Child Care Subsidy Use and Employment Outcomes of TANF Mothers During the Early Years of Welfare Reform: A Three-State Study

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REPORT OVERVIEW

The country's major overhaul of its welfare programs in 1996 shifted the focus from providing cash assistance to needy parents to supporting them in their efforts to secure work. Because the cost of child care can be a major obstacle to low-income mothers making the transition from welfare to work, federal and state governments have increased both funding of and flexibility in their child care subsidy programs. However, very little is known about the child and family outcomes of the child care subsidy program. This study begins to fill this research gap by examining the relation between subsidy take-up and employment duration among low income mothers. Specifically, we examine patterns of child care subsidy take-up (e.g., who uses the subsidies and when), type of child care used (e.g., center-based care, relative care, care by nonrelatives in the child's or caregiver's home), and the relation between child care subsidy use and employment outcomes (e.g., whether mothers who use subsidies stay longer in their jobs) among single mothers who were receiving TANF or who had recently left the TANF program during the early years of welfare reform (1997 to 1999) in three states—Illinois, Maryland, and Massachusetts.

Although child care subsidies are available to those in either employment or training, we focus in this report on the dynamics of subsidy use among those who become eligible for subsidies through employment. We rely exclusively on linked, individual-level, administrative data to follow a series of TANF entry cohorts over time. Families become eligible for the child care subsidy if they are working, have a child younger than age 13, and have household income below the child care subsidy state eligibility ceiling. We use Unemployment Insurance (UI) wage

record data to identify those who are eligible for the child care subsidy because they have found employment and have wages below the child care subsidy state eligibility ceiling. We use the child care subsidy program data to distinguish between those who take-up the subsidy and those who do not, and UI data to examine the subsequent employment patterns of both groups.

The major findings of the report are:

- Roughly one-half of the single mothers in this sample became eligible for the child care subsidy through employment during the study period. Eligibility varies by state, from 49 percent in Massachusetts to 58 percent in Maryland. These differences likely reflect different rates of employment and different earnings levels in the three states as well as differences in child care subsidy and TANF policies. In Massachusetts, for example, TANF household heads are not required to work until the youngest child is age 6.
- Child care subsidy take-up rates among the income-eligible mothers in all three states are low—never exceeding 35 percent in any of the three states. The subsidy take-up rate is noticeably lower in Maryland (24%) than in either Illinois or Massachusetts (34%). Among the possible explanations is the substantially higher family co-payment rates required for child care of post-TANF families in Maryland.
- The child care subsidy take-up rates vary by socioeconomic and demographic groups. In all three states, African Americans are more likely than their white counterparts to use the subsidy. Those in urban settings (Cook County, Illinois; Baltimore City, Maryland; and Boston, Massachusetts) are less likely to use the subsidy when eligible to do so than those in nonurban settings. Mothers with younger children are more likely to use the subsidy than are those whose youngest child is over age 6. The higher cost of child care

for infants and toddlers may help explain the differences by age, as does the fact that at age 6, children go to school thereby decreasing their need for child care.

- Interestingly, the number of children in a family significantly increases child care subsidy participation only in Illinois. Intuitively, one might assume that the higher cost of more children in care would lead families to use a subsidy, but this was not the case in Maryland or Massachusetts.
- Those currently receiving TANF were no more likely than those who had left the program to use the subsidy in Illinois or Maryland, although TANF receipt did increase use in Massachusetts. This is explained, in part, by the priority given in Massachusetts for child care subsidies to TANF families and post-TANF families with no break in employment.
- In all three states, the probability of an individual family taking up the subsidy decreases substantially the longer the family is eligible and does not take up the subsidy. If the family does not use the child care subsidy at the point of first eligibility, it becomes less likely to do so over time. This suggests that the most likely time a family will take up the subsidy is at the point of first employment.
- The three states vary in the extent to which the rate of subsidy use has increased over time. Illinois and Maryland show some improvement in take-up rates over time. In Illinois, both the 1998 and 1999 entry cohorts were significantly more likely to use the subsidy than the earliest (1997) cohort. In Maryland, subsidy use increased between 1997 and 1998. By contrast, Massachusetts showed no change across cohorts.
- The types of care used differ across the states. Illinois mothers are more likely to use relative and in-home care than their Maryland and Massachusetts counterparts. This is

true even though Illinois has slightly less generous relative and in-home reimbursement rates than the other two states. Mothers in Massachusetts are more likely to use center based care than mothers in Illinois or Maryland.

- Type of care used also differs by demographic characteristics. In Illinois, African American and Hispanic mothers are more likely to use relative and in-home care than in the other two states. Moreover, in Illinois, mothers who are receiving TANF at the time of subsidy take up are significantly more likely to use relative and in-home arrangements. Those receiving TANF may be working in part-time or irregular-hour jobs, which might explain their preference for in-home or relative care. Center-based care is typically less flexible in its hours of operation. Finally, mothers in urban settings in Illinois are more likely to use relative or in-home care, while those in Massachusetts (living in Boston) were significantly more likely to use center or family settings.
- Finally, the central finding of our study is that child care subsidy use is strongly correlated with employment retention. Even after controlling for a range of socioeconomic and demographic characteristics of our study population, using a child care subsidy decreases the probability of ending employment over the study period by 43 percent in Illinois, by 31 percent in Maryland, and by 25 percent in Massachusetts. While this is a striking correlation, we note that our analysis has not established a direct causal link between subsidy take-up and employment duration. It is quite possible, in fact, that those who use the child care subsidy may be more motivated in general than those who do not and, hence, more likely to succeed in the labor market. In addition, those who anticipate longer employment spells may be more likely to apply for a child care subsidy. Future work should address these potential "selection biases."

This study demonstrates that by bringing together the existing expertise and data resources in academic and state institutions, it is possible to build a collaborative child care research capacity at the state level. In addition to providing answers to key research questions on the outcomes of child care subsidy use, the ongoing development and collaborative use of administrative data in the three states creates a model for other states, and makes the case for the investment necessary to develop administrative data into a more readily available resource for studying child care subsidies. Although surveys, ethnographic studies, and other data collection remain critical to research, none of these methods allows the quick-turnaround analyses possible once well-designed integrated administrative databases are in place.

STUDY RATIONALE

It is often argued that the absence of affordable child care prevents women from entering the labor market, and in particular, restricts the ability of single mothers to leave the welfare rolls. At low incomes, these women typically are eligible for subsidized child care funded by both federal and state governments; yet, despite the argued importance of such programs, the subsidy take-up rates remain low. The purpose of this study is to better understand how the child care subsidy aids TANF recipients in their quest for economic independence. Specifically, in this first annual report, we are interested in understanding who uses the child care subsidy; the type of care used; and the role of subsidy use in predicting employment duration.

We believe that this work is significant for several reasons. We know from previous research that take-up rates of child care subsidies, even among those who are eligible and working, are low [for example, The University Consortium on Welfare Reform, 2003]. Our first contribution, then, will be to understand the characteristics and factors associated with higher take-up rates.

Put simply, we will uncover who uses these benefits. Our purpose is to better understand the distributional consequences of the child care subsidy policy, an essential component of understanding any government policy. By identifying the socioeconomic and demographic factors that affect take-up rates, states can better target underserved populations when fiscal resources are available.

The second contribution of this study is our examination of the types of subsidized care used by those with varying socioeconomic and demographic characteristics in three states. Here, our purpose is to illuminate how different population characteristics affect the types of care used among the subsidy population.

Third, given time limits on welfare receipt, it is critical for those receiving TANF to attain long-term employment to avoid what is often described as *welfare churning*—the return to the welfare rolls after a short-term spell of employment. We see child care as central in allowing women to develop long-term attachments to the labor market. This report, therefore, fills an important gap in the research on the role of child care subsidy use with regard to employment duration.

THE CHILD CARE SUBSIDY PROGRAM EXPANSION

Difficulty in securing child care has long been recognized as a major obstacle facing many low-income mothers in their efforts to make the transition from welfare to work and in attaining self-sufficiency. To address this obstacle, federal and state governments have supported child care subsidies to needy families. With the advent of welfare reform, in which the emphasis shifted from providing cash assistance to supporting parents in their efforts to secure and retain work, federal and state investment in child care substantially increased. The federal government consolidated its four main child care subsidy programs into the Child Care and Development

Fund (CCDF) (Meyers & Heintz, 1999), and in 2001, spending on child care subsidies from CCDF and TANF-related sources reached $11.2 billion (Child Care Bureau, 2003).[1] The CCDF also broadened child care assistance to include more working poor families by potentially including families whose income is as high as 85 percent of a state's median income (formerly 75%).

These changes have made it easier for states to offer an integrated child care system in which a wider range of families (those receiving cash assistance, those with changing welfare status, and those not receiving welfare) have access to child care subsidies (GAO, 1998). States were also given much more leeway under welfare reform to design and run their own child care programs. The new laws, for example, allow states to transfer up to 30 percent of their Temporary Assistance for Needy Families block grants from cash assistance to child care. Matching funds are available from the federal government to states that maintain pre-reform spending levels on child care, and several states are investing more than required to receive the federal match (Gish, 2002).

RESEARCH QUESTIONS AND STUDY POPULATION

Although federal and state governments have increased their efforts to help welfare mothers, very little is known about who uses subsidies when eligible to do so, the type of child care used by subsidy recipients, and the relation between child care subsidy use and employment dynamics. This report aims to increase our understanding of these patterns and dynamics among TANF entrants during the early years of welfare reform (from 1997 to 1999) by using individual-

[1] Prior to the 1996 reform, the federal government provided child care subsidies under three welfare-related programs: the AFDC Child Care Program, Transitional Child Care, and At-Risk Child Care, as well as the Child Care and Development Block Grant. Total spending also includes funds spent for child care from the Social Services Block Grant.

level, state administrative data on TANF receipt, child care subsidy use, and wage reports in three states—Illinois, Maryland, and Massachusetts. Our aims are to document the factors that may affect the use of the child care subsidies, to describe the types and patterns of child care use over time, and to examine how child care subsidy use is related to mothers' employment outcomes.

Underpinning all of our research questions is the understanding that the interplay between the child care subsidy, TANF, and employment outcomes among the current and former TANF population will vary according to 1) the socioeconomic and demographic characteristics of children and families, and 2) whether the eligible individual also receives TANF. We thus incorporate in the analysis characteristics such as mother's race, age, and number and age of children to better examine the interplay between the child care subsidy and TANF and employment outcomes.

Specifically, we ask, among new TANF entrants who enter the workforce and become eligible for child care subsidies in Illinois, Maryland, and Massachusetts between 1997 and 1999:

1. What are the patterns of subsidy take-up?
2. What types of child care do mothers use (center care, family care, relative care, and in-home care) when they use the subsidy?
3. What is the relation between subsidy use and employment outcomes?
4. How do take-up patterns and the relation between subsidy use and employment vary by family and mother's socioeconomic and demographic characteristics?

DATA SOURCES AND METHODS

The study population for this report is all single mothers with children younger than age 13 at the time they entered the TANF program. Mothers must be new TANF entrants between January 1997 and December 1999 in Illinois, Maryland, and Massachusetts. We define new TANF entrants as those who had not received TANF in the year prior to entry.

For the analysis reported here, we selected a 20 percent random sample from each state's study population. We use each state's administrative databases on TANF, child care subsidy, and Unemployment Insurance (UI) wage reports.[2] Data on the child care subsidy were linked to the TANF base population data at the individual level to track subsidy use both during and after welfare participation. We used linked state UI wage reports data, and in particular observed quarterly earnings, to identify those who are eligible for subsidies (working with quarterly earnings lower than the state eligibility income level) after their entry to TANF, and to track the employment duration of those who did and did not receive child care subsidies.

TANF Data

The TANF source data in each state are drawn from a database that contains TANF career histories for all families that have received TANF since 1997. Data are drawn directly from the administrative data systems operated by each state's TANF agency.[3] The unique properties of this information are that it is comprehensive, longitudinal, and at the individual level. Socioeconomic and demographic information are available on all those who receive cash grants (including number and age of children and marital status).

[2] In Massachusetts, the official name of the database containing UI wage reports is the State Wage Reporting Information.

