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Child Care Subsidy Duration and Caseload Dynamics: A Multi-State Examination

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Contents

Introduction

This report provides an examination of the length of time that low-income families receive government-funded child care subsidies that pay for part or all of the cost of their care arrangements.[1] Statistics of subsidy duration provide a description of the interval of time that families utilize subsidies and document the calendar months when they are more or less likely to enter and exit the programs. These statistics are useful to researchers and policymakers because the patterns may be related to adult employment and child care stability outcomes, and they provide valuable information to program administrators who want to better understand the caseload dynamics of the subsidy programs.

The existing literature has examined the child care subsidy duration patterns of a few states, but these patterns have not been documented for the entire United States. This report partially fills in this knowledge gap by providing statistics of child care subsidy duration for 35 U.S. states using administrative data submitted by state subsidy programs to the U.S. Department of Health and Human Services (HHS). In general, the data presented in this report show that families utilize child care subsidy programs for relatively short time periods in most states, usually less than a year, but frequently return to the subsidy programs after they exit. They are more likely to enter, leave, or return to the subsidy programs during particular times of the year and these usage patterns often coincide with the school year calendar. Since the administrative data used for the analysis does not have information on the employment situation of the families before and after they receive subsidies, and since it lacks information about the non-subsidized care arrangements of the participating families, it is challenging to determine why these patterns occur and to identify whether the breaks in subsidy usage coincide with a discontinuity of the child care arrangements. Despite these limitations, documenting child care subsidy patterns is an important part of understanding how the subsidy programs are currently being utilized and to what extent caseload dynamics differ across various states with dissimilar administrative policies and procedures.

Literature Review

Previous research on subsidy durations reveals that low-income families generally receive child care subsidies for relatively short periods of time, although reentry to the programs after an exit is common in many states (Meyers, Peck et al. 2002, Witte and Queralt 2005, Ha and Meyer 2010, Forry, Welti et al. 2012, Ros, Claessens et al. 2012). In their study of five states Meyers, Peck et al. (2002) reported median spell durations of participating children between three and seven consecutive months. They also found that children that reentered the subsidy programs after an exit had subsequent spell durations that were about the same lengths as their previous episodes of participation.   These results were somewhat similar to those found in other studies, although comparing duration lengths across the studies is challenging because many of them utilized different methodologies and analyzed data from different time periods or populations (Davis, Grobe et al. 2012). For example, some of the studies measured subsidy duration by following adult heads of households, while others followed the children receiving the care. Some studies defined a break in subsidy participation with one month of non-use, while other studies defined a break in subsidy duration with two consecutive months of non-

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[1] The author would like to thank Karen Aschaffenburg, Kimberly Burgess, Ajay Chaudry, Nina Chien, Elizabeth Davis, Joseph Gagnier, Minh Le, Susan Hauan, Taryn Morrissey, Andrew Williams, and Sharon Wolf for helpful comments on earlier drafts of this report.

use. They also used different methodologies to adjust the data when records were unavailable before and after the time-periods examined, and they examined data from dissimilar types of subsidy cases.

The short spell durations and the on-and-off patterns observed in the literature could be influenced by a variety of factors. One possibility is that the usage patterns reflect unstable employment patterns among the children's parents, who are disproportionately low-income single mothers. Several studies of single mothers have documented employment patterns, including short durations and job cycling, that appear to be similar to the duration patterns observed in the child care subsidy literature (Acs 2001, Andersson, Holzer et al. 2005, Andersson, Freedman et al. 2012). Other studies have examined this issue more directly by matching the employment records of child care subsidy recipients to administrative data from the child care subsidy programs. These studies found that in some cases the timing of child care subsidy exits appears to coincide with employment changes or exits. However, these studies also show that many families appear to remain eligible for the subsidies after they leave the program, suggesting that child care subsidy durations also are likely influenced by factors unrelated to employment (Grobe, Weber et al. 2006, Ha and Meyer 2010). In addition, since maternal employment is often contingent on securing child care subsidies it is possible that some of the employment exits are influenced by problems related to child care arrangements or the inability or unwillingness of the recipients to recertify their eligibility for the subsidy programs. In other words, the primary reasons for subsidy exits are not always known even when accurate employment and subsidy records are concurrently observed by researchers.

The results of several qualitative studies suggest that low-income families have difficulty securing and retaining child care arrangements and they often find that following subsidy administrative policies is burdensome and challenging. Adams, Snyder et al. (2002) conducted a series of interviews with state and local child care administrators and identified a number of administrative practices that appear to reduce the duration of child care subsidy usage. The study found that families often faced considerable administrative burden when trying to apply for or recertify their eligibility status. For example, families sometimes had to interact with more than one agency during the application process, had to make more than one trip to an administrative office, and sometimes had to wait for weeks or months to get an appointment with a social worker. In addition, families receiving Temporary Assistance for Needy Families (TANF) sometimes had additional difficulties with redetermination because of the temporary nature of their employment or training activities. The study also found that agencies had different policies regarding the ways in which families could recertify their eligibility status including mail, phone, or fax.

Other studies emphasize the complexity of understanding child care subsidy duration patterns. For example, a related study by Chaudry (2004) followed 42 low-income families in New York City over a three year period and described the challenges they encountered securing the care needs of their children. The stories retold by Chaudry are relevant to the subsidy duration literature because they show that families encounter challenges in securing child care for a variety of reasons. While many of the families experienced complications associated with dealing with local social service organizations to obtain subsidies, their child care arrangements also were sometimes interrupted by problems associated with their ever-changing work schedules and with the personal relationships they had with their providers.

In summary, the literature on child care subsidy duration suggests that subsidies are often used for relatively short periods of time and that reentry to the programs after an exit is common. While some of the exits are likely related to the volatile employment patterns of the parents that participate in the programs, many families that leave the program appear to be still employed and income-eligible for the subsidies.

Data

The data analyzed for this report are from the ACF-801 child care subsidy administrative records.[2] The ACF-801 data consist of monthly records submitted by state child care programs to HHS, and this analysis uses data from federal Fiscal Years 2004 through 2010 that are linked longitudinally by matching the Social Security Numbers (SSNs) of the family heads. The ACF-801 data include all families that received subsidies from the Child Care and Development Fund (CCDF) including those funded through the Child Care Development Block Grant (CCDBG), those funded with transfers from the Temporary Assistance for Needy Families (TANF) program, and those funded with state matching and maintenance of effort (MOE) funds related to the CCDBG. States also have the option of including families receiving subsidies from other funding sources such as the Social Services Block Grant (SSBG), direct TANF[3] funds, or state-funded sources, but not all states include these records in the ACF-801 data. Some states pool several child care subsidy funding sources and operate a single program, while other states operate separate child care subsidy programs. For example, some states administer separate subsidy programs for families receiving assistance or job training from the TANF program and states may or may not submit these records along with their ACF-801 data submissions.[4]

Some states report state-created unique case identifiers of the family heads instead of Social Security Numbers (SSN). A decision was made for this analysis to exclude the records that do not have SSNs for the heads of households since preliminary analysis of the data revealed that many of the non-SSN unique numbers appeared to be reported inconsistently across the months (or fiscal years) and their inclusion could bias the analysis. All SSNs were scrambled to protect the identity of the recipients.[5]

The 16 states that were excluded from the analysis are displayed in Table 1 by reason of omission. States that submitted samples instead of their full subsidy caseloads to HHS for some or all of the years examined were left

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[2] A sampled version of the ACF-801 data is available to the public on the Research Connections Web site http://www.researchconnections.org. For preservation of confidentiality, the public-use version does not include the unique identifiers needed to construct measures of child care subsidy duration.

[3] States have the option of transferring TANF funds to the Child Care Development Fund (CCDF) or spending the funds directly on child care subsidies. Funds spent directly on child care subsidies are sometimes called TANF-Direct funds and states have the option of including these families in their ACF-801 data submissions, but not all states do.

[4] The majority of statistics released by the U.S. Department of Health and Human Services adjust the caseload counts using a "pooling factor" to estimate the number of families funded by CCDF. These adjusted numbers are derived by multiplying the unadjusted caseloads reported on the ACF-801 data by the pooling factor. Since the data are not able to identify which families were funded by CCDF and which were funded by other funding sources, the data in this report are not adjusted with a pooling factor or re-weighted to align with any published caseload targets. Excluding the pooling factor does not alter the caseload characteristics or spell duration patterns at the state level, but does increase the size of the caseload reported.

