The Center for
State Child Welfare Data

Using Congregate Care:
What the Evidence Tells Us

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Introduction

Despite long-standing criticisms and the preference for less restrictive placement settings, congregate care remains an important component of the care continuum used to meet the complex behavioral and mental health needs of children and youth who cannot live at home (Dinges et al., 2008; Blau et al., 2014; Butler & McPherson, 2007; Whittaker et al., 2016). High-quality, tailored congregate care placements with strong program models and highly qualified practitioners do serve as an important placement alternative for children and youth with complex clinical needs who require a short-term stay in a treatment facility (Blau et al., 2014; Daly et al., 2018; James, 2011). The 2018 Family First Prevention Services Act (FFPSA), which alters federal policy concerning congregate care, preserves the appropriate use of congregate care through an emphasis on family-based placements and the development of qualified residential treatment programs (QRTPs).

Against this backdrop, we aim to answer the following four major research questions with this report:

- ▶ What is congregate care utilization over time?

- ▶ What is the likelihood of entering congregate care as the first placement? How does that likelihood vary?

- ▶ For children whose first care type was in congregate care, how stable were those congregate care spells? How long did those congregate care spells last? Where did the children go when they left those congregate care spells? And did they ever reenter out-of-home care after reaching permanency from those congregate care spells?

- ▶ How does the utilization of congregate care line up with the requirements related to federal reimbursement under the FFPSA?

The study was commissioned by the Annie E. Casey Foundation (AECF) to learn about the utilization of congregate care across the nation, both at the child- and the system-level. Staff at the Center for State Child Welfare Data, which is located within Chapin Hall at the University of Chicago, carried out the study independently using the data assets of the Foster Care Data Archive. The findings and conclusions presented in this report are those of the authors alone, and do not necessarily reflect the opinions of the Foundation.

Study Approach

The congregate care utilization presented in this report includes non-family care[1] such as emergency shelters, group homes, institutions, and residential treatment centers. Experience with the child welfare system varies among children. Congregate care placements can happen at any time during a child's placement trajectory. To better navigate through this complexity, we place children's congregate care experience in the context of their placement history, and organize their placement experiences into different types of spells, as illustrated in Table 1 below.

Child spells are at the top level. A child spell starts with an admission to out-of-home care and ends when the child leaves out-of-home care. Within a child spell, there exist care type spells, and children may experience one or more care type spells. Care types include regular foster family care, kinship care, congregate care, and other types of care. A care type spell consists of one or more consecutive placements of the same care type. Each care type spell begins on the date a child enters the care type placement and ends when the child either leaves out-of-home care to a permanent or non-permanent destination, or moves to another care type. Although the language is

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[1] Children placed with families such as foster families and relative families are regarded as being placed in a family setting.

somewhat technical, the reality is that young people have experiences in child welfare that traverse the full range of placement combinations represented in Table 1. It is therefore very important to be clear about the unit of analysis. Throughout the report, we specify the unit of analysis being used so that the reader has a point of reference that ties back to this taxonomy of experience.

Table 1. Unit of Analysis and File Structure

Unit of Analysis	Placement History
Child A	
1st Child spell	
1st care type spell - congregate care type spell	
1st congregate care placement	
Child B	
1st Child spell	
1st care type spell - congregate care type spell	
1st congregate care placement	
2nd congregate care placement	
2nd care type spell - foster care type spell	
1st foster care placement	
Child C	
1st Child spell	
1st care type spell - foster care type spell	
1st foster care placement	
2nd Child spell	
1st care type spell - congregate care type spell	
1st congregate care placement	
2nd care type spell - kinship care type spell	
1st kinship placement	
Child D	
1st Child spell	
1st care type spell - congregate care type spell	
1st congregate care placement	
2nd care type spell - foster care type spell	
1st foster care placement	
2nd foster care placement	
3rdd care type spell - congregate care type spell	
1st congregate care placement	
2nd Child spell	
1st care type spell - foster care type spell	
1st foster care placement	
2nd foster care placement	
2nd care type spell - congregate care type spell	
1st congregate care placement	
2nd congregate care placement	

As described in the table above, a child can have one to many child spells, and within each child spell, there could be one to many care type spells—any one or more of which could be a congregate care type spell (or none could be a congregate care type spell). To gain a view of the overall population and the position of congregate care spells in relation to child spells, we present the number of spells in Table 2 below. There were 917,561 child spells that began in 903 counties in 15 states between January 1, 2012 and December 31, 2019. More than three-quarters of those child spells (718,640 spells, or 78%) were the first child spell, representing the group of children entering out-of-home care for the first time. The majority of first child spells (80%) did not include any congregate care type spells. The remaining 20% of first child spells did include at least one congregate care type spell: 15% had a congregate care spell as the first care type spell and 5% had a congregate care spell as a subsequent (non-first) care type spell. In other words, about three-quarters of children who entered care for the first time and were placed in congregate care during the first child spell had the congregate care as their initial placement. As children had more child spells, the proportion of child spells with a congregate care spell increased.

Table 2. Position of Congregate Care Spells within Children's Child Welfare History

Child Spell Sequence	Number of Child Spells	No Congregate Care Type Spell during Child Spell	Congregate Care was 1st Care Type in Child Spell	Congregate Care was Subsequent Care Type in Child Spell
1	718,640	575,477	104,219	38,944
2	142,061	94,428	34,403	13,230
3	40,067	20,446	15,074	4,547
>3	16,793	5,839	8,166	2,788
Total	917,561	696,190	161,862	59,509
1	100%	80%	15%	5%
2	100%	66%	24%	9%
3	100%	51%	38%	11%
>3	100%	35%	49%	17%
Total	100%	76%	18%	6%

The analysis is divided into four main sections as follows:

▸ *Congregate care utilization:* We begin by examining the overall congregate care utilization trends across 15 states between 2012 and 2019, presenting the daily census of congregate care by child demographics and urbanicity of the county.

▸ *Likelihood of entering congregate care*: Next, we look at the likelihood that children will enter congregate care as their initial placement, focusing on first child spells (first entries in out-of-home care).

▸ *Outcomes*: Because it is difficult to draw broad inferences when there are so many underlying heterogeneities during the child's placement history, we focus the outcome analyses on first congregate care spells that occurred as the first care type spell in the first child spell. This allows us to manage the confound of the placement history. The sample for outcome analyses represents 73% of all children who had at least one congregate care spell during their first child spell.

▸ *Congregate care utilization under FFPSA:* Lastly, to assess the impact of the requirements related to federal reimbursement under FFPSA, we look at the volume of congregate care placements and congregate care days in each fiscal year that are potentially impacted by the child care institution (CCI) placement milestones under the new guidelines. All congregate care placements are included in this analysis.

For both likelihood of entering congregate care and outcomes, the analysis is further broken down into descriptive analysis and modeling analysis. Building on the descriptive analysis, we use multilevel modeling techniques to examine how both the likelihood of being placed in congregate care and congregate care outcomes vary by child characteristics and county attributes.

Findings

Congregate Care Utilization

To set the context for the analysis, we begin by assessing congregate care utilization over time by counting the number of children in congregate care each day by gender, age, race/ethnicity, and urbanicity over an eight-year period (January 1, 2012 through December 31, 2019).

Figure 1 tracks the number of children in congregate care from January 1, 2012 through December 31, 2019. Between 2012 and May 2015, just under 20,000 children and youth (ranging from 18,640 to 19,588) were placed in congregate care on any given day across the 15 states. Starting from May 2015, there was a gradual and steady

decline in the daily census until the censor date, down about 33% by December 2019 from the high in May 2012. Over the course of the past eight years, the average number of children and youth placed in congregate care on any given day in these states was 17,582, with a high of 19,588 (May 2012) and a low of 14,693 (December 2019).

Despite the gradual decline in congregate care utilization starting from mid-2015, the figure below reveals strong cyclical patterns in utilization over time. In other words, there have been some regular ups and downs throughout the past eight years, providing evidence of some system level routines that characterize the internal working of the congregate care system but do not align particularly well with what we know about the onset of problem behaviors among children and youth.

Figure 1. Daily Census Count of Children Residing in Congregate Care
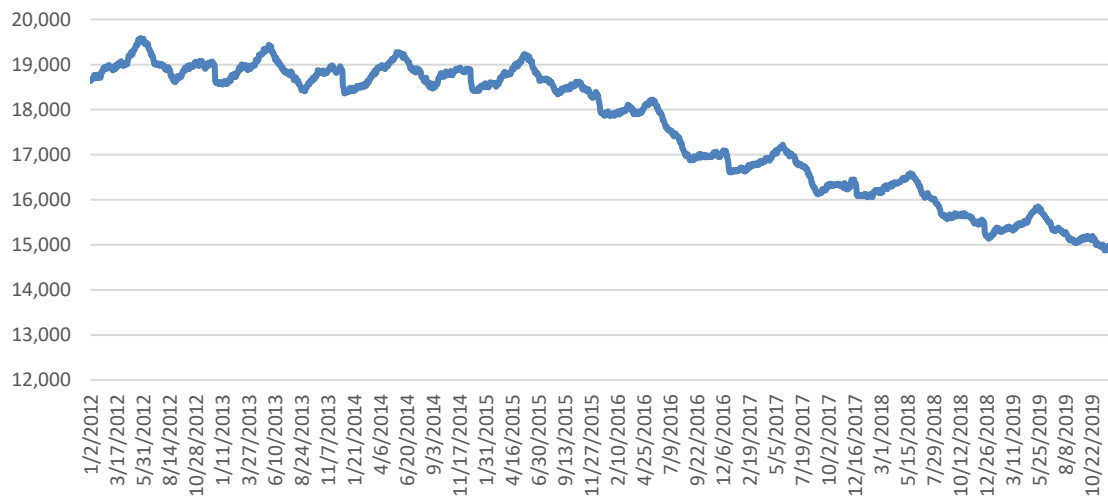
The trend in the daily census varied somewhat by age, gender, race/ethnicity, and urbanicity, as shown in the figures that follow.

Figure 2 shows that the congregate care daily census count decreased for children in all age groups from 2015 to 2019. However, the steeper decline in number was observed for youth ages 13 to 15 (down about 27% from the highest point) and children younger than 9 years old (down about half from the highest point). The largest group of children in congregate care were the 13 to 15 year olds, who made up approximately two-fifths of the daily census on average across all eight years, and 16 to 17 year olds accounted for a quarter.

Figure 2. Daily Census Count of Children Residing in Congregate Care from January 1, 2012 through December 31, 2019 by Age Group
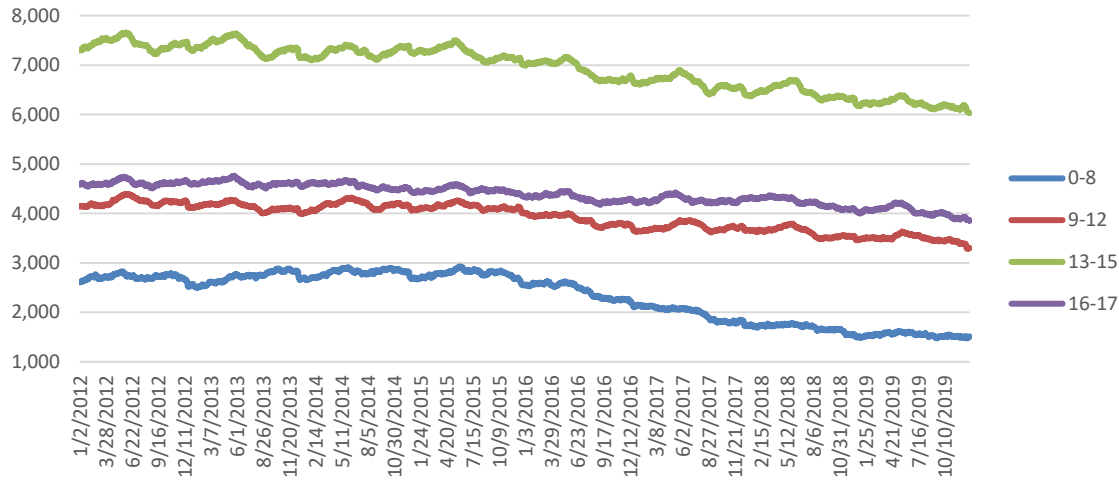
The congregate care daily census count experienced a decline for both gender groups from 2015 to 2019. As shown in Figure 3, boys decreased more both in terms of number (by 3,087) and percentage (by 36%) than girls (by 1,924 and 32%). On average, boys accounted for close to three-fifths of the daily census in congregate care while girls accounted for about two-fifths.

