CHILDREN AND FAMILY RESEARCH CENTER

The Effect of Economic Resources on Reunification of Illinois Children in Substitute Care

Mary Keegan Eamon
Principal Investigator
School of Social Work
University of Illinois at Urbana-Champaign

May 20, 2002

This paper was supported in part by the
Children and Family Research Center, School of Social Work
University of Illinois at Urbana-Champaign
which is funded in part by the
Illinois Department of Children and Family Services.

The number of children placed into substitute care by the Illinois Department of Children and Family Services (DCFS) decreased by 35% between fiscal year 1995 and fiscal year 2000 (Children and Family Research Center, 2001). Despite this positive finding, studies consistently have found that once children living in Cook County are placed into substitute care, they are less likely to be returned home, and they stay in care longer than children living in other Illinois counties (Children and Family Research Center, 2001; Goerge, 1990; Goerge & Lee, 1998). This lower rate of reunification in Cook County has been attributed to a number of factors. These include placement with relatives, Cook County Juvenile Court proceedings, residence in disadvantaged neighborhoods in large cities such as Chicago, substance abuse, and poverty (Goerge & Lee, 1998). The primary goal of the present research was to examine the impact of economic hardship, controlling for the influence of important child, caretaker and family, and placement and service characteristics, on the rate of family reunification of children removed by DCFS from their homes in Cook County.

Economic hardship has been associated with child neglect and abuse in national studies (Pelton, 1994); and once a child is placed in alternative care, economic hardship at the time of placement also has predicted a slower rate of reunification and adoption (e.g., Barth, Courtney, Berrick, & Albert, 1994; Courtney & Wong, 1996). Consistent with Pelton's (1994) explanations for the relation between poverty and official reports of child abuse and neglect, a lack of economic resources might deter reunification for two main reasons. First, child welfare agencies would be less likely to reunite children if parents lacked adequate and safe housing, sufficient food, or adequate income to purchase basic necessities for the child. Second, the stressful conditions of living in poverty might divert parents' energy from actively working on the reunification plan to coping with depression and resolving the personal or family crises found more frequently among poor families.

In the State of Illinois, however, economic hardship at the time of the child's placement might not predict the rate of reunification. Since the establishment of the Norman Program following the adopting order of May 18, 1990, funds have been available to DCFS caseworkers to assist "Norman-certified" families to prevent the "...taking and retaining custody of children because of the parents' inability to obtain cash, food, shelter, or other subsistence..." (*Norman v. Johnson*, 1990). A recent Norman Program evaluation indicates that this program has positive outcomes for poor families (Shook & Testa, 1997). Findings demonstrated that Norman-certified families receiving cash assistance were less likely to have a child placed in substitute care. Once in care, the child was more likely to stay for a shorter time than Norman-certified families not receiving cash assistance.

Although not the main focus of the present research, this study examined the influence of other variables, many of which were expected to correlate with economic hardship (e.g., caretaker's substance abuse, mental illness, and physical health problems) and to predict the rate of reunification. In examining the impact of economic hardship and the influence of these other variables on the rate of family reunification of children removed from their homes in Cook County, the following specific research questions were addressed.

(1) Do children whose families have inadequate economic resources have a slower rate of reunification compared to children whose families have adequate economic resources?

(2) Do children who have particular characteristics--age, gender, race/ethnicity, and health/developmental or behavior/emotional problems--have a slower rate of reunification compared to other children?

(3) Do children whose caretakers and families have particular characteristics–family structure, caretaker's substance abuse, mental health, or physical health problems, and number of siblings--have a slower rate of reunification compared to other children?

(4) Do children who have particular placement and service characteristics–person who took custody, year entered placement, reason for placement, type of placement, and preplacement services--have a slower rate of reunification compared to other children?

Preliminary data analysis indicated that almost 34% of reunified children were returned home within 7 days. After these early returners were removed from the sample, only 13.56% of the children were returned home during the study period. These preliminary results prompted the investigation of two additional research questions.

(1) Among children who were returned home, do inadequate economic resources, and particular child, caretaker/family, and placement/service characteristics predict whether the child was returned home within 7 days, rather than after 7 days?

(2) Are inadequate economic resources and particular child, caretaker/family, and placement/service characteristics related to the rate of children's attaining permanent placement (reunification, adoption, or guardianship)?

Family Reunification Analysis Method

Sample and Data

Data from the Illinois Department of Children and Family Services (DCFS) Integrated Database and DCFS case records were used in this study. A random sample of 600 cases was drawn from all children in the DCFS integrated database who entered substitute care in Cook County for the first time between July 1, 1996, and December 30, 1999. If more than one child was removed from the same family, one child was randomly selected. Reunification status was observed until September 30, 2000; the length of the study was 4 years and 3 months. July 1, 1996, was selected as the beginning date of the study because it coincided with the mandated use of the Child Endangerment Risk Assessment Protocol (CERAP). CERAP items were used as indicators of several of the independent variables included in this analysis. A case reader (a former DCFS employee) was trained to use a predesigned instrument to record the necessary information from the case records. The case reader located 450 case records that contained sufficient information to be included in the study. Preliminary analysis indicated that these cases were significantly less likely to have been reunited, relative to the 150 cases that could not located or did not contain sufficient information. A second case reader (trained by the first case reader) located and recorded the necessary information from an additional 15 case records of children who were returned home during the study period. The final sample contained 465 of the 600 randomly sampled children.

Independent Variables

Family economic resources. Indicators of economic hardship were measured by DCFS caseworkers' responses to particular items or from their narrative assessments on

standard DCFS case record forms. Information was recorded from the most recent assessment prior to placement, or from the first assessment immediately after placement. On the CERAP, indicators of economic hardship were measured by a checked "yes" for items 6 and 9, indicating that the caretaker has not, or was unable to meet the child's medical care needs or the child's immediate needs for food, clothing, and/or shelter. On the Family Assessment Factor Worksheet (FAFW), the caseworker indicated the environmental conditions of the home as placing the child at an intermediate or high risk; or in the narrative assessment, the caseworker indicated that the family had problems with unemployment/low income, meeting the child's basic needs, providing housing or safe housing, or attaining health insurance or sufficient money to treat the child's health problem. On the Social History Assessment (SHA) the caseworker indicated a lack of housing (homelessness or living in a shelter or other temporary housing that could not accommodate the child), inadequate housing (unsafe, insufficient bedrooms, insect/rodent infested, or lack of basic utilities), or insufficient food. The caseworker indicated on the "Norman Class Certification for Reunification or Intact Family Cases" before the child was placed into substitute care that "living circumstances were a barrier" to the child remaining at home. Unfortunately, these items were not available for every case, because the applicable form was not in the case record or was incomplete. *Family economic resources* was, therefore, defined based on the information that was available. The variable was categorized into no indicators of hardship (reference), one indicator of hardship, and two or more indicators of hardship.

Child characteristics. Child characteristics drawn from the DCFS integrated database included the child's *age at entry into substitute care* (categorized into less than 1 year, reference; 1 through 4 years; 5 through 9 years; and 10 years or older), *gender* (female, the reference), and race/ethnicity (categorized into Caucasian, reference; African-American; and other). Information on c*hild health/developmental status* and

behavior/emotional status at the time of placement was taken from the case records. Whether the child had a health/developmental or a behavior/emotional problem was measured by the caseworker's assignment of an intermediate or high risk rating for these items on the FAFW (indicating that the child exhibited moderate to severe health/developmental or behavior/emotional problems), and was measured by the caseworker's indication in the SHA that the child had a chronic health/developmental or behavior/emotional problem. Dichotomous variables were defined for the presence of a child health/developmental and child behavior/emotional problem (1 = at least one indicator for the respective variable, and 0 otherwise). Another variable was constructed to measure the *presence of either child problem* (1 = one indicator of either type problem, and 0 otherwise).