[5] One limitation of analyzing pseudo-SSNs is that the analysis was unable to exclude records that had invalid SSNs. Previous analysis has found that a small percentage of SSNs on the ACF-801 files were not valid, but the frequency of invalid SSNs was small and their inclusion in this analysis was not expected to significantly bias the results presented.

out because longitudinal analysis is not possible with incomplete data.[6] The states of Connecticut and Florida submitted their full populations to HHS, but they were excluded because they did not submit the SSNs for the heads of household for some or all of the months in the period of time analyzed for this report.[7] One complex issue encountered during the analysis was the presence of multiple records in the data with the same SSNs during the same months. Some of these cases appear to reflect transitions of families from one office or administrative process to another. For example, in some cases the multiple records appear to reflect redeterminations or transitions in and out of the Temporary Assistance for Needy Families (TANF) program or changes in geographic locations. However, it appears that many of the multiple records are a result of misreporting and a decision was made to delete all families containing a duplicate SSN for any of the months in the analysis. The data submitted by Oregon, Mississippi, and Arkansas consisted of large numbers of duplicate SSNs and these states were omitted. After these exclusions, 35 states remained for analysis. Another challenge with examining data from states with different types of caseloads is that the states varied in the percentage of their caseloads that received care because they were in protective services. Since these children are likely to have different characteristics than other children they were excluded from the analysis.

Table 1. States Excluded from the Analysis by Reason

State	Reason for Exclusion
Alaska	State submitted a sample
Arkansas	Data consisted of many duplicate SSNs
California	State submitted a sample
Connecticut	State did not include SSNs
Florida	State did not include SSNs
Indiana	State submitted a sample
Iowa	State submitted a sample
Massachusetts	State submitted a sample
Minnesota	State submitted a sample
Mississippi	Data consisted of many duplicate SSNs
New York	State submitted a sample
North Carolina	State submitted a sample
Oregon	Data consisted of many duplicate SSNs
Pennsylvania	State submitted a sample
Virginia	State submitted a sample
Washington	State submitted a sample

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[6] The states of Alaska, Minnesota, and Pennsylvania currently submit full populations to HHS but were excluded because they did not submit full samples for all of the years included for this analysis.
[7] States are not required to collect Social Security Numbers and Lead Agencies need to make it clear to applicants that providing SSNs is optional. Despite these options, most states receive SSNs for the majority of their participants.

Limitations of the Data

Producing a series of subsidy duration statistics with the ACF-801 data to be used for cross-state comparisons is desirable, though challenging for a variety of reasons. One limitation of the ACF-801 data, as previously discussed, is that some states include families receiving subsidies funded from SSBG, TANF-Direct, or state-funded programs in their caseload submissions, while other states do not. This issue is particularly salient because families receiving TANF have shorter spell lengths, on average, than other families and states that exclude some or all of their TANF families from their CCDF caseloads may artificially appear to have longer spell durations than states that include their TANF records in the ACF-801 data. These changes are especially challenging when states alter over time the populations they include in their ACF-801 data submissions. Thus, care should be exercised when making conclusions with the results. States also modify their policies and budgets across time, which may produce findings that are difficult to interpret without having intimate knowledge of the individual state programs. To mitigate these challenges this report primarily describes trends and patterns that appear consistent across many states, and less attention is placed on states with outlying characteristics. Hopefully, future researchers can build on the findings in this report with more in-depth examinations of the individual states with outlying characteristics because these states may have implemented innovative administrative practices that offer informative lessons for policymakers in other states.

A second limitation of the ACF-801 data is that it does not collect information about the circumstances of the families when they begin or exit the subsidy programs. One reason for examining child care subsidy duration patterns is that they are likely related to the usage patterns of child care arrangements. Many low-income families are unable to afford the full costs of care by themselves and the discontinuity of subsidies often corresponds with changes in child care arrangements. However, changes in care arrangements do not always occur when subsidies are initiated or discontinued[8] and the ACF-801 data provide no information about why these transitions transpired. Therefore, the link between changes in subsidy receipt and continuity of care arrangements cannot be directly made with the data.

Definition of Child Care Subsidy Duration

This report defines duration periods, also called spells, as the number of continuous months that families[9] receive child care subsidies, preceded and followed by a month of non-receipt.[10] All months of subsidy receipt are included in the spells regardless of the number of hours of participation. Spells began the months when families started using subsidies for either the first time or after at least a one-month break of non-use. Spells are considered completed when there is at least one month that the families do not receive subsidies. In some places in this report the definition is altered slightly to require that new spells are preceded and followed by at

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[8] For example, in the absence of subsidies some families may be able to pay the full cost of care to the providers themselves, or they may be able to convince their providers to lower their payment obligations.

[9] This study used families as units of analysis, which differs from some other studies that used children as units of analysis.

[10] Using months as units of measurement exaggerates somewhat the amount of time that some families receive child care subsidies if they begin subsidy participation during the middle or end of a month, or if they end subsidy use at the beginning or middle of a month. For example, if a family began receiving subsidies on August 15th and ended subsidy use on November 14th, the duration would be measured as four months even though the duration was 13 weeks, which is closer to three months after dividing the 13 weeks by 4.3 weeks/month.

least *two* months of non-receipt. The durations presented in this paper are statistical spells, which may differ from the methodologies that individual state administrators use to define program entries, exits, and lengths of participation. In some cases participants return to the subsidy system after they exit. In order to contrast families that have and have not experienced recent spells of participation the report restricts the analysis in some places to families that are either new to the subsidy system or are returning after a 36-month absence from the programs. In order to present statistics that measure subsidy duration across several individual spells of participation, the report presents in some places the total number of months that families received child care subsidies over a three-year period, regardless of whether the months of receipt were continuous.

Spell Beginnings

Figure 1 displays the number of families from all 35 states that began subsidy use either for their first time, or after at least a one-month break in usage. Some families are counted multiple times if they had a break in subsidy use and returned. As shown in the figure, the data reveal that families are more likely to begin new episodes of child care subsidy use during particular months of the year than in other months and these patterns appear to be related to the school year calendar. For example, new spell beginnings are at their highest frequency during the months of August, September, and October. December appears to be a month when spell beginnings are less frequent. These patterns vary somewhat across states, although the majority of states display at least some seasonal patterns, often showing peak months in either August or September. For example, Figure 2 presents the spell beginnings of Wisconsin and Kansas, which have higher than normal entries during the late summer months.[11]

Families frequently return to the subsidy programs after periods of non-use. This issue is explored in Table 2. Column two of the table presents the percentage of families that were either entering the subsidy programs for the first time, or were reentering after at least 36 months of non-receipt. As shown in the table, a large percentage of the entering families in all 35 states had previously received subsidies. These percentages ranged from a low of 41 percent in the District of Columbia to a high of 66 percent in New Jersey.[12] When the families from the 35 states were analyzed together, about 43 percent of them entered the programs without any recent subsidy receipt and about 57 percent of them were returning within 36 months of a previous period of participation.

A second pattern that is apparent in Table 2 is the large percentage of families that began new subsidy spells after only a single month of non-receipt following a previous period of participation. For example, of the families that began new spells in the 35 states (see column 3), about 17 percent of them were returning to the programs after one month of non-receipt.   In some cases, these spells may be administrative reporting errors that reflect occasional omitting or misreporting of family records. In other cases, however, the patterns likely reflect families that did not receive subsidies for a variety of reasons.

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[11] The data for the remaining 33 states can be found in Appendix Table 1.

[12] The percentages in this sentence were calculated by subtracting the values in column two from 100 percent.