Child Care Subsidy Data

The subsidy database is constructed from existing administrative data on child care subsidy receipt.[4] Each state's system records monthly subsidy information and the basic characteristics and child care arrangements of families receiving the subsidy. Each state's database contains longitudinal information on child care subsidy receipt on a monthly basis at the individual family and child levels.[5]

Unemployment Insurance Wage Report Data

Unemployment Insurance wage records consist of total quarterly earnings reported by employers to state UI agencies for each employee.[6] The database contains information on quarterly earnings, employee Social Security number (SSN), employer ID, and employer address. Any employer paying $1,500 in wages during a calendar quarter to one or more employees is subject to a state UI tax and must report the quarterly amount paid to each employee. Types of employment not covered include federal government civilian and military employees, U.S. Postal Service employees, railroad employees, employees of some philanthropic and religious organizations, independent contractors, and out-of-state employment. Hotz and Scholz (2002) suggest that between 86 percent and 90 percent of the employed population is included in UI data (Baj et al., 1991; Blakemore et al., 1996; Kornfeld & Bloom, 1999). Maryland has a higher proportion of federal government employees than Illinois or Massachusetts. Because these workers are absent from the UI wage data, we are unable to

[3] The raw administrative data have been provided by the Department of Human Services in Illinois, the Department of Human Resources in Maryland, and the Department of Transitional Assistance in Massachusetts.
[4] The agencies that provided the raw administrative data are the Department of Human Services in Illinois, the Department of Human Resources in Maryland, and the Office of Child Care Services in Massachusetts.
[5] The Illinois and Massachusetts' databases during the period contain only the voucher subsidy receipt information. None of the contracted children are included in the voucher data. In Illinois, contracted slots account for approximately 10 percent of all subsidy users, while in Massachusetts, these account for approximately 20 percent of all subsidy users.
[6] The agencies that provided the raw administrative data are the Department of Employment Security in Illinois, the Department of Labor, Licensing, and Regulation in Maryland, and the Department of Revenue in Massachusetts.

identify those TANF mothers who become federal employees as subsidy-eligible based on employment, and hence, they will not be included in the analyses. In addition, all three states have a minority of workers who are employed outside the state, though Maryland may have more of these workers given the short commute to the D.C. area. These out-of-state workers' earnings will not be reflected in their state UI wage data, and, although they are employed, and eligible for child care subsidies, we will not identify them as subsidy-eligible based on employment. Again, they will not be included in the analyses.

CREATING THE WITHIN-STATE AND CROSS-STATE LINKED DATABASES

Although each of the above source databases is a rich source of information, to pursue the study as described, it was necessary to both integrate the databases within and across states. To accurately integrate the databases, a first step is to assess the limitations of the source data for longitudinal research. Toward that end, each state team "cleaned" and documented the data. This involved significant communication with the source agency to learn how each data item was originally defined and any changes that have occurred over time. Once each state's data sources had been cleaned and documented, the project team reviewed data documents across states, examined sample data from each state, and held a series of face-to-face meetings to agree on and establish standard definitions for each data element.

Linking data records reliably and accurately across different data sources (in this case TANF, child care subsidy, and UI wage reports) was key to the success of the project. The linking process is complicated by the fact that no single variable, even SSN, can always be relied on to completely establish the identity of a client from the records of various agencies. After careful examination of the quality of SSNs recorded in each source database in Maryland and

Massachusetts, the project team determined that the SSN was a sufficiently reliable linking method in those two states. By contrast, in Illinois, it was necessary to use *probabilistic record matching* first developed by researchers in the fields of demography and epidemiology (Newcombe, 1988; Winkler, 1988; Jaro, 1985, 1989). Probabilistic record matching is based on the assumption that no single match between variables common to the source databases will identify a client with complete reliability. Instead, probabilistic record matching calculates the probability that two records belong to the same client using multiple pieces of identifying information. Such identifying data may include name, SSN, birth date, gender, race-ethnicity, and address of residence. When multiple pieces of identifying information from two databases are comparable, the probability of a correct match is increased.

The confidentiality of administrative databases is a key issue in this project. We implemented extensive procedures to ensure data security, protect confidentiality, and to control access to data. These procedures include inventorying confidential records when received, storing data tapes in a locked facility, and maintaining passwords. Once the record-linkage phase of the process is complete using identifying information from the source data, most identifying information (especially SSN and name) is removed to a separate file, accessible only to authorized personnel.

Once each state's data were cleaned and linked, the next task was to develop a data structure that was comparable across the states. We used relational database concepts to develop such a database. The schema of the resulting database is shown in Figure 1. We identified seven "entities" that are commonly available across the states. Those entities are represented by the boxes (which we refer to as "tables" for data linking) in Figure 1. For each entity, we also identified commonly available characteristics, which are the key variables for the study. This

simple data structure provides a very flexible means to create research-ready data sets, depending on one's particular research questions, by linking "entities" to "events" with the common ID. For example, each record in a TANF Case table has a unique ID (in this case, mother's ID) and key demographic variables. In turn, the TANF Case table can be linked to TANF Spell table that contains complete TANF histories for the mothers, and to Child Care Subsidy table for subsidy histories, and to the Employment Spell table for employment information.

To address our research questions, we use a variety of descriptive and multivariate analyses. We follow a series of new TANF entry cohorts from January 1997 through December 1999. First, we use simple cross-tabulations to describe the key demographic characteristics of the study population, and the patterns of child care subsidy take-up among those who are eligible. Second, we use a variety of multivariate methods, including logistic and Cox proportional hazard models to explore the timing and prevalence of subsidy take-up.

Figure 1. Database Structure

TANF Spell
Mother ID Begin Date End Date

TANF Case (Family/Mother)
Mother ID Mother's Birth Date Mother's Race/Ethnicity Residence County Number of Quarters with UI Wage Reports (during one year before TANF entry)

TANF Children
Mother ID Child ID Child's Birth Date

Child Care Subsidy Spell
Mother ID Child ID Begin Date End Date Provider ID

Child Care Provider
Provider ID Care (Provider) Type Provider Address

Employment Spell
Mother ID Quarter and Year Earnings Employer ID

Employer
Employer ID Employer Address Industry Code

CHILD CARE SUBSIDY ELIGIBILITY AND TANF POLICY RULES ACROSS THE THREE STATES[7]

In this study, eligibility for the child care subsidy in all three states is based on the presence in the household of a child under age 13, and on employment and income. We thus count new TANF families as being eligible for child care subsidies if they are working, have a child under age 13, and have household income that falls below the child care subsidy state ceiling. Former TANF recipients continue to be eligible for child care subsidies while working until they earn more than the subsidy income limit. Massachusetts imposes a 20-hour work requirement for part-time workers and a 30-hour work requirement for full-time workers. We note that child care subsidies are also available to those with a child less than 13 engaged in education and training. We do not include those only involved in education and training in our eligibility pool, though we do include those who combine education and training with employment.[8]

Under the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), states have substantial freedom to design their subsidy programs, and this discretion has led to different child care subsidy programs across states. Although all three states in the study have increased funding for child care subsidies, several important policy differences are evident in eligibility rules, subsidy priority groups, waiting lists, state payment levels for different types of care, and co-payment schedules. These policy differences may influence the make-up of the child care subsidy eligible population, child care subsidy take-up, and the type of

[7] This section draws heavily from the findings in "The Dynamics of Child Care Subsidy Use: A Collaborative Study of Five States (July 2002)" by the Child Care Subsidy Dynamics Team, National Center for Children in Poverty.

[8] We note that, according to conversations with IDHS staff, greater proportion of current TANF families than non-TANF families have child care eligibility based solely on education and training. According to the Illinois Department of Human Services, for example, in January 1999, 21 percent of TANF families with child care subsidies had eligibility based only on education and training, compared to 4 percent of non-TANF families. (Here, non-TANF families include former TANF families and families with no TANF history.)

care used. Likewise, TANF policy differences exist across the three states, and these differences may affect the likelihood of going to work, and hence the make-up of the child care subsidy eligible populations in the three states. Our findings across the three states must be discussed against a backdrop of these policy differences.

Table 1 outlines some of these differences.[9] The first difference is in the income ceiling for child care subsidy eligibility across states. This will affect the income levels of the child care subsidy eligible populations under study in the three states. Both Massachusetts and Illinois have more generous income eligibility allowances. Although child care subsidies are available in Maryland to those who earn up to 44 percent of the state median income (SMI), and in Illinois to those who earn up to 48 percent of SMI, Massachusetts residents are eligible for subsidies if they earn up to 67 percent of the SMI. In addition to the 48 percent SMI ceiling in Illinois, residents have 10 percent of their income from employment excluded when determining eligibility in the second year of the observation period.

Second, family co-payment rates and state payment rates differ across the three states. We anticipate that these differences will likely lead to different incentives to take up the CCS across the three states. For example, the fact that TANF families are exempt from co-payments in Maryland and Massachusetts may make families in these states more likely to use subsidies than their Illinois TANF counterparts who must make a co-payment. Non-TANF families in Maryland, however, pay higher co-payments than in either Illinois or Massachusetts, and this may lead Illinois and Massachusetts non–TANF families to be more likely to use subsidies than non–TANF families in Maryland. State payment rates are generally highest in all three states for center-based care, followed by family child care, and informal care (in-home or with a relative),

[9] A more detailed description of the program and policy characteristics is in Appendix A.

which has the lowest payment rate in all three states. However, beginning January 1999, relative to the prevailing market rate, state payment rates for center care or family care are lowest in Massachusetts and highest in Maryland.[10] Throughout the study period, the difference between maximum state payment rates for market-based formal and informal care is lowest in Massachusetts. On these dimensions, we might anticipate less use of the subsidy in Massachusetts.

Table 1: Selected Elements of Child Care Subsidy Eligibility Rules, by State (1997–1999)

	Illinois	Maryland	Massachusetts
Income eligibility ceiling, per month as % of state 1998 median income (for family of three, 1998)	48% ($1,818)	36% ($1,534) at application and 44% ($1,872) for continued services	47% ($1,931) at application and 67% ($2,771) for continued services
Monthly co-payment for TANF family of three[a] earning $2,000 per year, 1997–1999	$1 (7/97) $9 (10/97)	None	None
Monthly co-payment for non-TANF family of three[a] at poverty level, 1997–1999	$1 (7/97) $69 (10/97)	$106 (7/97) $103 (12/97)	$78
Maximum rate for center-based care	$374 (7/97) $515 (1/99)	$369 (7/97) $565 (12/97)	$628 (10/96)
Maximum rate for relative care	$200 (7/97)	$211 (7/97) $236 (12/97)	$325
Subsidy priorities	Income-eligible families, including TANF and non-TANF employed families; No priority for TANF families	TANF families and income-eligible, employed families, including former TANF and non-TANF families.[b]	TANF families and employed former TANF families
Service rationing, i.e., waiting lists	Commitment to serve all eligible families. No waiting lists during this period	Waiting lists until October 1997, with no waiting lists after that date	Waiting lists for non-TANF families during this period

Sources: See Appendix Table A

a. Based on a family of three: parent plus two- and four-year-old child

b. Maryland priorities are as follows: (1) TANF families who are working or participating in an approved activity; (2) former TANF families who are working and income-eligible, where transitional status is offered for 12 months following the TANF end date; (3) income-eligible, non-TANF families who are working or participating in an approved activity.

[10] A widely used benchmark used to measure subsidized families' access to the child care market is the 75th percentile of market rates, the rate high enough to purchase three quarters of the care in a market area—i.e. all care except the highest priced quarter. During the period of study, in its highest rate area, Massachusetts reimbursed at 70 percent of the 75th percentile of market rates, while Maryland reimbursed at 95 percent of this percentile. Illinois reimbursed at 62 percent of the 75th percentile until January 1999, when the state began to reimburse at 85 percent. For this period, the market rate is calculated in Maryland using the Resource and Referral price data, while Illinois and Massachusetts use surveys to collect price information.

Third, whereas TANF families and employed former TANF families are given priority for child care subsidies in Massachusetts and Maryland, Illinois had no priority groups in the period under study. In Massachusetts, post-TANF families that have a break in employment are placed on the waiting list when they return to work and are once again CCS eligible. Although Illinois served all eligible families—both TANF and non–TANF—who applied during this period, in Massachusetts, non–TANF families faced a waiting list throughout the study period, and in Maryland there was a waiting list through October 1997. Waiting lists have important implications for our analyses. Because we have no individual-level data on who among post–TANF families is and is not on a waiting list, we cannot distinguish those eligible residents who do not use the CCS because they are on a waiting list from those who do not take up the subsidy because of choice or omission. Because waiting lists are most prevalent in Massachusetts, we might again anticipate take-up rates to be somewhat lower in Massachusetts.

