transition-aged youth succeed provided by the National Transition Funders Group. The chapter closes with a brief discussion of evidence-based practices and practice-based evidence, and how those relate to the recently passed Family First Prevention and Services Act.

Defining Child Well-Being

The Department of Health and Human Services has identified four domains of well-being to guide policy and practice in child welfare: cognitive functioning, physical health and development, behavioral/emotional functioning, and social functioning (U.S. Department of Health and Human Services, 2012). While these original four domains are central to youth functioning, specific aspects of emerging adulthood related to transitions to independence (e.g., financial stability) are not well-explicated. The National Transition Funders Group expanded the set of domains of child and youth well-being below to provide a more comprehensive framework (Langford, Strauss & Legters, 2021, pp. 25-29):

1. ***Physical Health and Safety:*** All young people should have the opportunity and supports—through family, community, and public systems—to maximize their physical health, strength, and functioning, be physically safe and free from violence, abuse, and neglect, and have basic needs met.
2. ***Cognitive and Mental Health:*** All young people should have the opportunity and supports—through family, community, and public systems—to experience continuous cognitive health and intellectual growth and to optimize mental health, managing any mental health issues as they arise.
3. ***Social and Emotional Wellness:*** Social and emotional wellness require both a strong sense of self-efficacy and self-esteem and supportive, nurturing, and mutually satisfying relationships. Emotional wellness requires the development of a positive

racial, gender, sexual, and cultural identity. This begins and is nurtured throughout life within the context of a lifelong family. Every young person needs the opportunity to have a meaningful and positive experience of living in, connecting with, and belonging to a family.

4. ***Mental Health and Wellness:*** All young people should have the opportunity and supports—through family, community, and public systems—to manage their mental health and wellness.
5. ***Economic Well-Being:*** All young people should have the opportunity and supports—through families, community, and public systems—to obtain the learning and work opportunities they need in order to experience economic security and advancement and to accrue the financial and social capital needed to afford and access quality education, employment, and housing**.**
6. ***Racial and Ethnic Equity***: All young people should have the opportunity—through family, community, and public systems—to be treated with fairness and respect, have equitable access to opportunity, and have their wellness not determined by race or ethnicity.

Some of the practice approaches to promoting youth well-being use an approach informed by social ecological theory, situating the six domains within a social ecology, using Urie Bronfenbrenner's work (Bronfenbrenner, 1979, 2004). Different levels of the social ecology must be brought to bear to help a youth prepare for emancipation. For example, effective programs focus on leveraging the social supports both *proximal* (e.g., foster family; favorite teacher) and *distal* (volunteer or employment opportunities in the community) to support the financial needs of transition-age foster youth for education through scholarship awards or reduced education fees. The cognitive development of youth in out-of-home care also is important for their health.

Another example exists within the mesosystem within Bronfenbrenner's model—involving the interaction and cohesiveness of microsystem supports (school, family, church, and neighborhood). For youth residing in out-of-home placements in this case, their mesosystem has experienced tremendous disruption due to loss of biological caregivers, disruption of community supports, and sometimes even removal from their school systems. Thus, social systems that are highly interconnected and stable may be an important factor for successful development for adolescent youth—foster systems should seek to prioritize some way for youth to stay connected to prior community supports. For example, policies that prioritize youth staying within their current local school allow them to maintain some aspects of their social support systems.

Finally, the safety domain is at the heart of the child welfare mission: keeping youth safe from emotional, physical and sexual abuse as well as neglect. While safety is understood to be a motivating factor for youth in out of home placement, ongoing safety concerns for youth *within* foster care (Pecora at al., 2019), and high rates of re-placement following foster care placement (Roberts et al., 2017) suggest safety remains an important ongoing emphasis for youth served by child welfare. Similarly, economic well-being is a key domain because the majority of families supported by child welfare fall within lower socioeconomic status groups (USDHHS, 2021). Parents and youth alike recognize the need for supports that improve economically stability, and youth need preparation within foster care to live

successfully and independently in the community as adults (Valentine et al., 2015). For example, many youth in foster care struggle to obtain part-time jobs and require supports for reaching independence-related milestones (e.g., driver's licenses, individual insurance plans) (Courtney et al., 2004; Pecora et al., 2010).

Each of the above domains are distinctly important for youth development, but they do not function in isolation. For example, Behavioral Activation is a primary treatment approach for adolescent depression, but the effectiveness of that clinical approach is bolstered when a youth has a supportive social network, stable living situation, and a sense of hope for the future.

Guiding Values and Principles

The core values and principles of achieving child well-being that should underlie all child welfare programs are described in this section. The core values and principles are listed below (Langford, Badeau & Legters, 2015, p. 10, 12):

- ***Well-being is a satisfactory human condition, characterized by health, happiness, and fulfillment.*** Well-being is not a state of being that one achieves and then lives in for a lifetime. Defining for oneself, moving toward, and achieving well-being is a continual developmental process beginning at infancy and continuing throughout the course of life. Indeed, a better term for the process may be "well-becoming." (Ben-Arieh & Frones, 2011; Langford, Badeau & Legters, 2015, p. 12).
- ***Young People are Valuable:*** All young people are valuable, despite circumstances or actions that have caused them to come to the attention of public systems. Youth-serving professionals believe, expect, and speak the best about the young people they serve.
- ***Equity:*** Young people of color and other marginalized communities, including homeless, pregnant or parenting, immigrant, and LGBTQ youth, deserve equitable opportunities, experiences, and well-being outcomes. Policies and practices should demonstrate intentional efforts to effectively identify, address, and mitigate racial, cultural, linguistic, gender, and other disparities among vulnerable youth.
- ***Youth Voice and Self-Determination:*** What young people think and feel matters. Young people should be supported in expressing dreams and goals, defining well-being for themselves, developing decision-making skills, and in developmentally appropriate ways, exercising control over their journey to adulthood.
- ***Developmentally Appropriate:*** All young people have a right to childhood and adolescence. Young people should be treated as young people, not adults. Science related to youth and adolescent development should drive practice and policy development.
- ***Normalcy:*** All young people deserve to have access to developmentally appropriate activities, experiences, and opportunities even when they experience out-of-home placement through the child welfare or youth justice systems.
- ***A Focus on the Whole Person:*** Well-being requires a focus on the whole young person (not a segment or part) and their relationship to communities where they live, work, and learn.

- ***Family:*** Every young person needs, and belongs in, a lifelong family to love and support them.
- ***Fairness and Second Chances:*** All young people deserve opportunities to heal from trauma. Policies and practices should be fundamentally fair. Balanced and restorative approaches to justice, which reduce or eliminate collateral consequences, should be the norm when systems respond to adolescent behaviors or needs. Use of harmful practices such as incarceration should be reduced and ultimately eliminated.
- ***Youth Workers and Volunteers:*** The people who serve youth and young adults are valuable, and they need adequate resources, training, and ongoing support to do their work effectively.
- ***Science-Based:*** Evidence generated from research, practice, communities, and experience should inform and improve implementation of this framework.
- ***Communities:*** Communities (and community safety) are improved when young people have opportunities to thrive and contribute as community members.

These principles may read as a guide for how to implement ethical and value-driven services, but in actuality, the principles should serve as a general frame or ethic that guides every decision on service creation and implementation; and every interaction that system supports have with youth in out-of-home care. Consider what is involved in planning and implementing services that fully embrace the principle of *Youth Voice and Self-Determination*, or *uplifting a youth equity*. This would require acceptance of a core belief that young people have value and the right to self-determination. It can be demonstrated by how agency staff and foster parents talk with youth, how they work with them, and how they involve them in their case planning (e.g., collaborative vs. autonomous decision making). A growing number of child welfare agencies are trying to implement these values by creating constituent advisory committees, inviting youth and parents with lived experience to assist with and shape program planning, and by hiring them as peer mentors (Chambers et al., 2019; Leake et al., 2012). Before these agencies roll out a new curriculum or foster parent assessment tool, they sit down with the youth or parents with lived experience and say, "We're thinking about introducing this change. What do you think about this? What have we missed? How do we make sure this goes well?" Collaborative decision-making models have demonstrated effectiveness within other service industries such as medicine and behavioral health care (Politi & Street, 2011); community-based participatory designs have long been used to enhance research effectiveness (Cacari-Stone et al., 2014; Wallerstein & Duran, 2006). These models are particularly useful for work with youth from underserved or underrepresented communities (e.g., LGTBQIA+ youth), as they may have had prior experiences with systems of support that undermined their ability to feel heard and understood.

Regarding normalcy, some group care agencies receive criticism when their service schedules, placement decisions, or rules prevent youth from participating in cultural or athletic events. Agency board members and staff have responded by assessing limitations on youth opportunities for normalcy because group care counseling or other sessions are scheduled in a way that interfere with extracurricular activities. Agencies can obstruct developmental and healing pathways in significant ways when youth lose opportunities to volunteer in the community or participate in extracurricular activities. Engagement with “normal life

experiences" may also promote youth engagement with system-related supports, such as therapy and educational supports (e.g., tutoring), as many extra-curricular activities require academic and behavioral standards (Pokempner et al., 2015). Indeed, youth in out-of-home placements who are offered opportunities to engage in age-normative activities, such as extracurricular sports, have demonstrated more positive outcomes (White, Scott, & Munson, 2018).

The concepts of fairness and having second chances represents a rarely discussed principle—*restorative justice*, which is based partially on work with American Indian or first nations people in Canada and elsewhere (Bargen, 2018; Crampton & Rideout, 2010). This approach allows young people who have injured or harmed other people, such as their siblings or foster parents, the opportunity to apologize. Youth should have the ability to "make up for" prior transgressions in some way with their victims to avoid continuous punishment and self-blame for a mistake that may have been made when they were an impulsive 12-year-old. Similarly, social systems that interact with adolescents in out-of-home placement should consider the totality of their experiences to promote justice. For example, an older adolescent on probation with juvenile justice may struggle with trust and openness in their relations with their probation officer above and beyond what might typically be expected if they have a prior history of multiple foster placements. Youth with histories that involved experiences of discrimination, bias, or marginalization on top of added adversity related to system-involvement may be particularly averse to system supports. These youth require sensitivity from case workers and interventionists who are willing to work to understand the totality of their experiences. Further, system-induced adversity is regularly under-recognized as an explanatory factor in youth behavior, but has known influences on how adolescents with system-involvement perceive their world (e.g., Cooley et al. 2015).

Achieving Adolescent Well-Being by Focusing on Key Conditions and Capacities by Environmental Domain

The key conditions and capacities that older youth in foster care (including those who are planning to transition or emancipate from care) need to have or develop for well-being are highlighted below and described in much more detail by the National Transition Funders Group. This framework for building well-being for older youth in foster care describes in detail the conditions and capacities by environment: youth, families, communities, and the public environment.

More specifically, the domains are Physical Health and Safety, Cognitive and Mental, Social and Emotional, Economic, and Racial and Ethnic Equality. And the areas of focus are government and systems, community, private sector partners, neighborhoods, families, youth, and young parents. Some of the capacities and strategies for developing youth well-being are listed

- Maximize physical health, strength, and functioning, be physically safe and free from violence, abuse and neglect, and have basic needs met.

- Experience continuous cognitive and mental health as well as intellectual growth, with the ability to address any mental health issues as they arise.
- Cultivate a strong and resilient self-identity and supportive and nurturing relationships.
- Obtain the learning and work opportunities needed to experience security and advancement; accrue financial and social capital to afford quality education, employment, housing, and transportation.
- Be treated with fairness and respect, have equitable access to opportunity; wellness is not determined by race or ethnicity (Langford, Krauss, & Legters, 2021, pp. 21-24).

Some of these have been discussed by other organizations and in other publications. For example, the Strengthening Families Approach identifies five protective factors as the foundation for a stable nurturing environment for children with birth, foster and adoptive parents: parental resilience, social connections, concrete support in times of need, knowledge of parenting and child development, and social and emotional competence of children (Browne, 2016). An extensive review of the research studies by the Center for the Study of Social Policy and other recent research studies (e.g., Fortson et al., 2016) support the idea that the presence of these protective factors is associated with reduced risk for child abuse and neglect. These protective factors can contribute to family cohesion and familial interaction promotive of positive outcomes for youth (Center for the Study of Social Policy, 2018). These recommendations were previously developed for younger children in care but have been aged up for the adolescent focus within this chapter:

1. ***Parental Resilience.*** Given the focus on autonomy and independence during adolescence, this is a phase in parenting that is notable for conflicts in parent-child communication. A parent's individual capacity for management of stress and internal resources for coping can impact how parents approach and resolve conflict with adolescents. Parents who engage in effective and collaborative problem-solving with their children, actively work to build and sustain trusting relationships that also allow for appropriate youth independence, and seek help from others to support the parent-child relationship will demonstrate capacity for resilience.
2. ***Social Connections.*** From Bronfenbrennar's ecological model, socio-emotional support and interconnected networks of support will provide an adaptive framework for youth development. Support can be obtained from multiple layers of the ecological network, and microsystem supports can come from friends, family members, neighbors, and community members. Networks of support are essential to parents and also offer opportunities for people to "give back," an important part of self- esteem as well as a benefit for the community. Isolated families may need extra help in reaching out to build positive relationships.
3. ***Concrete Support in Times of Need.*** Families and youth require food, shelter, clothing, and health care—basic needs essential for families to thrive. In the context of a family crisis, such as domestic violence, mental illness, or substance abuse, adequate services and supports need to be in place to provide stability, treatment, and help for family members to get through the crisis. Adolescents in out-of-home placements also

require training around the process by which sources of concrete support can be obtained (e.g., WIC cards, application for Medicaid).

4. ***Knowledge of Parenting and Child Development***. Accurate information about child development and appropriate expectations for children's behavior, particularly in the adolescent phase, will encourage parents to see their children and youth in a positive light and promote their healthy development. Provision of information to parents about how exposure to adversity may impact adolescent emotional and cognitive development will promote trauma-informed parenting and build parental capacity for understanding. Studies show information is most effective when it comes at the precise time parents need it to understand their own children. Parents who experienced harsh discipline or other negative childhood experiences may need extra help to change the parenting patterns they learned as children.
5. ***Social and Emotional Competence of Children.*** An adolescent's ability to interact positively with others, self-regulate their behavior, and effectively communicate their feelings has a positive impact on their relationships with their family, other adults, and peers. Adolescents are in a developmental phase also identified by increased autonomy in social functioning, which can at times create additional stress or challenges for them. Youth behaviors related to oppositionality or delays in emotional or social development may create extra stress for families; early identification and assistance for both parents and youth can reduce risk for maladaptive outcomes and keep development on track (Center for the Study of Social Policy, Undated, pp. 1-2).

In 2019, the National Academy of Sciences (2019b) released a report on youth well-being that discussed advances in science, such as epigenetics and resilience, that should be utilized to refine child welfare practice. The report underscored how caregivers and social service agencies should work to support the ability of the brain and emotional systems to recover over time—with the right nurturance and care. Unfortunately, most child welfare workers know little about epigenetics and how the brain can heal. Staff and foster parents would benefit from training in how to help nurture the brain and build youth resiliency and protective factors (Center on the Developing Child at Harvard University, 2016, 2017). The National Academy of Sciences report also discussed the importance of timing interventions. Many group care agencies and other behavioral health providers struggle with this dimension as approaches to intervention may be systematic (e.g., all youth entering care are provided with group therapy) rather than individually driven (e.g., after assessment, interventions are tailored to youth-specific needs). As an example, by the time some youth come to the attention of the child welfare system, they are so emotionally and behaviorally dysregulated that conventional talk therapies are not effective. For example, Cognitive Behavioral Therapy or Trauma-Focused Cognitive Behavioral Therapy have less utility with children that are highly dysregulated. Instead, these youth may require therapy that focuses on grounding and emotional regulation (e.g., equine therapy, raising service dogs, drumming, yoga, or some other type of non-talk therapy) to get their emotion management systems under control. Successful treatment may therefore depend on the use of non-talk therapies, such as those listed above, because

they engage proprioception (the sense of the relative position of neighboring parts of the body and strength of effort being employed in movement; Mosby, 1994), and restorative vestibular mechanisms (Kranowitz & Miller, 2006; Warner et al., 2013). Further, within child welfare systems, the focus of therapeutic intervention is often centered on the child, whereas more often than not a family approach to treatment may be more appropriate to address the needs of the child nested within the family system (e.g., Kolko, Iselin, & Gully, 2011).

The National Academy of Sciences report also highlights the need to study the impact of laws and policies with respect to child development and well-being. For example, when the Federal Government began to subsidize adoptions as part of the Adoption Assistance and Child Welfare Act of 1980 (PL 96-272) in 1980, that law helped transform child welfare services in the following ways: more children were adopted and more children found permanent homes, which increased their likelihood of developing positive well-being. Thus this policy shift that emphasized regular case reviews and adoption incentives to improve permanency planning helped the child welfare system pivot and attend to at least one form of legal permanency linked to positive child and adult outcomes—adoption (Kawam, 2014; Pecora et al., 2019; Vandivere et al., 2009).

The field also saw some positive results when Congress passed subsidized guardianship legislation (Fostering Connections to Success and Increasing Adoptions Act of 2008 [P.L. 110–351]). Fostering Connections offers federal support to children who leave foster care to live permanently with relative guardians through a federal subsidized guardianship program. A recent major improvement was included in P.L. 110-351 which ensures that Indian tribes have direct access to IV-E funded programs, including the foster care and adoption program, as well as the Subsidized Guardianship Program and the Permanency Incentive Program. When families can receive a subsidy for serving as a legal guardian, it provides another option for child welfare workers to help children achieve permanency in cases where adoption or family reunification are not feasible. Thus public policy for promoting child well-being deserves further study, including the use of child tax credits and other income supports for families contained in the American Rescue Plan (Children's Defense Fund, 2021).

In addition, the social support, relationship skill-building, and resilience aspects of the framework listed earlier are essential and transcend various child welfare programs. For example, while the Chafee program provides various services delivered concurrently to prepare youth for life after foster care and to support youth who have recently left care, it is not the complete answer. The Children's Defense Fund recently documented how the COVID-19 pandemic has been devastating for youth in extended foster care and those who have recently aged out of the foster care system (Olender, 2020). Across the country, these youth are losing their jobs and their homes, and also facing serious food and economic insecurity. The social support networks and skills mentioned above can be key for survival, particularly in times of crisis.

Finally, other program reforms are needed. A number of child welfare service organizations, such as those in Colorado, New York City, and New Jersey, are working to develop their child family service systems using a 21st century approach to child and family well-being. This approach includes a sharper focus on addressing the root causes of child maltreatment, including intervening upon social determinants of health. With this

approach, these agencies are focusing on socioeconomic factors that help determine well-being, such as the physical environment, economic opportunity and supports, what kinds of healthy behaviors they engage in, and what kind of health care services are available. Approaches that incorporate cross-cutting risk factors such as these will be robust to macrosystem level influences and crises (e.g., the COVID-19 pandemic reducing national resources for system services) that have trickle-down impacts on youth and families.

With this approach, child welfare systems recognize that they cannot do this work alone. They must strategically partner with public health, public assistance, housing, the business community, faith-based communities, and others to comprehensively address the root causes of child maltreatment and maximize child well-being. To help support some of that work, the Family First Act has allocated dollars specifically for the selective prevention domain for families with a child at risk of foster care placement (National Research Council and the Institute of Medicine, 2009).

Family First Prevention Services Act

In contrast to some of the other well-developed policies and programs, the United States is at the very beginning of a policy experiment with the Family First Prevention Services Act (FFPSA). This landmark piece of legislation increased funding for placement prevention services for youth at risk of being placed in foster care using an open-ended entitlement (Human Resources Subcommittee Staff, 2016). Many experts, such as Jerry Milner, who recently was a senior leader at the U.S. Children's Bureau, believe the law needs to extend even further in support of prevention services because families eligible for this program must have a child at risk of being placed in foster care (Milner, 2018-19). For example, one who utilizes the SafeCare home visiting program in one's county would be able to obtain reimbursement up to 50% for SafeCare services provided to families if a child was at risk of going into foster care (i.e., if the child was a "candidate for foster care"). Other families being served with SafeCare would not be eligible to receive Family First reimbursement for that service if their children were not at risk of placement, thus potentially missing an opportunity to intervene earlier.

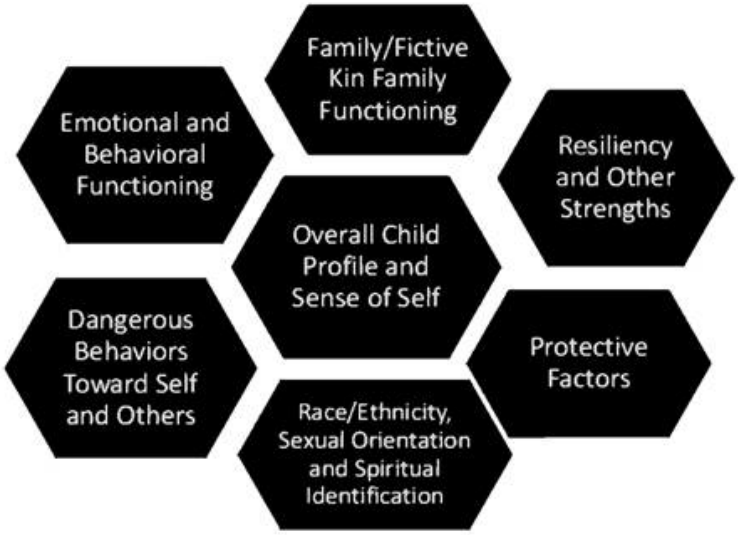
Assessment of Youth and Family Functioning

In this final section, we highlight the importance of careful assessment of child and family well-being as a prelude to services provision and other support strategies. Proper implementation of prevention and intervention services is dependent upon clear assessment of service needs, service effectiveness, feasibility of delivery, and acceptability of service provision for the target community. As child welfare moves to engage more with public health, behavioral health, public assistance, and other systems, it needs to improve how staff match needs and services for children and families. For all areas of child welfare, under FFPSA, trauma-informed multi-dimensional assessments must be consistently used within each state. (See Figure 1 as an

example of the dimensions that should be assessed.) To efficiently and successfully address child well-being, agencies need comprehensive assessment data about child functioning (and by extension family functioning if that is the environment within which the child is being raised). In addition, with FFPSA, in order to place a youth in group care, a third-party objective trauma-informed child assessment by qualified clinician who is not employed by the group care agency is required. Consequently, states and counties across the country are considering what kind of standardized child and family assessment tools they should use—if they are not already using one—often in conjunction with behavioral health. In some cases, systems may be using multiple assessments, but in an inconsistent way. Moreover, assessment should be ongoing for the duration of service delivery to ensure services maintain effectiveness and continue to meet the needs of the child/family. Routine monitoring of key outcomes (e.g., child welfare referrals, utilization of behavioral health services, community-level needs/resources) provides more accurate data for system-level leveraging of resources; and it allows for flexible implementation of services that can be responsive to changes in circumstances and needs encountered by system-involved children and families.

For example, in the years leading up to 2018, Florida was using four different types of the Child and Adolescent Needs and Strengths Scale (CANS) with insufficient staff training and coaching, so some subscale scores could not be trusted. Florida state and local agency leaders were concerned with how they could capture youth functioning and how best to match needs with services if they were not using some kind of a standardized assessment (Thompson & Pecora, 2018). To conduct high-quality needs assessment and service planning, agency staff need access to valid multidimensional assessments and training in how to utilize them. For example, assessment of a youth's internal resources to promote resiliency as well as other strengths they bring to a given situation may be critical to match youth to appropriate available resources. Identification of protective factors (e.g., youth expressed values related to education or internal flexibility in coping style) that might be operating in a youth's life should be promoted when making placement decisions (e.g., prioritizing placement within school district zones). Other important individual factors include understanding youth identity around race, ethnicity, gender, spiritual orientation, and social systems of support. Other relevant microsystem factors include youth engagement with extended family, peer supports, academic supports, and religious communities. Across these factors (protective, individual, and microsystem-level factors), recognition of the contextual nature of their risk- versus resiliency-promoting nature must be at the forefront. For example, a youth's identity related to minority status may increase risk for exposure to discrimination or marginalization in some settings, but it may also provide an opportunity for connection and support in other settings.

Figure 1.
Key Assessment Domains for Child Assessment in Child and Family Social Services



Source: Pecora, P.J. (2015). *Assessment: Ensuring that children receive the right services at the right time from high quality providers*. Presentation for the National Association for Children's Behavioral Health conference, Baltimore, July 16, 2015.

To develop a preventative system approach that is grounded in thorough assessment, considerations of assessment duration/comprehension, cost, outcomes targeted, and implementation (e.g., staff training in assessment) must be addressed. How do you quickly assess a youth for life skills using a strength-based set of items? What criteria are states using in selecting a state-wide youth or family assessment tool? This section provides an overview of factors that should be considered for comprehensive youth, parent, and family assessment in child welfare, using the framework described above. While an exhaustive list of evaluation factors falls outside the scope of this chapter, the sections below discuss some foundational aspects that can serve to enhance child welfare assessments to promote youth positive outcomes.

Emotional and Behavioral Functioning. As the cornerstone of most treatment delivery, emotional and behavioral functioning remains a critical component of assessment. Most tools derived for measurement of these outcomes have not been evaluated for use with youth in foster care, and recent studies suggest modifications may be needed to address differences in child-welfare populations (Jacobson et al., 2019).

- Is functional impairment evaluated across contexts (e.g., school, home)?
- How practical are the scores in terms of use for diagnostic evaluation, case planning, and routine outcomes measurement?
- If normed, what is the norming population, and is that appropriate for the given child's circumstances? Have the measure's psychometric properties been evaluated for welfare-involved youth?
- If used for measuring treatment progress, is it clinically sensitive (i.e., can it measure change over time)?
- How well does the child assessment tool address issue of diversity, equity, and inclusion in its design and how the scores are interpreted?

Family/Fictive Kin Family Functioning. Fewer well-researched family assessment tools suitable for child welfare exist. Researchers and clinicians alike should prioritize the

development and use of family-focused assessments to improve youth/family matching for child welfare placements.

- Will the assessor have adequate knowledge of the child and family required to complete the measure? In some situations, a youth self-report measure may be essential to capture the youth's perspective. In other situations, it may be critical to capture the primary caregiver's perspective.
- Whose perspective does the tool most directly measure: youth, parent, teacher, foster/resource parent?
- What family-specific outcomes may be important to assess across time (e.g., family or caregiver stress, placement disruptions)?
- How well does the assessment tool address issues of diversity, equity, and inclusion in its design and how the scores are interpreted? (Pecora, 2021).

Resiliency, Other Strengths, and Protective Factors. The completeness of domain coverage, including strengths and protective factors, is important to consider in tool selection as well. Some community-based programs working to support children at risk of child maltreatment or suffering from a behavioral health disorder assess family functioning by using the *protective factors framework* from the Center of Social Study Policy. There are at least two scales that assess the protective factors. (See https://cssp.org/resource/papf-instrument-english/ and https://friendsnrc.org/protective-factors-survey). While a less commonly studied aspect of influence on child welfare outcomes, emerging research suggests individual, familial, and system-level strengths can have impact on youth outcomes. Evaluation of strengths and protective factors may look different than assessment of pathology, and thus, some recommendations are as follows:

- Does the informant provide context-specific or context-global information on youth strengths?
- Are strengths evaluated across the youth's socio-ecological levels (e.g., microsystem, mesosystem, and macrosystem levels)?
- Are strengths as protective factors evaluated in a way that is useful for treatment and placement planning?

Self-Identification Factors. Generally, evaluation that fails to address unique aspects of a youth important to their self-perceived value system will also fail to maximize potential strengths specific to that youth. How youth consider their religious, familial, cultural, racial, and sexual identities could serve as important contributors to their present-day functioning and access to social supports. Furthermore, measures that are mismatched to youth characteristics may pathologize aspects of a given youth in unintended ways or under-assess important risk factors for negative outcomes.

- Are measures selected appropriate for the age, gender, ethnic, or other cultural groups that are served?
- Are norms available for the population of interest under evaluation?
- What unique aspects of the youth being evaluated may be missed in traditional forms of assessment?
- What contextual circumstances related to discrimination or marginalization may impact the findings of the assessment?

Dangerous Behaviors. Given that most out-of-home placement decisions are made to increase the physical and emotional safety of youth, recognition and assessment of potential safety-related behaviors (e.g., runaway, self-harm, harm to others, health risk behaviors) should also be used to inform placement decisions. Assessment of these behaviors also must consider the context wherein they occur—for some youth, engagement in what would be considered "unsafe" behaviors such as running away may actually have served an adaptive purpose for them (e.g., running away from a perpetrator to seek safety).

- Are measures selected covering the full range of safety behaviors and have clinical cutoffs been examined in the population of interest?
- Is there a functional assessment of safety behaviors to contextualize the functional purpose of the behaviors for the youth under assessment?

Other Practical Considerations. Many assessment measures are completed by the worker, and with this approach agencies must depend on the worker knowing that youth and the youth's living situation enough to rate the youth. The worker has to assemble that information and synthesize it. For example, the Child and Adolescent Needs and Strengths Scale (CANS) is the most commonly used measure of this type (see http://praedfoundation.org/). This approach is in contrast to using first-person ratings from the youth or the youth's caregiver. More well-developed measures have automatic scoring systems that can be used once the scores are scanned or entered into the program, and technology is advancing the use of measurement-based care online dashboard systems to ease the burden of repeated evaluation across time. Additional examples of criteria for selecting an assessment measure based on practical issues are listed below:

- Ease of completion in terms of clarity of instructions, clarity of items, and time to complete
- Training and coaching requirements for administration and interpretation
- Whose perspective does the tool most directly measure: youth, parent's perspective, teacher, foster parent?
- What is the cost to use the measure (e.g., is it affordable), and how easy is it to score?
- Compatibility with the agency management information system, and accessing total and sub-scale scores for case planning and evaluation
- How well does the measure perform in terms of construct validity, "face validity," concurrent validity, criterion validity, discriminant validity, inter-rater reliability, and predictive validity (Pecora, 2021)?

There are a number of challenges to assessment. Primary system-related obstacles to proper assessment include staff training, staff time, knowledge of appropriate tools for assessment, and system integration of assessment findings within a decision-making framework. Some child welfare agencies rely on behavioral health staff to complete youth assessment measures because the child welfare staff are not trained well enough to use these tools or lack the time. Some might argue that obstacles should be removed to assist welfare workers to complete measures as they often know the child and family the best. In some states, however, the behavioral health or other systems can function as a strong partner to a local child welfare agency if they are carefully trained to conduct these assessments. In Washington state, the Foster Care Assessment Program (FCAP) at the University of Washington assesses every

child placed in foster care within 30 days with assessments conducted by experienced social workers and psychologists (see https://depts.washington.edu/uwhatc/FCAP/). With that approach, every child is afforded a fairly comprehensive assessment of strengths and needs when they first enter placement by a highly trained team.

Conclusions

This chapter presented strategies at the youth, family, community, and general public levels for promoting adolescent well-being for youth and families served by child welfare. It builds on recent research, principles, and strategies for helping youth in care succeed from the National Transition Funders Group. Finally, recommendations were provided using a key assessment domain framework to guide considerations for youth, parent, and family assessment.

Future research funding should support studies that enact holistic approaches to understanding outcomes for children and youth characterized by the consideration of achievement, health, and other outcome domains simultaneously. Further, studies that demonstrate the specific social conditions and supports linked to epigenetic mechanisms that activate processes related to resilience and positive outcomes for young people, despite challenging circumstances, are needed. For example, research that identifies, substantiates, and implements interventions that build autonomy, adaptive help-seeking, and agency in adolescents while also promoting resilience would offer a strengths-focused approach to management of behavioral and emotional difficulties for system-involved youth. One example is provided by the Strong African American Families study that delivered specified curricula to youth and their caregivers (see Brody et al., 2017). Models such as these would benefit from further research support and enhancements that extend program scope and impact.

Studies could be specifically designed to test optimal timing of interventions for youth in foster care, posing questions such as “What are the trajectories of true developmental change in connectivity within and between neural networks implicated in cognitive control and emotional processing? Are these trajectories of change steeper or quicker during some periods than others, potentially providing key windows for input and intervention?” (Fuligni et al., 2013, p. 151). Further, the field should seek to prioritize refinement and greater use of available tools as well as development of new tools for domains that are lacking to ensure adherence to FFPSA assessment requirements. Studies need to continue to assess how well measures capture constructs of interest for system-involved youth and how measurement-based care can be better infused in system-level decision-making processes.

We also need to better understand how the social and environmental context (and factors within that context) can offer opportunities for flourishing outcomes or for worsened outcomes for youth in out-of-home care. Studies should also aim to reduce discrimination and marginalization, with a focus on both neurobiological consequences as well as structural strategies (school, community, state policies and practices) that reduce the conditions in which discrimination and marginalization are prevalent, and that buffer individuals from such experiences. These include youth who historically have been underrepresented or who are most

vulnerable (e.g., youth of color; immigrants; sexual and gender minorities; religious minorities; out-of-home youth; or those experiencing homelessness, foster care, or unstable housing). This also includes ways in which intersecting axes of oppression shape youth development, particularly against a backdrop of social stratification and oppression, where relationships between identity, experience, and behavior may not operate the same way for all youth (National Academies of Sciences, Engineering, and Medicine, 2019b). For example, these studies could focus on:

- Understanding the impact of laws and policies that improve or impede adolescent health, well-being, safety, and security;
- Ascertaining what social and economic policies may improve opportunities for youth placed in foster care to thrive and test whether their effectiveness differs by race/ethnicity or context; and
- Identifying what interventions might ameliorate and (or) enrich the outcomes of youth in care who have experienced childhood deprivation, oppression, or other negative experiences (such as poverty, trauma, separation, or displacement) (National Academies of Sciences, Engineering, and Medicine, 2019b).

While this chapter outlines key dimensions of child well-being, strategies for promoting child well-being, and ways to assess those dimensions, much work remains to be done to address gaps that continue to impact our most vulnerable youth. System approaches that maintain focus on primary tenants of factors promotive of adolescent well-being, as well as adherence to core values related to the promotion of adolescent well-being will support consideration of the whole child in assessment and intervention. Further, assessment methods that are grounded in the specific needs of the adolescent and family (Figure 1) and promotive of protective factors, while also responsive to system-level limitations, will be sustainable for the promotion of measurement-based care and effective recommendations for service delivery.

Acknowledgements

The authors thank Sue Badeau, Barbara Hanson Langford, Stephanie Malia Krauss and Lyman Legters of the Youth Transition Funders Group for permitting us to reprint material from their recent report; and to the many foster care alumni who have shared their experiences in out-of-home care with us.

References

Bargen, C. (2018). Revival of Indigenous Justice in Canada, U.S., Should Be Compass for Restorative Justice. *Youth Today*, February 26, 2018. Retrieved from https://youthtoday.org/2018/02/revival-indigenous-justice-canada-u-s-compass-restorative-justice/

Ben-Arieh, A., & Frønes, I. (2011). Taxonomy for child well-being indicators: A framework for the analysis of the well-being of children. *Childhood*, 18(4), pp.460–476.

Brody, G.H., Gray, J.C., Yu, T., et al. (2017). Protective prevention effects on the association of poverty with brain development. *JAMA Pediatr* 171(1):46-52, 2017.

Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.

Bronfenbrenner, U. (2004). Making human beings human: Bioecological perspectives on human development. Thousand Oaks, CA: Sage Publications.

Browne, C. H. (2016). The Strengthening Families Approach and Protective Factors Framework™: A Pathway to Healthy Development and Well-Being. In *Innovative approaches to supporting families of young children* (pp. 1-24). Springer, Cham.

Cacari-Stone, L., Wallerstein, N., Garcia, A. P., & Minkler, M. (2014). The promise of community-based participatory research for health equity: a conceptual model for bridging evidence with policy. *American journal of public health*, *104*(9), 1615-1623.

Casey Family Programs Data Advocacy. (2021). *Analysis of federal U.S. Children's Bureau AFCARS data*. Seattle: Author.

Center for the Study of Social Policy. (2018). *About Strengthening Families™ and the protective factors framework*. Washington, D.C.: Author. Retrieved from https://cssp.org/wp-content/uploads/2018/11/About-Strengthening-Families.pdf

Center for the Study of Social Policy. (Undated). The Protective Factors Framework. Washington, D.C.: Author, pp. 1-2. Retrieved from https://www.flgov.com/wp-content/uploads/childadvocacy/strengthening_families_protective_factors.pdf

Center on the Developing Child at Harvard University (2016). *Applying the science of child development in child welfare systems*. Boston: Author. Retrieved from http://www.developingchild.harvard.edu

Center on the Developing Child at Harvard University (2017). *Three principles to improve outcomes for children and families*. Boston: Author. Retrieved from http://www.developingchild.harvard.edu

Chambers, J., Lint, S., Thompson, M., Carlson, M., Graef, M. (2019). Outcomes of the Iowa Parent Partner program evaluation: Stability of reunification and re-entry into foster care. *Children and Youth Services Review, 104,* 1-11. Retrieved from: https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1020&context=ccflfacpub

Children's Defense Fund. (2021). *Child tax credit resources*. Washington, D.C.: Author, Retrieved from https://www.childrensdefense.org/child-tax-credit-resources/?gclid=CjwKCAjwkN6EBhBNEiwADVfya55lM56FwQsd325RV6JCZ9ma2Z9rMOn18htAqOLfmz9C47EztU0-sBoCAkkQAvD_BwE

Cooley, M., Wojciak, A., Farineau, H., & Mullis, A. (2015). The association between perception of relationship with caregivers and behaviors of youth in foster care: A child and caregiver perspective. *Journal of Social Work Practice*, (29), 205-221 DOI 10.1080/02650533.2014.933405

Courtney, M., Terao, S. & Bost, N. (2004). *Midwest evaluation of the adult functioning of former foster youth: conditions of youth preparing to leave state care*. Chicago, IL: Chapin Hall, University of Chicago. https://www.chapinhall.org/research/conditions-of-youth-preparing-to-leave-state-care/.

Crampton, D.S. & Rideout, P.L. (2010). Restorative Justice and Child Welfare: Engaging Families and Communities in the Care and Protection of Children. Chapter 8 in Elizabeth Beck, Nancy P. Kropf, and Pamela Blume Leonard (Eds.) *Social Work and Restorative Justice: Skills for Dialogue, Peacemaking, and Reconciliation*. Oxford: Oxford University Press. DOI:10.1093/acprof:oso/9780195394641.003.0008

Fortson, B., Klevens, J., Merrick, M., Gilbert, L., Alexander, S. (2016). *Preventing Child Abuse and Neglect: A Technical Package for Policy, Norm, and Programmatic Activities*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. Retrieved from: https://www.cdc.gov/violenceprevention/pdf/can-prevention-technical-package.pdf?platform=hootsuite

Fuligni, A.J. & Telzer, E.H. (2013). Another way family can get in the head and under the skin: The neurobiology of helping the family. *Child Development Perspectives*, 7(3), 138–142

Human Resources Subcommittee Staff (2016). *Family First Prevention Services Act of 2016.* House Ways and Means Committee, Washington, D.C.: Author. Retrieved from: http://waysandmeans.house.gov/wp-content/uploads/2016/06/Family-First-Prevention-Services-Act-Summary-061016.pdf

Jacobson, J. H., Pullmann, M. D., Parker, E. M., & Kerns, S. E. (2019). Measurement based care in child welfare-involved children and youth: reliability and validity of the PSC-17. *Child Psychiatry & Human Development*, *50*(2), 332-345.

Kawam, E. (2014). Revisiting the Adoption Assistance and Child Welfare Act of 1980: Analysis, Critique, and Recommendations. *World Journal of Social Science Research, 1(1), 23-44*. Retrieved from: https://core.ac.uk/download/pdf/268085267.pdf

Kranowitz, C. S., & Miller, L. J. (2006). *The out-of-sync-child: Recognizing and coping with sensory processing disorder*. New York: Perigee.

Kolko, D. J., Iselin, A. M. R., & Gully, K. J. (2011). Evaluation of the sustainability and clinical outcome of Alternatives for Families: A Cognitive-Behavioral Therapy (AF-CBT) in a child protection center. *Child Abuse & Neglect*, *35*(2), 105-116.

Langford, B. H., Badeau, S. H., & Legters, L. (2015). *Investing to Improve the Well-Being of Vulnerable Youth and Young Adults: Recommendations for Policy and Practice.* Washington, D.C. Center for the Study of Social Policy. Retrieved from: http://www.ytfg.org/wp-content/uploads/2015/11/Investing-in-Well-Being-small.pdf?utm_source=DynamicsMarketing&utm_medium=Email&utm_campaign=JUVJUST_YTFG_YouthWellBeing_121415&ed2f26df2d9c416fbddddd2330a778c6=tuulvujkeh-tkuhcceu
http://hdl.handle.net/11212/2667

Langford, B. H., Krauss, S. M., & Legters, L. (2021). *Investing in the Well-Being and Well-Becoming of America's Young People: Recommendations for Philanthropy, Policy, and Practice.* Youth Transition Funders Group.