Figure 1. Number of Families in the 35 States Beginning New Spells of Subsidy Receipt by Month of Entry
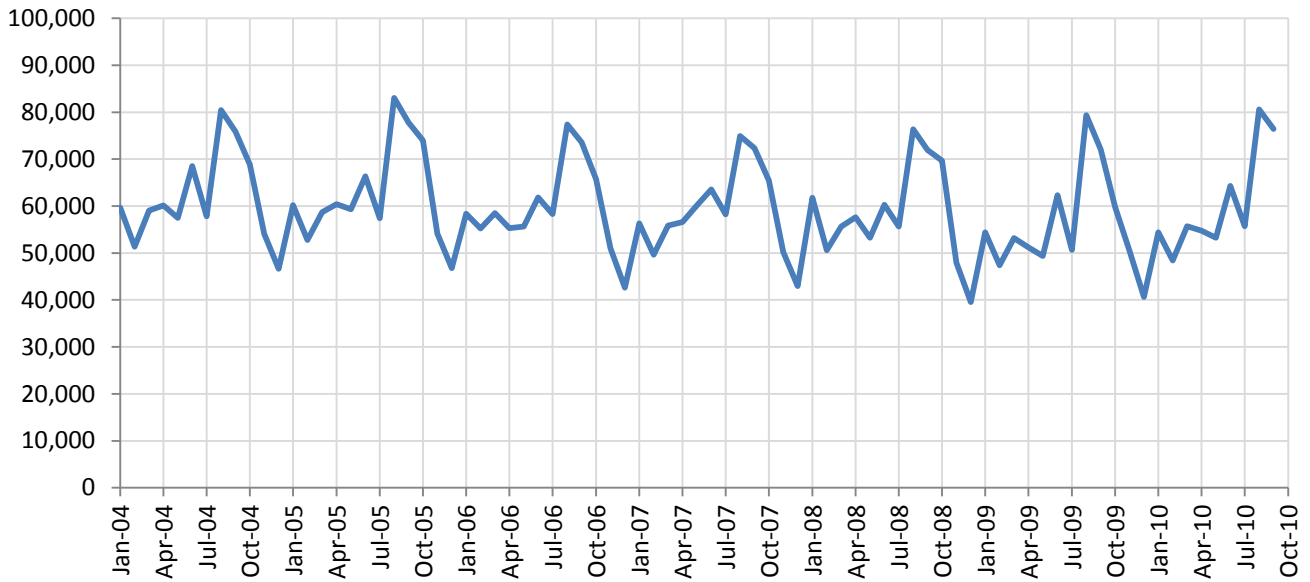
Figure 2. Number of Families in Wisconsin and Kansas Beginning New Spells of Subsidy Receipt by Month of Entry
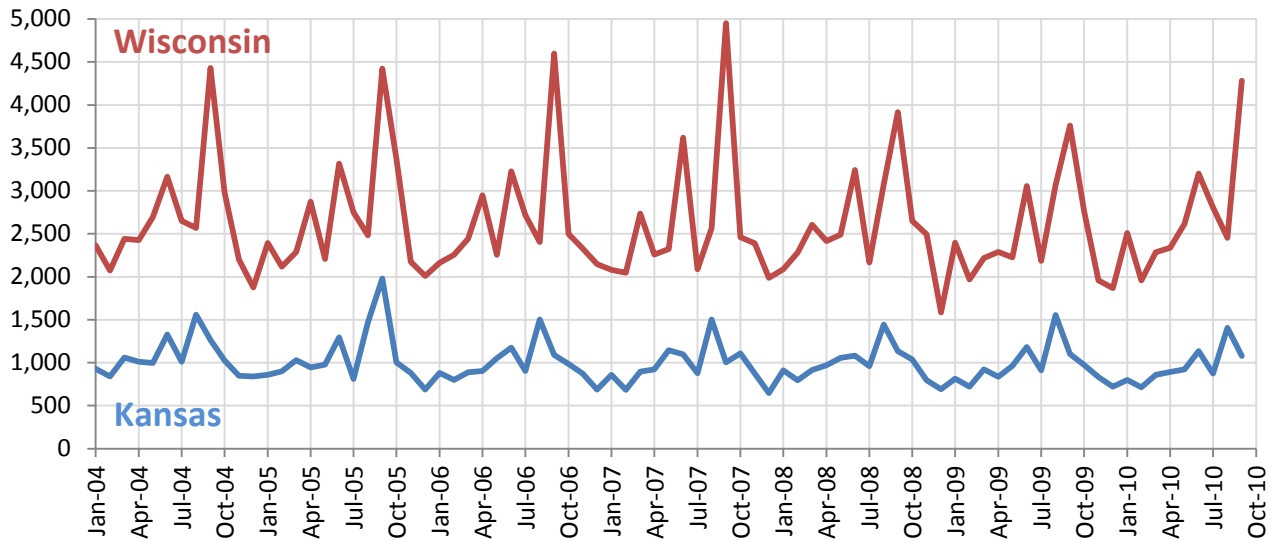
Table 2. Percentage of Families Beginning New Spells of Child Care Subsidy Use that Had Previously Received Subsidies by State: FY 2007 to FY 2010

State	No Recent Usage	1 Month of Non-Receipt	2 to 5 Months of Non-Receipt	6 to 11 Months of Non-Receipt	12 to 23 Months of Non-Receipt	24 to 35 Months of Non-Receipt
All 35 States	43%	17%	19%	10%	8%	4%
Alabama	41%	29%	16%	7%	5%	2%
Arizona	46%	21%	17%	8%	6%	3%
Colorado	43%	20%	19%	8%	6%	3%
Delaware	35%	20%	21%	12%	8%	3%
District of Columbia	59%	6%	13%	10%	8%	4%
Georgia	56%	10%	15%	8%	8%	4%
Hawaii	48%	19%	17%	7%	6%	3%
Idaho	42%	19%	21%	8%	7%	4%
Illinois	35%	20%	21%	11%	9%	4%
Kansas	48%	7%	22%	11%	8%	4%
Kentucky	48%	17%	16%	9%	8%	4%
Louisiana	51%	10%	16%	10%	9%	4%
Maine	57%	15%	13%	7%	5%	3%
Maryland	49%	14%	18%	9%	7%	3%
Michigan	39%	13%	21%	12%	10%	4%
Missouri	39%	19%	20%	10%	8%	4%
Montana	48%	16%	17%	9%	7%	3%
Nebraska	38%	21%	22%	10%	7%	3%
Nevada	40%	27%	19%	6%	5%	2%
New Hampshire	46%	16%	19%	10%	7%	3%
New Jersey	34%	26%	24%	8%	5%	2%
New Mexico	46%	12%	20%	11%	8%	4%
North Dakota	38%	22%	21%	10%	7%	4%
Ohio	37%	21%	21%	10%	8%	3%
Oklahoma	41%	16%	20%	11%	8%	4%
Rhode Island	42%	12%	20%	12%	10%	4%
South Carolina	55%	11%	16%	9%	7%	3%
South Dakota	50%	14%	18%	9%	6%	3%
Tennessee	46%	12%	20%	11%	8%	4%
Texas	55%	11%	14%	9%	8%	4%
Utah	47%	13%	17%	10%	8%	3%
Vermont	44%	17%	18%	10%	7%	3%
West Virginia	40%	20%	20%	9%	7%	3%
Wisconsin	38%	15%	23%	12%	8%	4%
Wyoming	41%	19%	20%	9%	7%	3%

Spell Endings

Figure 3 displays the months that families exited the subsidy programs for Federal Fiscal Years 2007 to 2010.[13] Like spell beginnings, the timing of spell endings is more prevalent during certain months of the calendar year than in others. The caseloads in the table represent the number of families that received child care subsidies before experiencing at least a one-month break in subsidy participation. As shown in the figure, subsidy exits are more frequent in May and August than in other months.