Caretaker/family characteristics. *Family structure* (categorized into two parent, reference; mother only; and other, including mothers living with an unrelated partner or other adults, father-headed families, and other relative caretakers) was taken from the DCFS integrated database. Information on the *caretaker's substance abuse* and *mental* and *physical health status* was taken from the case records. Caretaker's substance abuse problem was measured by a checked "yes" on item 11 of the CERAP, indicating that the caretaker's alleged or observed drug or alcohol use may seriously affect his/her ability to supervise, protect, or care for the child; the caseworker rated on the FAFW that the caretaker's substance misuse placed the child at an intermediate or high risk, or the caretaker exhibited alcohol or drug problems that interfered with parenting; or the caseworker indicated in the SHA that the caretaker abused drugs or alcohol, or a substance abuse problem or the need for substance abuse treatment was present. Caretaker's mental health problem was measured by a checked "yes" on item 12 of the CERAP, indicating that the caretaker's alleged or observed mental illness or developmental disability may seriously affect his/her ability to supervise, protect, or care

for the child; the case-worker indicated on the FAFW that the caretaker's emotional or mental health status placed the child at an intermediate or high risk, or the caretaker exhibited a mental health problem; or the caseworker indicated in the SHA that a mental health diagnosis was present, there was a need for medication and/or treatment for a mental health problem, or symptoms of mental illness such as depression or suicidal thoughts were impacting parenting. Caretaker's physical health problem was measured by the case-worker indicating on the FAFW or in the SHA that the caretaker had a critical health issue, an acute or chronic disease, or a need for medication and/or treatment for a physical problem. Three dichotomous caretaker variables were then defined: substance abuse problem, mental health problem, and physical health problem (1 = at least one indicator was present for the respective variable, and 0 otherwise). A *Caretaker's risk index* also was defined, by adding the number of caretaker risks present (categorized into none, reference; one; two; and three risks). *Number of siblings* was taken from the DCFS integrated database (categorized into none, reference; one; and two or more siblings).

Placement/service characteristics. Information on the *person who took custody* (categorized into protective custody not taken, reference; DCFS worker; physician; and police; the latter two categories were collapsed for data analysis); the *year child entered substitute care* (categorized into 1996, reference; 1997; 1998; and 1999); *reason for substitute care placement* (categorized into other, including emotional and sexual abuse, neglect, and lack of supervision, reference; substance exposed infant; physical abuse; and substantial risk of physical injury); and *type of first substitute care placement* (categorized into relative care, reference; family or specialized foster care; and institution or group home) was drawn from the DCFS integrated database. Information on whether the family received *paid services before placement* was taken from the "Purchases of Services" form in the case record and included a wide range of services (e.g., counseling,

homemaker, wrap-around, parent training, drug treatment, and preventive services). The services variable was coded 1 if at least one service was provided, and 0 otherwise.

Frequencies and percentages for the independent variables for the study sample (N = 465) are presented in Table 1. As Table 1 indicates, over two-thirds (69.46%) of the sample had at least one indicator of economic hardship, and almost a quarter of the families had two or more economic hardship indicators. These children were relatively young, as over half (52.47%) of the children were less than one year of age (mean age was 3.24 years). The children were divided almost equally by gender, but were predominately African American (81.29%, compared with 9.25% Caucasian, and 9.46% other race/ethnicity). Over half (58.49%) of the children had a health/developmental problem, but far fewer children (approximately 21%) had a behavior/emotional problem. This latter finding likely reflects the higher percentage of infants and young children in the sample. However, almost 67% of the children had either a health/developmental or a behavior/emotional problem. Caretaker/family characteristics indicate that the children were removed from predominately mother-only families (63.23%), and of the three caretaker risk factors, substance abuse was the most prevalent. Whereas 81.08% of caretakers had a substance abuse problem, only 40.86% had a mental health problem, and 27.1% had a physical health problem. The caretaker risk index (including substance abuse, mental health, and physical health problems) indicates that only 6.88% of the caretakers had no risk factors, and more than 13% had all three risk factors present. Almost half of the children were from families with no siblings, and less than a third had more than two siblings.

Table 1

Child, Family, and Placement Characteristics of Children Placed into Substitute Care for the First Time in Cook County Between July 1996 and December 1999 (N = 465)

Variable	n	%	Variable	n	%
Family Economic Resources			*Caretaker's physical health status*		
No indicators of hardship	142	30.54	No physical health problem	339	72.90
One indicator of hardship	210	45.16	Physical health problem	126	27.10
Two or more indicators of hardship	113	24.30	*Caretaker's risk index* [b]		
Child Characteristics			No caretaker risks	32	6.88
Age at entry into substitute care			One caretaker risk	235	50.54
Less than 1 year	244	52.47	Two caretaker risks	136	29.25
1 through 4 years	79	16.99	Three caretaker risks	62	13.33
5 through 9 years	82	17.63	*Number siblings*		
10 years or older	60	12.91	No siblings	231	49.68
Gender			One sibling	91	19.57
Female	233	50.11	Two or more siblings	143	30.75
Male	232	49.89	**Placement/Service Characteristics**		
Race/Ethnicity			*Person who took custody*		
Caucasian	43	9.25	Protective custody not taken	106	22.80
African American	378	81.29	DCFS worker	288	61.94
Other	44	9.46	Physician	60	12.90
Child health/developmental status			Police	11	2.36
No health/developmental problem	193	41.51	*Year child entered substitute care*		
Health/developmental problem	272	58.49	1996	83	17.85
Child behavior/emotional status			1997	144	30.97
No behavior/emotional problem	367	78.92	1998	135	29.03
Behavior/emotional problem	98	21.08	1999	103	22.15
Presence of either child problem			*Reason for substitute care placement*		
No child problems	154	33.12	Other [c]	102	21.94
At least one child problem	311	66.88	Substance exposed infant	72	15.48
Caretaker/Family Characteristics			Physical abuse	39	8.39
Family structure			Substantial risk of physical injury	252	54.19
Two parent	78	16.77	*Type first substitute care placement*		
Mother only	294	63.23	Relative care	142	30.54
Other [a]	93	20.00	Family or specialized foster care	70	15.05
Caretaker's substance abuse status			Institution or group home [d]	253	54.41
No substance abuse problem	88	18.92	*Paid services before placement*		
Substance abuse problem	377	81.08	No services provided	416	89.46
Caretaker's mental health status			At least one service provided	49	10.54
No mental health problem	275	59.14			
Mental health problem	190	40.86			

[a] Includes mothers living with an unrelated partner or other adults, father-headed families, and other relative caretakers.

[b] Includes presence of substance abuse, mental health, and/or physical health problems.

[c] Includes emotional and sexual abuse, neglect, and lack of supervision; lack of supervision accounted for 76% of other reason for substitute care placement.

[d] Only 3 children were placed into group homes.