Figure 3. Daily Census Count of Children Residing in Congregate Care from January 1, 2012 through December 31, 2019 by Gender
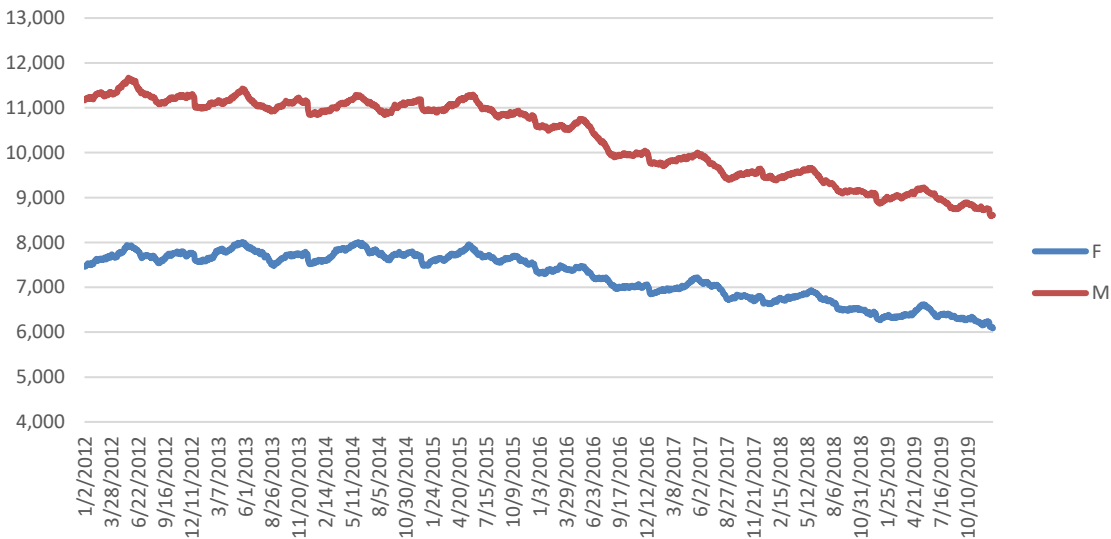
Figure 4 shows a decreasing congregate care daily census count for all race/ethnicity groups from 2015 to 2019. Black children and youth experienced a steady decrease since mid-2012, and they also had the largest decline in the daily census (by 1,858 or 41% from the highest point) compared to White and Hispanic children (decreased by 1,479 or 28%, and 1,476 or 38% from the highest point, respectively). Black, White, and Hispanic children and youth accounted for about 94% of the daily census in congregate care; youth whose race/ethnicity was classified as "Other" (not shown in the figure) made up the remaining six percent.

Figure 4. Daily Census Count of Children Residing in Congregate Care from January 1, 2012 through December 31, 2019 by Race/Ethnicity
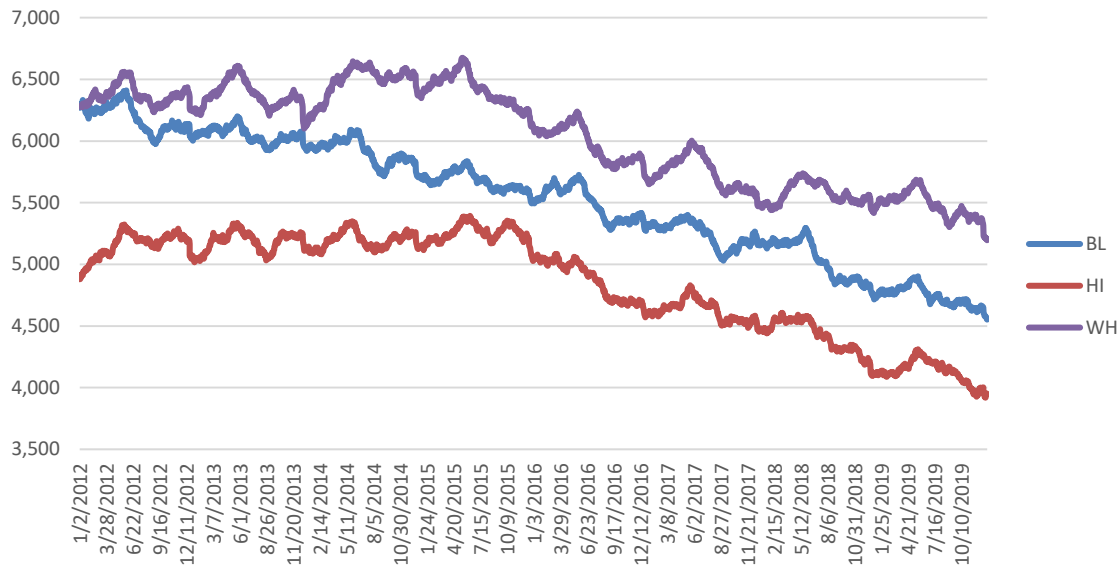
There is also variation based on where the children lived when they entered care for the first time. As shown in Figure 5, the congregate care daily census count decreased most significantly for children from urban core counties from 2016 to 2019 (by 2,362 or 43% from the highest point), followed by smaller metro areas (by 1,603 or 38% from the highest point). The congregate care daily census experienced a smaller decrease for children from large fringe and rural counties. Children and youth from urban core counties accounted for about two-fifths of the daily census in congregate care.

Figure 5. Daily Census Count of Children Residing in Congregate Care from January 1, 2012 through December 31, 2019 by Urbanicity
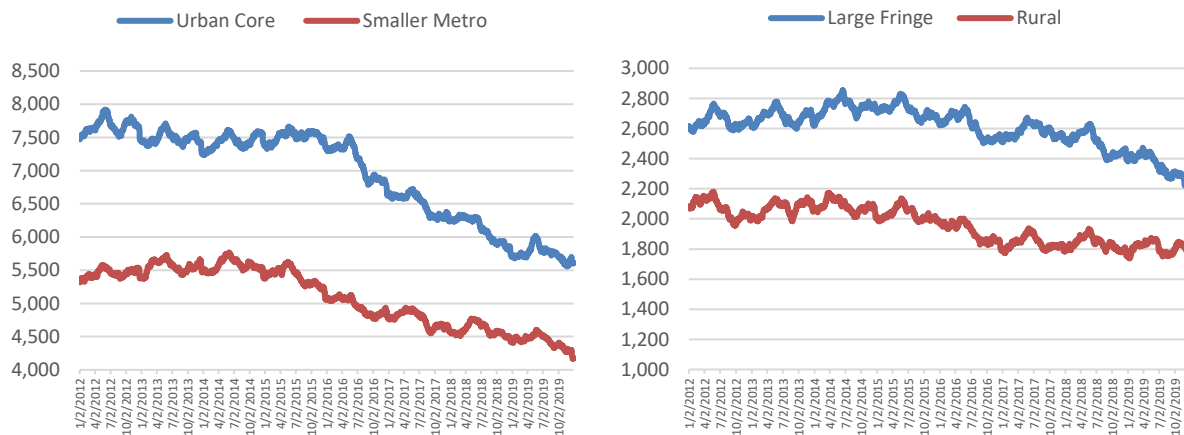
Likelihood of Congregate Care Placement and Outcomes of Congregate Care

This section consists of two parts. The first part is the descriptive analysis of the likelihood of entering congregate care, the duration of congregate care spells, the stability of congregate care placements, the likelihood of leaving congregate care to permanency, and the likelihood of returning to out-of-home care after leaving a congregate

care spell to permanency, and the extent to which these measures change over time and differ by child demographics and county attributes.

The descriptive analysis then serves as the springboard into the second part of the analysis—the multilevel model analysis that reveals effects for those measures of interest after controlling for child demographics, county attributes, and between-state variation.

Descriptive Analysis

For the following descriptive analyses, we examined (1) child-level characteristics including gender, age, and race/ethnicity, and (2) county-level attributes including urbanicity and socioeconomic disadvantage. The county variable from which county-level attributes were derived refers to the child's removal county. These variables are also explored and incorporated in the modeling analysis.

Likelihood of Congregate Care

When a child enters out-of-home care, he or she can be placed into congregate care, foster care, kinship care, or other types of care. As explained in the Introduction to this report, as a starting point, we focused on the first placement type for children who entered out-of-home care for the first time from 2012 through 2019. There were a total of 718,640 children entering out-of-home care for the first time from the 15 states during the period.

Table 3 shows that among all 718,640 children entering care for the first time between 2012 and 2019, on average, approximately 15% of children (N=104,219) were placed in congregate care as their initial placement. This proportion has been declining in recent years (from 16% in 2012 to 13% in 2019). Close to half of the children were placed in foster care as their initial placement in earlier years with a slight decrease in recent years (from 48% in 2012 to 45% in 2019), while close to one-third were placed in kinship care as their initial placement in earlier years with a gradual increase in recent years (from 29% in 2012 to 36% in 2019). To sum up, in recent years, fewer children have been initially placed in congregate care and foster care and more children have been initially placed in kinship care. In addition, it has become less likely for children to be placed in congregate care and foster care but more likely for children to be placed in kinship care.

Table 3. Number and Percent of Children Entering Out-of-Home Care for the First Time, by Initial Care Type and Year

Initial Care Type Spell	2012	2013	2014	2015	2016	2017	2018	2019	Total
Congregate Care	16,683	13,502	13,507	13,547	12,242	12,108	11,465	11,165	104,219
Foster Care	51,029	46,105	43,096	41,016	41,601	39,735	38,297	37,653	338,532
Kinship Care	30,885	28,111	28,579	28,292	27,769	29,088	29,090	29,996	231,810
Other Care	6,651	5,262	5,262	5,318	5,434	5,443	5,477	5,232	44,079
Total First Care Type Spells	105,248	92,980	90,444	88,173	87,046	86,374	84,329	84,046	718,640
Congregate Care	16%	15%	15%	15%	14%	14%	14%	13%	15%
Foster Care	48%	50%	48%	47%	48%	46%	45%	45%	47%
Kinship Care	29%	30%	32%	32%	32%	34%	34%	36%	32%
Other Care	6%	6%	6%	6%	6%	6%	6%	6%	6%
Total First Care Type Spells	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table 4 examines the congregate care placement rate for gender, age, race, urbanicity, and socioeconomic subgroups. The congregate care (CC) rate in the last column refers to the proportion of children entering congregate care as their initial placement among each subgroup of children.

> ▸ *Age at entry into care*: There were 498,577 children under 9 years old, making up about 69% of the children who entered out-of-home care. This group was followed by children ages 9 to 12 (97,895, about 14%), ages 13 to 15 (77,283, about 14%) and ages 16 to 17 (44,885, about 6%). The likelihood

of being placed into congregate care varied by age group. Younger children (under 9 years old) were the least likely to enter congregate care (8%) as their initial placement, which means the remaining 92% of that age group entered non-congregate care placement settings. Children between ages 16 and 17 were the most likely to be placed in congregate care (42%), compared to 18% for children ages 9 to 12 and 36% for children ages 13 to 15. Although the rate of initial placement in congregate care was lowest for young children (under 9 years old), because children in this age group make up by far the largest number of children entering care, they also make up the largest percentage of the 104,219 children initially placed in congregate care (39,668, or 38%), followed by children ages 13 to 15 (27,599, or 26%).

▸ *Gender*: In general, there were slightly more boys than girls (363,035 or 51%, and 355,605 or 49%), and boys were slightly more likely to be placed in congregate care than girls (15% vs. 14%).

▸ *Race and Ethnicity*: Overall, African American children were most likely (16%) to be placed in a congregate care placement initially, followed by Hispanic children (14%) and White children (13%). However, African American children made up one-third, Hispanic children made up close to one-quarter, and White children made up just over one-third of the children entering care for the first time.

▸ *Urbanicity*: Looking at the urbanicity status of the counties in which children lived at the time they entered care for the first time, more children came from counties classified as urban core (281,924, or 39%) or smaller metro (207,943, or 29%), and fewer children came from counties classified as large fringe (109,053, or 14%) or rural (88,608, or 12%). When examining the likelihood of entering congregate care by those attributes, we observed that the likelihood of placement in congregate care was higher for children from urban core and smaller metro counties (16% and 15%, respectively) compared to the rate for children from large fringe or rural counties (11% and 10%, respectively).