Leake, R., Longworth-Reed, L., Williams, N., & Potter, C. (2012). Exploring the benefits of a parent partner mentoring program in child welfare. *Journal of Family Strengths, 12*(1), 1–15. Retrieved from: https://digitalcommons.library.tmc.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1147&context=jfs

McDaniel, S. (2014). *On my way home – A memoir of kinship, grace, and hope.* Pittsburgh, PA: A Second Chance, Inc.

Milner, J. (2018-19). Improving child welfare through primary prevention. *Children's Bureau Express*. 19(10), December-January, p. 1. Retrieved from: https://cbexpress.acf.hhs.gov/article/2019/december-january/improving-child-welfare-through-primary-prevention/743800031b92c15051762 ɔefe54bcb5c
Video: https://vimeo.com/276889408.

Mosby's Medical, Nursing & Allied Health Dictionary, Fourth Edition, Mosby-Year Book 1994, p. 1285.

National Academies of Sciences, Engineering, and Medicine. (2019a). *A Roadmap to Reducing Child Poverty*. Washington, DC: The National Academies Press. doi: https://doi.org/10.17226/25246.

National Academies of Sciences, Engineering, and Medicine. (2019b). *Fostering Healthy Mental, Emotional, and Behavioral Development in Children and Youth: A National Agenda.* Washington, DC: The National Academies Press.

National Research Council and the Institute of Medicine. (2009). *Preventing mental, emotional and behavioral disorders among young people: Progress and possibilities.* Washington, D.C.: National Research Council and the Institute of Medicine of the National Academies. http://www.nap.edu/catalog.php?record_id=12480

Olender, S. (2020). *New Analysis from CDF: Increase Chafee Funds to Protect and Support Foster Care Youth*. Washington, D.C.: Children's Defense Fund. Retrieved from: https://www.childrensdefense.org/blog/increase-chafee-funds/

Pecora, P.J. (2015). *Assessment: Ensuring that children receive the right services at the right time from high quality providers*. Presentation for the National Association for Children's Behavioral Health conference, Baltimore, July 16, 2015.

Pecora, P. J., Kessler, R. C., Williams, J., Downs, A. C., English, D.J., & White, J. & O'Brien, K. (2010). *What works in family foster care? Key components of success from the Northwest foster care alumni study*. New York and Oxford, England: Oxford University Press.

Pecora, P.J. (2021). *Selecting Family and Youth Assessments for Child and Family Services*. Seattle: Casey Family Programs, Research Services.

Pecora, P.J., Whittaker, J.K., Barth, R.P., Borja, S., & Vesneski, W. (2019). *The child welfare challenge*. (Fourth Edition.) New York City: Taylor and Francis.

Pokempner, J., Mordecai, K., Rosado, L., & Subrahmanyam, D. (2015). *Promoting normalcy for children and youth in foster care*. Philadelphia, PA: Juvenile Law Center. Retrieved from https://jlc.org/sites/default/files/publication_pdfs/JLC-NormalcyGuide-2015FINAL.pdf

Politi, M. C., & Street, R. L. (2011). The importance of communication in collaborative decision making: facilitating shared mind and the management of uncertainty. *Journal of evaluation in clinical practice*, *17*(4), 579-584.

Roberts, Y.H., O'Brien, K., Pecora, P.J. (2017). *Supporting Lifelong Families Ensuring Long-Lasting Permanency and Well-Being*. Seattle: Casey Family Programs. https://www.casey.org/supporting-lifelong-families/

Thompson, R. & Pecora, P.J. (2018). *A latent class analysis of the child and adolescent needs and strengths assessment for children served in Florida child welfare*. Seattle, WA: Casey Family Programs.

U.S. Department of Health and Human Services. (2012). *Promoting social and emotional wellbeing for children and youth receiving child welfare services*. Washington, D.C.: Author. Retrieved from: https://www.acf.hhs.gov/cb/policy-guidance/im-12-04

U.S. Department of Health and Human Services, Administration for Children and Families, Children's Bureau. (2021). *Child Maltreatment 2019*. Washington DC: U.S. Department of Health and Human Services. Retrieved from: https://www.acf.hhs.gov/cb/report/child-maltreatment-2019.

U.S. Department of Health and Human Services, Administration for Children and Families, Children's Bureau (2022). *The AFCARS report preliminary FY 2021 estimates as of June 28, 2022. (No. 29)*. Washington DC: US Department of Health and Human Services. Retrieved from: https://www.acf.hhs.gov/cb/report/afcars-report-29

Valentine, E. J., Skemer, M. & Courtney, M.E., (2015). *Becoming Adults: One-Year Impact Findings from the Youth Villages Transitional Living Evaluation*, New York: MDRC, 2015.

Vandivere, S., Malm, K., & Radel, L. (2009). *Adoption USA: A Chartbook Based on the 2007 National Survey of Adoptive Parents*. Washington, D.C.: The U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. Retrieved from https://aspe.hhs.gov/system/files/pdf/75911/index.pdf

Wallerstein, N. B., & Duran, B. (2006). Using community-based participatory research to address health disparities. *Health promotion practice*, *7*(3), 312-323.

Warner, E., Koomar, J., Lary, B., & Cook, A. (2013). Can the body change the score? Application of sensory modulation principles in the treatment of traumatized adolescents in residential settings. *Journal of Family Violence*, 28(7). doi:10.1007/s10896-013- 9535-8

White, T., Scott Jr, L. D., & Munson, M. R. (2018). Extracurricular activity participation and educational outcomes among older youth transitioning from foster care. *Children and Youth Services Review*, *85*, 1-8.

Chapter 3. Technology Innovations in Foster Care

Kristin W. Atwood[1]
Daryl T. Cooley[2]

[1] Enterprise Account Executive at Binti Inc. and former Social Worker, City and County of San Francisco, California
[2] Department of Psychology, The Pennsylvania State University

Suggested Citation: Atwood, Kristin W. & Cooley, Daryl T., *Technology Innovations in Foster Care,* in The Future of Foster Care: New Science on Old Problems by the Penn State Child Maltreatment Solutions Network (Sarah Font ed. & Yo Jackson ed., 2021). https://doi.org/10.26209/fostercare3

Abstract

The foster care system requires a substantial amount of documentation. Technology can be an important tool in helping caseworkers maintain records; however, technological advances in the child welfare system have been slow. Many caseworkers have been left to conduct their work in outdated and poorly designed systems. Agencies are looking for more modern solutions to address some of the most common shortcomings of their current systems. This chapter highlights common areas in need of improvement and provides examples of potential solutions. Specifically, Binti is referenced throughout the chapter as an example of a software program that meets the needs of caseworkers in foster care. The chapter discusses gaps in previously available technology options and recommendations for agencies looking to replace, upgrade, or rebuild their existing systems.

Meticulous documentation—including notes from client encounters, treatment reports, and communication with other providers—is a core element of social work practice. Documentation of this nature serves many purposes including assessment of the client's current needs, coordination of services, monitoring of client progress, and risk management (Reamer, 2005). Although documentation has been valued by the field of social work since the early 20th century, it was not explicitly obligatory in the National Association of Social Workers (NASW) Code of Ethics until 1996 (Reamer, 2005). The current NASW Code of Ethics mandates that practitioners maintain accurate and timely documentation and protect the confidentiality of client records (NASW, 2017). In addition to the ethical grounds for thorough documentation, governing bodies often use documentation as a way to monitor adequate provision of services. Funding from the federal and state governments and insurance companies often requires documentation to verify provision of services. Therefore, there is a financial incentive to increase the efficiency of documentation and services.

Given the demanding nature of documentation requirements, many agencies and non-profits have turned to various computer-based technologies to sustain documentation. However, caseworkers often feel burdened by these technology systems and report that the technology systems take away from their time with clients (Gillingham, 2011). Critiques raised by caseworkers have illuminated the shortcomings of many of the currently available systems. For example, the information housed in these systems often do not match up with the information practitioners need on a daily basis such as what paperwork has been completed or what documentation has already been provided to the agency. As a result, many practitioners choose to keep their own documents and spreadsheets of the information they need in addition to maintaining records in the electronic system, because the tools do not provide a robust solution that allows for the tracking of all required information. Therefore, these electronic systems that are designed to streamline the administrative tasks are experienced as time-intensive, duplicative, and burdensome.

Foster care caseworkers are responsible for making placement decisions for youth, monitoring youth progress, supporting families during the reunification, guardianship, or adoption process, and communicating with and supporting both biological and foster parents (Fulcher & McGladdery, 2011). Additionally, one study found that 80% of caseworkers felt they were responsible for managing the behavioral health of the youth on their caseloads including proper documentation of medications and coordinating appointments for mental health evaluations and treatment (Jolles, Givens, Lombardi, & Cuddeback, 2019). Thus, as is true in other areas of social work, practitioners involved with foster care often report feeling burdened by administrative tasks (Lindahl & Bruhn, 2018).

The Families First Prevention Services Act (hereafter, Families First Act) was signed into law in 2018 and reallocates child welfare funding to encourage the prevention of foster care. Additionally, the Families First Act aims to decrease the use of congregate and group home settings by reducing the reimbursement for these services. Instead, the Families First Act encourages the placement of children in family settings. This will require a greater quantity of foster families to provide care for children. Despite the increased need, there continues to be a nationwide struggle to recruit, certify, and retain foster caregivers (Bass, Shields, & Behrman, 2004; Geiger, Piel, & Julien-Chinn, 2017). Poor data management tools for caseworkers makes

the process of approving and monitoring foster families slow and time intensive, and may detract attention and resources from critical recruitment and retention efforts.

Shortcomings in Available Tools

Many of the currently available software systems within the child welfare system have overlapping shortcomings. This chapter focuses primarily on systems for tracking prospective and current foster families, but many of the key points apply to other facets of data management within the child welfare system. Common data management system issues include: difficulty collating interagency data, redundancies in data input requirements, lack of integration between systems, outdated interfaces, and no mobile/web-based access options.

Collating Interagency Data

The majority of currently available software solutions make it very difficult to collect accurate data across an agency or region. There is a lack of standardization across data and terminology, making it difficult to make comparisons when looking at data. For example, an agency might define the length of time it takes to license a foster family as beginning the moment they first meet that family and ending once the family receives their license. Other agencies will measure that same data point, the length of time to license a foster family, but their beginning point is when the applicant first signs their application. There may be days, weeks, or even months in between the first contact with a family and the date they sign their application, which would lead to huge variations in data values and the meaning of the data element between these two agencies. Alternatively, you might have two agencies that track this same data point beginning with the date the application is signed, but at one agency the application might be the first step in the licensing process and at another agency it may be the last. In addition, different regions and agencies are all utilizing different tools that track different metrics. Many agencies are still unable to answer basic process questions such as, “how long does it take to find a placement for each referral received?” Similarly, agencies often cannot easily access a list of all children currently in a foster care placement, or the name and location of the family with whom they are placed.

Redundant Data Entry

Workers are required to duplicate their work or log work they previously completed, thereby increasing time spent on administrative tasks and decreasing available time for direct contact with children and families. For example, a caseworker may go to a home to conduct a home study to assess the safety and resources in the house. The caseworker might complete a standard form while they are in the home to ensure they check all the required

aspects of the home. When the caseworker returns to the office, their electronic system may require them to re-answer the same questions. In addition, they may need to re-enter the family's name, address, phone number, etc. to create a complete log of their visit and the outcome of the assessment. This information, in turn, might appear on multiple other forms or documents, the family's home study might need the date of the building and grounds assessment, and the final approval documentation may also need the date of the assessment, all of which require the worker to return to their original form or notes to copy the information into the relevant places. Many states and counties contract with private agencies, however they typically use multiple different systems that do not integrate with each other resulting in additional duplicative data entry for workers. When case workers have to input data twice—once on a paper form and a second time in the electronic database—they are doubling their time on administrative tasks and taking time away from seeing youth and families. This duplication of information also increases opportunities for error and inconsistency across forms.

Poor System Integration

Without a single system that covers all aspects of an agency's needs, agencies are forced to use multiple systems to track various processes. If these systems are not able to integrate, workers are required to enter the same information into multiple systems to ensure the information is present everywhere it is required. This duplication of work not only adds to the amount of time each worker must invest in each family, but it also increases the chances of data entry errors. Every field that is manually entered more than once has an increased chance for a typo that might then be perpetuated into other systems and forms in the future. A common example of this is that many state systems do not have the ability to track the foster parent licensing process. Thus, workers and agencies create their own tools to track requirements. The worker might be logging information into a spreadsheet to keep track of things like family name, home address, phone numbers, background checks, etc., and then once that family is licensed, they will still need to add them back into the state system which will require all that information to be re-entered. Even agencies that have built systems to track these processes did not necessarily structure them to facilitate integration with other systems. The majority of state systems are older and do not allow for integration, so even if an agency is using a system capable of integrating, that agency may be required to also use other systems that do not support that functionality.

Outdated Interfaces

Many of the current systems are outdated, making them both frustrating to use and out of compliance with current child welfare practices. As many statewide child welfare information systems were developed 20+ years ago, the user interface often does not look like the software tools workers are used to encountering in their everyday lives (U.S. General Accounting Office, 2003). These older systems are not intuitive for the user and therefore make them less efficient and more challenging for new staff to learn how to use them. Moreover, many assessment tools (e.g., surveys, checklists) have been developed to help caseworkers complete their jobs, and many policies and mandates have made certain forms and paperwork mandatory. However, the electronic programs used by many agencies have not been updated to align with the new forms, surveys, and formats of gathering information. As forms and policies change over time, the older systems cannot be updated quickly enough, which pushes workers to look for alternative solutions to handle their needs. This was seen in California when the state implemented new requirements to approve foster parents. The state's Child Welfare Services / Case Management System (CWS/CMS) had no way of tracking these new forms and requirements, yet the counties were still required to complete them and track each family every step of the way. CMS/CWS is the current system California requires their counties to use; however, it is unable to accommodate the additional tasks this new state mandate requires, so counties are left to come up with their own systems to track things.

Lack of Mobile/Web-Based Access

Many of the existing software systems are not web-based, which means that work can only be completed in the office on designated computers that have the software installed. Because staff are primarily conducting their work in the field, having a system that is not designed for remote work means they are being forced to wait to complete their documentation once they return to the office. Alternatively, staff may be completing their notes in the field using informal methods (that may not be HIPAA approved) and transferring the information to the primary systems once back in the office. Either of these solutions can result in less accurate data and/or a duplication of work. It also makes it impossible for staff to easily move to remote work in the event of an emergency, such as the COVID-19 pandemic.

Identifying a Solution

In order to develop an electronic system that is effective and useful, it is critical to listen to the needs of the people who will be using it—the social work practitioners themselves (Westwood, Dill, Campbell, & Shaw, 2017). Successful software development requires that the early stages of development include focus groups, meetings, and shadowing the target user group. For example, Binti, a software company that makes

tools specifically for the child welfare field, conducted thousands of hours of research with youth who have experienced foster care, parents involved in the system, foster families, caseworkers, supervisors, and administrators. All of them have had similar aspirations for their computer systems: a modern, adaptive system that promotes and supports quality social work practice, leading to positive outcomes for youth and families. This includes making it easy for staff to engage with families and collaborate with other agencies, while gathering the data from the field to measure progress without burdening staff with hours of data entry at their desks.

The majority of the currently available electronic systems do not meet these aspirations. States and agencies have invested huge sums of money and time to maintain systems that don't meet their needs, or to build new systems that either don't meet their basic needs or are never successfully launched. There are a number of factors that drive this failure to meet expectations. Invariably, state and county agency staff have been well-intentioned, smart, competent administrators working hard to get better systems. However, the lack of communication between the technology sector and the social work sector has caused a gap between what is needed and what is available. Through countless hours meeting with practitioners, agencies, and families, Binti has gleaned several lessons in the successful development of software systems for foster care caseworkers, which are detailed below.

Software as a Service (SaaS) Is the Future

In the past few decades, the business world has shifted dramatically toward SaaS for their enterprise software needs (Seethamraju, 2015). Instead of building and maintaining their own custom system to manage accounting, for example, businesses large and small pay a few thousand dollars per month for great software provided by SaaS companies that serve multiple businesses for their accounting needs. SaaS is therefore more cost-effective for an agency than building their own system (Seethamraju, 2015). As the software company can devote more resources and engineers to the development of the system, businesses can benefit from getting a product that is better than what they could build on their own. The purchasing company can focus on their core business functions, enabling them to build their expertise faster and serve their customers better. The SaaS model also lowers risk since the software has already been deployed in other places and the company can see its effectiveness in other businesses prior to purchase.

The SaaS model has grown in the fields of video games (Vaudour & Heinze, 2020), healthcare (Oh et al., 2015), and other small-to-medium sized businesses (Seethamraju, 2015). However, the adaptation of SaaS models in government agencies is much more recent. The benefits of SaaS that have been seen by commercial businesses are likely to be seen by the implementation of SaaS in government agencies—such as child welfare—as well. For example, SaaS will likely result in better software that can drive better outcomes, lower risk, and lower cost for child welfare agencies.

Binti has developed a SaaS model that offers several advantages over other, more customized models such as custom-built solutions or Platform as a Service (PaaS) solutions transferred from other jurisdictions. Binti's modules have been used widely and achieved measurable results on key metrics. Using Binti's Licensing Module, for example, agencies have been able to approve an average of 30% more families in 18% fewer days each year, saving an estimated 20-40% of social worker time. Binti's modular solution empowers agencies to do their work more effectively, with promising results across both private and public agencies, at both the regional and state level.

Another benefit of SaaS is the ability for agencies to quickly launch the software programs and customize them to their agency's needs. The development of a new program can take years; by adopting a SaaS solution, companies can quickly begin on a new system. In many cases, these launches can happen in 12 weeks or less, as is seen with Binti. In addition to a fast launch time, SaaS models are less risky to agencies than developing a new system as they have been previously tested and utilized by a number of other agencies. By examining how the SaaS performed in similar agencies, child welfare agencies are able to more confidently select a program to implement. On the other hand, the risks of more custom-built solutions have been well documented—numerous cost overruns and failed systems after investment of tens of millions of taxpayer dollars (Font, S. A., 2020).

The nature of SaaS is to serve a number of different agencies. As more agencies adopt the same platform, the opportunity for collaboration and sharing becomes easier. For example, with Binti's SaaS solution, both public and private agencies serving youth and families use the system as part of the all-inclusive annual license fee. When working at the state level, through multiple carefully calibrated levels of access, state staff can access cases related to all youth and families, while private agencies access only the families and youth assigned to them for services. This enhances partnership and collaboration and integrates services. As the SaaS solution grows in size and accumulates more customers, they are able to provide a larger, more specialized engineering team that can iterate more quickly on launching new features than any agency would be able to afford on their own. Each agency benefits from other agencies using the system. Even though agencies share the broader platform, a SaaS solution such as Binti is configurable so that each agency has their own custom look and feel, forms, and data fields. This ability to customize to the specific needs of each agency creates a more efficient and streamlined experience for caseworkers and practitioners using the software.

Start With Some Quick Wins

Many agencies that Binti has worked with have had highly ambitious plans to develop systems with highly detailed functionality in all areas of child welfare practice. Others have sought the interoperability that is so critical to holistic practice by developing systems that could be deployed across multiple, broad swaths of government operations. These ambitions have the best of intentions, but have run into extreme challenges of timeliness, cost, and maintenance

when developing and deploying such a complex solution. Platform-based solutions such as Salesforce, Microsoft Dynamics, and IBM's Cúram also promise to perform across systems and deploy more quickly, but they have yet to deploy successfully and still require extensive—and expensive—customization by large consulting firms. This is because they were not designed for child welfare in the first place. Due to new regulations some states are looking to revamp their statewide Comprehensive Child Welfare Information Systems (CCWIS). These new regulations for CCWIS are extensive and include, for example, functionality to support outcomes for children and families, collect data, and allow for data exchanges between systems (Federal Register, 2016). Binti recommends that states and agencies begin their Comprehensive Child Welfare Information Systems (CCWIS) system revamps with quick success by deploying Binti's modules since they can launch quickly and add great value for staff while causing minimal disruption to operations. Staff can instantly see the value of the system to help them get their work done, and subsequent deployments can build on this success. Administrators can also understand what it's like to work with the software program prior to investing huge amounts of time and resources into a system, as the annual license fee for these modules would be the only investment prior to seeing results.

Since Binti has a bi-directional Application Programming Interface (API), allowing for integration into other systems, Binti's modules can be used in tandem with other systems to support different workflows across agencies.

Let Competition Flourish—Stay Platform Agnostic

Technology changes rapidly. It sometimes moves faster than procurement processes and nearly always moves faster than multi-year deployments of custom products. Therefore, it is important for agencies to stay platform agnostic, or open to various platforms and approaches without committing or limiting your projects scope to a specific vendor or platform, and launch modularly when adopting new technological tools for social services. This maximizes competition and allows SaaS vendors to compete. Specific platform solutions often limit choices to large consulting firms that build more custom solutions on top of specific platforms. While these platforms are powerful tools, they were not designed for child welfare and they still require extensive customization, usually by large consulting firms that are also not dedicated to child welfare, which adds additional time and cost to the project both upfront and on an ongoing basis as the systems must be maintained.

It is also recommended that agencies avoid putting limitations on size, company age, and revenue amounts of companies eligible to apply. By excluding vendors simply based on revenue (e.g., higher than $100M), this limits the number of options from vendors that each state or agency can choose from. It also excludes more innovative, mission-driven companies that may provide more specialized services.

Agencies should outline desired functionality with less focus on specific features. This allows vendors to be creative in suggesting a variety of features that could be relevant to the state while incorporating the necessary functionality. For example, Binti has a dedicated product development team that integrates research from the field to identify and creatively solve key barriers for child welfare teams. Requests For Proposals (RFPs) that require adherence to very specific feature lists are likely to miss some of the more creative solutions that might be discovered or are already available.

Build an Integrated, Configurable System

When working at the state level, Binti proposes a roll-out of modules for all counties and private agencies across the state. This removes unnecessary duplication of systems in counties and private agencies, and minimizes overall costs. It also ensures that the state maximizes CCWIS funding, if that funding is being utilized, since Child Welfare Contributing Agencies (CWCAs) will be included in the system. If CWCAs get their own system and there is duplicate functionality, the state could lose CCWIS funding. However, with Binti, CWCAs use Binti, ensuring there is not a chance of duplication or loss in funding. Additionally, many CWCAs will request funding from the state to fund their one-off systems, adding more cost to the state budget. Existing state systems don't work for CWCAs because they have not built their systems in a manner that is configurable enough to accommodate differences between counties and private agencies. Binti is the only state system that works across counties and CWCAs and includes the cost of CWCAs in their pricing.

It is critical that software companies take the time to understand the requirements, forms, and workflows that are statewide, and those that are county- and agency-specific. Then, developers can configure each module based on these forms and workflows as applicable. If working at the state level, it can be helpful to allow the state to access all data and functionality across all agencies. At Binti, reporting functionality is configured for statewide, county and private agency views, allowing states to evaluate outcomes and effectiveness. Counties and private agencies are also more invested in the system, since it reflects both the statewide requirements and their own unique processes.

Be Open to Module-Based Annual License Fees

There is an unfortunate history of multimillion dollar systems failing to launch or being scrapped after only being utilized for a short period of time and the immense cost of these systems creates an additional barrier for smaller agencies/states (Font, S. A., 2020). Binti uses a pricing model based on a per-module, all-inclusive annual license fee. As outlined above, this model reduces cost and risk for agencies and aligns incentives between

the software company and the child welfare agency for excellent products and service over time. All updates and ongoing configurations are included in the annual fee—and updates are quick and frequent (over 20 per week). Hourly pricing structures for implementation based on consultants' or staff time provide some initial estimates of costs, but absent the aligned incentives, they frequently lead to cost overruns and systems that don't meet expectations but require large sums to fix and make operational. They also require intensive state staff resources for tracking and billing, all of which is avoided when using the annual licensing fee model.

Driving Improved Outcomes with Technology

It is important when evaluating and implementing new technology solutions to make sure the systems are designed to improve outcomes. The innovation comes not just through updated systems, but through systems that specifically evaluate and improve outcomes. For example, the design process should begin by identifying and focusing on the success metrics that drive high-quality outcomes for youth and families. Then, the software developers should use the metrics to guide intensive research and discovery processes, identifying the barriers to achieving those metrics and formulating the software to address these barriers.

For example, integral components of Binti's design are the staff portal and dashboards. The dashboards provide essential information on each applicant, allowing staff to see in real time where each applicant is in the process and what is outstanding for each of the major steps (forms, supporting documents, references, medical clearance, trainings, background checks, caseworker forms, etc). Staff, supervisors, and administrators can select from extensive filter options to help them prioritize their time on applications that need the most immediate attention, and easily sort applicants by multiple characteristics. Configurable reminders provide for flexibility for staff and applicants to set email alerts that match their work style and help them to keep moving applications forward.

Systems ought to allow families and caseworkers to easily see what requirements are completed or outstanding in order to direct work efforts towards the families that are most in need of assistance. Binti addresses this by having the applicant-facing portal and the agency portal allow users to click into each requirement section, view documents, and complete/electronically sign forms as needed. Multiple access levels allow for administrators to access all families, supervisors to see their supervisees' families, and workers to see their own assigned cases. Additional access levels are available for private agency staff or county staff that complete different parts of the application, such as training attendance.

All aspects of the licensing process are tracked and monitored seamlessly online through the Binti program. Training and background check requirements are integrated and tracked as they are completed. Attendance at training is tracked online in real time, and contracted training staff can be granted access levels to take attendance and monitor progress. Complaints are recorded, screened, assessed, and documented, including the response, investigative steps, and disposition. Staff can complete all steps of the licensing process online, including

all forms, data tracking, and approvals.

The robust tracking functionality allows for agencies to view and access data about their processes and outcomes that previously would have been inaccessible to them. Binti's insights from all of the agencies and users have helped develop a unique set of built-in reports that help to identify barriers, track trends, and manage staff performance and workload. These reports help workers gain insights and make informed decisions based on the current and accurate data that might otherwise be unavailable.

In an effort to collect data organically, Binti has created unique interfaces that facilitate the collection of data naturally through the course of the existing workflows without requiring the additional data entry or tracking that most other systems require. Binti has multiple portals to collect data from primary sources (such as the youth or family), which allows for a more natural collection of information and reduces the possibility of error as information does not need to be passed through multiple sources before it is recorded. The modern mobile interface makes it simple for users to access the fields they need and prompts them to continue through the appropriate workflow without missing steps or requirements. In addition, the system has built-in prompts to avoid duplication and facilitate the capture of quality data—users cannot continue if required fields have not been complete, they will be prompted if there are similar entries within the system to reduce or eliminate duplication within the data, and at every step users can easily see what most urgently needs to be completed to ensure deadlines are met.

Having access to improved data across agencies allows us to answer questions that we previously could not, such as what types of recruitment activities are most productive for bringing in potential foster families and which of those families will complete the licensing process. It is possible that some recruitment methods might bring in more families, but if those families aren't as likely to complete the entire process, there might be other recruitment methods that would have better outcomes overall that can be focused on instead. By surfacing this information in Binti, agencies will be able to make more informed decisions regarding their recruitment efforts.

Observed Outcomes Across Binti's Partner Agencies

As mentioned previously, Binti has been able to observe measurable outcomes across the agencies using Binti and has seen agencies achieve remarkable results through their use of updated technology. By looking at de-identified and anonymized data across the agencies using Binti, we have been able to determine that, on average, agencies are approving 30% more families in the year after they start using Binti compared to the year prior. Agencies are able to better track every family that begins the application process and what their outcomes are, and they can see where families are dropping out of the process and what barriers are causing them to withdraw or close out. In addition, agencies are approving these families in 18% fewer days, meaning they are approving far more families more efficiently. The streamlined process for both applicants and agency workers ensures that families are able to move at a steady pace

through the process, and the assigned worker will easily be able to step in to help if the families get held up.

Illustration of a Workflow in Binti

By incorporating innovative new features into their software, Binti has been able to streamline processes and workflows that previously added hours, if not days, of additional work for caseworkers and families. Binti's product team spends hundreds of hours shadowing and researching the existing workflows in order to identify different areas that can be streamlined or automated. Below is an example of one workflow—approving new foster families—using the Binti software system.

1. Prospective foster and adoptive parents can sign up directly online to begin the application process in Binti. Agencies can embed a link to sign up directly within their existing website, or Binti can create a public recruiting website as needed. Once an applicant clicks the link, enters their email address, and creates a password, Binti automatically sends them an email with a message from the agency, welcoming them to the process and allowing them to continue at any time with one click. Agency staff automatically have access to contact information once an applicant begins the process and can begin to follow up. Agency workers are also able to start an application on behalf of an applicant, in the case that a prospective family becomes interested after engaging with an agency worker (e.g., at a recruitment event or information session). In both cases, applicants receive a welcome email with a message created by the agency that includes one-click access to log in and start or continue the application.
2. Applicants fill out necessary information within the application, which is clearly outlined in a sidebar within each section of the application. Applicants can complete all of their necessary paperwork at their own pace from any computer or mobile device. An intuitive user interface (UI) guides applicants to complete all steps of the process. All processes, forms, and data fields in the application are configured to exactly match the agency's forms and workflows. Forms are exactly replicated in PDF format once complete with information entered digitally and e-signed as needed. All forms can also be submitted in paper format and uploaded easily into Binti, if applicants wish to complete the application process that way.
3. Applicants add contact information of other adults in the home and references, which are also completed online. Once entered, Binti sends these individuals an automated email with a link for them to also complete the necessary forms and information through their own unique login into Binti. Reminders are automatically sent up to three times, and staff or applicants can also send reminders. All information is available in real time for the assigned agency worker to review, sign, and access as needed. Applicants can add/edit entered information in the case of changes and are notified when a reference is completed.

4. Applicants upload necessary documents and forms directly into the application portal. Key documents identified by the agency, such as DMV records and CPR certification cards, can be easily uploaded by applicants or staff using a mobile device or computer, avoiding potential delays in the process. Binti also has a quick and easy "drag and drop" feature allowing applicants to quickly upload documents. All uploaded documents are instantly available to staff.
5. Applicants have access to all of their completed paperwork and uploaded documents in their "My Documents" section. All uploaded documents and signed forms can be easily surfaced and viewed in the "My Documents" section, a comprehensive dashboard in which applicants can edit/delete/re-upload documents as needed or generate a PDF of all documents.
6. Applicants can continually go back to the main dashboard to see progress of their application, with the ability to click into each section and continue making progress or editing previously entered information. The dashboard highlights all the major components required for completion, such as the main application, supporting documents, background checks, training registration/completion, caseworker approval checklist, and more.
7. Once all required information and steps are completed, applicants receive a confirmation of completion. The assigned agency worker (and administrators/supervisors, as relevant) will have access to all the information in real time and can easily follow-up with the applicant to approve the application and/or gather additional information as needed.
8. After application approval and licensing, applicants use the Family Portal to continue to access their application and update information, certifications, and trainings that are required for license renewals. Binti fully automates renewals as well as the initial applications. On the agency dashboard, workers are also notified of upcoming renewals and necessary steps needed to complete those renewals.

Creating a Culture of Continuous Quality Improvement (CQI)

All of Binti's modules are designed to support the federal outcome indicators related to safety, permanence, and well-being. Binti's Licensing Module has also been a national leader in supporting quality practice in recruiting, approving, and retaining high-quality caregivers. Binti's existing functionality collects data never assembled before about prospective caregivers and foster families, greatly enhancing the ability of agencies to monitor and improve their practice. Data on a wide range of demographics, location, preferences, and characteristics of prospective foster parents is collected and can be analyzed over time to inform recruitment and retention.

Built-in reporting allows agencies to examine cohorts of applicants, youth, or families over time to examine outcomes and inform Continuous Quality Improvement (CQI) efforts. Extensive mapping capability allows agency staff to easily analyze geographic patterns of youth

in care and available and prospective placements. Data in all of Binti's dashboards is also sortable and filterable by multiple factors, enhancing the ability of the agency to conduct checks of data quality. Filtered data from the dashboards can also be instantly downloaded in .csv format, supporting custom reports for monitoring data quality.

Binti is dedicated to CQI for all of their modules and understands the data that must be surfaced in order for administrators and staff at all levels to examine data critically and link their practice to outcomes. By implementing a data system that is built with an understanding of CQI, agencies are able to collect, manage, and interpret data far more efficiently than ever before.

Conclusion

Given the administrative demands on caseworkers—particularly on those that work in foster care and child welfare—it makes sense to integrate technology to make documentation and clinical decision making more efficient. However, much of the currently available software does not adequately meet the needs of the caseworkers it aims to serve. These programs often require redundant manual inputting of information which creates a greater administrative burden on staff. Many existing programs are not web-based and therefore staff cannot access them in the field—only from desktop computers in their offices. Additionally, many of the programs are not standardized, therefore making collating information across counties/agencies challenging. Finally, many of the systems are outdated both in design and content. It is important that software companies work together with social service agencies to ensure their program meets the needs of the caseworkers who will be using it. Binti is one company that has worked closely with child welfare workers to create a program that addresses many of the shortcomings of previous programs. As an example for future companies, Binti has shown that for technology to effectively assist child welfare workers, it should use a SaaS model, start with quick wins, stay platform agnostic, build an integrated system that allows for differences across counties/areas, and be open to module-based annual license fee pricing. Using the model set forth by Binti may allow for technology to truly be more integrated into social work practice to improve child and youth outcomes and improve job satisfaction among caseworkers.

References

Bass, S., Shields, M. K., & Behrman, R. E. (2004). Children, families, and foster care: Analysis and recommendations. *The future of children*, 5-29.

Federal Register. (2016). Comprehensive child welfare information system (Vol. 81, No. 106). U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families. https://www.govinfo.gov/content/pkg/FR-2016-06-02/pdf/2016-12509.pdf

Font, S. A. (2020). Data challenges and opportunities in child welfare. American Enterprise Institute. https://www.aei.org/research-products/report/data-challenges-and-opportunities-in-child-welfare/

Fulcher, L. C., & McGladdery, S. (2011). Re-examining social work roles and tasks with foster care. *Child & Youth Services*, *32*(1), 19-38.

Geiger, J. M., Piel, M. H., & Julien-Chinn, F. J. (2017). Improving relationships in child welfare practice: Perspectives of foster care providers. *Child and Adolescent Social Work Journal*, *34*(1), 23-33.

Gillingham, P. (2011). Computer-based information systems and human service organisations: Emerging problems and future possibilities. *Australian Social Work*, *64*(3), 299-312.

Jolles, M. P., Givens, A., Lombardi, B., & Cuddeback, G. S. (2019). Welfare caseworkers' perceived responsibility for the behavioral needs of children: A national profile. *Children and Youth Services Review*, *98*, 80-84.

Lindahl, R., & Bruhn, A. (2018). Professional dilemmas and occupational constraints in child welfare workers' relationships with children and youth in foster care. *Children and Youth Services Review*, *88*, 333-340.

National Association of Social Workers. (2017). NASW Code of Ethics. Retrieved from: https://www.socialworkers.org/About/Ethics/Code-of-Ethics/Code-of-Ethics-English

Oh, S., Cha, J., Ji, M., Kang, H., Kim, S., Heo, E., ... & Yoo, S. (2015). Architecture design of healthcare software-as-a-service platform for cloud-based clinical decision support service. *Healthcare informatics research*, *21*(2), 102-110.

Reamer, F. G. (2005). Documentation in Social Work: Evolving Ethical and Risk-Management Standards. *Social Work, 50*(4), 325-34.

Seethamraju, R. (2015). Adoption of software as a service (SaaS) enterprise resource planning (ERP) systems in small and medium sized enterprises (SMEs). *Information Systems Frontiers*, *17*(3), 475-492.

U.S. General Accounting Office. (2003). Child welfare: Most states are developing statewide information systems, but the reliability of child welfare data could be improved (GAO 03-809). https://www.govinfo.gov/content/pkg/GAOREPORTS-GAO-03-809/html/GAOREPORTS-GAO-03-809.htm

Vaudour, F., & Heinze, A. (2020). Software as a service: Lessons from the video game industry. *Global Business and Organizational Excellence*, *39*(2), 31-40.

Westwood, J., Dill, K., Campbell, A., & Shaw, A. (2017). Making it 'APP'en: service user feedback: developing and implementing a service user APP: reflections from Northern Ireland, England and Scotland. *Social Work Education*, *36*(8), 855-868.

Chapter 4. What's Working in Mental Health Care? Leveraging Opportunities to Develop More Effective Services for Children in Foster Care

Sonya J. Leathers, PhD[1]

[1] University of Illinois at Chicago

Suggested Citation: Leathers, Sonya J.,Ph.D.,*What's Working in Mental Health Care? Leveraging Opportunities to Develop More Effective Services for Children in Foster Care,* in The Future of Foster Care: New Science on Old Problems by the Penn State Child Maltreatment Solutions Network (Sarah Font ed. & Yo Jackson ed., 2021). https://doi.org/10.26209/fostercare4

Abstract

Children and adolescents in out-of-home care are disproportionately affected by emotional and behavior problems. Despite the positive effects of evidence-based mental health interventions, the availability of empirically-supported interventions is low. Providing effective treatments to children in foster care is critical to improve children's quality of life and reduce placement disruptions and prolonged stays in foster care. Following a review of the mental health issues experienced by children in care and effective interventions, this chapter discusses the specific supports and deterrents to increasing access to effective services within child welfare systems. Developing effective mental health services will require a range of strategies to counter barriers and increase accessibility. Strategies discussed in this chapter are drawn from initiatives currently underway in the U.S. Examples highlight use of collaborative partnerships and grants to support statewide initiatives to increase access to evidence-based interventions; use of intervention tracking and cost-benefit analysis data to support implementation and sustained use of effective practices; development of more accessible interventions for children in foster care; and leveraging federal and state resources to support activities to build more effective, sustained mental health services.

Introduction

Increasing access to effective mental health interventions for children and adolescents in foster care is critical given their vulnerability to a wide range of difficulties in adulthood (Courtney et al., 2010). Contact with the child welfare system provides the opportunity to support positive adult outcomes with comprehensive services throughout childhood, but effective, accessible services are needed to meet this goal. Recognition of the personal and societal burden of mental health disorders has supported considerable investment in the development of effective mental health interventions for a wide range of childhood mental health issues in the general population (Kazdin & Weisz, 2017). Although evidence-based interventions developed for children in foster care are more limited, effective interventions for foster children include interventions for both trauma symptoms (Cohen, Deblinger, & Mannarino, 2018) and disruptive behavior (Chamberlain et al., 2008; Fisher et al., 2006; Kim & Leve, 2011).

Despite the positive effects of evidence-based interventions relative to services as usual, the availability of many evidence-based interventions is low (Garland et al., 2010; Herschell et al., 2020; Kerns et al., 2014). The low provision of evidence-based services is thought to account for the lack of an association between receipt of mental health services and reduced behavior problems over time for children in foster care (Bellamy et al., 2010). In addition, failing to provide evidence-based treatments to children in foster care potentially contributes to overuse of psychotropic medication (Crystal et al., 2016) and placement disruptions (Fisher et al., 2011), which are associated with negative outcomes such as delinquency and additional moves (Leathers, 2006; Ryan & Testa, 2005). For children who remain in their homes after an abuse allegation, failing to provide evidence-based parenting interventions also increases chances for ongoing difficulties with parenting and higher child externalizing problems (Sanders at al., 2014), increasing risk for entry into foster care.

Building an effective system of care will require a sustained investment by federal and state governments. Understanding the types of evidence-based interventions that could be provided and the barriers that must be overcome to establish regular use of these interventions is a first step in this process. Following a review of the range of mental health issues children in care experience, this chapter provides a brief overview of a straightforward process to identify effective mental health interventions for children and youth[1] in foster care. Child welfare specific supports and deterrents to increasing access to effective services are then outlined. Developing effective mental health services will require a range of strategies to counter barriers and increase accessibility. While many different approaches could support this effort, strategies discussed in this chapter build on initiatives currently underway in the U.S., including use of collaborative partnerships and grants to support statewide initiatives to increase access to evidence-based

[1] Following the Children's Bureau's conventions, in this chapter "children" refers to young people age 5-15; "youth" refers to young people age 16 and older. "Adolescents" is used when study samples include the full range of adolescence (e.g., age 13-18).

interventions; use of intervention tracking and cost-benefit analysis data to support implementation and sustained use of effective practices; development of more accessible interventions for children in foster care; and leveraging federal and state resources to extend current monitoring and assessment activities to encourage activities to build more effective mental health services.