In almost 23% of the cases, protective custody was not taken. DCFS workers took custody in the largest percentage (61.94%) of placements, with physicians and police taking custody in 15.26% of the cases. The large percentage of children (77.2%) taken into protective custody by the DCFS worker, a law enforcement officer, or a physician indicates the serious nature of the abuse or neglect among the majority of these children. As would be expected, the majority (60%) of the children entered care during 1997 and 1998, the only two full years during the study period. Substantial risk of physical injury accounted for over one-half (54.19%) of the reasons for substitute care placement, followed by approximately 22% for "other" reason (emotional and sexual abuse, neglect, and lack of supervision; the latter accounted for 76% of the cases), 15.48% for substance exposure, and 8.39% for alleged physical abuse. Over one-half of the children were placed (or custody was taken) in an institution or group home (only 3 children were placed in a group home), 30.54% were placed in relative care, and 15.05% were placed in family or specialized foster care. Finally, 10.54% of families received at least one paid service before the child was placed.

Dependent Variable and the Cox Model

Family reunification was defined as the number of weeks from the date of substitute care placement to the date of reunification *or* the date the child was *censored*, that is, was no longer observed or eligible for reunification. This information was obtained from the DCFS Integrated Database. In order to assess the independent effect of inadequate economic resources and the child, caretaker/family, and placement/service characteristics on reunification, while controlling for the effects of the other independent variables, a Cox proportional-hazards regression model was estimated. A Cox proportional-hazards model defines an unobserved variable (a hazard rate) as the dependent variable. The hazard rate can be interpreted as the probability that a child made a move from a substitute care placement to the parent's home during a particular week, given that the child was not censored and had not yet been reunited. Observations

were treated as censored on the date that the child left substitute care for a reason other than reunification (adoption, ran away/was missing, or died), had guardianship transferred to a private individual, reached the age of 18 years, the case was closed while the child was still in care, or on the final date of the study (9/30/00) for children who were still in substitute care.

Table 2 presents frequencies and percentages for the 376 cases that were censored for various reasons (89 children were reunited) by the end of the study. The majority of the censored cases (appr. 68%) continued in substitute care on September 30, 2000. Adoption accounted for close to 22% of the censored cases, and runaways, missing, or unknown status accounted for approximately 5% of these cases. The remaining 5.59% were censored for guardianship being transferred to a private individual, court ordered release, case closing for *other* reason, and death.[1] Among children who were reunited, 25% were placed back into care during the study period. However, the percentage of children returned to substitute care likely is larger, as this figure does not include placements back into care after September 30, 2000.

Table 2
Censored Cases (exited substitute care for other reasons than reunification, were no longer eligible for reunification, or continued in substitute care on 9/30/00)

Censoring Reason	Frequency	Percent
Child continued in substitute care	255	67.82
Adoption completed [a]	81	21.54
Runaway, missing, or status unknown	19	5.05
Subsidized guardianship	9	2.39
Child turned 18 years of age	6	1.60
Court ordered release [b]	1	.27
Cased closed for "other" reason [b]	2	.53
Child died	3	.80
Total	376	100.00

Note: Of the 89 children who were reunited, 25% were placed back into substitute care during the study period.

[a] Of those children who were adopted, 23% were adopted by relatives.

[b] At case closing, these children were in relative care.

Data Analysis

Data analysis began by investigating possible sample selection bias caused by systematic differences between the 465 cases that were located and contained sufficient information to be included in the analysis and the 135 cases that were excluded because they could not be located or contained insufficient information. Results of chi-square analyses indicated significant differences between the two groups for a number of variables. Those variables included reunification ($\chi^2[1, N = 600] = 14.67, p < .001$), with a lower proportion (19.14%) of children being reunited in the analyzed group, as compared to 34.81% of children being reunited in the unanalyzed group; child's age at entry into substitute care ($\chi^2[1, N = 600] = 21.33, p < .001$); race/ethnicity ($\chi^2[1, N = 600] = 6.57, p < .05$); family structure ($\chi^2[1, N = 600] = 12.18, p < .01$); year the child entered substitute care ($\chi^2[1, N = 600] = 12.72, p < .01$); and reason for substitute care placement ($\chi^2[1, N = 600] = 10.60, p < .05$). Many of these differences are likely attributed to the larger percentage (36.30%) of unanalyzed cases that were closed, compared with 18.49% of the analyzed cases, $\chi^2[1, N = 600] = 19.01, p < .001$. The two case readers reported being less able to locate closed cases.

When the proportional-hazards assumption of the Cox model (which assumes proportional hazards across all observations, thus the effect of each independent variable should be equal at all points in time; Allison, 1995) was tested for the covariates in Table 1, the assumption frequently was violated.[2] However, no serious departures from the assumption were found when the 30 children who were returned home within 7 days were eliminated from the analysis. This latter finding is consistent with another Illinois reunification study that found children who were returned home within four days differed systematically from children who remained in care for longer periods of time (Goerge & Lee, 1998). Reunification of these short-term placements are determined by court

proceedings or the DCFS caseworker's decision after further investigation that protective custody or substitute care placement is not warranted (Children and Family Research Center, 1997). In addition, when the 56 children who were reunited within 7 days were removed from the 600 random sample, chi-square analyses revealed few differences between the group that was included in the final analysis (n = 435) and the group that was excluded (n = 109) because case records could not be located or the case lacked sufficient information. The only differences found between the two groups were for the child's age at entry into substitute care ($\chi^2[1, N = 544] = 14.63$, $p < .01$); reason for substitute care placement ($\chi^2[1, N = 544] = 9.64$, $p < .05$); and year the child entered substitute care ($\chi^2[1, N = 544] = 15.17$, $p < .01$). Because including the 30 children who were reunited within 7 days resulted in violations of the proportional hazards assumption, and in many more significant differences for variables between the analyzed and unanalyzed groups, these 30 cases were eliminated from the multivariate analysis reported in the results section. A separate analysis of the variables that predicted reunification within 7 days (n = 30), rather than after 7 days (n = 59), was conducted and results reported in a subsequent section of this report.

Eliminating 30 cases from the 465 sample not only reduced the sample size, but decreased the percentage of children who returned home from 19.14% to 13.56% (86.44% of the cases were censored). Because of the small percentage of children who experienced reunification, several steps were used to determine a smaller set of variables to be included in the final multivariate model. A forward stepwise procedure (which provides both univariate chi-squares for the association of individual variables with survival time and a forward stepwise sequence of chi-squares for testing the variables as a set; Allison, 1995), was conducted on the variables displayed in Table 1.[3] Based on significance of the univariate chi-squares (at the $p < .10$ level), categories of several

independent variables with more than two categories were collapsed. Two approaches to a forward stepwise procedure were used to determine the final variables. The variables were grouped by child, family economic resources and caretaker/family characteristics and placement/service characteristics; then all the variables were analyzed simultaneously. The final variable selection was the same, regardless of how the stepwise procedure was conducted. This final set of variables was then examined in a Cox proportional-hazards model.[4]

Results

The Hazard Function for Reunification

The hazard function gives the probability that a child will be reunited within an interval of time, given that the child was not censored or already returned home. Because of the few data points in this analysis (46 unique weeks), a few of the observations resulted in the hazard function graph being visually difficult to interpret, thus the graph is not presented. The hazard function indicates that the probability of a child being reunited is relatively high for the first ten weeks, during which time approximately 20% of the reunified children were returned home. The probability that a child was reunited increased between weeks 30 and 40, then declined rapidly. By the end of one year, 53.54% of the reunited children were returned home, and by the end of week 130 (two and one-half years), approximately 92% of these children were returned home. No child was returned home after week 196 (about 3 years and 9 months). These findings are consistent with other studies demonstrating that the longer children remain in substitute care placement, the less likely they will be reunited with their families (Courtney & Wong, 1996; Goerge & Lee, 1998).