▸ *Socioeconomic Disadvantage*: Another attribute of the counties is the socioeconomic disadvantage index, which is a composite variable created based on the status of child poverty, unemployment, education, and family structure at the county level for the counties in which children lived at the time they entered care. The lower the index, the better off the county is in those four domains. The largest proportions of children entered care from counties with the lowest (174,226, or 24%) and highest levels of socioeconomic disadvantage (177,945, or 25%), making up approximately half of the children entering care for the first time. When looking at the likelihood of entering congregate care by socioeconomic disadvantage status, it appears that children were more likely to be placed in congregate care when the socioeconomic disadvantage index for their home county was lower (19% for Low and 16% for level 1).

Table 4. Number of Children Entering Out-of-Home Care for the First Time and Rate of Initial Placement in Congregate Care, by Child Demographics and County Attributes

| Characteristic[2] | Category | First Placement of the Initial Care Type Spell in Congregate Care | | | |
		No	Yes	Sub Total	CC Rate
Age	Less than 9	458,909	39,668	498,577	8%
	Age 9-12	79,924	17,971	97,895	18%
	Age 13-15	49,684	27,599	77,283	36%
	Age 16-17	25,904	18,981	44,885	42%
Gender	Female	306,269	49,336	355,605	14%
	Male	308,152	54,883	363,035	15%
Race/Ethnicity	White	212,928	33,136	246,064	13%
	African Am.	142,104	26,785	168,889	16%
	Hispanic	205,413	34,644	240,057	14%
	Other	53,976	9,654	63,630	15%
Urbanicity	Urban Core	236,939	44,985	281,924	16%
	Large fringe	97,023	12,030	109,053	11%
	Smaller metro	177,765	30,178	207,943	15%
	Rural	79,457	9,151	88,608	10%
Socioeconomic Disadvantage	Low	140,960	33,266	174,226	19%
	1	69,053	13,286	82,339	16%
	2	85,841	12,138	97,979	12%
	3	139,351	15,688	155,039	10%
	High	155,979	21,966	177,945	12%
Total		614,421	104,219	718,640	15%

Congregate Care Outcomes

For the children who entered out-of-home care for the first time via congregate care, we analyzed several outcomes: (1) how long children stayed in their congregate care spells; (2) whether children moved from one congregate care placement to another within their first congregate care spell; (3) whether children exited to permanency from their first congregate care spell; and (4) for those who exited from their first congregate care spell to permanency, whether they ever reentered out-of-home care. The analyses of placement stability, and permanency outcomes focus on the 104,219 children who entered out-of-home care for the first time and were placed in congregate care as their initial placement. Of these 104,219 children, 23,690 children exited congregate care to reunification or to relatives. These 23,690 children constitute the sample for the reentry analysis. For the analysis of duration, we begin by focusing on the 104,219 first congregate care spells and then expand the analysis to all congregate care spells.

Duration

Duration in out-of-home care is an important measure of system performance. For purposes of this study, we first looked to see how long children were placed in their first congregate care spell before being discharged from that care type. To measure the duration of congregate care spells, we use quartile durations. Quartile durations answer the questions: How many days elapsed before 25 percent of the children who were placed in congregate care during each year left congregate care (the 25th percentile)? How many days elapsed before 50 percent left

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[2] A small proportion of the spell data is missing the county information (4%), so the urbanicity and socioeconomic disadvantage for those spells could not be populated.

(the 50th percentile)? Before 75 percent left (the 75th percentile)?

As shown in Table 5 below, 25 percent of children who were placed in their first congregate care spell left that care type in eight days on average (with a low of six days and a high of 11 days). This has remained relatively stable over the years with a slight decrease in recent years. The median duration is about one month, while the 75th percentile is approximately four months, with both experiencing a decline in recent years. Quartile durations for 2019 are not presented because they have not been fully observed yet due to censoring.

Table 5. Quartile Duration (in Days) of First Congregate Care Spell, by Year

	2012	2013	2014	2015	2016	2017	2018
25th Percentile	10	10	11	7	7	6	6
50th Percentile	40	40	39	31	31	29	27
75th Percentile	164	142	141	122	116	109	99

One of the limitations of the analysis is that shelter or respite care could not be consistently identified for all the states in the sample. Those congregate settings are unique in the way they intend to provide short-term crisis stabilization or are designed for a quick assessment and temporary stay before a longer-term and more stable placement is identified. Because they are widely used as temporary first placements and are included in the sample, the short length of stay likely reflects children's experience in those congregate care settings.

To explore this a bit further, we looked at how long children were placed in any congregate care spell (first or subsequent)[3] without regard to child spell and produced quartile durations for those spells, presented in Table 6. When including all congregate care spells in the analysis, we observe that the duration was longer for every percentile: 14 days on average for the 25th percentile (compared to eight days for first congregate care spells), about two months on average for the median (compared to one month for first congregate care spells), and approximately seven months for the 75th percentile (compared to four months for first congregate care spells). These trends have also remained relatively stable over the years with a slight decrease in recent years.

Table 6. Quartile Duration (in Days) of Any Congregate Care Spell

	2012	2013	2014	2015	2016	2017	2018
25th Percentile	15	15	15	13	13	13	12
50th Percentile	58	62	60	56	56	55	56
75th Percentile	211	210	207	198	192	192	191

Quartile durations were also examined for gender, age, race, urbanicity, and socioeconomic subgroups. As shown in Table 7:

- ▸ *Age:* Children ages 13 to 15 had the longest quartile durations while children under 9 had the shortest quartile durations.

- ▸ *Gender:* Overall, boys stayed in congregate care spells longer than girls.

- ▸ *Race/Ethnicity:* White children had the longest quartile durations, followed by African American children and Hispanic children.

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[3] The sample used here is different from other outcome measures and includes all 221,371 congregate care type spells across all child spells.

- *Urbanicity:* Children from large fringe counties stayed in congregate care the longest while children from urban core counties had the shortest quartile durations.

- *Socioeconomic Disadvantage*: The level of socioeconomic status did not reveal a clear pattern in quartile durations.

Table 7. Quartile Durations (in Days) for All Congregate Care Spells, by Child Demographics and County Attributes

		Duration of Congregate Care Spell in Days		
	Category	25th Percentile	50th Percentile	75th Percentile
Age	Under 9	5	21	77
	Age 9-12	16	70	268
	Age 13-15	21	84	269
	Age 16-17	20	72	204
Gender	Female	13	50	171
	Male	15	65	234
Race/Ethnicity	White	15	67	225
	African Am.	14	58	214
	Hispanic	14	53	175
	Other	10	41	153
Urbanicity	Urban Core	11	49	185
	Large fringe	18	73	248
	Smaller metro	15	61	204
	Rural	21	77	232
Socioeconomic Disadvantage	Low	14	63	219
	1	14	55	181
	2	22	79	228
	3	17	64	211
	High	11	44	183

Congregate Care Placement Stability

Placement stability is a key indicator of how well children and youth in care are being served. Research shows that children generally perform better when experiencing less frequent placement disruption, including being at a decreased risk for future homelessness (Dworsky et al., 2013). Placing a child in the right setting and providing appropriate services to the child to minimize the placement interruption is crucial to the success of the placement and transition to permency. In the context of this study, the analysis of placement stability focuses on children who experienced congregate care as a first care type within the first child spell, as explained in the Introduction to this report. Placement disruption is in the form of movements between different congregate care placements within the first congregate care spell.

Table 8 compares, by entry year, the number and percent of children who experienced at least one placement move (from one congregate care placement to another) during the initial congregate care spell with those who did not move during their initial congregate care spell. The former situation indicates that there was more than one congregate care placement during the first congregate care spell (see Child B's initial congregate care spell in Table 1), while the latter means that there was only one congregate care placement during the first congregate care spell (see Child A and Child D's initial congregate care spells in the first child spell shown in Table 1).

The overall picture across years is relatively stable: about 80 percent of children did not experience any move,

while the remaining 20 percent of children experienced at least one move. Of the 104,219 children who were placed into congregate care, 21,117 (20%) experienced at least one move during the congregate care spell. The movement experience for children entering congregate care in 2019 is presented to show what has been observed until the censor date, but with approximately one-fifth of children still in care for 2019, the movement activity for those children is still unfolding and cannot yet be fully observed.

Table 8. Number and Percent of Children Initially Placed in Congregate Care, by Whether or Not They Moved from Their Initial Congregate Care Placement to another Congregate Care Placement, by Year

Placement Move	2012	2013	2014	2015	2016	2017	2018	2019*	Total
Moved during 1st CC spell	3,576	2,803	2,856	2,855	2,659	2,449	2,152	1,767	21,117
Did not move during 1st CC spell	13,107	10,699	10,651	10,692	9,583	9,659	9,313	9,398	83,102
Total First CC spells	16,683	13,502	13,507	13,547	12,242	12,108	11,465	11,165	104,219
Moved during 1st CC spell	21%	21%	21%	21%	22%	20%	19%	16%	20%
Did not move during 1st CC spell	79%	79%	79%	79%	78%	80%	81%	84%	80%
Total First CC spells	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table 9 shows the rate of movement by child demographics and county characteristics.

- ▸ *Age:* Older children moved more during their initial congregate care type spell (32% for 13-15 year olds and 33% for 16-17 year olds) than did younger children (6% for children under 9 and 18% for 9-12 year olds).

- ▸ *Gender:* Boys tended to move more often than girls (22% for males compared to 18% for females).

- ▸ *Race/Ethnicity:* African American children moved between congregate care settings slightly more often than other race/ethnic groups (23% for African American, 22% for White, and 17% for Hispanic).

- ▸ *Urbanicity:* Children from large fringe counties were more likely to move (24%) than children from counties of other urbanicity statuses (18% for urban core, 20% for smaller metro, and 22% for rural).

- ▸ *Socioeconomic Disadvantage:* Children from counties with the highest socioeconomic disadvantage were least likely to move between congregate care settings within their first congregate care spell (17%).

Table 9. Number of Children Initially Placed in Congregate Care and Rate of Movement from Initial Congregate Care Placement to another Congregate Care Placement, by Child Demographics and County Attributes

| Characteristic[4] | Category | Child Moved from Initial CC Placement to Another CC Placement during First CC Spell | | | |
		No	Yes	Sub Total	Movement Rate
Age	Under 9	37,094	2,574	39,668	6%
	Age 9-12	14,722	3,249	17,971	18%
	Age 13-15	18,656	8,943	27,599	32%
	Age 16-17	12,630	6,351	18,981	33%
Gender	Female	40,212	9,124	49,336	18%
	Male	42,890	11,993	54,883	22%
Race/Ethnicity	White	25,760	7,376	33,136	22%
	African Am.	20,697	6,088	26,785	23%
	Hispanic	28,787	5,857	34,644	17%
	Other	7,858	1,796	9,654	19%
Urbanicity	Urban Core	36,764	8,221	44,985	18%
	Large fringe	9,174	2,856	12,030	24%
	Smaller metro	24,228	5,950	30,178	20%
	Rural	7,177	1,974	9,151	22%
Socioeconomic Disadvantage	Low	26,499	6,767	33,266	20%
	1	10,450	2,836	13,286	21%
	2	9,611	2,527	12,138	21%
	3	12,565	3,123	15,688	20%
	High	18,218	3,748	21,966	17%
Total		83,102	21,117	104,219	20%

Congregate Care Permanency

For a child placed in congregate care, we are also interested in whether the child exited the congregate care placement to a permanent exit (this analysis uses the same population as the congregate care stability analysis). Exit types from congregate care include:

▸ Exit from out-of-home care, either to permanency (including adoption, reunification, and exit to relative/guardianship) or to non-permanency (including aging out, runaway, and other non-permanent exits)

▸ Transfer from congregate care to another care type

▸ No exit (remaining in congregate care as of the censor date of the file, 1/1/2020)

Table 10 presents the observed exit experience of the children entering congregate care placement by entry cohort and by exit destination as of the censor date (1/1/2020). The most frequent way that children leave congregate care is via transfer to a different care type (about 64%). About one-quarter left their congregate care spell (and out-of-home care) to a permanent exit, and about one-tenth left congregate care to a non-permanent

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[4] A small proportion of the spell data is missing the county information (8%), so the urbanicity and Socioeconomic Disadvantage for those spells could not be populated. The percent of movement was the highest (~27%) when a child's county data was missing, which indicates that missingness of the county information is not random. The non-random component was captured as a dummy covariate and analyzed in the statistical model of movement in the later section. In the county random effects model, children whose county was missing were combined and treated as belonging to one county to include those children in the county random effects model.

exit. As of the censor date, 21% of the children who entered congregate care in 2019 remained in their initial congregate care spell, and their exit destinations are still unfolding.

