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Dual-System Families: Cash Assistance Sequences of Households Involved with Child Welfare

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Abstract

Dual-system families, those involved with the child welfare system and receiving public cash assistance, may be more vulnerable than families only connected to either of the two systems. This study advances our understanding of the heterogeneous and dynamic cash assistance histories of dual-system families in the post-welfare reform era. With merged administrative data from [state name removed] over the period 1998 to 2009, we use cluster analysis to group month-to-month sequences of cash assistance use among households over the 37-month period surrounding child removal. Close to two thirds of families who received any assistance either had a short spell of Temporary Assistance for Needy Families (TANF) or lost TANF. Smaller percentages had steady support. Families who lose assistance are less likely than average to reunify while those who connect to benefits are more likely, suggesting coordination between systems may serve dual-system families well.

Poor families disproportionally comprise child welfare caseloads. Poverty is associated with child neglect (Connell-Carrick, 2003), child welfare referrals (Slack, Lee, & Berger, 2007) and child welfare involvement (Paxson & Waldfogel, 2002; Rivausx, James, Wittenstron, Baumann, Sheets, Henry, & Jeffries, 2008; Slack, 1999). In [state name removed], over half of primary caregivers with children in out-of-home care report household incomes of less than \$10,000 per year (author citation). Some poor families draw support from public cash assistance; when these families are also child welfare-involved they are subject to the requirements of both systems. Major reforms to public assistance in the late 1990s resurfaced some longstanding questions about how well the cash assistance and child welfare systems serve their mutual clients and raised new concerns as well (Berrick, 1999, Frame, 1999). The 1996 replacement of Aid to Families with Dependent Children (AFDC) with Temporary Assistance for Needy Families (TANF) eliminated entitlement cash assistance in favor of time-limited support with tougher sanctions for non-compliance with program rules and strong work enforcement-all of which were potentially difficult for dual-system families to reconcile with the demands of the child welfare system (Geen, Fender, Leos-Urbel, Markowitz, & The Urban Institute, 2001; McGowan & Walsh, 2000;

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Ward Doran & Roberts, 2002). At the same time, TANF also opened the possibility of greater collaborative efforts between welfare and child welfare agencies and offered states greater flexibility for dual-systems families (Ehrle, Scarcella & Geen, 2004).

In this paper we document one facet of the intersection of child welfare and cash assistance in the post-reform era by examining cash assistance benefits received by households from which a child is placed out-of-home. Drawing on a unique data set of administrative records for families with children removed from the home in [state name removed] between 1999 and 2008, we describe patterns in the benefit use sequences of dual-system families. Our aim is descriptive; we do not attempt to draw causal links between events. Rather our data and methods allow us to show the diversity of trajectories, documenting how child welfare households receive cash assistance in the post-welfare reform era.

Background

The substantial overlap between child welfare and welfare caseloads - TANF and its predecessor AFDC - is well-documented (Courtney, Dworsky, Piliavin, & Zinn, 2005; Pelton 1989; Shook Slack, Holl, Lee, McDaniel, Altenbernd, & Stevens, 2003; US Department of Health and Human Services, 2000; Waldfogel, 2004). Dual-system families may be more vulnerable than families only connected to either of two systems. They are more likely to have material hardships that may impede reunification than those families only involved in child welfare system. They are also likely to experience more demanding requirements from two different systems relative to families who participate in welfare programs only (Ward Doran & Roberts, 2002; Geen et al., 2001). Welfare and child welfare administrators and caseworkers report that dual-systems families find the requirements of the two systems overwhelming (Geen et al., 2001). Whereas the cash welfare system encourages paid employment for mothers, the child welfare system puts the greatest emphasis on parents safely caring for children. Insofar as clashes between the demands of market work and caregiving create greater instability or inadequacy in resources for vulnerable families, this fundamental system-level conflict raises both pragmatic and moral considerations. Do stringent cash assistance requirements reduce the chances of reunification, the preferred outcome of the child welfare system? In doing so, do they exacerbate hardship and suffering?

Poor families involved with the child welfare system can draw economic support from TANF, Supplemental Security Income (SSI) or General Assistance (GA) (Pecora et al, 2009). Here we describe each of these programs then turn to reasons why families might move on, off or between these programs. [state name removed] made changes to its TANF and GA programs after the observation period covered in this study, including a change that makes it more likely that a caregiver will retain TANF benefits after a child is removed from the home. We will consider possible implications of these more recent changes – and the discontinuity in the child welfare data that prevents us from examining them in the current analysis – in the discussion.

TANF serves as the primary monthly cash assistance program for poor families, in particular working age adults with dependent children. Formed by the Personal Responsibility and

Work Opportunity Reconciliation Act of 1996 (PRWORA), TANF provides cash grants and other assistance conditional on participating in work related activities (for instance career readiness training or supervised job search) for 30 hours per week in most cases. TANF policies vary from state-to-state; a comparison of state TANF programs shows that [state name removed]'s policies were relatively generous in benefits and lenient in application of sanctions during the post-welfare era (Meyers, Gornick, & Peck, 2001). For instance, the state did not have a family cap, meaning that benefits would increase when an additional child was added to the family through birth or other means.

Supplemental Security Income supports poor families that contain an adult or child with a disability. In 2014, 4.6 million persons under age 65 received SSI (U.S. Social Security Administration, 2014). There is documented overlap between SSI and TANF recipients; 16.1 percent of TANF families are estimated to also include an SSI recipient (Wamhoff & Wiseman, 2006). Welfare reform may have increased SSI caseloads by providing incentives for individual families to move from TANF to SSI (Schmidt & Sevak, 2004) because it offers a higher monthly benefit without time limits or work requirements (Wamhoff & Wiseman, 2006). Fiscal constraints may have also produced political incentives for some states to turn to SSI because SSI grants are federally funded.

