



Subsidy Continuity in Maryland

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Introduction to the Maryland Research Capacity Brief Series

The purpose of this Research Brief Series is to summarize key findings and implications from the Maryland Research Capacity study. This multi-method study included focus groups and the analysis of Maryland's child care subsidy administrative data on topics including: parents' priorities and preferences in making child care decisions, defining high quality care and school readiness, continuity in subsidized care arrangements, and the association between enrollment in subsidized care arrangements and assessments of children's school readiness upon kindergarten entry. The Maryland Research Capacity Brief Series is designed to answer questions of interest to state child care administrators, county agency staff and other early childhood stakeholders. The entire series of baseline briefs is available online at: www.mdmnresearchpartnership.com.

INTRODUCTION

Child care subsidy programs have dual objectives of supporting parents as they pursue financial self-sufficiency and supporting school success for their children. Numerous studies have documented benefits of child care subsidies among families receiving or recently transitioning off TANF (Temporary Assistance to Needy Families) cash assistance. Compared to families receiving or transitioning off TANF who don't receive a child care subsidy, those with a subsidy are more likely to obtain and maintain employmentⁱ, have more rapid gains in earnings,ⁱⁱ select higher quality care,ⁱⁱⁱ and be more satisfied with their child's care arrangement.^{iv} However, recent research has also highlighted an unintentional negative effect associated with child care subsidies, namely when child care subsidies that facilitate access to care end, a child's care may be disrupted.^v

Continuity in high quality child care arrangements is important for a variety of child outcomes. In particular, children in more continuous, or stable, care arrangements are less likely to exhibit problem behaviors^{vi}, and more likely to have secure attachments with primary caregivers and child care providers,^{vii} better cognitive proficiency,^{viii} positive adjustment in school,^{ix} and overall well being.^x Additionally, as summarized by Adams & Rohacek (2010), discontinuity of children's care has been associated with negative employment outcomes for parents.^{xi}

Multiple qualitative studies have documented discontinuity in child care arrangements resulting from subsidy exits. Reasons for subsidy exits cited in qualitative studies include administrative challenges in maintaining a subsidy, loss of subsidy eligibility, and parental choices to exit the subsidy system due to increasing family copayments.^{xii} Studies in several states have found that the median length of a continuous period of subsidy receipt is relatively short. For example, one study of child care subsidy dynamics in five states, including Maryland, found subsidy spells from 1997 to 1999 to last on average 3-7 months (average of 4 months in Maryland).^{xiii} Two studies have found that many families appear to remain income eligible after they stop using a child care subsidy.^{xiv}

PURPOSE OF THIS BRIEF

This brief uses more than three years of administrative data to examine the continuity of participation of children in Maryland's child care subsidy voucher program. The brief begins with a description of the data and the characteristics of the children and families who participate in Maryland's child care subsidy program. Next, the brief examines the amount of time children participate continuously in the subsidy program, both overall and by subgroups based on chil-



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dren's characteristics. Finally, the results of an analysis that simultaneously controls for multiple characteristics of children in looking at subsidy continuity are presented. Implications of research findings for child care subsidy policy are discussed.

DATA & METHODS

Data

This study uses Maryland's child care subsidy voucher data covering the period from June 2007 through September 2010, and includes all children who received a subsidy voucher during that time period.¹ These data were entered daily into the statewide Child Care Administration Tracking System (CCATS) database by local department of human resources staff on a weekly basis and include information about the children, their families, and their care settings.

Methods

In order to understand how long children continuously participate in the voucher program, a "spell" of participation is defined as a series of weeks in which a child received care paid for in full or in part by a voucher. A spell starts the week a child's care is paid for by a child care subsidy voucher and ends the first time the child goes for at least seven (7) days without a voucher subsidizing their care.² Although the study covers more than two years, many spells began before or ended after the start of the study. Spells that began before the start of the study period (6/25/2007) are "left censored." These spells are excluded from the analysis because their full length cannot be known. Spells that were observed continuing up until the end of the study period (9/26/2010) are "right censored." These spells may continue after the study period. Right censored spells were included in the analysis, with appropriate statistical techniques to account for right-censoring.³ If a child had multiple subsidy spells during the study period, the analysis focused on the first spell observed between June 2007 and September 2010 for any given child. Limiting our analysis to first observed non-left-censored spells in the study period yielded 62,338 unique spells. We hereafter refer to these spells as "first spells." These "first spells"⁴ of children in the child care subsidy voucher program should be representative of those experienced by all children receiving child care subsidy vouchers.