Table 10. Number and Percent of Children Initially Placed in Congregate Care, by Exit Destination from First Congregate Care spell, by Year

Exit Destination	2012	2013	2014	2015	2016	2017	2018	2019*	Total
Permanency	3,798	3,210	3,479	3,357	2,990	2,857	2,468	1,598	23,757
Non-Permanency	1,891	1,462	1,321	1,331	1,239	1,165	948	568	9,925
Transfer	10,977	8,804	8,668	8,788	7,895	7,862	7,553	6,600	67,147
Still in Congregate Care	17	26	39	71	118	224	496	2,399	3,390
Total First CC spells	16,683	13,502	13,507	13,547	12,242	12,108	11,465	11,165	104,219
Permanency	23%	24%	26%	25%	24%	24%	22%	14%	23%
Non-Permanency	11%	11%	10%	10%	10%	10%	8%	5%	9%
Transfer	66%	65%	64%	65%	64%	65%	66%	59%	64%
Still in Congregate Care	0%	0%	0%	1%	1%	2%	4%	21%	4%
Total First CC spells	100%	100%	100%	100%	100%	100%	100%	100%	100%

Of the total 104,219 children who were placed into congregate care, 23,757 (23%) experienced permanent exits. Table 11 presents the number and proportion of children who experienced permanency in each subgroup.

▸ *Age:* The likelihood of exiting congregate care to permanency is the highest for children ages 13 to 15 (31%) and the lowest for children under 9 years old (14%).

▸ *Gender*: The likelihood of exiting congregate care to permanency for males is slightly higher than it is for females (24% compared to 22%).

▸ *Race/Ethnicity:* African American and Hispanic children have a lower likelihood of exit to permanency (23% for African American and 19% for Hispanic) than do White children (25%).

▸ *Placement Moves:* Compared to children who experienced placement move(s) during their first congregate care spell, children who did not move were less likely to reach permanency. The relationship between placement moves and the rate of permanency reversed in the modeling analysis after controlling for child demographics and county characteristics (see Table 17).

▸ *Urbanicity:* Children from smaller metro and large fringe counties have the highest likelihood of exit to permanency (27%), and children from urban core counties have the lowest likelihood (19%).

▸ *Socioeconomic Disadvantage*: Children from counties where the level of socioeconomic disadvantage is high have the lowest likelihood of exit to permanency (16%).

Table 11. Number of Children Initially Placed in Congregate Care and Rate of Permanency, by Child Demographics and County Attributes

| Characteristic[5] | Category | Exit from First Congregate Care Type Spell | | | | | |
		Still in Congregate Care	Transfer	Non Permanency	Permanency	Sub Total	Permanency Rate
Age	Under 9	481	33,284	277	5,626	39,668	14%
	Age 9-12	675	12,399	475	4,422	17,971	25%
	Age 13-15	1,393	13,581	4,073	8,552	27,599	31%
	Age 16-17	841	7,883	5,100	5,157	18,981	27%
Gender	Female	1,377	32,332	4,770	10,857	49,336	22%
	Male	2,013	34,815	5,155	12,900	54,883	24%
Race/Ethnicity	White	1,109	20,693	2,898	8,436	33,136	25%
	African Am.	998	16,586	3,026	6,175	26,785	23%
	Hispanic	958	24,266	2,983	6,437	34,644	19%
	Other	325	5,602	1,018	2,709	9,654	28%
Movement within CC Spell	No Movement	1,874	58,140	5,035	18,053	83,102	22%
	Yes Movement	1,516	9,007	4,890	5,704	21,117	27%
Urbanicity	Urban Core	1,263	31,168	3,932	8,622	44,985	19%
	Large fringe	482	6,808	1,536	3,204	12,030	27%
	Smaller metro	879	18,871	2,174	8,254	30,178	27%
	Rural	331	5,945	676	2,199	9,151	24%
Socioeconomic Disadvantage	Low	1,229	20,478	3,360	8,199	33,266	25%
	1	382	8,037	1,159	3,708	13,286	28%
	2	376	7,917	872	2,973	12,138	24%
	3	466	9,999	1,400	3,823	15,688	24%
	High	502	16,361	1,527	3,576	21,966	16%
Total		3,390	67,147	9,925	23,757	104,219	23%

Congregate Care Reentry after Exit to Permanency

The final outcome of interest is whether or not a child reenters out-of-home care after exiting to permanency. To understand the ultimate success of the work to achieve a permanent exit for a child, we need to consider what happens over the long term. To do so, we observed whether children reentered care after exiting to permanency from congregate care. Specifically, for children who exited from the initial congregate care type spell to a permanent exit (reunification or exit to relatives[6]) from 2012 through 2019, we wanted to determine how many reentered care, and whether that likelihood has changed over time. For children who exited to permanency from congregate care, we followed whether they reentered care again into any care type (i.e., foster care, kinship care, congregate care, or other care types) until the censor date of the file (1/1/2020), as shown in Table 12.

Of children placed in congregate care as a first care type between 2012 and 2019 (N=104,219), 23% exited to reunification or to relatives (N=23,690). Among them, 5,048 children (21%) experienced reentry. Fewer children reentered in recent entry cohorts because less time has elapsed during which to observe their reentry. To account for this censoring issue, person-period data (6-month) were used in building the statistical models, presented later in this report.

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[5] A small proportion of the spell data is missing the county information (8%), so the urbanicity and Socioeconomic Disadvantage for those spells could not be populated

[6] Adopted children were excluded because of the complexities of identifying children after a finalized adoption.

Table 12. Number and Percent of Children Initially Placed in Congregate Care Who Exited by Reunification or to Relative, by Whether or Not They Reentered Care, by Year

Reentry	2012	2013	2014	2015	2016	2017	2018	2019*	Total
Reentered	993	776	789	728	687	580	379	116	5,048
Did not reenter	2,789	2,427	2,682	2,615	2,291	2,273	2,084	1,481	18,642
Total Perm Exits from 1st CC Spell	3,782	3,203	3,471	3,343	2,978	2,853	2,463	1,597	23,690
Reentered	26%	24%	23%	22%	23%	20%	15%	7%	21%
Did not reenter	74%	76%	77%	78%	77%	80%	85%	93%	79%
Total Perm Exits from 1st CC Spell	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table 13 presents the number and proportion of children who reentered care from permanency in each subgroup.

▸ *Age:* The reentry rate for children under 9 and ages 9 to 12 is 22%. The reentry rate is the highest for ages 16-17 (25%); however, the reentry rate drops sharply for ages 16-17 (13%) because of aging out.

▸ *Gender:* Males and females experienced a similar rate of reentry (21%).

▸ *Race/Ethnicity:* African American children are more likely to reenter (25%), compared to White children (21%), Hispanic children (22%), and children of other races/ethnicities (13%).

▸ *Urbanicity:* Children from large fringe and smaller metro counties were less likely to reenter (20%) than were children from urban core (23%) and rural (23%) counties.

▸ *Socioeconomic Disadvantage:* The level of socioeconomic status did not reveal a clear pattern.

Table 13. Number and Percent of Children Initially Placed in Congregate Care and Exited by Reunification or to Relative and Rate of Reentry, by Child Demographics and County Attributes

| Characteristic[7] | Category | Child Reentered Out-of-Home after Exit to Permanency from Congregate Care? | | | |
		No	Yes	Sub Total	Reentry Rate
Age	Under 9	4,334	1,249	5,583	22%
	Age 9-12	3,444	967	4,411	22%
	Age 13-15	6,403	2,142	8,545	25%
	Age 16-17	4,461	690	5,151	13%
Gender	Female	8,513	2,307	10,820	21%
	Male	10,129	2,741	12,870	21%
Race/Ethnicity	White	6,624	1,793	8,417	21%
	African Am.	4,642	1,514	6,156	25%
	Hispanic	5,030	1,381	6,411	22%
	Other	2,346	360	2,706	13%
Urbanicity	Urban Core	6,648	1,944	8,592	23%
	Large fringe	2,564	636	3,200	20%
	Smaller metro	6,555	1,683	8,238	20%
	Rural	1,677	509	2,186	23%
Socioeconomic Disadvantage	Low	6,459	1,734	8,193	21%
	1	2,829	875	3,704	24%
	2	2,391	579	2,970	19%
	3	2,974	828	3,802	22%
	High	2,791	756	3,547	21%
Total		18,642	5,048	23,690	21%

Model Analysis

Modeling Methodology

The study design addresses some potential methodological issues. The first issue is that the observational period differs between children (because the dates they entered congregate care and exited congregate care differ), and the outcomes (permanent exit rate, reentry rate, and movement rate) differ depending on the degree to which we are able to observe what happens next. To address this challenge, we use what is called a person-period data structure. The person-period data structure allows us to standardize the observation periods as much as possible. Second, children are nested within counties and counties are nested within states. Children placed in the same county, because of county-level placement practices, may share more in common with each other than do children placed in different counties. This clustering of children creates statistical problems that we address with a state and county random effects model.

Censoring and Discrete-time Hazard Model

Censoring refers to the fact that the window of observation is longer for some study participants than it is for others. The likelihood of permanency and the likelihood of movement depend on how much time a child spends in care and the likelihood of reentry depends on how much time has passed since a child exited. There are two major approaches for solving the problem: The Cox proportional hazard model and the discrete-time hazard model (Singer & Willett, 2003). The Cox proportional hazard model uses one record per child. A discrete time model

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[7] A small proportion of the spell data is missing the county information (6%), so the urbanicity and Socioeconomic Disadvantage for those spells could not be populated.

divides time into intervals referred to as person-periods. Given the choice of the two methods, we employed the discrete-time hazard model (DTHM) because it offers several advantages. First, the DTHM calculates explicitly the likelihood of an event for each person-period. Second, when testing for interaction effects that involve time, the DTHM offers more flexibility and transparency to test specific interactions. Third, for the multi-level data, the DTHM addresses the nested data structure in a straightforward manner.

In the DTHM, the duration from the beginning of the congregate care spell until the end of the observation period is divided into intervals or person-periods. The placement stability and permanency analyses use 90-day person-periods, and the reentry analysis uses 180 days as the person-period length. For the 90-day period, a child will have only one row if a child stays no more than 90 days; however, a child will have multiple rows if a child stays more than 90 days in care. All children are included in the first person-period, with the number of children decreasing in subsequent person-periods. The end of the observation period can come either from leaving the congregate care spell or reaching the censoring date while still in the congregate care spell. If a child experienced an outcome at 200 days, the outcomes for the first and the second periods are coded as zero and the outcome for the third period is coded as one, indicating that the event occurred during this particular person-period. As such, until a child experiences an event outcome, the outcomes for all prior person-periods are coded as zero. In this way, the outcome becomes a *person-period specific probability*, which means we are measuring the likelihood of an event occurring during specific intervals. Constructed this way, the approach allows us to use as much of the available data as possible without introducing a censoring bias.

Random Effects Model

Children are nested within counties and counties are nested within states, just as students are nested within classrooms and classrooms are nested within schools. Because a child is attached to one county and the county is attached to one state, we employ a three-level nested (hierarchical) data structure with the state and county random effects model. The likelihood of an outcome (i.e., either placement into congregate care, movement, permanency, or reentry) is not only affected by child differences (e.g. age), but also by both county and state differences attributable to county and/or state policy and practice differences.

The DTHM model, with the random effects, is illustrated below using a hierarchical form with separate equations for the person-, county-, and state-levels. This follows the standard exposition on multi-level models (Raudenbush and Bryk, 2002).

Level 1 (child level)

$$\eta_{ijkt} \sim \textit{Binomial} \ (1, h_{ijkt}) \text{ and } \eta_{ijkt} = \ln(h_{ijkt} / (1- h_{ijkt})) = \beta_{0jk} + \beta_1 X_{ijk} + \Sigma T_t \ P_{ijkt}$$

For binary outcomes (events=1, non-events=0), a non-linear link function is appropriate. As shown in the level-1 model structure, among non-linear functions, the logit link function works well. η_{ijkt} is the log of the odds of outcome (0 or 1) for child i in county j in state k at discrete time t, h_{ijkt} is the likelihood of the outcome for child i in county j in state k at time t, and X_{ijk} represents child level covariates for child i in county j in state k. P_{ijkt} is an indicator variable of discrete person-periods. T_t represents statistical model intercepts for different discrete time intervals, which form the baseline hazard rate.

