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California's Child Welfare Outcome and Accountability Legislation:  
Improving Performance, and Staying the Course for System Reform

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## INTRODUCTION

The California Child Welfare Outcomes and Accountability Act (Assembly Bill 636) emerged from growing concerns among legislators and stakeholders that there was a paucity of system oversight that monitored results. AB 636 provides the legal framework for measuring and routinely tracking each county's performance in ensuring the safety, health and well-being of children. The outcome-focused system builds upon standards established by the federal government, and augments them with other accountability measures deemed appropriate by the state and supported by expert researchers in the field.

While the legislation was passed in October of 2001, the process was officially initiated with the release of the first AB636 report in January of 2004. Following the report, counties reviewed the data and created self-assessments to identify strengths and areas needing improvement. From the assessments, each county developed a system improvement plan which described the strategies and actions needed to improve their performance on their targeted outcomes. Plans had to be approved by county boards of supervisors and made available for public comment. New outcome reports are circulated each quarter, and statewide information as well as data for all 58 counties are publicly available on the U.C. Berkeley, Center for Social Services Research website.

### *National Context—the Children and Family Services Reviews*

Concurrent with the development of AB636, the federal government implemented the first round of reviews of states' child welfare programs--the Children and Family Services Reviews (CFSR). The federal reviews examined seven outcomes for children and families as well as seven systemic factors. California, like all other states, did not meet expectations on any of the seven outcomes, and achieved compliance on only one of seven systemic factors. The

state created and implemented a Program Improvement Plan (PIP) for improving its performance, and is currently in discussions with the federal government regarding whether it has sufficiently improved on the federal reentry and placement stability measures. California has otherwise passed all other national standards.

*Concepts Underlying AB636—Longitudinal Data and Interrelated Outcomes*

While the CFSR was a step in the right direction, the national data indicators used in the review are limited. The biases in point-in-time and exit cohort data used in AFCARS are well-known and documented (Courtney et al., 2004; Wulczyn, 1996; Wulczyn et al., 2001). When the national standards were created, limitations of available federal data made it impossible to follow all children through their entire experience in the child welfare system. Thus, this information is incomplete and may be misleading. To understand performance fully, it is necessary to have data from start to finish, for all children in the child welfare system.

AB 636 addressed the limitations of the national data indicators through the use of fully longitudinal outcome data that permits tracking from the first maltreatment referral through investigation, placement decisions, and exits, and through additional child welfare interactions if they occur. This enables the state to review the national standards but also to measure performance more comprehensively and accurately through tracking of point-in-time data (e.g., how many children are in foster care today), entry cohort data (how many children entered foster care and how many were reunified over time), and exit cohort data (e.g., how many children were reunified, and how long they were in care). All three approaches are important, and each one gives a different but critical perspective. Longitudinal data permits examination of all three types of data, whereas restricting data to only one approach has major implications for the targeting of resources.

The interrelated nature of outcomes is another key concept underlying AB636. This concept recognizes that data tell a story, and the relationship between outcomes must be taken into account when evaluating performance (Usher et al., 2001). For example, while we may seek to reduce the number of children entering care--when we succeed in doing so, we must be aware of how the smaller population entering care will likely be more difficult to work with (i.e., we have prevented more families from oversight by the agency--but those families that do require intervention have more challenging circumstances). Thus a reduction in entries may affect other measures such as time to permanency or placement stability.

#### *Pros and Cons of Publicly Available Outcome Information*

Publicly available data is a final aspect of AB636 that is both fundamental and double-edged. That is, while the public presentation of detailed performance information at the state and county level is a bold but necessary part of system improvement, it does invite not only data use, but also has the potential for data abuse. On the positive side, public data provide for greater accountability and transparency (i.e., numbers are there for all to see); community awareness and involvement encourages public-private partnerships (e.g., funders can be shown “results”); and collaboration can be fostered as agency staff are able to build on each other’s success through greater awareness of performance improvements by colleagues in other counties. By the same token, these data are also available to anyone with an agendas or seeking to create a sensational headline. Unrestricted access to data also has the potential for misuse, misinterpretation, and misrepresentation (e.g., through inappropriate county comparisons, treating insignificant differences as meaningful, or taking statistics out of context). Accurate statistics can be used to bolster inaccurate arguments; and unintended, negative consequences could ensue from reactive

changes in policy that could result from precipitous responses to inaccurately interpreted or presented data.