Third, during the time period covered by our data some 30 states including [state name removed] also had GA programs that support those who qualify for neither TANF nor SSI. As a state or local program, GA program eligibility, benefit levels and time limits vary across localities. Recipients are typically childless adults, including parents without minor children in the household. GA monthly grants are modest – lower than TANF grants and typically no more than \$400 per month. Many programs have been cut or eliminated during the recent economic downturn (Schott & Cho, 2011). Seven states impose time limits for anyone receiving benefits, but their policies vary from a one year lifetime limit to an intermittent time limit such as 12 out of the last 60 months as of year 2015 (Schott & Hill, 2015). [state name removed] did not have a GA time limit during the study period.

Transitions of cash assistance use and their potential consequences

There are several likely transition sequences within and between the three cash assistance programs for dual-system families. Child welfare involvement may initiate particular moves between, on to, or off of programs, and program eligibility may change when a child is placed out of the household.

As TANF is a primary source of public assistance and its use is typically conditional upon having a child in the household, we expect that some households will lose TANF postremoval. PRWORA provided an option for TANF benefits to continue if a child's absence was likely to be temporary (45 days or less), allowing states flexibility to some extent (Committee on Ways and Means U.S. House of Representatives, 1996), but whether and how often this option was invoked in practice seems to be unknown. As we note in the discussion [state name] recently took advantage of later federal legislation to expand this temporary absence policy.

Even if benefits are not ceased upon child removal, TANF loss can also result from competing mandates from the conflicting philosophies between two systems (McGowan & Walsh, 2000; Ward Doran & Roberts, 2002). For example, parents may be conflicted between child welfare requirements such as meetings, court attendance and service participation and completing TANF job training or job search requirements. Parents might have to make choices between visitation with their children – scheduled at the convenience of the child welfare workers – and showing up for a job interview or pre-employment test – scheduled at the convenience of a potential employer. We expect that post-removal transitions off of TANF are likely to produce more economic hardships for dual-system families as they lose primary benefits, potentially creating a slow reunification outcome.

Other life circumstances could cause both a removal and TANF loss. For instance, a physical or mental health crisis could both render a caregiver unable to safely care for children and unable to comply with TANF requirements. In this case, a sequence of child removal would not cause the subsequent TANF loss; rather both events would be consequences of another factor.

TANF loss may precede child removal. Evidence suggests that losing TANF is associated with child welfare involvement and may worsen child protection outcomes. For instance, Shook Slack and colleagues (2007) examine families who received TANF in Illinois in 1999 and find that those whose income was cut due to a sanction for non-compliance with welfare rules were more likely to have been reported to Child Protective Services for reasons of neglect. One explanation for this sequence is that income loss destabilized the family leading to removal; however, as before, other factors could account for both TANF loss and child removal.

Child removal could result in other transitions – or not affect benefit use at all. Among all parents who lose TANF, in some cases, a parent from whom a child is removed may no longer meet the TANF requirements but could meet requirements for GA or SSI. Families who transit from TANF to these other cash assistance programs may be better off than those losing benefits at all or TANF. Transition to other cash assistance could yield different consequences. Movement from TANF to GA are likely to worsen families' economic status because benefit amounts are likely to reduce, while families transitioning from TANF to SSI may fare better because SSI grants are typically larger. SSI grants follow individuals, so grants to parents with disabilities would be unaffected by removal, but if a recipient child leaves the household, the parent would no longer receive the grant.

Lastly, parents who come to the attention of the child welfare system may connect to TANF or other benefits. PRWORA provided states with greater flexibility in how they delivered services to poor families, which may have led state child welfare and cash assistance systems to collaborate in order to better serve families on their mutual caseloads (Ehrle, Scarcella & Geen, 2004). In the event that child welfare workers determined that families needed additional income support, these collaborative efforts could have facilitated families gaining TANF, GA, or SSI after coming to the attention of the child welfare system.

We hypothesize that all of these patterns may be observed to some extent within the population. Hence our primary goal is to establish a set of types of sequences, or sequential patterns, that describe benefit use among families before and after a child is removed from the household. For instance, we suspect that families who have TANF until removal and then lose it may constitute one type of sequence. We use a data-driven cluster analysis approach to group sequences of benefit use over time in order to reveal patterns not a priori predicted. Having established a set of benefit sequence groups, we then address a set of research questions about the timing and correlates of benefit use. First, within these groups, to what extent do households maintain, gain or lose benefits before, during or after the period of child removal (Question 1)? Second, how do demographic and case characteristics relate to different benefit sequence groups (Question 2)? Third, how are benefit sequences groups associated with reunification outcomes (Question 3)? The dataset, comprised of child welfare cases where a child was removed from the caregiver's home provides insight into the public financial support of families of greatest concern, those for whom abuse or neglect was substantiated as severe enough to warrant removal.

This study adds to the knowledge base in important ways. Previous studies examining benefit use among dual-systems families focus on AFDC and TANF (Slack, 1999; Wells & Guo, 2003, 2004, 2006; Kortenkamp, Geen, & Stagner, 2004). Our analysis includes SSI, which is an increasingly important support for poor families, and GA, which was an important source of support in the 2000s and the most common state-administered type of grant for adults without children in the household. Extant work also uses dichotomous measures of welfare continuity (versus loss) or uses counts of months on benefits to measure continuity. We use a more flexible empirical approach that allows us to examine transitions on and off of three different types of cash assistance (TANF, SSI and GA) and combinations thereof. Finally, by relying on administrative data with a large number of observations and an analytic approach that clusters cases by the sequence of benefits used and not used, we can reveal both common and less common patterns including those not a priori considered.