Multivariate Results

The results for the multivariate Cox proportional-hazards model for family reunification are presented in Table 3. Parameter estimates for economic hardship, race/ethnicity, health/developmental or behavior/emotional problem, presence of either child problem, family structure, caretaker's mental health and physical health problem, caretaker risk index, reason for substitute care placement, and type of first substitute care placement are not presented in Table 3 because univariate chi-square analyses indicated

that these variables were not related significantly (at the $p < .10$ level) to reunification. Although bivariate analyses indicated that children aged five years and older (relative to children less than age one) were reunited at a statistically significant faster rate, the age variable was eliminated in the forward stepwise procedure. These findings are in contrast with a recent reunification study from Cook County foster care, which found that African American children (relative to white children), children placed with relatives (relative to other type placements), infants (relative to children between the ages of 1 and 3), and children with a disability were reunited at a slower rate (Wells et al., 2000). These discrepancies might be due to the low percentage of children who were reunited and to the relatively small sample size (465 compared with 4,895) in the present analysis.

As indicated in Table 3, when the effects of all other variables in the model were held constant, being male was related significantly to the hazard rate of reunification at the $p < .10$ level, and four other variables were related at the $p < .05$ level. The risk ratio indicates that male children were reunited at a rate that was 39% slower than were female children. This variable, however, did not reach statistical significance at the traditional $p < .05$ level, and might be a chance finding. Children whose caretaker had a substance abuse problem were reunited at a rate that was 45% slower than children whose caretaker had no indicators of substance abuse. Children who had one or more siblings were reunited at a rate 113% faster than children who had no siblings. This finding probably reflects the increased likelihood that when a child has siblings, the sibling group is returned home at the same time.

Children for whom a physician or police officer took protective custody, relative to children for whom protective custody was not taken, were reunited at a rate 154% faster. This finding suggests that after further DCFS investigation, allegations of

maltreatment for children taken into custody by a physician or police officer were more likely to be unfounded or were of a less serious nature than allegations for children for whom protective custody was not taken. No significant differences were found between children whose custody was taken by a DCFS worker and children for whom protective custody was not taken. Finally, children who entered substitute care after 1996 (in 1997, 1998, or 1999) were reunited at a rate 162% faster than children who entered substitute care in 1996.[5] This finding might reflect the early DCFS reforms aimed at reducing the time children spent in the child welfare system that were initiated in 1997 in response to a legislatively mandated Permanency Initiative. In order to compare results in this sample with the other Cook County analysis, which found that children placed into substitute care after 1997 were reunited at a faster rate (Wells et al., 2000), a variable measuring whether the child was placed into substitute care after 1997 was substituted for the after 1996 variable. The coefficient for this variable was not statistically significant.

Table 3
Cox Proportional-Hazards Model for Family Reunification (N = 435)

Variable	n	%	Parameter Estimate	Standard Error	Wald Chi-Square	*p*	Risk Ratio
Child Characteristics							
Gender							
Female	218	50.11					
Male	217	49.89	-.496	.272	3.311	.068	.609†
Caretaker/Family Characteristics							
Caretaker's substance abuse status							
No Substance abuse problem	73	16.78					
Substance abuse problem	362	83.22	-.598	.293	4.161	.041	.550*
Number siblings							
No siblings	221	50.80					
One or more siblings	214	49.20	.756	.287	6.934	.009	2.129**
Placement/Service Characteristics							
Person who took custody							
Protective custody not taken	106	24.37					
DCFS worker	272	62.53	.309	.358	.749	.387	1.363
Physician/police	57	13.10	.930	.418	4.959	.026	2.535*
Year child entered substitute care							
1996	81	18.62					
1997, 1998, or 1999	354	81.38	.964	.444	4.702	.030	2.621*

	Testing Null Hypothesis (All Parameters = 0)				
	Without Covariates	With Covariates	Model Chi-Square	df	*p*
-2 log likelihood	652.326	622.828	29.499	6	< .0001

Number of events: 59; Censored: 376; Percent censored: 86.44

Note: Reference category is listed first for each categorical variable.
† $p < .10$, * $p < .05$, ** $p < .01$

Analysis of Early Reunifications Compared With Later Reunifications

As discussed previously in the Data Analysis section of the Family Reunification Analysis, 89 of the 465 children were reunited with their families during the study period. Among the 89 reunited children, 30 children were reunited within 7 days. These early returners were removed from the reunification analysis because their inclusion frequently violated the proportional hazards assumption and resulted in a number of significant differences for variables between the cases included in the analysis and the cases excluded because they could not be located or contained insufficient information. To investigate whether economic resources and child, caretaker/family, and placement/service characteristics predicted reunification within 7 days, rather than after 7 days, further analyses were completed.

Data Analysis

The data analysis was conducted in three main stages. First, a logit analysis of bivariate contingency tables was conducted on the variables presented in Table 4. Based on this analysis, variables that were significant at the $p < .10$ level were further evaluated in a forward stepwise logistic procedure. The forward stepwise selection determined the final variables that were estimated in a multivariate logistic regression. The multivariate logistic regression allows for examining the effect that each independent variable contributes to the log odds that the child was returned home within 7 days, rather than returned home after 7 days, while adjusting for the effects of the other independent variables.

Results

Bivariate Results

The bivariate contingency table results are presented in Table 4. Compared with variable categories shown in Table 1, several of the variable categories presented in Table 4 were collapsed because of zero cell frequencies. No child was returned home within 7 days if custody was not taken. Thus, custody not taken and DCFS worker taking custody were combined into one category, and the reference variable was physician/police took custody. No substance exposed infant went home within 7 days. Thus, this variable was combined with substantial risk of physical injury, and the reference variable was *other* reason for substitute care placement (physical, emotional, and sexual abuse, neglect, and lack of supervision). No child placed into foster care went home within 7 days. Thus, this variable was combined with relative care, and the reference variable was institutional placement. Finally, no child went home within 7 days and had paid services provided prior to removal. The services variable was, therefore, removed from the analysis.

As presented in Table 4, the bivariate contingency table results indicate that family economic resources, presence of either a child health/developmental problem or a behavior/emotional problem, caretaker substance abuse problem, caretaker risk index, person who took custody, year the child entered substitute care, reason for substitute care placement, and type of substitute care placement were related (at the $p < .10$ level) to whether the child was returned within 7 days, rather than after 7 days. These variable were included in a forward stepwise logistic procedure.[6]

Table 4

Child, Family, and Placement Characteristics of Children Placed into Substitute Care and Returned Home Within 7 Days vs Children Returned Home After 7 Days: Bivariate Contingency Table