Level 2 (county level)

$$\beta_{0jk} = \beta_{00k} + \beta_{01} C_{jk} + \gamma_{0jk}$$

For Level-2, both β_{0jk} have subscripts of j and k, which means each county and state has a unique intercept, which makes this model different from the typical logit model. β_{0jk} is the intercept in county j in state k, and as shown in

the equation above, β_{0jk} includes county level fixed variables, C_{jk}, so that β_{0jk} becomes the adjusted intercept of children in county j in state k. β_{01} is the adjusted difference in child outcome associated with county variables of C_{jk}. γ_{0jk} is a level-2 random variable. γ_{0jk} is the adjusted average outcome rate in county j in state k. The county random effects model allows only the county intercept to be random. It assumes that counties follow the same overall slope, but only differ in average outcome rates.

Level 3 (state level)

$$\beta_{00k} = \beta_{000} + \eta_{00k}$$

For Level-3, β_{00k} is the average outcome for states. β_{000} refers to the overall intercept; however, when person-periods (P_{ijkt}) are included, the intercept refers to the placement rate for the omitted person-period. Alternatively, for a no-intercept DTHM, person-period estimates (T_t) forms the baseline hazard rate. We used the no-intercept version of the DTHM with random effects. η_{00k} is a level-3 random variable. The presence of η_{00k} changes the model to the state random effects model that allows only the state intercepts to be random. It assumes that states follow the same overall slope, but only differ in average outcome rates.

In terms of distributions, both the county and the state intercepts are assumed to be normally distributed with an expected value of zero. Therefore, the individual county and state intercepts are deviations from zero.

Combined Model (levels 1, 2, and 3 together)

$$\eta_{ijkt} = \ln(h_{ijkt} / (1 - h_{ijkt})) = \beta_{000} + \Sigma T_t\, P_{ijkt} + \beta_1 X_{ijk} + \beta_{01} C_{jk} + \gamma_{0jk} + \eta_{00k}$$

The mixed or combined model is formed by algebraic substitution. As shown, the model contains fixed components (overall intercept, person-period intercepts, level 1 covariates, and two level 2 covariates) and two random components (γ_{0jk} and η_{00k}). However, the first placement model does not consider person periods. It drops $\Sigma T_t\, P_{ijkt}$ because the analysis limits the sample to a child's initial entry into care where each child has only one row. Now a child has only one intercept, β_{000}, which means there are no period-specific intercepts. This is a special form of the combined model presented above, and the only model without the person-period construct. Therefore, the person period structure is applied only to the congregate care outcomes (stability, permanency, and reentry).

Modeling Results

For Table 14, Table 16, Table 17, Table 18, and Table 19 below, model coefficients and their standard errors, p-values, and odds ratios (O.R.) for each covariate are presented. Estimates from three different models are shown in those tables. Model 1 shows the estimates of the logistic regression model and Models 2 and 3 show the estimates of the county and state random effects models. Model 1 does not account for the county and state clustering, but Model 2 and Model 3 account for county and state clustering by using multi-level models.

For Table 15 and Table 18, the adjusted results of the interaction terms from Model 3 are presented. Odds ratios greater than one are associated with an increased likelihood of outcomes (first placement, movement, permanency, and reentry). Odds ratios smaller than one are associated with a lower likelihood of outcomes.

Likelihood of Congregate Care

We start with the likelihood of entering congregate care: the results are presented in Table 14 below. Age, gender, and race/ethnicity are correlated with entry into congregate care. Older males are more likely to be placed in congregate care. Among children of different races and ethnicities, Black and Hispanic children are both more likely to be placed in congregate care. However, when the odds-ratios of Model 1 and Model 2 are compared, the

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odds-ratios associated with the child's age shift. After accounting for county and state clustering, age shows a greater impact on entry into congregate care; however, the effect of a young person's race/ethnicity shrinks in the case of Hispanics. These findings indicate that policies and practices unique to states and counties have an influence on the likelihood of congregate care entry.

Regardless of model types, the demographic variables, including age, gender, and race/ethnicity, are associated with statistically significant effects. As expected, age is the strongest predictor of entering congregate care. As children become older, they have a higher likelihood of being placed into congregate care (odds-ratio=3.01 for ages 9-12, 9.03 for ages 13-15, and 12.95 for ages 16-17 in Model 2). Male children are more likely to enter congregate care (27% higher likelihood than females in Model 2). White children (reference category) are less likely to enter congregate care than other races/ethnicities. Even after accounting for other child-level and county-level characteristics and county and state clustering, African American children have the highest likelihood of entering congregate care (22% higher likelihood than White children in Model 2). As the observation timeframe transitions from 2012 through 2019, children are less likely to be placed into congregate care. Compared to the 2012 cohort, the 2019 entry cohort is 10% less likely to enter congregate care (odds-ratio=0.90).

Regarding county variables, children who live in urban core counties (the reference group) have the highest likelihood of being placed into congregate care. Presented in Model 2, children who live in rural counties show the lowest likelihood of being placed into congregate care (odds-ratio=0.60). Socioeconomic disadvantage shows only a statistically significant finding in the middle of the index (odds-ratio=0.76).

Table 14. Estimates for the first entry into Congregate Care

	Model 1: Logistic Regression (main effects only)				Model 2: Random Effects Model (main effects only)				Model 3: Random Effects Model (with interaction effects)			
	Estimate	Error	Pr	O.R.	Estimate	s.e.	Pr	O.R.	Estimate	s.e.	Pr	O.R.
Intercept	-2.712	0.012	<.0001		-2.905	0.201	<.0001		-3.026	0.202	<.0001	
Age												
Under 9	Reference											
Age 9-12	0.963	0.010	<.0001	**2.62**	1.102	0.011	<.0001	**3.01**	1.269	0.016	<.0001	**3.56**
Age 13-15	1.880	0.009	<.0001	**6.56**	2.201	0.010	<.0001	**9.03**	2.365	0.016	<.0001	**10.64**
Age 16-17	2.157	0.011	<.0001	**8.65**	2.561	0.013	<.0001	**12.95**	2.742	0.019	<.0001	**15.52**
Gender												
Female	Reference											
Male	0.213	0.007	<.0001	**1.24**	0.237	0.008	<.0001	**1.27**	0.282	0.012	<.0001	**1.33**
Race/Ethnicity												
White	Reference											
African Am.	0.190	0.009	<.0001	**1.21**	0.201	0.011	<.0001	**1.22**	0.281	0.019	<.0001	**1.32**
Hispanic	0.142	0.009	<.0001	**1.15**	0.037	0.011	0.001	**1.04**	0.307	0.017	<.0001	**1.36**
Other	0.211	0.013	<.0001	**1.24**	0.030	0.015	0.043	**1.03**	0.035	0.015	0.020	**1.04**
Interaction Terms												
Male*Afr. Am.									-0.049	0.019	0.013	**0.95**
Male *Hispanic									-0.104	0.018	<.0001	**0.90**
Age 9-12* Afr. Am.									-0.149	0.027	<.0001	**0.86**
Age 13-15*Afr. Am.									-0.038	0.025	0.133	0.96
Age16-17* Afr. Am.									-0.153	0.030	<.0001	**0.86**
Age 9-12*Hispanic									-0.375	0.024	<.0001	**0.69**
Age 13-15* Hispanic									-0.478	0.024	<.0001	**0.62**
Age 16-17*Hispanic									-0.440	0.029	<.0001	**0.64**
Inyear												
Inyear 2012	Reference											
Inyear 2013	-0.050	0.013	0.000	**0.95**	-0.028	0.014	0.050	**0.97**	-0.028	0.014	0.053	0.97
Inyear 2014	0.001	0.013	0.914	1.00	0.008	0.014	0.586	1.01	0.009	0.014	0.554	1.01
Inyear 2015	0.053	0.013	<.0001	**1.05**	0.067	0.014	<.0001	**1.07**	0.069	0.014	<.0001	**1.07**
Inyear 2016	-0.048	0.014	0.001	**0.95**	-0.045	0.015	0.002	**0.96**	-0.044	0.015	0.003	**0.96**
Inyear 2017	-0.054	0.014	<.0001	**0.95**	-0.036	0.015	0.015	**0.96**	-0.034	0.015	0.023	**0.97**
Inyear 2018	-0.096	0.014	<.0001	**0.91**	-0.068	0.015	<.0001	**0.93**	-0.065	0.015	<.0001	**0.94**
Inyear 2019	-0.139	0.014	<.0001	**0.87**	-0.100	0.015	<.0001	**0.90**	-0.097	0.015	<.0001	**0.91**
Urbanicity												
Urban core	Reference											
Large fringe					-0.433	0.159	0.006	**0.65**	-0.441	0.159	0.006	**0.64**
Smaller metro					-0.332	0.152	0.028	**0.72**	-0.342	0.152	0.024	**0.71**
Rural					-0.516	0.150	0.001	**0.60**	-0.531	0.150	0.000	**0.59**
County missing					-0.040	0.314	0.899	0.96	-0.033	0.314	0.917	0.97
Socioeconomic Disadvantage												
Low	Reference											
1					-0.009	0.097	0.925	0.99	-0.010	0.097	0.921	0.99
2					-0.269	0.097	0.006	**0.76**	-0.270	0.097	0.006	**0.76**
3					-0.098	0.100	0.326	0.91	-0.096	0.100	0.335	0.91
High					-0.063	0.101	0.535	0.94	-0.061	0.101	0.546	0.94

In contrast to Model 2, which captures the main effects, Model 3 captures the differential subgroup effects by using interaction terms. The main effects refer to the overall impact of covariates by assuming that the main effects are, by and large, the same within subgroups. To test this assumption, the interactions between covariates were used. In particular, we were interested to see the race/ethnicity differential impacts on age and gender. Therefore, the interactions of race/ethnicity with gender and age were investigated. The impact of male and race/ethnicity interaction terms (-0.049 for African American children and -0.104 for Hispanic children) are relative to the baseline White male impact (0.282). To contrast with African American and Hispanic female children, logits have to be adjusted as shown in Table 15. The odds-ratio for males refers to the odds ratio for the missing category, White. The odds-ratio for African American gender gap is 1.26 and the odds ratio for Hispanic gender

gap is 1.20. Therefore, the gender gap is less pronounced in African American and Hispanic children, compared to White children, even though African American and Hispanic children are placed more frequently in congregate care. The age gaps among race/ethnicity are shown in Table 15, too. The logits for the interactions between age groups and race/ethnicity were recalculated. The reference group is White children ages under 9. The gaps are less pronounced in Hispanic children, especially for ages 16 to 17 (15.52 for White and 9.99 for Hispanic children).

Table 15. Differential Effects for the first entry into Congregate Care

Effect	Logit	Recalculated logit	Odds-ratio
Male: White (reference)	0.282		1.33
Male*African Am	-0.049	0.234 = [(0.282) + (-0.049)]	1.26
Male*Hispanic	-0.104	0.178 = [(0.282) + (-0.104)]	1.20
Age 9-12: White (reference)	1.269		3.56
Age 9-12*African Am.	-0.149	1.120= [(1.269) + (-0.149)]	3.07
Age9-12*Hispanic	-0.375	0.894= [(1.269) + (-0.375)]	2.44
Age 13-15: White (reference)	2.365		10.64
Age 13-15*African Am.	-0.038	2.327= [(2.365) + (-0.038)]	10.25
Age13-15* Hispanic	-0.478	1.887= [(2.365) + (-0.478)]	6.60
Age 16-17: White (reference)	2.742		15.52
Age16-17*African Am.	-0.153	2.589= [(2.742) + (-0.153)]	13.32
Age16-17*Hispanic	-0.440	2.302= [(2.742) + (-0.440)]	9.99

Congregate Care Outcomes

Congregate Care Placement Stability

Once children were placed in congregate care, their stability was analyzed by observing moves during the congregate care spell when it was the first care type within a first child spell. A dummy variable was created to indicate whether or not a child experienced any movement during the congregate care spell. To address the censoring issues mentioned in the methodology section, a three-month (90 day) person period data structure was used. In Table 16, D1 indicates the first 90 days and D2 refers to the following 90 days (91 to 180 days). The maximum observation time is 1,080 days.