CHARACTERISTICS OF CHILDREN RECEIVING CHILD CARE SUBSIDY VOUCHERS

Table 1 presents some key characteristics of the children who received child care vouchers in Maryland during the study period from 2007 to 2010. There were 62,338 children who had a spell that started between June 2007 and September 2010. Boys and girls were very nearly equally represented. The majority of children who received child care vouchers were non-Hispanic Black (76.5%), while nearly 18% of children were non-Hispanic White. Hispanic children were 4.5% of the study population, and the remaining 1.3% was non-Hispanic American Indian, Alaskan Native, Asian, Hawaiian, or Pacific Islander. Children who received a child care subsidy during the study period covered the full range of ages eligible for subsidy, from infants through age 12. As recorded the first month a child was observed in the sample, approximately a third (35%) of children were infants or toddlers (under 3 years), a third (34%) were preschoolers (aged 3-4 years), and the remainder (31%) were school-aged (5 years or older).

¹ Maryland residents are eligible to receive child care subsidies if they are 1) working or in an approved training program/school, 2) receiving Temporary Cash Assistance/SSI or meet the income eligibility criteria for child care subsidies (in 2012, the maximum income eligibility for a family of three was \$27,990), 3) willing to have their child immunized in accordance with Maryland State Standards, and 4) pursuing/receiving child support. For more details about eligibility for child care subsidies in Maryland, see www.marylandpublicschools.org/msde/divisions/child_care/subsidy/.

² Different length breaks could be used to define continuous care. We experimented with a 31-day break definition as well as the 7-day break definition. While spells defined using a 31-day break were slightly longer on average, the 7-day break definition and 31-break definition had substantively similar results in terms of the relationship between different characteristics and spell length.

³ Left censored spells are typically excluded from studies of spell length (or "survival analysis") both because their full length cannot be known and because they over-represent the experiences of participants with long spells. The entry cohort approach used in this study, in which only left censored spells of participation are excluded, is recommended in studies of program participation. However, some studies do not use this approach, thus the results of this study may differ from other analyses of characteristics of voucher participants.

⁴ Children who started a voucher spell during the study period may have also received child care subsidy vouchers prior to the start of the study period in June 2007. Therefore, the spell observed in this study may not be the first spell of CCAP participation for the child.

TABLE 1. Demographic Characteristics of Children in Subsidized Care, 2007-2010

	Percent of children
GENDER	
Female	50.1
Male	49.9
RACE/ETHNICITY	
Non-Hispanic White	17.7
Non-Hispanic Black	76.5
Hispanic	4.5
Non-Hispanic American Indian Alaskan Native/Asian/Hawaiian/Pacific Islander	1.3
TOTAL	100%
N observations (children)	62,338
<i>Source. State-level child care subsidy administrative data from the CCATS automated system of the Maryland State Department of Education.</i>	

FAMILY CHARACTERISTICS OF CHILDREN RECEIVING CHILD CARE SUBSIDY VOUCHERS

Children receiving child care vouchers lived in diverse households.⁵ The vast majority (92.4%) of children lived with a single parent. Given that most of our sample consists of single parents, the household size is largely reflective of the number of children in the household. Around a quarter of children (26%) had a household size of two. Close to a third of children (32%) had a household size of three. Another third (34%) had a household size of four or five. The remainder (8%) had a household size of six or more people.

A variety of family characteristics and circumstances were associated with children receiving child care subsidy vouchers (Table 2). The primary reason for needing a voucher, among parents of children in subsidized care, was to support parental employment (68.4%). One-fifth of children (20.5%) were provided a voucher to support parental training or education. Among the remainder of children in subsidized care, vouchers were provided for either a combination of employment and training or education (5.2%) or as an ancillary service for children in protective services (5.8%).

Most families (59.5% of children) were receiving neither TCA (Temporary Cash Assistance) nor TCC (Transitional Child Care, i.e. TCA within the past 12 months) benefits. Slightly more than a third (37.8%) were receiving TCA, and a small percentage (2.8%) was receiving TCC benefits.