Method

Case universe and data

This study uses child welfare and public assistance data from the [state name removed] Health Service Department (HSD) and was conducted under approval from the [state name removed] Institutional Review Board. Figure 1 summarizes the process by which we assembled the data set capturing the population of dual-system families in this state. First, using child welfare records we identified primary caregivers whose child was removed for the first time from July 1999 through May 2008 (for details, see author citation). Primary caregivers are typically parents and most commonly mothers. In the [state name removed], child removals happen when child protection investigators substantiate imminent risk of abuse or neglect and also in the case of child behavioral issues requiring institutional care.¹

¹Youth age 12 to 18 who spend a short period in residential treatment comprise most of the second group; these placements are often voluntary in that parents seek help (Author citation, 2012). We believe it is appropriate to include these cases in the analysis as they are also likely to be poor or at risk of poverty (wealthier households are more likely to draw on private resources to treat youths' behavioral needs).

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The first date of removal was used to include only one record per caregiver. Caregivers 18 or older and younger than 65 were included, as persons outside this age range would be eligible for Social Security and other supports. This yielded 26,806 caregivers, the universe of cases meeting the above parameters.

Cases included in our analysis reflect the demographics of the [state name removed] child welfare caseload during this time period. Primary caregivers are most commonly women (88.2 percent) and on average are 33.3 years old when their children are removed. The largest percentage identify as non-Hispanic white (70.0 percent) followed by Hispanic (8.5 percent), Native American (8.3 percent), African American (7.7 percent), Asian/Pacific Islander (2.2 percent), and others (3.3 percent). Non-exclusive reasons for removals reported are neglect (47.0 percent), substance abuse (23.5 percent), physical abuse (16.7 percent), and sexual abuse (4.9 percent). More than two thirds of the cases (68.3 percent) had more than two reasons for removal indicated. More than two third of the cases in our data (67.6 percent) have their removed children reunified with their caregivers within 18 months of removal. Among reunifying families, the average time between removal and reunification was 116.5 days.

Lastly, we match 26,806 primary caregiver cases to cash assistance data for January 1998 through December 2009 in [state name removed] HSD. This finds a total of 16,556 households (61.8% of the universe, Figure 1) received cash assistance at least one month during the observation period of 37 months, which consists of 18 months prior to the removal month, the month of removal, and 18 months post-removal. We used the same approach as Wells and Guo (2003) in setting the observation window to focus on benefit use experiences of child welfare involved families around child removal. As such, the chronological time associated with the observation window is case-specific. For example, for a household from which a child was removed in July 2005, the data would contain cash assistance records from January 2004 through to January 2008, a total of 37 months. Our data contain the TANF cash assistance received by the caregiver. This could be either a family or child-only grant. This would not include a child-only grant where someone other than the caregiver was the payee (i.e. foster parent).

Analysis

Because households involved with the child welfare system likely include a heterogeneous mix of different benefit use patterns, our approach is to characterize sequences and then create groups, or clusters, of similar sequences. We construct sequence data for the 16,556 households who received cash assistance during the period starting 18 months before the month of child removal and extending 18 month after, for a total of 37 months. Eight states of benefit participation status are possible each month: 1) TANF, 2) SSI, 3) GA, 4) TANF +SSI, 5) TANF+GA, 6) SSI+GA, 7) TANF+SSI, GA, or 8) no public income benefits. Hence the sequence for each primary caregiver consists of the ordered listing of these states for the 37 month observation period. Sequence analysis treats sequence data, i.e., all of the listed successive (sequential) elements in a series of events, as a whole entity rather than discrete events (Abbott & Hrycak, 1990; Aisenbrey & Fasang, 2010; Brzinsky-Fay, Kohler, & Luniak, 2006; Gabadinho, Ritschard, Studer, & Nicolas, 2010), focusing on a holistic

trajectory of "events in context" instead of "entities with variable attributes" (Aisenbrey & Fasang, 2010:422).

We use the optimal matching (OM), the most commonly used sequence dissimilarity measure in order to gauge resemblance between sequences. The OM algorithm calculates the overall distance between two sequences by counting the number of substitution, insertions and deletions (indels) needed to make two sequences the same (for details, see Abbott & Hrycak, 1990) and by adding these with the respective costs, which is referred as the Levenshtein distance (Aisenbrey & Fasang, 2010; Brzinsky-fay et al., 2006). This process finds the most efficient way (minimum distance) to switch from one sequence to another sequence. The substitution cost is concerned with the timing of states; that is, whether the same state occurs at the same time point in two sequences. The indel cost captures the occurrence of states. We compute pairwise optimal matching (OM) distances between sequences with an insertion/deletion cost of 1 and a substitution cost of 2, following Brzinsky-Fay (2007).

The distances measured by OM are used for cluster analysis in grouping similar sequences. In fact, a sequence analysis is often used in combination with a process of simplifying sequences such as cluster analysis. Despite the subjectivity of cluster analysis (Halpin & Chan, 1998; Piccarreta & Lior, 2010), this approach is by far the most popular method for identifying different subsets of sequences (Brzinsky-Fay et al., 2006; Havlicek, 2010; Pollock, 2014; Simonson, Gordo, & Titova 2011). We employed hierarchical clustering with Ward linkage. Because conventional fit test statistics do not apply to cluster analysis with sequence data (Brzinsky-Fay, 2007; Pollock, 2014), our approach to choosing a number of groups is necessarily more qualitative. We consulted the clustering dendrogram (available from the author by request and included as Appendix 4 in this draft for review purposes), examined case counts, and analyzed descriptive statistics to determine how many groups are analytically meaningful. We then assigned names based on the dominant patterns within each group.