Model 1 shows the estimates of the logistic regression model that does not account for the county and state clustering, and Model 2 presents the estimates of the county and state random effects model that accounts for county and state clustering. When Model 1 and Model 2 are compared, it is noticeable again that the odds-ratios of Model 2 are greater in age, similar to the entry into congregate care model presented above. After accounting for county and state clustering, age again shows a greater impact on child movement during congregate care (from 1.38 to 1.49 for age 9 to 12, from 2.14 to 2.48 for age 13 to 15, and from 2.69 to 3.12 for age 16 to 17). As expected, age is a strong predictor of placement movements. As children become older, they have a higher likelihood of moving during congregate care. Race/ethnicity is not statistically significant in Model 2. Male children are 13% less likely to move during congregate care (odds-ratio: 0.87 in Model 2), as opposed to a 27% higher likelihood of congregate care entry (see Table 14 above). As the observation timeframe transitioned from 2012 through 2019, children were more likely to move, especially in the 2018 and 2019 cohorts. Urbanicity and socioeconomic disadvantage did not show statistically significant impacts. Unlike entry into congregate care, most interaction terms for movements are not statistically significant. This indicates that the gender gap and the age gap are similar across race/ethnicity groups.

Table 16. Estimates for Placement Stability

	Model 1: Logistic Regression (main effects only)				Model 2: Random Effects Model (main effects only)				Model 3: Random Effects Model (with interaction effects)			
	Estimate	Error	Pr	O.R.	Estimate	s.e.	Pr	O.R.	Estimate	s.e.	Pr	O.R.
Person Periods												
D1	-3.443	0.031	<.0001		-3.668	0.138	<.0001		-3.648	0.140	<.0001	
D2	-2.809	0.035	<.0001		-2.919	0.139	<.0001		-2.899	0.141	<.0001	
D3	-2.615	0.037	<.0001		-2.680	0.139	<.0001		-2.659	0.141	<.0001	
D4	-2.478	0.039	<.0001		-2.522	0.140	<.0001		-2.501	0.142	<.0001	
D5	-2.475	0.042	<.0001		-2.514	0.141	<.0001		-2.493	0.143	<.0001	
D6	-2.416	0.045	<.0001		-2.449	0.142	<.0001		-2.428	0.144	<.0001	
D7	-2.420	0.049	<.0001		-2.453	0.143	<.0001		-2.432	0.145	<.0001	
D8	-2.388	0.053	<.0001		-2.418	0.145	<.0001		-2.396	0.147	<.0001	
D9	-2.480	0.060	<.0001		-2.510	0.147	<.0001		-2.488	0.150	<.0001	
D10	-2.438	0.065	<.0001		-2.464	0.149	<.0001		-2.442	0.152	<.0001	
D11	-2.382	0.070	<.0001		-2.404	0.152	<.0001		-2.382	0.154	<.0001	
D12	-2.450	0.080	<.0001		-2.465	0.156	<.0001		-2.443	0.158	<.0001	
Age												
Under 9	Reference											
Age 9-12	0.322	0.029	<.0001	**1.38**	0.402	0.029	<.0001	**1.49**	0.335	0.045	<.0001	**1.40**
Age 13-15	0.762	0.024	<.0001	**2.14**	0.908	0.026	<.0001	**2.48**	0.878	0.039	<.0001	**2.41**
Age 16-17	0.988	0.025	<.0001	**2.69**	1.137	0.027	<.0001	**3.12**	1.143	0.041	<.0001	**3.14**
Gender												
Female	Reference											
Male	-0.111	0.015	<.0001	**0.89**	-0.141	0.016	<.0001	**0.87**	-0.135	0.024	<.0001	**0.87**
Race/Ethnicity												
White	Reference											
African Am.	0.042	0.019	0.030	**1.04**	0.035	0.021	0.102	1.04	0.023	0.058	0.697	1.02
Hispanic	-0.010	0.019	0.621	0.99	-0.023	0.022	0.282	0.98	-0.075	0.054	0.163	0.93
Other	0.074	0.029	0.010	**1.08**	0.031	0.030	0.314	1.03	0.029	0.031	0.348	1.03
Interaction Terms												
Male*Afr. Am.									-0.061	0.037	0.105	0.94
Male *Hispanic									0.041	0.037	0.276	1.04
Age 9-12* Afr. Am.									0.220	0.072	0.002	**1.25**
Age 13-15*Afr. Am.									0.057	0.061	0.352	1.06
Age16-17* Afr. Am.									-0.039	0.064	0.543	0.96
Age 9-12*Hispanic									0.025	0.067	0.709	1.03
Age 13-15* Hispanic									0.050	0.057	0.383	1.05
Age 16-17*Hispanic									0.021	0.060	0.732	1.02
Inyear												
Inyear 2012	Reference											
Inyear 2013	0.025	0.028	0.369	1.03	0.036	0.028	0.203	1.04	0.037	0.028	0.191	1.04
Inyear 2014	0.092	0.028	0.001	**1.10**	0.088	0.028	0.002	**1.09**	0.089	0.028	0.002	**1.09**
Inyear 2015	0.174	0.028	<.0001	**1.19**	0.188	0.028	<.0001	**1.21**	0.189	0.028	<.0001	**1.21**
Inyear 2016	0.230	0.028	<.0001	**1.26**	0.261	0.029	<.0001	**1.30**	0.262	0.029	<.0001	**1.30**
Inyear 2017	0.252	0.029	<.0001	**1.29**	0.275	0.029	<.0001	**1.32**	0.277	0.029	<.0001	**1.32**
Inyear 2018	0.368	0.030	<.0001	**1.44**	0.409	0.031	<.0001	**1.51**	0.410	0.031	<.0001	**1.51**
Inyear 2019	0.700	0.033	<.0001	**2.01**	0.721	0.033	<.0001	**2.06**	0.722	0.033	<.0001	**2.06**
Urbanicity												
Urban core	Reference											
Large fringe					-0.019	0.075	0.805	0.98	-0.021	0.075	0.777	0.98
Smaller metro					-0.029	0.069	0.672	0.97	-0.032	0.069	0.647	0.97
Rural					-0.111	0.072	0.126	0.90	-0.112	0.073	0.124	0.89
County missing					0.178	0.165	0.281	1.19	0.173	0.165	0.295	1.19
Socioeconomic Disadvantage												
Low	Reference											
1					0.030	0.060	0.613	1.03	0.029	0.060	0.633	1.03
2					0.022	0.061	0.723	1.02	0.022	0.061	0.717	1.02
3					-0.055	0.063	0.383	0.95	-0.055	0.063	0.380	0.95
High					0.045	0.061	0.459	1.05	0.046	0.061	0.453	1.05

Congregate Care Permanency

This analysis investigates whether a child exited to permanency from congregate care. Permanent exits include adoption, reunification, and exit to relative/guardianship. Once again, Model 1 shows the estimates of the logistic regression model, and Models 2 and 3 show the estimates of the county and state random effects models in Table 17.

When the odds-ratios of Model 1 and Model 2 are compared, the odds-ratios of Model 2 are slightly lower in all age groups (from 1.36 to 1.33 for age 9-12, 1.67 to 1.59 for age 13-15, and 1.52 to 1.45 for age 16-17). The statistically significant impacts of African American and Hispanic race/ethnicity disappear in Model 2. This indicates that some of the disparities disappear after accounting for county and state variations. Children who moved at least once during their first congregate care spell ("Yes Movement" in Table 17) have a substantially lower likelihood of reaching permanency (odds-ratio: 0.43). Gender, urbanicity, and socioeconomic disadvantage did not show statistically significant impacts.

Table 17. Estimates for Permanency

	Model 1: Logistic Regression (main effects only)				Model 2: Random Effects Model (main effects only)				Model 3: Random Effects Model (with interaction effects)			
	Estimate	Error	Pr	O.R.	Estimate	s.e.	Pr	O.R.	Estimate	s.e.	Pr	O.R.
Person Periods	Reference											
D1	-2.067	0.025	<.0001		-2.172	0.154	<.0001		-2.160	0.155	<.0001	
D2	-2.204	0.031	<.0001		-2.300	0.155	<.0001		-2.287	0.156	<.0001	
D3	-1.987	0.034	<.0001		-2.072	0.155	<.0001		-2.059	0.156	<.0001	
D4	-1.956	0.037	<.0001		-2.020	0.156	<.0001		-2.006	0.157	<.0001	
D5	-2.114	0.043	<.0001		-2.158	0.158	<.0001		-2.144	0.158	<.0001	
D6	-2.232	0.050	<.0001		-2.257	0.160	<.0001		-2.243	0.160	<.0001	
D7	-2.454	0.060	<.0001		-2.474	0.163	<.0001		-2.460	0.164	<.0001	
D8	-2.674	0.073	<.0001		-2.695	0.169	<.0001		-2.681	0.169	<.0001	
D9	-3.129	0.100	<.0001		-3.154	0.182	<.0001		-3.138	0.182	<.0001	
D10	-3.107	0.110	<.0001		-3.124	0.187	<.0001		-3.109	0.188	<.0001	
D11	-3.396	0.139	<.0001		-3.413	0.206	<.0001		-3.397	0.207	<.0001	
D12	-3.661	0.176	<.0001		-3.695	0.233	<.0001		-3.678	0.233	<.0001	
Age												
Under 9	Reference											
Age 9-12	0.308	0.022	<.0001	1.36	0.288	0.023	<.0001	**1.33**	0.234	0.034	<.0001	**1.26**
Age 13-15	0.512	0.019	<.0001	1.67	0.467	0.021	<.0001	**1.59**	0.462	0.030	<.0001	**1.59**
Age 16-17	0.419	0.021	<.0001	1.52	0.371	0.023	<.0001	**1.45**	0.429	0.032	<.0001	**1.53**
Gender												
Female	Reference											
Male	-0.039	0.014	<.0001	0.96	-0.013	0.015	0.352	0.99	-0.034	0.021	0.109	0.97
Race/Ethnicity												
White	Reference											
African Am.	-0.075	0.018	<.0001	0.93	-0.004	0.020	0.838	1.00	0.046	0.043	0.289	1.05
Hispanic	-0.200	0.018	<.0001	0.82	-0.035	0.020	0.084	0.97	-0.106	0.041	0.009	**0.90**
Other	0.255	0.024	<.0001	1.29	0.296	0.026	<.0001	**1.34**	0.292	0.026	<.0001	**1.34**
Movement												
No Movement	Reference											
Yes Movement	-0.873	0.018	<.0001	0.42	-0.842	0.018	<.0001	**0.43**	-0.842	0.018	<.0001	**0.43**
Interaction Terms												
Male*Afr. Am.									0.020	0.035	0.569	1.02
Male *Hispanic									0.055	0.034	0.108	1.06
Age 9-12* Afr. Am.									0.044	0.055	0.424	1.05
Age 13-15*Afr. Am.									-0.058	0.047	0.216	0.94
Age 16-17* Afr. Am.									-0.218	0.053	<.0001	**0.80**
Age 9-12*Hispanic									0.138	0.052	0.008	**1.15**
Age 13-15*Hispanic									0.059	0.046	0.192	1.06
Age 16-17*Hispanic									-0.022	0.051	0.675	0.98
Inyear												
Inyear 2012	Reference											
Inyear 2013	0.093	0.026	0.000	**1.10**	0.051	0.026	0.054	1.05	0.052	0.026	0.049	**1.05**
Inyear 2014	0.200	0.025	<.0001	**1.22**	0.137	0.026	<.0001	**1.15**	0.138	0.026	<.0001	**1.15**
Inyear 2015	0.209	0.026	<.0001	**1.23**	0.152	0.026	<.0001	**1.16**	0.153	0.026	<.0001	**1.17**
Inyear 2016	0.219	0.026	<.0001	**1.25**	0.129	0.027	<.0001	**1.14**	0.131	0.027	<.0001	**1.14**
Inyear 2017	0.189	0.027	<.0001	**1.21**	0.132	0.028	<.0001	**1.14**	0.134	0.028	<.0001	**1.14**
Inyear 2018	0.161	0.028	<.0001	**1.17**	0.093	0.029	0.001	**1.10**	0.094	0.029	0.001	**1.10**
Inyear 2019	-0.100	0.032	0.002	**0.90**	-0.154	0.033	<.0001	**0.86**	-0.151	0.033	<.0001	**0.86**
Urbanicity												
Urban core	Reference											
Large fringe					-0.011	0.100	0.913	0.99	-0.014	0.100	0.886	0.99
Smaller metro					0.078	0.093	0.405	1.08	0.073	0.093	0.432	1.08
Rural					0.038	0.094	0.688	1.04	0.035	0.095	0.712	1.04
County missing					0.146	0.214	0.496	1.16	0.140	0.214	0.512	1.15
Socioeconomic Disadvantage												
Low	Reference											
1					-0.036	0.075	0.637	0.97	-0.035	0.075	0.638	0.97
2					-0.066	0.077	0.387	0.94	-0.066	0.077	0.388	0.94
3					-0.044	0.077	0.570	0.96	-0.044	0.077	0.573	0.96
High					-0.075	0.076	0.328	0.93	-0.072	0.076	0.342	0.93

The impact of male and race/ethnicity interaction terms (logit=0.020 for African Am. and 0.055 for Hispanic) are not statistically significant. However, the interaction terms for age and race/ethnicity are statistically significant for Age16-17*African American and Age9-12*Hispanic. The baseline odds-ratio for ages 16 to 17 is for White children. Thus, White youth ages 16 to 17 have a 53% higher likelihood of permanency than White children under 9 years old. However, African American youth ages 16 to 17 have only a 23% higher likelihood of permanency than African American children under 9 years old. For ages 9 to 12, White children are 26% more likely to exit than White children under 9 years old, but Hispanics are 45% more likely to exit than Hispanic children under 9 years old.