Mental Health Needs of Children and Youth in Care

Children and youth in foster care have had a range of adverse experiences that have an enduring effect on their development and emotional and behavioral well-being. Although many of these experiences mirror those in the general population, those contributing to complex trauma experiences, such as parental loss, abuse, parental substance abuse, and violence exposure, occur at a much higher rate among children with histories of foster care (Turney & Wildeman, 2017). Given this intensity of adverse experiences, it is not surprising that studies administering behavior problem checklists find that a high percentage of children—in one nationally representative study, 63% in non-relative care and 39% in kinship care—have clinically significant emotional and behavioral problems, with higher rates reported for adolescents than children (Burns et al., 2004). Another national study suggests that ADHD diagnoses are most common in foster care, affecting 22% of children (Turney & Wildeman, 2016, p. 5). In this study, caregivers also frequently reported internalizing disorders (anxiety and depression, 14% combined) and behavioral disorders (17.5%). These rates are significantly higher than reported in the general population (3%, 2%, and 3% for anxiety, depression, and behavior disorders, respectively). Similarly, other studies in foster care report high rates of attention deficit hyperactivity disorder (ADHD; 15-20%); conduct disorder (8-20%); and oppositional defiant disorder (8-30%) (dosReis et al., 2001; McMillen et al., 2005; Garland et al., 2001; White et al., 2007). Among youth, particularly high rates of depression (18%) and PTSD (8%) in the past year have been documented (McMillen et al., 2005). In sum, these studies point to elevated symptoms across a range of areas, including both internalizing disorders, disruptive behavior disorders, ADHD, and PTSD in older youth. Few studies have examined rates of attachment disorders, but in one study focused on children with a history of moves, 4.9% of foster parents reported diagnoses of reactive attachment disorder (Leathers et al., 2021), suggesting much higher rates than in the general population, where this disorder is very rare.

Understanding the level of needs and range of diagnoses among children in foster care is an important starting point, as specific evidence-based interventions typically address specific types of needs (e.g., behavioral parenting training for disruptive behavior). However, it cannot be assumed that appropriate treatment only requires matching the diagnoses of a child in foster care with an evidence-based intervention developed in the general population. The complexity and range of maltreatment and other adverse experiences associated with child welfare involvement profoundly affects many children's mental health. The etiology and presentation of mental health disorders is likely to vary in child welfare settings given these experiences.

High rates of disruptive behavior disorders and ADHD, for example, are likely to be related to different etiological factors that potentially influence treatment effectiveness. Trauma symptoms could overlap with ADHD symptoms related to attention and focus leading to misdiagnosis (Szymanski et al., 2011). Early adverse caregiving experiences also result in neurological differences that increase risk for executive functioning deficits as well as a range of behavior problems and relational difficulties (Bunea et al., 2017; Sandtorv et al., 2018). These differences could result in greater severity or variation in symptoms and require adaptations to treatment models developed in the general population for effective treatment.

Evidence-Based Mental Health Interventions for Children in Foster Care

Evidence-based interventions for children in foster care can be classified into two types: those that have been developed primarily for high-risk children and adolescents in the general population and those developed specifically for children and adolescents in care. Mental health interventions developed specifically for children in care are more likely to attempt to support other positive outcomes that are specific to children in care, such as placement stability. These programs also recognize the unique family structures of children in care, with some, such as treatment foster care models, targeting both foster-parent-child and parent-child interactions to support positive care and reduce behavior problems (Fisher et al., 2006). Unfortunately, these interventions are frequently more expensive to implement and maintain, resulting in few established programs throughout the U.S. and low access.

In contrast, interventions initially developed in the general population that are classified as "evidence-based" are more likely to be available in the community-based mental health service systems that will treat many children in care. These interventions can be classified as effective for children in care based on the results of subsequent studies that indicate positive effects of the intervention with samples of children in care, or in some cases, mixed population studies that include some children in care. Both interventions developed specifically for child welfare and those developed in the general population are important components of an effective mental health service system given the relative advantages of greater access versus greater specificity that might be needed for some children and adolescents in care.

A recommended source to identify evidence-based interventions for use in child welfare is the California Evidence-Based Clearinghouse for Child Welfare (CEBC; see https://www.cebc4cw.org), an online resource that categorizes the level of evidence for intervention models across a range of areas including child and adolescent mental health disorders. In additional to a rating for level of evidence ranging from 1 (supported practice) to 5 (concerning or potentially harmful practice), the site provides a separate rating for level of relevance for child welfare involved children and families. These classifications include high, medium, and low, with a rating of "high" indicating that the intervention was designed for or is commonly used with child welfare-

involved families and young people. A rating of "medium" indicates that it was designed for use with clients who are similar to child welfare populations.[2]

At the time this chapter was written, for example, the site indicated that three interventions had sufficient evidence to be classified as "supported practices" for trauma symptoms[3], but just one, *trauma-focused cognitive behavioral therapy*, also has "high" relevance to child welfare[4]. For disruptive behavior problems, the CEBC indicates that many different behavioral interventions have sufficient evidence to be classified as supported practices, with 10 different programs listed. However, from this broad list, just one, *GenerationPMTO* (previously called Parent Management Training - the Oregon Model) was also categorized as having high relevance to child welfare. Therapeutic foster care programs are listed under "Resource Parent Programs," with just the Treatment Foster Care Oregon program for adolescents having the highest ratings for effectiveness and relevance. Notably, all of the practice models rated most effective are cognitive behavioral or behavioral interventions with a focus on increasing caregivers' positive reinforcement of desired behaviors, reducing harsh punishment, and providing consistent structure to children. All also involve extensive caregiver involvement, with trauma-focused cognitive-behavioral therapy (TF-CBT) involving caregivers and children separately in every session and the interventions for disruptive behavior primarily involving work with caregivers, who learn to support positive behavior through their interactions with the child at home.

The CEBC ratings are updated over time, and in some cases a lag could occur in the time between when a study is published and its findings are incorporated in the ratings. Prior to selecting an intervention for implementation in an agency, recent research on the intervention should be accessed. For example, recent controlled research of one the interventions for disruptive behavior in younger children, *Parent Child Interaction Therapy (PCIT)*, involved adapting the intervention for use with foster parents and found positive effects on disruptive behavior (Mersky et al., 2020), potentially supporting a higher child welfare relevance rating. Exploration of ratings in the CEBC also reveals some areas in which few evidence-based interventions have been developed. In particular, despite the impact of attachment-related issues for children who have experienced complex trauma, there are no practices classified as supported or well-supported to treat attachment issues.

This overview of evidence-based mental health interventions with high relevance to children and youth in care suggests a fairly straightforward approach to building an effective mental health service system for children in care. Interventions can be selected based on the most relevant research. The CEBC website provides contact information to access training in each intervention and an overview of what is involved, and following training, individual agencies or localities should be able to provide the intervention. There is a strong rationale to begin with building capacity to treat trauma symptoms and disruptive

[2] See https://www.cebc4cw.org/registry/how-are-programs-on-the-cebc-reviewed/child-welfare-relevance-levels/

[3] See https://www.cebc4cw.org/topic/trauma-treatment-client-level-interventions-child-adolescent/

[4] See https://www.cebc4cw.org/program/trauma-focused-cognitive-behavioral-therapy/

behavior problems, given their impact on multiple aspects of functioning and placement stability. Trauma interventions are effective in treating trauma symptoms and other related internalizing symptoms (Morina et al., 2016) and effective interventions are accessible. Unfortunately, implementing and sustaining evidence-based models is complicated by a range of challenges. Although child welfare supports greater access to mental health treatment than in the general population, these barriers will need to be recognized and addressed to support more effective mental health services.

Child Welfare as a Context for Mental Health Intervention: Supports and Deterrents

The child welfare system provides many structural supports to increase access to mental health services. Children in foster care are embedded in service networks with assigned caseworkers whose practices are overseen by agencies that are following state and federal practice and policy guidelines. In an ideal service system, caseworkers, agencies, and the courts would provide important support and oversight of mental health treatment by providing referrals, transportation, and enforcement of service plans. The Administration for Children and Families as well as other federal agencies provide opportunities to support implementation of interventions by monitoring the extent states meet mental health needs in Child and Family Services Reviews and providing financial support for service innovations through IV-E demonstration waivers, cooperative agreements, and discretionary grants (for a discussion of these initiatives, see Ryan et al., 2006; Testa et al., 2019). The National Child Traumatic Stress Network (NCTSN) serves as a state resource and conduit for federal funds to support greater implementation of trauma-informed service models and evidence-based trauma treatments for child welfare involved children and families. Federal policies also influence service system development. For example, a federal initiative now reviews how states monitor use of psychotropic medications (Congressional Research Service, 2017). This has supported recent reductions in use of multiple psychotropic medications and off-label use of antipsychotics and increased pressure to provide more psychosocial interventions for disruptive behavior. External pressure to enhance mental health services for foster children has also occurred through class-action lawsuits and resulting consent decrees (Center for the Study of Social Policy, 2012) as well as policy statements made by professional groups[5].

[5] See statement made by the Child Welfare League and the American Academy of Child and Adolescent Psychiatry, https://www.aacap.org/aacap/Policy_Statements/2003/Mental_Health_and_Use_of_Alcohol_and_Other_Drugs_Screening_and_Assesment_of_Children_in_Foster_Care.aspx

These initiatives, policies, and consent decrees increase incentives for states and county-administered child welfare systems to develop more effective mental health service systems, and strong progress can be seen in some areas. Mental health or trauma screening processes of some type for children entering foster care are established in nearly every state (Hayek et al., 2014; Pullmann et al., 2018), consistent with federal guidelines[6]. Despite variations in implementation and use of validated screening tools, the majority of children (50-70%) who are indicated to have a significant mental health need receive some type of mental health service while in foster care (Petrenko et al., 2011; Pullmann et al., 2018; Tarren-Sweeney, 2010). Data also indicate that mental health services are allocated to those with more significant symptoms (Fong et al., 2018). Although optimism about these service shifts is tempered by indications of racial disparities in service referrals (Garcia et al., 2013; Kim & Garcia, 2016) and the lack of follow-through on referrals to provide services for many children (Mersky et al., 2020; Petrenko et al., 2011), screening provides a potentially strong conduit for service referrals.

Ideally, positive mental health screenings should trigger a full assessment of children identified as having a possible need for services (Raghavan et al., 2010). This diagnostic assessment would result in identification and use of an evidence-based intervention to address the child's needs. However, while progress has occurred in use of screening, progress in making appropriate referrals and provision of evidence-based services has been slower. Despite the development of effective interventions for children in care, the majority of children in foster care receive few mental health sessions (Pullmann et al., 2018) and services that do not have clear evidence for effectiveness (Fitzgerald et al., 2015; Leathers et al., 2021). For example, in a study of children with a history of moves, most children with behavior problems were receiving therapy, but this therapy did not include providing foster parents with training, support, and resources to address behavior issues for three-quarters of those in therapy (Leathers at al., 2021). This is of concern given that foster parents frequently identified behavior problems as the reason for services, and these are key components in evidence-based practice models to treat behavior problems.

The slow progress in implementing evidence-based interventions can be in part attributed to all the disincentives noted in the broader implementation literature, including the cost and time investment to implement interventions, perceptions of the intervention, staff turnover, and organizational climate and culture (Glisson & Green, 2011; Golden, 2009; Palinkas et al., 2017; Wulczyn et al., 2008). These are powerful disincentives for implementation, with cost constraints cited by over 85% of mental health agency administrators as a barrier to adopting evidence-based practices (Palinkas et al., 2017). This included both the cost of lost staff billing hours while staff complete training (54% citing as a barrier) and the initial expense of the intervention (47%). Disincentives that are unique to child welfare systems pose additional challenges, including the level of staff turnover, high caseloads in some areas,

[6] Administration for Children and Families, Information Memorandum, ACYF-CB-IM-12-03. State Medicaid agencies are also required to cover mental health screenings under the Early and Periodic Screening, Diagnostic, and Treatment benefit. See 42 U.S.C. §§ 1396a(a)(43), 1396d(a)(4)(B) and (r).

and the high-stress, crisis nature of child welfare work (Glisson & Green, 2011). These characteristics of child welfare practice pose barriers to both initiating and maintaining evidence-based interventions. Mental health services for foster children are typically funded through Medicaid as fee-for-service with low reimbursement rates or managed care contracts. Just as in the general population, these rates are not typically sufficient for agencies to initiate and sustain evidence-based interventions, which can be expensive to implement due to initial training costs, consultation with certified trainers on a specific number of cases, and specialized supervision that specifically addresses adherence to the intervention model (Edmunds, Beidas, & Kendall, 2013). The primary goal of child welfare practice is to ensure child safety, and in financially-strapped services systems, services focused on child protection and monitoring are prioritized.

The population dynamics in foster care also potentially support a "watch and wait" approach to implementing evidence-based practices and providing more services. Nearly half of children in foster care exit within a year, and just 28% will be in care two years or longer (Child Welfare Information Gateway, 2020). Separation from caregivers and placement moves are negative events that exacerbate or create emotional and behavioral reactions, and adjustment to foster care over time reduces symptoms for some children. Caseworkers, who are often overloaded with their current tasks related to visiting children, documentation, and court attendance, also have incentives to avoid the additional tasks associated with a child's attendance at therapy by minimizing reports of child behavior problems with foster parents and in ongoing screening assessments.

In summary, despite the development of strong interventions for trauma symptoms, behavior problems, and therapeutic foster care and factors potentially supporting the provision of mental health services within child welfare systems, a range of factors also serve as disincentives to provide more effective services for foster children. From a public health and preventative perspective, failing to provide services is a lost opportunity to intervene with a wider range of children whose life chances could be improved by identification and treatment of the full range of their needs. To overcome these barriers, increased support and incentives are needed to initiate and sustain evidence-based interventions. A vast literature has described both the barriers to implementation of evidence-based practices and implementation frameworks that outline a broad range of targets in implementation efforts (Tabak et al., 2012). The purpose of this chapter is not to comprehensively apply an implementation framework, but instead to propose approaches to support increased use of effective models by leveraging processes that have had some success in either child welfare services or broader mental health service systems. These approaches primarily seek to influence factors in "outer context" (e.g., leadership, policies and federal initiatives) and "bridging factors" (e.g., collaborative partnerships) but do not address many factors in the "inner context" (e.g. organizational characteristics and staffing) that would need to addressed in an individual implementation plan. Implementation of services in any given region or agency will require both an increase in the incentives and availability of effective interventions and a plan to understand and address the barriers that are specific to that region or agency.

The strategies discussed in the next section include use of collaborative partnerships and grants to support statewide initiatives to increase access to evidence-based interventions; use of

intervention tracking and cost-benefit analysis data to support implementation and sustained use of effective practices; development of more accessible interventions for children in care; and leveraging federal and state resources to extend current monitoring and assessment activities to encourage activities to build more effect mental health services. For each strategy, examples are provided from recent initiatives in the U.S. Although the examples presented are just a few of the many relevant projects that are shifting practice, they suggest how several strategies might be synchronized to increase use of evidence-based practices.

Increasing Access to Evidence-Based Interventions Through Statewide or Locality-based Initiatives to Initiate and Sustain Evidence-Based Practices

Children in foster care need greater access to evidence-based practices specifically developed for children in care, such as therapeutic foster care, but also evidence-based practices that have been developed for children in the general population, such as TF-CBT and behavioral interventions. These services are frequently provided to children in care through community-based mental health clinics and, for children who have had a recent abuse allegation, child advocacy centers. Initiatives to implement these treatments in settings serving Medicaid-insured clients have the potential to greatly increase access to more effective care to children in foster care as well as families at risk for child welfare involvement. A statewide effort in Connecticut to implement and sustain evidence-based practices highlights some of the characteristics of a successful initiative. Although this initiative has targeted services provided by community mental health services, it has significantly increased access to services for child welfare-involved children and families. Twenty-five percent of children served by partnering agencies involved in the initiative have child welfare involvement, and multiple projects have focused specifically on treatment of trauma in children and families.

Including Key Partners in Collaborative Approach to Services Development

Connecticut's initiative is characterized by a longstanding partnership between the state agency overseeing social services across child welfare, mental health, and juvenile justice (Connecticut Department of Children and Families [DCF]); a non-profit child services and policy center (Child Health and Development Institute [CHDI]), which has provided coordination of training; a university partner (Yale University), which has provided consultation and evaluation; and community agencies across Connecticut. This partnership provides key expertise in evidence-based practices and effective training models, and also support for coordination of trainings and data collection. The involvement of both child welfare and children's mental health services in the initiative and the administrative linkage between

the agencies strengthens leverage to support the development of mental health services for children with child welfare involvement.

To date, Connecticut's most significant practice advancement with high relevance to children in foster care is the establishment of TF-CBT as a widely available treatment. A collaboration between CHDI and DCF beginning in 2007 has provided ongoing, extensive support for statewide dissemination of TF-CBT in community mental health agencies. Using the Institute for Healthcare Improvement's Breakthrough Series Collaborative quality improvement model from 2006-10, DCF funding supported training of staff from 16 agencies through the Connecticut TF-CBT Learning Collaborative (Randall et al., 2019). This work continued with a second federally-funded multi-component initiative in 2011. Completed in 2016, this initiative included statewide trauma training using NCTSN's Child Welfare Trauma Training Toolkit, trauma screening for children aged 6 and entering foster care, and support for agency training that included more than 600 clinicians in TF-CBT (Connell et al., 2019).

A critical factor in the successful implementation of TF-CBT statewide is CHDI's ongoing role as a coordinating center for training, consultation, and credentialing providers in the model throughout the state (Randall et al., 2019). In fiscal year 2019, the center reported that 56 clinical staff were trained for the first time in TF-CBT and 1,536 children received TF-CBT, including 553 children with child welfare involvement. In this period, children were reported to have a 60% remission rate for both posttraumatic stress and depressive symptoms (Randall et al., 2019).

External Funding Support for Implementation and Infrastructure Development.

Connecticut has addressed the barriers posed by the financial costs of implementation, particularly in the initial stages, by receiving funding for intervention dissemination initiatives through federal and state sources. In particular, the state's initiatives have received significant funding from multiple large federal initiatives to support dissemination of trauma treatments through the Administration for Children and Families. The training coordination center, CHDI, also received funding in 2016 from the Substance Abuse and Mental Health Services Administration (SAMHSA) through NCTSN to support dissemination of trauma interventions. This grant was followed by additional funding for a Level 2 Treatment and Services Adaptation Center in 2020. The federal grants received by DCF and CHDI are competitive, requiring staff expertise in grant writing, evidence-based practices and dissemination models, and evaluation. The expertise of the state collaborative partners is likely to have been critical to the state's success in obtaining continuous grant support throughout their efforts to support implementation of evidence-based practices.

SYSTEM-WIDE TRACKING OF USE OF COMPONENTS OF EVIDENCE-BASED MODELS.

In collaboration with intervention developers, CHDI developed a statewide tracking system to support use of selected interventions (https://www.chdi.org/our-work/mental-health/evidence-based-practices/ebp-tracker/). This online measurement system, the Evidence-Based Practice Tracker, is used to track use of interventions including TF-CBT and the Modular Approach to Therapy for Children with Anxiety, Depression, Trauma, or Conduct Problems (MATCH-ADTC) and two school-based trauma interventions (Cognitive Behavioral Intervention for Trauma in Schools and Bounce Back). The system allows clinicians from 30 participating agencies to enter standardized assessments and components of the intervention completed all children they treat with one of these interventions. This provides an indication of fidelity, although self-reported, as well as children's progress and outcomes over time. CHDI reports that the tracking system is currently used by over 30 agencies and more than 300 clinicians.

Agencies, clinicians, and CHDI can access this information to identify the extent of use of different practices and clinical outcomes. Statewide data indicates that a steady increase in the use of evidence-based interventions has occurred over the past 10 years and that outcomes for children receiving specific evidence-based interventions, particularly TF-CBT or MATCH, are more positive than those receiving services as usual (Lang, 2019). For 46,729 children who received treatment between 2013-17, problem severity scores decreased by 46%-76% (TF-CBT) and 68%-75% (MATCH) more that the decrease for children who received services as usual.

Connecticut's initiative is described because of its scope and positive effects, but it is not unique. Other states and regions are currently using similar strategies to incrementally build effective service systems. For example, Mersky and colleagues (2020) report use of similar strategies in Wisconsin in a project targeting increased access to evidence-based interventions in two cities with funding from SAMHSA through NCTSN. This project involves a collaboration between a university partner, a hospital-based treatment center, the state child welfare agency, and the Wisconsin Office of Children's Mental Health. Training will be provided to up to 150 mental health providers in three established, evidence-based interventions for younger children. Data from a controlled trial conducted as a part of this initiative indicate the effectiveness of PCIT when adapted for use with foster parents, providing support for its continued use.

Build Capacity to Track Use of Practices, Outcomes, and Use Cost-benefit Analysis to Support Use of Effective Models of Care

Connecticut's development of a statewide practice tracker provides a mechanism to understand both use of evidence-based interventions and outcomes for children who complete different interventions over time. From outcome data collected by CDHI, the state is then able to estimate cost-savings over time based on the number of children receiving specific interventions using the Washington Policy Institute's cost-benefit analysis of the interventions (https://www.chdi.org/ebt/). From their data collected on use of specific interventions, CHDI estimates long-term savings of $132 million since they have initiated tracking. A limitation

of this analysis is that clinicians might over-report their use of evidence-based interventions and positive treatment outcomes given the use of the system to assess individual clinicians' performance. If the initiative eventually affects practices throughout the entire state, changes in key metrics such as arrests, incarceration, and hospitalizations could also provide an indication of the benefits of implementing evidence-based interventions over time. For children in care, this data could also be linked with administrative placement data to identify associations between different services and reduced symptoms as well as other outcomes that are particularly relevant for children in care, such as placement stability and reductions in use of off-label and antipsychotic psychotropic medications. In addition, because the tracking system is not specific to children placed in foster care, the disincentives to provide services earlier in children's placement trajectories potentially have less impact; earlier service provision provides the opportunity to prevent negative outcomes that would be tracked for children and youth during time in substitute care as well after substitute care.

Connecticut began with initiatives to provide training to support use of evidence-based interventions for children and then initiated tracking of services and outcomes through an online tracking platform, supporting continued use of the interventions by demonstrating the individual benefits to children, the relative use across different agencies, and the potential cost benefits. Other states have sought to increase use of evidence-based practices by developing statewide requirements for reporting practice components or outcomes in the process of Medicaid billing submissions. For example, Washington state began with legislation directing the state's child-serving social service departments (including child welfare, mental health and juvenile justice) to increase investments in evidence-based practice and initiating use of reporting codes for specific evidence-based practices in Medicaid billing for mental health practices (see Walker et al., 2019). Agencies were not mandated to use evidence-based practices, to reduce the potential for "paper reporting" of services that do not correspond to actual practice.

Although the state's early effort was unsuccessful, as would be expected given the lack of attention to the multiple factors that would inhibit adoption of new practices, after the state formed a partnership with the University of Washington's Evidence-based Practice Institute, university partners describe their approach as a "key catalyst for turning legislative intent in to meaningful impact" supporting increased use of evidence-based practice (Walker et al., 2019, p. 2). However, a limitation in this state's approach is the absence of an initiative to support training in specific interventions due to the cost of these types of initiatives. Instead, the state has provided every agency with information about evidence-based practices in reporting guides that focus on the components of treatment corresponding to evidence-based practice for different areas. Submission of treatment and session notes as a part of billing and enhanced reimbursement for use of evidence-based components is expected to increase agency uptake of effective interventions and increase use by orienting practitioners and the agency to evidence-based practices, but additional research is needed to understand the degree to which this is occurring.

As Washington's and Connecticut's experiences demonstrate, reporting session content requires a significant effort to define practice components and provide agency trainings in use of the system. A cost-effective approach that also provides significant benefits is requiring

outcome measurement as a component of billing or service documentation. For example, in Illinois, mental health Medicaid providers are required to use a standardized initial assessment measure and then to submit follow up data at three months. Because this requirement was implemented in conjunction with a state initiative involving agency training in three specific evidence-based interventions, the resulting data was used by university partners to estimate the effects of each of the interventions (see Starin et al., 2014). This produced valuable data as it indicated the positive effects of the training initiatives, with positive effects relative to services as usual occurring particularly for the training on behavioral parenting interventions, which were believed to be a more significant departure from usual practice than the CBT and MATCH interventions. Because the study was not randomized, the effects cannot be attributed to the training initiative, but the data are consistent with the hypothesis that training was associated with more effective services. These results provided support for continued efforts to train providers.

Although outcome data collected within child welfare systems does not have all the advantages of data collected across service systems, assessment and follow-up data collected within child welfare systems also has a similar role to play in the development of more effective interventions. Initial screening and assessment data can be followed up by repeated data collection at 6 months before administrative case reviews, providing the potential for understanding trajectories in severity of needs over time. However, validity of the data when collected at follow-up by caseworkers is often untested, and the extent that measures such as the Child and Adolescent Needs and Strengths (CANS) reflect foster parents' perceptions of children's needs and real changes in symptom levels is unclear. One study found that the CANS items (entered by caseworkers every 6 months) had low correlations ($r <= .33$) with foster parents' reports of emotional and behavioral problems using validated behavior checklists (Leathers & Xing, 2018). A more efficient system might involve measurement of mental health symptom levels by collecting data directly from caregivers including foster parents and direct care staff. Electronic data collection though a platform such as SurveyMonkey could streamline the process of data collection.

Increase Understanding of Cost-Benefits of Specialized Interventions

Development of more effective community child mental health service systems has the potential to prevent escalation of mental health needs and address the needs of many children in foster care, including those with mild to moderate mental health issues. For children with more complex or severe needs, however, other, more intensive interventions are likely to be needed. Tracking of outcomes will be key to understanding the extent that community mental health services meet the needs of children in care. Outcome data could point to less strong effects for some groups of children, indicating that other practice models or adaptations to the models are needed to improve outcomes. These practice models could involve adaptations to existing models, such as TF-CBT to enhance effectiveness, or could involve use of interventions developed specifically for children in foster care, such as treatment foster care.

A range of different strategies could be used to increase incentives to adopt to more intensive treatment models. As noted, use of a centralized tracking system for children and adolescents across a state would provide the ability to track outcomes over time into early adulthood, even after children leave foster care. This allows for analysis of outcomes and potential benefits of specialized treatments, such as reduction of high-cost events like hospitalizations, residential placements, and detention or incarceration that are frequently experienced by children with more significant needs. While improving children's quality of life should be enough of a rationale to support dissemination of effective mental health interventions, identification of these cost-benefits is likely to be essential to build political will to support this investment. In particular, multimodal evidence-based treatments for more severe behavior problems such as Multidimensional Family Therapy (MDFT), Multisystemic Therapy (MST), and Treatment Foster Care Oregon – Adolescents (TFCO-A) are expensive to initiate but have the potential to prevent highly disruptive events in young people's lives with high personal and social costs. While it would seem that these interventions would be widely available given their positive cost-benefit ratios, the lack of locally based cost-benefit information impedes their implementation.

Develop More Accessible Interventions for Children and Youth in Foster Care

Another strategy to increase access to a range of evidence-based treatments is to develop interventions that are less costly to implement and sustain. More widespread use of TF-CBT in comparison to many other evidence-based interventions is due to its consistently positive effects, but facilitated by its accessibility and relatively low training costs. TF-CBT training is supported by publicly available manuals that can be purchased online, and exposure can begin in graduate school with completion of a 10-hour online training at a low cost. Therapist certification then requires an in-person two-day training and 12 hours of consultation calls (provided to groups of five to 12 therapists). Average per-person costs to become certified range from approximately $700-$1,300, depending on the size of the group being trained and the consultant fees. This training structure provides agencies and localities the opportunity to begin implementation with a relatively small expense that can be built upon over time, rather than a large expense that may be difficult to budget and justify in a single year.

Even a moderate cost can pose a disincentive for many agencies and localities seeking to increase use of more effective interventions. For example, PCIT, a relatively inexpensive intervention, requires up to $10,000 in costs to set up equipment for the intervention and $4,000-$4,200 per clinician in training costs which can pose a deterrent in implementation (Goldfine et al., 2008). However, this level of expense can fit into agency budgets or covered by small grants (as provided in Connecticut), and nearly every state in the U.S. has multiple certified PCIT providers (see http://www.pcit.org/united-states.html). The significantly higher initial cost of other interventions that are critically needed in foster care presents more difficulty to overcome. For example, KEEP SAFE includes foster parent parenting training and youth

skills groups and has consistently positive effects in reducing daily reports of behavior problems among youth (Kim & Leve, 2011; Kim et al., 2013; Kim et al., 2017; Smith et al., 2011). Despite the program's high relevance to the needs of children in foster care, it has a low rate of dissemination.[7] This is likely to be related to its high start-up costs ($40,000 to train one facilitator and co-facilitator).[8] Similarly, treatment foster care, which involves hiring foster parents as professionals who are trained and provided with ongoing support to implement in-home treatment with youth have been found to be cost effective as an alternative to residential treatment (Chamberlain & Smith, 2003). Again, however, the high start-up costs of these programs have limited their dissemination, with 95% of therapeutic foster care programs estimated to be agency-developed rather than a specific evidence-based model (Southerland et al., 2017).

It is also important to address the costs of sustaining newly implemented programs. "Fidelity drift," or the tendency for providers to gradually shift their practices back to previous models is thought to partially account for weaker effects in actual practice than in clinical trials (Edmunds et al., 2013). This tendency can be reduced through consultation with detailed attention to clinical practices. In one child advocacy center, a high level of fidelity was maintained by contracting with a university partner to provide training and ongoing supervision in specific interventions and creating a unique clinical supervisor position (Bond & Drake, 2019). This supervisor monitored practices through chart review, face-to-face supervision providing intensive review of sessions, and audio and videotape session reviews. Obviously, providing these supports comes with a cost; an important next step is understanding the costs and benefits of these supports, including their impact on children's outcomes.

To address the critical need for more accessible practice models, intervention developers should study lower cost intervention training and fidelity monitoring mechanisms. This might include videotaped training modules, remote learning, and automated reviews of components of treatment that can be coded through language processing software (Walker et al., 2019). In addition, the development of more accessible models is facilitated by researchers moving away from studying "name brand" interventions that must be disseminated by private companies formed by the developers. Instead, this work seeks to identify the key components of effective treatments in an area and then support the development of training and consultation models that have more positive effects than usual care. For example, MATCH (the intervention disseminated widely in Connecticut that is discussed above) is a modular treatment that incorporates the common components of evidence-based interventions for four different areas (disruptive behavior, depression, anxiety, and trauma symptoms) and maintains the positive effects of evidence-based interventions relative to services as usual (Chorpita et al., 2013). Eventually, training in this type of common components intervention could offer providers an evidence-based intervention to address several different types of mental health issues with more

[7] See https://www.keepfostering.org/implementation/#sites for a list of current sites.

[8] https://www.blueprintsprograms.org/programs/684999999/keep-safe/

flexibility. Without studies focused on children in foster care, however, it cannot be assumed that an intervention like MATCH would have the same effects as in the general population.

Therapeutic foster care is an area where significant work has been completed to develop a model that is more flexible and lower-cost than currently available evidence-based models (e.g., Treatment Foster Care Oregon). An ongoing project has studied therapeutic foster care as it is typically provided, identified components consistent with evidence-based models in these "services as usual" programs (e.g., more extensive foster parent training), and found that programs that incorporate more of these components have more positive outcomes (Murray et al., 2010). Based on these findings and the components of effective models, the research group developed a training and consultation model to enhance therapeutic foster care with foster parent training in areas including relationship building and behavioral parenting skills. In a controlled study, Farmer and colleagues (2010) found that the children placed in foster homes in the enhanced training and consultation group had significantly fewer problematic behaviors and mental health issues at 6-month follow-up than children who received therapeutic foster care as usual, without the experimental consultation and training. Weaker but still significant positive effects were found at a year for behavior problems. This work is significant because it provides agencies with an alternative to developing their own version of therapeutic foster care and specifies a lower-cost model to implement training components that have been found to be most helpful. Additional work is needed to replicate these findings to understand the types of support foster parents, parents, and children need to maintain positive effects over time.

Consistent with these positive findings in developing therapeutic foster care training models, opportunities to enhance foster care environments to directly benefit children's mental health should be optimized by enhancing the content of training required of parents and foster parents in traditional and kinship foster care. Again, the cost of "name brand" interventions such as KEEP SAFE, the preventative intervention involving 16 group sessions for foster parents at the start of new placements, might be prohibitive. But use of models developed by adapting the common elements of behavioral interventions has the potential for similar effects and could be provided at the start of placements in lieu of part of the often extensive foster parent trainings that have been found to have little effect on placement outcomes. Similarly, there is a critical need for more effective, accessible parenting training models given how ubiquitous parent training is in service plans (Horwitz et al., 2010).

Enhancing Federal and State Monitoring and Assessment Activities to Improve Mental Health Services

The strategies described in this chapter require a significantly increased commitment to improving children's mental health services than has previously occurred in most areas of the country. These efforts involve increased leadership, allocation of staff time, and financial commitments, which are significant barriers in states that are still impacted by the Covid-19 pandemic and its financial repercussions. A strategy to increase incentives to make these investments at the state level could involve enhancement of the Child and Family Services

Review (CFSR) process, which rates seven outcome indicators in the areas of safety, permanency, and family and child well-being (one outcome which includes health and mental health services). The two rounds of CFSR reviews completed since 2000 highlighted the need for more appropriate treatment of children's mental health needs, with only a few states receiving the highest rating level based on assessment of mental health needs and access to services (e.g., referral to services after assessment) in the last round. The improvement plans resulting from past reviews have had positive effects on services by supporting widespread use of screening,[9] as discussed previously (Pullmann et al., 2018).

The review process provides a unique opportunity to support use of evidence-based practices, but will need greater specificity in its state rating system to support this. Similar to other outcomes, the CFSR will need to operationalize use of evidence-based interventions and create benchmarks for expected use. Although previous reviews have only specified "appropriate" treatment as a goal and primarily relied on screening rates and referral rates after assessment, further specifying how to operationalize this goal is consistent with the increased understanding of the effects of evidence-based practices relative to services as usual and the role of effective services in reducing negative outcomes. Greater specification of mental health services content is also supported by other federal initiatives that have affected mental health services in the U.S. For example, concern about the potential overuse of psychotropic medications among children and youth in care, particularly use of multiple medications and off-label use of antipsychotic medications, led to congressional review and a federal initiative now requiring that states monitor use of psychotropic medications (Congressional Research Service, 2017). This initiative highlighted the importance of providing effective psychosocial interventions rather than relying on use of medication to address disruptive behavior. As noted in a report following up on progress in seven states, difficulty in accessing evidence-based mental health interventions is a challenge to these efforts (U.S. Government Accountability Office, 2017). Including indicators of use of evidence-based practices could further orient states and agencies to the quality of services received rather than just a child's referral to services.

Incorporation of greater specificity in CFSR ratings of mental health services would require states to implement some type of services tracking system, as previously discussed. Although further study of the validity of the data entered is needed, existing studies have found correlations between clinician-reported use of different practices and observed use, suggesting that reported practices corresponds to greater use of practices, although not precisely (Southerland et al., 2017). Requirements to monitor service quality and content could support building increased capacity for data collection monitoring and collection in this area (as it has for other outcomes in the CFSR process). This in turn could support increased attention on the types of interventions that are most effective for different mental health issues and capacity to provide these interventions.

---

[9] See Administration for Children and Families, Information Memorandum, ACYF-CB-IM-12-03. State Medicaid agencies are also required to cover mental health screenings under the Early and Periodic Screening, Diagnostic, and Treatment benefit. See 42 U.S.C. §§ 1396a(a)(43), 1396d(a)(4)(B) and (r).

Proposing that the CFSR process incorporate indicators of specific use of evidence-based interventions to address children's mental health issues could be viewed as beyond the scope of the reviews, which focus primarily on core child welfare services and practices supporting child safety and permanency. However, recent attention to the extent that failures to provide appropriate services can result in real harms to children and youth in the systems entrusted for their care could create greater political will for a higher level of monitoring with a goal to support more effective mental health services. Addressing the mental health needs of children in care is a critical need both due to the role assumed by the child welfare system when children are removed from their parents' care and the individual consequences and societal costs of failing to meet their needs.

Next Steps and Conclusions

This chapter reviewed several approaches to supporting more effective service systems by increasing incentives to provide interventions with known effectiveness, but it did not address many of the limitations in our knowledge about what works for children in foster care. There are still unaddressed questions about how to enhance the long-term effectiveness of some key interventions, such as therapeutic foster care. Combinations of behavioral parenting interventions used with both parents and foster parents along with services enhancing support might be more effective than behavioral parenting interventions alone, given the complex needs of child welfare-involved families and children and indications that foster parents' need for support is an independent predictor of placement disruption (Leathers et al., 2019; Tonheim & Iversen, 2019). Additionally, as noted previously, there are currently no effective interventions to treat children with more significant attachment disorders. These disorders are exceedingly rare in the general population but are more common among children in care, and when a broader range of relational issues are considered, could affect many children presenting with mental health issues. These issues could also undermine the effectiveness of interventions primarily developed in the general population.

This chapter was also limited by its primary focus on strategies to increase use of evidence-based practices in outpatient settings and community-based treatment settings such as therapeutic foster care. For some children, more effective, higher-intensity treatments are needed, and there are many unaddressed questions about how to best provide these services. Additionally, school-based services are commonly provided to children in foster care, and very little is known about the effects of these services, their adequacy, and how they are coordinated with other services provided. Finally, other services that are commonly provided to children in foster care, such as mentoring (see Taussig et al., 2019) and service planning models (see Leathers et al., 2019 and Leathers et al., 2021), could play an important role in building support networks, identifying unmet needs, and supporting positive outcomes. Additional research to understand the role of these programs in providing additional benefits beyond formal mental health services is also needed.

Although service system change occurs incrementally, recent progress in creating more effective mental health service systems for children in foster care is encouraging. Screening processes now identify many children with significant needs as they enter foster care, and the majority of identified children receive at least some follow-up services. However, the development of an effective care system obviously requires much more than screening, with effective linkage to evidence-based services following identification of needs. The examples described in this chapter increase incentives to build a sustained, effective service system. Notably, other states and regions are using a range of strategies to incrementally build their service systems, with some taking similar approaches and others pursuing other paths. Other states and regions have not made as much progress in their efforts to shift mental health services, and the challenges they face could be substantial. Child welfare practice is often dominated by crisis management, underfunded services, and high staff turnover, which inhibits capacity to pursue cross-agency and university collaborations, apply for external funding, and manage new initiatives. It is likely that child welfare systems operating with greater resources and strong collaborations will make the most progress in building effective systems of care. But by attending to the enormous individual and societal benefits of providing effective care, it is hoped that evidence-based mental health services will be increasingly accessible to children and youth in foster care.

Author Note

Studies referenced this chapter were funded by the Illinois Department of Children and Family Services (DCFS) and the Health Resources and Services Administration (HRSA). Views and opinions expressed in this chapter do not necessarily reflect those of DCFS or HRSA.

References

Administration for Children and Families (ACF) (2012). *Information Memorandum: Promoting the Safe, Appropriate, and Effective Use of Psychotropic Medication for Children in Foster Care*. http://www.acf.hhs.gov/programs/cb/resource/im1203

Alavi, Z. & Calleja, N.G. (2012). Understanding the use of psychotropic medications in the child welfare system: Causes, consequences, and proposed solutions. *Child Welfare, 91,* 77-94.

Bellamy, J. L., Gopalan, G., & Traube, D. E. (2010). A national study of the impact of outpatient mental health services for children in long-term foster care. *Clinical child psychology and psychiatry*, *15*(4), 467–479. https://doi.org/10.1177/1359104510377720

Bond, G.R., & Drake, R.E. (2019). Assessing the fidelity of evidence-based practices: History and current status of a standardized measurement methodology. *Administration and Policy in Mental Health and Mental Health Services Research*. 10.1007/s10488-019-00991-6. Advance online publication. https://doi.org/10.1007/s10488-019-00991-6

Bunea, I. M., Szentágotai-Tătar, A., & Miu, A. C. (2017). Early-life adversity and cortisol response to social stress: A meta-analysis. *Translational Psychiatry, 7,* 1274. https://doi.org/10.1038/s41398-017-0032-3

Burns, B. J., Phillips, S. D., Wagner, H. R., Barth, R. P., Kolko, D. J., Campbell, Y., & Landsverk, J. (2004). Mental health need and access to mental health services by youths involved with child welfare: A national survey. *Journal of the American Academy of Child and Adolescent Psychiatry, 43,* 960-970. https://doi.org/10.1097/01.chi.0000127590.95585.65

Center for the Study of Social Policy (2012). *For the Welfare of Children: Lessons Learned from Class Action Litigation*. https://cssp.org/wp-content/uploads/2019/01/Lessons-Learned.pdf

Chamberlain, P., Price, J., Leve, L. D., Laurent, H., Landsverk, J. A., & Reid, J. B. (2008). Prevention of behavior problems for children in foster care: Outcomes and mediation effects. *Prevention Science: The Official Journal of the Society for Prevention Research, 9, 17–27*. https://doi.org/10.1007/s11121-007-0080-7

Chamberlain, P., & Smith, D. K. (2003). *Antisocial behavior in children and adolescents: The Oregon Multidimensional Treatment Foster Care model*. In A. E. Kazdin & J. R. Weisz (Eds.), *Evidence-based psychotherapies for children and adolescents* (p. 282–300). The Guilford Press.