Results

Assistance Receipt by Benefit Sequence Group

The cluster analysis yielded six clusters, corresponding to sequence groups, displayed in Table 1. Here we briefly introduce each group by their major defining characteristics before presenting more detailed information on monthly benefit participation rates and sequences below. Households with *Short Spells of TANF*, with only seven months of average duration out of 37 months of observation in TANF use, comprise the largest group with about a quarter of all households experiencing removal (25.2 percent) and 40.7 percent of households that ever used any cash assistance. *Lose TANF*, the second most frequent group, consists of households that were on TANF at the beginning of the observation but lost their benefits over time especially around their child removal. They make up 15.7 percent of all households or about a quarter of benefit users (25.3 percent). Next is the *Gain Benefits* group which gradually obtain GA, SSI or TANF and remain on for most of the remainder of the observation period; 7.1 percent of households transitioned onto benefits during the observation period. This is about one in nine (11.5 percent) of all households who ever used

benefits. Smaller numbers of households can be characterized as in the *Steady TANF* group (5.8 percent of all households) maintaining their TANF benefits for average of 31 months, *Steady SSI* (4.7 percent) who are on SSI average 26 months or *TANF+SSI* who began with the combination of TANF and SSI in the observation (3.4 percent). Next we describe the differences between groups, which confirm our expectation of heterogeneity of cash assistance use trajectories.

Data for each group are displayed with benefit states aggregated by month (Figure 2) and in a sequence index plot (Figure 3). Together these two data displays address our first question, to what extent do households maintain, gain or lose benefits before, during or after the period of child removal? Figure 2 presents changes in the proportion of households receiving the different benefits over time and Figure 3 displays ordered sequences for the households in each group, allowing greater insight into the transitions from one state to another. For grey-scale display, the three benefit states observed in fewer than five percent of households are collapsed into other categories, leaving five states 1) TANF (only TANF, TANF+GA or TANF+GA+SSI), 2) TANF+SSI, 3) SSI (SSI only or SSI+GA), 4) only GA, or 5) no benefits.²

In the most common pattern, the *Short Spells of TANF* group, between 10 percent and 40 percent of households received TANF in a given month. Figure 2 shows that the number of households receiving TANF grows before removal and then descends rapidly. Figure 3 shows short durations of TANF for individual households. Most of the transitions off of TANF were to the "no benefit" state, meaning that these households lost TANF but did not gain other benefits. A small proportion of the households (less than 5 percent) of the *Short Spells of TANF* group used GA or SSI after removal.

The *Lose TANF* group shows a gradual decrease in the monthly TANF receipt rate starting around nine months prior to the removal (from month –10 to month –1) and a very rapid decrease in TANF benefit receipt rate from 70 percent to 25 percent quickly after removal (Figure 2). Use of GA increases for this group post-removal, but even after including households that gain GA after the removal, the benefit usage after removal never recovered to the equivalent level in pre-removal period. By month 18 less than thirty percent of the *Lose TANF* group receives any benefit. These overall patterns are echoed in the individual trajectories summarized in Figure 3 for the *Lose TANF* group. Only a few households in this group are on and off TANF before removal, but few received TANF after the removal. They lose TANF, particularly in the removal month and month after removal. Transitions in *Lose TANF* group are mostly between TANF and no benefits, but duration of benefit use sequences are much longer than those in the *Short Spells of TANF*.

The Figure 2 display for the *Gain Benefits* group shows increasing caseloads over the full observation period and distinctive differences between the pre- and post-removal period. The increase in benefit use pre-removal is governed by TANF rates, which begin to increase around nine months prior to the removal (month –9). After removal, TANF use rates drop

 $^{^{2}}$ Color plots with all eight benefit combination states are included as an appendix for review and would be available by request from the author (or could be posted to an online appendix).

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suddenly then gradually rebuild and fall. GA use increases starting about three months after removal, but then trickles out. The SSI caseload increases in the post-removal months and then levels off with about a third of the *Gain Benefits* group receiving SSI in the last month of observation. Figure 3 also indicates that TANF is the most common entry point for the *Gain Benefits* group, with many transitioning onto SSI or GA. These transitions prevailed around the removal. After gaining benefits, most families (eighty percent of this group) maintain receipt through end of the observation window.

Most of the *Steady TANF* households – about nine out of 10 households in this group – received TANF benefits from twelve months prior to the removal to the removal month (Figure 2). More than a half of households in this group received SSI at the beginning of the observation and even more families received SSI after the removal. Even though there was a small drop in TANF receipt right after the removal, it rebounded to be almost equivalent to the pre-removal level within nine months after the removal (month +9). Interruptions of a month or a few months around removal (month 0) for the *Steady TANF* are common (Figure 3). Only about a fifth of households in *Steady TANF* have no interruptions on TANF benefit usage throughout the entire 37 months. About a fourth of these households were not on TANF at the beginning of the period, but they began receiving TANF benefits over time. Despite some interruptions of TANF benefit use across time, many of them are able to maintain TANF most of time observed.

The *Steady SSI* group generally maintained a high level of SSI participation over time but experienced a temporary decline around the removal (Figure 2). About ten percent of *Steady SSI* families received TANF alone or in conjunction with SSI in the months before the removal, but the rate of TANF use dropped to less than ten percent by the end of the 37 months (month +18). Figure 3 shows that families in the *Steady SSI* group tend to continue to receive SSI even after the removal (even if some lost TANF) or moved from TANF to SSI. About half of households in this group receive SSI at the beginning of the observation window (month -18), and about half of those households who had received SSI at the beginning lost SSI benefit at some point around the removal. Many of them, however, regain after or around removal month. About a third of these households started with no benefits, but began to receive SSI over time.