TANF policies also differed across the three states during our study period (1997 through 1999) in ways relevant to this study. The maximum TANF grant given to families may influence the extent to which families in the three states work and thus become eligible for the CCS. We identify two measures of the level of TANF grant generosity across states. As illustrated in Table 2, Massachusetts is the most generous, both in its grant to single-parent, nonworking families and to families working in full-time jobs at minimum wage (this is based on three-person families). Although Illinois and Maryland offer similar cash grants for nonworking families, Illinois—unlike Maryland—continues to provide a TANF grant for those working full-time at minimum wage. Illinois and Massachusetts are also more generous in their "earnings disregard" policies—the extent to which TANF benefits are reduced when the recipient reports employment earnings. Finally, Massachusetts is again the most generous in its work exemptions based on a

child's age. Parents in Massachusetts are exempt from TANF work requirements until the child is school age, whereas those in Illinois and Maryland must find employment when their youngest child turns 1.[11]

Table 2: Selected Elements of TANF Policy Rules, by State (1997 to 1999) [a]

	Illinois	Maryland	Massachusetts
Maximum TANF grant for a one-parent family of three	$377	$377[b]	$579
Earnings disregard policies for TANF eligibility	Disregard 67% for all months	Disregard 26% for all months	Disregard first $120 and 50% of remainder for all months
Maximum TANF grant for a family with adult working full-time at minimum wage job	$115	Ineligible	$248
Age of youngest child that exempts parent from TANF work requirements	1 year	1 year	School-age (when child turns 6)[c]

a. This table is adapted from Meyers et al. 2002

b. We note that Maryland's TANF grant changed on an annual basis over the course of the study period. It was $373 in January 1997 and rose to $377 in March 1997. In October 1997 it changed to $388, in October 1998 it changed to $399, and in October 1999 it increased to $417.

c: Parents with children younger than school age (age 5) are exempt from work requirements but not time limits. Two-year time limits begin when the child turns 2.

More generous TANF benefits could result in less employment and, hence, fewer families eligible for child care subsidies, while more generous income disregards could create incentives to employment and child care subsidy use. Further, policies that exempt parents from working until children are a certain age or that curtail time limits may create less incentive to pursue child care subsidy eligibility. The TANF differences across states do not point to clear-cut expectations for child care subsidy use in Maryland and Massachusetts. Although Maryland offers the lowest income disregard, potentially leading to lower employment and subsidy use, it also, along with Illinois, offers less generous TANF benefits, potentially contributing to

[11] One concern may be that employment may be increasing owing to time limits. However, during the time period of this study, time limits had not been reached or acted upon in any of the three states.

increased employment and subsidy use. Massachusetts—like Illinois—may make work more attractive through a relatively high income disregard, but it may make work less attractive through relatively high cash grants, again suggesting no consistent potential effects of TANF policies on child care subsidy demand. Illinois TANF policy combines a relatively high income disregard with less generous TANF benefits, both of which potentially point to more employment and demand for child care subsidies.

DEMOGRAPHIC CHARACTERISTICS OF THE STUDY POPULATION

Table 3 summarizes the demographic characteristics of the study population (all single mothers with children younger than age 13 who entered TANF from January 1997 through December 1999) based on the 20 percent sample data. Mirroring the overall state population, the welfare population varies widely in all three states by concentration in the major metropolitan area, and by racial-ethnic distribution.[12] The proportions of the welfare population living in a major metropolitan area are substantially higher in Illinois and Maryland than in Massachusetts. Almost 57 percent of the Illinois population lived in Cook County (which includes the city of Chicago), and 40 percent of the Maryland population lived in Baltimore City. In contrast, only about 17 percent of the Massachusetts study population resided in Boston. The welfare population was predominantly white in Massachusetts (at about 66%), while African Americans represented the majority in Illinois and Maryland (approximately 55% and 69%, respectively). Although a substantial proportion of the population was Hispanic in Illinois and Massachusetts (both more than 10%), less than 2 percent of the population was Hispanic in Maryland. Other demographic characteristics varied less across the states. The average age of the mothers at the

[12] We define the major metropolitan area as Cook County, which includes the city of Chicago; Baltimore City; and the Boston metropolitan area.

time of TANF entry was around 27. The average family had one to two children under age 13, and the average age of the youngest child was 3.

Table 3. Characteristics of the Study Population based on 20 Percent Sample of TANF Entrants between 1997 and 1999: Illinois, Maryland, and Massachusetts

Characteristics	IL	MD	MA
Total number of Mothers	12,631	4,482	5,876
Region			
Cook/Baltimore City/Boston	56.63%	39.76%	16.63%
Rest of state	43.37%	60.24%	83.37%
Race-Ethnicity			
White	34.96%	28.85%	66.47%
African American	54.71%	69.39%	19.80%
Hispanic	10.33%	1.76%	13.73%
Average Age of Mother at the time of TANF entry	26.6(SD=7.4)	27.9(SD=8.0)	27.3 (SD=7.9)
Average Number of Children under 13 at the time of TANF entry	1.8(SD=1.1)	1.6(SD=0.9)	1.5 (SD=0.8)
Average Age of Youngest Child at the time of TANF entry	3.1(SD=3.4)	3.6(SD=3.5)	3.2 (SD=3.4)

TAKE-UP RATES OF CHILD CARE SUBSIDIES

The historically low use of child care subsidies both by families connected with cash assistance and other low-income families has been a concern to policymakers. Meyers and Heintz (1999) found that among California AFDC recipients in 1995, two-thirds of all employed child care users were paying the full cost of care. In a review of studies of those leaving the cash assistance program in 17 states, Schumacher and Greenberg (1999) report that in most study sites, fewer than 30 percent were using child care subsidies. A more recent study of current and former TANF recipients in Illinois found that only about 37 percent of those working and with a

child under age 13 were receiving the child care subsidy in 2001 (University Consortium on Welfare Reform, 2003).

Several studies have found even lower take-up rates among families without cash assistance history. Among single mothers with children under age 13 included in the 1997 National Survey of America's Families (NSAF), Blau and Tekin (2001) found women with no current or previous welfare participation were less likely to receive subsidies. Similarly, among African American women in Philadelphia eligible for subsidies in early 2000, Shlay and colleagues (2002) found that those who had never received cash assistance were less likely to receive subsidies. A 1999 Administration for Children and Families study found that only 15 percent of all low- and moderate-income working families eligible for subsidies in 1998 were receiving them (ACF, 1999).

Recent studies are also beginning to paint a preliminary picture of the socioeconomic and demographic characteristics of families that do and do not use child care subsidies. Schumacher and Greenberg (1999) report, for example, that Washington State families with more than one worker or adult in the family were less likely to use subsidies, as were families working nonstandard hours. Shlay and colleagues (2002) and Burstein and colleagues (forthcoming) also found two-parent families less likely to use subsidies than single-parent families. Families with young children were more likely to use subsidies than those with older children (Meyers et al., 1999; Huston et al., 2002). Pearlmutter and colleagues (1999) examined families with a child aged 3–5 who left welfare in 1996 and found that, among those who used subsidies, 82 percent were African American, and more than 90 percent were between age 18 and 34. Blau and Tekin (2001) and Burstein and colleagues (forthcoming) found African American mothers more likely to apply for or receive subsidies than white mothers. Blau and Tekin also found that Hispanics

were slightly less likely to receive subsidies than non-Hispanics and the likelihood of subsidy receipt decreased with the mother's age, until age 43.

We explore take-up rates by examining the variation among subsidy users by individual and family socioeconomic and demographic characteristics.[13] We further contribute to the knowledge base by examining some key factors not previously studied, such as mother's education, previous work history, and number of children.

Table 4 shows subsidy eligibility and use among those entering TANF for the first time between 1997 and 1999. In this study, we focus on those who become eligible for subsidies through employment. Families are determined to be eligible for the child care subsidy if they are working, have a child younger than age 13, and have a household income below the child care subsidy state ceiling. Roughly one-half of the sample became eligible for the child care subsidy because of employment during the study period. Eligibility varies by state, from a low of 49 percent in Massachusetts to 58 percent in Maryland. These differences likely reflect different rates of employment and different earnings levels in the states, and may also reflect different CCS eligibility ceiling as well as different TANF policies described above. As noted, however, it is unclear which policies explain these differences in eligibility. On the one hand, TANF policies in Massachusetts—where household heads are not required to work until their youngest child is age 6, where the time limit clock does not start running until the youngest child turns 2 , and where TANF payments are relatively generous—may lead to fewer incentives to become eligible for child care subsidies. On the other hand, relatively generous income disregards could provide incentives to employment and child care subsidy eligibility.

[13] Although we refer to take-up rates of subsidies throughout this report, some researchers believe that the use of the term "take-up rate" is only appropriate for programs that guarantee services to all eligible applicants. Witte and Queralt (2002), for example, argue that when waiting lists for child care subsidies exist, as they do throughout the period under study in Massachusetts and through October 1997 in Maryland, it is more appropriate to refer to the proportion of the eligible population that receives a subsidy as a service rate rather than a take-up rate.

Table 4 also highlights both the level of and variation in child care subsidy take-up rates. We are examining take-up in any quarter of eligibility during the observed period. We look for a match between eligibility and take-up in any quarter since the mother's TANF entry. Strikingly, the subsidy use does not exceed 35 percent of the eligible population in any of the three states. Further, take-up rates in Maryland are noticeably lower (24%) than in the other two states (34%). Although we expect that an important explanation of take-up rates may be the extent to which higher quality providers accept subsidies, we note that we are unable to identify the prevalence of this across states.

Table 4. Child Care Subsidy Eligibility[a] (due to employment) and Use among TANF Entrants[b] in Illinois, Maryland, and Massachusetts, 1997–1999 [c]

	Illinois		Maryland		Massachusetts	
	No.	%	No.	%	No.	%
Total TANF Entries	12,631		4,482		5,867	
Child Care Subsidy Eligible due to employment	6,931	54.9	2,576	57.5	2,857	48.6
Child Care Subsidy Use	2,391	34.5	629	24.4	992*	34.7

a. Families are determined to be eligible for subsidies if they are working, have a child younger than age 13, and have reported household income below the child care subsidy ceiling.
b. The study population is a 20 percent sample of all first time TANF entrants with a child under 13 years old in 1997–1999
c. Massachusetts's child care subsidy data only span September 1997 through December 1999. Thus, the MA data might be an underestimate of child care subsidy use because the data do not contain those who used the subsidy between January 1997 and August 1997 and subsequently left the subsidy program and did not return.

Again we note the importance of waiting lists for our analyses. In particular, we cannot distinguish between those who do not use the subsidy because they are on a waiting list from those who do not use it because of choice or omission. This holds true in Massachusetts for the entire duration of our study, and until October 1997 in Maryland. We note, however, that take-up rates are highest in Massachusetts despite the state's waiting lists during the entire study period. However, we also note that TANF families in Massachusetts are exempt from co-payments, and non-TANF family co-payment rates are lower in both Massachusetts and Illinois

than in Maryland.[14]

An important feature of any subsidy system is when services are received. It is important to document whether families use services immediately after becoming eligible, or whether there is a time lag between eligibility and use. To begin to address this question, we track how many TANF entry cohorts become eligible for and use the child care subsidy because of employment within one, two, and three years of TANF entry (see Table 5).

Table 5. Eligibility[a] and Use of Child Care Subsidies within Three Years of TANF Entry (entry between 1997 and 1999)

TANF Entry Year	No of Entries	Within 1 Year		Within 2 Years		Within 3 Years	
		% Eligible	% Eligible Using Subsidy	% Eligible	% Eligible Using Subsidy	% Eligible	% Eligible Using Subsidy
Illinois							
1997	5,802	39	25	59	31	66	33
1998	4,420	42	32	56	36		
1999	2,409	27	38				
Maryland							
1997	1,751	42	23	65	27	72	27
1998	1,575	44	24	63	24		
1999	1,156	28	17				
Massachusetts							
1997	2,448	32	29	57	34	66	35
1998	1,870	32	31	51	35		
1999	1,558	18	33				

Shaded areas represent partially censored observations. Observations are censored because we only follow our population through December 1999.
a. Please see note (a) on Table 4.