Child Welfare Information Gateway (2020). *Foster Care Statistics 2018*. Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families, Children's Bureau.

Chorpita, B. F., Weisz, J. R., Daleiden, E. L., Schoenwald, S. K., Palinkas, L. A., Miranda, J., Higa-McMillan, C., Nakamura, B. J., Austin, A. A., Borntrager, C. F., Ward, A., Wells, K. C., & Gibbons, R. D. (2013). Long-term outcomes for the Child STEPs randomized effectiveness trial: A comparison of modular and standard treatment designs with usual care. *Journal of Consulting and Clinical Psychology, 81,* 999-1009.

Cohen, J. A., Deblinger, E., & Mannarino, A. P. (2018). Trauma-focused cognitive behavioral therapy for children and families. *Psychotherapy Research, 28,* 47–57. https://doi.org/10.1080/10503307.2016.1208375

Congressional Research Service (2017). *Child welfare: Oversight of psychotropic medication for children in foster care*. https://www.everycrsreport.com/reports/R43466.html

Connell, C. M., Lang, J. M., Zorba, B., & Stevens, K. (2019). Enhancing capacity for trauma-informed care in child welfare: Impact of a statewide systems change initiative. *American Journal of Community Psychology, 64,* 467–480. https://doi.org/10.1002/ajcp.12375

Courtney, M. E., Dworsky, A. L., Lee, J. S., & Raap, M. (2010). Midwest evaluation of the adult functioning of former foster youth: Outcomes at ages 23 and 24. Chicago: Chapin Hall at the University of Chicago.

Crystal, S., Mackie, T., Fenton, M.C., Amin, S., Neese-Todd, S., Olfson, M., & Bilder, S. (2016). Rapid growth of antipsychotic prescriptions for children who are publicly insured has ceased, but concerns remain. *Health Affairs, 35,* 974-982.

Cummings, M.M. (2012). Sedating forgotten children: How unnecessary psychotropic medication endangers foster children's rights and health. *Boston College Journal of Law & Social Justice, 3235,* 7-389.

Daviss, W.B., Barnett, E., Neubacher, K., Drake, R.E. (2016). Use of antipsychotic medications for nonpsychotic children: Risks and implications for mental health services. *Psychiatric Services, 67,* 339-341.

dosReis, S., Zito, J. M., Safer, D. J., & Soeken, K. L. (2001). Mental health services for youths in foster care and disabled youths. *American Journal of Public Health, 91,* 1094-1099.

Edmunds, J.M., Beidas, R.S., & Kendall, P.C. (2013). Dissemination and implementation of evidence-based practices: Training and consultation as implementation strategies. *Clinical Psychology: Science and Practice, 20,* 152-165.

Farmer, E. M. Z., Burns, B. J., Wagner, H. R., Murray, M., & Southerland, D. G. (2010). Enhancing "usual practice" treatment foster care: Findings from a randomized trial on improving youths' outcomes. *Psychiatric Services, 61*, 555–561.

Fitzgerald, M. M., Torres, M. M., Shipman, K., Gorrono, J., Kerns, S. E. ., & Dorsey, S. (2015). Child Welfare Caseworkers as Brokers of Mental Health Services: A Pilot Evaluation of Project Focus Colorado. *Child Maltreatment*, *20*, 37–49. https://doi.org/10.1177/1077559514562448

Fisher, P. A., Gunnar, M. R., Dozier, M., Bruce, J., & Pears, K. C. (2006). Effects of therapeutic interventions for foster children on behavioral problems, caregiver attachment, and stress regulatory neural systems. *Annals of the New York Academy of Sciences, 1094,* 215-225.

Fisher, P. A., Stoolmiller, M., Mannering, A. M., Takahashi, A., & Chamberlain, P. (2011). Foster placement disruptions associated with problem behavior: mitigating a threshold effect. *Journal of Consulting and Clinical Psychology*, *79*, 481–487.

Fisher, P. A., Van Ryzin, M. J., & Gunnar, M. R. (2011). Mitigating HPA axis dysregulation associated with placement changes in foster care. *Psychoneuroendocrinology, 36,* 531–539.

Fong, H. F., Alegria, M., Bair-Merritt, M. H., & Beardslee, W. (2018). Factors associated with mental health services referrals for children investigated by child welfare. *Child Abuse & Neglect, 79,* 401-412.

Garcia, A.R., Palinkas, L.A., Snowden, L., & Landsverk, J. (2013). Looking beneath and in-between the hidden surfaces: A critical review of defining, measuring and contextualizing mental health service disparities in the child welfare system. *Children and Youth Services Review, 35,* 1727-1733

Garland, A. F., Brookman-Frazee, L., Hurlburt, M. S., Accurso, E. C., Zoffness, R. J., Haine-Schlagel, R., & Ganger, W. (2010). Mental health care for children with disruptive behavior problems: A view inside therapists' offices. *Psychiatric Services*, *61*, 788–795.

Garland, A. F., Hough, R. L., McCabe, K. M., Yeh, M., Wood, P. A., & Aarons, G. A. (2001). Prevalence of psychiatric disorders in youths across five sectors of care. Journal of the *American Academy of Child & Adolescent Psychiatry, 40,* 409-418.

Glisson, C., & Green, P. (2011). Organizational climate, services, and outcomes in child welfare systems. *Child Abuse & Neglect, 35,* 582-591.

Golden, O. (2009). *Reforming Child Welfare*. The Urban Institute: Washington, D.C.

Goldfine, M. E., Wagner, S. M., Branstetter, S. A., & Mcneil, C. B. (2008). Parent-child interaction therapy: An examination of cost-effectiveness. *The Journal of Early and Intensive Behavioral Intervention, 5,* 119+.

Hayek, M., Mackie, T. I., Mulé, C. M., Bellonci, C., Hyde, J., Bakan, J. S., & Leslie, L. K. (2014). A multi-state study on mental health evaluation for children entering foster care. *Administration and Policy in Mental Health and Mental Health Services Research, 41,* 552-567.

Herschell, A. D., Taber-Thomas, S. M., Kolko, D. J., McLeod, B. D., & Jackson, C. B. (2020). Treatment-as-usual for child physical abuse in community mental health centers: therapist characteristics, client profiles, and therapy processes. *Journal of Emotional and Behavioral Disorders*, *28*, 223–234. https://doi.org/10.1177/1063426619866188

Horwitz, S.M., Chamberlain, P., Landsverk, J. et al. (2010). Improving the mental health of children in child welfare through the implementation of evidence-based parenting interventions. *Administration and Policy in Mental Health and Mental Health Services Research, 37,* 27–39.

Hurlburt, M. S., Garland, A. F., Nguyen, K., & Brookman-Frazee, L. (2010). Child and family therapy process: Concordance of therapist and observational perspectives. *Administration and Policy in Mental Health and Mental Health Services Research, 37,* 230-244.

Kerns, S. E., Pullmann, M. D., Putnam, B., Buher, A., Holland, S., Berliner, L., et al. (2014). Child welfare and mental health: Facilitators of and barriers to connecting children and

youths in out-of-home care with effective mental health treatment. *Children and Youth Services Review, 46,* 315–324.

Kim, H. K., & Leve, L. D. (2011). Substance use and delinquency among middle school girls in foster care: A three-year follow-up of a randomized controlled trial. *Journal of Consulting and Clinical Psychology, 79,* 740-750.

Kim, H. K., Buchanan, R., & Price, J. M. (2017). Pathways to preventing substance use among youth in foster care. *Prevention Science, 18*, 567-576.

Kim, H. K., Pears, K. C., Leve, L. D., Chamberlain, P., & Smith, D. K. (2013). Intervention effects on health-risking sexual behavior among girls in foster care: The role of placement disruption and tobacco and marijuana use. *Journal of Child & Adolescent Substance Abuse, 22*, 370-387.

Kim, M., & Garcia, A. R. (2016). Measuring racial/ethnic disparities in mental health service

Lang, J.M. (2019). *Issue Brief 71: Better than Usual (Care): EBTs Improve Outcomes and Reduce Disparities for Children of Color*. Farmington, CT: Child Health and Development Institute of Connecticut. https://www.chdi.org/publications/issue-briefs/issue-brief-71-better-usual-care/

Leathers, S.J. (2006). Placement disruption and negative placement outcomes among adolescents in long-term foster care: the role of behavior problems. *Child Abuse & Neglect*, *30*, 307–324.

Leathers, S.J., Atkins, M.S., Spielfogel, J.E., McMeel, L.S., Wesley, J.M., & Davis, R. (2009). Context-specific mental health services for children in foster care. *Children and Youth Services Review, 31,* 1289-1297.

Leathers, S.J., Spielfogel, J.E., Geiger, J., Barnett, J., & Vande Voort, B. (2019). Placement disruption in foster care: Children's behavior, foster parent support, and parenting experiences. *Child Abuse & Neglect, 91,* 147–159.

Leathers, S. J., Vande Voort, B. L., & Melka-Kaffer, C. (2021). Mental health services and psychotropic medications provided to children at risk for placement instability in foster care. *Developmental Child Welfare*, *3*, 256–281. https://doi.org/10.1177/25161032211034255

Leathers, S. J. & Xing, K. (2018). *Child and Adolescent Strengths and Needs Validation Study*. Chicago, IL: Child Welfare Research Collaborative at the Jane Addams College of Social Work, University of Illinois at Chicago.

Loomis, A., Randall, K., & Lang, J. (2019). *Helping Young Children Exposed to Trauma: A Systems Approach to Trauma-Informed Care*. Farmington, CT: Child Health and Development Institute of Connecticut.

McMillen, J. C., Zima, B. T., Scott, L. D., Jr., Auslander, W. F., Munson, M. R., Ollie, M. T., & Spitznagel, E. L. (2005). Prevalence of psychiatric disorders among older youths in the foster care system. *Journal of the American Academy of Child & Adolescent Psychiatry, 44,* 88-95.

Meinhofer, A. & Angleró-Díaz, Y. (2019). Trends in foster care entry among children removed from their homes because of parental drug use, 2000 to 2017. *JAMA Pediatrics, 173,* 881–883. doi:10.1001/jamapediatrics.2019.1738

Mersky, J., Topitzes, J., Janczewski, C., Lee, C., McGaughey, G., & McNeil, C. (2020). Translating and implementing evidence-based mental health services in child welfare. *Administration and Policy in Mental Health, 47,* 693–704.

Morina, N., Koerssen, R., & Pollet, T. V. (2016). Interventions for children and adolescents with posttraumatic stress disorder: A meta-analysis of comparative outcome studies. *Clinical Psychology Review*, *47*, 41–54. https://doi.org/10.1016/j.cpr.2016.05.006

Murray, M. M., Southerland, D., Farmer, E. M., & Ballentine, K. (2010). Enhancing and adapting treatment foster care: Lessons learned in trying to change practice. *Journal of Child and Family Studies*, *19*, 393–403.

Palinkas, L. A., Saldana, L., Chou, C. P., & Chamberlain, P. (2017). Use of research evidence and implementation of evidence-based practices in youth-serving systems. *Children and youth services review*, *83*, 242–247. https://doi.org/10.1016/j.childyouth.2017.11.005

Petrenko, C.L., Culhane, S.E., Garrido, E.F., & Taussig, H.N. (2011). Do youth in out-of-home care receive recommended mental health and educational services following screening evaluations? *Children and Youth Services Revie*w, 33, 1911-1918.

Pullmann, M. D., Jacobson, J., Parker, E., Cevasco, M., Uomoto, J. A., Putnam, B. J., ... & Kerns, S. E. (2018). Tracing the pathway from mental health screening to services for children and youth in foster care. *Children and Youth Services Review, 89,* 340-354.

Raghavan, R., Inoue, M., & Hamilton, B. (2010). A preliminary analysis of the receipt of mental health services consistent with national standards among children in the child welfare system. *American Journal of Public Health, 100,* 742-749. doi:10.2105/AJPH.2008.151472

Randall, K.G., O'Connor, C. Nelson, A., & Lang, J.M. (2019). *Connecticut's Evidence Based Treatment Coordinating Center: Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) FY 2019 Annual Report*. Farmington, CT: Child Health and Development Institute of Connecticut. https://www.chdi.org/index.php/publications/?q=fy19

Rogers, E. M. (2003). *Diffusion of Innovation*. (5th ed.). New York: Free Press.

Ryan, J., Marsh, J., Testa, M. & Louderman, R. (2006). Integrating substance abuse treatment and child welfare services: Findings from the Illinois AODA waiver demonstration. *Social Work Research, 30,* 95-107.

Ryan, J. P., & Testa, M. F. (2005). Child maltreatment and juvenile delinquency: Investigating the role of placement and placement instability. *Children and Youth Services Review, 27*, 227–249

Sanders, M. R., Kirby, J. N., Tellegen, C. L., & Day, J. J. (2014). The Triple P-Positive Parenting Program: A systematic review and meta-analysis of a multi-level system of parenting support. *Clinical Psychology Review*, *34*, 337–357.

Sandtorv, L. B., Fevang, S., Nilsen, S. A., Bøe, T., Gjestad, R., Haugland, S., & Elgen, I. B. (2018). Symptoms associated with attention deficit/hyperactivity disorder and autism spectrum disorders in school-aged children prenatally exposed to substances. *Substance Abuse: Research and Treatment, 12,* 1178221818765773. https://doi.org/10.1177/1178221818765773

Smith, D. K., Leve, L. D., & Chamberlain, P. (2011). Preventing internalizing and externalizing problems in girls in foster care as they enter middle school: Impact of an intervention. *Prevention Science, 12,* 269-277.

Southerland, D. G., Farmer, E. M., Murray, M. E., Stambaugh, L. F., & Rosenberg, R. D. (2017). Measuring fidelity of empirically-supported treatment foster care: Preliminary psychometrics of the together facing the challenge—fidelity of implementation test (TFTC-FIT). *Child & Family Social Work, 23,* 273-280.

Starin, A.C., Atkins, M.S., Wehrmann, K.C., Mehta, T., Hesson-McInnis, M.S., Marinez-Lora, A., & Mehlinger, R. (2014). Moving science into state child and adolescent mental health systems: Illinois' evidence-informed practice initiative. *Journal of Clinical Child & Adolescent Psychology, 43,* 169-178.

Stein, R. E., Hurlburt, M. S., Heneghan, A. M., Zhang, J., Kerker, B., Landsverk, J., & Horwitz, S. M. (2016). For better or worse? Change in service use by children investigated by child welfare over a decade. *Academic Pediatrics, 16,* 240–246. https://doi.org/10.1016/j.acap.2016.01.019

Szymanski, K., Sapanski, L., & Conway, F. (2011). Trauma and ADHD — association or diagnostic confusion? A clinical perspective. *Journal of Infant, Child & Adolescent Psychotherapy, 10,* 51-59.

Tabak, R. G., Khoong, E. C., Chambers, D. A., & Brownson, R. C. (2012). Bridging research and practice: Models for dissemination and implementation research. *American Journal of Preventive Medicine, 43,* 337–350.

Tarren-Sweeney, M. (2010). It's time to re-think mental health services for children in care, and those adopted from care. Clinical Child Psychology and Psychiatry, 15, 613-626.

Taussig, H. N., Weiler, L. M., Garrido, E. F., Rhodes, T., Boat, A., & Fadell, M. (2019). A positive youth development approach to improving mental health outcomes for maltreated children in foster care: Replication and extension of an RCT of the Fostering Healthy Futures program. *American journal of community psychology*, *64*(3-4), 405–417.

Testa, M., Woodruff, K., Bess, R., Milner, J., & Woolverton, M. (2019). Every child deserves a permanent home: The Permanency Innovations Initiative. *The Future of Children, 29,* 145-162. doi:10.1353/foc.2019.0006.

Tonheim, M., & Iversen, A. C. (2019). "We felt completely left to ourselves." Foster parents' views on placement disruption. *Child & Family Social Work*, *24*(1), 90–97.

Turney, K., & Wildeman, C. (2016). Mental and physical health of children in foster care. *Pediatrics, 138,* e20161118. https://doi.org/10.1542/peds.2016-1118

Turney, K., & Wildeman, C. (2017). Adverse childhood experiences among children placed in and adopted from foster care: Evidence from a nationally representative survey. *Child abuse & neglect*, *64*, 117–129. https://doi.org/10.1016/j.chiabu.2016.12.009.

U.S. Government Accountability Office (2012, December). *Children's Mental Health: Concerns Remain about Appropriate Services for Children in Medicaid and Foster Care (Publication No. GAO-13-15).* https://www.gao.gov/assets/660/650716.pdf.

U.S. Government Accountability Office (2017, January). *FOSTER CARE: HHS Has Taken Steps to Support States' Oversight of Psychotropic Medications, but Additional Assistance*

Could Further Collaboration (Publication No. GAO-17-129). https://www.gao.gov/assets/690/681916.pdf

Walker, S.C., Sedlar, G., Berliner, L., Rodriguez, F. I., Davis, P. A., Johnson, S., & Leith, J. (2019). Advancing the state-level tracking of evidence-based practices: a case study. *International Journal of Mental Health Systems, 13,* 25–25. https://doi.org/10.1186/s13033-019-0280-0

Weisz, J.R., & Kazdin, A.E. (Eds.) (2017). *Evidence-Based Psychotherapies for Children and Adolescents, Third Edition*. New York: The Guilford Press.

White, C.R., Havalchak, A., Jackson, L.J., O'Brien, K. & Pecora, P.J. (2007). *Mental health, ethnicity, sexuality, and spirituality among youth in foster care: Findings from the Casey Field Office Mental Health Study*. Casey Family Programs, Seattle, WA.

Wulczyn, F., Barth, R.P., Yuan, Y.T., Harden, B.J., & Landsverk, J. (2008). *Beyond Common Sense: Child Welfare, Child Wellbeing, and the Evidence for Policy Reform.* Aldine Transaction: Piscataway, NJ.

Chapter 5. Development of an Integrated Medical and Behavioral Health Care Model for Children in Foster Care: The Rees-Jones Center for Foster Care Excellence

Kimberly E. Stone, MD, MPH[1,3]
Sara Moore, DNP, APRN, PNP-BC,[2,3]
Sara Pollard, PhD, ABPP[1,3]

[1] University of Texas Southwestern Medical School, Dallas, Texas
[2] University of Texas at Arlington, College of Nursing and Health Innovation, Arlington, Texas
[3] Children's Health, Dallas, Texas

Suggested Citation: Stone, Kimberly E., Pollard, Sara & Moore, Sara, Development of an Integrated Medical and Behavioral Health Care Model for Children in Foster Care, in The Future of Foster Care: New Science on Old Problems by the Penn State Child Maltreatment Solutions Network (Sarah Font ed. & Yo Jackson ed., 2021). https://doi.org/10.26209/fostercare5

Abstract

Children in foster care are classified as a population with special health care needs. They face multiple adverse childhood experiences and disrupted relationships, yet face barriers accessing consistent, high-quality health care. The American Academy of Pediatrics recommends integrated physical and behavioral health care for children in foster care, but little is known about the implementation of integrated care for this population. As a pediatrician, doctor of nursing practice, and psychologist in an academic medical setting, we describe the development and implementation of the Rees-Jones Center for Foster Care Excellence, emphasizing the role of medical and behavioral health providers in promoting the overall well being of children in foster care. We discuss the evolution of the integrated care model, as well as current initiatives for quality improvement, research, and advocacy; and future goals for evaluation, education, policy, and collaboration to improve the lives of children in foster care.

Keywords: foster care, integrated care, cross-system collaboration, behavior and physical health care, advocacy, out of home care, child welfare system

Abbreviations: Primary Care (Medical) Providers (PCPs), Behavioral Health Providers (BHPs), Adverse Childhood Experiences (ACEs)

Development of an Integrated Care Health Care Model for Children in Foster Care: The Rees-Jones Center for Foster Care Excellence

Children in foster care are classified as a vulnerable population with special health care needs by the American Academy of Pediatrics (AAP), and many have unmet health care needs both before and after being placed in care (Szilagyi et al., 2015). Children in foster care have a higher prevalence of asthma and obesity (Turney & Wildemann, 2016). They are more likely to have delayed immunizations (Hansen et al., 2004) and higher rates of hospitalization with complex chronic problems than those not in care (Bennett et al. 2020). In addition to high rates of toxic and posttraumatic stress (Forkey & Szilagyi, 2014), children in foster care have high rates of psychotropic medication use and are more likely to be referred for mental health or developmental concerns than children not in care (Hansen et al., 2004; Turney & Wildemann, 2016; Dosreis et al., 2011; Raghavan & McMillen, 2008). Unmet health needs and multiple adverse childhood experiences (ACEs) increase the risk of ongoing health problems and poor health outcomes in adulthood (Bramlett & Radal, 2014; Felitti et al., 1998; Merrick et al., 2019; Zlotnik et al., 2012; Strathearn et al., 2020). Failure to address these issues can impact relationships, placement stability, and educational success (Rubin et al., 2007).

Most children in foster care are eligible for Medicaid health insurance because their care is supported by title IV-E of the Social Security Act (Child Welfare Information Gateway, 2015). Medicaid benefits vary by state, but all contain Early and Periodic Screening, Diagnostic and Treatment (EPSDT) services (Centers for Medicaid and Medicare Services [CMS], 2014). Each state is responsible for implementing these federally mandated services, which include services for preventive medical care, dental health, hearing and vision screening, and behavioral health care (CMS, 2014). Many states have managed Medicaid plans specifically for children in foster care and have developed provider incentive programs and mechanisms for sharing health information (Pires, Stroul, & Hendricks, 2013). While these efforts can improve health care delivery, concerns of quality of care and access remain (Deutsch & Fortin, 2015, Pires, Stroul, & Hendricks, 2013). However, children in foster care often face barriers to accessing health care; up to 30% of children in foster care missed at least one recommended health screening (Levinson, 2015). Barriers include lack of access to their medical providers (PCPs) due to removal from their neighborhood and community, frequent placement changes, insurance coverage for providers and services, communication between child welfare and health providers, and a lack of health care provider training regarding the unique needs of children in foster care (Greiner & Beal, 2018; Deutsch & Fortin, 2015; Szilagyi et al., 2015, Raghavan et al., 2010).

For the child in foster care to thrive, a trauma-informed, integrated multidisciplinary approach to their care is needed. Educators, PCPs and behavioral health providers (BHPs), child welfare agencies, and caregivers should coordinate efforts and communicate regarding each child's unique trauma history and needs. PCPs and BHPs can provide crucial health information to child welfare agencies, but communication between these professions is often lacking. Difficulties making phone or email contact, child and family privacy issues, and a lack of

understanding regarding the players and organization of each system and their roles and responsibilities in evaluating child maltreatment are all recognized barriers to communication (Campbell et al., 2020). This can result in children not receiving needed medications, allergies, or missed appointments for chronic conditions. Children in foster care often have significant mental health and developmental needs, thus BHPs are often needed to address child behaviors and support and educate caregivers. However, barriers to effective collaboration also exist between BHPs and PCPs, including disparate training and focus, lack of training in a primary care setting, communication barriers, and differences in privacy policies (Kolko & Perrin, 2014; Levy et al., 2017; Mufson et al., 2018). Children in foster care have many health care concerns that can be best managed with both PCPs and BHPs, such as maladaptive eating patterns, sleep disturbances, abdominal pain and headaches, anxiety and depression, and elimination disorders such as enuresis and encopresis (Peek, 2013). Evaluations by PCPs and BHPs provide opportunities to assess educational issues, provide support and information to caregivers, and refer for learning and school difficulties (Berger et al., 2015; Whitgob & Loe, 2018).

Interest in improving and coordinating the care of children in foster care has increased over the past 20 years. The Child Welfare League of America (CWLA) and the AAP published recommendations for the health care of children in foster care (AAP, 2005; CWLA, 2007). These guidelines stressed the importance of medical and behavioral health evaluations within a few days of removal and in one month after a child enters foster care. Medical and behavioral follow-up is recommended at least every 3 months for the first year children are in care, which is more frequent than the standard annual health supervision recommendation for older children and adolescents (Hagan, Shaw & Duncan, 2017). The state government is obligated to ensure the health and safety of children in foster care, and the Family First Prevention Services Act underscores the federal government's focus on child well-being by committing federal funds to prevention services. Including the child's medical and behavioral health needs in both the family's and the child's reunification service plans is crucial (CWLA, 2007).

In 2015, the AAP reaffirmed the need for ongoing, coordinated health care for children in foster care (AAP, 2015; Szilagyi et al., 2015), stressing integration of medical and behavioral health services, and sensitivity to trauma. Despite these recommendations, the majority of children in foster care do not receive coordinated care that involves communication between child welfare, PCPs and BHPs (Deutsch & Fortin, 2015; Levinson, 2015; MeKonnen, Noonan, & Rubin, 2009; Terrell, Skinner, & Narayan, 2018). The remainder of this chapter will describe health care delivery models that can improve the care of children in foster care and detail the development of a trauma-informed, integrated medical and behavioral health care delivery model at the Rees-Jones Center for Foster Care Excellence at Children's Health in Dallas, Texas. Benefits and challenges of integrated care and strategies for addressing barriers will be discussed.

Health Care Delivery Models for Children in Foster Care

Several models of care delivery, including those listed below, have been developed to address the medical and behavior health needs of children in foster care (AAP, 2020; Greiner & Beal, 2018; Johnson et al., 2013):

1) *Evaluation and referral*: When a child enters foster initial entry to foster care or following a placement change, is referred to a dedicated foster care assessment center for a detailed evaluation, which could include medical, dental, and developmental-behavioral services. These centers may coordinate with child abuse evaluation clinics or be freestanding. After the initial assessment, the child is referred to a PCP in the community for ongoing care.

2) *Dedicated primary care:* PCPs provide initial assessment and *ongoing* medical care in the same clinic, including health supervision, sick visits, and chronic disease management.

3) *Nurse coordination:* These clinics are often based at child welfare office and provide case management and referral services.

4) *Behavioral care model:* In this model, a behavioral health provider coordinates care, focusing on developmental-behavioral concerns and foster parent training to prevent placement breakdowns.

The Medical Home Model

The AAP described a medical home model for children as one in which children receive care that is "accessible, continuous, comprehensive, family-centered, coordinated and compassionate" (Dickens, Green, Kohrt, & Pearson, 1992). Care should include health supervision, acute and chronic illness treatment, and access to subspecialty care and community resources (Dickens et al., 1992; Sia et al., 2004). The medical home model is considered the gold standard of pediatric medical care.

There are many barriers to implementing this type of care for children in foster care. One tenet of a medical home is ongoing care with one provider. The PCP, who provides ongoing comprehensive general pediatric care, is the core of the medical home. Children in foster care may lack this continuity in PCPs when placed outside their community, experiencing multiple changes in placements, or experiencing repeated transitions into and out of foster care. Child welfare agencies, health care providers, and caregivers may not know where children have previously received care, which prevents continuity of care with previous providers and limits access to medical records (Szilagyi et al., 2015, Espeleta et al., 2020).

Integrated Care Models

Multidisciplinary collaboration among providers can improve health outcomes for pediatric conditions such as depression and Attention Deficit Disorder (ADHD) (Butler et al.,

2008; Deutsch & Fortin, 2015; Zlotnik et al., 2015). Behavioral health issues are commonly identified by primary care providers, but lack of community resources or access to mental health providers can limit effective treatment (Godoy et al., 2017; Ader et al., 2015). Integrating BHPs in a primary care setting can benefit children in foster care, since PCPs often lack training in managing complex behavioral problems (Horwitz, et al., 2015). The Agency for Healthcare Research and Quality (AHRQ) defines this type of integrated care as *"the care a patient experiences as a result of a team of primary care and behavioral health clinicians, working together with patients and families, using a systematic and cost-effective approach to provide patient-centered care for a defined population." (Korsen et al. 2013).*

Integrated care, at its core, is the coordination of medical and behavioral health care. There are five levels of care integration (Table 1) (National Council for Behavioral Health [NCBH], 2020; SAMSHA, 2021). The degree of integration ranges from referral and consultation, with rare communication, to a completely team-based system where PCPs and BHPs share visits, documentation, and patient management (NCBH, 2020; Platt et al., 2018). Implementation of integrated care at the highest level requires PCPs and BHPs to fully understand each other's training, culture, and ethical standards. Providers must merge their respective cultures, with the ultimate focus on improving quality of care. This requires provider training and ongoing communication. Clinic space and processes must be designed to support collaboration, and information systems need to support co-management, patient support, and access to community resources (Kolko & Perrin, 2014). Barriers to implementing fully integrated medical and behavioral health care for children in foster care include lack of buy-in by clinic leadership, sustainability due to lack of reimbursement for shared visits, and the increased visit times.

Table 1.
Level and Scope of Integration in Care Models (National Council for Behavioral Health, 2020; SAMSHA, 2021)

	Level of Integration				
Scope of Integration	**Minimal**	**Basic Collaboration**	**Co-located Basic Collaboration**	**Partially Integrated**	**Fully Integrated**
Communication	Referral from list	Referral to known provider	Routinely	In-person	Ongoing
Provider Interaction	Only when needed	Rarely	Meet occasionally	Meet regularly/ defined roles	Meet continuously/ Roles blended

Location	Separate	Separate	Same health system	Same office space	Shared clinic
Medical Record Systems	Separate	Separate	Separate	Same system	Shared documentation
Management	Consult only	Consult only	Collaborative	Team-based	Team-based/leader support
Clinic Visits	Separate	Separate	Separate	Separate	Shared

TRAUMA-INFORMED CARE.

Medical and behavioral health care for children in foster care should be sensitive to the impact of their past traumatic experiences (Bartlett et al., 2016). Trauma is defined as the emotional, psychological, and physiologic response to distressing events, such as natural disasters, abuse and neglect, or medical trauma (Marsac et al., 2016). A trauma-informed practice recognizes the varied impacts traumatic experiences can have on health, behavior, and interaction with the health care system. This includes identifying those at risk for trauma, recognizing past trauma, and preventing additional trauma or re-traumatization during care (Marsac et al., 2016, Duffee, Szilagyi, Forkey, & Kelly, 2021, Forkey et al., 2021).

To truly practice trauma-informed care requires an understanding of the widespread impact of trauma, including how the trauma histories of providers, staff, and caregivers can impact a child's care (National Child Traumatic Stress Network [NCTSN], 2018). This includes individual, institutional, historical, and cultural trauma experiences. Secondary trauma can also affect the family, staff, and system dynamics. Implementing a trauma-informed integrated approach to care is guided by principles of cultural humility, mutual trust and collaboration, and safety and requires collaboration across multiple sectors, leadership engagement, and monitoring (Bartlett et al., 2016; SAMHSA, 2014). Barriers to implementing trauma-informed care for children in foster care include lack of financial commitment by institutions, lack of provider and staff training, and time constraints of clinic visits (Center of Excellence for Integrated Health Solutions, 2017).

TRAUMA-INFORMED INTEGRATED MEDICAL AND BEHAVIORAL HEALTH CARE.

Children's Health in Dallas had a long-established child abuse evaluation team with a smaller foster care support team. There was shared clinic space for serving a small number of

children in foster care but no physical space for expansion. The formation of a statewide Medicaid Managed Care Organization specifically for children in foster care in 2008 streamlined referrals and standardized access for specialty care and other services throughout Texas. Speech, occupational, and physical therapy evaluation did not have to undergo prior authorization, and , behavioral health services and dental services were included. Statewide child welfare redesign focusing on caring for children close to their communities of removal provided opportunities for community collaboration. In 2009, in response to these changes, Children's Health established an independent clinic for children in foster care to address system-level issues such as transitions in and out of care, fragmented health care, and lack of communication between child welfare and health care providers. In 2011, with support from the medical and child welfare community, an innovative care model with co-located general pediatricians and pediatric nurse practitioners, behavioral health specialists, and child welfare agency workers was piloted with a grant from the Rees-Jones Foundation. In 2014, sustained funding from the Rees-Jones Foundation and the Meadows Foundation allowed planning for the Rees-Jones Center for Foster Care Excellence to begin.

The goals of the center were to improve outcomes for children in foster care by addressing the barriers to accessing quality health care (see Figure 1). The center has three pillars: 1) excellence in evidence-based clinical care; 2) scholarly research and education of future health professionals; and 3) community engagement and advocacy.

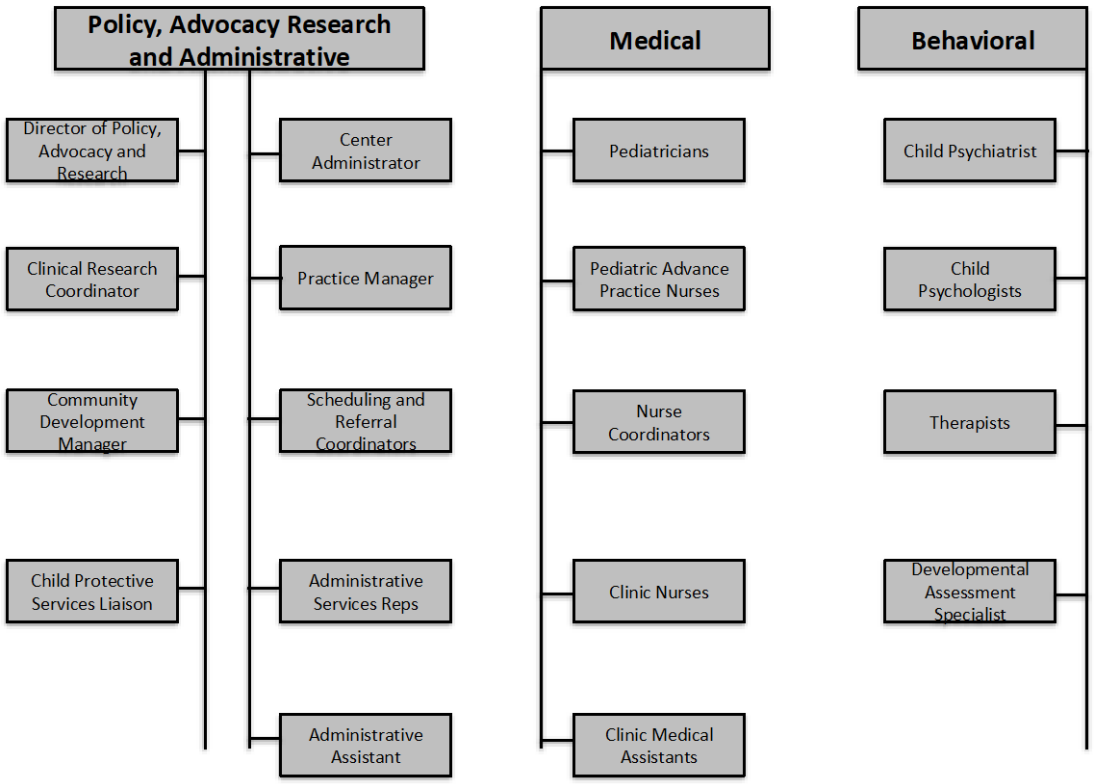
Figure 1.
Logic Model Addressing Barriers to Improve Health Outcomes of Children in Foster Care

Clinic Design

PHYSICAL SPACE.

Initial planning focused on the development of physical space that allowed for multiple providers to be present during the visit. The waiting room has colorful artwork and twinkle lights on the ceiling, and most of the visit is conducted in an inviting interview room and playroom connected by a window, so caregivers can discuss sensitive issues but children can still be seen. The exam room is separate, and time spent in that "medical" environment is minimized whenever possible. Conference room and team room space allowed collaboration between medical providers, early childhood specialists, therapists, psychologists, learners, child welfare agencies, and clinic staff. Wellness spaces with soft lighting, comfortable seating, and no technology provide places for staff to debrief, breathe, and recharge. Both clinic sites were completed in 2016 and fully staffed in 2018 (see Figure 2).

Figure 2.
Rees-Jones Center for Foster Care Excellence Organizational Chart: Clinical and Non-Clinical Staff



INTEGRATED CLINICAL CARE.

Following the recommendations of the AAP (Szalagyi et al., 2015), the Rees-Jones Clinic implemented an on-site, collaborative integrated primary care clinic incorporating elements of integrated care and patient-centered medical home and trauma-informed care models (Lamminen, McLeigh, & Roman, 2020; Pediatric Integrated Care Collaborative, [PICC], 2009) (Table 2). This model differs from "usual" medical care in a variety of ways.

Table 2.
Care Delivery Frameworks Informing the Rees-Jones Center's Trauma-Informed Integrated Care Model

Model of Care Delivery	Desired Attributes
Medical Home	Comprehensive, ongoing, family-centered health supervision, acute and chronic condition management
Fully Integrated Care	Coordinated behavior and medical care, where provides team-based documentation, collaboration, and management
Trauma-Informed Care	Acknowledges the impact of trauma, response to traumatic event and after-effects can impact health and well-being

Table 3 details a typical patient's possible outcome when receiving care in the Rees-Jones Center compared to "usual care."

Table 3.
Care Received by a Child Entering Foster Care in the Rees-Jones Center Compared to Usual Care. Example of "Martin," a 4-year-old removed from his family and placed in foster care with first-time foster parents with no other children.

Encounter	Rees-Jones Center	Usual Care
	Foster parent calls to schedule Visit scheduled in 48 hours Email sent to CPS liaison who uploads removal history to medical record CPS liaison obtains previous primary care provider's name and clinic nurse requests medical records	Foster parent calls to schedule initial visit no new patient appointment available for 3 weeks
Initial medical evaluation within 3 days of removal	Completed by Trauma-Informed Pediatric Provider and Licensed Behavioral Health Provider 1-hour visit Gave resources on	Completed in Emergency Room: 10-minute visit Documentation: Immunizations up to date, no known past medical history

	developmental milestones and sleep hygiene. Speech delay and occasional urinary accidents noted. Discussed impact of neglect and traumatic experiences on toileting and behavior. Referred to Speech Therapy AAP-Recommended Foster Care Laboratory Screenings Completed. Patient has mild anemia. Provider calls family and prescribes iron therapy Previous Primary Care Provider's Record Faxed to Clinic: No immunizations since 18 months of age, wheezing requiring ED visits and medications 3 times in past year Pediatrician calls family and prescribes asthma control and rescue medications	
Child and Adolescent Needs and Strengths Assessment (CANS) (required within 30 days of removal)	Completed by Licensed Behavioral Health Provider that assessed him at initial visit. Interviews both child and foster parent CANS visit summary in electronic medical record and discussed weekly clinic meeting Concern for posttraumatic stress disorder Evidenced-based therapy recommended	Completed by Community Behavioral Health Provider. Obtains information only from foster parent CANS uploaded to CPS system. Findings and recommendations not shared with primary care provider

Behavioral Health Encounter	BHP contacts family and recommends trauma-focused play therapy. Weekly therapy sessions set up with center provider	No corresponding service
Well Child Visit (required within 30 days of removal)	Immunizations updated. Behavioral and developmental screening completed. Concerns noted Referred for speech therapy and audiology evaluation Asthma well-controlled	No mention of immunizations during visit. CPS mandated Tuberculosis testing done Follow up in 1 year
Information Update	Child moved to pre-adoptive home. CPS Liaison updates demographics and front desk notifies new family of follow-up appointment. Therapy sessions are uninterrupted.	Medical Provider not notified of move.
Follow up Visit in 2 months with Medical and Child Development Specialist	Increased defiance, trouble sleeping, and increased temper tantrums. Discussed behavioral strategies in context of trauma, speech delay and normal development. Community behavioral support resources given to family	Martin is delayed starting PreK because his immunizations are not up to date
Care Conference with Caseworker, Child Welfare Agency, Foster Parents, Community Behavioral Skills Trainer and Center Medical Provider and Therapist	Decision made to begin Parent Child Interaction Therapy Psychological Evaluation for Autism Testing and Intellectual Evaluation Recommended developmental preschool through school district	Martin admitted to children's hospital with asthma exacerbation and influenza
Follow up Visit in 2 months	Martin's speech has improved and tantrums decreased. He is sleeping well and thriving in preschool. Biological parents have relinquished their rights, and the foster family is	At hospital follow-up visit, with a new medical provider, foster parent states Martin will be moved to another home, because they can't manage his outbursts, aggression and

	planning to adopt.	behaviors.