Finally, the display for the TANF+SSI group shows that combining TANF and SSI was more common before removal than after (Figure 2). About 60 percent of households in this group received both TANF and SSI at the beginning of the 37-month period, a rate that grew to about 80 percent around the removal. Soon after removal, however, concurrent use of both benefits plummeted and use of SSI alone increased, which suggests a loss of TANF benefit. By the end of the period, about half of the TANF+SSI group uses only SSI and fewer than half receive both benefits. Figure 3 also reflects that the pattern of losing TANF benefits for the TANF+SSI group as many households in this group initially receive both TANF and SSI but by the end most receive only SSI.

Characteristics of Benefit Sequence Groups

Table 2 presents the descriptive characteristics for each cluster membership, addressing our second question about how demographic and case characteristics relate to different benefit

sequence groups. This helps to understand the possible association between family characteristics and benefit use patterns even though it does not establish any causal relation. The last two columns display a summary column of households who *Ever Used Assistance* and those who used *No Assistance* in order to compare the differences between families who ever received benefits and families never received them during the 37 month period. T-tests show that the *No Assistance* group differs on several dimensions from *Ever Used Assistance* group and other individual groups who ever received any cash assistance. Households who did not use benefits are older in average in caregivers' and children's ages. They are more likely than other groups to have more child behavior issues and sexual abuse but less likely to have neglect, physical abuse and substance abuse. Moreover, they have the highest reunification rate with a quicker reunification than other groups.

In order to understand which caregiver and case characteristics are associated with different benefit sequence groups, we perform t-tests comparing clusters against three theoreticallymotivated reference groups. First, we compare caregivers with Short Spells of TANF, which is the most prevalent group, to those with other patterns. Caregivers who had Short Spells of TANF were younger than those who received SSI (SSI or TANF + SSI) but older than those who lost TANF. Our second reference group is caregivers in the *Steady TANF* group, which we believe might have been the most prevalent group prior to welfare reform. Caregivers in the Steady TANF group are more likely to have an infant and on average have younger children than those in the other TANF groups (Short Spells, Lose TANF or Gain Benefits). This is not surprising as TANF participants are exempt from work requirements in [state name removed] – and hence less likely to be sanctioned – for a period after the birth of a child. Both the Short Spells of TANF group and the Steady TANF group were less likely than the Lose TANF group to have neglect as a reason for removal, suggesting that loss of TANF may be associated with increased risk of neglect. Third, we compare caregivers with *No Assistance* group, which may be qualitatively different from those who received any benefits. Caregivers and children in No Assistance group are likely to be older than those in all six benefit sequence groups as well as Ever Used group. The No Assistance group is also less likely to have removal reasons caused by primary caregivers, but is more likely to have child issue for removal reasons.

Benefit Sequence Groups and Reunification

Our third question is how are benefit sequence groups associated with reunifications outcomes. The bottom panel in Table 2 shows that benefit use is strongly related to reunification patterns. The highest reunification rate, 83.8 percent, is found among the *Gain Benefits* group. This group is significantly higher than either the *Steady TANF*(71.2 percent) or *Short Spells of TANF*(66.3 percent). The *Lose TANF* group is significantly lower than both reference groups at 58.3 percent. The *Steady SSI* group has the lowest overall reunification rate at 50.7 percent. These correlations between outcomes and TANF use cannot distinguish whether these patterns arise because benefit use is determined in part based on quick or promising reunification, because benefits support family reunification goals, or a combination of the two.

We also examined whether a short removal period is highly associated with the benefit sequence groups we observed. Other child welfare research predicting reunification excludes stays of a week or less because such cases are qualitatively different from longer stays (author citation). We did not exclude short stays because of our focus on dual-systems families; high proportions of both short-stay and longer stay cases use cash assistance. Among families who ever received any cash assistance, 24.7 percent were short stayers (Table 2). A higher proportion of *Gain Benefits* cases have short stays relative to those families with *Short Spells of TANF* and *Steady TANF. Lose TANF* has lower proportion of short stays (18.8%) than *Short Spells of TANF*(26.7%). Even though some variations exist among groups for households who used benefits, differences between them are small relatively than difference from those in *No Assistance* group.

Discussion

We examine cash assistance used by families whose children experienced out of home care during the post welfare reform era. Using administrative data covering the universe of [state name removed] families who had a child placed out-of-home over the period 1999–2008 we generated distinct groups based on patterns of cash assistance use. Overall, 61.8 percent of families who had a child removed from the home received TANF, SSI or General Assistance either at the point of removal or at some point in the 18 months before or after removal. Six general types of benefit use patterns characterize these families. Most commonly families had a short spell of TANF (40.8 percent of those who used any benefit) or lost TANF (25.3 percent). Other patterns included gaining benefits (11.5 percent), steady TANF use (9.4 percent), Steady SSI use (7.6 percent) and a combination of TANF and SSI (5.4 percent). In this discussion we note first the limitations of our data and approach, then interpret our findings in light of our original questions and motivation, and finally discuss reasons for both concern and hope stemming from economic and policy events that happened since our observation period closed.

Study limitations

Findings must be evaluated in light of potential weaknesses in the data and limitations in the scope of the analysis. Data come from only one state, [state name removed], which is relatively generous in its benefits and lenient in application of sanctions during the post-welfare era (Meyers, Gornick & Peck, 2001). The state-level administrative data include limited demographic information about the households. Although our focus is on financial supports, the data also do not include information about private support – such as transfers from friends or family – nor locally administered housing subsidies.