Figure 3. Number of Families in the 35 States that Ended Subsidy Spells by Month of Exit (FY 2007 to FY 2010)
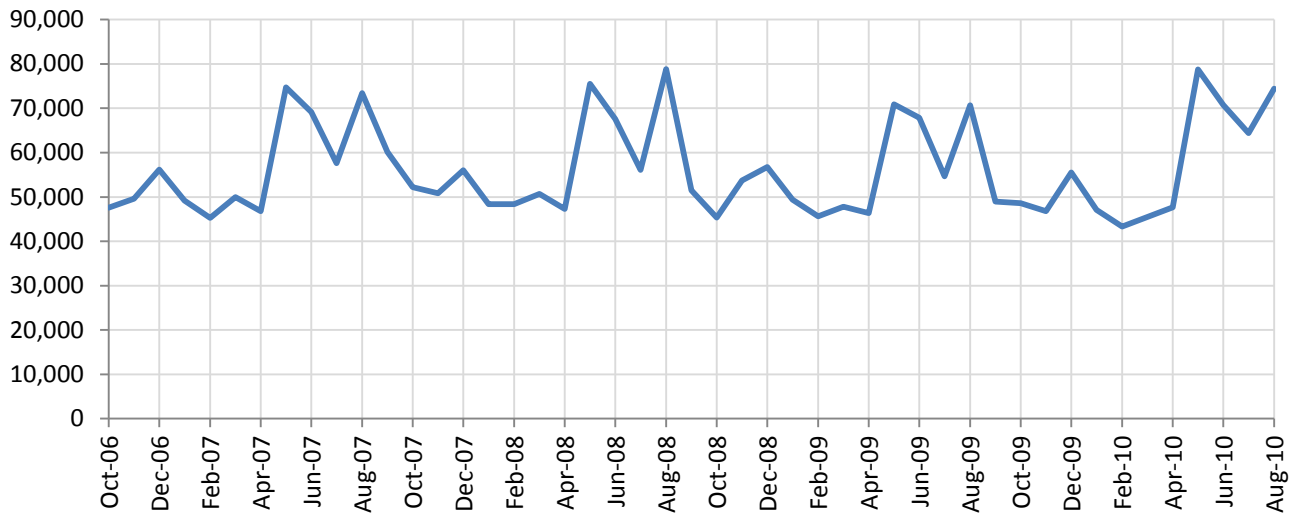
Length of Spell Duration

The amount of time that families receive child care subsidies can be presented in different ways. One possibility is with a Kaplan-Meier survival curve, like that shown in Figure 4. The x-axis in the figure represents the number of consecutive months that families received child care subsidies and the y-axis signifies the percentage of the caseload that "survived" to the corresponding month in the x-axis.[14] For example, slightly less than half (47 percent) of families received subsidies for six or more months, and about 25 percent participated for at least 12 months before experiencing at least one month without receipt.[15] Uninterrupted subsidy participation for at least two years was somewhat uncommon; these spells represented about 11 percent of the families that began subsidy use in FY 2007 (i.e., between October 2006 and September 2007). About six percent of families received child care subsidies for at least 36 consecutive months.

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[13] This figure presents data from a somewhat different time period from that shown in Figure 1. It excludes a very small number of families that began subsidies before FY 2004. Caseloads for the month of September 2010 are not included.

[14] The data in this figure are restricted to families beginning new spells of participation in Fiscal Year 2007 for either their first time or after at least a 36-month absence from child care receipt.

[15] The data to compute Kaplan-Meier survival curves for individual states can be found in Appendix Table 2.

Figure 4. Kaplan-Meier Survival Curve: The Percentage of Families in the 35 States that Received Child Care Subsidies to Particular Lengths of Time without Experiencing at Least One-Month of Non-Receipt (FY 2007)
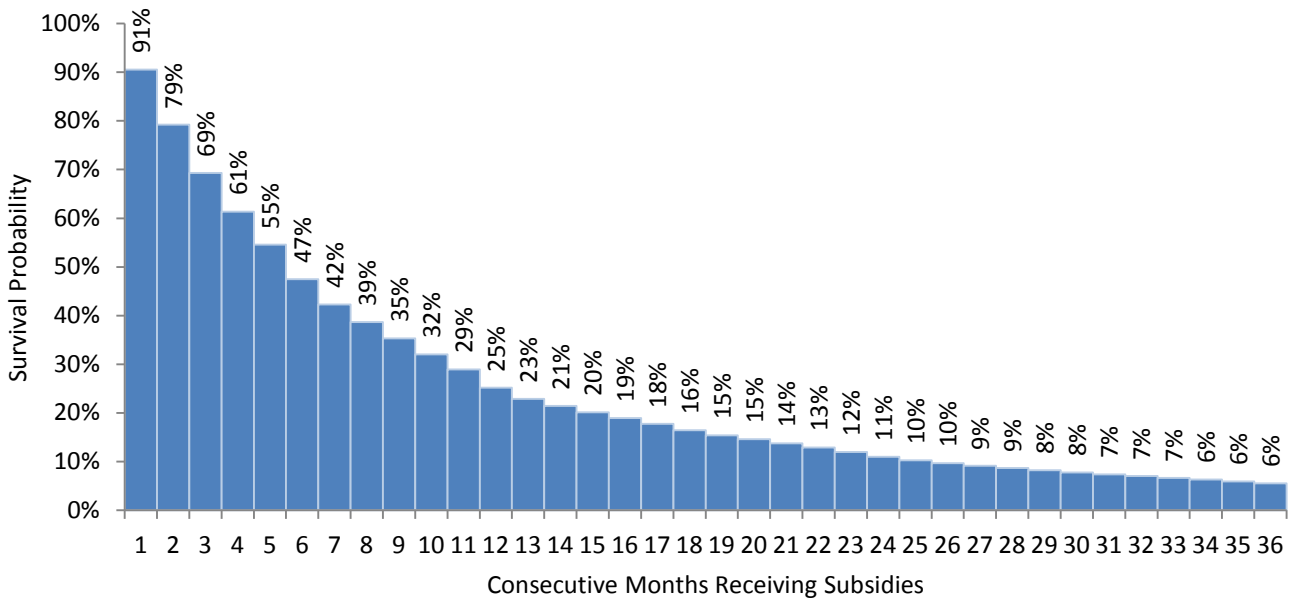
Another way to analyze length of subsidy receipt is to examine the percentage of families that experienced spell durations of various lengths. This is shown in Figure 5 for families that began spells of subsidy use in Fiscal Year 2007 for either their first time or after at least 36 months of non-receipt. When the families from the 35 states are analyzed together, about 21 percent of them completed spells in one or two months, and another 25 percent completed spells in three to five months. About 29 percent of families had spell lengths of 12 months or greater.

One of the most common methods of analyzing subsidy durations is with medians. Figure 6 presents the median spell lengths of families in the 35 states that began new spells of participation for either their first time or after at least one month on non-receipt. The time period is restricted to families beginning new spells between January 2004 and August 2009. The data from the 35 states presented in the figure reveal that median spell lengths have seasonal patterns that generally fluctuate between four and seven months.[16] Families that began subsidy usage in the months of August to January had higher medians spell lengths than families beginning program use during other months of the year. In general, median spell durations were particularly low when they began in June compared to the spell durations that began in the late summer and early fall months.

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[16] The data for the individual states can be found in Appendix Table 3.

Figure 5. Number of Continuous Months that Families Received Child Care Subsidies before Leaving the Subsidy Program or Experiencing at Least One Month of Non-Receipt (Percentages of All Families Entering the Programs in FY 2007)