*(**Bold** font indicates Child Protective Services required visit, italicized indicates additional encounter at Rees-Jones Center)*

Families are referred to the center by word of mouth from other foster families or from child welfare agencies; caregivers choose the center as the child's primary care provider. In the initial visit, PCPs and BHPs assess the child and foster family together in a shared interview whenever possible. Extended appointment times (30-90 minutes) allow more time to address caregiver concerns. If there are urgent mental health care needs, the BHP can assess, safety plan, and arrange follow up as needed. All new patients are discussed in a weekly huddle that includes a psychiatrist, psychologists, licensed therapists, child development specialists, primary care providers, nurse coordinators, nurses, a child protective services liaison, and front desk staff. Nurse care coordinators ensure follow up on referrals and provide case management for medically complex patients. Collaboration with child welfare agency staff allows early communication regarding placement changes and court proceedings, which facilitates healthier transitions to the next placement or reunification and reduces gaps in care. When the Center is notified of a placement change, the clinic offers the new caregiver a transition phone call or visit. Nurse coordinators send a letter to the caseworker, new caregiver, and new PCP detailing medical and behavioral health concerns, current treatment, and recommendations for care.

Primary care services are team-based and comprehensive, including well-child care, sick visits, and care coordination to facilitate management of chronic medical issues as informed by the medical home model. A trauma-informed approach involves a shared interview to minimize re-telling of traumatic events, and discussions regarding removal or behavioral issues are conducted with the caregiver separately. Validated screeners for development (Ages and Stages), behavioral issues (Pediatric Symptom Checklist), and depression (PHQ-9) are conducted at all health supervision and follow-up visits. Behavioral health services include Trauma-Focused Cognitive-Behavioral Therapy (Cohen, Mannarino, & Deblinger, (2012)) and Parent-Child Interaction Therapy (McNeil & Hembree-Kigin, (2010)).

After the initial visit, a child is referred to psychiatry for evaluation if needed. The level of integration of medical and behavioral services is tailored according to the needs of the child.

Collaborative Integrated Care Benefits

A trauma-informed, integrated care model benefits children, families, and providers. A shared visit allows the child's story to be told only once, limiting potential re-traumatization and redundancy. Early involvement of behavioral health allows timely identification of issues and prompt referral to services, which can decrease placement breakdown. Both PCPs and BHPs have expertise in foster care policy and are knowledgeable about community resources to help caregivers in accessing supports. Recommendations are made in the context of understanding

trauma, medical concerns, and evidence-based treatments. Joint treatment planning allows the communication of a unified message, emphasizing both the child's physical and mental health care needs, which can improve treatment engagement and reduce unnecessary intervention as well as confusion and stress for caregivers. For example, shared management of encopresis addresses the medical treatment of constipation and the behavioral consequences of sexual abuse and PTSD simultaneously. Opportunities abound for interdisciplinary consultation and training.

Collaborative Integrated Care Challenges

Challenges with integrated care occur at the patient, provider, and system levels. Families did not always appreciate the benefit of seeing a BHP in the primary care visit. Some caregivers preferred shorter, less frequent appointments, especially when multiple siblings needed same-day visits. PCPs and BHPs who historically conducted visits independently now needed to share exam room space, time, and documentation. Processes for determining frequency and scheduling created administrative stress. The shared visits raised ethical issues for children with outside therapists. Electronic medical records were not equipped to schedule provider visits concurrently, and there was no process for billing. Legislation (Texas HB1549) mandating medical evaluation within 3 days of placement improved prompt access to medical care, but resulted in decreased availability of BHPs for the initial visit.

Clinic Outcomes

Reach of Services

Over time, the Rees-Jones Center for Foster Care Excellence has served increased patient volume. In 2010, the foster care clinic saw 723 patients at one site and in 2019, the Center served over 2,000 patients at two sites, almost 20% of the children in foster care in the region.

Health Outcomes

Measuring outcomes for children in foster care was part of the initial plan for the Center, but the first 5 years were focused on building and staffing the center. Hiring a Director of Policy, Advocacy and Research enabled increased focus on policy and the development of a research agenda and program evaluation plan. Strategies for obtaining data from electronic medical records required structural changes in documentation to allow accurate data retrieval and ongoing collaboration with data intelligence. Privacy concerns and issues surrounding center

access of Medicaid billing data, consent for research studies, and use of data not obtained in the clinic are barriers to measuring health outcomes of children in Texas foster care. Current projects include descriptions of our clinic population, caregiver stress, resilience, and implementation of recommended laboratory screenings, and evaluation of the impact of evidence-based psychotherapies.

Community Involvement, Advocacy, and Policy

The Rees-Jones Center is committed to developing relationships with community stakeholders involved with the care of children in foster care. When a child with complex medical or behavioral health care needs is not getting access to needed services or is at risk of placement breakdown, or a return to the biological parents is planned, center providers or child welfare staff can schedule a collaborative care conference. These conferences include the clinic treatment team (PCPs, BHPs, nurse coordinator), child welfare personnel, community supports (behavioral supports, speech or physical therapists), and foster or biological parents. Care conferences allow everyone involved in the child's care to identify and propose solutions to benefit the individual child.

Working with child advocacy agencies at the state level resulted in the passage of legislation (Texas HB 1549, 2017) mandating medical evaluation within 3 days of entering care; within thirty days, a health supervision visit; and, for children ages 3 and older, a mental health examination using the Child and Adolescent Needs and Strengths Assessment (John Praed Foundation, 2017). The Rees-Jones Center is a member of the Texas Foster Care Roundtable and leads the North Texas Region 3 Foster Care Consortium, which has representatives from child welfare, child advocacy agencies, schools, legal systems, and medical and behavioral providers.

Lessons Learned and Future Directions

In 2019, the Center conducted a reassessment of the strategic plan, with a redefined mission, "To be the trusted health resource making life better for children in foster care," and vision, "To achieve hope, health and healing for all children in foster care." Strategies to address challenges facing children in foster care were reassessed in the context of the current political and health care climate. The 2018 Texas Legislative Session's focus on child welfare and the passage of the Federal Families First Prevention Services Act provided opportunities to reframe Center goals and priorities. Increased focus was placed on examining health outcomes, program evaluation, and increasing advocacy for quality health care at the regional and state level.

Guidelines for Creating an Integrated Care Model for Foster Children

Focus on Sustainability of Funding

Many clinical positions are grant-funded or supported by the children's health system or academic institutions. Billing and reimbursement within the context of these systems is administratively complex. It is crucial to have upfront support regarding access to billing and reimbursement information at the provider, institutional, and insurance levels. For example, review of billing PCP and BHP time revealed denied reimbursement depending on what order behavior and medical services billing occurred. Addressing this required systemic changes in the institutional billing and electronic medical record, such as enabling separate PCP and BHP encounter scheduling and education of the children's hospital and academic institution's billing departments. Future strategies for sustainability include advocating for increased reimbursement statewide and exploring alternate sources of funding. Since all children involved with child welfare could benefit from integrated, trauma-informed care, providing services to children who remain with their biological parents receiving child welfare services, children who have been reunified with biological families, children who have been adopted or aged out of the foster care system, and unaccompanied immigrant minors in federal foster care could increase revenue.

Coordinate Processes for Communication Across Stakeholders

Continuous reassessment of communication among clinic providers and child welfare workers, clinic PCPs and BHPs, and with caregivers and community stakeholders is important. Standardizing communication methods based on urgency can decrease information overload and ensure the most pressing issues are addressed. For example, email can be used for issues needing an answer within a few days, instant messaging can be used for urgent questions requiring little or no discussion, and phone calls can be used for more complex problems.

Develop Community Partnerships

Community engagement is crucial to success of an integrated care clinic. Champions from the Center's Family Advisory Council, which includes foster and adoptive caregivers, ensure referrals of children to the clinic and provide a crucial caregiver perspective. Kinship caregivers, former foster youth, and biological parents are under-represented in discussions surrounding the care of children in foster care, and a community development coordinator can work with clinics to improve the diversity of stakeholders.

Taking a leadership role in consortiums and advocacy groups ensures that medical and behavioral health issues are always included in discussions on how to improve outcomes for children in foster care.

Invest in Education and Training

It is important to provide opportunities for training and education of future health professionals and the wider community. Students in medical, psychology, and public health disciplines often have no exposure to foster care; a trauma-informed integrated care clinic can increase the number of professionals caring for these children. Shared mentoring and limiting the number of learners can address challenges around increased visit times and multiple learners. Providing community trainings on topics of interest can inform caregivers and child welfare workers on important topics affecting children in foster care. Clinic providers have provided trainings on caring for drug-exposed infants, managing problems behaviors, addressing sensory differences, and trauma-informed parenting. Engagement with legal professionals and community PCPs and BHPs are next steps to increase awareness of the impact of child welfare involvement on health outcomes and the importance of trauma-informed care.

Seek Out Institutional Support

Engage leadership at your hospital, medical system, and Medicaid in the planning process. Investment in clinic space, longer visit times, financial support to cover shortfalls in revenue generation, and support staff are needed to support an integrated model. Advocacy for child welfare and health insurance reimbursement for evidence-based medical and behavioral health care should be included in development plans.

Pursue Formal Data Sharing Agreements to Facilitate Outcome Evaluation

Attention to detail regarding planning for evaluating health outcomes needs to be a part of the initial planning process. It is crucial to understand legal and ethical issues surrounding data sharing and approval for research involving children in child welfare custody. Establishing formal agreements for information sharing with child protective services early in the planning process could improve the ability to evaluate care delivery models and health outcomes. Concerns surrounding privacy of children and families involved in child welfare limits the use of data obtained outside of a medical encounter and has constrained robust evaluation of data of children seen in the clinic.

Continuous Assessment and Quality Improvement

Engage early in national initiatives supporting trauma-informed integrated care. The Center's involvement in the Pediatric Integrated Care Collaborative and the National Child Traumatic Stress Network's Trauma Informed Organizational Assessment revealed gaps in knowledge and training at the clinic and institutional level and informed the standardization of training for clinic staff in culturally sensitivity, trauma-informed care, diversity training and expansion of training on trauma informed care to the institution.

COVID-19 Impact

The current COVID-19 pandemic has presented challenges and opportunities for the Rees-Jones Center. Social distancing limited the number of in-person clinical staff and postponed non-urgent visits. Telehealth for psychiatry was already in pilot phase, but had not been implemented for primary care visits, integrated visits, or behavioral therapy. Rapid implementation of telehealth in both medical and behavioral health care enabled the delivery of therapy and many types of sick visits and follow up medical care. A one-way traffic flow, clustering sick appointments, and standardizing all visits to 60 minutes allowed minimizing exposure in clinic. Challenges with PCPs and BHPs working in multiple locations were addressed with protocols for communication and telehealth visit platforms. Integrated visits with PCPs in clinic and BHPs on virtual platforms were piloted and then fully implemented. An on-call BHP in clinic provides urgent consultation for PCPs if needed. COVID-19 updates facilitated timely information sharing regarding the rapidly evolving public health information and policy and operational updates at the clinic, institutional, county, state, and national levels. Decreased clinic volume increased available time for non-clinical projects. Workgroups updated the Center's website, published a white paper on the impact of COVID-19 on children in foster care, created novel web-based caregiver and stakeholder trainings, and implemented trauma-informed organizational assessment findings.

Conclusions

The Rees-Jones Center for Foster Care Excellence strives to continue to work to fulfill the mission of making life better for all children in foster care. This multi-disciplinary framework can serve as a model to promote collaboration and communication with all stakeholders who are committed to helping children and their families receive needed support and improve outcomes. Shifts toward prevention and family-based interventions provide opportunities to incorporate medical and behavioral health services into a strength-based, trauma-informed, family-centered approach that will ultimately benefit children. Children in foster care need to be served by a multi-disciplinary approach that involves the collaboration of

child welfare systems, schools, and the judicial/legal system. Children in foster care benefit when medical and behavioral health providers collaborate in a fully-integrated care delivery model.

Acknowledgement

We gratefully acknowledge Laura Lamminen, Jill Mcleigh, Anna Flores, Heidi Roman, and Hilda Loria for their support of this work, and thank all those working to improve the lives of children in foster care.

Author Note

The authors have no conflicts of interest to disclose relevant to this work. The Rees-Jones Center for Foster Care Excellence receives funding from the Rees-Jones Foundation and the Meadows Foundation.

Correspondence concerning this article should be addressed to: Kimberly E. Stone, MD, MPH, FAAP, Rees-Jones Center for Foster Care Excellence, 7601 Preston Road, MC P2.05, Plano, Texas 75024
email: Kimberly.Stone@utsouthwestern.edu

References

Ader, J., Stille, C. J., Keller, D., Miller, B. F., Barr, M. S., & Perrin, J. M. (2015). The medical home and integrated behavior health: Advancing the policy agenda. *Pediatrics, 135*(5),909-917. https://doi.org/10.1542/peds.2014-3941

American Academy of Pediatrics. (2020). Healthy Foster Care America Models of Care. https://www.aap.org/en/patient-care/foster-care/models-of-care-for-children-in-foster-care

American Academy of Pediatrics, District II Task Force on Health Care for Children in Foster Care. (2005). *Fostering health: Health care for children and adolescents in foster care*. American Academy of Pediatrics.

American Academy of Pediatrics. (2015). Health care issues for children and adolescents in foster care and kinship care. *Pediatrics*, *136(4),* e1142-1166. https://doi.org/10.1542/peds.2015-2656

American Academy of Pediatrics. Trauma Toolbox. https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/healthy-foster-care-america/Pages/Trauma-Guide.aspx#trauma

Bartlett, J. D, Barto, B., Griffin, J. L., Fraser, J. G., Hodgdon, H. & Bodian, R. (2016). Trauma-informed care in the Massachusetts Child Trauma Project. *Child Maltreatment, 21*(2),101-112. https://doi.org/10.1177/1077559515615700

Bennett, C. E., Wood, J. N. & Scribano, P. V. (2020). Health care utilization for children in foster care. *Academic Pediatrics, 20*(3), 341-347. https://doi.org/10.1016/j.acap.2019.10.004

Berger, L. M., Cancian, M., Han, E., Noyes, J. & Rios-Salas, V. (2015). Children's academic achievement and foster care. *Pediatrics, 135*(1) e109-e116. https://doi.org/10.1542/peds.2014-2448

Bramlett, M. D., & Radel, L. F. (2014). Adverse family experiences among children in nonparental care, 2011-2012. *National Health Statistics Reports, 74,* https://www.cdc.gov/nchs/data/nhsr/nhsr074.pdf

Butler M., Kane R. L., McAlpine D., Kathol, R. G., Fu S. S., Hagedorn H., & Wilt T. J. (2008). *Integration of mental health/substance abuse and primary pare No. 173* (Prepared by the Minnesota Evidence-based Practice Center under Contract No. 290-02-0009.) AHRQ Publication No. 09E003. Agency for Healthcare Research and Quality.

Campbell, K.A., Wuthrich, A. & Norlin, C. (2020). We have all been working in our own little silos forever: Exploring a cross-sector response to child maltreatment. *Academic Pediatrics*. 20(1):46–54. https://doi.org/10.1016/j.acap.2019.06.004

Centers for Medicaid and Medicare Services. (2014). *EPSDT-A guide for states: Coverage in the Medicaid benefit for children and adolescents.* https://www.hhs.gov/guidance/sites/default/files/hhs-guidance-documents/epsdt_coverage_guide_112.pdf

Center of Excellence for Integrated Health Solutions. (2017) Trauma-informed approaches: Practical strategies for integrated care settings. https://www.thenationalcouncil.org/resources/trauma-informed-approaches-practical-strategies-for-integrated-care-settings/

Child Welfare Information Gateway. (2015). Healthcare coverage for youth in foster care-and after. US Department of Health and Human Services, Children's Bureau.

Child Welfare League of America. (2007). *CWLA standards of excellence for health care services for children in out-of-home care.* Child Welfare League of America.

Cohen, J.A., Mannarino, A.P., & Deblinger, E. (2012). Trauma-Focused CBT for Children and Adolescents: Treatment Applications. New York: Guilford.

Deutsch, S. A., & Fortin, K. (2015). Physical health problems and barriers to optimal health care among children in foster care. *Current Problems in Pediatric and Adolescent Health Care, 45*(10), 286–291. https://doi.org/10.1016/j.cppeds.2015.08.002

Dickens, M. D., Green, J. L., Kohrt, A. E., & Pearson, H. A. (1992). The medical home. *Pediatrics, 90(5),* 774.

Dosreis, S., Yoon, Y., Rubin, D. M., Riddle, M. A., Noll, E., & Rothbard, A. (2011). Antipsychotic treatment among youth in foster care. *Pediatrics, 128*(6), e1459-e1466. https://doi.org/10.1542/peds.2010-2970

Duffee, S., Szilagyi, M., Forkey, H., and Kelly, E.T. (2021). *Pediatrics,* Trauma Informed Care in Child Health Systems. 148(2). e2021052579; https://doi.org/10.1542/peds.2021-052579.

Espeleta, H. C., Bakula, D. M., Sharkey, C. M., Reinink, J., Cherry, A., Lees, J., Shropshire, D., Mullins, L. L. & Gillaspy, S. R. (2020). Adapting pediatric medical homes for youth in foster care. Extension of the American Academy of Pediatrics guidelines. *Clinical Pediatrics, 59*(4/5), 411-420. https://doi.org/10.1177/0009922820902438

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adulthood. *American Journal of Preventive Medicine*,14(4), 245–258. https://doi.org/10.1016/s0749-3797(98)00017-8

Forkey, H., & Szilagyi, M. (2014). Foster care and healing from complex childhood trauma. *Pediatric Clinics of North America, 61*, 1059-1072. https://doi.org/10.1016/j.pcl.2014.06.015

Forkey, H., Szilagyi, M., Kelly, E. T., Duffee, J., & COUNCIL ON FOSTER CARE, ADOPTION, AND KINSHIP CARE, COUNCIL ON COMMUNITY PEDIATRICS, COUNCIL ON CHILD ABUSE AND NEGLECT, COMMITTEE ON PSYCHOSOCIAL ASPECTS OF CHILD AND FAMILY HEALTH (2021). Trauma-Informed Care. *Pediatrics*, *148*(2), e2021052580. https://doi.org/10.1542/peds.2021-052580

Godoy, L., Long, M., Marschall, D., Hodgkinson, S., Bokor, B., Rhodes, H., Crompton, H., Weissman, M., & Beers, L. (2017). Behavior health integration in health care settings: Lesson learned from a pediatric hospital primary care system. *Journal of Clinical Psychology in Medical Settings, 24*, 245–258. https://doi.org/10.1007/s10880-017-9509-8

Greiner, M. J., & Beal, S. J. (2018). Developing a health care system for children in foster care. *Health Promotion Practice, 19*(4), 621-628. https://doi.org/10.1177/1524839917730045

Hagan, J.F., Shaw, J.S. & Duncan, P.M (eds). (2017) Bright Futures: Guidelines for Health Supervision of Infants, Children and Adolescents, 4th ed. Elk Grove, Village, IL, American Academy of Pediatrics

Hansen, R. L., Mawjee, F. L., Barton, K., Metcalf, M. B., & Joye, N. R. (2004). Comparing the health status of low-income children in and out of foster care. Child Welfare, 83(4), 367-380.

Horwitz, S. M., Storfer-Isser, A., Kerker, B. D., Szilagyi, M., Garner, A., O'Connor, K. G., Hoagwood, K. E., & Stein, R. E. (2015). Barriers to the Identification and Management of Psychosocial Problems: Changes From 2004 to 2013. *Academic pediatrics*, *15*(6), 613–620. https://doi.org/10.1016/j.acap.2015.08.006

John Praed Foundation. (2017) Standard Child and Adolescents Needs and Strengths (CANS) Forms. https://praedfoundation.org/general-forms-cans/

Johnson, C., Silver, P., & Wulczyn, F. (2013). Raising the bar for health and mental health services for children in foster care: Developing a model of managed care. Council of Family and Child Caring Agencies.

Kolko, D. J., & Perrin, E. (2014). The integration of behavioral health interventions in children's health care: Services, science, and suggestions, *Journal of Clinical Child & Adolescent Psychology, 43*(2), 216-228, https://doi.org/10.1080/15374416.2013.862804

Korsen, N., Narayanan, V., Mercincavage, L., Noda, J., Peek, C. J., Miller, B. F., Unutzer, J., Moran, G., & Christensen, K. (2013). *Atlas of integrated behavioral health care quality measures*. (2013). Agency for Healthcare Research and Quality. AHRQ Publication No. 13-IP002-EF.

Lamminen, L. M., McLeigh, J. D., & Roman, H. K. (2020). Caring for children in child welfare systems: A trauma-informed model of integrated primary care. *Practice Innovations, 5*(1), 55–64. https://doi.org/10.1037/pri0000108

Levinson, D.R. (2015). Not all children in foster care who were enrolled in Medicaid received required health screenings. US Department of Health and Human Services. OEI-07-13-00460. https://oig.hhs.gov/oei/reports/oei-07-13-00460.pdf.

Levy, S. L., Hill, E., Mattern, K., McKay, K., Sheldrick, C., & Perrin, E. C. (2017). Colocated mental health/developmental care. *Clinical Pediatrics, 56*(11), 1023-1031. https://doi.org/10.1177/0009922817701172

Marsac, M. L., Kassam-Adams, N., Hildenbrand, A. K., Elizabeth Nicholls, E., Flaura K., Winston, F. K., Leff, S. S., & Fein, J. (2016). Implementing a trauma-informed approach in pediatric healthcare networks. *JAMA Pediatrics*, *170*(1), 70-77. https://doi.org/10.1001/jamapediatrics.2015.2206

McNeil, C.B. & Hembree-Kigin, T. L. (2010). Parent-Child Interaction Therapy, Second Edition. New York: Springer.

Mekonnen, R., Noonan, K., & Rubin, D. (2009). *Achieving better health outcomes for children in foster care.* Pediatric Clinics of North America. 56(2). 405-415. https://doi.org/10.1016/j.pcl.2009.01.005

Merrick, M. T., Ford, D. C., Ports, K. A., Guinn, A. S., Chen, J., Klevens, J., Metzler, M., Jones, C. M., Simon, T. R., Daniel, V. M., Ottley, P., & Mercy, J. A. (2019). Vital signs: Estimated proportion of adult health problems attributable to adverse childhood experiences and implications for prevention. *Morbidity and Mortality Weekly Report, 68*(44), 999-1005. https://doi.org/10.15585/mmwr.mm6844e1

Mufson, L., Rynn, M., Ynes-Lukin, P., Choo, T. H., Soren, K., Stewart, E., & Wall, M. (2018). Stepped care interpersonal psychotherapy treatment for depressed adolescents: A pilot study in pediatric clinics. *Administration and Policy in Mental Health and Mental Health Services Research, 45*(3), 417-431. https://doi.org/10.1007/s10488-017-0836-8

National Council for Behavioral Health. (2020). *Center for Excellence for Integrated Health Solutions*. SMAHSA-HRSA Center for Health Care Solutions: https://www.thenationalcouncil.org/integrated-health-coe/resources/

National Child Traumatic Stress Network. (2018). *Trauma informed integrated care for children and families in healthcare settings*. https://www.nctsn.org/resources/trauma-informed-integrated-care-children-and-families-healthcare-settings.

Pediatric Integrated Care Collaborative (PICC) Toolkit. (2009). *Trauma Informed Integrated Care*. Johns Hopkins University. https://cmht.johnshopkins.edu/assets/ii-trauma-informed-integrated-care.pdf

Peek, C. J. (2013). *Lexicon for behavioral health and primary care integration: Concepts and definitions developed by expert consensus*. Agency for Health Care Research and Quality. AHRQ Publication No. AHRQ 13-IP001-EF, 2013.

Pires, S.A., Stroul, B.A., & Hendricks, T.H. (2013). *Making Medicaid work for children in foster care: Examples from the field.* Center for Health Care Strategies, Inc. www.chcs.org/media/Making_Medicaid_Work.pdf.

Platt, R. E., Spencer, A. E., Burkey, M. D., Vidal, C., Polk, S., Bettencourt, A. F., Jain, S., Stratton, J. & Wissow, L.S. (2018). What's known about implementing co-located paediatric integrated care: A scoping review. *International Review of Psychiatry*, *30*(6), 242-271. https://doi.org/10.1080/09540261.2018.1563530

Raghavan, R., & McMillen, J. C. (2008). Use of multiple psychotropic medications among adolescents aging out of foster care. *Psychiatric Services*, *59*(9), 1052-1055. https://doi.org/10.1176/appi.ps.59.9.1052

Raghavan, R., Inoue, M., Ettner, S.I., Hamilton, B.H. & Landsverk,, J. (2010). A preliminary analysis of the receipt of mental health services consistent with national standards among children in the child welfare system. American Journal of Public Health. 100 (4). 742-749. https://doi.org/10.2105/AJPH.2008.151472

Rubin, D. M., O'Reilly, A., Luan, X., & Localio, A.R. (2007) The impact of placement stability on behavioral well-being for children in foster care. *Pediatrics, 119*(2), 336–344. https://doi.org/10.1542/peds.2006-1995

Sia, C., Tonniges, T. F., Osterhus, E. & Taba, S. (2004). History of the medical home concept. *Pediatrics, 113*,1473-1478.

Strathearn, L., Giannotti, M., Mills, R., Kisely, S., Naiman, J., & Abajobir, A. (2020). Long-term cognitive, psychological and health outcomes associated with child abuse and neglect. *Pediatrics*. *148(4)*. https://doi.org/10.1542/peds.2020-0438

Substance Abuse and Mental Health Services Administration. (2014). *SAMHSA's concept of trauma and guidance for atrauma-informed approach*. HHS Publication No. (SMA) 14-4884. Substance Abuse and Mental Health Services Administration.

Substance Abuse and Mental Health Administration. (2021). *Integration Practice Assessment Tool.* https://www.thenationalcouncil.org/resources/integration-practice-assessment-tool-ipat/

Szilagyi, M. A., Rosen, D. S., Rubin, D., & Zlotnik, S. (2015). Health care issues for children and adolescents in foster care and kinship care technical report. *Pediatrics, 136*, e1142-e1166. https://doi.org/10.1542/peds.2015-2656

Task Force on Health Care for Children in Foster Care. (2005). Fostering Health: Health care for children and adolescents in foster care. 2nd edition. American Academy of Pediatrics.

Terrell, L., Skinner, A. & Narayan, A. (2018). Improving timeliness of medical evaluations for children entering foster care. *Pediatrics.142*(6), e20180725. https://doi.org/10.1542/peds.2018-0725

Turney, K. & Wildeman, C. (2016). Mental and physical health of children in foster care. *Pediatrics*, *138*(5), e20161118. https://doi.org/10.1542/peds.2016-1118

Whitgob, E. E. & Loe, I. M. (2018). Impact of chronic medical conditions on academics of children in the child welfare system. Front. *Public Health*. *6*,267. https://doi.org/10.3389/fpubh.2018.00267

Zlotnik, C., Tam, T. W., & Soman, L. A. (2012) Life course outcomes on mental and physical health: The impact of foster care on adulthood. *American Journal of Public Health*, *102*(3), 534–540. https://doi.org/10.2105/AJPH.2011.300285

Zlotnik, S., Wilson, L., Scribano, P., Wood, J. M., & Noonan, K. (2015). Mandates for collaboration: Healthcare and child welfare policy and practice reforms create the platform for improved health for children in foster care. *Current Problems in Pediatric Health Care, 45*, 316-322. https://doi.org/10.1016/j.cppeds.2015.08.006

Chapter 6. Keeping Foster Parents Supported and Trained: Empowering Foster and Kinship Parents as Agents of Change for Children and Youth in Foster Care

Rohanna Buchanan, Ph.D.[1]

[1] Oregon Social Learning Center, Eugene, Oregon

Suggested Citation: Buchanan, Rohanna, *Keeping Foster Parents Supported and Trained: Empowering Foster and Kinship Parents as Agents of Change for Children and Youth in Foster Care*, in The Future of Foster Care: New Science on Old Problems by the Penn State Child Maltreatment Solutions Network (Sarah Font ed. & Yo Jackson ed., 2021). https://doi.org/10.26209/fostercare6

Abstract

Numerous studies show that although children and youth placed in foster care often have histories of significant trauma along with behavioral and emotional challenges, they also respond positively to effective parenting strategies. The research literature also shows that a safe, predictable, and nurturing home environment, along with positive parenting, can help reverse the negative effects of trauma for children and youth. KEEP is a parenting program designed to support the unique needs of children and youth placed in foster care. The KEEP model focuses on optimizing the role of foster and kinship parents as the agents of positive change for children and youth. KEEP has been shown to increase participants' positive parenting skills, decrease parenting stress, decrease child and youth behavior problems, decrease the number of placement disruptions, and increase the number and pace of positive permanency outcomes. Findings from the KEEP randomized controlled trials have been replicated in multiple independent research trials in the United States, England, and Denmark.

Abbreviations: Facilitation Adherence Rating (FAR), Fidelity Observation System (FIDO), Parent Daily Report (PDR), Randomized Controlled Trial (RCT), Social Advocates for Youth (SAY), Treatment Foster Care Oregon (TFCO)

The Impact of Placement Disruption on Children and Youth in Child Welfare

Placement disruptions for children in foster care increase in frequency and likelihood the longer a child is placed in care. In the context of this chapter, foster care refers to foster and kinship placements for children and youth removed from their parents by the child welfare system. Placement disruptions include moves to new foster or kinship homes, group homes, psychiatric or residential treatment facilities, and juvenile justice facilities as well as the child/youth running away. Positive exits from foster care typically include returning to parents, adoption, or permanent placement in foster care. The *Child Welfare Outcomes 2010-2014: Report to Congress* includes outcome data from 48 states (US Department of Health and Human Services, 2017). This report shows a median rate of 85.6% of children placed for 12 months or less experience placement stability, defined as 0-2 placements (range = 73.7% - 91.4%). However, the placement stability rate drops to a median of 66.1% for children placed for 12-24 months (range = 44.0% - 76.9%) and to a median of 35.7% for children placed more than 24 months (range = 15.7% - 53.1%).

Time placed in foster care is only one factor contributing to placement disruptions. Research has indicated that a sizeable proportion of children in foster care exhibit externalizing and internalizing behavior problems (e.g., aggressive, disruptive, destructive, and oppositional behaviors and depression, anxiety, and symptoms of traumatic stress, respectively) (Landsverk, Garland, & Leslie, 2002). Data from the National Survey of Child and Adolescent Well-Being study revealed that a high proportion (43% based on teacher report, 50% based on parent report) of children in foster care evidence some form of serious externalizing behavior problem (Chapman et al., 2003). One factor that makes these findings highly concerning is that the evidence indicates that externalizing behavior problems are associated with placement disruptions for children and youth in foster care (Chamberlain, Price, et al., 2006; Farmer et al., 2005; James, 2004). Not only are externalizing behavior problems predictive of placement disruptions, but the experience of having repeated placement disruptions amplifies the child/adolescent's risks for later mental health and physical problems including drug abuse, participation in health-risking sexual behavior, suicide attempts, homelessness, and premature death (Newton et al., 2000; Ryan & Testa, 2005). Thus, children in foster care displaying high levels of emotional and behavior problems have an increased likelihood of experiencing a change in placement, which, in turn, further increases the risks of continued and escalating problems over their life course.

Trauma-related emotional problems such as depressed mood, anxiety, and posttraumatic stress disorder symptoms are estimated to affect up to 63% of maltreated children (Gabbay et al., 2004). These emotional difficulties and trauma symptoms are a highly relevant target of intervention for children in foster care who have suffered severe maltreatment and/or experienced multiple traumatic events. Indeed, removal from birth parents and subsequent placement changes likely add further trauma exposure. Well-documented negative long-term outcomes associated with untreated trauma include adult depression, substance use, health-

risking sexual behavior, comorbid psychiatric disorders, neurobiological deficits, and negative health effects (Anda et al., 2006; Kendall-Tackett, 2002).

Building on the evidence that the negative effects of trauma can be reversed (Dahl, 2004; Fisher et al., 2006), KEEP (Keeping Foster Parents Supported and Trained) is a trauma-informed parenting program that promotes creating a safe, predictable, and nurturing home environment through the use of positive parenting skills. KEEP was developed to address the behavioral and emotional challenges of children in foster care and to reduce the risk of the spiraling co-escalation of further traumatization, behavior problems, and placement disruptions. The body of literature on the KEEP program, described in detail below, highlights the myriad ways that children in KEEP-trained foster homes show improved emotional, behavioral, and placement-related outcomes compared to children in non-KEEP homes.

Foster Parent Pre-Service and In-Service Training

Requirements for and implementation of pre-service and in-service training for foster parents in the United States vary widely from state to state (Gerstenzang, 2009; Grimm, 2003). Although most states mandate a minimum of 30 hours of training before a child is placed in a foster home, prospective foster parents in some states are obligated to complete as few as four hours of training prior to placement, and a rare few have no pre-service training requirements (Grimm, 2003). The requirements for in-service training are also varied where some states require 20 hours of annual training, some require no in-service training, but most fall somewhere in between (Gerstenzang, 2009). Based on this review, trainings for foster parents are available and are often mandatory; however, it is less clear whether these trainings are effective in helping foster parents manage the common challenges presented by the child welfare population.

In fact, previous reviews have noted a scarcity of evaluations of the most commonly used forms of pre- and in-service foster parent training (Dorsey et al., 2008; Festinger & Baker, 2013). Increases in knowledge related to the training curriculum have been reported, but none have evaluated effects on child problem behaviors or placement change (Festinger & Baker, 2013). In a Cochrane review of in-service multisession cognitive-behavioral-based foster parent training programs, Turner, Macdonald, and Dennis (2007) concluded that there was inadequate evidence supporting the efficacy of such programs to provide any guidance for interventionists or practitioners. Murray and colleagues (2010) highlight that effective foster parent training requires establishing parenting confidence and the ability of the foster parents to apply their training to the daily responsibilities and jobs of parenting, which in turn helps to mediate the stress associated with parenting and create a balanced parenting style that provides both discipline and positive reinforcement. In addition, evidence has accumulated to support the effectiveness of group-based in-service trainings for foster parents that use standardized curricula to impact parent and child behaviors (Festinger & Baker, 2013).

Clearinghouses or other registries of evidence-based practices provide another vantage point from which to assess the effectiveness of current foster parent training programs and possible alternatives. For example, the California Evidence-Based Clearinghouse for Child Welfare (CEBC; https://www.cebc4cw.org/) is a database of programs for child welfare. The CEBC site allows users to search for and compare programs across a range of factors (e.g., target population, program goals, child welfare outcomes). The CEBC conducts thorough reviews of each program using a scientific rating scale with the following ratings: (1) well-supported by research evidence, (2) supported by research evidence, (3) promising research evidence, (4) evidence fails to demonstrate effect, (5) concerning practice, and (NR) not able to be rated on the CEBC scientific rating scale. The majority of pre-service and in-service trainings, including commonly used training programs, received a rating of NR, indicating that there is not sufficient research evidence to evaluate the program using the scientific rating scale. The two programs comprising the KEEP model, KEEP and KEEP SAFE (discussed below), received CEBC ratings of 3 and 2 respectively.

The KEEP Model: Keeping Foster Parents Supported and Trained

The KEEP model is an adaptation of the Treatment Foster Care Oregon model (TFCO; formerly Multidimensional Treatment Foster Care). Both KEEP and TFCO were developed by Dr. Patricia Chamberlain and have a theoretical base in social learning theory (Patterson & Reid, 1984).

TFCO

TFCO is a community-based model for treating youth with severe and chronic delinquency, emotional problems, and behavioral problems (Buchanan, et al., 2017). The model is based on social learning theory and was formerly branded as Multidimensional Treatment Foster Care (MTFC). Patti Chamberlain developed TFCO (Chamberlain, 2003) in 1983 in response to a State of Oregon request for proposals for community-based alternatives to incarceration and placement in residential/group care settings. TFCO originally was designed as an alternative to group home placement or commitment to state training facilities for severely delinquent boys, and it has since been adapted to treat girls with chronic delinquency because of severe emotional and mental health problems referred from juvenile justice, mental health, and child welfare systems (Chamberlain, Leve, & DeGarmo, 2007; Leve, Chamberlain, & Kim, 2015; Leve, Chamberlain, & Reid, 2005). The TFCO model is based on more than 45 years of longitudinal research on the development of antisocial behavior.

Social learning theory posits that challenging child and adolescent behavior can be characterized as a process of inadvertently reinforced negative behavior that grows in

severity and complexity over time. The coercive processes that sustain challenging behaviors are often reciprocal and transactional whereby parent–child interactions influence parenting practices, which are simultaneously influenced by environmental and contextual factors. For example, a child arguing with a parent over completing chores might elicit a helpless or frustrated response from a parent, which can contribute to the parent giving in and not asking the child to complete the chore in the future. Contextual influences such as parental stress might further reinforce this coercive family processes, and once coercive processes are in place, they tend to be maintained with very little reinforcement. Fortunately, coercive processes (regardless of severity or duration) can be interrupted by improving parenting practices, as parenting plays a central role in the development, maintenance, and treatment of antisocial behavior. According to social learning theory, new behaviors are most effectively taught and generalized in naturally occurring settings (e.g., family, school, peer group). The TFCO model, designed with this in mind, keeps youth in the community and uses the foster family setting to teach, practice, and reinforce adaptive youth responses to everyday compliance demands. Research on the TFCO model has helped to identify specific parenting practices that serve as key variables in the development and treatment of challenging behavior and delinquency.

TFCO is a 6-9-month treatment program where children and youth are placed in highly trained and supported treatment foster homes. Children and youth placed in TFCO homes participate in a daily Point and Level system designed to reinforce typical positive and prosocial behaviors (e.g., getting up on time, going to school, being helpful). In addition, they receive individual therapy and skills coaching, and their biological parent or aftercare resource receives family therapy. TFCO foster parents attend a weekly support group to share stories, customize implementation of the Point and Level system, and review the child/youth's progress. For a full summary of the TFCO model and outcomes, see Buchanan et al. (2017).

KEEP

In the early 1990s, Dr. Chamberlain adapted the TFCO model to develop KEEP as a universal intervention to address the needs of all children in foster care. Similar to TFCO, the KEEP model is based on social learning theory and capitalizes on the powerful social role that parents play in the lives of their children and in the family as change agents. Where TFCO is an intensive 6-9-month treatment program, KEEP is a 16-week intervention. KEEP is currently being implemented in Oregon, San Diego, New York City, England, and Denmark. KEEP has previously been implemented in Maryland, Tennessee, and Washington state.

The KEEP model focuses on optimizing the role of foster and kinship parents as the agents of positive change for the child. In several studies (reviewed below), KEEP has been shown to increase participants' positive parenting skills, decrease parenting stress, decrease child and youth behavior problems, decrease the number of placement disruptions, and increase the number and pace of positive permanency outcomes. Figure 1 shows the Logic Model on the mechanisms of change for KEEP, highlighting the ways the program mitigates a child's risk for placement disruption.

Figure 1.
Logic Model on the Mechanisms of Change

KEEP Curriculum

The key principles of the model include: (a) reinforce normative and prosocial behavior in the child, (b) incentivize the behavior that parents want to see more of, (c) build cooperation, (d) teach new behaviors, (e) use non-harsh effective limit setting, and (f) manage emotions while parenting. These principles map onto protective and risk factors for vulnerable children and have been found to be malleable to change in previous studies (Eddy & Chamberlain, 2000). The KEEP model includes KEEP for children ages 4-12 and KEEP SAFE for youth ages 13-18. The KEEP and KEEP SAFE curricula include 16 weeks of manualized curricula, and each session is 90 minutes in length. The parenting skills included in the KEEP and KEEP SAFE curricula are consistent with those found in other evidence-based parenting programs for vulnerable children and youth (e.g., Parent Management Training Oregon [Forgatch & Patterson, 2010], Treatment Foster Care Oregon [Buchanan et al., 2017], Kids In Transition to School [Pears et al., 2018]). See Table 1 for information about the session topics. Delivering the intervention over 16 sessions provides foster/kin parents sufficient time to learn the KEEP parenting skills, practice them at home, and become comfortable and confident in consistently using them in their unique home environments.

Table 1.
KEEP and KEEP SAFE Curriculum Topics by Session

Session	KEEP	KEEP SAFE
1	Welcome and Overview	Welcome and Overview
2	Giving Clear Directions and Encouraging Cooperation	Giving Clear Directions and Encouraging Cooperation
3	Setting Clear Expectations and Teaching New Behaviors	House Rules and Pre-Teaching
4	Charts and Incentives with Children	Charts and Incentives with Teens – Part 1
5	Setting Limits	Charts and Incentives with Teens – Part 2
6	Discipline Strategies	Setting Limits
7	Balancing Encouragement and Limit Setting	Avoiding and Disengaging from Power Struggles

8	Avoiding and Disengaging from Power Struggles	Addressing Emotional Coercion
9	Pre-Teaching	Making a Plan for Super-Tough Behaviors
10	Making a Plan for Super-Tough Behaviors	Stress and Managing It
11	Promoting School Success	Promoting School Success
12	Promoting Positive Peer Relations	Promoting Positive Peer Relations
13	Stress and Managing It	Addressing Health Risking Sexual Behavior
14	Spare Session (review of prior content)	Addressing Teen Substance Use
15	Spare Session (review of prior content)	Technology and Teens
16	Celebration	Celebration

KEEP Intervention Delivery

KEEP groups are delivered by two co-group leaders over 16 weeks. Sessions are 90 minutes each week. The same group of 8-10 foster/kin parents attends each week, and most KEEP groups have a blend of both foster and kinship parents participating. In addition, most KEEP groups have a blend of both new and experienced parents. The KEEP model uses a group-based learning approach where parents are encouraged to share their experiences and ideas with other group members. Specifically, KEEP harnesses the knowledge and experience of the parents in the group to facilitate learning for all group members.