To interpret Table 5, consider Illinois. The first cohort analyzed are 5,802 single mothers (with a child younger than 13) who entered TANF in 1997. The first column shows that within

[14] Note however that state payment rates for both center care and family care relative to prevailing market rates are lowest in

one year of TANF entry, 39 percent of families became eligible; by the end of 1998 (within two years), this increased to 59 percent, and increased to 66 percent by the following year. This suggests that most people start TANF without earnings but find employment along the way and thus become eligible for CCS. These patterns are similar across both 1997 and 1998 entry cohorts in Illinois and Maryland. For example, among those who entered TANF in 1997 in Maryland, 42 percent are eligible within one year of TANF entry, and within three years, 72 percent are eligible. The lower eligibility (owing to employment) rates in Massachusetts likely reflect different rates of employment and different earnings levels.

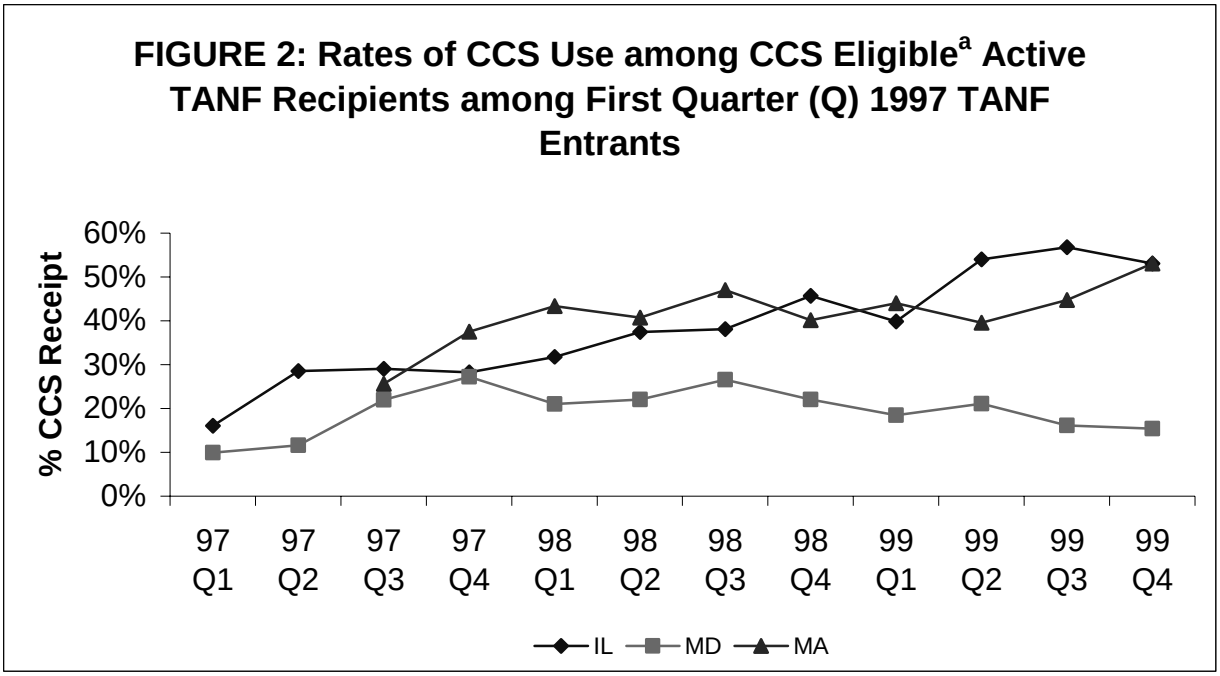
Table 5 also indicates low take-up rates for all states, cohorts, and time periods; no cohort exceeds a 40 percent take-up rate in the first three years after TANF entry. Take-up rates increase, however, with longer duration since TANF entry. For example, in Illinois, one-fourth of those who are eligible use the subsidy within a year of TANF entry, and this rate increases to one-third within three years of TANF entry. Similar patterns are found in Maryland and Massachusetts.[15]

Figures 2 and 3 examine take-up rates separately for those who continue to use TANF and those who do not. The figures only show the patterns for the 1997 first-quarter entry cohort.

Massachusetts (and highest in Maryland).

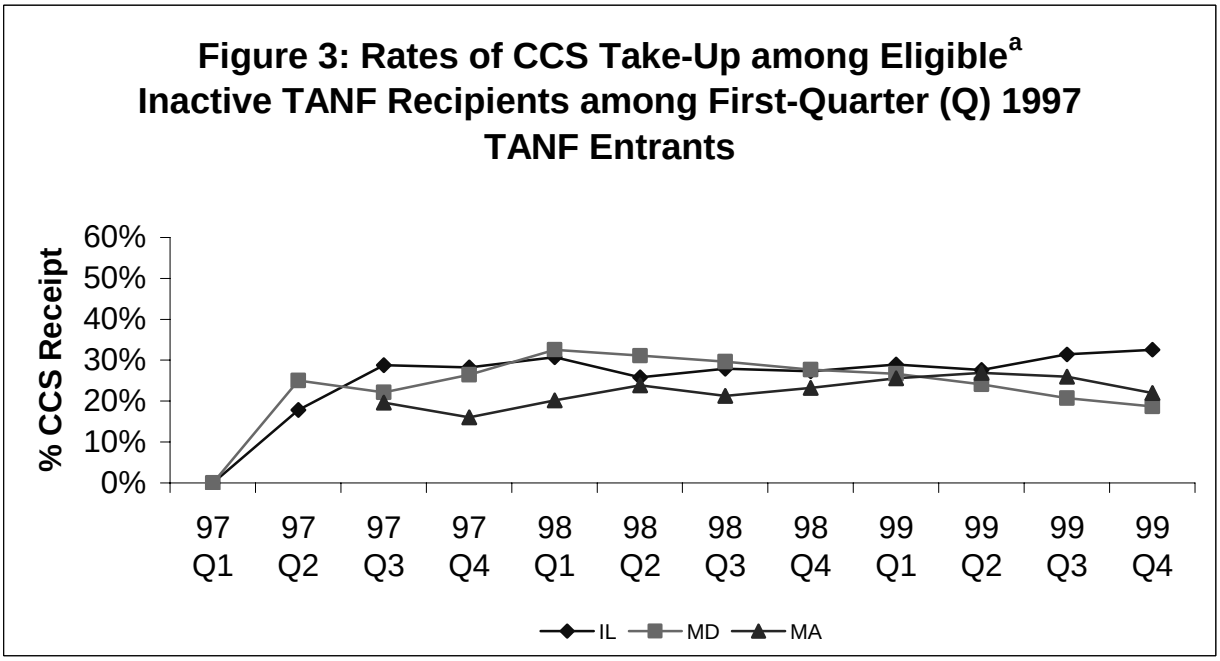
[15] Appendix B documents take up rates by quarterly entry cohort.

FIGURE 2: Rates of CCS Use among CCS Eligible[a] Active TANF Recipients among First Quarter (Q) 1997 TANF Entrants



a. Please see note (a) on Table 4.

Figure 3: Rates of CCS Take-Up among Eligible[a] Inactive TANF Recipients among First-Quarter (Q) 1997 TANF Entrants



a. Please see note (a) on Table 4.

Three findings stand out. First, in Illinois and Massachusetts, child care subsidy receipt is higher among those who still receive TANF than those who do not. In Massachusetts, as noted above, child care subsidy priority is given to those receiving TANF and to those who have left the program with no break in employment. By contrast, in Maryland, child care subsidy take-up

is typically higher among those who have left TANF. This pattern likely reflects Maryland's TANF earnings disregard, which is far less generous than in Illinois or Massachusetts.

The second interesting finding is that take-up rates among the entry cohorts remain quite high—between 25 percent and 30 percent—even for those who have left TANF but remain eligible. Clearly, the child care subsidy system is not limited to TANF recipients. Finally, although in Maryland, take-up rates appear to taper off with time for both those currently receiving TANF and those not receiving TANF, the opposite is true in Illinois and Massachusetts; take-up rates generally rise with time. In both states, however, the rate of increase is much higher for active TANF recipients.

Table 6 analyzes the time lag more formally by providing the duration from the time of first becoming eligible to subsidy use in 3-month periods (quarter years). Here, we present Kaplan-Meier estimates (by year of becoming eligible) of the time it takes (in quarters) for 25 percent of the eligible population to take up the subsidy. The numbers represent the number of quarters from child care subsidy eligibility to take up.

Table 6. Time (in quarters) from Child Care Subsidy Eligibility[a] for 25 Percent of Eligible Population to Take Up Subsidy

Kaplan-Meier 1st Quartile Duration to Adjust for Right Censoring

	Illinois			Massachusetts			Maryland		
Year Eligible	All	Cook County	Rest of State	All	Boston	Rest of State	All	Baltimore	Rest of State
1997	2	3	2				3	3	3
1998	2	2	2	1	1	1	2	5	1
1999	1	1	1.5	1	1	1	4	.	3
Average ('97-'99)	2	2	2	1	1	1	3	5	2

a. Please see note (a) on Table 4.

Table 6 shows that it took 2 quarters, on average, for 25 percent of the eligible population in Illinois to take up the subsidy once they became eligible. The data also show that the take-up time has decreased in Illinois over time, reaching about 1 quarter by 1999. The steepest declines were in Cook County. In Maryland, the estimated take-up time, on average, was 3 quarters

during the same period. Massachusetts had the shortest take-up time overall; about 1 quarter throughout the state. These data suggest that families initially may eschew the child care subsidy, perhaps because they do not know about it, are uncertain whether the job will work out, have fluid or nonstandard hour work schedules, or do not think it will be helpful. Ultimately, however, they find it beneficial. It is possible that child care subsidies are only used after stable full-time employment is secured, which offers more confidence in job security.

Table 7 models the take-up duration described so far. The dependent variable is time from first child care subsidy eligibility to take-up. Because our duration data are in discrete time segments (quarters), we used the *complementary log-log* model rather than the regular Cox regression model (which is more appropriate for continuous time data). The percentages presented in Table 7 represent changes in the hazard of taking up the subsidy depending on the value of the covariates.

The first point of interest in Table 7 is the similarity in the factors influencing the decision to use the subsidy across the three states. First, in each state, those in urban areas are less likely to use the subsidy when eligible to do so than their nonurban counterparts, perhaps reflecting greater networks of alternative care in urban areas. Second, African Americans are more likely to use the subsidy than their white counterparts. Hispanics are significantly less likely to take up the subsidy when eligible to do so than their white counterparts in Illinois. Third, those with younger children are much more likely to use the subsidy than those with older children; perhaps reflecting the greater benefit of the child care for families whose child care costs are highest.

Table 7. Time from First Child Care Subsidy Eligibility[a] to Take-Up: Estimated Percent Changes in Hazard of CCS Take-Up, from Complementary Log-Log Models (Based on Gompertz Models)

Variables	IL (%)	MD (%)	MA (%)
Year Eligible			
1997			N/A
1998	20**	47**	
1999	53**	-1	10
Region			
Rest			
Cook/Baltimore City/Boston	-14**	-47**	-3
Race/Ethnicity			
White			
African American	102**	24*	41**
Hispanic	-24**	-6	17
Age			
Under 20			
20-24	11	11	5
25-34	9	33*	6
35 and over	-12	4	-18
Number of Children			
1			
2	17**	8	7
3 and more	21**	0	2
Age of Youngest Child			
0-2	140**	259**	259**
3-5	101**	227**	234**
6 and over			
Being on TANF			
Yes	-7	5	169**
No			
Number of Quarters of Eligibility	-28**	-40**	-57**

* <.05 ** <.001

a. Please see note (a) on Table 4.

Each of these findings likely reflects how greater need results in higher rates of participation in the child care subsidy program. Yet, there are some noticeable differences across states. First, the number of children in a family significantly increases participation only in Illinois, despite the fact that we might expect that the economic burden of having to pay for child care for multiple children may make it more likely that the family takes up the subsidy. Second,

only in Massachusetts does receipt of TANF increase participation; in Maryland and Illinois, it plays no role. This is likely explained, in part, because, as noted above, Massachusetts gives child care subsidy priority to TANF recipients with post-TANF families who have a break in employment being put on the CCS waiting list, while Illinois and Maryland typically serve all eligible applicants.

Table 7 also shows variation across states in the extent to which the aggregate take-up rate has changed or improved over time (across cohorts). There is some evidence of improvement in take-up rates over time in Illinois and Maryland. In Illinois, both the 1998 and 1999 entry cohorts were significantly more likely to use the subsidy than the earliest (1997) entry cohort. We see evidence of improvement between 1997 and 1998 in Maryland. By contrast, we see no change across cohorts in Massachusetts. For a given family, the probability of taking up the subsidy declines the longer eligible families choose not to use the subsidy.