### *The Present Study*

Assembly Bill 636 was developed as a means to improve child welfare outcomes in support of the state's program improvement efforts related to the federal review. AB636 requires counties to guide their practice reform efforts by monitoring longitudinal outcomes each quarter in addition to the Child and Family Services Review (CFSR) federally-mandated measures. More than two and a half years have elapsed since the initial AB636 report was disseminated on January 1, 2004, and the present study seeks to address the question, "has AB636 made a difference?" The study carried out 2 analyses—a calculation of relative change in performance on AB636 measures, and multivariate models on reunification and adoption—as a first step toward assessing whether or not statewide child welfare performance improved on outcome indicators since the advent of the AB636 quarterly review process.

## **METHOD**

### *Population and Sample*

The study analyzed statewide data containing the population of children referred to or entering the California child welfare system. The data originate from California's statewide automated child welfare information system (SACWIS)—the Child Welfare Services Case Management System (CWS/CMS). Under the terms of an interagency agreement with the California Department of Social Services, quarterly extracts from this system are housed at the Center for Social Services Research (CSSR) at the University of California at Berkeley and

integrated into the California Children's Services Archive. The Archive is a child-specific, event-level, longitudinal administrative data base.

The study sample consisted of cohorts of children referred to (n=2,895,335) or first entering, and remaining in care for at least 5 days<sup>1</sup> (n=131,441), the child welfare system over a five year period (January 1, 2000 to December 31, 2004). These data were drawn from the fourth quarter, 2005 extract of CWS/CMS. The earliest cohort analyzed was calendar year 2000 since it coincides with updated population demographic indicators available by the 2000 census. Children were tracked until the fourth quarter cut-off date (January 1, 2006) or until they experienced events relevant to the respective analyses. A small proportion of the sample (two percent) was excluded from multivariate analyses due to missing values on important variables. Also, a sibling identifier was created and included in multivariate analyses to control for biased parameter estimates and standard errors that may result from the unadjusted inclusion of siblings or by their systematic exclusion in an effort to make such adjustments (Guo & Wells, 2003).

### *Study Objectives*

The study addressed two primary research objectives regarding potential changes in child welfare system performance since the beginning of the AB636 reporting process: (1) examine whether performance on key outcome indicators differed from the baseline reporting period to the current reporting period; and (2) employ multivariate statistics on permanency measures to begin a more in-depth analysis of potential performance change over time.

### Study Objective 1: Percent Change in Outcomes from Baseline to Present

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<sup>1</sup> Children in care less than five days are an important population that merits separate analysis because they are fundamentally different with respect to permanency outcomes such as reunification. It is not uncommon for the police to remove a child and place her in a shelter overnight, only to send her home the next day because the maltreatment report is not substantiated. Including these children would confound the analysis because they are arguably children who should not have come into care in the first place.

The first analysis sought to determine if, since the advent of AB636, there was any change in statewide performance on 20 outcomes measures tracked on the quarterly report. The relative change in performance for each of the respective measures was calculated from data provided at the baseline reporting period (i.e., initial AB636 quarterly outcomes report disseminated on January 1, 2004) to the current reporting period (i.e., the AB636 quarterly outcomes report disseminated on July 1, 2006). Time periods, frequencies and rates for these 20 measures are displayed in Table 1 and are discussed in the Results section below.

(Insert Table 1 about here.)

#### Study Objective 2: Multivariate Analysis of Permanency Exits

Since the analysis in study objective one was a zero-order comparison that did not take into account alternate factors that could have influenced observed changes in the outcome measures, study objective two employed multivariate models to attempt to control for differences in characteristics of children being served, underlying population factors, and volume of children entering the system over the course of the study period. While ideally a comprehensive review of the potential impact of AB636 would call for detailed examination of all 20 measures reviewed in study outcome 1, as a first step toward that end, multivariate models were run on the likelihood that children first entering care exited to permanency via one of the following outcomes: (a) discharge to reunification; or (b) discharge to adoption. These two outcomes merit special consideration since they traditionally, and under current federal legislation, are the preferred result sought by the child welfare system.