KEEP is delivered via a support group format rather than as a class where, rather than taking an expert role, KEEP group leaders facilitate discussions and problem solving about the weekly content and the parents' experiences with the KEEP skills. Each week, KEEP group leaders build on skills from the previous weeks, introduce new KEEP parenting skills, use discussion and role-play to tailor the content to the experiences of the parents in the group, and engage the parents in discussions about how the KEEP skills fit in their homes. Parents are encouraged to practice skills at home, and each session begins with a discussion about progress and challenges using the KEEP skills at home. Foster/kin parents identify a focal child at the start of the group, and weekly discussions and skills practice are tailored to the needs of that child. Often, the focus child has more challenging behaviors than other children in the home. Choosing one focus child also allows parents to learn and practice skills with one child at first, then generalize to other children as they experience success using new parenting skills. If a parent misses a group session, the group leaders will provide a make-up session.

KEEP group leaders collect and use data to inform the weekly sessions. KEEP group leaders collect the Parent Daily Report (PDR; Chamberlain & Reid, 1987) once per week for the focal child via a brief (5- to 10-minute) telephone call. PDR calls occur between KEEP sessions and are scheduled at a time convenient to the foster/kin parent. The PDR assesses the type and frequency of challenging behaviors demonstrated by the child over the past 24 hours. This measure includes 32 behaviors (e.g., arguing, backtalking, fighting) and the parent's associated

stress with each behavior. There is a child version and an adolescent version of the PDR. The PDR data are used to inform weekly KEEP session discussions and to monitor the child/teen's progress and parental stress over time. Children with 0-5 behaviors per day are at lower risk for placement disruption while those with more than 6 are at higher risk (Chamberlain, Price, et al., 2006). KEEP group leaders also track attendance and rate the foster/kin parent's engagement after each session. The engagement measure includes four items (e.g., "How much did they participate?" and "How much did they implement/complete the last session's home practice?") rated using a five-point Likert-type scale.

Foster/kin parents are referred to KEEP through official and informal sources including flyers posted at the child welfare office, recommendations from caseworkers, and word-of-mouth from parents who have completed KEEP groups. Participating parents are given monetary incentives for attending weekly sessions and bonuses for attending 80% of sessions. In addition, childcare and snacks are provided each week. Such incentives motivate parents to attend regularly. Monetary incentives have varied during real-world implementation of KEEP. For example, in Oregon, parents are paid $25 per session for attendance and in New York City parents are paid $25 per session for attendance, plus a $100 bonus for completion of 80% of all sessions. In the Tennessee statewide implementation, parents who completed KEEP received an additional $1.50 per day board rate. Monetary incentives are aimed at providing recognition for the time and effort parents make to attend sessions and help create a sense of respect and professionalization for their role as positive change agents.

KEEP Group Leader Training, Coaching, and Fidelity Monitoring

All KEEP group leaders are trained to identify, reinforce, and build upon the existing strengths of children/teens and their foster/kin parents in each group session. Prior to leading KEEP, group leaders attend a 5-day, interactive training with approximately 10 other trainees. The training includes discussion and role-play delivery of each KEEP session. During the training, trainees alternate between playing the role of the group leader and the role of a foster/kin parent. This training model gives new group leaders realistic experience of both leading and participating in a KEEP group.

Each group KEEP session is recorded, and the video is uploaded to a secure, web-based Fidelity Observation System (FIDO). For each new KEEP group leader, all sessions for their first three groups are watched and rated for fidelity by an experienced KEEP Coach, and the group leader receives weekly consultation from the KEEP Coach. Fidelity is rated using the Facilitation Adherence Rating (FAR) for KEEP, a 14-item measure rated on a five-point Likert-type scale. In addition to the session video and fidelity, FIDO is also used to track attendance, PDR, and written feedback to KEEP group leaders. KEEP Coaches are trained and supervised by model developers. Just as with KEEP group leaders, coaching sessions are observed and rated for model fidelity.

KEEP Outcomes

The KEEP model has been studied in multiple randomized controlled trials (RCTs) and implementation trials with over 2,000 foster/kin parents and their children. Each KEEP study is described in detail below, then a summary of the main findings is provided in Table 2. Across the KEEP trials, the focal child/youth completed study measures, though they did not participate in the KEEP intervention unless otherwise specified.

Oregon KEEP RCT

The initial KEEP study took place between 1988 and 1990 in three counties in Oregon. This study was designed to test the hypothesis that enhanced services and stipends to foster parents would benefit both foster parents and children in foster care. Seventy-two foster parents (61% female) and one of their children aged 4-7 were randomly assigned to one of three conditions: (a) Enhanced support and training (KEEP) plus an increased monthly payment (n = 31), (b) foster care as usual plus an increased monthly payment (n = 14), and (c) foster care as usual (n = 27). Foster care as usual included referrals to individual and family therapy, parenting classes for the biological parents, state mandated pre-service and in-service foster parent training, and case monitoring.

Ratings from child welfare caseworkers showed that foster parents in the KEEP condition increased their use of positive parenting skills after completing the KEEP group (Chamberlain et al., 1992). In addition, the PDR was collected when each family entered the study, and again 3 months later. The children placed in the KEEP-trained homes showed reduced behavior problems on the PDR compared to the children in both of the non-KEEP conditions (Chamberlain et al., 1992). Taken together, these results demonstrated the initial promise of the KEEP model.

San Diego KEEP RCT

To build on the promising results of the initial KEEP study, Dr. Chamberlain and colleagues conducted a large scale RCT of KEEP in San Diego, CA from 1999-2004. The San Diego KEEP RCT was designed to test the effectiveness of the KEEP model. Seven hundred foster/kin parents and one of the children aged 5-12 placed in their homes were randomly assigned to either the KEEP condition (n = 359) or the foster care as usual condition (n = 341). Foster care as usual included the same referrals and resources as this condition in the Oregon KEEP RCT. KEEP groups were delivered to groups of 3-10 foster/kin parents in community settings (e.g., at churches or community centers) in English and Spanish. Make-up sessions were delivered at home, and the PDR was collected once per week. During the PDR call, parents

were asked standardized questions rated on a seven-point Likert-type scale about their use of the KEEP parenting skills that day (e.g., "How often did you use rewards?" and "How often did you use discipline?").

Results from the San Diego KEEP RCT established the initial effectiveness of KEEP to increase foster/kin parents' use of positive parenting practices, reduce challenging child behaviors, increase children's chance of exiting foster care, and reduce placement disruptions. After 5 months, parents in the KEEP condition reported that they used more positive parenting skills than at baseline compared to the parents in the foster care as usual condition, and in particular, the KEEP parents used a higher proportion of positive reinforcement (Chamberlain, Price, Leve, et al., 2008). Further analyses showed that the proportion of positive reinforcement mediated reduced child behavior problems and that KEEP-trained parents who rated their child as having 6 or more behaviors on the PDR at baseline (and thus a higher risk of placement disruption) demonstrated greater increases in their use of positive reinforcement over the course of the study (Chamberlain, Price, Leve, et al., 2008). PDR results also showed that children of parents in the KEEP condition had lower rates of behavior problems than children in non-KEEP-trained homes (Chamberlain, Price, Leve, et al., 2008). Using child welfare administrative records data, Chamberlain and colleagues also demonstrated that placement in a KEEP-trained home not only nearly doubled the chances of a child exiting from foster care (e.g., reunifying with their parent, adoption), but also mitigated the risk-enhancing effects of multiple placements for children in foster care (Price et al., 2008). Simply put, children in KEEP-trained homes were less likely to disrupt from their foster/kin placement than children in the foster care as usual condition. As described above, children in foster care with higher rates of challenging behavior and children with multiple placement disruptions are at increased risk for future placement disruptions compared to their peers with lower rates of challenging behavior and fewer placement changes. The study authors suggest that, "One of the processes that may be contributing to this relation is the bidirectional relation between placement instability and child behavior problems" whereby reductions in challenging child behavior are related to increased foster parent competence and confidence that they have the skills to maintain the child in their home (Price et al., 2008; p. 8).

An additional within treatment analysis of the foster/kin parents who participated in the KEEP groups showed that the engagement of the parent in the weekly KEEP sessions impacts outcomes for children. As described in the KEEP Intervention Delivery section above, KEEP group leaders rate the foster/kin parent's engagement after each session on a four-item measure rated using a five-point Likert-type scale. Findings from hierarchical linear model and multilevel logit model analyses show that parental engagement moderated the influence of prior placements, particularly for Latino foster/kin parents (DeGarmo et al., 2009). The average number of children's prior placements was consistent across race-ethnicity groups. In addition, parental engagement was found to moderate risk of negative placement disruption for all race-ethnicity groups (DeGarmo et al., 2009). These results confirmed the researchers' hypothesis that parents with higher levels of group engagement would derive greater benefit from KEEP and identified parents' positive group engagement as a key mechanism of change for children with greater risk of disruption.

The data from the San Diego KEEP RCT also provided an opportunity to examine other factors related to placement disruption for children in both the KEEP and foster care as usual conditions. Examining outcomes for the children in the foster care as usual condition (*n* = 246), Chamberlain and colleagues found that children placed in non-kinship homes were more likely to disrupt from their placement than children placed with relatives (Chamberlain, Price, et al., 2006). Specifically, the children placed in non-kin homes (64%) were nearly three times more likely to disrupt from their placement than children placed in kinship homes. A later analysis of the KEEP sample replicated the finding that children placed in non-kinship homes were more likely to experience placement disruption than children placed with relatives (Hurlburt et al., 2010). Taken together, these findings are consistent with prior work showing that children placed with relatives are less likely to disrupt from placement (James, 2004). Other factors such as child gender, child and foster/kin parent race-ethnicity, child age, and number of children in the home were not linearly related to placement disruptions for this sample of children. Using a Cox hazard regression model, the researchers also found that the mean number of behaviors on the PDR at baseline predicted a child's risk for placement disruption such that the risk of disruption increased by 25% for each additional behavior over 6 (Chamberlain, Price, et al., 2006). The San Diego KEEP RCT was a major step forward in understanding the complex dynamics that contribute to and protect against placement disruption.

Train-the-Trainers

In an effort to enhance the post-study sustainability of KEEP at the request of the San Diego Health and Human Services Agency, the San Diego KEEP RCT utilized a cascading implementation model to test two versions of KEEP group delivery. The first cohort of KEEP group leaders (generation 1) were trained and supervised by KEEP model developers. The second cohort of KEEP group leaders (generation 2) were trained and coached by experienced group leaders (called local coaches) from generation 1. Model developers trained and supervised local coaches to train/coach the generation 2 KEEP group leaders, but had no direct contact with the group leaders themselves. See KEEP Group Leader Training section, above, for training details. Participants in the KEEP condition show no differences in child behavior and foster/kin parent outcomes for KEEP groups led by generation 1 and 2 KEEP group leaders (Chamberlain, Price, Reid, and Landsverk, 2008). Specifically, children placed in KEEP-trained homes had similar reductions in rates of challenging behavior whether the KEEP groups were delivered by generation 1 or generation 2 group leaders. This finding provided the initial evidence that KEEP can be effectively delivered in community settings without direct model developer involvement—a finding that indicated promise for ongoing implementation of KEEP in San Diego following study completion. A later study examined fidelity data for KEEP group leaders delivering KEEP in community-based, non-research settings (e.g., sites that implemented KEEP in their local area and were not affiliated with a formal study). Findings from the community-based implementations of KEEP showed that fidelity ratings of generation 2 KEEP group leaders were equivalent to ratings for generation 1 KEEP group leaders (Buchanan et al., 2013). Fidelity

was rated using the FAR, a 14-item measure rated on a five-point Likert-type scale, described above. These findings demonstrate that KEEP can be delivered with fidelity in community settings without direct involvement from model developers.

The KEEP SAFE Model

Following the successful outcomes demonstrated through the San Diego KEEP RCT, Chamberlain and colleagues developed and tested a version of the KEEP model for foster/kin parents of adolescents: KEEP SAFE. KEEP SAFE was based on the same positive parenting practices and key principles as the KEEP model with additional content tailored to the developmental needs of older youth in foster care. Multiple studies have demonstrated that youth placed in foster care are at higher risk for a range of health-risking behaviors than their peers without histories of foster care involvement (Aarons et al., 2008; Keller et al., 2010; Thompson & Auslander, 2007). Substance use has been identified as one of the most common mental health challenges experienced by youth in foster care, with rates of drug and alcohol abuse at two to five times higher than for their non-foster care involved peers (Keller et al., 2010). Other studies have shown that substance use is an important treatment target because substance use and abuse has been found to be a precursor to poor academic achievement, health-risking sexual behavior, and pregnancy during the teen years (Kim et al., 2013). In addition, an in-depth analysis of risk factors for adolescent girls involved with the juvenile justice system showed that they had poor knowledge of methods to reduce risk of pregnancy and prevent sexually transmitted infections, high rates of substance use, and high rates of association with peers who were engaging in illegal or antisocial behavior (Chamberlain, Leve, & Smith, 2006). For these reasons, KEEP SAFE sessions incorporate the same core parenting skills found in KEEP and also include parenting skills related to substance use, health-risking sexual behavior, and adolescent peer relations (see Table 1).

Like standard KEEP, KEEP SAFE foster/kin parent groups are delivered by two co-group leaders for 16 weeks, and the adolescent version of the PDR is collected weekly. In addition to the foster/kin parent group, the original KEEP SAFE model incorporated a 1:1 youth skills component to coach and practice skills that mapped onto the foster/kin parent sessions. Youth skills coaching sessions focused on skills to help adolescents to set goals, regulate emotions, make and maintain friendships with prosocial peers, reduce substance use, and reduce health-risking sexual behavior. Two KEEP SAFE RCTs were conducted between 2006 and 2009. The first RCT focused on girls in early adolescence, and the second RCT included both boys and girls in early through late adolescence. Both are described in detail in the next sections.

KEEP SAFE Outcomes

Oregon KEEP SAFE RCT

The Oregon KEEP SAFE RCT was conducted in two counties in Oregon 2006-2011. This RCT was designed to test the efficacy of the KEEP SAFE model with middle school-age girls placed in foster/kin care. This study was also called the Middle School Success project, and a primary goal was to test the KEEP SAFE model as a preventive intervention for younger adolescent girls (Chamberlain, Leve, & Smith, 2006). The transition from elementary to middle school is a particularly vulnerable developmental period for girls in foster care. Prior studies of girls who participated in the TFCO model have shown that girls who were placed in out-of-home care as children and later entered the juvenile justice system typically did so at younger ages (Leve & Chamberlain, 2004). Specifically, the researchers found that for the girls who participated in TFCO who also had histories of child welfare involvement (e.g., founded allegations of abuse and neglect, placement in foster/kin care), the age of first arrest was 12.5 years old (2004). Such findings point to early adolescence as a developmental target for preventive intervention, and development of the KEEP SAFE model was informed by the knowledge gained from the earlier TFCO trials with adolescent girls (2004). Eligible participants for the Oregon KEEP SAFE RCT were girls finishing elementary school (typically the fifth grade) and about to start middle school and placed in foster/kinship care. One hundred girls and their foster parents were randomly assigned to either the KEEP SAFE condition (n = 48) or the foster care as usual condition (n = 52).

KEEP SAFE parent groups were delivered in a conference room at the Oregon Social Learning Center and in the community (e.g., churches or community centers). Make-up sessions were delivered at home, at the center, or in the community. The adolescent version of the PDR was collected once per week. In addition to the parent groups, youth participants attended a 6-week summer program prior to the start of middle school, followed by weekly 1:1 youth skills coaching sessions during their first year of middle school (typically the sixth grade).

Published findings for the Oregon KEEP SAFE RCT focus on youth outcomes, and data were collected at baseline then 6, 12, 24, and 36 months post-baseline with 90-98% participation in assessments across data collection timepoints. One-year outcomes showed improved prosocial behavior for youth and reduced placement disruptions for youth who participated in KEEP SAFE (Kim & Leve, 2011). As with the KEEP San Diego RCT, child welfare administrative records data were used to evaluate placement disruptions. Three-year outcomes include reduced substance use (particularly tobacco and marijuana use), reduced internalizing and externalizing behaviors, reduced delinquency (Kim & Leve, 2011), and reduced health-risking sexual behavior (Kim et al., 2013). Further analyses revealed that not all outcomes were direct effects of the KEEP SAFE intervention and instead were a result of the youth's changed behavior over time following the completion of the KEEP SAFE intervention. For example, improvements in internalizing and externalizing behaviors and reductions in delinquency (measured at 12 and 24 months) for youth in the KEEP SAFE condition were mediated by youths' earlier improvements in prosocial behavior (measured at 6 and 12 months; Kim & Leve,

2011). In addition, at 3 years postbaseline, lower levels of health-risking sexual behaviors were mediated by youths' reduced tobacco and marijuana use (Kim et al., 2013).

San Diego KEEP SAFE RCT

The San Diego KEEP SAFE RCT took place from 2006-2009. This RCT was designed to test the efficacy of the KEEP SAFE model with both boys and girls aged 11-17 placed in foster/kin care. Two hundred and fifty-nine youth, girls (n = 154) and boys (n = 105), placed in care were randomly assigned to either the KEEP SAFE condition (n = 117) or the foster care as usual condition (n = 142).

Similar to the RCT of KEEP conducted in San Diego, KEEP SAFE groups were delivered to groups of 3-10 foster/kin parents in the community in English and Spanish. Make-up sessions were delivered at home or by telephone. The adolescent version of the PDR was collected once per week. This study replicated key findings from the Oregon KEEP SAFE RCT. Specifically, youth in the KEEP SAFE condition showed reduced substance use (tobacco, alcohol, and marijuana) at 18 months after the start of the intervention (Kim et al., 2017). Further analyses showed that the reduced substance use findings were a result of a cascade of changes over time: (a) the foster/kin parent-youth relationship quality improved within 6 months, (b) youth were less likely to associate with delinquent peers at 12 months, and (c) as a result, youth were less likely to use illegal substances at 18 months (Kim et al., 2017). Similar to the Oregon KEEP SAFE RCT, this trial demonstrated that longer-term effects of the KEEP SAFE intervention are mediated by shorter-term changes in behavior (e.g., reductions in associations with delinquent peers was preceded by improvement in the youth-foster/kin parent relationship). Further, these findings were generalized to a developmentally and ethnically diverse sample of youth in both middle and high school, suggesting that KEEP SAFE is effective for both younger and older youth with diverse ethnic backgrounds. Findings related to placement stability have not yet been published for this sample.

Unpublished findings did not bear out evidence for the value of the youth skills coaching component over and above the impact of the parenting intervention. Specifically, no meaningful differences on key outcomes were found for youth who participated in the skills coaching sessions compared to those who did not. Therefore, the skills component has been removed from the current KEEP SAFE model. In addition, while the original KEEP SAFE model was delivered over 20 weeks to accommodate the additional youth-specific content, current implementations of KEEP SAFE are delivered over 16 weeks using a revised and modernized manual.

KEEP and KEEP SAFE Replication Trials

The KEEP and KEEP SAFE program results have been replicated in five independent trials: two in San Diego, CA, one in Maryland, one in England, and one in Denmark. These trials

were initiated by researchers in each of these sites without direct involvement of the KEEP developers.

SAY KEEP Replication and Effectiveness Trials

Following the completion of the San Diego KEEP RCT in 2004, Price and colleagues conducted a KEEP replication trial in 2005-2008 with Social Advocates for Youth (SAY), a non-profit agency in San Diego that delivers a range of social and treatment programs in San Diego County. The SAY KEEP Replication was a quasi-experimental effectiveness study where a sample of 181 foster/kin parents and one focus child aged 5-12 placed in their home were recruited to the KEEP condition, and data from the foster care as usual condition from the 1999-2004 San Diego KEEP RCT (n = 341) was used as the control condition. For the SAY KEEP Replication, KEEP groups were delivered in San Diego County by SAY staff who were trained and supervised by experienced generation 2 group leaders from the San Diego KEEP RCT. KEEP group delivery was consistent with prior KEEP studies. Results from the SAY KEEP Replication reproduced the findings from the San Diego KEEP RCT showing that children placed in KEEP-trained homes show reduced child behavior problems at 4 months postbaseline, regardless of the initial level of behavior problems, even when KEEP is delivered by staff from a community agency and not study staff (Price et al., 2012). Placement outcomes were not examined for this sample.

To further test the impact of KEEP delivery in community settings, Price and colleagues conducted a second KEEP replication trial in 2009-2013 in San Diego, CA. The second replication trial was an RCT (SAY KEEP Sibling RCT), and outcomes were examined not only for a focal child, as in the prior KEEP and KEEP SAFE RCTs, but also for a specific foster sibling placed in the same home as the focal child. KEEP groups for the SAY KEEP Sibling RCT were delivered in San Diego County by SAY staff, some of whom had participated in the SAY KEEP Replication study. Three hundred and fifty-five children aged 5-12, their foster/kin parents, and a foster sibling were randomly assigned to the KEEP condition (n = 164) or the foster care as usual condition (n = 171). KEEP group delivery was consistent with prior KEEP studies.

Price and colleagues again replicated the finding that children placed in KEEP-trained homes demonstrated fewer behavior problems than children in the foster care as usual condition at 5 months post-baseline (Price et al., 2015). In addition, results show that both the child who is the focus of discussions in the KEEP groups and another foster sibling placed in the same home show reduced behavior problems at the end of the intervention (Price et al., 2015). Results also show that foster and kinship parents who participated in the KEEP groups reported lower levels of stress associated with the focal child's problem behavior after completing KEEP (Price et al., 2015). By demonstrating the same outcomes for both the focal child and a foster sibling, this study highlights the value of the KEEP intervention to positively impact multiple youth placed in the same foster/kin home.

Maryland KEEP Replication

The Maryland KEEP Replication took place in 2010-2012. Sixty-five children aged 4-12 and their foster/kin parents participated in Maryland KEEP. The Maryland KEEP Replication study was a treatment-only trial with pre- and post-test data collection and analyses. As with other KEEP trials, child participants completed study measures, though they did not participate in the intervention. KEEP groups were delivered by generation 1 group leaders, and other KEEP group delivery details were consistent with prior KEEP studies (e.g., size, make-up sessions, PDR).

The children in the Maryland KEEP Replication showed more frequent and significant behavior problems at the start of the intervention as measured by the PDR than did children in the prior KEEP trials. Yet, consistent with other KEEP studies, the Maryland KEEP Replication results show both reduced frequency of challenging child behavior and reduced severity of behavior problems 6 months after starting the KEEP group (Greeno et al., 2016). Notably, the Maryland KEEP Replication reproduced the San Diego KEEP RCT finding that children in KEEP-trained homes were less likely to disrupt from their foster/kin placements. Examinations of child welfare administrative records for the children placed in non-relative foster care (n = 57 or 88% of the sample) show that, compared to their placement data in the period prior to the start of KEEP, the children had more stable placements with reduced placement disruptions in the year after KEEP (Greeno et al., 2016). Before KEEP, 72% of the children placed in non-relative foster care had stable placements (defined as two or fewer placements) and 91% had stable placements in the year after KEEP (2016). In addition, 39% of the children placed in non-relative foster care exited from care (e.g., reunified with parents, adoption) within 12 months of the completion of the KEEP group. Records were not available for the children placed in kinship care (22% of the sample). Although there was no comparison group, the Maryland KEEP Replication findings related to reduced challenging child behavior, improved placement stability, and exits from care lend further confidence to the effectiveness of the KEEP intervention.

England KEEP & KEEP SAFE Replication

The KEEP programme in England began in 2009 as a government-funded pilot of KEEP in five sites (England KEEP & KEEP SAFE Replication). The goals of the pilot were to reduce placement disruption and provide foster/kin carers with training and support. The England KEEP & KEEP SAFE Replication took place from 2009-2014. Five hundred and seventy-two foster/kin carers of children aged 5-12 and youth aged 10-17 participated. The England KEEP Replication study was a treatment-only trial with pre- and post-test data collection and analyses. KEEP group delivery details were consistent with prior KEEP studies (e.g., size, make-up sessions, PDR), and the England KEEP Replication utilized the cascading implementation model tested in the San Diego KEEP RCT (described above) where generation 1 group leaders later train and support generation 2 group leaders.

Results from the England KEEP and KEEP SAFE implementation replicated earlier findings including reduced challenging child behavior for children and youth, reduced parenting stress, and increased use of positive parenting practices at the end of the intervention (Roberts et al., 2016). Longer-term outcomes show that child/youth and carer improvements were maintained at 6 and 12 months after completion of the groups (Roberts et al., 2016). Data collection for all measures occurred at baseline, at the end of the KEEP group (approximately 4 months postbaseline), and again at 6 and 12 months after the final KEEP group session. Challenging child behavior was measured using the PDR and the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997). The SDQ is a widely used, 25-item measure of child behavior. For the children in KEEP and KEEP SAFE-trained homes, mean scores on both the PDR and the SDQ were lower for the three follow-up time points than at baseline, showing reduced challenging behavior for the children and youth. Parenting stress was measured using the PDR, and carers reported that fewer of the child/youth's behaviors were stressful to them at the three follow up time points. The Parenting Scale (Arnold, et al., 1993) is a 30-item self-report measure of parenting discipline styles related to challenging child behavior (e.g., overly long reprimands or reliance on talking). Carers reported lower scores on the Parenting Scale at the end of the KEEP and KEEP SAFE groups, with scores continuing to decline at the two follow-up time points, indicating reductions in ineffective or harsh parenting practices and increased use of positive parenting practices over time. In addition, results for foster and kinship carers were found to be equivalent across all measures, suggesting that KEEP and KEEP SAFE are effective for both groups of carers. KEEP continues to be implemented in England in one site.

Denmark KEEP Replication

The Denmark KEEP Replication took place in 2015-2017 across seven sites. The Denmark KEEP Replication was a pilot funded by the Danish government following a call to improve training and support for foster/kin carers. Sixty-four foster/kin carers of children aged 5-12 participated. KEEP group delivery details were consistent with prior KEEP studies (e.g., size, make-up sessions, PDR), and the Denmark KEEP Replication utilized the cascading implementation model tested in the San Diego KEEP RCT (described above).

The Denmark KEEP Replication used a non-randomized control group design with n = 43 in the KEEP condition and n = 21 in the foster care as usual control condition. The PDR and SDQ were used to measure challenging child behavior. Data collection for the PDR and SDQ occurred at baseline and at the end of the KEEP group (approximately 4 months postbaseline). Results show somewhat reduced PDR and SDQ scores from baseline to the end of the KEEP group, indicating reduced challenging child behavior at the end of the intervention (Oxford Research, 2017). The study authors note that the reductions on the PDR and SDQ were not statistically significant. In addition, the Denmark KEEP Replication included qualitative interviews with the carers who participated in the KEEP groups. Qualitative outcomes indicate that foster/kin carers experienced less stress related to their child's challenging behaviors after

the completion of the KEEP group, that they used the positive parenting skills from KEEP regularly, and that they felt more skilled to handle child behavior problems (2017). Carers also reported that the children in their homes seemed happier and calmer (2017). KEEP continues to be implemented in Denmark in four sites. In addition, in 2018, experienced KEEP group leaders contributed to a cultural adaptation of the KEEP SAFE curriculum for the Danish context. Results from the KEEP SAFE pilot are pending.

Table 2.
Main Findings From Research on the KEEP Model

KEEP		
Study	**Publication**	**Main Findings**
Oregon KEEP RCT Years: 1988-1990 *N* = 72 children aged 4-7 and their foster/kin parents	Chamberlain et al. (1992)	Compared to the foster care as usual and the foster care as usual plus increased payment conditions, for parents and children in the **KEEP** condition, at 3 months postbaseline, results included: • Increased use of positive parenting skills • Reduced challenging child behavior
San Diego KEEP RCT (Efficacy Trial) Years: 1999-2004 *N* = 700 children aged 5-12 and their foster/kin parents	Chamberlain, Price, Leve, et al. (2008)	Compared to the foster care as usual condition, for parents and children in the **KEEP** condition, at 5 months postbaseline, results included: • Increased use of positive parenting skills by foster/kin parents, including positive reinforcement • Reduced challenging child behavior Mediation analysis results included: • Proportion of positive reinforcement mediates effects on child behavior problems • Positive reinforcement mediation effect is particularly evident for children with high levels of behavior problems at baseline
	Price et al. (2008)	Compared to the foster care as usual condition, for children in the **KEEP** condition, at 5 months postbaseline, results included:

		• Increased chance of positive exit from foster care (nearly double) • KEEP mitigated the negative risk-enhancing effect of multiple prior placements
	Chamberlain, Price, et al. (2006)	For children in the **foster care as usual** condition, at 12 months postbaseline, results included: • Children in non-kin placements were more likely to disrupt from placement than children placed with relatives • The mean number of behaviors on the PDR at baseline predicts risk for placement disruption
	Hurlburt et al. (2010)	For children in the **foster care as usual** condition, at 12 months postbaseline, results included: • Children in non-kin placements were more likely to disrupt from placement than children placed with relatives • The mean number of behaviors on the PDR at baseline predicts risk for placement disruption
	Chamberlain, Price, Reid, and Landsverk (2008)	For children in the **KEEP** condition, at 12 months postbaseline, results included: • Reduced challenging child behavior was the same for children in foster/kin homes whether KEEP group leaders were trained and supervised by study staff (cohort 1) or by intervention staff (cohort 2)
	DeGarmo et al. (2009)	For foster/kin parents in the **KEEP** condition, at 12 months postbaseline, results included: • Foster/kin parent engagement in KEEP moderates the influence of prior placements and risk of negative placement disruption for children placed in Latino foster/kin homes
	Chamberlain, Price, Reid, and Landsverk (2008)	**KEEP Cascade** analysis results included: • No differences in child behavior and foster/kin parent outcomes for KEEP groups led by generation 1 and generation 2 KEEP group leaders

KEEP in Community-Based, Non-Study Settings	Buchanan et al. (2013)	**Fidelity** analysis results included: • Equivalent fidelity for KEEP groups led by generation 1 and generation 2 KEEP group leaders
KEEP SAFE		
Study	**Publication**	**Main Findings**
Oregon KEEP SAFE RCT Years: 2006-2011 *N* = 100 girls (5th grade) and their foster/kin parents	Kim & Leve (2011)	Compared to the foster care as usual condition, for youth in the **KEEP** condition, at 12 months postbaseline, results included: • Reduced placement disruptions • Improved prosocial behavior At 36 months postbaseline, results included: • Reduced substance use, particularly tobacco and marijuana use • Reduced internalizing and externalizing behaviors and reduced delinquency were mediated by improved prosocial behavior
	Kim et al. (2013)	Compared to youth in the foster care as usual condition, for youth in the **KEEP SAFE** condition, at 36 months postbaseline, results included: • Lower levels of health-risking sexual behaviors were mediated by reduced tobacco and marijuana use
San Diego KEEP SAFE RCT Years: 2006-2009 *N* = 259 youth aged 11-17 and their foster/kin parents	Kim et al. (2017)	Compared to youth in the foster care as usual condition, for youth in the **KEEP** condition, at 6 months postbaseline, results included: • Improved quality of relationship with foster/kin parents At 12 months postbaseline, results included: • Fewer associations with delinquent peers At 18 months postbaseline, results included: • Reduced substance use
KEEP and KEEP SAFE Effectiveness and Replication		
Study	**Publication**	**Main Findings**
SAY KEEP Replication	Price et al. (2012)	Compared to a historical foster care as usual control condition from the San Diego KEEP RCT,

Years: 2005-2008 *N* = 181 children aged 5-12 and their foster and kinship parents		for children in the **KEEP** condition, at 4 months postbaseline, results included: • Reduced challenging child behavior
SAY KEEP Sibling RCT Years: 2006-2009 *N* = 335 children aged 5-12 and their foster/kin parents	Price et al. (2015)	Compared to parents and children in the foster care as usual condition, for parents and children in the **KEEP** condition, at 5 months postbaseline, results included: • Reduced parental stress associated with child behavior problems • Reduced challenging child behavior for the focal child • Reduced challenging child behavior for foster siblings
Maryland KEEP Replication Years: 2010-2012 *N* = 65 children aged 4-12 and their foster/kin parents	Greeno et al. (2016)	All participants received **KEEP**, and at 6 months postbaseline, results included: • Reduced challenging child behavior • Reduced placement disruptions
England KEEP Replication Years: 2009-2014 *N* = 572 children and youth aged 4-17 and their foster/kin parents	Roberts et al. (2016)	All participants received **KEEP** or **KEEP SAFE**, and at 6 and 12 months postbaseline, results included: • Reduced challenging child/youth behavior • Reduced foster/kin carer stress • Increased use of positive parenting skills and decreased use of ineffective or harsh parenting skills
Denmark KEEP Replication (mixed-method study) Years: 2015-2017 *N* = 64 children aged 5-12 and their foster/kin parents	Oxford Research (2017)	Compared to the foster care as usual condition, for youth in the **KEEP** condition, at 6 months postbaseline, qualitative results included: • Reduced challenging child behavior (not statistically significant) At 6 months postbaseline, qualitative results for carers and children in the **KEEP** condition included: • Increased use of positive parenting skills • Reduced parental stress associated with challenging child behavior • Parents feel more skilled to handle challenging

		child behavior • Foster/kin parent report that children are happier and calmer

Conclusion

The KEEP and KEEP SAFE models were developed specifically to address the behavioral and emotional needs of children and youth placed in foster and kinship care. The link between multiple placement disruptions and increased risk for cascading mental health, physical health, and social problems for children and youth in foster care is well documented (Newton et al., 2000; Ryan & Testa, 2005). Similarly, the link between higher levels of emotional and behavioral problems and increased rates of placement disruptions for children and youth in foster care is also well established (Chamberlain, Price, et al., 2006; Farmer et al., 2005; James, 2004). Therefore, children and youth's emotional and behavioral health is a logical target for intervention.

Group-based in-service trainings for foster/kin parents using standardized curricula have been established as an effective training strategy (Festinger & Baker, 2013). The KEEP model is standardized, group-based, and delivered as a support group to increase foster/kin parent learning and engagement with the group and session content. As a result, foster/kin parents who participate in KEEP groups are empowered to use a range of positive parenting skills tailored to the context of their child and their home. Thus, supporting foster/kin parents to create and maintain stable, predicable, and nurturing homes places them as the agents of change for children and youth in care.

Multiple studies of the KEEP model have demonstrated that use of positive parenting skills, particularly positive reinforcement, was related to reduced stress for foster/kin parents, improved parenting confidence, and improved child/youth behavior (e.g., reduced internalizing and externalizing behavior problems, reduced substance use, reduced health-risking sexual behavior). Further, KEEP has the potential to ameliorate the risks associated with histories of trauma and placement disruption by reducing health-risking behaviors and placement disruptions for children and youth in foster care.

Successful implementation of evidence-based models like KEEP with diverse communities in non-study environments is essential to achieving wider service delivery and, ultimately, improving outcomes for children and youth in foster care. The KEEP literature includes multiple examples of successful delivery of KEEP in community-based settings with diverse ethnicities, cultures, and languages. Currently, the KEEP model is implemented in San Diego and New York City, statewide in Oregon, and in multiple sites in England and Denmark.

Future Directions for the KEEP Model

KEEP's cascading implementation model provides a framework for integrating KEEP training and support into the workforce of implementation sites. For example, community-based implementations of KEEP in New York City, Oregon, Tennessee, England, and Denmark successfully developed a strong cohort of generation 2 group leaders who were trained and supported by local KEEP coaches who had previously been generation 1 group leaders. Other efforts to increase the reach of KEEP include delivering the model via tele-health methods; adapting the model to address specific cultural and social needs of children, youth, and foster/kin parents; and evaluating the unique needs of kinship families.

In Oregon, a virtual version of the model, "TeleKEEP," is being piloted with the aim of increasing the reach of KEEP to rural foster/kin families. For TeleKEEP, foster/kin parents attend KEEP and KEEP SAFE sessions from home via video conference. Early unpublished results from the Oregon TeleKEEP pilot show high rates of foster/kin parent attendance and engagement and decreases in challenging child and youth behavior (as measured by the PDR). The TeleKEEP pilot began in the fall of 2019 and, due to the COVID-19 pandemic, the early lessons learned helped the model developers support all KEEP sites nationally and internationally to move to an online platform in April 2020.

The KEEP model developers are partnering with a community agency with strong connections to the Native American community in Oregon to adapt the KEEP model for the specific cultural and social needs of Native American children and youth in foster care. Nationwide, Native American communities have a complicated and often tense relationship with child welfare (Cooper, 2013). In Oregon, many Native American children and youth are placed in non-Native foster homes and, as such, may not have access to culturally important events, rituals, and items. Though still in the early stages, this adaptation of the KEEP model has the potential to provide Native and non-Native foster/kin families with the skills to implement positive parenting practices in a culturally sensitive and responsive manner.

The KEEP model developers are also piloting a version of KEEP and KEEP SAFE specific to the needs of kinship families. The published results of multiple RCTs (described above) as well as recent unpublished analyses of data from community-based implementations of KEEP have demonstrated that children in both foster and kinship homes benefit from placement in KEEP-trained homes. However, empirical questions remain about potential additional benefits that could be derived from a kinship-specific version of the KEEP model.

The urgent need for high-quality, culturally sensitive, and effective parenting to prevent placement disruptions and ameliorate trauma-related behavioral and emotional challenges for children and youth placed in foster care cannot be overstated. Multiple research trials demonstrate the effectiveness of the KEEP parenting strategies to produce significant and meaningful outcomes for children and youth, for their foster/kin parents, and, as a result, for the child welfare system.

Acknowledgements

Support for this research was provided by Grant Nos. R01MH060195, R01MH054257, R01DA020172, R01DA032634, P20DA17592, and P50DA035763. The author would like to thank all of the participating children, youth, and foster and kin parents; Patricia Chamberlain, developer; JP Davis, supervisor; Courtenay Padgett and Jan Price, project coordinators; Katherine Bennett, director of implementation; David Kerr, Gordon Harold, and David DeGarmo, statistical consultants; Norma Talamentes and Melissa Woods, lead interventionists; and Caroline Dennis, editorial support. The author would also like to thank the KEEP and KEEP SAFE collaborating partners in San Diego, CA; Eugene, Oregon; Baltimore, MD; England; and Denmark.

Author Note

Rohanna Buchanan: https://orcid.org/0000-0003-454101770

The KEEP and KEEP SAFE trials conducted at the Oregon Social Learning Center were registered with ClinicalTrials.gov (Identifiers NCT00239837 and NCT01549561). I have no conflicts of interest to disclose. The KEEP and KEEP SAFE trials were funded by Grants R01MH060195 and R01MH054257, NIMH, U.S. PHS; and R01DA020172, R01DA032634, P20DA17592, and P50DA035763, NIDA U.S. PHS.

Correspondence concerning this chapter should be addressed to Rohanna Buchanan, Oregon Social Learning Center, 10 Shelton McMurphey Blvd., Eugene, OR 97401, United States. Email: rohannab@oslc.org.

References

Aarons, G. A., Hazen, A. L., Leslie, L. K., Hough, R. L., Monn, A. R., Connelly, C. D., ... & Brown, S. A. (2008). Substance involvement among youths in child welfare: The role of common and unique risk factors. *American Journal of Orthopsychiatry*, *78*(3), 340-349.

Anda, R. F., Felitti, V. J., Bremner, J. D., Walker, J. D., Whitfield, C. H., Perry, B. D., ... & Giles, W. H. (2006). The enduring effects of abuse and related adverse experiences in childhood. *European Archives of Psychiatry and Clinical Neuroscience*, *256*(3), 174-186.

Arnold, D. S., O'leary, S. G., Wolff, L. S., & Acker, M. M. (1993). The Parenting Scale: A measure of dysfunctional parenting in discipline situations. *Psychological Assessment*, *5*(2), 137.

Buchanan, R., Chamberlain, P., Price, J. M., & Sprengelmeyer, P. (2013). Examining the equivalence of fidelity over two generations of KEEP implementation: A preliminary analysis. *Children and Youth Services Review*, *35*(1), 188-193.