TYPE OF CARE USED

Recently, some studies have begun to look at the type of child care used by those who receive the subsidy. We distinguish between center-based care, family care, relative care, and in-home care. *Center care* refers to care in a center for groups of 13 or more children for 4 or more hours per day. *Family care* refers to care for unrelated children in a provider's home.[16] *Relative care* refers to care by a relative in either the home of the child or the relative. *In-home care* refers to care in the child's home by a nonrelative.

[16] "Family child care" includes regulated and nonregulated care. Regulations vary across the states, as does the use of unregulated family child care. In Illinois, for example, only a small percentage of subsidized children are in unregulated family child care homes.

Research has found that subsidy participants are more likely to use center care than nonsubsidized families; those who do not use subsidies more often rely on relatives, friends, and neighbors. State data show that in 1998, 55 percent of children receiving CCDF child care were in center care, 30 percent were in family homes, 11 percent were in the child's own home, and 4 percent were in group homes (Child Care Bureau 2001). More recently, Shlay and colleagues (2002) and Burstein and colleagues (forthcoming) found that families that used center-based care were more likely to apply for and use subsidies. The center provider may assume the job of applying for the child care subsidy on behalf of their clients.

A recent study by the National Center for Children in Poverty on types of subsidized care used for children ever connected to TANF shows that the types of care used can differ widely across states (Piecyk, et al., 1999). The study found children in Maryland and Illinois used significantly different types of subsidized care. Among current or former TANF users in Maryland in January 1998, children were most often cared for in centers (39%), followed by child care by a nonrelative in the provider's home (31%). This was followed by nonrelative care in the child's home (17%), and relative care (13%). In Illinois, however, the most common form of subsidized care was relative care (41%), followed by in-home care by a nonrelative (25%), center care (18%), and nonrelative care in the provider's home (16%).

The type of care families used is also related to current and prior TANF status, and again, patterns differ across states. In Maryland, prior TANF recipients were more likely than current recipients to use family care and less likely to use center care, relative, and in-home care. However, prior recipients of TANF in Illinois were slightly more likely than those currently receiving TANF to use center care and less likely to use family, relative, and in-home care (Piecyk et al., 1999). A recent study by Anderson, Ramsburg, and Rothbaum (2003) found that

among all Illinois children—TANF and non-TANF—using subsidies in January 2001, 63.9 percent used one relative, in-home caregiver or a license-exempt family child care provider.

Accessibility and flexibility also bear on a family's decision to use care and which type of care to use. The majority of low-income women use in-home or relative care. Queralt and Witte (1996) suggest that this is because such care is more flexible, and low-income women working in the service sector and other low-paying jobs often work nonstandard schedules and need flexible care. Center care is typically available only during standard working hours.

In this study, we focus on the first type of care chosen by the families. Because type of child care can vary by age of children, we also analyze care for different age groups. We distinguish between children birth to age 1, 1–2, 3, 4–5, and age 6 and over. Table 8 presents descriptive statistics at the individual child level, and children of all ages in each family are included. Appendix C presents the analysis at the mother or family level. Because mothers can have more than one child within a given age range, we select a focal child for each mother (the youngest child in each age group). In this way, we do not "double count" mothers with more than one child within a given age category.

The most notable finding in Table 8 is the enormous variation across the three states in the type of child care used. In Illinois, almost 65 percent of children are either in relative or in-home care, as opposed to 34 percent in Maryland and only 20 percent in Massachusetts. More families rely on center care or care provided by unrelated individuals in the provider's home in both Maryland and Massachusetts, with much greater reliance on center care in Massachusetts (53%) than in Maryland (31%). These differences are consistent across all age groups.[17]

[17] We also examined whether the patterns found using a "focal" child approach were significantly different from those using all children in a family. They were not (see Appendix C).

Table 8. First Type of Care Arrangement Used after Subsidy Take-Up, by Child Age Groups: IL, MD, and MA (%)

	Center	Family	Relative	In-home	Total #
Illinois					
Age 0	14.41	24.46	38.56	22.57	1,582
1-2	23.87	20.68	34.65	20.80	1,567
3	26.21	13.17	36.42	24.19	744
4-5	21.13	16.74	33.67	28.45	1,093
6 and over	10.13	11.52	40.80	37.56	1,728
All	17.92	17.74	37.19	27.15	6,714
Maryland					
Age 0	18.08	48.49	27.40	6.03	365
1-2	33.48	34.81	27.72	3.99	451
3	42.86	29.63	22.75	4.76	189
4-5	42.04	33.63	19.22	5.11	333
6 and over	25.77	25.06	34.75	14.42	423
All	31.06	34.53	27.20	7.21	1,761
Massachusetts					
Age 0	34.77	35.92	16.38	12.93	348
1-2	53.23	28.73	10.91	7.13	449
3	60.80	24.12	4.02	11.06	199
4-5	63.71	20.46	6.95	8.88	259
6 and over	56.37	16.43	13.03	14.16	353
All	52.55	25.68	11.07	10.70	1,608

The analysis is based on the total number of children in each age group.

To further explore the differences in type of child care used across states, we consider how type of child care arrangement varies by race in Table 9. One finding is striking: the greater use of relative and in-home care in Illinois largely reflects the disproportionately higher use of these types of care among African American and Hispanic families. In other words, although Illinois shows much higher rates of relative and in-home care overall, this is not true for the white population.

Table 9. First Type of Care Arrangement used after Subsidy Take-Up, by Race-/Ethnicity: IL, MD, and MA (%)

	Center	Family	Relative	In-home	Total #
Illinois					
White	27.12	26.51	26.51	19.87	1,973
African American	14.35	14.78	40.52	30.35	4,363
Hispanic	11.11	6.08	54.50	28.31	378
All	17.92	17.74	37.19	27.15	6,714
Maryland					
White	33.14	34.10	23.37	9.39	522
African American	29.74	34.97	28.92	6.37	1,224
Hispanic	66.67	13.33	20.00	0.00	15
All	31.06	34.53	27.20	7.21	1,761
Massachusetts					
White	57.53	22.83	9.82	9.82	876
African American	51.79	29.37	12.33	6.50	446
Hispanic	38.46	28.67	12.94	19.93	286
All	52.55	25.68	11.07	10.70	1,608

The analysis is based on the total number of children in each age group.

In Table 10, we present the results of a logistic regression to predict the likelihood of using either relative or in-home care versus center or family care. We distinguish between child care settings where the child may be in a more familiar environment (in their own home or with a relative) with those that may be in a less familiar environment (home of a nonrelative or center). We run separate regressions for each age group and include only the focal child for each age group.[18]

[18] We acknowledge that to effectively examine the age effects of type of care would require a much more sophisticated model than the one presented here since there is nontrivial joint decision making across children within a family.

Table 10. Estimated Likelihood Odds of Having Relative or In-home Care (versus Center and Family Care) as the First Care Arrangement

	Infant	Ages 1-2	Age 3	Ages 4-5	Ages 6 and over
Illinois					
Year CCS Take Up					
1997	1.00	1.00	1.00	1.00	1.00
1998	0.92	0.76	1.53	1.52	1.12
1999	0.90	0.82	2.33 **	1.02	1.08
Region					
Cook	1.53 *	1.72 **	1.08	2.30 **	2.55 **
Rest	1.00	1.00	1.00	1.00	1.00
Race-Ethnicity					
White	1.00	1.00	1.00	1.00	1.00
African American	2.34 **	1.97 **	2.33 **	1.43	2.06 **
Hispanic	10.74 **	3.55 **	2.65 *	2.87 *	2.96 *
Age of Mother					
24 and under	1.00	1.00	1.00	1.00	1.00
25-34	1.05	0.68 *	1.17	0.79	0.65
35 and over	1.00	0.80	0.89	0.71	0.75
Current TANF Receipt					
Yes	1.45 *	1.67 **	1.77 **	1.71 **	1.63 *
No	1.00	1.00	1.00	1.00	1.00
Maryland					
Year CCS Take Up					
1997	1.00	1.00	1.00	1.00	1.00
1998	1.24	0.71	0.71	0.60	0.90
1999	0.92	0.66	1.17	0.76	1.22
Region					
Baltimore	0.55	0.94	0.18 *	0.71	0.82
Rest	1.00	1.00	1.00	1.00	1.00
Race-Ethnicity					
White	1.00	1.00	1.00	1.00	1.00
African American	1.01	1.46	1.44	1.86	1.12
Hispanic	N/A	N/A	N/A	N/A	N/A
Age of Mother					
24 and under	1.00	1.00	1.00	1.00	1.00
25-34	1.36	2.25 **	1.45	1.18	0.97
35 and over	2.04	3.89 *	2.39	1.14	0.88
Current TANF Receive					
Yes	1.00	0.93	0.84	0.85	0.62
No	1.00	1.00	1.00	1.00	1.00

Massachusetts												
Year CCS Take Up												
1997												
1998	1.00			1.00			1.00			1.00		
1999	0.89			1.18			0.93			0.79		
Region												
Boston	0.41	*		0.45	*		0.85			0.09	*	
Rest	1.00			1.00			1.00			1.00		
Race-Ethnicity												
White	1.00			1.00			1.00			1.00		
African American	0.83			1.62			0.22			3.69	**	
Hispanic	1.72			2.31	*		0.72			2.81	*	
Age of Mother												
24 and under	1.00			1.00			1.00			1.00		
25-34	1.27			1.11			2.00			1.92		
35 and over	0.49			0.68			0.51			0.54		
Current TANF Receipt												
Yes	2.43	*		1.45			1.71			1.01		
No	1.00			1.00			1.00			1.00		

* <.05 ** <.001

As in the descriptive statistics, Table 10 shows that race plays an important role in the odds of using relative or in-home care in Illinois, as does living in Cook County. The greater use of relative or in-home care in Illinois largely reflects higher use of these types of care among African American and Hispanic families. These families are making different choices than white families in Illinois. We do not see this difference in choice in the other states. Those living in urban settings in Illinois (Cook County) are also significantly more likely to use relative or in-home care. Other measures of need also play a significant role in Illinois, with TANF receipt a significant influence in families' choice of relative or in-home care for all age groups. This trend is not evident in the other two states, except among infants in Massachusetts.

The other notable finding is the absence of statistical significance of many variables of interest in Maryland and Massachusetts. However, the sample size also is much smaller in these two states. In Massachusetts, those in Boston are less likely to use relative or in-home care, the opposite of urban Illinois residents. Beyond this, there is some marginal significance of race

variables, but little else. In Maryland, the regressions do not explain the type of child care used, beyond the finding that older mothers use relative and in-home care for 1–2-year-olds.

DYNAMICS OF SUBSIDY USE AND WORK

Important research on the effects of child care subsidies on employment outcomes has emerged in the last few years. Several studies have modeled the effect of child care subsidies on the number of women in the labor market. Ribar (1992) found that married women are essentially rational actors; that is, the higher their wages and the lower the cost of child care, the more likely they are to enter the workforce. Thus, he concludes, policies that subsidize child care are likely to encourage employment. Kimmel (1998) replicates and expands Ribar's model and finds similar results: child care prices significantly affect married mothers' labor force participation. For single mothers, however, Kimmel's findings are much less robust. Berger and Black (1992) and Lemke and colleagues (2000) also found that as spending on child care subsidies increases, so does the probability that women will enter the workforce. Distinguishing low-income women by race, Kimmel (1995) found that white women are more sensitive to increases in subsidies than are black women. Finally, distinguishing low-income women by education level, Anderson and Levine (1999) found that reducing child care expenses led to the largest gains in employment for women with the least education, although their employment levels still remain well below those with more education.

Much less is understood about how child care subsidy use interacts with welfare and employment beyond the decision to enter the workforce. The role subsidies play in the duration of employment has been explored in a Florida study that surveyed TANF leavers. That study found that 22 percent of respondents reported that child care problems had led to a change in

jobs, and 17 percent reported that child care problems had led to a "new line of work" (Crew & Eyerman, 1999). These results suggest that lack of child care might be a barrier to both job retention and advancement of employment. A more recent study also reports a significant relation between child care subsidy use and the employment status of current and former welfare mothers. An Illinois welfare panel study finds that even after controlling for work status in 2001, the survey respondents who received the child care subsidy in the same year were significantly more likely to be working in 2002 (University Consortium on Welfare Reform, 2003).