Many parents are required to pay for part of their children’s care while receiving a child care subsidy, and the copayment rates vary by family size, TCA/SSI status, and income. Families receiving TCA or Supplemental Security Income (SSI) pay no copay, while other families with a gross income of less than 100% of poverty guidelines pay a “low” copay of 5% to 8% of the state-approved child care price for the first child. Families with gross income around 101-150% of poverty have a “medium” copay level, ranging from 13% to 39%. Finally, families above 150% of poverty have a “high” copay, ranging from 45% to 50%. The majority of children’s subsidized care was at the no or low copay level (59.1%). Slightly less than one-fifth of children (18.4%) had subsidized care at the medium copay level, and 22.5% at the high copay level.

⁵Household members include parents and their children, whether related by blood, adoption, or legal guardianship. Grandparents, aunts/uncles, or other adults who are not a guardian of the child are not included as household members.

TABLE 2. Family Characteristics of Children in Subsidized Care, 2007-2010

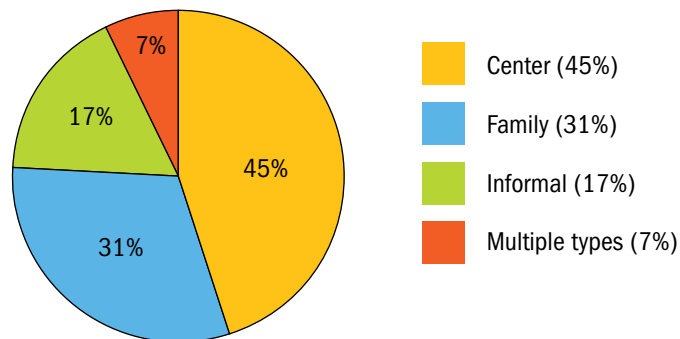
	Percent of children
REASON FOR NEEDING CHILD CARE	
Both employment and training/education	5.2
Employment, including on-the-job training	68.4
Training/education only	20.5
Protective services	5.8
TCA STATUS	
TCA (Temporary Cash Assistance)	37.8
TCC (Transitional Child Care)	2.8
Neither TCA nor TCC	59.5
COPAY LEVEL	
No or low copay	59.1
Medium	18.4
High	22.5
TOTAL	100%
N observations (children)	62,338

Note. Percentages based on first observed non-left censored spell.
Source. State-level child care subsidy administrative data from the CCATS automated system of the Maryland State Department of Education.

TYPES OF CARE ARRANGEMENTS FOR CHILDREN USING CHILD CARE SUBSIDY VOUCHERS

Parents receiving a child care subsidy voucher in Maryland can choose from a variety of different types of child care providers (Figure 1). Almost half (45.4%) of children’s subsidized care arrangements during their first spell within the study period were center-based.⁶ Licensed family child care arrangements provided subsidized care for 31.3% of children during their first spell within the study period. Fewer children were in subsidized informal care settings (16.5%). Finally, 6.8% of children maintained a consistent subsidy (no break in subsidy payments to providers lasting more than seven days); even while changing care arrangements to a different type of care. These children are herein referred to as experiencing “multiple types” of care.

FIGURE 1. Types of Subsidized Care Arrangements Used During Children’s First Spell between 2007-2010



Note. The type of care covers the entire spell.

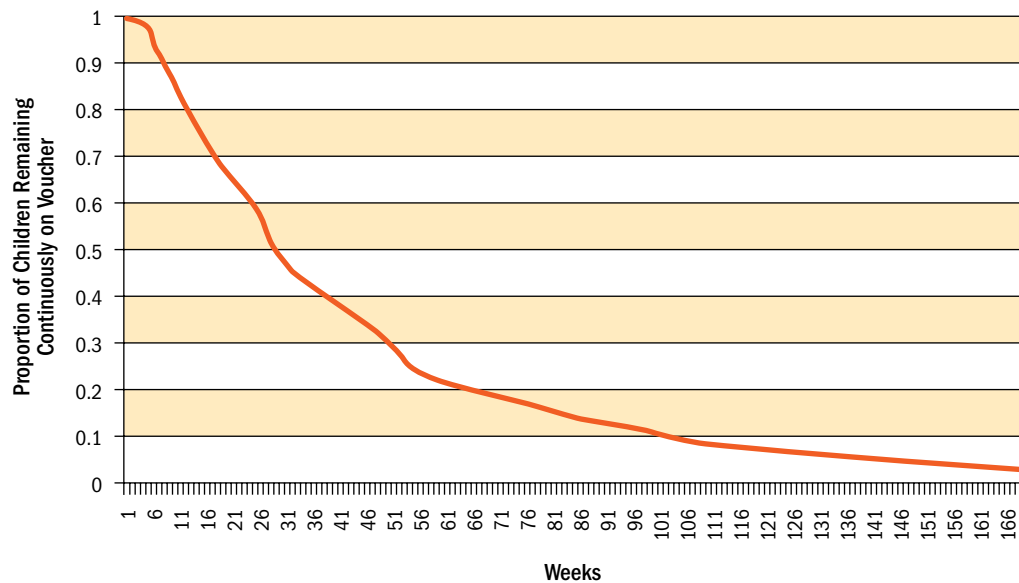
Source. State-level child care subsidy administrative data from the CCATS automated system of the Maryland State Department of Education.