Variable	Returned Within 7 Days (N = 30)		Returned After 7 Days (N = 59)			All Children (N = 89)	
	n	%	n	%	Significance	N	%
Family Economic Resources					$p < .01$		
No indicators of hardship	12	40.00	18	30.51		30	33.71
One indicator of hardship	4	13.33	28	47.46		32	35.96
Two or more indicators of hardship	14	46.67	13	22.03		27	30.33
Child Characteristics							
Age at entry into substitute care					N.S.		
Less than 1 year	11	36.67	24	40.68		35	39.33
1 through 4 years	3	10.00	10	16.95		13	14.61
5 through 9 years	9	30.00	14	23.73		23	25.84
10 years or older	7	23.33	11	18.64		18	20.22
Gender					N.S.		
Female	15	50.00	37	62.71		52	58.43
Male	15	50.00	22	37.29		37	41.57
Race/Ethnicity					N.S.		
Caucasian	4	13.33	7	11.86		11	12.36
African American	23	76.67	45	76.27		68	76.40
Other	3	10.00	7	11.87		10	11.24
Child health/developmental status					N.S.		
No health/developmental problem	11	36.67	31	52.54		42	47.19
Health/developmental problem	19	63.33	28	47.46		47	52.81
Child behavior/emotional status					N.S.		
Behavior/emotional problem	7	23.33	13	22.03		20	22.47
No behavior/emotional problem	23	76.67	46	77.97		69	77.53
Presence of either child problem					$p < .05$		
No child problem	6	20.00	25	42.37		31	34.83
At least one child problem	24	80.00	34	57.63		58	65.17
Caretaker/Family Characteristics							
Family structure					N.S.		
Two parent	10	33.33	11	18.64		21	23.60
Mother only	15	50.00	32	54.24		47	52.80
Other [a]	5	16.67	16	27.12		21	23.60
Caretaker's substance abuse status					$p < .10$		
No substance abuse problem	15	50.00	17	28.81		32	35.96
Substance abuse problem	15	50.00	42	71.19		57	64.04
Caretaker's mental health status					N.S.		
No mental health problem	18	60.00	32	54.24		50	43.82
Mental health problem	12	40.00	27	45.76		39	56.18
Caretaker's physical health status					N.S.		
No physical health problem	24	80.00	46	77.97		70	78.65
Physical health problem	6	20.00	13	22.03		19	21.35

Table 4 (Continued)
Child, Family, and Placement Characteristics of Children Placed into Substitute Care and Returned Home Within 7 Days vs Children Returned Home After 7 Days: Bivariate Contingency Table

Variable	Returned Within 7 Days (N = 30)		Returned After 7 Days (N = 59)			All Children (N = 89)	
	N	%	N	%	Significance	N	%
Caretaker's risk index [b]					$p < .01$		
No caretaker risk	11	36.67	5	8.47		16	17.97
One caretaker risk	7	23.33	31	52.55		38	42.70
Two or more caretaker risks	12	40.00	23	38.98		35	39.33
Number siblings					N.S.		
No siblings	10	33.33	18	30.51		28	31.46
One sibling	9	30.00	18	30.51		27	30.34
Two siblings or more	11	36.67	23	38.98		34	38.20
Placement/Service Characteristics							
Person who took custody					$p < .10$		
Physician/police	14	46.67	13	22.03		27	30.34
DCFS worker/custody not taken	16	53.33	46	77.97		62	69.66
Year child entered substitute care					$p < .10$		
1996	2	6.67	7	11.86		9	10.11
1997	8	26.67	24	40.68		32	35.96
1998	7	23.33	19	32.20		26	29.21
1999	13	43.33	9	15.26		22	24.72
Reason for substitute care placement					$p < .05$		
Other [c]	17	56.67	19	32.20		36	40.45
Substance exposed infant/substantial risk of physical injury	13	43.33	40	67.80		53	59.55
Type first substitute care placement					$p < .001$		
Institution [d]	25	83.33	25	42.37		50	56.18
Relative and foster care	5	16.67	34	57.63		39	43.82

Notes: Categories were collapsed for several variables due to zero frequencies in cells. The services variable also was eliminated from the analysis because no child who went home within 7 days was provided services. Reference category is listed first for each categorical variable.

[a] Includes mothers living with an unrelated partner or living with other adults, father-headed families, and relative families.

[b] Includes presence of substance abuse, mental health, and/or physical health problems.

[c] Includes physical, emotional, and sexual abuse, neglect, and lack of supervision; lack of supervision accounted for 76% of other reason for substitute care placement

[d] No children were placed into group homes.

As a result of this analysis, family economic resources, presence of either a child health/developmental problem or a behavior/emotional problem, reason for substitute care placement, and type of first substitute care placement were estimated in a multivariate logistic model. These results are presented in Table 5.

Multivariate Results

As indicated in Table 5, children whose families had one indicator of economic hardship, relative to no indicators, were .11 as likely to be returned within 7 days, rather than after 7 days. However, the presence of two or more indicators of hardship was not related significantly to reunification within 7 days. Children who had at least one health/developmental or behavior/emotional problem were, surprisingly, 6.43 times more likely to be returned within 7 days. Children or infants who were placed into substitute care for substance exposure or substantial risk of physical injury were .29 times as likely to be returned home within 7 days, compared with children who were placed into substitute care for other reasons (physical, emotional, and sexual abuse, neglect and lack of supervision). Finally, children who were placed in relative or foster care were .09 times as likely to be returned within 7 days, relative to children placed into institutions.[7]

Table 5

Multivariate Logit Model of Child, Family, and Placement Characteristics Predicting Reunification Within 7 Days, for Children Who Were Reunited (N = 89)

Variable	n	%	Parameter Estimate	Standard Error	*p*	Odds Ratio
Family Economic Resources						
No indicators of hardship	30	33.71				
One indicator of hardship	32	35.96	-2.172	.788	.006	.114
Two or more indicators of hardship	27	30.33	.385	.351	.273	1.470
Child Characteristics						
Presence of either child problem						
No child problem	31	34.83				
At least one child problem	58	65.17	1.861	.719	.010	6.430
Placement/Service Characteristics						
Reason for substitute care placement						
Other [a]	36	40.45				
Substance exposed infant and substantial risk of physical injury	53	59.55	-1.239	.623	.047	.290
Type first substitute care placement						
Institution [b]	50	56.18				
Relative and foster care	39	43.82	-2.392	.693	.001	.091

Notes: Statistical significance of model: $\chi^2(5, N = 89) = 40.62$, $p < .001$. Reference category is listed first for each categorical variable.

[a] Includes physical, emotional, and sexual abuse, neglect, and lack of supervision; lack of supervision accounted for 76% of other reason for substitute care placement

[b] No children were placed into group homes.

Permanency Analysis

The final analysis investigated whether economic resources, and child, caretaker/family, and placement/service characteristics were associated with the rate of children's attaining permanency. Consistent with the 1997 Adoption and Safe Families Act (ASFA), permanency was defined as the number of weeks from the date of substitute care placement to the date of family reunification, adoption, or transfer of guardianship to a private individual *or* the date the child was "censored," that is, no longer observed or eligible for a permanency placement. Observations were treated as censored on the date that the child left substitute care for a reason other than permanency (aged out, ran away/was missing, or died), the case was closed while the child was still in care, or on the final date of the study (9/30/00) for children who were still in substitute care. Of the 435 children, 149 (34.25%) were reunited, adopted, or had guardianship transferred to a private individual during the study period. In contrast, only 13.56% of these children (n = 59) were returned home during the study period, as reported in the first section of this report. A summary of the types of permanency placements is presented in Table 9. As this table indicates, almost 40% of these children were returned home, 54.36% were adopted, and 6% had guardianship transferred to a private individual.

Table 9
Children Placed into Substitute Care in Cook County between July 1996 and December 1999 and Were Reunited, Adopted, or Had Guardianship Transferred to a Private Individual by September 30, 2000[a]

	Subsample (N = 435)		Entire Sample (N = 544)	
Type of Permanency	n	%	n	%
Reunited with family	59	39.60	80	40.61
Adopted				
Relative adoption	19	12.75	23	11.68
Other adoption	62	41.61	83	42.13
Subsidized guardianship	9	6.04	11	5.58
Total	149	100.00	197	100.00

[a] Children who were returned home within 7 days were excluded from the analysis.