Our choice to highlight program participation trajectories of families that experience a child placed out of home deemphasizes other important processes and factors. For instance, our data included only families from whom children were removed; families that come to the attention of the child welfare system but do not experience removal may be less likely to rely on cash assistance or they may be more likely to have stable benefits. Similarly, our analysis does not distinguish between voluntary TANF exits and exits for reasons of sanction or changes in household status. Certainly, exiting TANF because a caregiver is earning money

through work is very different than losing benefits and being left without any means of support. However, an analysis of employment and benefit use simultaneously among the same population shows that decreases in benefits are not typically offset by increases in employment for most portions of the caseload (author citation). Because our data are organized around the removal of a focal child, we cannot distinguish between families who maintained benefits because caseworkers applied a concurrent benefit policy or because another child remained in the home. Lastly we examine case outcomes by trajectory group in only a correlational manner, noting which types of removal reasons and outcomes are associated with different patterns of benefit use. This befits the goal of documenting support but does not help untangle the many ways in which case characteristics may cause benefit patterns. For instance, based on both policy and our understanding of frontline practice, we believe caseworkers are more likely to request benefits continue when they judge that the family in question has a good chance of reunification. Future work may investigate the role of policy and frontline workers in different benefit patterns for dual-system families and the causal relationship between different benefit use sequences and renunciation for these families.

Understanding benefit sequences

Limitations notwithstanding, this study offers important new evidence about the limited and tenuous cash assistance used by families in the child welfare system. We believe our findings support two interrelated themes: 1) relatively few families in this post welfare-reform era receive stable cash assistance, but 2) among those who use cash assistance, TANF benefits may promote reunification.

We begin our interpretation of results with the 38.2 percent of the universe of households with children removed from their caregivers that did not receive cash assistance benefits during the period surrounding removal. Most of these households (82.8%) reunified, the majority within 90 days. These households may reunify more quickly either because they have greater financial resources or because the primary issue is more often the child's behavioral problems, which is more easily addressed than child neglect.

Among the households who ever received benefits, almost two thirds were characterized as having short spells of TANF (40.8 percent) or losing TANF (25.3 percent). This stands in contrast to the small AFDC-era sample in Wells and Guo (2003) where almost half the families observed received welfare for most or all months prior to removal and about a third of those continued to receive it without interruption for 18 months post-removal. We believe our finding reflects a general trend of decreasing and shortened TANF support nationally and within [state name removed] last decade. The number of TANF parent-headed households (i.e. excluding child-only cases) on [state name removed]'s caseloads fell over our observation period, from 68,707 in January 1998 to 40,894 in December 2009, an overall decrease of just over 40 percent (Author calculations based on U.S. Department of Health & Human Services, n.d.). Nationally the drop was more dramatic, down almost 60 percent over the same time period (ibid). These trends reflect the policy goals of the 1996 welfare reform—to make aid "temporary"—and are consistent with short spells of TANF use observed in among the general population of recipients (Cancian, Meyer & Wu, 2005).

This suggests that TANF receipt would have likely dropped for any cross-section of poor families observed for three years over our time frame.

National tightening of TANF does not, however, account for the sharp decreases in TANF use observed in the months immediately following child removal. Rather we believe this reflects interactions with systems causing parents to lose TANF. Across all six types of benefit use, a drop in TANF cash use is evident following removal. This drop is most dramatic in the Lose TANF group. Households who lose TANF are also less likely to reunify relative to almost all of the other groups. This finding is consistent with prior studies showing correlations between welfare loss and worse child welfare outcomes including greater risk of child welfare involvement (Shook, 1999) and lower reunification postremoval (Wells & Guo, 2006). (The only group with lower reunification rates than the Lose TANF group is the Steady SSI group, 7.6 percent of benefit recipient. We believe that severe caregiver disabilities explain the low reunification rate for the SSI group). The most prevalent group, Short Spells of TANF, reunified at a lower rate than households who did not use benefits or those categorized as Gain Benefits or Steady TANF. This is consistent with AFDC-era work by Barbara Needell and colleagues (Needell, Cuccaro-Alamin, Brookhart, & Lee, 1999) which found that families with interruptions in benefit use were at greater risk of continued abuse and neglect.

Of course, two different causal stories can account for the co-occurrence of low rates of reunification and a loss of TANF benefits within a group. Losing benefits may further destabilize caregivers, making it harder for them to meet requirements for reunification. For instance, losing benefits may mean a caregiver loses housing or is unable to afford transportation to required appointments. On the other hand, these may be cases with more severe issues in which caseworker assessments suggest reunification is unlikely and hence removing the caregiver from the TANF rolls is warranted. We believe both patterns likely occurred, but the low rates of TANF use post-removal suggest that many households in this group may have experienced material hardship while working toward and after reunification. Although the *Lose TANF* group had the second-lowest reunification rate, over half of this group (58.3 percent) did reunify, a third within 90 days of removal. These might have been households who successfully gained employment or found private assistance such as support from relatives. However, while over 70 percent of *Lose TANF* households received cash assistance prior to removal, only a minority (less than a third) did so post-removal.

In contrast to those who lost benefits, the highest rate of reunification was observed for households who gained benefits over the observation window. The *Gain Benefits* group's reunification rate (83.8 percent) was statistically equivalent to the relatively wealthier *No Assistance* group. We believe this group illustrates potential pathways whereby the convergence of cash assistance and child welfare supports families. Many of these households started TANF in the six months prior to removal or gained SSI benefits post-removal. These may be cases in which the first point of child welfare contact was several months before removal. In such situations, caseworkers may have coordinated services, including TANF, to stabilize and support families. Alternatively, families may have come to the attention of the child welfare system because they applied for TANF and were hence

more visible to the system (Shook Slack et al., 2003), but the high reunification rate suggests that intervention may have been relatively brief and helpful.