Table 18. Differential Effects for permanency

Effect	Logit	Recalculated logit	Odds ratio
Age9-12: White (reference)	0.234		1.26
Age9-12*Hispanic	0.138	0.291= [(0.234) + (0.138)]	1.45
Age16-17: White (reference)	0.429		1.53
Age16-17*African Am.	-0.218	0.012= [(0.429) + (-0218)]	1.23

Congregate Care Exit and Reentry

To investigate whether a child reentered after exiting congregate care to reunification or to relatives, the duration from the exit date until the end of the observation period was divided into 180-day intervals. If the duration is less than 180 days, a child has only one row; however, a child has more than one row if a child has more than 180 days of duration in the person-period file. The maximum observation time is 2,160 days (=180*12). This person period data structure overcomes a censoring bias.[8]

Model 1 presents the estimates of the logistic regression model and Models 2 and 3 present the estimates of the county and state random effects models in Table 19. When Model 1 and Model 2 are compared, the odds ratios for age are lower in Model 2 (from 1.19 to 1.12 for age 9-12, from 1.33 to 1.11 for age 13-15, from 0.66 to 0.52 for age 16-17). Ages 9 to 12 and ages 13 to 15 show a higher likelihood of reentry than children under 9 years old; however, it drops suddenly for ages 16 to 17 due to aging-out. African American and Hispanic children have a higher likelihood of reentry (from 1.18 to 1.30 and from 1.03 to 1.13, respectively). Thus, African American and Hispanic children show a 30% and a 13% higher likelihood of reentry than White children in Model 2. Gender does not show a statistically significant difference. Children who exited to relatives have a lower likelihood of reentry (0.93 in Model 2). Urbanicity and socioeconomic disadvantage are not associated with the likelihood of reentry. Most interaction terms are not statistically significant, which indicates that main effects apply across different races/ethnicities.

[8] Details can be found in the methodology section.

Table 19. Estimates for Reentry

	Model 1: Logistic Regression (main effects only)				Model 2: Random Effects Model (main effects only)				Model 3: Random Effects Model (with interaction effects)			
	Estimate	Error	Pr	O. R.	Estimate	s.e.	Pr	O. R.	Estimate	s.e.	Pr	O. R.
Person Periods												
D1	-6.150	0.143	<.0001		-6.387	0.232	<.0001		-6.383	0.237	<.0001	
D2	-5.076	0.094	<.0001		-5.307	0.205	<.0001		-5.304	0.211	<.0001	
D3	-4.629	0.082	<.0001		-4.853	0.200	<.0001		-4.850	0.205	<.0001	
D4	-4.513	0.080	<.0001		-4.731	0.199	<.0001		-4.728	0.205	<.0001	
D5	-4.167	0.074	<.0001		-4.376	0.196	<.0001		-4.372	0.202	<.0001	
D6	-4.112	0.074	<.0001		-4.311	0.197	<.0001		-4.306	0.203	<.0001	
D7	-3.845	0.070	<.0001		-4.031	0.195	<.0001		-4.026	0.201	<.0001	
D8	-3.659	0.069	<.0001		-3.829	0.195	<.0001		-3.824	0.201	<.0001	
D9	-3.655	0.071	<.0001		-3.813	0.196	<.0001		-3.808	0.201	<.0001	
D10	-3.464	0.070	<.0001		-3.610	0.195	<.0001		-3.605	0.201	<.0001	
D11	-3.227	0.069	<.0001		-3.365	0.195	<.0001		-3.359	0.201	<.0001	
D12	-2.919	0.068	<.0001		-3.044	0.194	<.0001		-3.038	0.200	<.0001	
Age												
Under 9	Reference											
Age 9-12	0.174	0.052	0.001	**1.19**	0.116	0.054	0.033	**1.12**	0.091	0.085	0.282	1.10
Age 13-15	0.285	0.044	<.0001	**1.33**	0.103	0.051	0.042	**1.11**	0.025	0.076	0.747	1.02
Age 16-17	-0.422	0.058	<.0001	**0.66**	-0.656	0.065	<.0001	**0.52**	-0.695	0.094	<.0001	**0.50**
Gender												
Female	Reference											
Male	0.020	0.034	0.556	1.02	-0.032	0.035	0.357	0.97	0.034	0.054	0.536	1.03
Race/Ethnicity												
White	Reference											
African Am.	0.166	0.043	<.0001	**1.18**	0.262	0.047	<.0001	**1.30**	0.158	0.105	0.130	1.17
Hispanic	0.034	0.044	0.438	1.03	0.122	0.050	0.014	**1.13**	0.194	0.101	0.055	1.21
Other	-0.330	0.070	<.0001	**0.72**	-0.337	0.075	<.0001	**0.71**	-0.329	0.075	<.0001	**0.72**
Interaction Terms												
Male*Afr. Am.									-0.120	0.084	0.152	0.89
Male *Hispanic									-0.113	0.085	0.185	0.89
Age 9-12* Afr. Am.									0.235	0.130	0.071	1.26
Age 13-15*Afr. Am.									0.241	0.112	0.031	**1.27**
Age16-17* Afr. Am.									0.146	0.145	0.313	1.16
Age9-12*Hispanic									-0.139	0.127	0.274	0.87
Age13-15* Hispanic									0.042	0.110	0.704	1.04
Age16-17*Hispanic									-0.001	0.147	0.996	1.00
Exit Type												
Exit to relatives	-0.214	0.056	0.000	0.81	-0.067	0.062	0.277	0.93	-0.068	0.062	0.276	0.93
Urbanicity												
Urban core	Reference											
Large fringe					0.141	0.154	0.359	1.15	0.144	0.154	0.351	1.15
Smaller metro					0.121	0.139	0.384	1.13	0.121	0.138	0.383	1.13
Rural					0.313	0.146	0.033	**1.37**	0.317	0.146	0.030	**1.37**
County missing					-0.169	0.355	0.635	0.84	-0.174	0.355	0.625	0.84
Socioeconomic Disadvantage												
Low	Reference											
1					0.050	0.130	0.701	1.05	0.054	0.129	0.678	1.06
2					-0.001	0.132	0.994	1.00	0.001	0.132	0.992	1.00
3					0.012	0.135	0.927	1.01	0.011	0.134	0.934	1.01
High					0.123	0.130	0.343	1.13	0.123	0.130	0.344	1.13

In Table 14, Table 16, Table 17, and Table 19, we presented the estimates of covariates. In particular, in those tables, Model 2 showed the fixed estimates based on the county and state random effects model. Using the same model, state Empirical Bayes (EB) residuals can be derived and then used to measure the extent to which state event rates deviate from the overall adjusted event rates. Figure 6, Figure 7, Figure 8, and Figure 9 illustrate how much individual states differed from the adjusted mean for first entries into congregate care, placement stability, permanency, and reentry, respectively. Each state's deviation from the overall adjusted average is shown as a square; the vertical lines are confidence intervals that indicate whether outcomes for the given state depart significantly from the overall adjusted average. After accounting for child characteristics, county effects, and unmeasured factors, we observe states that have statistically different outcomes. About half of the 15 states show statistically significant differences for at least one of the outcomes (5 for entry models, 8 for stability models, 9 for permanency models, and 4 for reentry models). These differences are likely due to other between-state differences including policies and practices.

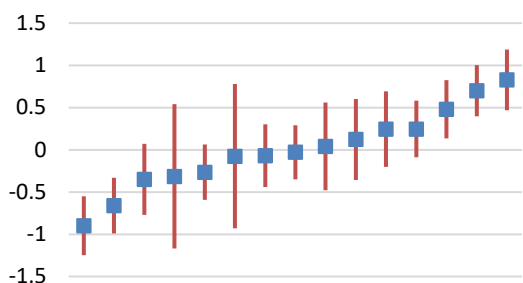Figure 6. Between-State Variations for First Entry into CC

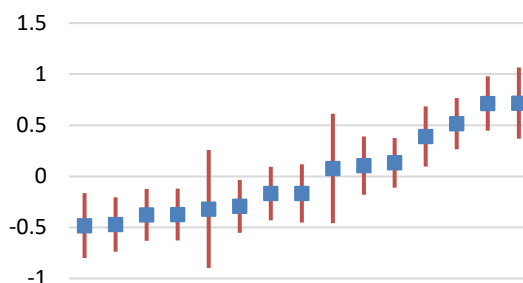Figure 7. Between-State Variations for CC Placement Stability

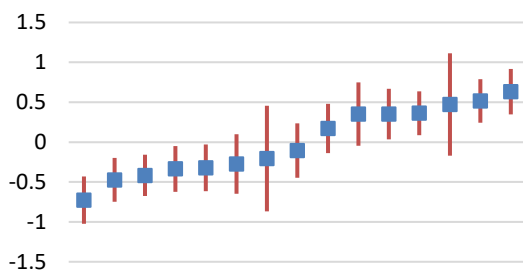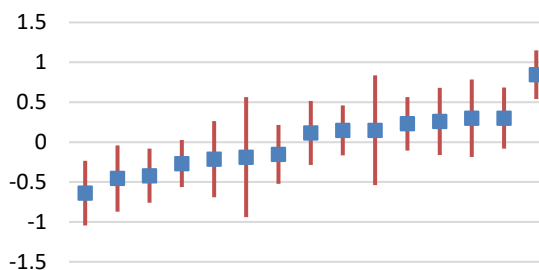Figure 8. Between-State Variations for Permanency


Figure 9. Between-State Variations for Reentry

FFPSA Impact on Congregate Care

The federal Family First Prevention Services Act (FFPSA) establishes requirements for placement in residential treatment programs. These new regulations aim to improve the quality and oversight of services in residential care, or—as defined by the FFPSA—child care institutions. The definition of a child care institution (CCI) under the FFPSA is "a licensed private or public child-care institution with no more than 25 children" (FFPSA of 2018). This definition remains the same as that in previous Title IV-E legislation.

The FFPSA creates a timeline of milestones tying CCI services to federal reimbursement (Figure 10) which includes requirements for the timing of assessments, court decisions, transition periods, and the supporting documentation mandatory for children who continue to stay in a CCI placement after one fiscal year.