Preliminary analyses determined that none of the variables measured by case record information (economic hardship; child health/developmental and behavior/emotional status; caretaker's substance abuse, mental health, and physical health status; and receipt of paid services before placement) were related to the rate of permanency. Subsequent analyses, therefore, were conducted using administrative data for the 544 children, excluding the 56 early returners. Of the 544 children, 197 (36.21%) were reunited, adopted, or had guardianship transferred to a private individual during the study period; only 14.71% of these children (n = 80) were reunited. A summary of the types of permanency placements for the 544 children also appears in Table 9.

Descriptive Results

Descriptive information for the variables included in further analysis of the rate of permanency for the 544 children is presented in Table 10. The frequency distributions for the variables are similar to those reported in previous tables of this report. The final variables estimated in the Cox proportional-hazards permanency model were determined using the same procedures as described in the Methods section of the reunification analysis.

Table 10
Child, Family, and Placement Characteristics of Children Placed into Substitute Care for the First Time in Cook County Between July 1996 and December 1999 (N = 544)

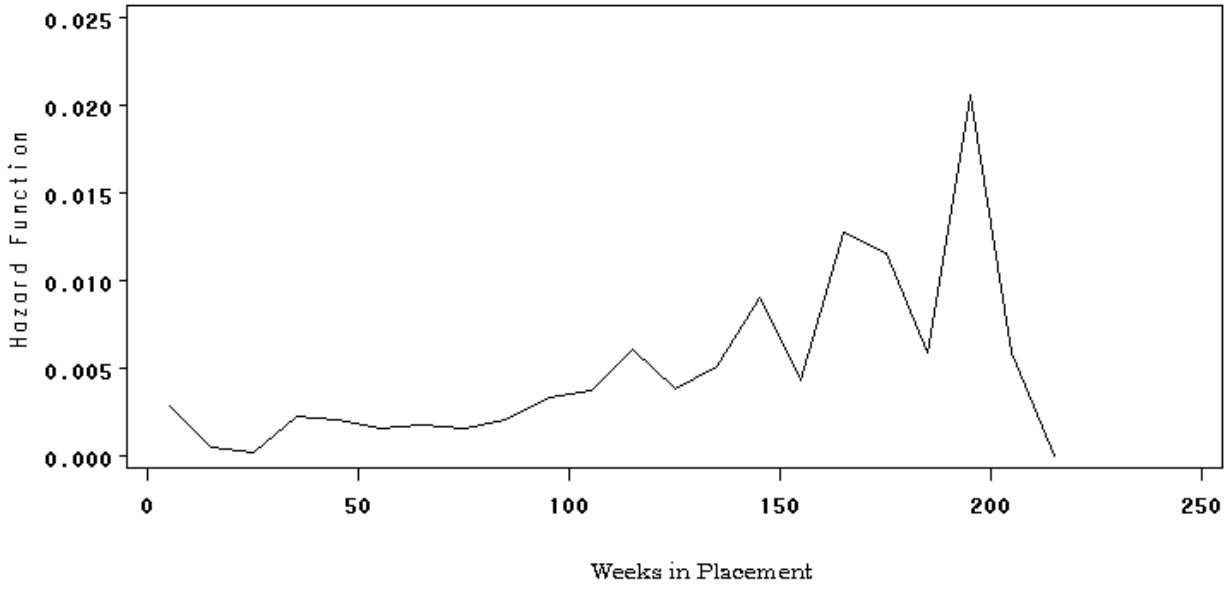
Variable	n	%	Variable	n	%
Child Characteristics			**Placement/Service Characteristics**		
Age at entry into substitute care			*Person who took custody*		
Less than 1 year	280	51.47	Protective custody not taken	136	25.00
1 through 4 years	103	18.93	DCFS worker	335	61.58
5 through 9 years	83	15.26	Physician/police	73	13.42
10 years and older	78	14.34	*Year child entered substitute care*		
Gender			1996	116	21.32
Female	272	50.00	1997	172	31.62
Male	272	50.00	1998	157	28.86
Race/Ethnicity			1999	99	18.20
Caucasian	57	10.48	*Reason for substitute care placement*		
African American	434	79.78	Other [b]	125	22.98
Other	53	9.74	Substance exposed infant	82	15.07
Caretaker/Family Characteristics			Physical abuse	42	7.72
Family structure			Substantial risk of physical injury	295	54.23
Two parent	89	16.36	*Type first substitute care placement*		
Mother only	340	62.50	Relative care	174	31.99
Other [a]	115	21.14	Family or specialized foster care	91	16.73
Number siblings			Institution or group home [c]	279	51.28
No siblings	271	49.82			
One sibling	105	19.30			
Two or more siblings	168	30.88			

[a] Includes mothers living with an unrelated partner or other adults, father-headed families, and other relative caretakers.
[b] Includes emotional and sexual abuse, neglect, and lack of supervision, with the latter accounting for 73.6%; physical abuse was collapsed with this category in subsequent analyses.
[c] Only 3 children were placed into group homes.

Estimated Hazard Function for Permanency

Figure 1 depicts the estimated hazard function for permanency. The function gives the probability that a child was reunited, adopted, or had guardianship transferred to a private individual during a specified time period, given that the child was eligible for a permanency placement. Similar to the survival function for reunification, the probability for permanency declines after week 10 (by which time only 8% of children who attained permanency were in permanency placements). But, beginning in week 30 (seven and one-half months after placement), the hazard function for permanency increases fairly consistently through week 200 (approximately 3.8 years). This increasing hazard likely reflects the relatively large percentage of adoptions, which usually takes more than two years to complete (Children and Family Research Center, 2001). Only one child attained permanency after week 199, which was in the 207th week, approximately 4 years after placement.

Figure 1. Estimated Hazard Function for Permanency



Multivariate Results

After the final set of variables was selected by a univariate chi-square analysis and a forward stepwise procedure, the proportional hazards assumption for the variables was tested. Examination of the log-log survival plots for the three substitute care placement groups (the log-log survivor functions should be parallel), revealed that the hazards function for the substance exposed infant group clearly violated the proportional hazards assumption. Compared with the "other" and substantial risk of physical harm groups, the substance exposed infants attained permanency at a lower rate up until week 40. Shortly after the 40th week, the hazard function for the substance exposed infant group diverged and, compared with the other groups, these infants attained permanency at a faster rate. Because of this violation, a time-dependent covariate was formed; the variable was coded 1 when weeks in out-of-home placement was more than 40 weeks, and coded as 0 elsewhere. Then a product of that variable and the substance exposed infant category was formed and included in the multivariate Cox model. Because the coefficient for this variable reached statistical significance at the $p = .03$ level, and the model including the interaction term provided a better fit with the data than the main effects model, the interaction term was estimated in the final multivariate Cox model.

The results of the multivariate Cox model for permanency is presented in Table 11. As shown in this table, the risk ratio for male children does not reach statistical significance in the multivariate model, but African American children attained permanency at a rate approximately 40% slower than Caucasian children. Although only statistically significant at the $p < .10$ level, children who had more than one sibling were reunited, adopted, or had guardianship transferred to a private individual at a rate 27% slower than children who had one or no siblings. If a DCFS worker took custody, the rate of permanency was not significantly different from zero, relative to custody not

being taken; but if a physician or police took custody, the child attained permanency at a rate 97% faster. Prior to the inclusion of the interaction between substance exposed infant and weeks in substitute care more than 40 weeks into the Cox model, a significant difference in the rate of permanency was found for infants placed into substitute care for substance exposure, compared with *other* reason (abuse, neglect, or lack of supervision). After inclusion of the interaction term, this variable was no longer significant, and the rate of attaining permanency for substance exposed infants after the 40th week was approximately 398% faster relative to children who were placed for *other* reasons. Finally, children whose first substitute care placement was in an institution or group home, as compared to relative care, attained permanency at a rate 35% slower.