Steady TANF use, the benefit group that characterizes 9.4 percent of the benefit recipients, also has a high reunification rate of 71.2 percent. We believe these are largely young families. Over a third of focal children in the *Steady TANF* families were infants and the average child age for this group was the lowest across all groups. Child age also explains why these families were able to maintain TANF benefits, as [state] exempted parents from TANF work requirements for participants caring a child under four months old for cumulative 12 months in a recipients' life time during the study period.

In sum, we believe our findings support some of the concerns about how well dual-systems families would fare post-welfare reform (Ward Doran & Roberts, 2002; McGowan & Walsh, 2000). The higher-than-average reunification rates among households who received steady TANF or got connected to benefits (Gain Benefits) suggests that benefits were related to – and we believe assisted in – reunification. Relative to these groups, the patterns of benefit receipt made most common by welfare reform, short TANF spells or losing benefits, were associated with lower rates of reunification.

Recent changes and future directions

Our study period ended during the waxing months of the Great Recession. Recession-driven changes to state budgets suggest that the transience of cash assistance has become even more problematic for parents in need of support. However, recent changes to TANF policies in [State name removed] have also extended more stable support to dual-system families.

Despite a temporary federally funded increase, TANF support has become less generous and more tenuous since the period observed in our study. Rising unemployment during the Great Recession increased need for cash assistance just as falling tax rolls limited states' abilities to respond. A TANF emergency fund in the American Reinvestment and Recovery Act of 2009 provided two years of extra support for state spending on core TANF functions including basic cash assistance and subsidized employment (Administration for Children and Families, 2012). This temporarily buffeted state budgets and allowed state administrations to partially respond to increased need. In [state], the TANF caseload increased 30 percent over the period 2008–2011 (Patton, Ford Shah, Felever, & Beall, 2015). However, the federal emergency fund ended in 2010, with TANF rolls again dropping sharply nationwide, despite lingering high employment (Hall, 2015). A national scan of state administrators suggests that many states restricted TANF benefits or cut staffing post-2010 (Brown & Derr, 2015). [State name removed] State reduced the TANF payment standards and tightened time limits in 2011. By 2014 [state name removed] spending on TANF benefits had dropped by 32 percent relative to 2008, the last pre-Recession year (author calculations using Pavetti, 2015). State caseloads, which had grown to 65,140 households post-Recession, have dropped to 42,549 households, well below the pre-Recession level of 55,610 (Patton et al, 2015).

Although federal funds temporarily protected TANF, state GA had no such backstop. In the Great Recession and its immediate aftermath, over a third of the 30 states that still offered

some type of general assistance as of 2011 had recently cut back or were considering restrictive measures (Schott & Cho, 2011). [State name removed] numbered among those that cut GA. In 2011 – two years after the end of our observation period – it replaced GA with a more restricted program with stricter time limits and a greater emphasis on disability. This subsequent program was further limited a year later and renamed Aged, Blind or Disabled (ABD). The 2009 GA caseload served an average of 34,992 persons per month with an average benefit of \$308. In 2013 ABD served 38 percent fewer persons (22,840) with an average transfer of \$172. Given that our study embarks before the retrenchment of GA in 2011, we expect that dual-system families now are more likely to have more economic hardships than before because some cases in TANF benefit loss are not replaced with GA participation.

Policy and agency changes in how systems serve low- income, dual-systems families may help counteract these larger trends. Although TANF is typically predicated on having a child in the home, program options allow state discretion in whether caregivers from whom children are removed can continue to receive TANF benefits if reunification is expected to take place. [State name removed]'s temporary absence policy allows benefits to continue if reunification is anticipated within 180 days, and benefits are provided concurrently if the child moves to another household receiving a TANF grant. [State name removed] put these policies in place in August 2008, after the latest removals in our data. At the same time, HSD took a "significant step forward in the active collaboration between" the HSD subagencies of Economic Services, which implements TANF, and Children's Administration, responsible for child welfare (Dori Shoji, HSD, written communication, November 3, 2014). The two administrations share case management system information with each other's caseworkers and supervisors, although not all staff members have received training. Given this study's evidence of a sharp drop-off of TANF use within three months of removal, these efforts seem to have the potential to stabilize families. Indeed, an analysis of concurrent benefit recipients with a comparison group by observable characteristics showed that those caregivers who continued to receive TANF benefits after removal reunified faster and at a higher rate (Marshall, Beall, Mancuso, Yette, & Felver, 2013).

In sum, this analysis documents that support from public assistance programs is important to families involved with the child welfare system. Policies that stabilize support during the tumultuous time surrounding a child's removal from the home and casework practices that help connect families to benefits for which they might be eligible can promote reunification. State policy-makers should consider these conclusions in light of how their systems serve dual-systems families.

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Group 5. Steady SSI (7.6%)

Group 6. TANF + SSI (5.4%)

Colored Benefit Use States by Month and Benefit Sequence Group among families who ever received benefits (N=16556), x-axis indicates month relative to removal and y-axis indicates the number of recipient households. The removal month (month 0) is indicated with the vertical line.

APPENDIX 2



Colored Sequence Index Plot by Benefit Sequence Group, (N=16556), x-axis indicates month relative to removal and y-axis indicates the number of recipient households. The removal month (month 0) is indicated with the vertical line.

APPENDIX 3



Colored Sequence Index Plot By Benefit Sequence Group, With 8 States of Benefit Participation. X-axis indicates month relative to removal and y-axis indicates the number of recipient households. The removal month (month 0) is indicated with the vertical line.