Figure 10. FFPSA CCI Placement Milestones
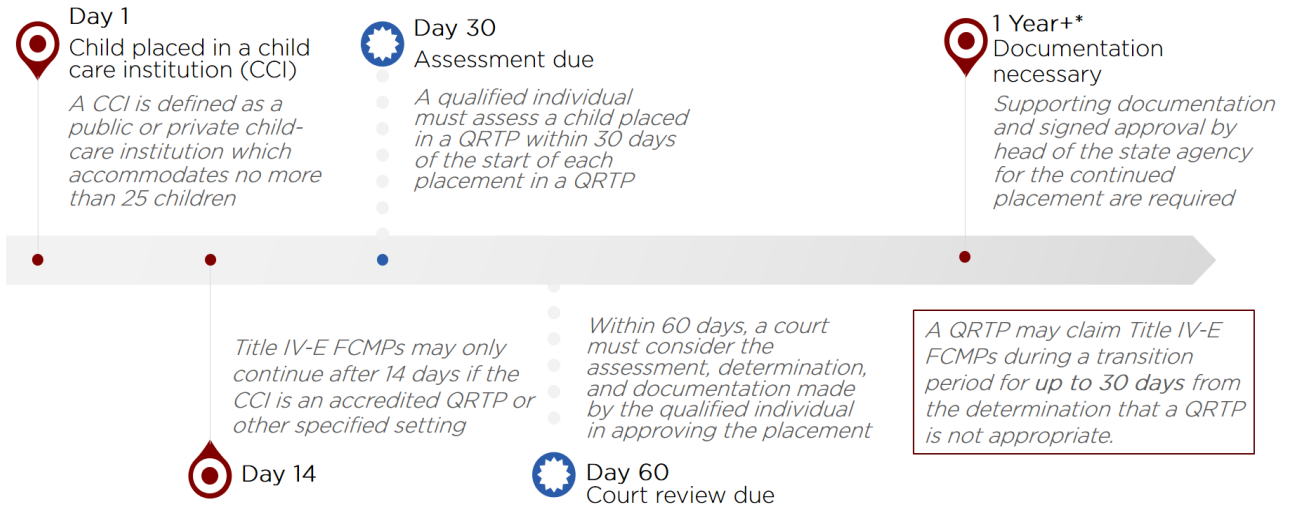
The following is a detailed explanation of the four milestones outlined in Figure 10:

1. 14 days – Federal maintenance payments for out-of-home placements are limited for CCI placements after two weeks. After two weeks, only specified CCIs[9] are eligible for Title IV-E foster care maintenance payments (FCMPs). Put another way, a Title IV-E agency may receive FCMPs for any Title IV-E eligible child who enters and leaves a CCI placement within 14 days. For children who stay past the 14-day milestone, the agency may only receive FCMPs when the child is staying in an eligible placement setting (see list above) and all assessment, decision, and documentation requirements are met.

2. 30 days – By the 30th day of placement in a qualified residential treatment program (QRTP), a qualified individual must conduct an assessment of the child's strengths and needs, in collaboration with the child's family and permanency planning team, to determine whether the child's needs could be met in a family setting. The qualified individual must not be a state employee or be an affiliate of any placement setting in the state, although there are circumstances under which the requirements for the "qualified individual" can be waived.

3. 60 days – Within 60 days of placement in a QRTP, a court must review and approve or disapprove of continued placement in a QRTP. If a court disapproves of continued placement, the state will continue to receive federal reimbursement for up to 30 days from the decision date during which to transition the child into a placement setting that meets his or her needs.

4. 1 year – After one year in a CCI placement, to continue receiving Title IV-E FCMP reimbursement, the head of the state agency must provide signed approval of documentation supporting why a continued placement is required.

Child welfare agencies would be well served by better understanding how many child placements and care days may fall under the FFPSA residential care restrictions each fiscal year.

Congregate Care Placement

We begin by looking at the number of congregate care placements in each fiscal year that would be impacted by

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[9] Specified CCIs include CCIs that are qualified residential treatment programs (QRTPs), settings specializing in providing prenatal, post-partum, or parenting supports for youth (MMCB), high-quality residential care and support services for sex trafficking victims or those at risk (SE), or supervised settings in which the child is living independently (IL).

each of the four FFPSA milestones, based on their duration. For example, congregate care placements lasting less than 14 days would not be impacted by any of the FFPSA requirements related to federal reimbursement, while congregate care placements lasting more than one year would be impacted by all four of the above requirements. In the analysis presented in Table 20 below, we are interested in understanding the proportion of congregate care placements that would be impacted by the FFPSA requirements based on their duration.

As shown in Table 20, slightly more than one-third (between 35% and 38%) of the congregate care placements made each year do not last longer than 14 days and therefore would not be impacted by the FFPSA requirements regarding federal reimbursement. The corollary of this is that slightly less than two-thirds of congregate care placements made each year would be impacted by the requirement that the congregate care placement is in a QRTP or other specialized setting outlined in the FFPSA in order to continue receiving federal reimbursement beyond the 14-day mark. Slightly over half of the congregate care placements made each year (about 65% minus about 14%) would be impacted by the requirement of an assessment by a qualified individual in order to continue receiving federal reimbursement beyond the 30-day mark, and slightly more than one-third would be impacted by the requirement for court review of the assessment by the 60-day mark. Only 6% to 7% of congregate care placements last beyond one year and would therefore be impacted by the requirement of signed approval by the head of the state agency.[10] These proportions have remained relatively stable over time, with a slight increase in the percentage of congregate care placements lasting 14 or fewer days and a corresponding slight decrease in the percentage of congregate care placements lasting longer than one year.

Table 20. Number and Percent of Congregate Care Placements, by Duration of Placement, by Fiscal Year in which the Placement Began

	Duration of Congregate Care Placement						
Fiscal Year	<= 14 Days	15-30 Days	31-60 Days	61-365 Days	> 1 Year	TOTAL	Censored
	Number of Congregate Care Placements						
2012	24,698	9,866	9,259	21,331	5,019	70,173	11
2013	24,581	9,608	9,168	21,357	4,955	69,669	29
2014	25,242	9,908	9,385	21,748	4,711	70,994	60
2015	25,662	9,738	9,378	21,934	4,862	71,574	81
2016	26,386	9,167	8,806	20,821	4,515	69,695	170
2017	25,216	8,807	8,394	19,843	4,273	66,533	326
2018	24,025	8,215	8,266	19,067	4,025	63,598	911
2019	23,421	7,619	7,793	20,358	1,812	61,003	4,409
	Percentage of Congregate Care Placements						
2012	35%	14%	13%	30%	7%	100%	0%
2013	35%	14%	13%	31%	7%	100%	0%
2014	36%	14%	13%	31%	7%	100%	0%
2015	36%	14%	13%	31%	7%	100%	0%
2016	38%	13%	13%	30%	6%	100%	0%
2017	38%	13%	13%	30%	6%	100%	1%
2018	38%	13%	13%	30%	6%	100%	3%
2019	38%	12%	13%	33%	3%	100%	22%

[10] Note that since the analytic file used to produce the analyses in this report contains data through December 31, 2019 (but not beyond this date), the percentage of "censored" congregate care placements in SFY18-19 (that is, placements that were still ongoing on December 31, 2019), at 22%, is much higher than for prior fiscal years. In addition, only a subset of placements made during SFY18-19 have had more than a year in which to observe their durations. After more time has elapsed, the number of congregate care placements in SFY18-19 lasting more than one year is expected to increase.

Care Days in Congregate Care

The above analysis of congregate care placements that would be impacted by the various requirements of the FFPSA leads to questions about the fiscal impact on child welfare agencies: How do the above congregate care placement durations translate into the number of care days in congregate care for which a child welfare agency can receive reimbursement only if the FFPSA requirements are met? For example, for all congregate care placements lasting more than two weeks, a child welfare agency can still expect to receive federal reimbursement for the first 14 days of those placements, irrespective of whether the placements are in a QRTP or other specialized settings.

As shown in Table 21 below, looking at the number and proportion of care days provided within each interval reveals a different trend than looking at the duration of congregate care placements.[11] Only about one-tenth of the total number of care days spent in congregate care each year fall within the 14-day time frame and would therefore be automatically eligible for federal reimbursement. The corollary of this is that about 90% of care days spent in congregate care each fiscal year would have to be in a QRTP or other specialized setting in order to be eligible for federal reimbursement. About 80% (sum of care days in the "14 days or less" and "15 to 30 days" categories, subtracted from 100%) would need to meet the requirement of an assessment by a qualified individual in order to maintain eligibility for federal reimbursement, and about 60% would need to meet the requirement for court review of the assessment. Just under 20% would need to meet the requirement for signed approval by the head of the state agency. These trends have also remained relatively stable over time.

Table 21. Distribution of Care Days Spent in Congregate Care within the Time Frames Set by FFPSA Requirements

	FFPSA Time Frames					
Fiscal Year	<= 14 Days	15-30 Days	31-60 Days	61-365 Days	> 1 Year	TOTAL
	Number of Care Days Spent in Congregate Care					
2012	770,742	649,663	920,456	3,675,774	1,374,543	7,391,178
2013	763,688	643,829	918,311	3,642,392	1,409,856	7,378,076
2014	775,413	652,487	925,601	3,593,707	1,331,487	7,278,695
2015	779,717	656,399	935,726	3,650,481	1,277,984	7,300,307
2016	740,817	621,662	884,912	3,438,576	1,172,559	6,858,526
2017	709,672	590,996	841,367	3,236,687	997,898	6,376,620
2018	678,925	567,644	811,295	3,099,197	710,070	5,867,131
2019	643,484	540,272	779,314	2,716,998	134,683	4,814,751
	Percentage of Care Days Spent in Congregate Care					
2012	10%	9%	12%	50%	19%	100%
2013	10%	9%	12%	49%	19%	100%
2014	11%	9%	13%	49%	18%	100%
2015	11%	9%	13%	50%	18%	100%
2016	11%	9%	13%	50%	17%	100%
2017	11%	9%	13%	51%	16%	100%
2018	12%	10%	14%	53%	12%	100%
2019	13%	11%	16%	56%	3%	100%

A more nuanced understanding of the impact of the FFPSA legislation on federal reimbursement for congregate care could be obtained by adding facility-level information to the analysis presented in Table 21 above. Facility-level data could be used to determine whether each congregate care placement met the base requirement for

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[11] Note that the issues with censoring, described in Footnote 10, impact this analysis as well. As more time elapses during which to observe the duration of congregate care placements in more recent fiscal years, the number of care days provided in the longer time frames (60 days to one year and more than one year) are expected to increase.

qualification as a QRTP—that the facility serve no more than 25 children at one time—and in so doing, narrow down the pool of congregate care placements lasting more than 14 days that could potentially qualify as QRTP placements.

Implications and Next Steps

The most important thing we learned from this study is that congregate care is a much more heterogeneous experience for young people than we generally acknowledge. Everything that we learned while doing this work reinforced that idea. That means federal policy should be interpreted in a way that recognizes that differential impacts are possible at the state level because no two states really operate the same congregate care system. Indeed, much more attention should be paid to those between-state differences, in the long run, if we want to manage our use of congregate care more effectively.

For example, we learned that congregate care differs with regard to who is placed in congregate care, how they experience congregate care, and how their care is managed at the state level.[12] We found significant between- and within-state variation in the utilization of congregate care, all of which needs to be taken into account if we want to develop policies that are globally beneficial.

We learned that a lot of congregate care happens early when decision-making is the most difficult because the child is arriving in the system for the first time and information about the needs of young people is relatively thin. Child welfare agencies get one chance to do things right at the front end of a child's case, so having a timely, accurate assessment in place will help match a child's clinical needs to the service provided. However, being able to place a child in a bed most suited to the child's needs is a matter of bed supply and supply management.

We learned that age and race/ethnicity with regard to disparity are, in fact, difficult to untangle. There is a significant relationship between age, race/ethnicity, and the utilization of congregate care, but the connections are best understood within the context of the local child welfare system and the services offered there. In particular, because the use of congregate care is highest in urban areas, the higher rates of congregate care utilization by Black and Hispanic youth likely reflects the fact the most youth entering care in urban areas are either Black or Hispanic rather than White (Wulczyn, et al., 2020)

There have been changes in the utilization of congregate care during the study window, particularly since 2015. Even though the daily census has declined steadily, we still see this pronounced pattern of ups and downs in the daily census. We attribute the rhythmic ebb and flow to structural forces within the system itself. Even though these system forces have important implications for how we improve the congregate care system, we know far too little about how the supply of a service affects utilization.

Finally, given that most of the congregate care capacity in the nation resides in the private sector, how those private-sector agencies are reimbursed raises an important policy question. Most if not all congregate care policy is organized around the answer to two important questions: who should be placed in congregate care (i.e., when is it appropriate to do so) and what services should be paid for within the category we call congregate care. The congregate care provisions within the Family First Prevention Services Act target *who* by limiting eligibility for federal funding to children who meet certain thresholds and *what* by reinforcing the role of qualified residential treatment programs on the care continuum. Left out of this particular policy conversation, however, are questions pertaining to whether the methods used to reimburse congregate care providers influence how congregate care is

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[12] Although not explored in this study, the literature identifies a broad range of placements and services that are grouped under the term "congregate care" (Butler & McPherson, 2007; Lee, 2008), and this diversity is certainly represented in the congregate care placements analyzed in this study.

delivered and whether that influence is at odds with social policy. Health care has been struggling with this very question for some time. We think viewing congregate care utilization through this lens would yield powerful insights, rendering the challenge of aligning fiscal policy and social policy a more solvable problem for everyone.

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