⁶In Figure 1, military child care, summer camps and facilities with a Letter of Certification are included with centers.

For How Long Do Children Receive Child Care Subsidy Vouchers?

Children receive child care subsidy vouchers for varying lengths of time. While some children in Maryland received vouchers for just a few weeks, others received vouchers continuously for a year or longer. Among first subsidy spells starting after June 2007, one quarter of children had a first spell of 15 weeks (3.5 months) or less, half of children had a spell of 29 weeks (approximately 7 months) or less, and three quarters had a spell of 54 weeks (just over 1 year) or less. More than a quarter of children's first subsidy spell starting after June 2007 lasted for more than a year. Figure 2 shows the proportion of children remaining continuously on the voucher by week. The proportion dropped steadily with each additional week through approximately 29 weeks, at which point about 50% of the children had ended their first subsidy spell. After about 32 weeks, fewer subsidy exits were seen. Although the administrative data does not include the reason for leaving the voucher program, it is likely that some of the earlier exits from vouchers were related to the end of short-term training, care that was for only the summer or short-term, and unstable housing or employment.

FIGURE 2. Length of Time Continuously Using a Child Care Subsidy Voucher



Note. Sample is child's first observed non-left censored spell. Spell defined as a break of more than 7 days between voucher periods. Kaplan-Meier method used for estimation to correct for right-censored spells.

Source. State-level child care subsidy administrative data from the CCATS automated system of the Maryland State Department of Education.

Does the Length of Time on Child Care Subsidy Vouchers Vary by Child and Family Characteristics, Type of Subsidized Care, and Reasons/Timing of Voucher?

In this section, differences in median spell length by child and family characteristics, reasons for needing a voucher, timing of voucher receipt, and city/county of residence (herein referred to as jurisdiction) are presented. The median spell length refers to the number of weeks half of children with a particular characteristic received a voucher without a seven day break. The median length of first spells between June 2007 and September 2010 for all children was 29 weeks (approximately 7 months). Except in the case of gender, where there is no difference in median spell length, all the differences in median spell length by examined characteristics were statistically significant. Differences in median spell length for child and family characteristics, reasons for needing a voucher, and timing of voucher receipt are presented in Table 3.

Differences by Child Characteristics

Subsidy spell lengths varied with the age and race/ethnicity of the child. The median length of spell was greater for infants and toddlers (30 weeks) than preschoolers or school-age children (28 weeks). There were small differences in median spell length by race/ ethnicity. White children had a median spell length of 30 weeks, followed by Black children (29 weeks), Hispanic children (28 weeks), and children of other ethnicities (27 weeks). No differences in spell length were found by child gender, with boys and girls both having a median spell length of 29 weeks.

Differences by Household Characteristics

Household structure, income, and receipt of cash assistance were each associated with differences in the median spell length of first spells within the study period. Children in single parent households had longer subsidy spells than children in two-parent households, with a median spell length of 29 vs. 27 weeks, respectively. The length of spell also varied by household income, as summarized through a comparison of copay levels. Children whose families paid no or low copays (5-8%) had a median spell length of 26 weeks. Medium copay levels (13-39%) were associated with longer spells, median of 38 weeks. Children whose families paid high copay levels (45-50%) also had longer spells than those in the no/low copay group (median of 35 weeks). Finally, children whose parents received TCA had shorter spells (median of 23 weeks), than children whose parents had recently transitioned off TCA (those categorized as receiving TCC; median of 32 weeks). Children whose parents were neither receiving TCA nor TCC benefits had the longest median spell length (35 weeks).

Differences by Type of Care

No statistically significant differences in spell length were found among children receiving subsidized care in centers and family child care (median spell length of 27 weeks) or children in informal care (median of 29 weeks). As might be expected, children whose subsidy was maintained during transitions to using other types of care (as was the case in less than 10% of the total sample) had the longest spells, with a median spell length of 65 weeks and children in military/summer care had the shortest spells (median of 10 weeks).