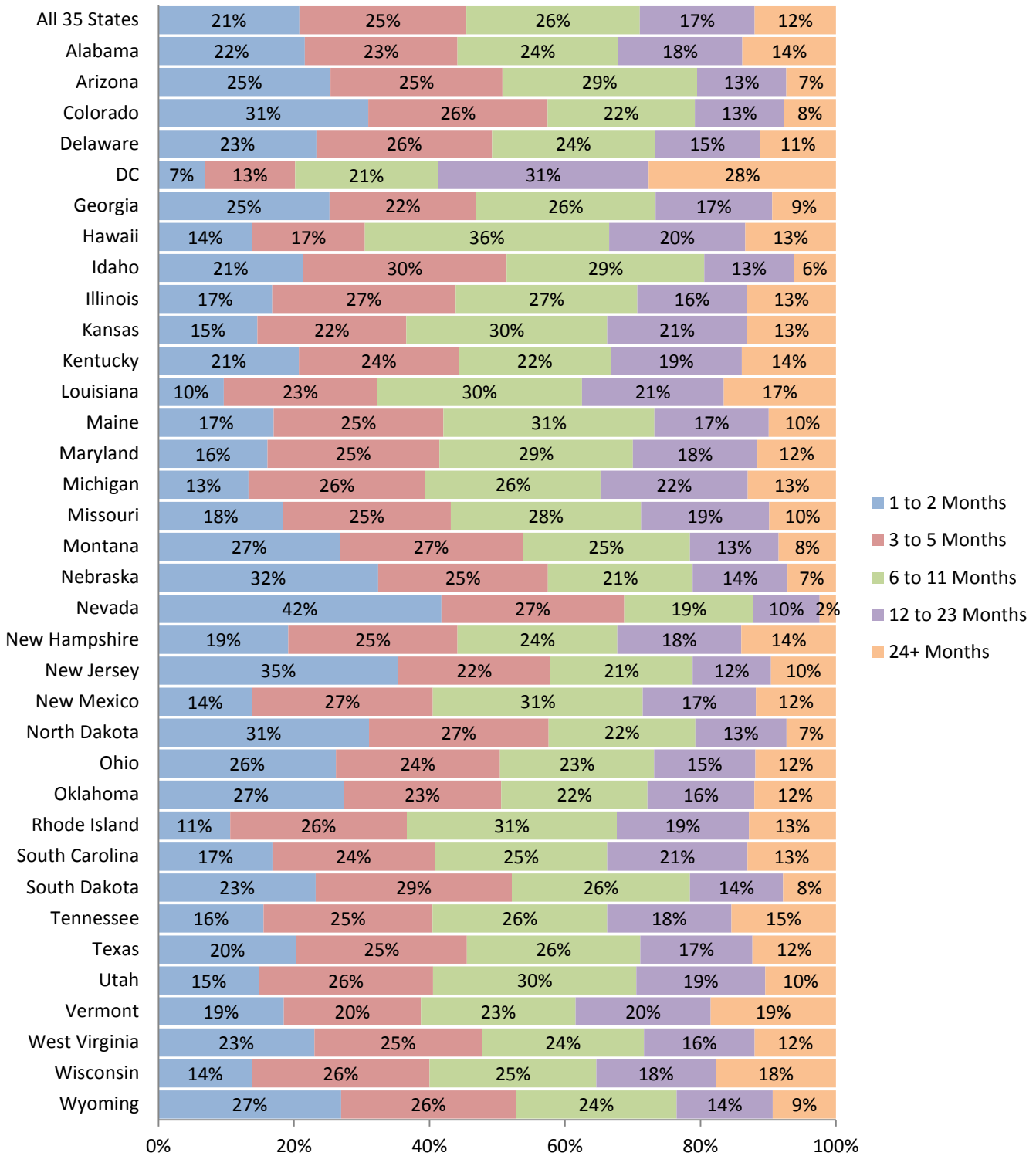| State	1 to 2 Months	3 to 5 Months	6 to 11 Months	12 to 23 Months	24+ Months
All 35 States	21%	25%	26%	17%	12%
Alabama	22%	23%	24%	18%	14%
Arizona	25%	25%	29%	13%	7%
Colorado	31%	26%	22%	13%	8%
Delaware	23%	26%	24%	15%	11%
DC	7%	13%	21%	31%	28%
Georgia	25%	22%	26%	17%	9%
Hawaii	14%	17%	36%	20%	13%
Idaho	21%	30%	29%	13%	6%
Illinois	17%	27%	27%	16%	13%
Kansas	15%	22%	30%	21%	13%
Kentucky	21%	24%	22%	19%	14%
Louisiana	10%	23%	30%	21%	17%
Maine	17%	25%	31%	17%	10%
Maryland	16%	25%	29%	18%	12%
Michigan	13%	26%	26%	22%	13%
Missouri	18%	25%	28%	19%	10%
Montana	27%	27%	25%	13%	8%
Nebraska	32%	25%	21%	14%	7%
Nevada	42%	27%	19%	10%	2%
New Hampshire	19%	25%	24%	18%	14%
New Jersey	35%	22%	21%	12%	10%
New Mexico	14%	27%	31%	17%	12%
North Dakota	31%	27%	22%	13%	7%
Ohio	26%	24%	23%	15%	12%
Oklahoma	27%	23%	22%	16%	12%
Rhode Island	11%	26%	31%	19%	13%
South Carolina	17%	24%	25%	21%	13%
South Dakota	23%	29%	26%	14%	8%
Tennessee	16%	25%	26%	18%	15%
Texas	20%	25%	26%	17%	12%
Utah	15%	26%	30%	19%	10%
Vermont	19%	20%	23%	20%	19%
West Virginia	23%	25%	24%	16%	12%
Wisconsin	14%	26%	25%	18%	18%
Wyoming	27%	26%	24%	14%	9%

Figure 6. Median Consecutive Months that Families in the 35 States Received Child Care Subsidies without Exiting the Subsidy System or Experiencing at Least One Month of Non-Receipt by Month of Entry (January 2004 to August 2009)
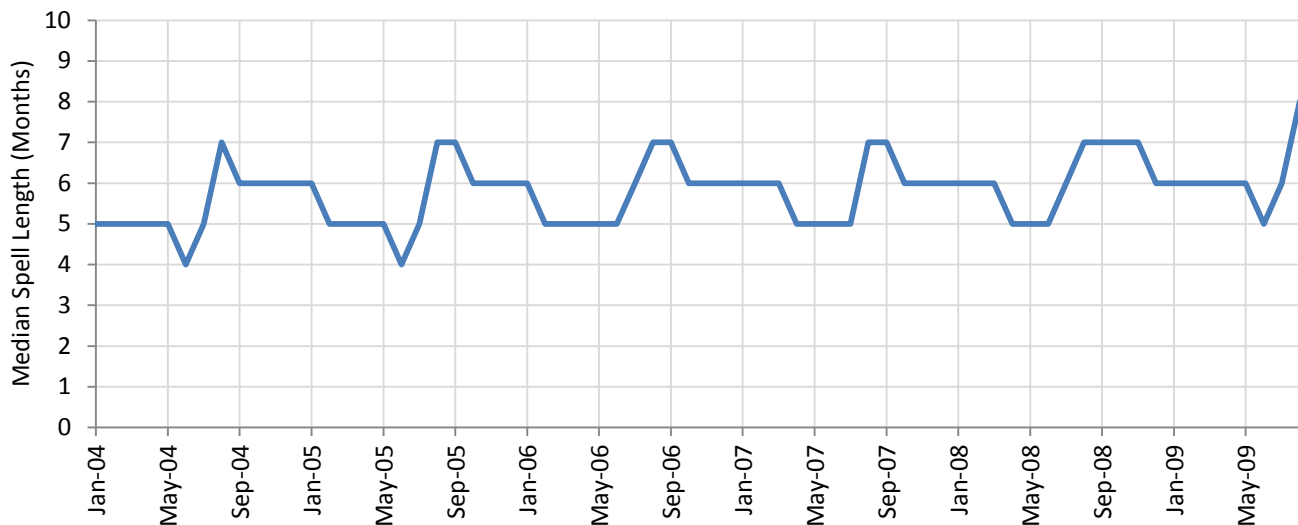

Table 3 presents spell medians by state for Fiscal Years 2004 through 2009. Care should be used when making comparisons across years and between states with the data in this table. The data for the months of November and December in Fiscal Year 2004 are not included in the calculations and their exclusion could distort the medians displayed for this year to some degree. In addition, as stressed earlier, states sometimes change which non-CCDF families they include in their ACF-801 data submissions, which may result in changes solely attributed to varying reporting patterns that were not related to actual changes in the caseloads themselves. In addition, any analysis of individual states should take into account various environmental, political, and economic factors. For example, Hurricane Katrina may have had an impact on Louisiana's median spell durations in late Fiscal Year 2005 and the early part of Fiscal Year 2006.

Of the 35 states in Fiscal Year 2009, 31 had median spell durations between 4 and 8 continuous months. Nevada (3 months) was a low outlier and Tennessee (9 months), Kentucky (10 months), and the District of Columbia (13 months) were upper outliers that year. The median spell durations shown in Table 3 for the combined 35 states reveal that median aggregate child care subsidy durations remained fairly consistent between FY 2005 and FY 2009; the medians remained at six for all of those years. However, changes in median spell durations were somewhat more pronounced for individual states. Of the 35 states, 13 had the same medians in Fiscal Year 2009 as they had in Fiscal Year 2005. In the remaining states, 20 of them had median spells that were at least one month higher In Fiscal Year 2009 than in Fiscal Year 2005. Among the most notable changes was the state of Kentucky, which had a median spell length of six in Fiscal Years 2006 and 2007, a median spell length of eight in Fiscal Year 2008, and a median spell length of 10 in Fiscal Year 2009. Two states had decreases in their median spell durations during this time period; South Carolina had a median spell duration that was one month lower and Rhode Island had a median spell duration that was two months lower in Fiscal Year 2009 than in Fiscal Year 2005.