(for review only, will list as "available by request from author" for print version). – Dendrogram of cluster analysis, each red rectangle indicates a cluster, producing total 6 clusters. Hierarchical cluster analysis with Ward method is used.

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Figure 1.

Data set construction for universe of [state name removed] dual-system families



FIGURE 2.

Benefit Use States by Month and Benefit Sequence Group among families who ever received benefits (N=16556), x-axis indicates month relative to removal and y-axis indicates the number of recipient households. The removal month (month 0) is indicated with the vertical line.



FIGURE 3.

Sequence Index Plot by Benefit Sequence Group, (N=16556), x-axis indicates month relative to removal and y-axis indicates the number of recipient households. The removal month (month 0) is indicated with the vertical line.

TABLE 1

Clusters of Benefit Sequences

Sequence cluster type	Number	Percent of households using cash assistance	Percent of all households	
Short Spells of TANF	6,749	40.8	25.2	
Lose TANF	4,201	25.3	15.7	
Gain Benefits	1,905	11.5	7.1	
Steady TANF	1,547	9.4	5.8	
Steady SSI	1,255	7.6	4.7	
TANF+SSI	899	5.4	3.4	
No Assistance	10,250		38.2	
Total	26,806	100	100	

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TABLE 2

Demographic and Case Characteristics by Benefit Sequence Cluster Group Ever used Short spells No Assistance Assistance Lose TANF (15.7%) Gain Benefits (7.1%) Steady TANF (5.8%) Steady SSI (4.7%) TANF+SSI (3.4%) (38.2%, of TANF (61.8%, (25.2%) N=10,250) N=16,556) Caregivers' age 37.3+& 30.9 * 29.8*X 30.4* 30.2* 33.0 *+& 35.4*+& 30.9* Child's age 5.8 *+ Mean 5.7*+ 10.9+& 5.9*+ 4.8 *X 5.8 *+ 8.4 *+& 5.8* 36.4 *& 39.1 *& Infant (%) 28.7 *+ 16.7*+& 17.9*+& 8.5+X 24.8* 9.1+& 1-4 (%) 23.1 *+ 14.2 *+& 34.3*+& 33.1 *+& 26.4* 10.3+& 22.8* 22.7* 5-8 (%) 11.6 & 9.9+& 15.5 * 20.6*+& 17.8* 15.1* 16.9* 16.8* 9-12 (%) 12.7 14.3 12.7 11.2 11.4 21.5 *+& 13.4 14.0 14.4 *& 13 and older (%) 20.0 $^{*_{+}}$ 18.5* 14.1 *& 23.7 *+ 30.5 *+& 56.7+& 18.7* Race and ethnicity (%) White 70.3 70.5 74.4 70.5 69.1* 71.5 68.2* 61.6*+& 8.4 * 12.5 *+& African American 7.1 * 9.7 *& 13.1 *+& 8.4* 9.0* 5.7+& Hispanic 8.2 8.5 11.8*+& 8.5 5.2 *+& 4.6*+& 8.3 8.7 Others 12.4* 11.4 10.7 11.6 12.4 * 12.4* 12.1* 10.1 & Reasons for removal (%) Neglect 55.4 *+ 65.2*+& 56.0* 59.9* 55.1 * 51.7*+ 58.2* 29.1+& Substance Abuse 28.1 *+& 32.5 * 35.1 *& 34.4* 21.5 *+& 17.9*+& 31.2* 11.0+& Physical Abuse 16.6 * 15.8 13.5* 17.1 14.6* 13.3 * 15.5* 18.6+& Sexual Abuse 4.0 * 2.9* 5.0 3.7* 2.7* 5.1 3.8* 6.6+X 14.8 *+ Child issue 45.4+& 10.3 *& 14.5* 10.8 *X 15.0 * 20.0*+& 13.5* Placement outcome (%) Reunification 66.3 *+ 58.3*+& 83.8+X 71.2 *& 50.7 *+& 69.1* 65.7* 82.8+& 33.4 *+& Within 90 days 42.4 *+ 32.9*+& 58.0*+& 47.4 **&* 49.2 *& 41.9* 69.4+& 11.5*+ 91-365 days 13.4 * 18.4 *+& 14.7* 10.1 +& 13.0* 13.4* 8.8^{+}

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	Short spells of TANF (25.2%)	Lose TANF (15.7%)	Gain Benefits (7.1%)	Steady TANF (5.8%)	Steady SSI (4.7%)	TANF+SSI (3.4%)	Ever used Assistance (61.8%, N=16,556)	No Assistance (38.2%, N=10,250)
366+	10.4 *	13.8 *+&	7.5 ^{*&}	9.0*	7.2 *&	6.9 ^{&}	10.4*	4.6 ^{+&}
Adoption	17.8 *+	21.0 ^{*+&}	7.1 <i>+&</i>	14.4 *&	24.9 *+&	13.0 *&	17.3*	6.1 ^{+&}
Still in care	12.4 *	16.6 *+&	6.8 ⁺ &	12.2*	18.9 *+&	14.5*	13.4*	6.3 ^{+&}
Aging out	1.4 *	2.0*	1.3*	1.2*	2.8 &	3.1&	1.7*	3.3+&
Other	2.1	2.1	1.0&	1.1	2.7 +	0.3&	1.8	1.6
short stay (%)	26.7 *	18.8 *&	32.3 *+&	22.8*	21.2 *&	29.3 *+	24.7*	54.0+&

Reasons for removal are not exclusive. Short stay indicates whether a child was removed for less than 8 days.

⁺significantly different from Steady TANF at p<.05;

 $\pounds_{\text{significantly different from Short Spells of TANF at p<.05;}$

* significantly different from No Assistance at p<.05