Differences by Reason for and Timing of Voucher

Spell length varied by reason for needing a child care subsidy voucher. Longer median spells were observed among children whose parents received a voucher for employment, including on-the-job-training (31 week median) or for the combination of employment and training/education (30 week median). Shorter spells were observed among children whose parents received a subsidy to support their training/education only (24 week median) or for child protective services or other reasons (23 week median). These results are consistent with findings from other states, in which families receiving child care subsidies while receiving welfare, or for education and training rather than employment, tend to have shorter spells of subsidy use.^{xv}

We also examined whether there were differences in median spell length for spells that began in June—when school gets out and families may have additional child care needs. Children had slightly shorter spells (27 week median) if their subsidy spell started in June, as compared to another month (29 week median). Other months of the year did not indicate differences in spell length.

Differences by Jurisdiction of Residence⁷

While child care subsidy policy is determined at the state level, Maryland's child care subsidy vouchers are managed by Department of Human Resources offices within each jurisdiction. There is a wide range of median spell lengths by jurisdiction, ranging from 22 to 53 weeks. For the majority of jurisdictions, median spell length is in between 20 weeks and 30 weeks.

⁷ Note: Differences by jurisdiction are not included in Table 3.

TABLE 3. Estimated Median Spell Length by Select Characteristics

	Median spell length – in weeks
All subsidized children	29
AGE GROUP*	
Infant/toddler	30
Preschool	28
School age	28
GENDER	
Female	29
Male	29
RACE/ETHNICITY*	
White	30
Black	29
Hispanic	28
Other	27
SINGLE PARENT*	
Not a single parent	27
Single parent	29
TCA STATUS*	
TCA	23
TCC	32
Neither TCA nor TCC	35
REASON FOR CARE*	
Both employment and training/education	30
Employment, including on-the-job training	31
Training/education only	24
Protective services/other	23
CO-PAY LEVEL*	
None/Low	26
Middle	38
High	35
PROVIDER TYPE*	
Center	27
Family	27
Informal	29
Multiple types	65
Military/summer care	10
JUNE START*	
Not a June start	29
June start	27

Note. * Statistically significant differences were found in comparing these characteristics.

Source. State-level child care subsidy administrative data from the CCATS automated system of the Maryland State Department of Education.

What Factors are Predictive of Subsidy Spell Exits?

The differences in median spell length described above examine each characteristic independently. To provide a more comprehensive understanding of the associations between these characteristics and median spell length, we conducted a Cox regression analysis. This regression included each of the variables in Table 3 as well as jurisdiction.

The results of a Cox regression analysis are typically expressed as hazard ratios. A hazard ratio represents the relative change in the probability of a spell of child care voucher use ending, while controlling for the other characteristics included in the regression. For example, the hazard ratio of 1.14 for preschoolers indicates that a preschooler is 1.14 times more likely to have his or her subsidy spell end compared to an infant, all else equal. Figure 3 presents the results of the Cox regression analysis by showing the hazard ratios for each variable. For variables with more than two response categories (e.g., age and race/ethnicity of child, TCA status, reason for voucher, and copay level), one category is set as the base category with a hazard ratio of one. Each of the other categories is compared to this base category. For variables with two categories (e.g., single parent, additional household member, and whether the spell began in June), the base categories (e.g., two-parent household, only one child, spell beginning not in June) are not shown. Hazard ratios less than one indicate that children with this characteristic were less likely to end their subsidy spells than children in the base category. Hazard ratios greater than one indicate that children with this characteristic were more likely to end their subsidy spells than children in the base category. As detailed below, the findings of the multivariate analyses mostly mirror the findings of bivariate comparisons of median spell length described above.

Child Characteristics

Compared to infants, both preschoolers and, to a greater extent, school-age children were more likely to end a subsidy spell. Even after controlling for other characteristics, infants had longer spells of subsidy participation. Once other characteristics are controlled for, no statistically significant differences were found by child race/ethnicity (not shown in Figure 3).