Table 11
Cox Proportional-Hazards Model for Permanency (N = 544)

Variable	n	%	Parameter Estimate	Standard Error	Wald Chi-Square	*p*	Risk Ratio
Child Characteristics							
Gender							
Female	272	50.00					
Male	272	50.00	-.205	.145	1.990	.158	.815
Race/Ethnicity							
Caucasian	57	10.48					
African American	434	79.78	-.513	.234	4.794	.029	.599*
Other	53	9.74	-.105	.306	.118	.731	.900
Caretaker/Family Characteristics							
Number siblings							
No or one siblings	271	49.82					
Two or more siblings	273	50.18	-.315	.175	3.216	.073	.730†
Placement/Service Characteristics							
Person who took custody							
Protective custody not taken	136	25.00					
DCFS worker	335	61.58	.283	.176	2.602	.107	1.328
Physician/police	73	13.42	.679	.260	6.822	.009	1.971**
Reason for substitute care placement							
Other [a]	167	30.70					
Substance exposed infant	82	15.07	-.861	.746	1.334	.248	.423
Substantial risk of physical injury	295	54.23	.200	.185	1.169	.280	1.222
Substance exposed infant x weeks in substitute care > 40 weeks	--	--	1.605	.751	4.567	.033	4.976*
Type first substitute care placement							
Relative care	174	31.99					
Family or specialized foster care	91	16.73	-.052	.202	.065	.798	.950
Institution or group home [c]	279	51.28	-.431	.181	5.687	.017	.650*

	Testing Null Hypothesis (All Parameters = 0)				
	Without Covariates	With Covariates	Model Chi-Square	Df	*p*
-2 log likelihood	2024.05	1991.16	32.89	11	< .001

Number of events: 197; Censored: 347; Percent censored: 63.79

Note: Reference category is listed first for each categorical variable.
[a] Includes physical, emotional, and sexual abuse, neglect, and lack of supervision
† $p < .10$, * $p < .05$, ** $p < .01$

Discussion and Practice Implications

The main objective of this study was to determine whether economic hardship predicted the rate of family reunification of children removed from their homes for the first time in Cook County, controlling for the influence of important child, caretaker and family, and placement and service characteristics. The results indicate that when children who were reunited within 7 days were removed from the analysis, economic hardship was not related to the rate of family reunification. Economic hardship also was not related to the rate of children's attaining permanency (family reunification, adoption, or transfer of guardianship to a private individual). However, children whose families had one indicator of economic hardship, relative to no indicators, were .11 as likely to be returned within 7 days, rather than after 7 days. The presence of two or more indicators of hardship was not related significantly to reunification within 7 days.

A failure to find a relation between economic hardship and family reunification (after the early returners were removed from the analysis) and attaining permanency might be due to several factors. First, the indicators of economic resources used in the analysis might not have been reliable. Case readers were unable to record consistently the required information from the case records because of missing or incomplete case forms. Second, given the likelihood that the majority of the families in the study were of lower socioeconomic class, distinguishing families who were experiencing economic hardship might have been difficult even if case records were complete. Third, using a direct measure of income or social program eligibility (e.g., Medicaid) might have provided a more reliable indicator of economic hardship; however, such measures pose several problems as well. For example, researchers have found only a weak association between material or economic resources and family income (Mayer & Jencks, 1989), and ensuring the accuracy of reported income (particularly when illegal activity is involved)

poses additional problems. Using eligibility status for social programs is also problematic, because many families are likely to have incomes that fluctuate close to eligibility thresholds, yet these families are coded as nonpoor.

Finally, economic hardship might not have an independent effect on the rate of reunification or permanency in Illinois, regardless of the way it is measured. This could be due to the assistance that Norman-certified families are given through the Norman Program. Caseworkers also might find that families with the fewest economic resources qualify for more public and private assistance, or these cases might be more likely to be dismissed by the judge at the preliminary hearing. This interpretation is consistent with the finding that children whose families had more than one indicator of economic hardship were just as likely to be returned home within 7 days, rather than after 7 days, as were children whose families had no indicators of economic hardship. But, children whose families had one indicator of economic hardship, relative to no indicators, were less likely to be returned within 7 days. Possibly, families with fewer indicators of economic hardship have fewer external resources available, are less likely to qualify for Norman funds, or have additional problems that warrant continued custody. These findings, however, must be interpreted with caution. As previously reported, a lower proportion of children were reunited in the analyzed group, as compared to the unanalyzed group. The excluded information could have resulted in biased estimates. Despite this caution, this latter finding suggests that when caseworkers assess the presence of even a few indicators of economic hardship, assisting these families in attaining economic resources might result in earlier family reunifications.

Although not the main objective of this analysis, several other findings are noteworthy. First, a relatively small percentage (13.56%) of children in the analyzed group were returned home after the early returners were removed (19.14% before the early returners were removed). These percentages were a little larger in the entire 600

random sample (22.66% for all children; 14.71% with the earlier returners removed). These figures must be interpreted with caution, because these children were in substitute care for varying lengths of time (ranging from 6 months to 4 years and 3 months). However, these low reunification rates, in conjunction with the 25% of all reunited children who were placed back into substitute care during the study period, suggest a poor prognosis for children's attaining permanency through family reunification in Cook County. When permanency was defined more broadly, DCFS was more successful in assisting children who were removed from their homes in Cook County to attain permanent placements. Among the 544 children, 36.21% of them were reunited, adopted, or had a transfer of guardianship to a private individual during the study period; approximately 54% of the children who attained permanency were adopted. This latter finding probably reflects the relatively high percentage of African American children taken into custody in Cook County, as African American children are more likely to achieve permanency through adoption than are Caucasian children (Children and Family Research Center, 2001).

These latter findings have several implications. The small percentage of children who were reunited in Cook County, and the 25% of reunited children who were returned to substitute care during the study period, suggest the need for continued research and practice efforts to identify and correct barriers to family reunification. Continued efforts to adequately serve and evaluate the well-being of the children who remain in care also appear to be warranted. The relatively large percentage of children who attained permanency when adoptions and transfers of guardianship were included in the analysis indicates, on one hand, the Department's success in assisting more children to attain permanency as defined by the ASFA. On the other hand, these results suggest the need for more supportive services for families, particularly for African Americans. These findings also indicate the importance of continued evaluations of the stability of adoptive placements.

Second, among the multiple child, caretaker/family, and placement/service characteristics that were examined in this analysis, caretakers' substance abuse problem was the most salient. The relation between substance abuse and child maltreatment has been recognized in the child welfare literature for more than 30 years, and estimates of the proportion of child maltreatment cases that are related to substance abuse range from 13% to 79% (Besinger, Garland, Litrownik, & Landsverk, 1999; Magura & Laudet, 1996). The 81.08% of caretakers exhibiting an alcohol or drug abuse problem, and the 15.48% of children taken into custody for substance exposure as infants, indicate the seriousness of substance abuse in Cook County. Furthermore, children of caretakers who exhibited a substance abuse problem were reunited with their families at a rate 45% slower than children whose caretakers had no indicators of substance abuse. Caretakers' substance abuse problem was not related to whether the child was reunited within seven days, rather than after seven days, or to the rate of attaining permanency. However, among children who were reunited, not one of the substance exposed infants was returned home within 7 days. The finding that substance exposed infants attained permanency after the 40th week at a faster rate than other children, probably reflects the increased likelihood that young children are adopted rather than returned home (Children and Family Research Center, 2001). Although reports of substance exposed infants in Illinois have decreased dramatically since 1995 (Children and Family Research Center, 2001), the findings of this analysis indicate that substance abuse is related both to the child's substitute care placement and to a slower rate of reunification.