Table 3. Median Number of Continuous Months that Families Received Child Care Subsidies before Exiting the Subsidy System for at Least One Month (Fiscal Years 2004 through 2009)

State	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
All 35 States	5	6	6	6	6	6
Alabama	5	5	5	6	5	5
Arizona	6	5	5	5	5	5
Colorado	4	4	4	4	4	5
Delaware	5	5	6	5	5	6
District of Columbia	14	12	12	13	13	13
Georgia	6	6	6	6	6	8
Hawaii	5	4	5	7	6	6
Idaho	5	6	6	5	5	6
Illinois	6	6	6	6	6	6
Kansas	5	7	8	8	8	8
Kentucky	6	5	6	6	8	10
Louisiana	9	7	10	9	9	8
Maine	8	8	8	6	8	8
Maryland	6	6	6	7	7	7
Michigan	6	6	8	8	7	7
Missouri	6	6	6	7	7	6
Montana	5	5	5	5	5	5
Nebraska	4	4	4	4	3	5
Nevada	2	2	3	3	3	3
New Hampshire	6	6	6	6	6	6
New Jersey	3	4	3	4	4	4
New Mexico	6	6	6	7	6	7
North Dakota	4	4	4	4	4	4
Ohio	5	5	5	5	5	6
Oklahoma	3	3	5	5	5	5
Rhode Island	9	9	8	7	7	7
South Carolina	6	7	7	7	7	6
South Dakota	5	6	6	6	5	6
Tennessee	7	7	7	7	7	9
Texas	5	6	6	6	7	7
Utah	5	6	6	6	6	6
Vermont	6	7	8	7	8	8
West Virginia	5	5	5	5	6	6
Wisconsin	6	6	7	7	7	7
Wyoming	5	5	5	5	5	5

Note: In order to avoid problems associated with left-censoring the medians for spells that began in October 2004 through December 2004 are excluded. In order to avoid problems with right-censoring the medians for the months of July, August, and September are excluded for the District of Columbia in FY 2009. The families in this figure were either entering the subsidy system for the first time, or entering after at least one month of non-receipt.

Table 4. Median Spell Durations of Families by Age of Youngest Child and State

State	Age 0	Age 1	Age 2	Age 3	Age 4	Age 5	Ages 6 to 8	Ages 9 to 12
All 35 States	7	6	7	6	6	5	4	4
Alabama	7	7	7	7	6	5	4	3
Arizona	6	5	6	5	5	4	4	3
Colorado	5	5	5	5	4	3	3	2
Delaware	7	6	6	5	5	5	5	3
District of Columbia	15	14	13	13	9	7	9	9
Georgia	6	6	7	6	5	4	4	3
Hawaii	8	7	7	9	7	4	4	3
Idaho	5	5	6	6	6	5	5	4
Illinois	6	6	6	6	6	6	5	5
Kansas	8	8	9	9	8	6	6	4
Kentucky	7	7	7	7	6	4	4	3
Louisiana	10	10	9	8	7	7	6	6
Maine	7	7	7	7	7	4	6	4
Maryland	7	7	7	6	6	6	6	5
Michigan	8	8	7	7	7	6	6	6
Missouri	8	7	7	7	6	5	4	4
Montana	5	5	5	5	4	3	3	3
Nebraska	5	4	4	4	4	3	3	3
Nevada	4	3	3	4	3	3	3	3
New Hampshire	9	7	8	7	7	7	4	3
New Jersey	4	5	6	7	6	4	3	3
New Mexico	7	6	7	7	6	6	6	5
North Dakota	5	4	4	3	4	4	3	3
Ohio	6	6	6	5	5	5	3	3
Oklahoma	6	5	5	5	4	4	4	3
Rhode Island	8	7	7	8	7	7	6	6
South Carolina	7	7	8	8	7	5	5	4
South Dakota	6	5	6	6	6	5	3	3
Tennessee	8	7	7	7	5	5	6	5
Texas	6	7	7	7	6	5	4	4
Utah	6	6	6	6	7	6	5	5
Vermont	9	11	7	11	9	6	6	3
West Virginia	6	6	6	6	6	4	4	3
Wisconsin	8	7	7	7	7	5	5	5
Wyoming	5	6	5	6	5	4	3	3

Note: The families in this figure were either entering the subsidy system in Fiscal Year 2007 for the first time, or were entering after at least one month of non-receipt.

Spell Durations and Age of Youngest Child

Table 4 presents median spell durations by age of the youngest subsidized child in each family by state for Fiscal Year 2007. The medians displayed in the table show that typical spell durations were somewhat longer for families with younger children compared to families with older subsidized children. For example, the median spell durations for the families in the 35 states were six or seven for children ages zero to four, were five for children age five, and were four for children ages six to eight and for children ages nine to 12.

Comparisons of Spell Duration Using Different Methodologies

The scholarly field of early childhood development has yet to fully embrace a specific methodology for measuring child care subsidy duration and this section is intended to provide a series of medians to compare and contrast various approaches. The details of the methodologies are summarized in Table 5. The methodologies vary by whether they require one or two months to precede and follow a spell of receipt, and they differ by whether they include or exclude families with recent spells of previous program usage.

Table 5. Alternative Methods to Calculate Spell Duration

Method	Months Required to Precede and Follow a Month of Subsidy Receipt	New and Returning Families
One Month, All	One	All Families
One Month, New	One	Families entering the subsidy program for either their first time or after at least 36 months on non-receipt
One Month, Returning	One	Families returning to the subsidy system within 36 months of a previous spell
Two Months, All	Two	All Families
Two Months, New	Two	Families entering the subsidy program for either their first time or after at least 36 months of non-receipt

Table 6 presents median spell durations using the five methodologies described above for families beginning new spells of participation in Fiscal Year 2007. In the aggregate, the medians from the combined 35 states did not show large amounts of variation across the methodologies. For example, the median spell lengths did not change when the populations were restricted to families that were either receiving subsidies for the first time or were returning to the caseloads after a three-year exit from the programs. Requiring two months of non-receipt to precede and follow a spell of participation increased the median spell durations from six to seven months.

Table 6. Median Months of Child Care Subsidy Receipt for Families by Type of Spell Measurement and State: Fiscal Year 2007

State	One Month, All	One Month, New	One Month, Returning	Two Months, All	Two Months, New
All 35 States	6	6	6	7	7
Alabama	6	7	5	9	10
Arizona	5	5	5	6	6
Colorado	4	4	4	5	5
Delaware	5	6	5	6	6
DC	13	13	12	13	13
Georgia	6	6	6	7	7
Hawaii	7	7	7	9	9
Idaho	5	5	5	6	6
Illinois	6	6	6	7	7
Kansas	8	8	8	9	9
Kentucky	6	6	6	8	8
Louisiana	9	9	9	10	10
Maine	6	6	5	6	7
Maryland	7	7	7	7	7
Michigan	8	7	8	8	8
Missouri	7	7	7	8	8
Montana	5	5	5	6	5
Nebraska	4	4	4	5	5
Nevada	3	3	2	4	4
New Hampshire	6	7	6	7	8
New Jersey	4	4	3	5	6
New Mexico	7	6	7	8	7
North Dakota	4	4	4	5	5
Ohio	5	5	4	6	7
Oklahoma	5	5	5	6	6
Rhode Island	7	7	7	8	8
South Carolina	7	7	7	8	8
South Dakota	6	5	6	6	6
Tennessee	7	7	7	8	8
Texas	6	6	6	7	7
Utah	6	6	6	6	6
Vermont	7	8	6	9	10
West Virginia	5	6	5	6	6
Wisconsin	7	7	7	8	8
Wyoming	5	5	5	6	6

Variations in the medians across methodologies are more pronounced for some states than other states. For example, the median spell lengths for new and returning families (one month methodology) were the same in 22 out of the 35 states and were within one month of each other for 11 of the states. However, the medians for the families without recent participation in the states of Vermont and Alabama were two months higher than the medians for the families that were returning from recent spells. Changing the minimum participation gap from one to two months of non-receipt before and after a spell altered the median spell lengths for all but six of the states (new entrants only). In the remaining states, 23 of the medians were one month higher, five of the medians were two months higher, and the medium in one state (Alabama) was three months higher when the two months gap approach was used instead of the one month gap. Care should be used when making comparisons across the states because it is not clear whether the differences were influenced by variances in reporting across the states. For example, states may differ to the extent to which they retrospectively correct or update their data systems when payment amounts are altered when appeals or recalculations are made.