Household Characteristics

Variation in household size and composition was associated with differences in the hazard ratios. Each additional household member decreased the probability of ending a voucher spell, as did having a single parent. Compared to children whose families were provided a TCC voucher or whose families were neither receiving TCA nor TCC benefits, those whose families were receiving TCA were much more likely to end a subsidy spell. As was also observed in the median spell lengths, compared to the low/no copay category, children whose subsidized care came with a high copay were less likely to exit, as were those with medium copays. In other words, despite having little or no copay, children in families who were impoverished or receiving TANF/SSI tended to have the shortest spells of subsidy participation.

Type of Care⁸

No differences in likelihood of exiting the subsidy program were found among children being cared for in centers, family child care homes, or by informal care providers. As would be expected, children in military/summer camps exited the subsidy program earlier than children in center, family child care, and/or informal care. Additionally, families who switched care types without a break of seven days or more in subsidy payment, had longer spells than families who used only one type of care.

Reason for and Timing of Voucher

Compared to children who received a voucher because of parents' employment and training, those whose parents were employed were less likely to exit subsidy. Children whose parents applied for a subsidy to support their education or training were much more likely to exit than those whose parents were engaged in both employment

⁸Note: Differences by type of care are not included in Figure 3 to maintain a range of hazard ratios that highlights meaningful differences on other characteristics.

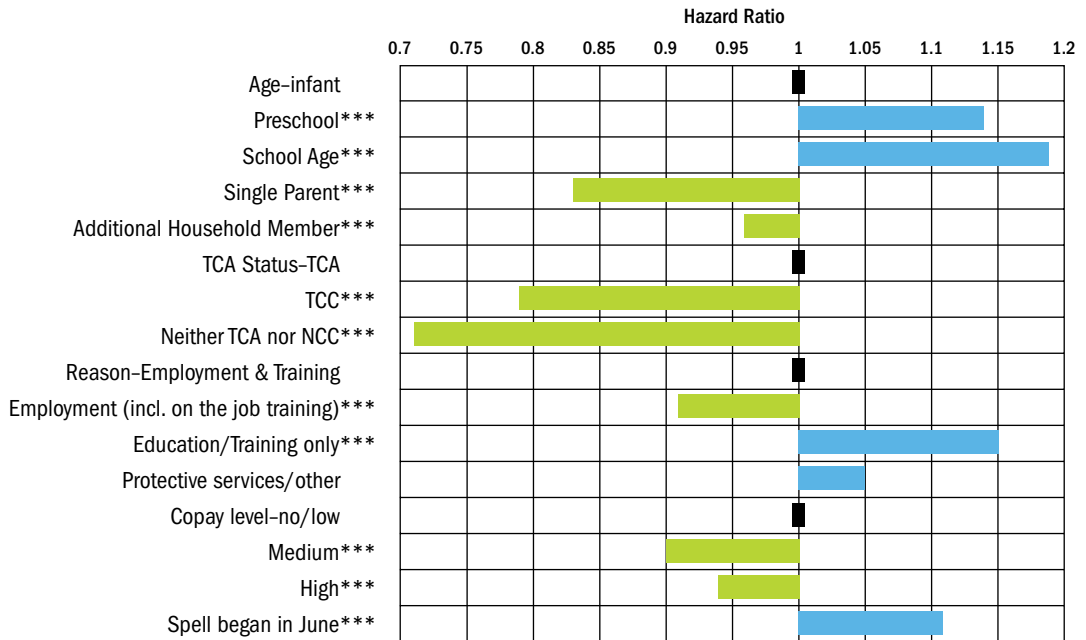
and training. Finally, children receiving a voucher because they were in protective services or for other reasons were slightly more likely to end their spell than those whose parents needed a voucher to support their employment and training. In short, children who receive vouchers to support parental employment have the longest subsidy spells. Children that first received a child care subsidy voucher in June were more likely to end their subsidy spells than children who began in other months. This difference likely reflects the need for summer care only.

Jurisdiction of Residence⁹

Jurisdiction of residence was a significant predictor of median spell length. One explanation for this association is that it reflects caseload characteristics that vary by jurisdiction. Separate analyses were used to explore this possible explanation. Specifically, a multivariate Cox regression model was estimated, which controlled for the characteristics of children and families in the subsidy system, including children’s age, gender, race/ethnicity, type of care, household size, single parent status, TCA status, reason for voucher, co-pay level, and whether the spell began in June. Controlling for these caseload characteristics, differences in hazard ratios were still found across jurisdictions in Maryland.