We add to this research in part by examining the interaction of subsidies and workforce participation as measured by job duration. Our major concern is how employment outcomes differ between those who use child care subsidies and those who do not. In Table 11, we examine this issue by focusing on the relation between child care subsidy take-up and employment duration. We estimate median employment duration (the time it takes for 50 percent of those employed to leave their jobs) for those mothers who use the child care subsidy within 2 quarters of eligibility and those who do not.[19]

Employment duration is longer in all three states for those who use the subsidy within 2 quarters of eligibility compared with those who do not. These differences are particularly dramatic in Illinois and Maryland for the earlier CCS eligible cohorts. For example, among those who began employment and thus became subsidy eligible in Illinois in 1997, the median employment duration was 8.5 quarters (nearly 26 months) for those who took up subsidies within 2 quarters of eligibility compared with 3 quarters (9 months) for those who did not. Although the differences are smaller in size for the later cohorts and the other two states, there is a consistently positive relation between subsidy take-up and employment duration across the three states.

[19] The estimates are present only for the 1998 and 1999 subsidy eligible cohorts in Massachusetts because the full year subsidy up-take data were unavailable for 1997.

Table 11. Median Employment Duration (in Quarters) among the CCS Eligible, by CCS Take-Up

Year of First CCS Eligible	CCS Take-Up within 2 Quarters from Eligibility	Illinois			Maryland			Massachusetts		
		Cook County	Rest of State	All	Baltimore	Rest of State	All	Boston	Rest of State	All
1997	No	3	3	3	2	3	3	N/A	N/A	N/A
	Yes	10	7	8.5	6	5	5	N/A	N/A	N/A
	Total	4	4	4	3	3	3	N/A	N/A	N/A
1998	No	4	3	4	3	3	3	2	3	2
	Yes	7	6	6	3	5	5	3	3	3
	Total	5	4	4	3	4	3	2	3	3
1999	No	3	3	3	3	3	3	2	2	2
	Yes	.	.	.	4	.	.	3	3	3
	Total	4	4	4	3	3	3	2	3	3

Medians are calculated using Kaplan-Meier method.

Each state has a somewhat different pattern when comparing the effect of the subsidy on employment duration by regions in the state. In Illinois, subsidy take-up has a much stronger relation with employment in Cook County than in the rest of the state. Among those who became CCS eligible in 1997 in Cook County, those who use the subsidy have employment spells that are more than three times as long (10 quarters) than those who do not use the subsidy (3 quarters). By contrast, among those living in the rest of the state, employment spells are just over twice as long for those who take up the subsidy (7 quarters) as those who do not (3 quarters). The effect of the subsidy on duration thus appears greater in Cook County than in the rest of the state, but this difference declines over time. Maryland shows a similar urban–rest-of-state pattern among those who become CCS eligible in 1997. However, beginning with the 1998 CCS eligibility cohort, the relation changes direction such that the subsidy effect seems to be greater in the rest of the state. In Massachusetts, there is very little difference in the effect of subsidy between Boston and the rest of the state.

Table 12 reports econometric estimates predicting the likelihood of an employment spell ending (at the mother level), while controlling for several factors that have been shown in the literature to be predictors of employment outcomes in the welfare population. Again, because our employment duration data are in discrete time (quarters), we used the complementary log-log model, a discrete time hazard rates method, rather than a Cox regression model (which is more appropriate for continuous time data). The model estimates the effects of various covariates on the "hazard" (probability) of an event, while treating the duration in discrete time. The percents presented in the table represent changes in the "hazard" of ending employment, depending on the value of the covariates.

The key independent variable of interest is whether the mother used the child care subsidy within 2 quarters of eligibility.[20] We find a significant relation between using the subsidy and employment in all three states. Mothers who used the child care subsidy were 43 percent less likely to end employment in Illinois, 31 percent less likely in Maryland, and 25 percent less likely in Massachusetts. These effects are large, and one interpretation is that child care subsidy use leads to longer employment spells. Despite the fact that the subsidy effect appears strong, our findings remain "correlational;" we have not established causality in the analyses. Selection bias and simultaneity are key concerns of a nonexperimental study such as this. A selection bias is introduced when unobserved factors affecting subsidy use are likely to be correlated with unobserved factors that affect employment and welfare outcomes. For example, those most likely to use subsidies might also be those who are likely to succeed in the job market; they might be more motivated or well informed about benefits that can help them in making the transition to work. Likewise, those who anticipate longer employment spells may be more likely to apply for the child care subsidy. Under these circumstances, our analysis in no

sense ensures that child care subsidies cause employment outcomes; it could be that those who were likely to secure jobs anyway also tended to use the child care subsidies.

Table 12. Estimated Percent Changes in Hazard of Employment Ending, among the CCS Eligible (Complementary Log-Log Models -Based on Gompertz models)

Variables	IL (%)	MD (%)	MA (%)
Year Eligible			
1997	0	0	
1998	-5	-2	0
1999	1	3	5
CCS Take-up within 6 months of being Eligible			
Yes	-43**	-31**	-25**
No	0	0	0
Region			
Cook/Baltimore City/Boston	-7	-1	7
Rest	0	0	0
Race-Ethnicity			
White	0	0	0
African American	9*	11	4
Hispanic	-13*	-9	20**
Age			
Under 20	0	0	0
20-24	-29*	-19*	-20**
25-34	-38*	-26**	-24**
35 and over	-40*	-14	-31**
Number of Children			
1	0	0	0
2	18*	11	6
3 and more	27*	21**	2
Age of Youngest Child			
0-2	6	9	11
3-5	14*	8	9
6 and over	0	0	0
Number of Quarters of Employment	-19**	-12**	-7**

* <.05 ** <.001

The findings on the effects of other demographic variables examined in the models are very similar across the three states, and in general are in line with past research on TANF exit. First, older workers have longer employment spells, while those with more children (especially

[20] We use take-up within 2 quarters because most mothers, if they were going to use the subsidy, used it within two quarters.

in Illinois and Maryland) are more likely to terminate employment. We find no difference in employment durations across the cohorts and regions once we control for the other variables in all three states. However, we find a strong time (quarter) effect in all three states, with the probability of losing employment declining with the length of employment. As each quarter passes on the job, the probability of losing a job decreases by 19 percent in Illinois, 12 percent in Maryland, and 7 percent in Massachusetts.

We know that quality of child care and its accessibility are clearly central to employment outcomes. Lemke and colleagues (2000), for example, found that the stability and quality of child care have much larger effects on the probability of work than child care costs.[21] The key factors of quality often cited in the literature are child-teacher ratios, group size, teacher education, quality of the social environment, and the interactions between teachers and children (including level of stimulation and quality of activities, and the emotional tone of the classroom) (Queralt & Witte, 1996). Although we acknowledge the importance of quality and accessibility of child care, we do not include any direct measures in this report. We anticipate exploring how certain proxies for child care quality affect subsidy take-up and through take-up, employment outcomes in the next phase of this research.

SIGNIFICANCE OF THE STUDY AND POLICY IMPLICATIONS

The findings discussed above have immediate and direct benefit for policymakers and leaders of state and local government in planning their programs to encourage the welfare to work transition. First, child care subsidy take-up rates among those eligible are low, and our

[21] Based on state agency data from Massachusetts from July 1996 through August 1997, Lemke et al. 2000 find that the caregiver's time in operation (stability) and the quality of care (based on accreditation) both increase the probability that a welfare recipient will work.

findings suggest that more information is needed , in situations where no waiting lists exist or where budget constraints are not at issue, this is the case. It is critical for states to know whether nonparticipation is because subsidies are not needed or, conversely, not well advertised or easily accessible.

Second, policymakers can be comforted by the fact that, at least on some dimensions, it is those in greatest need who appear to avail themselves of the subsidy. Our results indicate that need plays some role in take-up; those who are most economically and socially disadvantaged seem to be more likely to take up the subsidy when eligible to do so. Low-income African American mothers and mothers with younger children are more likely to take up the subsidy than white mothers and those whose youngest child is over 6 years.

Third, that larger families are no more likely to take up the subsidy than smaller families in Massachusetts and Maryland is surprising. We might expect that the economic burden of child care for multiple children might make it more likely that families use the subsidy. This finding should prompt policymakers to explore the reasons for this contradictory finding.

Fourth, the child care subsidy is used for all types of child care, reflecting the preferences and choices of families as well as the available supply of various types of care to subsidy recipients. There is, however, significant variation across states in type of child care most often used, and some evidence of greater use of relative or in-home care among African Americans in Illinois. If the field has a preference for center-based care because it is seen as being of higher quality, then Illinois should provide a greater incentive for these families to use center-based care.

This report's main finding that take up of the subsidy within 6 months of eligibility reduces the hazard of ending an employment spell by between 25 percent and 43 percent in our

three states has important implications as the effects of welfare reform continue to unfold. Welfare reform requirements, and state time limits in particular, make it imperative that states identify the successes of their service delivery systems to replicate them. Our data provide some support for the view that the child care subsidy program helps families to become more economically independent. Although some econometric selection and simultaneity concerns remain, these results are encouraging to those who believe that child care subsidies may offer a way for families to avoid long-term welfare receipt.

The research to date has built on successful state and researcher collaborations in place in each of the proposed states. Source-linked databases, stripped of individual identifiers for confidentiality purposes, have been developed that contain longitudinal records of individuals' TANF, child care subsidy receipt, and quarterly wages at least since 1997 in the three states. If maintained, the resulting database will allow states to monitor the patterns of subsidy use and their effects on welfare and employment outcomes of low-income mothers who have received TANF.

In addition to answering key research questions surrounding the patterns of child care subsidy use and their effects on welfare and employment outcomes of current and former TANF recipients, the ongoing development and use of administrative data in the three states can provide a model for other states and may promote the investment necessary to develop administrative data into a more readily available resource for effective monitoring. Although surveys, ethnographic studies, and other data collection continue to play a critical role, none allows the quick turnaround analyses possible with a well-designed, linked administrative database.

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Appendix A: Selected Elements of Child Care Subsidy Eligibility Rules, by State (1997 to 1999)

	Illinois	Maryland	Massachusetts
Income Eligibility Ceiling per month as % of state 1998 median income (for family of three, 1998)	48% ($1,818) Ref: Meyers et al. 2002, Table 1	36% ($1,534) at application and 44**%** ($1,872) for continued services Ref: Meyers et al. 2002, Table 1	47% ($1,931) at application and 67% ($2,771) for continued services Ref: Meyers et al. 2002, Table 1
1998 SMI Monthly for Family of Three	$3,766.5 Ref: Meyers et al. 2002, Table 5	$4,216.67 Ref: Meyers et al. 2002, Table 5	$4,143.33 Ref: Meyers et al. 2002, Table 5
Income Exclusions for Determining Eligibility: 1997-1999	Children's earned income; Non-related adults' income; Food Stamp benefits And As of July 1998, 10% of earned income (other than self-employment) Ref: Meyers et al. 2002, Table 1	Children's earned income; Non-related adults' income; Food Stamp benefits Ref: Meyers et al. 2002, Table 1	Children's earned income; Non-related adults' income; Food Stamp benefits Ref: Meyers et al. 2002, Table 1
Eligible Activities	Employment, education, training Ref: Meyers et al. 2002, Table 1	Employment, education, training Ref: Meyers et al. 2002, Table 1	Employment, education, training, or receipt of protective services Ref: Meyers et al. 2002, Table 1
Required minimum number of hours worked to be eligible for the CCS	No required minimum. Subsidized care needs to match the parent's work schedule or combined work and training schedule. Note: this is in effect only checked when working part time.	No required minimum.	A minimum of 20 hours per week of work or combined work and education and training. For Fulltime Child Care it is 30 hours per week

	Illinois	Maryland	Massachusetts
Frequency of Recertification	6 months Ref: Meyers et al. 2002, Table 1	Up to One year; actual period varies among local offices, average 3 months for TANF clients and 6 months for non-TANF clients. Ref: Meyers et al. 2002, Table 1	From 1-6 months depending on TANF and employment status Ref: Meyers et al. 2002, Table 1
CoPayments 1997-1999	Yes for all families except child-only TANf cases. Sliding Scale based on Family Income and family size, and, effective October 1997, Number of Children in Care Ref: Meyers et al. 2002, Table 3	Yes for all families except those receiving TANF or SSI. Sliding Scale based on Family Income, Family Size, Number of Children in Care and Local Costs Ref: Meyers et al. 2002, Table 3	Yes for all families except those receiving TANF or some child protective cases. Sliding Scale based on Family Income, Family Size. Ref: Meyers et al. 2002, Table 3
Monthly Co-Payment for TANF family earning $2000 per year 1997-1999	$1 (7/97) $9 (10/97) Ref: Meyers et al. 2002, Table 3	None Ref: Meyers et al. 2002, Table 3	None Ref: Meyers et al. 2002, Table 3
Monthly Co-Payment for Non TANF family of 3 at poverty level 1997-1999	$1 (7/97) $69 (10/97) Ref: Meyers et al. 2002, Table 3	$106 (7/97) $103 (12/97) Ref: Meyers et al. 2002, Table 3	$78 Ref: Meyers et al. 2002, Table 3
Monthly Co-Payment for Non TANF family of 3 earning 50% of the SMI 1997-1999	$139 (7/97) $234 (10/97) $282 (1/98) $234 (7/98) Ref: Meyers et al. 2002, Table 3	Ineligible for Subsidy Ref: Meyers et al. 2002, Table 3	$273 Ref: Meyers et al. 2002, Table 3