Cumulative Months of Participation across a Three-Year Period

Analysis of the ACF-801 data finds that many families receive subsidies sporadically over time and frequently return to the subsidy programs after they exit. These patterns are displayed in Figure 7, which presents the number of *cumulative* months that families receive child care subsidies over a three-year period. The blue area (i.e., the first section of the bar) replicates the numbers from column three of Table 6 and presents the median number of months of receipt during the first spell before at least one month of non-receipt occurred. The addition of the two bars equals the median number of all months of participation over the 36-month follow-up period. The red bar (i.e., second segment) is the remainder when the median values from the first bar (i.e., the first spell of participation) are subtracted from the median of the cumulative months.

As shown in the figure, the typical amount of participation in every state is much larger when examined in terms of cumulative months rather than with single spells. For example, the cumulative duration amount for the combined 35 states increased from six months when only considering the first spell to 12 months when adding the months from additional spells. In 19 of the 35 states, the median cumulative months of participation was at least two times the median length of the first spell of participation.

Figure 8 presents another way of examining participation patterns by tabulating the cumulative months of participation that families experienced over a three-year period into four mutually exclusive bands. When the data for the 35 states are combined, about 25 percent of families participated for less than six months and 47 percent (the addition of the first two bars) participated for less than 12 months. The data in Figure 8 also reveal that 26 percent of the families in the 35 states received subsidies for at least twenty-four months in the thirty-six month analysis period. In comparison, only 12 percent of this cohort participated for at least 24 months when only the first spell is considered (see Figure 5).

Figure 7. Median Spell Lengths in Months for Families Beginning New Spells with No Recent Participation in Fiscal Year 2007

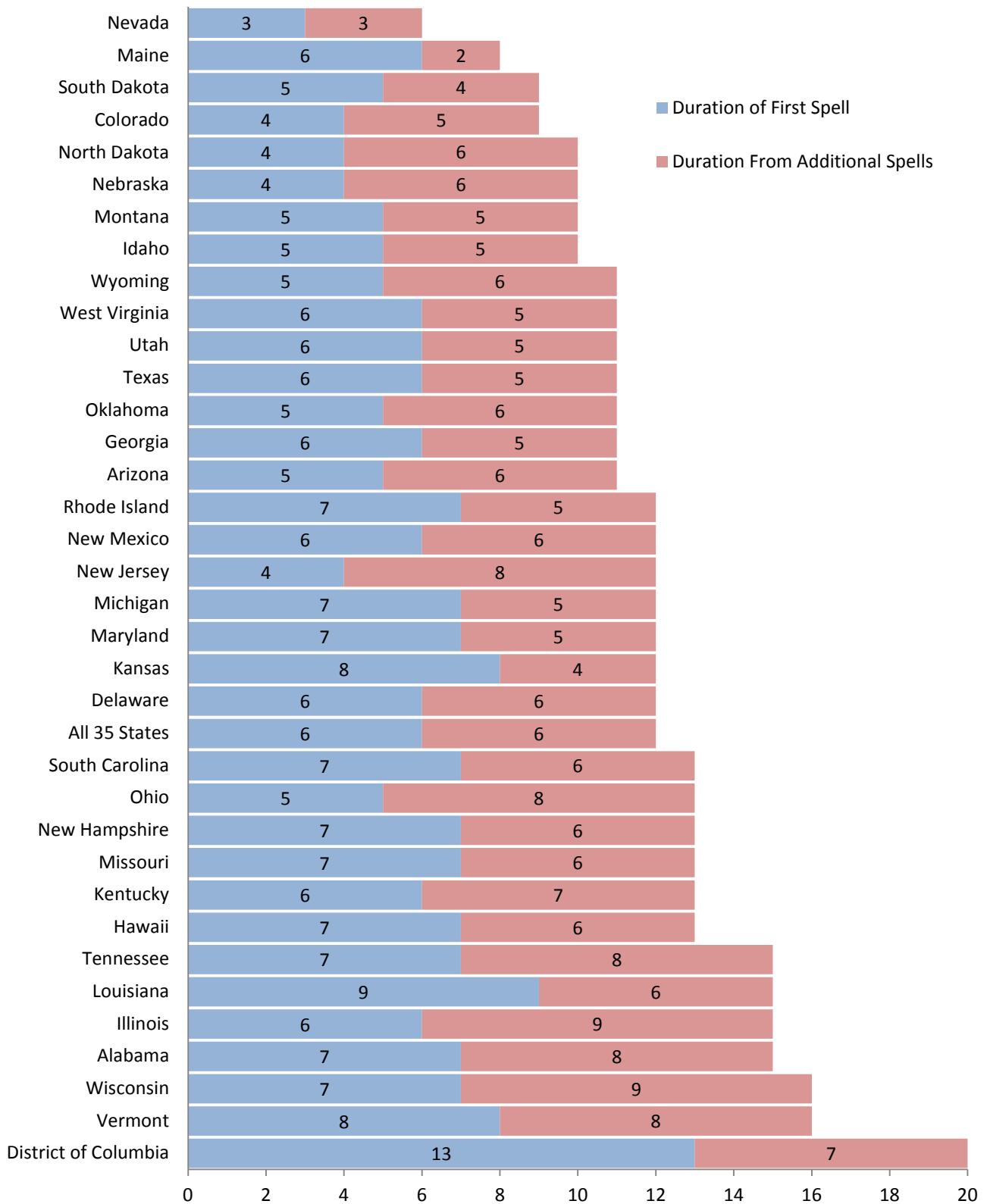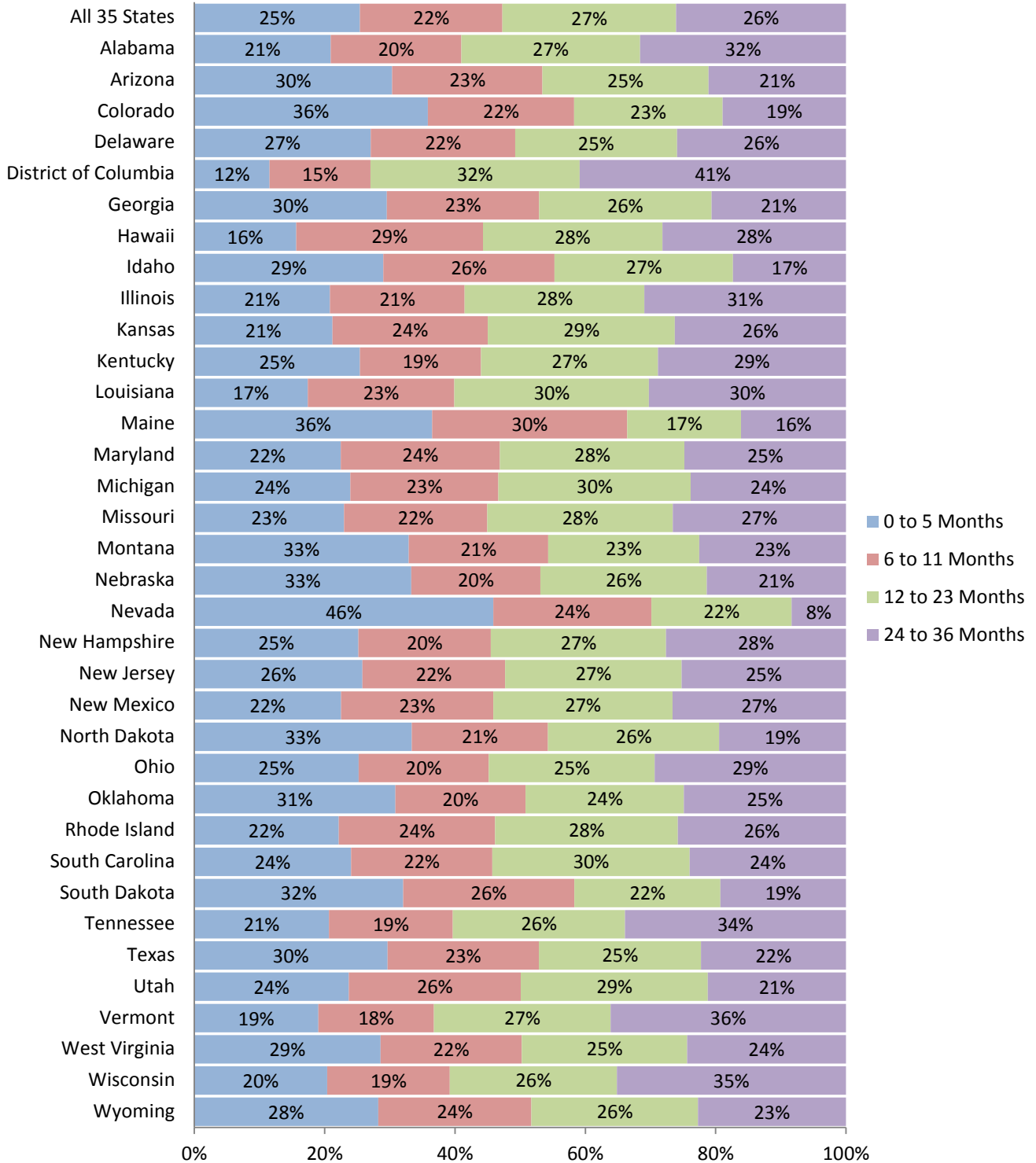| State	Duration of First Spell	Duration From Additional Spells
Nevada	3	3
Maine	6	2
South Dakota	5	4
Colorado	4	5
North Dakota	4	6
Nebraska	4	6
Montana	5	5
Idaho	5	5
Wyoming	5	6
West Virginia	6	5
Utah	6	5
Texas	6	5
Oklahoma	5	6
Georgia	6	5
Arizona	5	6
Rhode Island	7	5
New Mexico	6	6
New Jersey	4	8
Michigan	7	5
Maryland	7	5
Kansas	8	4
Delaware	6	6
All 35 States	6	6
South Carolina	7	6
Ohio	5	8
New Hampshire	7	6
Missouri	7	6
Kentucky	6	7
Hawaii	7	6
Tennessee	7	8
Louisiana	9	6
Illinois	6	9
Alabama	7	8
Wisconsin	7	9
Vermont	8	8
District of Columbia	13	7