Buchanan, R., Chamberlain, P., & Smith, D. K. (2017). Treatment Foster Care Oregon for Adolescents. *Evidence-Based Psychotherapies for Children and Adolescents*, 177.

Chamberlain, P. (2003). The Oregon multidimensional treatment foster care model: Features, outcomes, and progress in dissemination. *Cognitive and behavioral Practice*, *10*(4), 303-312.

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*(1), 187.

Chamberlain, P., Leve, L. D., & Smith, D. K. (2006). Preventing behavior problems and health-risking behaviors in girls in foster care. *International Journal of Behavioral Consultation and Therapy*, *2*(4), 518.

Chamberlain, P., Moreland, S., & Reid, K. (1992). Enhanced services and stipends for foster parents: Effects on retention rates and outcomes for children. *Child Welfare*, *71*(5), 387-401.

Chamberlain, P., Price, J., Leve, L. D., Laurent, H., Landsverk, J. A., & Reid, J. B. (2008). Prevention of behavior problems for children in foster care: Outcomes and mediation effects. *Prevention Science*, *9*(1), 17-27.

Chamberlain, P., Price, J., Reid, J., & Landsverk, J. (2008). Cascading implementation of a foster and kinship parent intervention. *Child Welfare*, *87*(5), 27.

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

Chamberlain, P., & Reid, J. B. (1987). Parent observation and report of child symptoms. *Behavioral Assessment, 9,* 97-109.

Chapman, M. V., Gibbons, C. B., Barth, R. P., & McCrae, J. S. National Survey of Child and Adolescent Well-Being Research Group. (2003). Parental views of in-home services: What predicts satisfaction with child welfare workers. *Child Welfare*, *82*, 571-596.

Cooper, T. A. (2013). Racial bias in American foster care: The national debate. *Marquette Law Review*, *97*(2), 215-277.

Dahl, R. E. (2004). Adolescent brain development: A period of vulnerabilities and opportunities. Keynote address. *Annals of the New York Academy of Sciences*, *1021*(1), 1-22.

DeGarmo, D. S., Chamberlain, P., Leve, L. D., & Price, J. (2009). Foster parent intervention engagement moderating child behavior problems and placement disruption. *Research on Social Work Practice*, *19*(4), 423-433.

Dorsey, S., Farmer, E. M., Barth, R. P., Greene, K. M., Reid, J., & Landsverk, J. (2008). Current status and evidence base of training for foster and treatment foster parents. *Children and Youth Services Review*, *30*(12), 1403-1416.

Eddy, J. M., & Chamberlain, P. (2000). Family management and deviant peer association as mediators of the impact of treatment condition on youth antisocial behavior. *Journal of Consulting and Clinical Psychology, 68,* 857-863.

Farmer, E., Lipscombe, J., & Moyers, S. (2005). Foster carer strain and its impact on parenting and placement outcomes for adolescents. *British Journal of Social Work*, *35*(2), 237-253.

Festinger, T., & Baker, A. J. (2013). The quality of evaluations of foster parent training: An empirical review. *Children and Youth Services Review*, *35*(12), 2147-2153.

Fisher, P. A., Gunnar, M. R., Dozier, M., Bruce, J., & Pears, K. C. (2006). Effects of therapeutic interventions for foster children on behavioral problems, caregiver attachment, and stress regulatory neural systems. *Annals of the New York Academy of Sciences*, *1094*(1), 215-225.

Forgatch, M. S., & Patterson, G. R. (2010). Parent Management Training—Oregon Model: An intervention for antisocial behavior in children and adolescents. In J. R. Weisz & A. E. Kazdin (Eds.), *Evidence-based psychotherapies for children and adolescents* (p. 159–177). The Guilford Press.

Gabbay, V., Oatis, M. D., Silva, R. R., & Hirsch, G. (2004). Epidemiological aspects of PTSD in children and adolescents. In R. R. Silva (Ed.), *Posttraumatic stress disorder in children and adolescents: Handbook* (pp. 1-17). W. W. Norton & Co.

Gerstenzang, S. (2009, July/August). Foster parent training in America. *Fostering Families Today*, 28-30.

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. *Journal of Child Psychology and Psychiatry*, *38*(5), 581-586.

Greeno, E. J., Lee, B. R., Uretsky, M. C., Moore, J. E., Barth, R. P., & Shaw, T. V. (2016). Effects of a foster parent training intervention on child behavior, caregiver stress, and parenting style. *Journal of Child and Family Studies*, *25*(6), 1991-2000.

Grimm, B. (2003). Foster parent training: What the CFS reviews do and don't tell us. *Youth Law News*, *24*(2), 1-29.

Hurlburt, M. S., Chamberlain, P., DeGarmo, D., Zhang, J., & Price, J. M. (2010). Advancing prediction of foster placement disruption using brief behavioral screening. *Child Abuse & Neglect*, *34*(12), 917-926.

James, S. (2004). Why do foster care placements disrupt? An investigation of reasons for placement change in foster care. *Social Service Review*, *78*(4), 601-627.

Keller, T. E., Salazar, A. M., & 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.

Kendall-Tackett, K. (2002). The health effects of childhood abuse: Four pathways by which abuse can influence health. *Child Abuse & Neglect*, *26*(6-7), 715-729.

Kim, H. K., Buchanan, R., & Price, J. M. (2017). Pathways to preventing substance use among youth in foster care. *Prevention Science*, *18*(5), 567-576.

Kim, H. K., & Leve, L. D. (2011). Substance use and delinquency among middle school girls in foster care: A three-year follow-up of a randomized controlled trial. *Journal of Consulting and Clinical Psychology*, *79*(6), 740.

Kim, H. K., Pears, K. C., Leve, L. D., Chamberlain, P., & Smith, D. K. (2013). Intervention effects on health-risking sexual behavior among girls in foster care: The role of placement disruption and tobacco and marijuana use. *Journal of Child & Adolescent Substance Abuse*, *22*(5), 370-387.

Landsverk, J., Garland, A. F., & Leslie, L. K. (2002). Mental health services for children reported to child protective services. In J. E. B. Meyers & L. Berliner (Eds.), *The APSAC handbook on child maltreatment* (2nd ed., pp. 487-507). Sage Publications.

Leve, L. D., & Chamberlain, P. (2004). Female juvenile offenders: Defining an early-onset pathway for delinquency. *Journal of Child & Family Studies*, *13*, 439-452.

Leve, L. D., Chamberlain, P., & Kim, H. K. (2015). Risks, outcomes, and evidence-based interventions for girls in the US juvenile justice system. *Clinical child and family psychology review*, *18*(3), 252-279.

Leve, L. D., Chamberlain, P., & Reid, J. B. (2005). Intervention outcomes for girls referred from juvenile justice: effects on delinquency. *Journal of consulting and clinical psychology*, *73*(6), 1181.

Murray, M. M., Southerland, D., Farmer, E. M., & Ballentine, K. (2010). Enhancing and adapting treatment foster care: Lessons learned in trying to change practice. *Journal of Child and Family Studies*, *19*(4), 393-403.

Newton, R. R., Litrownik, A. J., & Landsverk, J. A. (2000). Children and youth in foster care: Disentangling the relationship between problem behaviors and number of placements. *Child Abuse and Neglect, 24*, 1363-1374.

Oxford Research on behalf of the Danish National Board of Health. (2017). *Evaluation of the test of the method "Keeping foster parents trained and supported (KEEP)."*

Patterson, G. R., & Reid, J. B. (1984). Social interactional processes within the family: The study of moment-by-moment family transactions in which human social development is embedded. *Journal of Applied Developmental Psychology, 5*, 237-262.

Pears, K. C., Carpenter, L., Kim, H. K., Peterson, E., & Fisher, P. A. (2018). The Kids in Transition to School Program. In A. Mashburn, J. LoCasale-Crouch, & K. Pears (Eds.), *Kindergarten transition and readiness* (pp. 283-302). Springer, Cham.

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

Price, J. M., Roesch, S. C., & Walsh, N. E. (2012). Effectiveness of the KEEP foster parent intervention during an implementation trial. *Children and Youth Services Review*, *34*(12), 2487-2494.

Price, J. M., Roesch, S., Walsh, N. E., & Landsverk, J. (2015). Effects of the KEEP foster parent intervention on child and sibling behavior problems and parental stress during a randomized implementation trial. *Prevention Science*, *16*(5), 685-695.

Roberts, R., Glynn, G., & Waterman, C. (2016). 'We know it works but does it last?' The implementation of the KEEP foster and kinship carer training programme in England. *Adoption & Fostering*, *40*(3), 247-263.

Ryan, J. P., & Testa, M. F. (2005). Child maltreatment and juvenile delinquency: Investigating the role of placement and placement instability. *Children and Youth Services Review*, *27*(3), 227-249.

Thompson, R. G., Jr. & Auslander, W. F. (2007). Risk factors for alcohol and marijuana use among adolescents in foster care. *Journal of Substance Abuse Treatment*, *32*(1), 61-69.

Turner, W., Macdonald, G. M., & Dennis, J. A. (2007). Behavioural and cognitive behavioural training interventions for assisting foster carers in the management of difficult behaviour. *Campbell Systematic Reviews*, *3*(1), 1-77.

US Department of Health and Human Services. (2017). *Child welfare outcomes 2010-2014: Report to congress*. https://www.acf.hhs.gov/sites/default/files/documents/cb/cwo10_14.pdf

Chapter 7. What's Working for Academic Outcomes for Youth in Foster Care

Emily Peeler, J.D., M.S.W.[1]
Austen McGuire[2]

[1]American Bar Association Center on Children and the Law
[2]University of Kansas

Suggested Citation: Peeler, Emily & McGuire, Austen, What's Working for Academic Outcomes for Youth in Foster Care, in The Future of Foster Care: New Science on Old Problems by the Penn State Child Maltreatment Solutions Network (Sarah Font ed. & Yo Jackson ed., 2021). https://doi.org/10.26209/fostercare7

Abstract

Children in foster care are at a greater risk of negative educational outcomes (e.g., low grades, high school dropout) than children not in foster care. Recognizing the importance of supporting the educational needs of students in foster care, momentum has grown over the last two decades at the federal, state, and local levels to prioritize the educational needs of students in foster care. Child welfare agencies, education agencies, and courts are working together to improve education policies and practices around the country. In the following chapter, an overview of the empirical evidence documenting the risk children in foster care face at school is provided. Information on important legislative efforts and policy guidance (i.e., Blueprint for Change) that have sought to address the barriers that increase the risk of poor academic functioning among these children is reviewed. Importantly, there has also been an increase in collecting and reporting on data at state and local levels to evaluate what programs are working and identify where interventions are needed for addressing the educational needs of children in foster care. Case examples of these programs are provided and discussed to demonstrate how changes in policy can be enacted at the community level.

Abbreviations: American Bar Association (ABA), Blueprint for Change (Blueprint for Change: Education Successes for Children in Foster Care), DC Child and Family Services Agency (CFSA), Washington District of Columbia (DC), Every Student Succeeds Act of 2015 (ESSA), Fostering Connections to Success and Increasing Adoptions Act of 2008 (Fostering Connections), Hamilton Jobs and Family Services (JFS), Kids in School Rule! (KISR!), Legal Center for Foster Care and Education (LCFCE), Local Education Agency (LEA), Learning Partner Dashboard (LPD), State Education Agency (SEA)

Introduction

Examining local, regional, and national data in conjunction with one another on the academic functioning of the over 260,000 school-age youth in foster care (i.e., ages 5-17) has consistently shown that these youth tend to be at a greater risk of poor school functioning compared to non-system-involved youth (Luke & O'Higgins, 2018; National Working Group on Foster Care and Education, 2018; Trout et al., 2008). These findings appear across a wide variety of academic performance indicators and assessments. For example, youth in foster care are more likely to receive lower school grades and lower standardize test scores, as well as fail classes or drop out of high school at higher rates, in comparison to their non-foster care peers (e.g., Pecora, 2012; Zetlin et al., 2012). Moreover, concerns with poor academic functioning continue into adulthood. Studies of youth who emancipated from foster care suggest that they drop out of college or university at higher rates than those without a foster care history (Cox, 2013; Day, Riebschleger, Dworsky, Damashek, & Fogarty, 2012). Data provided in Table 1 from the Fostering Success in Education National Factsheet on the Education Outcomes of Children in Foster Care (2018) provides a snapshot on the academic vulnerability of this population both during and after their time in foster care.

Table 1.
Brief Overview of Academic Outcomes Among Youth in Foster Care

School Outcome of Interest	Foster Care Estimates
% of youth in foster care who change schools when first entering care	31%-75%[a]
% of 17-to 18-year-olds who experienced 5 or more school changes while in foster care	34.2%[b]
Likelihood of youth in foster care being absent from school	About twice that of other students[c]
Likelihood of 17-to 18-year-old youth in foster care having out-of-school suspension	About twice that of other students (e.g., 24% vs. national general population of 7%)[d]
Likelihood of 17-to 18-year-old youth in foster care being expelled	About 3 times that of other students[b]
Average reading level of 17-to 18-year-old youth in foster care	Average level 7th grade; 44% at high school level or higher[b]
% of youth in foster care receiving special education services	35.6% - 47.3%[e]
% of 17-to 18-year-olds in foster care who want to go to college	70%- 84%[f]
% of youth in foster care who complete high school by 18 (via diploma or GED)	Colorado: 41.8% Midwest Study (age 19): 63%[g]
% of youth in foster care who complete high school by age 21	65% by age 21 (National data) (Compared with 86% among all youth ages 18-24)[h]
% of youth in foster care who graduated from high school and enrolled in college at some level	31.8%- 45.3% (Compared with national college enrollment rate of 69.2% in 2015, which is slightly below the national record high of 70.2% in 2009)[i]

Adapted from *Fostering Success in Education [factsheet],* National Working Group on Foster Care and Education. 2018. Where available, information on general population youth provided. [a] = Clemens et al. (2017); Frerer et al. (2013). [b] = Courtney et al. (2004). [c] = Zorc et al. (2013); California Department of Education (2017). [d] = Scherr (2006). [e] = Pecora et al. (2010); Courtney et al. (2004). [f] = McMillen et al. (2003); Courtney et al. (2004). [g] = Parra & Martinez (2015); Courtney et al. (2005). [h] = National Center for Education Statistics (2014); U.S. Department of Education and U.S. Department of Health and Human Services (2016). [i] = Bureau of Labor Statistics (2015); Courtney et al. (2010); National Center for Education Statistics (2014); See Pecora et al. (2010).

Although youth in foster care may face many of the same normative educational challenges as their non-foster care peers, there are a number of unique barriers or risk factors that tend to be more prevalent among youth in foster care, which in turn may increase the likelihood of poor academic functioning. These risk factors can impede educational progress from before school begins, all the way through postsecondary education. For example, youth in

foster care tend to experience a greater number of traumatic or adverse experiences compared to non-foster care youth, such as exposure to domestic violence, community violence, and maltreatment (Stambaugh et al., 2013; Turney & Wildeman, 2017). These types of adverse or traumatic events, which also include the experience of being removed from their biological home and placed in care (Wechsler-Zimring, Kearney, Kaur, & Day, 2012), can increase the risk for physical and psychological problems (e.g., internalizing and externalizing concerns) which may then interfere with performance and well-being in school (McGuire & Jackson, 2018; Morton, 2018; Oswald et al., 2010). For example, internalizing concerns, such as anxiety and depression, may make it more challenging for youth to focus in class or have the motivation to complete schoolwork. Additionally, externalizing concerns may be associated with disproportionate rates of suspension and expulsion, over-representation in alternative education programs for behavioral problems, and increased truancy, all of which can result in missing important school material or assignments. Traumatic or adverse experiences can also make it more challenging to function in areas of life closely associated with academics. For example, youth in foster care who experience frequent adversity may struggle with aspects of social functioning, such as with the ability to form quality social relationships with teachers or classmates, or seek out social support from others when they need help in school (e.g., Perry, 2006). In addition to the individual-level issues these youth experience, it can also be challenging for teachers, schools, and other educational-focused agencies/services to support these youth without proper training and resources (e.g., Zetlin et al., 2012).

Children in foster care may also be more vulnerable to experiencing poor academic outcomes because of frequent mobility in living situation and school. At the most basic level, children in the foster care system often change home placements several times while in state or local custody (Casey Family Programs, 2018). According to the Child Welfare Outcomes 2016 (2019) report, which tracks the ability of states' foster care systems to keep children in stable living situations, the median percentage of youth who were in foster care *only less than a year* but who experienced two or more moves during that time was 15.7% among all reporting states (U.S. Department of Health and Human Services [DHHS], 2019). This number more than doubles to a median percentage of 34.6% for youth who were in foster care between one to two years, and then to 60.7% for youth in care more than two years (U.S. Department of Health and Human Services [DHHS], 2019). Estimates from studies with large samples of youth in foster care suggest that youth experience between three to nine placement changes during their full time in care (McGuire et al., 2018; Rubin et al., 2004; Villodas et al., 2016). Unfortunately, school placement is often tied to living placement, and frequent changes in living placements can lead to changes in a child's school as well (National Working Group on Foster Care and Education, 2018). Prevalence estimates indicate that up to 90% of youth will experience at least one school change while in care, with only a small percentage of these school changes being attributed to reasons besides a placement change (e.g., move in residence for a foster care family; Fawley-King, Trask, Zhang, & Aarons, 2017). For example, Colorado Department of Education's Foster Care Education Program (2019) tracked the rates of students in foster care

experiencing at least one school move during a single school year that were not because of a normative change, such as switching from a middle school to high school or leaving school because the student graduated. Among the 17 counties in the state with at least 16 students in foster care, the percentages of students in foster care with at least one school change ranged from 30.6% to 76.2%. Similar reports have been observed in states across the U.S. (e.g., California; Frerer et al., 2013). Experiencing multiple school changes is also not uncommon. For example, in a sample of over 700 youth in foster care who were close to emancipation, 34.2% reported experiencing five or more school changes throughout their time in foster care (Courtney, Terao, & Bost, 2004).

Research has shown that changes in living situations and schools can have a negative influence on youth in foster care's ability to succeed in school. That is, the more times a child moves placements or the more times the child moves schools, the more likely it is that they will demonstrate indicators of poor performance in school. For example, Clemens et al. (2016) found a negative relation between moves and school graduation, such that the likelihood of a student graduating with their 4-year or even 6-year cohort decreased with each additional school move. There are many reasons why frequent placement and school changes may be associated with poor performance or functioning in school. On an individual level and similar to experiences of trauma or adversity, placements changes may increase the risk for a wide range of mental health concerns (e.g., internalizing concerns, externalizing concerns) that can negatively influence schooling (McGuire et al., 2018; Rubin, O'Reilly, Luan, & Localio, 2007). On a broader system level, moving placements and school can influence a child's ability to do well in school by creating logistical challenges for the child, schools, and foster care families. This includes system-related challenges associated with placement instability and schooling such as: delayed school enrollment, issues with credit transfers and meeting graduation requirements, identification or misidentification for special education services, gaps in special education services, and inferior on-site educational programs (National Working Group on Foster Care and Education, 2018).

The body of research on the educational outcomes of students in foster care has grown significantly over the past several years. Public and private agencies, universities, and philanthropic organizations have contributed to this increase in data collection and research at the state and local levels. Taken together, this research shows a consistent theme: children in foster care face significant barriers to their educational progress. Although research on youth in foster care in general continues to be minimal, the growing empirical focus on academic functioning has helped provide a clearer picture on where these students tend to struggle and what risk factors might be contributing to these shortcomings. This information can then be used to better support these youth. One method for better supporting these youth is through creating and modifying policy and law.

Steps Toward Developing and Changing Education Policy

Given the widespread issues associated with being able to perform well in school among youth in foster care, academic outcomes and improving youths' ability to succeed in school has become a focus of agencies and organizations that seek to better serve these youth. Momentum has been growing at the federal, state, and local levels to prioritize the education needs of students in foster care through the development of statutes, policies, and programs focused specifically on schooling. Despite the obstacles that the more than 400,000 U.S. children and youth in foster care experience—including the negative effects of abuse, neglect, separation, and inconsistent living situations—these children may still be able to achieve positive school experiences with the support of strong practices and policies (National Working Group on Foster Care and Education, 2018).

Federal policy has undergone a significant shift over the past two decades, adding protections and supports for students in foster care related to their education. In this section, major legislation that has been passed at the national or federal level that has led to exemplary strategies in some state and local jurisdictions will be reviewed and discussed. This includes the Fostering Connections to Success and Increasing Adoptions Act of 2008 and the Every Student Succeeds Act of 2015 (ESSA). When considering the influence of these federal laws, it is important to remember that every state or local jurisdiction has different needs for their foster care and educational systems, and accountable agencies prioritize addressing their specific areas of need rather than implementing a general model. Also, as it relates to federal law reviewed it this chapter, federal regulation defines foster care as "24-hour substitute care for children placed away from their parents or guardians and for whom the child welfare agency has placement and care responsibility" (U.S. Department of Education and U.S. DHHS, 2016, pg. 6). This definition includes, but is not limited to, placements in foster family homes, foster homes headed by relatives, group homes, emergency shelters, residential facilities, childcare institutions, and pre-adoptive homes. This definition may vary state to state, which as a result may encompass different groups of students.

Fostering Connections to Success and Increasing Adoptions Act

The first notable policy change of the 2000s at the federal level that continues to have direct implications for youth in foster care specifically is the Fostering Connections to Success and Increasing Adoptions Act (Fostering Connections; 42 U.S.C. § 675) in 2008. In addition to making changes that promote permanency through kinship care and adoption and extending services to Native/Alaskan Native American children, this policy also includes goals for promoting educational stability and success for children in foster care. This was the first time that federal child welfare law included specific provisions that promoted school stability and success for youth in foster care and required collaboration between education and child welfare

agencies to achieve these goals. Broadly, Fostering Connections makes it a requirement that all children in foster care need to be immediately and appropriately enrolled in school if the student is changing schools or a living situation. This act also ensures that school-related concerns or needs should be considered in placement decision making, and when possible, keeping the child in their original school if this is in the child's best interest. To help with the process of trying to keep children in their original school, this legislation makes it possible for states to use federal funding for transportation related needs, such as if a child needs to be bussed in from outside the school zone (Fostering Connections to Success and Increasing Adoptions Act of 2008; National Working Group on Foster Care and Education, 2018). With the passing of this law, it was the first time that school stability was prioritized in federal law and marked a shift in the need for child welfare agencies to prioritize the educational needs of students in foster care. These aspects of the legislation are also a direct attempt to address the barriers and negative influence on academic functioning associated with placement and school stability.

Every Student Succeeds Act

In December 2015, Congress passed the Every Student Succeeds Act (ESSA; 2015), which reauthorized the Elementary and Secondary Education Act of 1965. Most provisions of the law took effect in December 2016. The primary goal of ESSA is to promote equality in educational opportunity for all U.S. students, by increasing educational commitments and protections for the most disadvantaged students. ESSA requirements include establishing protections, monitoring academic performance, and ensuring proper distribution of resources for students and schools at risk of failure. Although monitoring of academic performance (e.g., graduation rates, state assessments) for students with disabilities and other vulnerable groups has long been required, ESSA added a requirement for tracking the performance of youth in foster care.

Requirements in ESSA require State Education Agencies (SEAs) and Local Education Agencies (LEAs) to work with child welfare agencies to ensure the education stability of children in foster care if it is in the best interest of the child. For example, this includes a presumption that children will stay in their school of origin if it is in their best interest and that barriers to achieving this goal are to be addressed, if possible, by LEAs and child welfare. Barriers can include issues such as transportation to and from school or ensuring accurate and speedy transition of school records if a move is necessary. These ESSA requirements complement those in the Fostering Connections Act. ESSA seeks to address the system-level barriers that could impede educational progress among children in foster care. This law also seeks to increase empirical evidence on how children in foster care are performing in school.

Influence of Federal Policy on State and Local Policy

The enactment of ESSA and Fostering Connections had a notable influence on state-level policy. Although several states had policies requiring points of contact and school stability prior to ESSA, the pace of state and local legislation on supports for youth in foster care has accelerated since ESSA was passed in 2015. State and local policies sometimes expand on the protections established by ESSA. Pursuant to ESSA requirements, all state education agencies have identified foster care points of contact (2015; 20 U.S.C. § 1112, pp. 55-56) who are responsible for the oversight of the state's implementation of ESSA's foster care provisions, including collaboration with child welfare. Moreover, many states have also identified a counterpart within their state child welfare agency, though this is not required by ESSA or other federal laws (McNaught & Peeler, 2017). The points of contact in the SEA and state child welfare agency frequently collaborate to publish state guidance, resolve local disputes, provide technical assistance to local points of contact, and motivate or facilitate additional state legislation.

Specific examples of these practices can be seen across the U.S. For example, the state of Nevada passed Assembly Bill 491 (AB 491) in 2017, which requires the use of best interest decision-making guidelines, the establishment of local points of contact for each agency, the preparation of an annual statewide report with data on foster care students specifically, and the submission of academic information for youth in foster care to the courts every year. Nevada's AB 491 also went beyond ESSA's protections by giving students in foster care the right to transportation to support school stability for the entire school year, even if the child exits foster care prior to the end of school year. (ESSA asserts the right to transportation only while a child is in foster care.) New York also expanded ESSA's protections with Education Law §3244- "Education of Children in Foster Care" (2018). In addition to reiterating ESSA's protection of the students' right to remain in their school or origin and to immediate enrollment, New York's education law clarified responsibilities for how support is provided to students in foster care by providing guidelines on the sharing of transportation costs between child welfare and education agencies.

In an effort to further support the implementation of best practices and sharing of information on federal and state laws as it relates to youth in foster care and education, several states have hosted statewide or regional meetings and trainings to bring together local points of contact. Additionally, states have provided local agencies with joint guidance and tools such as best interest determination guides and transportation agreements to help guide the work and ensure school stability and academic success for children in foster care. For example, to support the implementation of both ESSA and New York's Education Law §3244, New York released a toolkit for schools with information about the requirements of the laws, timelines for ensuring proper application of the requirements, and example forms for setting up transportation needs.

As these laws encourage, state and local child welfare and education agencies must work together to identify barriers and challenges to meeting the goals set for youth in care and identify solutions to overcome these obstacles. Frequently, each of these systems sees the other

as the source of the problem. But often, both agencies will need to make changes. Working together to identify barriers and possible solutions ensures all partners have a common understanding of the mission and plan for moving forward. Success depends on an openness to learn about and address each agency's requirements, obstacles, and opportunities and recognize that these complex issues require sufficient staff time and resources to assess and solve.

Blueprint for Change

Despite efforts described above, the research evidence suggests that there are still many ways to positively support these youth through policy efforts at the federal, state, and local levels (National Working Group on Foster Care and Education, 2018). To assist local and state child welfare agencies, courts, and schools in supporting students in foster care, the Legal Center for Foster Care and Education (LCFCE) created the Blueprint for Change: Education Success for Children in Foster Care (Blueprint for Change; Legal Center for Foster Care & Education, 2014). Believing that collaboration is the key to achieving practice, policy, and cultural change to support education stability and achievement for children in foster care, the LCFCE combined efforts with the National Working Group and Education Advisory Group to establish a tool for change and identify goals that would address the global issues that challenge the education success for children and youth in foster care while highlighting national, state, and local examples. The National Working Group heightens national awareness of the education needs of students in foster care by promoting promising practices across the country, while the Education Advisory Group serves as an advisory board to the National Working Group and includes leading education organizations with a commitment to advancing educational stability and achievement for youth in foster care. Together, these groups consist of more than 23 national child welfare and education organizations, including the American Bar Association (ABA) Center on Children and the Law, Education Law Center, and Juvenile Law Center. As a result of these collaborations and efforts, the LCFCE created the Blueprint for Change: Education Success for Children in Foster Care (Blueprint for Change; Legal Center for Foster Care & Education, 2014).

The Blueprint for Change consists of eight goals and 56 corresponding benchmarks that create a framework or checklist for direct case advocacy and system reform to assist local and state child welfare agencies, courts, and schools in supporting students in foster care (Table 2). The *Goals* highlight the support and service needs of youth that must be addressed to facilitate education success for children in foster care. The eight goals are written from a youth's perspective as a constant reminder that the work should serve youth. The *Benchmarks* are the more specific and concrete elements of each broader goal. This outline can be tailored for a variety of individuals who work with youth in foster care, including caseworkers, caretakers, legal advocates, and judges. Moreover, the Blueprint for Change can be used to identify a jurisdiction's strengths and areas for improvement. In the ensuing paragraphs, each goal and its benchmarks are provided and reviewed.

Table 2.
Blueprint for Change Goals and Benchmarks

Goal	Benchmarks
Goal 1: Youth are entitled to remain in their same school when feasible	**1-A** Youth's foster care placement decisions take school stability into account, and school stability is a priority whenever possible and in the child's best interests. **1-B** Youth have sufficient foster home and permanent living options available in their home communities to reduce the need for school moves. **1-C** When in their best interests, youth have a legal right to remain in the same school (school of origin) even when they move outside the school district, and schools that retain children are not financially penalized. **1-D** Youth are entitled to necessary transportation to their school of origin, with responsibilities clearly designated for transportation costs. **1-E** Youth have necessary support and information to make school of origin decisions; youth, birth parents, caseworkers, foster parents, courts, attorneys, schools, and educators are trained about legal entitlements and appeal and dispute procedures. **1-F** Youth with disabilities continue in an appropriate education setting, regardless of changes in foster care placements, and transportation is provided in accordance with the youth's Individualized Education Program (IEP).
Goal 2: Youth are guaranteed seamless transitions between schools and school districts when school moves occur	**2-A** Youth have a right to be enrolled immediately in a new school and to begin classes promptly. **2-B** Youth can be enrolled in school by any person who has care or control of the child (i.e., caseworker or foster parent). **2-C** Youth enrollment and delivery of appropriate services are not delayed due to school or record requirements (i.e., immunization records, birth certificates, and school uniforms); designated child welfare, education, and court staff facilitate and coordinate transitions and receive training on special procedures. **2-D** Youth education records are comprehensive and accurate, and promptly follow youth to any new school or placement; records are kept private and shared only with necessary individuals working with the youth. **2-E** Youth who arrive in a new school during the school term are allowed to participate in all academic and extracurricular programs even if normal timelines have run or programs are full. **2-F** Youth receive credit and partial credit for coursework completed at the prior school. **2-G** Youth have the ability to receive a high school diploma even when they have attended multiple schools with varying graduation requirements. **2-H** Eligible youth with disabilities receive the protections outlined in federal and state law, including timelines for evaluations, implementation of an IEP or an Individual Family Service Plan (IFSP), and placement in the least restrictive environment, even when they change school districts.
Goal 3: Young children enter school ready to learn	**3-A** Young children have all the appropriate health interventions necessary, including enrollment in the Medical Assistance Early Periodic Screening, Diagnosis, and Treatment (EPSDT) Program, and receive comprehensive evaluations and treatment. **3-B** Young children are given special prioritization and treatment in

	early childhood programs (including Head Start, Early Headstart, and preschool programs). **3-C** Young children receive developmentally appropriate counseling and supports in their early childhood programs with sensitivity to their abuse and neglect experiences. **3-D** Young children have caretakers who have been provided information on the children's medical and developmental needs, and who have received training and support to be effective advocates. **3-E** Children under age 3 with developmental delays, or a high probability of developing such delays, are identified as early as possible, promptly referred for evaluation for early intervention services, and promptly evaluated and served. **3-F** Young children at high risk of developmental delays are screened appropriately and qualify for early intervention services whenever possible. **3-G** Children under age 3 who have been involved in a substantiated case of child abuse and neglect, who have been identified as affected by substance abuse or withdrawal symptoms resulting from prenatal drug exposure, or who have experienced a substantiated case of trauma due to exposure to family violence are referred to the early intervention system for screening. **3-H** Children with disabilities ages 3 to school age are referred and evaluated, and receive appropriate preschool early intervention programs.
Goal 4: Youth have the opportunity and support to fully participate in all aspects of the school experience	**4-A** Youth are entitled and encouraged to participate in all aspects of the school experience, including academic programs, extracurricular activities, and social events, and are not excluded because of being in out-of-home care. **4-B** Youth receive the additional supports necessary to be included in all aspects of the school experience. **4-C** Youth's records relating to his or her education and needs are made available to necessary individuals working with the youth, while respecting the youth's privacy. **4-D** Youth's appointments and court appearances are scheduled to minimize their impact on the child's education, and children are not penalized for school time or work missed because of court or child welfare case related activities. **4-E** Youth are not inappropriately placed in nonpublic schools or other alternative school settings, including schools for students with disabilities. **4-F** Youth receive supports to improve performance on statewide achievement tests and other measures of academic success (such as attendance and graduation). **4-G** Youth are surrounded by trained professionals that have the knowledge and skills to work with children who have experienced abuse and neglect; school curricula and programs utilize the research on trauma informed care. **4-H** Youth with disabilities are located, evaluated, and identified as eligible for special services. **4-I** Youth with disabilities receive the special help they need to learn content appropriate to their grade level or, when that is not possible, the content that is appropriate to their learning level. **4-J** Youth with disabilities receive their education in regular classrooms (with the necessary supports and accommodations) whenever possible.
Goal 5: Youth have supports to prevent school dropout,	**5-A** Youth are not disproportionately subjected to school discipline or school exclusion, and are not placed in alternative schools for disruptive students as a means to address truancy or as a disciplinary measure. **5-B** Youth have access to school counselors and other school staff familiar with the needs of children who

truancy, and disciplinary actions	have experienced abuse and neglect, and the staff has mastered effective remediation strategies. **5-C** Youth have advocates at school disciplinary and other proceedings who are trained on procedures related to dropout, truancy, and discipline. **5-D** Youth at risk of truancy or dropping out have access to programs and supports designed to engage them in school. **5-E** Youth who have dropped out of school have access to programs and supports designed to reintegrate them into a school or a General Educational Development (GED) program. **5-F** Youth with disabilities have behavior intervention plans in place to minimize inappropriate school behaviors and to reduce the need for disciplinary action or referral to the police. **5-G** Youth with disabilities receive the procedural protections outlined in federal law so that they are not punished for behavior that is a symptom of their disability.
Goal 6: Youth are involved and engaged in all aspects of their education and educational planning and are empowered to be advocates for their education needs and pursuits	**6-A** Youth are routinely asked about their educational preferences and needs, including their view on whether to change schools when their living situation changes. **6-B** Youth receive training about their educational rights commensurate to their age and developmental abilities. **6-C** Youth are given the opportunity to participate in court proceedings, and their engagement is supported with transportation and accommodations to decrease the impact on school attendance and schoolwork; attorneys, guardians ad litem, CASAs, and judges are trained on involving youth in court, and encourage youth participation. **6-D** Youth participate in school and child welfare meetings and planning about their education and their future. **6-E** Youth are surrounded by school and child welfare professionals with appropriate training and strategies to engage youth in education planning. **6-F** Youth with disabilities actively participate in the special education process, especially in transition planning for post-school education and employment, and are provided with the supports necessary to effectively participate.
Goal 7: Youth have an adult who is invested in their education during and after their time in out-of-home care	**7-A** Youth are entitled to have a knowledgeable and trained education advocate who reinforces the value of the youth's investment in education and helps the youth plan for post-school training, employment, or college; efforts must be made to recruit appropriate individuals (i.e., foster parents, birth parents, child welfare caseworkers, teachers, and guidance counselors). **7-B** Youth exiting care (because of age or because their permanency objectives have been reached) have significant connections to at least one adult to help the youth continue education pursuits. **7-C** Youth have an education decision maker at all times during a child welfare case who is trained in the legal requirements relating to education decisions for children with and without disabilities. **7-D** Youth with disabilities who are eligible for the appointment of a surrogate parent have access to a pool of qualified, independent, and well-trained individuals who can serve in that role, and are assigned a surrogate in a timely manner, but no later than 30 days after a determination that a surrogate is needed.

Goal 8: Youth have supports to enter into, and complete post-secondary education	**8-A** Youth are exposed to postsecondary education opportunities and receive academic support to achieve their future education goals. **8-B** Youth in care and youth who have exited care (because of age or because their permanency objectives have been reached) have financial support or tuition fee waivers to help them afford postsecondary education. **8-C** Youth have clear information and concrete help with obtaining and completing admission and financial aid documents. **8-D** Youth have access to housing during postsecondary school vacations or other times when school housing is unavailable. **8-E** Youth over 18 can remain in care and under the courts' jurisdiction to receive support and protection while pursuing postsecondary education. **8-F** Youth have access to academic, social, and emotional supports during, and through completion of, their postsecondary education. **8-G** Youth with disabilities pursuing higher education goals receive the supports to which they are entitled to under federal and state laws.

Goal 1: Youth Are Entitled to Remain in Their Same School When Feasible

Given the high rates at which youth in foster care change living and school placements each year and the negative consequences on academic well-being associated with these changes (e.g., DHHS, 2019; McGuire et al., 2018; Rubin et al., 2004), placement and school stability has become a primary focus of policy change. Youth in care are entitled to educational stability, and schools and child welfare agencies must make efforts to keep them in their same school whenever possible, as established by the Fostering Connections Act (2008) and ESSA (2015). To further build on these requirements, the Blueprint for Change benchmarks for this goal provide an outline for measuring whether the requirements are being met. For example, it provides reminders about prioritizing school stability and ensuring the youth's foster care placement decisions take school stability into consideration. Additionally, the benchmarks for this goal encourage youth, parent, foster parent, school, and other team member participation in the best interest decision for school placement as well as considering any disabilities and ensuring transportation to the school of origin when applicable.

Goal 2: Youth Are Guaranteed Seamless Transitions Between Schools and School Districts When School Moves Occur

Sometimes, school moves cannot be avoided or moving schools may be in the best interests of the child. For example, federal and state policy prioritize placement in the care of kin over other placement options, regardless of whether it requires a change in school (Johnson, Speiglman, Mauldon, Grimm, & Perry, 2018). School moves may result in delayed enrollment or delayed provision of educational support services at the new school. There can be lasting negative impacts of enrollment and service delays, including losing critical classroom time or

education material (National Working Group on Foster Care and Education, 2018), increased social and behavioral concerns, and even complications with the child welfare placement (Clemens, Klopfenstein, & Lalonde, 2018).

When school moves occur, there should be minimal disruption to the youth's education, which means enrollment even without normally required records, such as immunizations, education records, or birth certificates. ESSA requires the enrolling school to immediately contact students' prior school for relevant records and the prior school should immediately transfer those records; ESSA also requires schools to enroll children in foster care even if typically required records are not immediately available (ESSA, 2015; 20 U.S.C. § 1111). In addition, federal joint guidance for ESSA (U.S. Department of Education & U.S. DHHS, 2016 pp. 20-21) requires that schools ensure a child in foster care is regularly attending and fully participating in school and that their education needs are being met.

Building on ESSA, the Blueprint for Change also provides guidance for ensuring students graduate on time and receive their earned school credit, such as suggesting that differences in high school requirements (if a student changes high schools) not delay graduation. Further, the benchmarks provide guidance on who can enroll a child in the new school (e.g., caseworker, foster parent), and assert that no single entity (e.g., the schools, courts, or welfare system) or need of the child (e.g., special education or Individual Education Program) should delay school enrollment and transition.

Goal 3: Young Children Enter School Ready to Learn

Children in foster care often demonstrate higher rates of physical, developmental, and mental health problems, and may enter into foster care with more unmet medical and mental health needs, than children in the general population (Szilagyi et al., 2015). These conditions can negatively impact academic functioning by interfering with focus, cognition, and emotional regulation, and may also correlate with increased risk of missing school or moving placements (McMillen et al., 2005; Seltzer et al., 2017).

Given the variety and prevalence of children with mental and physical health needs, it is important to identify children who may be at risk as early as possible and provide services for these children given the benefits of early intervention (Leslie et al., 2005). This is the primary focus of Goal 3 in Blueprint for Change. Goal 3 asserts the importance of referring young children in foster care for both (a) assessment or screening services to identify areas of concerns, and (b) treatment or intervention services if a concern is identified that may negatively impact academic functioning. This includes linking young children to a full range of screening and early intervention services. For example, child welfare systems, schools, and even primary care services could refer young children in foster care for assessment of language delays (Stock & Fisher, 2006), developmental delays (Leslie, Gordon, Ganger, & Gist, 2002), and social-

emotional issues (Jee et al., 2011), in addition to academic and learning disorders (Evans, Scott, & Schulz, 2004).

Goal 4: Youth Have the Opportunity and Support to Fully Participate in All Aspects of the School Experience

In addition to classroom education, an important part of the school experience is participation in extracurricular or non-instructional school activities. This can include participation in activities such as school clubs, sports, and music. Participation in these types of activities may help promote academic well-being given associations between participation in extracurricular activities and enhancement in a sense of community, quality social engagement, a sense of mastery, and improved self-value (e.g., Conn, Calais, Szilagyi, Baldwin, & Jee, 2014; Klitsch, 2010). However, youth in foster care may not have access to these activities because of certain program or activity requirements, such as having available finances to cover to the costs of these activities, transportation, or residency requirements (e.g., living in a certain area for a set amount of time). Thus, the Blueprint for Change provides guidance on how to ensure these requirements do not serve as barriers to participation. For example, this might include equal participation in an after school or extracurricular activity by allowing students to participate in these activities despite moving in the middle of a school year after an activity has started.