Another possible explanation for differences in median spell length by jurisdiction is variation in economic conditions across jurisdictions, which might make it easier or harder for families to find employment and earn sufficient wages to afford child care without subsidies. To explore this association, we tested a Cox regression model that included urbanicity (e.g., whether jurisdiction includes a metropolitan area) and economic characteristics associated with each jurisdiction (e.g., whether the jurisdiction’s unemployment rate and subsidy caseload per capita are above the state-wide average, and percentage of children living in poverty). These variables did not explain the differences in hazard rates across jurisdictions. Thus, it does not appear that differences in measured caseload characteristics or geographic/economic conditions explain these differences across jurisdictions.

FIGURE 3. Factors Associated with the Likelihood of Ending a Subsidy Spell (Cox Regression Hazard Ratios)



Note. *** p ≤ .001; Cox regression also included the following variables that are not shown above: gender and race/ethnicity (both not significant), type of care, and county dummy variables.
 Source. State-level child care subsidy administrative data from the CCATS automated system of the Maryland State Department of Education.

⁹Note: Differences by jurisdiction are not included in Figure 3.

IMPLICATIONS FOR POLICIES, PROGRAMS, AND FUTURE RESEARCH

In conclusion, this brief described the median length of subsidy spells and identified characteristics that are associated with differences in spell length. Subsidy spells defined using state-level subsidy administrative data from June 2007 and September 2010 reflect the number of weeks a child's care is subsidized through the child care subsidy voucher program continuously with no more than a seven day break in payment. Compared to findings from previous studies conducted in Maryland and other states,^{xvi} subsidy spells documented in this study are relatively long, with one-half of children receiving continuous subsidized care for more than seven months. Longer than average subsidy spells in Maryland reflect recent changes in State subsidy procedures to facilitate the continuity of subsidized care (e.g., offering longer recertification periods, allowing 60 days per year of child absences from care before a subsidy is withdrawn).

A number of characteristics were found to be associated with spell length. These characteristics include child age; parental reason for needing subsidy; household size, income, and family structure (e.g., single vs. two-parent family); the type of care used and timing of subsidy receipt (June vs. other months); and the jurisdiction in which subsidies are administered. For the most part, the associations found in this study reflect existing literature, but a few associations warrant special attention.

First, 38% of subsidized families were receiving cash assistance (TCA) at the time of their first subsidized spell between June 2007 and September 2010. Additionally, of all of the characteristics examined in this study, families receiving TCA had among the shortest median subsidy spells (23 weeks on average).¹⁰ This is significantly shorter than the median spell length for either families transitioning off TCA (e.g., those were receiving Transitional Child Care [TCC] benefits) or families who were neither receiving TCA nor TCC benefits. Though this finding may reflect parents' engagement in short-term training programs or unstable jobs, a careful review of the administrative practices associated with the TCA program is suggested. This review could explore whether TCA parents are aware of the child care subsidy voucher, why some TCA parents are choosing not to use subsidies and what precipitates exits from the subsidy program among TCA recipients. Such information could be used to improve marketing of child care subsidies to TCA families and to gain information about barriers to obtaining or maintaining a subsidy.

Second, the associations between jurisdiction and median spell length warrants further attention. The median spell length across jurisdictions was approximately 33 weeks. Though 10 jurisdictions had a median spell length of 33 weeks or longer, 14 jurisdictions had shorter median spell lengths, the shortest being 22 weeks. Based on existing literature, differences by jurisdiction would not be surprising if they reflected the economic, geographical, and/or sociodemographic make-up of the jurisdiction. However, when rural vs. urban geography, unemployment rate, subsidy caseload size, and proportion of children living in poverty were controlled, the associations between jurisdiction and median spell length were not explained. Given this finding, it is possible that there are differences in the administration of the subsidy program by jurisdiction. A review of how the child care subsidy program is administered at the local level is recommended.

¹⁰Though recent analyses in Minnesota (research brief forthcoming) found a similar proportion of subsidized families to be receiving cash assistance through the state TANF system, there was not as big a difference in spell length between families who are and are not receiving cash assistance in Minnesota.

ABOUT THE DATA SOURCE AND METHOD USED FOR THIS BRIEF

Data for this brief are drawn from administrative data collected by the Child Care Subsidy Branch of the Maryland State Department of Education that includes all child care subsidy vouchers covering the time frame of June 2007 through September 2010. Data were prepared by staff at RESI of Towson University under the leadership of Dr. John Spears.

Other research briefs from this study are available at <http://www.mdmnresearchpartnership.com/>.

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