Figure 8. Families that Began Child Care Subsidies in Fiscal Year 2007 and Had No Recent Participation: Cumulative Number of Months Families Received Child Care Subsidies by State (Percentages)

State	0 to 5 Months	6 to 11 Months	12 to 23 Months	24 to 36 Months
All 35 States	25%	22%	27%	26%
Alabama	21%	20%	27%	32%
Arizona	30%	23%	25%	21%
Colorado	36%	22%	23%	19%
Delaware	27%	22%	25%	26%
District of Columbia	12%	15%	32%	41%
Georgia	30%	23%	26%	21%
Hawaii	16%	29%	28%	28%
Idaho	29%	26%	27%	17%
Illinois	21%	21%	28%	31%
Kansas	21%	24%	29%	26%
Kentucky	25%	19%	27%	29%
Louisiana	17%	23%	30%	30%
Maine	36%	30%	17%	16%
Maryland	22%	24%	28%	25%
Michigan	24%	23%	30%	24%
Missouri	23%	22%	28%	27%
Montana	33%	21%	23%	23%
Nebraska	33%	20%	26%	21%
Nevada	46%	24%	22%	8%
New Hampshire	25%	20%	27%	28%
New Jersey	26%	22%	27%	25%
New Mexico	22%	23%	27%	27%
North Dakota	33%	21%	26%	19%
Ohio	25%	20%	25%	29%
Oklahoma	31%	20%	24%	25%
Rhode Island	22%	24%	28%	26%
South Carolina	24%	22%	30%	24%
South Dakota	32%	26%	22%	19%
Tennessee	21%	19%	26%	34%
Texas	30%	23%	25%	22%
Utah	24%	26%	29%	21%
Vermont	19%	18%	27%	36%
West Virginia	29%	22%	25%	24%
Wisconsin	20%	19%	26%	35%
Wyoming	28%	24%	26%	23%

Discussion

The statistics presented in this report provide a description of the interval of time that families receive child care subsidies and document the calendar months when they are more or less likely to enter and exit the programs. These statistics are useful to researchers and policymakers because the patterns may be related to adult employment and child care stability outcomes, and they provide valuable information to program administrators who want to better understand the caseload dynamics of the subsidy programs.

The methodology used to analyze subsidy durations was somewhat different than what was used in other reports. This report used families as units of analysis, whereas many other studies used children as units of analysis.[17] The data examined also were more recent than most of what has been previously analyzed. Despite differences in methodologies across studies the results presented in this report were similar to what has been previously documented in the extant literature. Families often receive child care subsidies for relatively short periods of time; the median spell durations were between four and eight months for the majority of 35 states examined in this report. Similar to previous studies, this report finds that families frequently return to the subsidy programs after they exit and measurements that take into account multiple spells of participation reveal much longer periods of participation than measurements of single spells. For example, whereas the median duration of a single spell of participation was six months for the combined 35 states, the median cumulative usage over a 36-month measurement period was 12 months.

Since the ACF-801 data does not collect information on the employment situations of the families before and after they receive subsidies, and since it lacks information about the non-subsidized care arrangements of the participating families, it is challenging to determine why these patterns occur and it is difficult to identify whether the breaks in subsidy usage coincide with a discontinuity of the child care arrangements or the employment of the parents. Many of the important policy questions that policymakers want to rigorously answer concerning subsidy duration will likely require innovative research designs, and possibly more data collection, that goes beyond descriptive analysis of administrative data. For example, it will be difficult to use only administrative data to determine whether redetermination policies, reimbursement rates, maximum income eligibility thresholds, and earned income disregards impact employment and child care stability. Studies that link subsidy durations with employment records provide some insight into this topic, but even these studies are limited by the fact that the direction of causation between child care arrangements and changes in employment is not always clear.

Part of the challenge of studying subsidy programs is that they are funded by block grants such as the Child Care and Development Fund (CCDF), Social Services Block Grant (SSBG), and money spent directly from the Temporary Assistance for Needy Families (TANF) program. Much of the funding available to states through TANF and SSBG can be used for a variety of social service priorities and states vary in the amount of funding they allocate to child care subsidy programs. Without a clear entitlement funding structure, states must balance

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[17] The project decided to use families as the units of analysis because the unique identifiers were based on the heads-of-household and not the children. However, future analysis of the ACF-801 data could potentially replicate the statistics in this report using children as the units of analysis by combining the dates of birth of the children with the Social Security Numbers of the heads of household.

between a series of competing priorities. Some states prefer to broaden their eligibility parameters to families with somewhat higher incomes, while other states choose to implement more restrictive eligibility guidelines but provide higher reimbursement rates to the providers, which theoretically increase the care options available to the participating families. Some states choose to fund most or all eligible families that apply for subsidies, while other states control costs by operating waiting lists or by freezing enrollment.

The challenges to studying child care subsidy programs should not deter researchers from pursuing further quantitative analysis of caseload patterns using administrative data. There are likely additional patterns that can be observed that would be helpful to researchers and administrators. For example, further analysis of states with particularly long or short duration patterns might reveal important differences that could be informative to policymakers. However, the differences in policies and funding amounts across the states mean that states likely serve different types of populations and linking specific policies to various outcomes is challenging. Researchers may want to consider conducting qualitative interviews with a subset of the subsidy populations. For example, it might be helpful to conduct a survey with a sample of families that exited the subsidy programs to understand the various factors that led to the exits and to what happened to the employment and child care arrangements of the families after they exit the programs.

The results from this and other studies of child care subsidy durations also may be relevant to survey researchers and designers. Several early educational surveys ask their respondents whether they received child care subsidies to pay for part or all of their child care arrangements. The answers to these questions potentially provide ways to measure the impacts of subsidy use on the health and well-being of children, and some scholars have already started making these comparisons. However, surveys that simply ask whether families received subsidies or not during a particular week or month may not fully capture the true subsidy experience. The designers of such surveys may want to consider how to document subsidy use in a more longitudinal manner because the potential impact of subsidies on various outcomes may be related not only to receipt of subsidies, but also the duration of subsidy use and the circumstances surrounding the participation. For example, child care subsidies may have a different impact on children receiving subsidies for only a short period of time than they have on a family that utilizes subsidies for longer periods of time. If families with unstable care arrangements or employment have different take-up rates than other eligible families that do not participate in the subsidy programs then selection bias may distort the effects that the subsidies have on child outcomes and the well-being of the families they serve.

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