	Illinois	Maryland	Massachusetts
Max Rate for Center Care	$374 (7/97) $515 (1/99) Ref: Meyers et al. 2002, Table 4	$369 (7/97) $565 (12/97) Ref: Meyers et al. 2002, Table 4	$628 (10/96) Ref: Meyers et al. 2002, Table 4
Max Rate for Family Child Care	$238 (7/97) $433 (1/99) Ref: Meyers et al. 2002, Table 4	$349 (7/97) $539 (12/97) Ref: Meyers et al. 2002, Table 4	$441 (10/96) Ref: Meyers et al. 2002, Table 4
Max Rate for In-Home Care	$195 (7/97) $200 (1/99) Ref: Meyers et al. 2002, Table 4	$211 (7/97) $236 (12/97) Ref: Meyers et al. 2002, Table 4	$325 Ref: Meyers et al. 2002, Table 4
Max Rate for Relative Care	$200 (7/97) Ref: Meyers et al. 2002, Table 4	$211 (7/97) $236 (12/97) Ref: Meyers et al. 2002, Table 4	$325 Ref: Meyers et al. 2002, Table 4
Center Max as % of 75th percentile of Center Market rate	62% (7/97) 85% (1/99) Ref: Meyers et al. 2002, Table 4	62% (7/97) 95% (12/97) Ref: Meyers et al. 2002, Table 4	70% Ref: Meyers et al. 2002, Table 4

	Illinois	Maryland	Massachusetts
Family Child Care Max as % of 75th percentile of Family Child Care Market rate	45% (7/97) 68% (1/99) Ref: Meyers et al. 2002, Table 4	62% (7/97) 96% (12/97) Ref: Meyers et al. 2002, Table 4	51% Ref: Meyers et al. 2002, Table 4
Estimated Portion of Market that Center Payment Rate Purchased	Less than 25% (7/97) Between 25% and 50% (1/99) Ref: Meyers et al. 2002, Table 4	Between 25% and 50% (7/97) Between 50% and 75% (12/97) Ref: Meyers et al. 2002, Table 4	Less than 25% Ref: Meyers et al. 2002, Table 4
Estimated Portion of Market that Family Child Care Payment Purchased	Less than 25% (7/97) Between 25% and 50% (1/99) Ref: Meyers et al. 2002, Table 4	Between 25% and 50% (7/97) Between 50% and 75% (12/97) Ref: Meyers et al. 2002, Table 4	Less than 25% Ref: Meyers et al. 2002, Table 4
Subsidy Priorities	Income eligible families, including TANF and non-TANF employed families No priority for TANF families	TANF families and income-eligible, employed families, including former TANF and non-TANF families.[22]	TANF families and employed former TANF families
Child Care Settings Eligible for Child Care Subsidy Vouchers	Vouchers are given to eligible families to pay for any legal child care they select that accepts state payments including relative, in-home care, family child care, and center care	Vouchers are given to eligible families to pay for any legal child care they select that accepts state payments including relative, in-home care, family child care, and center care	Vouchers are given to eligible families to pay for any legal child care they select that accepts state payments including relative, in-home care, family child care, and center care

[22] Maryland priorities are as follows: (1) TANF families who are working or participating in an approved activity; (2) former TANF families who are working and income-eligible, where transitional status is offered for 12 months following the TANF end date; (3) income-eligible, non-TANF families who are working or participating in an approved activity.

Service Rationing-Waiting Lists	Commitment to serve all eligible families-No waiting lists during this period	Waiting lists until October 1997, with no waiting lists after that date	Waiting lists for non-TANF families during this period
Service Rationing-Time Limits	None	None	MA has a 2-year time limit on Transitional Child Care, but effectively continue on child care subsidies if eligible

	Illinois	**Maryland**	**Massachusetts**
Number of Regulated Family Child Care and Center Slots per 1,000 children under age 13, June 1998	154 (Kreader et al 2000)	245 (Kreader et al 2000)	
Frequency of Recertification	6 months	Up to one year; actual period varies among local offices, average 3 months for TANF clients and 6 months for non-TANF clients	From 1 to 6 months depending on TANF and employment status
Policies on CCS eligibility among zero earners (TANF recipients who are in education, training or community work). Note: We know that we will not be able to capture all of these in our analysis but we do want to document the policy	TANF families in approved education or training activities may be eligible for a child care subsidy, without working when they have 30 hours of activity, which may be a combination of education and work. Non-TANF clients must work an average of 10 hours per week in order to quality for subsidy during school hours.	TANF parents in approved activities, parents enrolled in public high school, and income-eligible and TANF parents in training activities approved by the Department of Human Resources are eligible for CCS without working	The number of hours is the same as for employment (minimum 20 hours of activity). The length of time until redetermination varies by activity (1-6 months). The DTA authorization for those who are in transition can be for up to 12 months but the system will have a six month authorization that is renewed every six months.

Source:
Meyers, M., Peck, L., Davis, E., Collins, A., Kreader, J.L., Georges, A., Weber, R., Schexnayder, D., Schroeder, D., and Olson, J. (2002). The Dynamics of Child Care Subsidy Use: A Collaborative Study of Five States. Child Care Subsidy Dynamics team. National Center for Children in Poverty. [on-line]. Available: www.nccp.org.

Kreader, J.L., Piecyk, J., and Collins, A. (2000). Scant Increases after welfare reform: Regulated Child Care Supply in Illinois and Maryland, 1996-1998. National Center for Children in Poverty.

Conversations with child care policymakers and policy experts familiar with each of the five states. State agency partners played a critical role in explaining policies in each state. State policy data were collected through document reviews and interviews with key informants in each of the five states.

Appendix B-1: Take-Up Patterns in Illinois (based on 20% sample)

TANF Entry Year	20% sample Total Entries		Percent											
			97 Q1	97 Q2	97 Q3	97 Q4	98 Q1	98 Q2	98 Q3	98 Q4	99 Q1	99 Q2	99 Q3	99 Q4
1997 Q1	1,347	% CCS eligible among entry cohort	33%	39%	42%	45%	44%	44%	43%	45%	45%	44%	42%	43%
		% TANF active among the eligible	100%	83%	65%	56%	44%	42%	37%	31%	28%	25%	23%	20%
		% CCS receipt among eligible active TANF	16%	28%	29%	28%	32%	37%	38%	46%	40%	54%	57%	53%
		% TANF inactive among the eligible	0%	17%	35%	44%	56%	58%	63%	69%	72%	75%	77%	80%
		% CCS receipt among eligible inactive TANF	0%	18%	29%	28%	31%	26%	28%	27%	29%	28%	31%	33%
1997 Q2	1,383	% CCS eligible among entry cohort		35%	39%	44%	42%	42%	43%	44%	43%	44%	42%	40%
		% TANF active among the eligible		100%	86%	68%	57%	53%	45%	42%	35%	29%	25%	23%
		% CCS receipt among eligible active TANF		13%	20%	20%	26%	35%	37%	38%	41%	51%	55%	54%
		% TANF inactive among the eligible		0%	14%	32%	43%	47%	55%	58%	65%	71%	75%	77%
		% CCS receipt among eligible inactive TANF		0%	30%	28%	28%	28%	29%	30%	33%	35%	37%	39%
1997 Q3	1,499	% CCS eligible among entry cohort			38%	41%	40%	42%	44%	45%	43%	43%	43%	43%
		% TANF active among the eligible			100%	85%	67%	57%	45%	40%	35%	33%	28%	24%
		% CCS receipt among eligible active TANF			15%	21%	27%	31%	38%	37%	42%	45%	45%	48%
		% TANF inactive among the eligible			0%	15%	33%	43%	55%	60%	65%	67%	72%	76%
		% CCS receipt among eligible inactive TANF			0%	23%	28%	23%	24%	30%	26%	33%	33%	33%
1997 Q4	1,573	% CCS eligible among entry cohort				37%	36%	40%	44%	45%	46%	44%	43%	43%
		% TANF active among the eligible				100%	84%	67%	55%	46%	37%	30%	27%	26%
		% CCS receipt among eligible active TANF				15%	21%	24%	34%	36%	37%	44%	42%	49%
		% TANF inactive among the eligible				0%	16%	33%	45%	54%	63%	70%	73%	74%
		% CCS receipt among eligible inactive TANF				0%	26%	26%	25%	28%	27%	29%	32%	32%
1998 Q1	1,297	% CCS eligible among entry cohort					32%	40%	42%	44%	44%	45%	43%	42%
		% TANF active among the eligible					100%	83%	63%	51%	41%	35%	28%	25%
		% CCS receipt among eligible active TANF					16%	22%	38%	37%	37%	47%	54%	53%
		% TANF inactive among the eligible					0%	17%	37%	49%	59%	65%	72%	75%
		% CCS receipt among eligible inactive TANF					0%	25%	22%	28%	34%	35%	37%	36%
1998 Q2	1,145	% CCS eligible among entry cohort						38%	42%	47%	45%	48%	46%	44%
		% TANF active among the eligible						100%	75%	61%	48%	43%	36%	31%
		% CCS receipt among eligible active TANF						20%	28%	35%	39%	43%	44%	48%
		% TANF inactive among the eligible						0%	25%	39%	52%	57%	64%	69%
		% CCS receipt among eligible inactive TANF						0%	30%	33%	35%	36%	35%	37%
1998 Q3	1,066	% CCS eligible among entry cohort							34%	41%	44%	43%	44%	44%
		% TANF active among the eligible							100%	74%	57%	41%	35%	32%
		% CCS receipt among eligible active TANF							28%	32%	34%	40%	45%	47%
		% TANF inactive among the eligible							0%	26%	43%	59%	65%	68%
		% CCS receipt among eligible inactive TANF							0%	38%	34%	36%	37%	36%
1998 Q4	912	% CCS eligible among entry cohort								39%	38%	43%	45%	46%
		% TANF active among the eligible								100%	77%	59%	47%	39%
		% CCS receipt among eligible active TANF								27%	37%	42%	48%	43%
		% TANF inactive among the eligible								0%	23%	41%	53%	61%
		% CCS receipt among eligible inactive TANF								0%	27%	35%	35%	38%

1999 Q1	721	% CCS eligible among entry cohort	34%	41%	44%	45%
		% TANF active among the eligible	100%	74%	54%	48%
		% CCS receipt among eligible active TANF	30%	40%	42%	46%
		% TANF inactive among the eligible	0%	26%	46%	52%
		% CCS receipt among eligible inactive TANF	0%	41%	46%	40%
1999 Q2	568	% CCS eligible among entry cohort		33%	38%	44%
		% TANF active among the eligible		100%	73%	55%
		% CCS receipt among eligible active TANF		25%	39%	38%
		% TANF inactive among the eligible		0%	27%	45%
		% CCS receipt among eligible inactive TANF		0%	47%	42%
1999 Q3	507	% CCS eligible among entry cohort			36%	44%
		% TANF active among the eligible			100%	79%
		% CCS receipt among eligible active TANF			32%	35%
		% TANF inactive among the eligible			0%	21%
		% CCS receipt among eligible inactive TANF			0%	43%
1999 Q4	613	% CCS eligible among entry cohort				39%
		% TANF active among the eligible				100%
		% CCS receipt among eligible active TANF				33%
		% TANF inactive among the eligible				0%
		% CCS receipt among eligible inactive TANF				0%

* Child Care Subsidy eligible grantees are defined as those who are had a child less than 13 years old and earnings less than $5,454.75 reported in UI wage reports.

* The maximum eligible quarterly earnings are defined as 1/4 of maximum annual income (50% of the 1997 state median income: $21,819) adjusted by family size.