Additionally, schools may provide further educational opportunities to supplement work in the classroom, such as tutoring services or additional support through IEP services (e.g., special education or study halls classes to help youth catch up on work), as well as opportunities for youth who might want to go beyond the standard educational trajectory (e.g., access to advanced placement classes). However, youth in foster care are often prevented from accessing these various types of school services, which again can stem from issues with transferring of school records following a school change or lack of financial resources (Piel, 2018). Barriers to participation for youth in out-of-home care should be clearly identified and dismantled to enable equitable access to services, supports, and opportunities. As described in the Blueprint for Change, specific policies and additional supports designed to improve academic achievement and broaden access to all aspects of the school experience can aid in effectively responding to these needs. Lastly, in further considering of all these services or activities a student in foster care may receive, this goal in the Blueprint for Change also reminds providers and individual working with these youth that specific demands of youth in foster care (e.g., attending court appearances) should not interfere with a child's participation in school and school-related activities.

Goal 5: Youth Have Supports to Prevent School Dropout, Truancy, and Disciplinary Actions

Studies indicate that youth in foster care have dropout, truancy, and disciplinary rates far higher than the general student population (National Working Group on Foster Care and Education, 2018). When students are removed from the classroom because of behavioral problems or other disciplinary actions, or these students do not show up to school, this can reduce their exposure to important classroom material, which in turn can further negatively impact academic functioning (e.g., Pickens & Tschopp, 2017). Additionally, dropping out of school and not finishing at least a high school education or GED has been found to be connected with poor functioning in adulthood, such as issues with housing instability and criminal activity (e.g., Berzin, 2008). These concerns are also associated with and can be exacerbated by other environmental factors for youth in foster care, such as evidence demonstrating that youth who experience frequent moves may be more likely to act out, skip school, or drop out altogether (e.g., Fowler, Toro, & Miles, 2009).

Considering the negative influence of these factors, the Blueprint for Change provides several benchmarks for this goal aimed at emphasizing the need for appropriate support, programs, and interventions to keep students in foster care engaged and in school. Rather than simply disciplining these students, the benchmarks seek to remind agencies working with these youth that the use of certain school policies (e.g., the use of alternative schools for disruptive students) and possible individual services (e.g., access to counselors and school advocates) should take into account the unique experiences of these youth. For example, this might include referring students for additional mental health and academic services as a first step, as opposed to sending these youth to an alternative school first. This may also include providing education/training to school staff and personnel on how to work with youth in foster care with experiences of trauma or who have a disability.

Goal 6: Youth Are Involved and Engaged in All Aspects of Their Education and Educational Planning and Are Empowered to be Advocates for Their Education Needs and Pursuits

There are certain decision points where youth in foster care are guaranteed participation (e.g., independent living plans for older youth), but this is not always the case for education planning and decision making. Concerns have been raised about not only youth's involvement in educational decision making but also youth's knowledge about academic processes. For example, studies suggest that youth lack necessary knowledge about how to plan and prepare for future education beyond high school (e.g., Hernandez & Naccarato, 2010; Kirk & Day, 2011). This is not surprising, given evidence demonstrating a lack of knowledge among youth in foster

care about how to seek services for other health and well-being needs (e.g., accessing mental health services; Munson, Narendorf, & McMillen, 2011). As a result of lack of knowledge about the educational process, educating youth has even become the focus of some academic support services (e.g., Kirk & Day, 2011). Further, direct involvement or participation in the decision-making processes may have a positive influence on youth's willingness to follow through with any created plans and view of themselves; youth involvement also gives direction and guidance to the professionals and adults advocating on their behalf (e.g., Vis, Strandbu, Holtan, & Thomas, 2011).

To address some of the concerns about youth's involvement in educational planning and the services that may influence academic well-being (e.g., special education or tutoring services), the Blueprint for Change reminds providers and agencies about the importance of educating youth on their academic situations and opportunities, as well as having youth involved in any decision making related to academic well-being if deemed age and developmentally appropriate. This can include participation in court proceedings, school meetings, the special education process, and transition planning for postsecondary education or jobs, with the goal of assisting youth in becoming advocates on their own behalf. For example, where feasible given age and development, youth should participate in a school of origin best interest determination.

Goal 7: Youth Have an Adult Who Is Invested in Their Education During and After Their Time in Out-of-Home Care

Several lines of research have demonstrated the benefit youth in foster care experience when having a supportive adult to help them achieve their education goals and pursuits. For example, research on the use of educational liaisons or specialists with expertise in both school and child welfare processes, who can serve as an advocate and support these youth, has shown to positively influence academic performance and well-being (e.g., Zetlin, Weinberg, & Kimm, 2004; Weinberg, Oshiro, & Shea, 2014). Additionally, studies on the role of caregiver and teacher social support consistency demonstrate the benefits of these sources of support on educational outcomes among youth in foster care when they are involved in a youth's academics (e.g., Cheung, Lwin, & Jenkins, 2012; Rosenfeld & Richman, 2003).

ESSA (2015) requires that school districts, child welfare, and other youth serving agencies involved in the academic decision making of a child collaborate and share information when working with students in foster care. To further extend on ESSA, the Blueprint for Change details how these systems can further support youth by providing them with well-trained and knowledgeable adults who can support their academic well-being when necessary. When possible, this should include an adult with expertise on the legal requirements and available resources for youth in foster care in a school context. It is also critical that all students in foster care, and in particular students with disabilities, have an available adult who has the authority to make education decisions on their behalf and can consider all factors including the input of

the youth. It is also critical that youth have adults available to advocate for their rights and needs and to serve as mentors as they navigate the educational system.

Goal 8: Youth Have Supports to Enter Into and Complete Postsecondary Education

Like other students, youth in foster care have aspirations of wanting to attend postsecondary education after high school. For example, large scale studies on youth in foster care have shown that between 40%-80% of youth in foster care express interest in wanting to attend a two-year or four-year college or university (e.g., Courtney et al., 2004; Kirk et al., 2013; Lemus et al., 2017). However, studies consistently indicate that youth who age out of foster care attend college less frequently than their non-foster peers, and, if attending, drop out at higher rates than their peers with no history of being in foster care (Gillum et al., 2016; Okpych & Courtney, 2018).

To achieve their full potential, older youth in care and those exiting care in or near adulthood need support and opportunities to participate in a wide range of postsecondary programs. Research shows that education outcomes improve when youth can stay in care beyond age 18 (e.g., Courtney & Hook, 2017). Moreover, research suggests that these youth may need specific services while in college or other postsecondary education endeavors that take into account aspects of their foster care history when addressing needs related to career and college counseling, assistance with applications and financial aid, and support while participating in their educational program of choice (Randolph & Thompson, 2017). Blueprint for Change provides guidance on how services can support youth's aspirations to complete postsecondary education both while in foster care and after emancipation from care. For example, starting while youth are typically still in care (i.e., 18 years of age or younger), services can be provided that expose youth to various experiences or requirements for obtaining education beyond high school. Additionally, given the evidence demonstrating a link between having access to services through foster care after age 18 and academic success (e.g., completing a postsecondary degree; Courtney & Hook, 2017), there is also guidance in the Blueprint for Change in Goal 8 on what types of services (e.g., financial aid, emotional and behavioral support) youth could receive to better support their academic aspirations.

Blueprint for Change in Practice: Blueprint for Change Strategy (Washington, DC)

As is the case with children in foster care across the country, children in foster care in the District of Columbia (DC) face similar struggles with demonstrating equal academic outcomes as

youth not in foster care or meeting the minimum standards of education for in the school districts. For example, district testing completed in 2013 showed more than half of DC youth in care were not on grade level in reading and math per DC Public School standards (Peeler, 2016). Recognizing a need for increased education outcomes, the DC Child and Family Services Agency (CFSA) partnered with the ABA Center on Children and the Law to provide structure and guidance to the CFSA education strategy. Using the "Blueprint for Change" framework created by the LCFCE, CFSA aligned existing education efforts with new opportunities to create a comprehensive framework and vision for education stability and success for children and youth in CFSA's custody. CFSA leadership, with guidance from the ABA, engaged in a 12-month review of CFSA policies and practices. Staff from all parts of the agency and external education partners provided input and ideas to shape CFSA's new education strategy. The result was the CFSA-specific Blueprint for Change, which identified the agency's strengths in addressing education issues, uncovered gaps and areas for improvement, and recommended changes through an action plan. The plan recommended action in six areas, which includes 70 strategies and over 140 specific actions or activities designed to make a difference in the lives of children in care. The six identified action areas and strategies were:

1) Revise child welfare agency policy to support practices and internal collaboration, including: (a) A comprehensive practice-focused education policy, (b) Complimentary business process standards to accompany the policy, (c) Inclusion of current issues and laws, (d) Clear roles and responsibilities, and (e) Clarification of different types of education decisions and who can make them for youth in CFSA custody.
2) Provide education-focused training including pre-service and in-service training for staff, an education resources clearinghouse on CFSA's website, and peer-to-peer learning for foster parents.
3) Strengthen practice to include education considerations in case plans and meetings by: (a) Assigning education specialists, (b) Putting information and data directly into the hands of social workers to improve education performance and interventions, (c) Creating practice tools for efficient communication with schools such as student contact sheets and information sharing, and (e) Implementing an incentive plan for middle and high school youth for achieving short-term educational goals.
4) Coordinate internally to share knowledge, resources, and supports.
5) Collaborate with external education partners through memorandums of agreement, a court education subcommittee, and improved partnerships with community nonprofits and organizations.
6) Improve data collection and use by accessing data from multiple sources, sharing data, analyzing data to guide practice change, and monitoring results of services.

Since implementing this CFSA-specific Blueprint for Change, CFSA saw an increase in data-driven decisions related to staffing and budgets and was able to bridge silos within the agency. Additionally, external partners reported to CFSA that they valued CFSA's education strategy vision and role as a leader to improve educational outcomes. With increased data collection, CFSA staff were able to track improved outcomes and target student support services.

To see more about CFSA's education practices and policies, see https://cfsa.dc.gov/page/educationresources.

What's Working?

As more data on the educational outcomes of youth in foster care is published and changes in policy that influence education are enacted, an increasing number of organizations and practices have been developed from these data and polices to specifically address disparities in educational outcomes among youth in foster care (National Working Group on Foster Care and Education, 2018). These programs are building off the policies established at the national level, such as the Fostering Connections to Success and Increasing Adoptions Act (2008) and ESSA (2015), as well as at the state or local levels. The primary goal of these programs is to increase educational support, services, and advocacy for students in foster care to promote academic success through ensuring that the multiple systems involved in the educational needs of these children are collaborating and sharing information to determine what is in the best interest of the child.

Although the exact strategies and focus may vary program to program, these programs also seek to support students in foster care at all stages of their educational trajectory. For example, beginning in early childhood, some programs are increasing early intervention opportunities and screening to ensure children enter school ready to learn. Toward the latter end of time in care, other programs are targeting services for students in foster care to help them prepare for and complete postsecondary education. Additionally, across all ages of children in care, programs are working to ensure school placement stability. To provide established examples of these efforts already used in practice, the following educational programs from across the country are described in the sections below: Kids in School Rule! (KISR!), ABA Education Barriers Project, and Treehouse.

Kids in School Rule! (KISR!)—Cincinnati, Ohio

KISR! is a collaboration between the Hamilton County Jobs and Family Services (JFS), Cincinnati Public Schools, Hamilton County Juvenile Court, and Legal Aid of Southwest Ohio. This program is aimed at promoting education outcomes for students who are in JFS custody and enrolled in the public school system. Collaboration, regular data sharing, and student-specific advocacy are integral to the success of this program. JFS has created staff positions specific to the KISR! program called "KISR! Education Specialists." These Education Specialists work with caseworkers, courts, schools, and legal advocates to support education stability and success. Each school in the public school system has a "KISR! Liaison" who communicates with the school-specific JFS KISR! Education Specialists, flagging potential issues and ensuring

students are on track for grade promotion and graduation. In Juvenile Court, magistrates use customized judicial bench cards to help prioritize education when KISR! students come before the court. Judicial bench cards are tools that assist judges in addressing important topics in court by providing easy to follow and straightforward questions to ask during a hearing, which in turns helps to ensure that aspects of a child's education are reviewed during proceedings. Additionally, KISR! Education Specialists submit education court reports before hearings to share information on the student's grades, attendance, disciplinary issues, special education, school stability, and any concerns the school or JFS sees with the student.

Finally, at Legal Aid, an education advocate and attorneys lead and coordinate the KISR! collaboration to ensure that different entities in the child welfare system coordinate and share data collections to boost individual student outcomes and drive program priorities. Legal Aid promotes communication among partners and the community and provides advocacy for students and families on enrollment, disciplinary removals, and special education. To share data between all of these important partners, Education Specialists and advocates use LPD (Learning Partner Dashboard), a website program designed and managed by the Cincinnati Public Schools. LPD allows both JFS and the school system to merge certain data elements that help track student outcomes and performance. KISR! has frequent data matching and real-time access to school portals, allowing advocates of the student across agencies to have timely access to the student's information.

Since starting with 22 pilot schools in 2008, KISR! has expanded to all 60+ public schools in Cincinnati and has served over 2,200 students to date. According to program evaluation data from 2012 to 2017 published in collaboration with the ABA Center on Children and the Law, LCFCE and the University of Northern Colorado, there have been several positive educational outcomes noted for youth in KISR!. For example, students in the KISR! program had a higher senior graduate rate (i.e., 95%) in 2017 and had more students meeting the third grade reading guarantee benchmark between 2013-2017, as compared to students in the Cincinnati Public Schools overall (e.g., graduation rate in 2017 for non-KISR! students = 74.7%). Additionally, from 2013 to 2017, the percentage of students in the KISR! program who had a 90% or greater attendance rate increased from 68% to 86.1% by the end of 2017. Within this same timeframe from 2013-2017, the average percentage of students who experienced no school moves was 74%, and the average percentage of students with no disciplinary referrals was 61% (compared with 32% in the 2012-2013 academic year; Kids in School Rule!, 2018).

ABA Education Barriers Project—Westmoreland County, Pennsylvania

The ABA Education Barriers to Permanency Project focuses on improving education outcomes for children in foster care as a key component to permanency and life success. The project combines the expertise of two successful ABA Center on Children and the Law projects—the ABA Permanency Barriers Project and the LCFCE. The Education Barriers Project guides its work around three principles: 1) School stability strengthens placement stability and may speed

permanency for children and families; 2) School success guides life success; focusing on the full educational experience (including needs and support) improves school and life outcomes; and 3) Collaboration between schools, child welfare agencies, and courts is key to supporting students in foster care (McNaught, 2019). Education ties into permanency for children in families because sometimes school instability or out-of-school discipline may lead to living placement disruption, trying to keep a child in their school of origin may make it more challenging to find living placement, frequent school changes may impact the ability for the child to form adult connections, and it is possible that school placement may delay reunification with parent(s) (ABA Center on Children and the Law, 2020; McNaught, 2019).

By collaborating with the school system, child welfare agency, and dependency court, the Education Barriers Project helps local jurisdictions identify and address the education needs of students in foster care. The Education Barriers Project is intended to be an intensive 2- to 3-year project in a specific county or local jurisdiction and begins with identification of education needs of children in foster care for that specific jurisdiction. Notably, a key resource that helps this program properly identify the educational needs of children in foster care is the Blueprint for Change. When working with the various systems to identify and address needs, the program goes through a series of steps to ensure there is individualized and appropriate support provided for that jurisdiction. First, the program works to identify the strengths and challenges of the child welfare agency, education, and court systems in the jurisdiction regarding the support of education success for students in care. This is completed through an extensive information gathering process where the program reviews broader agency documentation, policy, and outcomes, as well as more individual information such as youth's case files. Further, the program may also conduct focus groups with child welfare agency staff, local school districts, and the legal community or have these individuals complete self-assessments on identification, policies, and data on students in foster care to gather more information on agency functioning.

Following the information-gathering phase, the program then works with identified representatives from the various agencies in the jurisdiction to develop strategies that address the jurisdiction's education barriers. This is most often completed through helping agencies establish better coordination between each other, making suggestions on how to modify existing policy or create new policy, identifying needed areas of training for agencies, and establishing regular information sharing. Additionally, to support the education and dissemination of these changes and other policy needs, the program will provide targeted technical assistance to train educators, child welfare staff, and the legal community through trainings, technical assistance, and resource development based on the identified needs of the jurisdiction. Moreover, to help support lasting change, the jurisdiction and the program work together to build infrastructure that can sustain progress and address current and potential future needs through ongoing collaboration, local policies, and practice change (McNaught, 2019). At the end of each project, there is also the measuring and presentation of program evaluation data that summarizes outcomes across key areas of the project, such as changes in policies and procedures that

support students in the jurisdiction, as well as outcome data on student educational success (e.g., graduation rates, school stability).

One example that illustrates the entirety of the Education Barriers Project process is a recent collaboration with Westmoreland County, Pennsylvania (ABA Center on Children and the Law, 2018). In this jurisdiction, several local partners were involved in the efforts to address the needs of the students in foster care, such as the child welfare agency, courts, Court Appoint Special Advocates, local service agencies, and over 12 participating school districts. The collaborative team meets regularly and has subcommittees focusing on court/legal practices, school and child welfare collaboration, and information and data sharing. Following review of the county's previously established policies, common practices, and current student data in the first part of the project, several recommendations were created and enacted. One area of work was communication, as the child welfare agency and school districts increased information sharing and are able to identify students for targeted supports. For example, the project implemented an enrollment letter that the child welfare agency sends to the appropriate school district each time a student enters foster care or has a change in placement. This enrollment letter provides the school district with necessary information such as the student's current address, date of the best interest decision, any transportation needs, and who holds education decision-making rights for the student. Also, the county identified education decision making as an area in need of clarification and improvement which led to the creation of a new education decision-making policy that outlines when an education decision maker is needed for a youth and the process for appointing one. Moreover, to further support the education and dissemination of changes and policy in the county, the ABA Center on Children and the Law provided training on special education, education decision making, and information sharing in response to identified needs of the county. Additionally, Westmoreland County created a Foster Care Toolkit that is provided to school districts annually and includes tools to help schools meet the needs of students in foster care such an information sharing guide, new school checklist, and a best interest determination flowchart (ABA Center on Children and the Law, 2018). Following these changes and many others, Westmoreland County has seen some positive changes in the educational outcomes of its students in foster care. For example, the county reported an increase in school stability for students in foster care, such that there was a 10.5% increase from the previous year in students in foster care remaining in their school of origin in the 2018-2019 school year (D. Traill, personal communication, December 13, 2019).[1]

[1]This data was gathered by the Westmoreland County Children's Bureau and is currently unpublished. The Legal Center for Children and the Law obtained this data through direct correspondence with Dawn Traill, their Program Specialist for Quality Assurance.

Graduation Success—Treehouse, Washington

The Graduation Success program at Treehouse in Washington state works with middle and high school students in foster care to create individualized plans to help them reach academic success. Their goals include ensuring children in foster care graduate from high school and closing the achievement gap between youth in foster care and their non-foster care peers (Treehouse, 2020). To achieve these goals, Graduation Success monitors students' academics, behavior, and attendance while connecting students with academic resources such as tutoring, college counseling, and career preparation. Graduation Success also works with youth in care to address common obstacles, including transitioning between schools, retrieving course credit, addressing special education needs, and also providing funding opportunities to cover academic-related costs (e.g., athletics, art and music programs). Another important part of Graduation Success is the use of "Check and Connect," an evidence-based, comprehensive student engagement intervention that improves graduation rates for youth that receive the intervention. Check and Connect involves in-school mentors who partner with Treehouse's Education Specialists to provide timely monitoring of a student's attendance, behavior, and grades (University of Minnesota, 2014). With support from this program, in-school mentors are able to check in with students regularly and help connect students to additional resources within the school if they identify concerns within the student's progress.

For those schools not involved in the Graduation Success Program, the Treehouse Educational Advocacy program works with schools, social workers, foster families, and youth in foster care to resolve difficult issues and remove barriers to school success. The Educational Advocacy program serves youth in foster care in pre-kindergarten through 12th grade throughout Washington (Treehouse, 2020). The Treehouse Education Advocacy program is in partnership with the Department of Children, Youth, and Families. Additionally, Treehouse also has a post-high school program for young adults who were in foster care, Launch Success, which is available to those who completed Graduation Success. This program provides variety of services for young adults, such as help with managing college enrollment, guidance on career choices, an option to apply for funding that covers school or job supplies, and assistance in obtaining housing.

Initial program data on Graduation Success appears to show the program is meeting its goals of increasing academic success among students in foster care. In 2018, students in foster care who were in Graduation Success had a higher 4-year (69%) and 5-year extended (82%) graduation rate, as compared to non-program youth in foster care in the state of Washington (43% 4-year and 49% 5-year extended graduation rate; Treehouse, 2018). Moreover, the 5-year extended graduate rate for students in foster care who were in Graduation Success was higher than the extended graduation rate for all students in Washington state in 2017 (89% vs. 82%; Treehouse, 2017). These rates were equivalent in 2018, such that both Graduation Success and the state's overall 5-year graduation rate were 82% (Treehouse, 2018).

Conclusion

A supportive educational environment is important for the social, psychological, physical, and emotional development of any youth, but it is especially imperative for students in foster care for whom their educational environment may be the only constant throughout their early life. It is easy to think about education as an issue best addressed at an individual level, but in reality, only broad, systemic efforts to reform education for children in foster care and provide support for students, families, advocates, judges, teachers, and foster parents will truly elevate the current system to where it needs to be. Comprehensive, collaborative approaches to supporting students in foster care are the key to helping this incredibly vulnerable population achieve academically as is evidenced by the programs highlighted in this chapter.

Fortunately, the federal requirement that states annually report their educational data—specifically including data about students in foster care—should help foster the development of programs like those listed above as the urgency of effective intervention is becoming abundantly clear. Improving supports for students currently in care, but also furthering research about this population and what works when it comes to intervention, is what will ultimately produce the changes needed to close the achievement gap between students in foster care and their non-foster peers and assure that students in foster care have equal opportunities to achieve. Investing in this specific sect of the child welfare field will not only improve the lives and outcomes of students in foster care across the United States but will ultimately strengthen the greater community, economy, and society.

Acknowledgements

This article was supported by Pennsylvania Education Barriers to Permanency Project with funding from the Pennsylvania Department of Human Services, Office of Children Youth and Families, a project of the ABA Center on Children and the Law. Thank you to the Legal Center for Education team including colleagues Kathleen McNaught, Sneha Barve, and Kristin Kelly. This work would not be possible if not for the great jurisdictions supporting this important population; thank you to all of the wonderful partners we have in this work. Special thanks for ABA intern Faith Blank.

References

A.B. 491, Nev. Rev. Stat. §386.120, 79th Reg. Sess. (Nev, 2017). https://www.leg.state.nv.us/Session/79th2017/Bills/AB/AB491.pdf

American Bar Association Center on Children and the Law. (2018). Westmoreland County Education Barriers Project – Initial Data Report [Unpublished Report]. American Bar Association.

American Bar Association Center on Children and the Law (2020). *Education barriers to permanency project*. https://www.americanbar.org/groups/public_interest/child_law/project-areas/education---youth/education-barriers-to-permanency-project/

Avery, J. (2017, August 4). Reflecting on our extended graduation rate. *Treehouse: Stories to Inspire*. https://www.treehouseforkids.org/reflecting-extended-graduation-rate/

Berzin, S. C. (2008). Difficulties in the transition to adulthood: Using propensity scoring to understand what makes foster youth vulnerable. *Social Service Review, 82*, 171-196.

Bureau of Labor Statistics (2015, April 16). *College Enrollment and Work Activity of High School Graduates* links to 2021 [Press Release]. https://www.bls.gov/news.release/archives/hsgec_04162015.htm

California Department of Education (2016, September 16). *California department of education releases new information to help students in foster care* [Press Release]. http:// www.cdss.ca.gov/lettersnotices/entres/getinfo/acin/2016/i-77_16.pdf

Casey Family Programs. (2018). *Strategy brief strong families: What impacts placement stability?*. Retrieved from: https://www.casey.org/placement-stability-impacts/

Cheung, C., Lwin, K., & Jenkins, J. M. (2012). Helping youth in care succeed: Influence of caregiver involvement on academic achievement. *Children and Youth Services Review, 34*, 1092-1100.

Clemens, E.V., Klopfenstein, K., Lalonde, T. L., & Tis, M. (2017). Educational stability policy and the

interplay between child welfare placements and school moves. *Children and Youth Services Review*, *83*, 209–217. https://doi.org/10.1016/j.childyouth.2017.11.003.

Clemens, E. V., Klopfenstein, K., Lalonde, T. L., & Tis, M. (2018). The effects of placement and school stability on academic growth trajectories of students in foster care. *Children and Youth Services Review, 87*, 86-94.

Clemens, E.V., Lalonde, T.L., Sheesley, A.P. (2016). The relationship between school mobility and students in foster care earning a high school credential. *Child and Youth Services Review, 68,* 193-201.

Colorado Department of Education. (2019). 2017-2018 Foster Care Education Data. *Foster Care Education Program; The office of Dropout Prevention and Student Re-engagement*. https://www.cde.state.co.us/dropoutprevention/fostercare2017-2018datadocument

Conn, A.M., Calais, C., Szilagyi, M., Baldwin, C., & Jee, S.H. (2014). Youth in out-of-home care: Relation of engagement in structured group activities with social and mental health measures. *Children and Youth Services Review, 36*, 201-205.

Courtney, M.E., Dworsky, A., & Lee, J. & Raap, M. (2010). *Midwest evaluation of the adult functioning of former foster youth: Outcomes at age 23 and 24*. Chicago, IL: Chapin Hall Center for Children, University of Chicago.

Courtney, M.E., Dworsky, A., Ruth, G., Keller, T., Havlicek, J. & Bost, N. (2005). *Midwest Evaluation of Adult Functioning of Former Foster Youth: Outcomes at Age 19*. Chicago, IL: Chapin Hall Center for Children, University of Chicago.

Courtney, M. E., & Hook, J. L. (2017). The potential educational benefits of extending foster care to young adults: Findings from a natural experiment. *Children and Youth Services Review, 72*, 124-132.

Courtney, M. E., Terao, S., & Bost, N. (2004). *Midwest evaluation of the adult functioning of former foster youth wave 1: Three state findings*. Chicago, IL: Chapin Hall Center for Children, University of Chicago.

Cox, T.L. (2013). Improving educational outcomes for children and youths in foster care. *Children and Schools, 35,* 59-62.

Day, A., Riebschleger, J., Dworsky, A., Damashek, A., & Fogarty, K. (2012). Maximizing educational opportunities for youth aging out of foster care by engaging youth voices in partnership for social change. *Children and Youth Services Review, 34,* 1007-1014.

Education of Children in Foster Care, Education Law §3244 (2018). http://www.regents.nysed.gov/common/regents/files/1018p12d1.pdf

Evans, L. D., Scott, S. S., & Schulz, E. G. (2004). The need for educational assessment of children entering foster care. *Child Welfare, 83*, 565-580.

Every Student Succeeds Act, Pub. L. 114-95, §1005, 129 Stat.1844 (2015).

Fawley-King, K., Trask, E.V., Zhang, J., Aarons, G.A. (2017). The impact of changing neighborhoods, switching schools, and experiencing relationship disruption on children's adjustment to a new placement in foster care. *Children and Youth Services Review, 83,* 209-217.

Frerer, K., Sosenko, L. D., Pellegrin, N., Manchik, V., & Horowitz, J. (2013). Foster youth stability: A study of California foster youths' school and residential changes in relation to educational outcomes. *Stuart Foundation*. https://edsource.org/wp-content/uploads/old/67e52ff2-4b46-4afa-8133-ba223aa80c33.pdf

Fostering Connections to Success and Increasing Adoptions Act of 2008, Pub. L. 110-351. §204, 122 Stat. 3949 (2008).

Foulk, S., & Esposito, M. (2016). Ensuring educational equity for children and youth in foster care. *Leadership, 46*, 30-33.

Fowler, P. J., Toro, P. A., & Miles, B. W. (2009). Pathways to and from homelessness and associated psychosocial outcomes among adolescents leaving the foster care system. *American Journal of Public Health, 99*, 1453-1458.

Gillum, N. L., Lindsay, T., Murray, F. L., & Wells, P. (2016). A review of research on college educational outcomes of students who experienced foster care. *Journal of Public Child Welfare, 10*, 291-309.

Hernandez, L., & Naccarato, T. (2010). Scholarships and supports available to foster care alumni: A study of 12 programs across the US. *Children and Youth Services Review, 32*, 758-766.

Jee, S. H., Halterman, J. S., Szilagyi, M., Conn, A. M., Alpert-Gillis, L., & Szilagyi, P. G. (2011). Use of a brief standardized screening instrument in a primary care setting to enhance detection of social-emotional problems among youth in foster care. *Academic Pediatrics, 11*, 409-413.

Johnson, A., Speiglman, R., Mauldon, J., Grimm, B., & Perry, M. (2018). Promoting Permanency for Teens: A 50 state review of law and policy. *National Center for Youth Law*. https://youthlaw.org/resources/promoting-permanency-teens-50-state-review-law-and-policy

Kids in School Rule!. (2018). KISR! program report: Yesterday, today, and tomorrow. *ABA Center on Children and the Law's Legal Center for Foster Care and Education & The University of Northern Colorado*. http://fostercareandeducation.org/DesktopModules/Bring2mind/DMX/Download.aspx?portalid=0&EntryId=2109&Command=Core_Download

Kirk, R., & Day, A. (2011). Increasing college access for youth aging out of foster care: Evaluation of a summer camp program for foster youth transitioning from high school to college. *Children and Youth Services Review, 33*, 1173-1180.

Kirk, C. M., Lewis, R. K., Nilsen, C., & Colvin, D. Q. (2013). Foster care and college: The educational aspirations and expectations of youth in the foster care system. *Youth & Society, 45*, 307-323.

Klitsch, S. (2010). Beyond the basics: How extracurricular activities can benefit foster youth. National Center for Youth Law. https://youthlaw.org/news/beyond-basics-how-extracurricular-activities-can-benefit-foster-youth

Laird, J. (2016). *FosterEd Santa Cruz County: Evaluation final report*. RTI International. https://www.courts.ca.gov/documents/BTB24-2D-11.PDF

Legal Center for Foster Care & Education. (2014). *Blueprint for change: Education success for children in foster care.* http://www.fostercareandeducation.org/AreasofFocus/BlueprintforChange.aspx

Lemus, D., Farruggia, S. P., Germo, G., & Chang, E. S. (2017). The plans, goals, and concerns of pre-emancipated youth in foster care. *Children and Youth Services Review, 78*, 48-55.

Leslie, L. K., Gordon, J. N., Ganger, W., & Gist, K. (2002). Developmental delay in young children in child welfare by initial placement type. *Infant Mental Health Journal, 23*, 496-516.

Leslie, L. K., Gordon, J. N., Lambros, K., Premji, K., Peoples, J., & Gist, K. (2005). Addressing the developmental and mental health needs of young children in foster care. *Journal of Developmental and Behavioral Pediatrics, 26*, 140-151.

Luke, N., & O'Higgins, A. (2018). Is the care system to blame for the poor educational outcomes of children looked after? Evidence from a systematic review and national database analysis. *Children Australia*, *43*, 135-151.

McGuire, A., Cho, B., Huffhines, L., Gusler, S., Brown, S., & Jackson, Y. (2018). The relation between dimensions of maltreatment, placement instability, and mental health among youth in foster care. *Child Abuse & Neglect*, *86*, 10-21.

McMillen, C., Auslander, W., Elze, D., White, T., & Thompson, R. (2003). Educational experiences and aspirations of older youth in foster care. *Child Welfare*, *82*(4), 475-495.

McMillen, J.C., Zima, B.T., Scott, L.D., Auslander, W.F., Munson, M.R., Ollie, M.T., & Spitznagel, E.L. (2005). Prevalence of psychiatric disorders among older youths in the foster care system. *Journal of the American Academy of Child and Adolescent Psychiatry, 44*, 88-95.

McNaught, K. (2019). *ABA education barriers to permanency project*. [Flyer]. [Washington, D.C.]: American Bar Association, Center on Children and the Law.

McNaught, K. & Peeler, E. (2017). Every student succeeds means children in foster care too: State progress on ESSA's foster care provisions. *Child Law Practice, 36*, 135.

Morton, B. M. (2018). The grip of trauma: How trauma disrupts the academic aspirations of foster youth. *Child Abuse & Neglect*, *75*, 73-81.

Munson, M. R., Narendorf, S. C., & McMillen, J. C. (2011). Knowledge of and attitudes towards behavioral health services among older youth in the foster care system. *Child and Adolescent Social Work Journal, 28*, 97-112.

National Center for Education Statistics, Digest of education statistics (2014). *Table 104.40. Percentage of persons 18 to 24 years old and age 25 and over, by education attainment, race/ethnicity, and selected racial/ethnic subgroups: 2009 and 2014.* https://nces.ed.gov/programs/digest/d15/tables/dt15_104.40.asp?current=yes

National Working Group on Foster Care and Education. (2018). *Fostering success in education* [Factsheet].

http://fostercareandeducation.org/DesktopModules/Bring2mind/DMX/Download.aspx?portalid=0&EntryId=2100&Command=Core_Download

Okpych, N. J., & Courtney, M. E. (2018). Barriers to degree completion for college students with foster care histories: Results from a 10-year longitudinal study. *Journal of College Student Retention: Research, Theory & Practice, 23*, 28-54. doi: https://doi.org/10.1177/1521025118791776.

Oswald, S. H., Heil, K., & Goldbeck, L. (2010). History of maltreatment and mental health problems in foster children: A review of the literature. *Journal of Pediatric Psychology*, *35*, 462-472.

Parra, J., & Martinez, J. (2015). *2013-2014 state policy report: Dropout prevention and student engagement*. Denver, CO: Colorado Department of Education. http://www.cde.state.co.us./dropoutprevention/2014statepolicyreport31215.

Pecora, P.J. (2012). Maximizing educational achievement of youth in foster care and alumni: Factors associated with success. *Children and Youth Services Review, 34*, 1121-1129.

Pecora, P.J., Kessler, R.C., Williams, J., Downs, A.C., English, D.J., White, J., O'Brien, K. (2010). *What works in foster care?: Key components of success from the northwest foster care alumni study*. Oxford University Press.

Peeler, Emily. (2016, July 01). *Improving educational outcomes for youth in foster care in Washington DC: An agency approach*. American Bar Association. https://www.americanbar.org/groups/public_interest/child_law/resources/child_law_practiceonline/child_law_practice/vol-35/july-2016/improving-education-outcomes-for-youth-in-foster-care--in-washin/

Perry, B.L. (2006). Understanding social network disruption: The case of youth in foster care. *Social Problems,53(3),* 371-391.

Pickens, I.B., & Tschopp, N. (2017). Trauma-Informed classrooms. *National Council of Juvenile and Family Court Judges Technical Assistance Bulletin*.

Piel, M. H. (2018). Challenges in the transition to higher education for foster care youth. *New Directions for Community Colleges*, *181*, 21-28.

Randolph, K. A., & Thompson, H. (2017). A systematic review of interventions to improve post-secondary educational outcomes among foster care alumni. *Children and Youth Services Review, 79*, 602-611.

Rosenfeld, L. B., & Richman, J. M. (2003). Social support and educational outcomes for students in out-of-home care. *Children & Schools, 25*, 69-86.

Rubin, D. M., Alessandrini, E. A., Feudtner, C., Mandell, D. S., Localio, A. R., & Hadley, T. (2004). Placement stability and mental health costs for children in foster care. *Pediatrics*, *113*(5), 1336-1341.

Rubin, D. M., O'Reilly, A. L., Luan, X., & Localio, A. R. (2007). The impact of placement stability on behavioral well-being for children in foster care. *Pediatrics*, *119*(2), 336-344.

Scherr, T. (2006). Best Practices in working children living in foster care. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology V* (pp. 1547–1563). Bethesda, MD: National Association of School Psychologists.

Seltzer, R. R., Johnson, S. B., & Minkovitz, C. S. (2017). Medical complexity and placement outcomes for children in foster care. *Children and Youth Services Review, 83*, 285-293.

Shin, S. H. (2003). Building evidence to promote educational competence of youth in foster care. *Child Welfare, 82*, 615-632

Stambaugh, L.F., Ringeisen, H., Casanueva, C.C., Tueller, S., Smith, K.E., & Dolan, M. (2013). Adverse childhood experiences in NSCAW. OPRE Report #2013-26, Washington, D.C.: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services

Stock, C. D., & Fisher, P. A. (2006). Language delays among foster children: implications for policy and practice. *Child Welfare, 85*, 445-461.

Szilagyi, M.A., Rosen D.S., Rubin, D., Zlotnik, S. (2015). Health care issues for children and adolescents in foster care and kinship care. *Pediatrics, 136,* e1142-e1166.

Treehouse (2020). *Graduation Success*. https://www.treehouseforkids.org/our-services/graduation-success/

Treehouse (2017, August 2). Treehouse Exceeds 5-Year Goal for Youth in Foster Care to Graduate at Same Rate as Peers. *Treehouse*. https://www.treehouseforkids.org/treehouse-exceeds-5-year-goal-youth-foster-care-graduate-rate-peers/

Treehouse (2018, September 27). Treehouse Announces Highest Ever On-Time Graduation Rate for Youth in Foster Care at 69 Percent. *Treehouse*. https://www.treehouseforkids.org/treehouse-announces-highest-ever-on-time-graduation-rate-for-youth-in-foster-care-at-69-percent/

Trout, A. L., Hagaman, J. L., Beth Chmelka, M., Gehringer, R., Epstein, M. H., & Reid, R. (2008). The academic, behavioral, and mental health status of children and youth at entry to residential care. *Residential Treatment for Children & Youth, 25*, 359-374.

Turney, K. & Wildeman, C. (2017). Adverse childhood experiences among children placed in and adopted from foster care: Evidence from a nationally representative survey. *Child Abuse & Neglect, 64,* 117-129.

University of Minnesota. (2014, April 15). *Check & connect community spotlight: Treehouse.* http://checkandconnect.umn.edu/implementation/spotlight_treehouse.html

U.S. Department of Education & U.S. Department of Health and Human Services. (2016). *Non-regulatory guidance: Ensuring educational stability for children in foster care.* https://oese.ed.gov/files/2020/02/edhhsfostercarenonregulatorguide.pdf

U.S. Department of Education & U.S. Department of Health and Human Services (2016). *Guidance on the foster care provisions in title I, part of the Elementary and Secondary Education Act of 1965, as amended by the Every Student Succeeds Act of 2015, June 23, 2016*. http://www2.ed.gov/policy/elsec/leg/essa/edhhsfostercarenonregulatorguide.pdf.

U.S. Department of Health and Human Services: Administration on Children, Youth, and Families. (2019). *Child welfare outcomes 2016: Report to congress*. https://www.acf.hhs.gov/cb/resource/cwo-2016

Villodas, M. T., Litrownik, A. J., Newton, R. R., & Davis, I. P. (2016). Long-term placement trajectories of children who were maltreated and entered the child welfare system at an early age: Consequences for physical and behavioral well-being. *Journal of pediatric psychology*, *41*, 46-54.

Vis, S. A., Strandbu, A., Holtan, A., & Thomas, N. (2011). Participation and health–a research review of child participation in planning and decision-making. *Child & Family Social Work, 16*, 325-335.

Wechsler-Zimring, A., Kearney, C.A., Kaur, H., & Day, T. (2012). Posttraumatic stress disorder and removal from home as a primary, secondary, or disclaimed trauma in maltreated adolescents. *Journal of Family Violence, 27,* 813-818.

Weinberg, L. A., Oshiro, M., & Shea, N. (2014). Education liaisons work to improve educational outcomes of foster youth: A mixed methods case study. *Children and Youth Services Review, 41*, 45-52.

Zetlin, A., MacLeod, E., & Kimm, C. (2012). Beginning teacher challenges: Instructing students who are in foster care. *Remedial and Special Education, 33,* 4-13.

Zetlin, A., Weinberg, L., & Kimm, C. (2004). Improving education outcomes for children in foster care: Intervention by an education liaison. *Journal of Education for Students Placed at Risk, 9*, 421-429.

Zorc, C.S., O'Reilly, A.L.R., Matone, M., Long, J., Watts, C.L., Rubin, D. (2013). The relationship of placement experience to school absenteeism and changing schools in young, school aged children in foster care. *Children and Youth Services Review*, *35* (5)