These latter findings also have several implications. Research suggests that substance abuse problems have more influence than any other factor on deciding whether to place a child in substitute care (Zuravin & DePanfilis, 1997). Possibly, the mere presence of a parental substance abuse problem, regardless of whether it has a detrimental effect on the child's well-being, might account for the importance of parental

substance abuse in the current study. Regardless of this possibility, the large percentage of caretakers who exhibit substance abuse problems suggests referring caretakers to substance abuse treatment programs that integrate the needs of substance abusing parents, particularly mothers striving to regain custody of their children (Peterson, Gable, & Saldana, 1996). In addition to treating substance abuse, this integration might include teaching parenting techniques, treating emotional and psychological problems, and permitting children to remain with their mothers in residential substance abuse programs. Furthermore, as Goerge and Lee (1998) suggested, recent state and federal permanency initiatives requiring early dates for formal reviews of permanency goals, which inform subsequent court actions, might not allow sufficient time to determine whether a substance abuser will relapse and require additional treatment. Because of the large percentage of caretakers exhibiting substance abuse problems in this study, this observation is particularly relevant for Cook County parents who experience removal of their children.

Third, although this analysis did not find that African American children were reunited at a slower rate than were Caucasian children, a finding inconsistent with other analyses of Illinois DCFS data (Goerge & Lee, 1998; Wells et al., 2002), African American children attained permanency (including reunification, adoption, and guardianship) at a rate approximately 40% slower than Caucasian children. This finding might reflect the higher percentage of African American children achieving permanency through adoption and guardianship, procedures that frequently require years to complete, or might indicate the unavailability of adoptive homes for African American children. The finding also demonstrates the need to identify ways to support African American families and the adoptive families of African American children.

REFERENCES

Adoption and Safe Families Act of 1997, Pub.L. No.105-89, § 42 USC 1305, 111 Stat. 2115 (1997).

Allison, P.D. (1995). *Survival analysis using the SAS® system: A practical guide*. Cary, NC: SAS Institute.

Barth, R. P., Courtney, M., Berrick, J. D. & Albert, V. (1994). *From child abuse to permanency planning.* New York: Aldine de Gruyter.

Besinger, B. A., Garland, A. F., Litrownik, A. J. & Landsverk, J. A. (1999). Caregiver substance abuse among maltreated children placed in out-of-home care. *Child Welfare*, 78(2), 221-239.

Children and Family Research Center. (April, 2001). *Report on child safety and permanency in Illinois for fiscal year 2000).* Urbana, IL: Poertner, J.

Courtney, M. E. & Wong, Y. I. (1996). Comparing the timing of exits from substitute care. *Children and Youth Services Review*, 18(4/5), 307-334.

Goerge, R. M. (1990). The reunification process in substitute care. *Social Service Review*, 64(3), 422-457.

Goerge, R. M. & Lee, B. J. (1998). *Reunification of children in substitute care in Illinois: 1987-1996*. Urbana, IL: Children and Family Research Center.

Magura, S. & Laudet, A. B. (1996). Parental substance abuse and child maltreatment: Review and implications for intervention. *Children and Youth Services Review*, 18(3), 193-220.

Mayer, S. E. & Jencks, C. (1989). Poverty and the distribution of material hardship. *Journal of Human Resources*, 24(1), 88-113.Norman v. Johnson, 739 F. Supp. 1182, (N. D. Ill., 1990).

Pelton, L. H. (1994). The role of material factors in child abuse and neglect. In G. B. Melton & F. D. Barry (Eds.), *Protecting children from abuse & neglect* (pp. 131-181). New York: Guilford Press.

Peterson, L., Gable, S. & Saldana, L. (1996). Treatment of maternal addiction to prevent child abuse and neglect. *Addictive Behaviors*, 21(6), 789-801.

Shook, K. & Testa, M. (December 11, 1997). *Cost-savings evaluation of the Norman Program: Final report to the Department of Children and Family Services.* Illinois Department of Children and Family Services.

Wells, S., Fuller, T. & Wiley, A., (2000. August). *Reunification barriers and facilitators for children in Illinois: Section 3 administrative data analysis*. Unpublished interim project report. Urbana, IL: Children and Family Research Center.

Zuravin, S. J. & DePanfilis, D. (1997). Factors affecting foster care placement of children receiving child protective services. *Social Work Research*, 21(1), 34-42.

---

1. Children who were censored at the time they ran away or guardianship was transferred to a private individual could still have been eligible for reunification during the study period. In addition, children who aged out (turned 18 years of age) were not eligible for reunification during the entire study period. To test for the possible implications of these censored cases, the final Cox model was estimated eliminating these cases from the analysis, and these results were compared to the findings reported in the Results Section. With one exception, the results of the two models were identical in terms of the signs and statistical significance of the coefficients, as were the risk ratios. The exception was the coefficient for entry into substitute care after 1996; it did not reach statistical significance at the $p < .05$ level in the model estimated on the smaller sample.

2. The proportional hazards assumption was tested for variables in Table 1 by (1) creating interaction terms between each covariate and the time to reunification variable, then testing each interaction term for statistical significance in the Cox model; and (2) inspecting graphs of the log-log survival curves (plotted against the time variable) for categories of the covariates.

3. The univariate and forward stepwise procedure was conducted using the PROC LIFETEST available in SAS. The caretaker's risk index and the three caretaker problem variables (substance abuse, mental health, and physical health problems) were placed separately into the stepwise procedure, as were the variables for the child's health/developmental and behavior/emotional problems and the presence of either child problem. In addition, bivariate relations between categories of the independent variable also were tested in a Cox model. Findings were the same as the univariate chi-square results.

4. Cox regression models were estimated using the PROC PHREG procedure available in SAS.

5. These results were further tested for possible sample selection bias by estimating a logit regression with analyzed status (whether the case was included in the analysis or not) as the dependent variable and the variables in Table 3 (with the exception of the caretaker substance abuse problem, which was available only for cases that could be located and had sufficient information), as the independent variables. Only the entry after 1996 variable differed significantly from zero (the cases that were analyzed were less likely to contain children who were taken into care in 1996). When the Cox reunification model was estimated on the 544 randomly sampled children (eliminating the 56 children who were returned within 7 days) using the same variables, results were substantively the same as those reported in Table 3, with one exception. The coefficient for entry after 1996 (risk ratio = 1.417) was not statistically significant from zero.

6. Because only the 1999 year of entry variable was related to whether the child was returned in 7 days, the other years were collapsed into one category, and a dichotomous variable was formed (year of entry 1996, 1997, or 1998 was the reference category). Since the caretaker risk index contained the caretaker substance abuse variable, the stepwise forward procedure was conducted twice, once with the caretaker risk variables and once with the caretaker substance abuse variable.

7. In order to test possible sample selection bias in the results found for the cases that were included in the analysis, the same procedures (using the data available from the DCFS integrated dataset) were used to analyze the variables that predicted reunification within 7 days, rather than after 7 days, for the 136 children who were reunited from the 600 random sample. The results of this analysis were substantively the same, with only two variables significantly predicting reunification within 7 days. These were the child's being placed due to substance exposure or substantial risk of physical injury, relative to "other" reason (odds ratio = .431) and placement in relative or foster care, as compared to an institution (odds ratio = .071.)