Appendix B-2: Take-up Patterns in Maryland (based on 20% sample)

TANF Entry Year	20% of Total Entries		Percent											
			97 Q1	97 Q2	97 Q3	97 Q4	98 Q1	98 Q2	98 Q3	98 Q4	99 Q1	99 Q2	99 Q3	99 Q4
1997 Q1	502	% CCS eligible among entry cohort	30%	37%	40%	36%	42%	39%	40%	38%	37%	39%	39%	38%
		% TANF active among the eligible	100%	89%	57%	50%	39%	30%	24%	26%	20%	19%	16%	14%
		% CCS receipt	10%	12%	22%	27%	21%	22%	27%	22%	18%	21%	16%	15%
		% TANF inactive among the eligible	0%	11%	43%	50%	61%	70%	76%	74%	80%	81%	84%	86%
		% CCS receipt	0%	25%	22%	26%	33%	31%	30%	28%	27%	24%	21%	19%
1997 Q2	431	% CCS eligible among entry cohort		34%	33%	38%	41%	39%	39%	38%	39%	40%	41%	43%
		% TANF active among the eligible		100%	85%	70%	51%	51%	37%	34%	27%	23%	19%	19%
		% CCS receipt		10%	11%	13%	27%	32%	23%	32%	17%	26%	18%	22%
		% TANF inactive among the eligible		0%	15%	30%	49%	49%	63%	66%	73%	77%	81%	81%
		% CCS receipt		0%	24%	20%	22%	30%	26%	27%	28%	25%	22%	20%
1997 Q3	387	% CCS eligible among entry cohort			32%	32%	36%	39%	37%	39%	40%	39%	41%	42%
		% TANF active among the eligible			100%	88%	61%	54%	36%	26%	21%	27%	16%	18%
		% CCS receipt			15%	20%	21%	19%	29%	21%	31%	24%	12%	10%
		% TANF inactive among the eligible			0%	12%	39%	46%	64%	74%	79%	73%	84%	82%
		% CCS receipt			0%	20%	27%	29%	26%	28%	26%	28%	23%	22%
1997 Q4	431	% CCS eligible among entry cohort				35%	32%	36%	40%	39%	39%	41%	43%	41%
		% TANF active among the eligible				100%	88%	66%	49%	40%	30%	33%	26%	19%
		% CCS receipt				9%	19%	28%	21%	19%	27%	24%	6%	15%
		% TANF inactive among the eligible				0%	13%	34%	51%	60%	70%	67%	74%	81%
		% CCS receipt				0%	18%	20%	26%	29%	26%	24%	22%	21%
1998 Q1	402	% CCS eligible among entry cohort					34%	38%	46%	44%	41%	45%	43%	47%
		% TANF active among the eligible					100%	89%	56%	45%	33%	29%	19%	16%
		% CCS receipt					19%	22%	25%	29%	26%	13%	6%	16%
		% TANF inactive among the eligible					0%	11%	44%	55%	67%	71%	81%	84%
		% CCS receipt					0%	29%	31%	26%	28%	26%	20%	20%
1998 Q2	424	% CCS eligible among entry cohort						32%	38%	38%	41%	46%	42%	46%
		% TANF active among the eligible						100%	87%	60%	46%	36%	30%	20%
		% CCS receipt						24%	23%	23%	25%	29%	17%	13%
		% TANF inactive among the eligible						0%	13%	40%	54%	64%	70%	80%
		% CCS receipt						0%	23%	30%	28%	25%	17%	19%
1998 Q3	389	% CCS eligible among entry cohort							43%	40%	43%	47%	46%	46%
		% TANF active among the eligible							100%	80%	44%	44%	31%	27%
		% CCS receipt							18%	19%	26%	29%	15%	23%
		% TANF inactive among the eligible							0%	20%	56%	56%	69%	73%
		% CCS receipt							0%	19%	23%	18%	20%	24%
1998 Q4	360	% CCS eligible among entry cohort								38%	37%	41%	41%	45%
		% TANF active among the eligible								100%	73%	47%	36%	30%
		% CCS receipt								17%	16%	19%	21%	24%
		% TANF inactive among the eligible								0%	27%	53%	64%	70%
		% CCS receipt								0%	31%	23%	15%	20%
1999 Q1	304	% CCS eligible among entry cohort									36%	44%	45%	47%
		% TANF active among the eligible									100%	83%	46%	27%

		% CCS receipt	22%	15%	15%	13%
		% TANF inactive among the eligible	0%	17%	54%	73%
		% CCS receipt	0%	17%	15%	16%
1999 Q2	268	% CCS eligible among entry cohort		39%	44%	44%
		% TANF active among the eligible		100%	84%	45%
		% CCS receipt		16%	11%	19%
		% TANF inactive among the eligible		0%	16%	55%
		% CCS receipt		0%	32%	22%
1999 Q3	310	% CCS eligible among entry cohort			32%	37%
		% TANF active among the eligible			100%	81%
		% CCS receipt			16%	15%
		% TANF inactive among the eligible			0%	19%
		% CCS receipt			0%	36%
1999 Q4	274	% CCS eligible among entry cohort				33%
		% TANF active among the eligible				100%
		% CCS receipt				7%
		% TANF inactive among the eligible				0%
		% CCS receipt				0%

* Child Care Subsidy eligible grantees are defined as those who had a child less than 13 years old and quarterly earnings less than $4,602 (1Q1997 through 3Q1999) and $5,606 (4Q1999) reported in UI wage reports.
* The maximum eligible quarterly earnings are defined as 1/4 of maximum annual income (36% of the 1998 state median income from 1997Q1 to 1999Q3 and 44% of SMI from 1999Q4) adjusted by family size.

Appendix B-3: Take-up Patterns in Massachusetts (based on 20% sample)

TANF	20% of Total		Percent											
Entry Year	Entries		97 Q1	97 Q2	97 Q3	97 Q4	98 Q1	98 Q2	98 Q3	98 Q4	99 Q1	99 Q2	99 Q3	99 Q4
1997 Q1	682	% CCS eligible among entry cohort	40%	32%	39%	44%	43%	45%	46%	45%	42%	45%	45%	36%
		% TANF active among the eligible	100%	97%	79%	65%	57%	58%	54%	45%	35%	30%	32%	20%
		% CCS receipt	N/A	N/A	26%	38%	43%	41%	47%	40%	44%	40%	45%	53%
		% TANF inactive among the eligible	0%	3%	21%	35%	43%	42%	46%	55%	65%	70%	68%	80%
		% CCS receipt	N/A	N/A	20%	16%	20%	24%	21%	23%	26%	27%	26%	22%
1997 Q2	625	% CCS eligible among entry cohort		39%	28%	34%	33%	37%	37%	39%	37%	42%	41%	36%
		% TANF active among the eligible		100%	98%	80%	69%	64%	65%	56%	44%	44%	42%	30%
		% CCS receipt		N/A	26%	28%	42%	43%	52%	51%	50%	59%	49%	47%
		% TANF inactive among the eligible		0%	2%	20%	31%	36%	35%	44%	56%	56%	58%	70%
		% CCS receipt		N/A	0%	12%	9%	12%	21%	20%	24%	20%	29%	27%
1997 Q3	692	% CCS eligible among entry cohort			40%	35%	36%	43%	44%	43%	40%	45%	41%	39%
		% TANF active among the eligible			100%	97%	79%	69%	64%	60%	52%	43%	36%	26%
		% CCS receipt			15%	30%	35%	43%	48%	41%	47%	47%	50%	45%
		% TANF inactive among the eligible			0%	3%	21%	31%	36%	40%	48%	57%	64%	74%
		% CCS receipt			0%	14%	23%	23%	17%	17%	21%	25%	26%	30%
1997 Q4	449	% CCS eligible among entry cohort				42%	32%	41%	45%	42%	37%	40%	41%	36%
		% TANF active among the eligible				100%	94%	73%	63%	57%	53%	48%	35%	34%
		% CCS receipt				15%	24%	28%	41%	43%	43%	44%	42%	42%
		% TANF inactive among the eligible				0%	6%	27%	37%	43%	47%	52%	65%	66%
		% CCS receipt				0%	13%	10%	9%	17%	19%	20%	27%	25%
1998 Q1	434	% CCS eligible among entry cohort					34%	30%	35%	37%	36%	42%	41%	34%
		% TANF active among the eligible					100%	96%	77%	69%	58%	55%	45%	33%
		% CCS receipt					15%	27%	33%	32%	34%	43%	54%	55%
		% TANF inactive among the eligible					0%	4%	23%	31%	42%	45%	55%	67%
		% CCS receipt					0%	40%	17%	10%	11%	10%	12%	19%
1998 Q2	448	% CCS eligible among entry cohort						33%	32%	34%	33%	38%	44%	38%
		% TANF active among the eligible						100%	94%	80%	65%	64%	54%	45%
		% CCS receipt						14%	34%	39%	53%	49%	39%	37%
		% TANF inactive among the eligible						0%	6%	20%	35%	36%	46%	55%
		% CCS receipt						0%	22%	20%	19%	30%	33%	28%
1998 Q3	571	% CCS eligible among entry cohort							41%	27%	33%	39%	44%	39%
		% TANF active among the eligible							100%	97%	74%	60%	54%	47%
		% CCS receipt							16%	23%	28%	30%	43%	40%
		% TANF inactive among the eligible							0%	3%	26%	40%	46%	53%
		% CCS receipt							0%	0%	18%	22%	21%	24%
1998 Q4	417	% CCS eligible among entry cohort								35%	26%	35%	35%	31%
		% TANF active among the eligible								100%	97%	71%	62%	47%
		% CCS receipt								11%	29%	24%	37%	38%
		% TANF inactive among the eligible								0%	3%	29%	38%	53%
		% CCS receipt								0%	0%	24%	29%	29%
1999 Q1	376	% CCS eligible among entry cohort									27%	26%	31%	28%
		% TANF active among the eligible									100%	96%	72%	54%

		% CCS receipt	19%	38%	31%	48%
		% TANF inactive among the eligible	0%	4%	28%	46%
		% CCS receipt	0%	0%	27%	21%
1999 Q2	369	% CCS eligible among entry cohort		31%	31%	36%
		% TANF active among the eligible		100%	97%	71%
		% CCS receipt		10%	29%	28%
		% TANF inactive among the eligible		0%	3%	29%
		% CCS receipt		0%	67%	23%
1999 Q3	506	% CCS eligible among entry cohort			39%	26%
		% TANF active among the eligible			100%	95%
		% CCS receipt			14%	29%
		% TANF inactive among the eligible			0%	5%
		% CCS receipt			0%	14%
1999 Q4	307	% CCS eligible among entry cohort				35%
		% TANF active among the eligible				100%
		% CCS receipt				14%
		% TANF inactive among the eligible				0%
		% CCS receipt				0%

* Child Care Subsidy eligible grantees are defined as those who are had a child less than 13 years old and quarterly earnings less than $5,793 (at the time of subsidy application) and $8,318 (for continued services) reported in UI wage reports.
* The maximum eligible quarterly earnings are defined as 1/4 of maximum annual income (47 of the 1998 state median income at application and 67% of SMI for continued service).

Appendix C. First Type of Care Arrangement used after Subsidy Take-Up, by Child Age Groups: IL, MD, and MA

	Percents				
Illinois					
Age	Center	Family	Relative	In-home	Total #
0	12.05	25.16	40.94	21.86	938
1-2	20.21	21.49	37.98	20.32	940
3	24.18	13.85	37.14	24.84	455
4-5	19.97	14.61	37.34	28.08	616
6 and over	10.57	11.65	44.44	33.33	738
All	16.65	18.36	39.82	25.17	3,687
Maryland					
Age	Center	Family	Relative	In-home	Total #
0	19.35	46.54	28.57	5.53	217
1-2	33.33	36.82	25.19	4.65	258
3	42.11	32.46	21.93	3.51	114
4-5	43.94	30.81	19.70	5.56	198
6 and over	29.17	30.21	30.21	10.42	192
All	32.58	35.96	25.43	6.03	979
Massachusetts					
Age	Center	Family	Relative	In-home	Total #
0	34.51	34.90	16.47	14.12	255
1-2	52.65	28.24	12.06	7.06	340
3	60.00	24.52	4.52	10.97	155
4-5	63.40	18.04	8.25	10.31	194
6 and over	54.50	19.00	13.00	13.50	200
All	51.75	25.87	11.54	10.84	1,144

The analysis is based on the number of mothers with a focal child in care in each age group.