While study objective one compared relative change in performance on measures that examined permanency was achieved within a specified period of time (e.g., reunification within 12 months of entry, adoption within 24 months of entry), there is clear evidence that many

children continue to return home after one year or be adopted after two years in care (Needell et al., 2006). The longitudinal format of the Archive permits analysis that is not limited by whether an outcome has occurred by a twelve or twenty-four month cut-off; and event history analysis techniques are an optimal means to examine this type of information (Goerge, 1990; Wulczyn, 1996). Thus competing risk Cox proportional hazards models were used to examine the simultaneous impacts of selected variables on the likelihood of these respective permanency exits for children tracked from first entry to discharge or the study end date. These outcomes are considered “competing” due to the fact that, while children may experience only one of these exits from a placement episode, they are in the risk set for experiencing both outcomes while they are in care (Allison, 1984; Cox, 1972). Plots of the  $-\log(\text{estimated survival function})$  against  $\log(\text{failure time})$  were inspected for the variables and it was determined that they reasonably satisfied the necessary assumption of proportional hazards over time (Allison, 1984). Also, deviance residuals for final models were plotted against their linear predictor scores and there was no indication of a lack of fit of the models.

#### *Measures for Multivariate Models*

The dependent variables for the multivariate analyses were reunification and adoption for first entries to foster care in California between January 1, 2000 and December 31, 2004. The dichotomous outcomes were defined as reunification verses other types of exits or remaining in care, and adoption verses other types of exits or remaining in care (other types of exits include running away, emancipation, abduction, death, etc.). Observations were censored at the date of exit or at the study end date (January 1, 2006).

The independent variables for the Cox models were consistent with those used in previous research on reunification and adoption (Barth et al., 2002; Courtney, 1994; Courtney &

Wong, 1996; Davis, Landsverk, and Newton, 1997; Goerge, 1990), the availability of information in CWS/CMS, and by the US Census Bureau. The variables included in these analyses are described below, and frequencies and proportions are provided in Table 2.

(Insert Table2 about here.)

#### Entry Year

Year during which a child first entered out-of-home care (i.e., their entry cohort).

#### Age at Entry

Age at first entry to foster care was divided into five categories: <1 (infants before their first birthday), 1-5 (from the first birthday up to but not including the sixth), 6-10, 11-15, and 16-17 years.

#### Ethnicity

The primary racial or ethnic group of the child. If a child was coded as having Hispanic origin, they were classified as Hispanic. Otherwise, primary ethnicity code for children was categorized as either: African American, Caucasian, Hispanic, Native American, or Asian/Pacific Islander.

#### Gender

Children were classified as either Female or Male.

#### Removal Reason

These reasons were grouped into four categories from the removal reason type codes in CWS/CMS: Neglect (including general neglect, severe neglect, or caretaker incapacity), Physical Abuse, Sexual Abuse, and Other (including, exploitation, child's disability or handicap, relinquishment, disrupted adopted placement, voluntary placement).

#### Predominant Placement Type

Analyses used the predominant placement type in the child's foster care episode (where the child spent at least 50 percent of her time in care). The different placement types are: Kinship care, county Foster homes, Foster Family Agency (FFA) homes, Congregate care (Group homes, or Shelters), Other placement types (which include court-specified homes), and Mixed placement type (if a child did not spend at least half of their care days in any of the specified categories).

#### LA vs Other Counties

Los Angeles County accounts for approximately forty percent of children in the California child welfare system and typically exhibits different patterns from the rest of the state. We therefore consider it separately.

#### Census Variables

Children's addresses of removal upon entering care are geocoded in the Archive, and population characteristics on the corresponding census tracts were used to construct the following: High Poverty rate (i.e., child entered from a census tract in the highest quartile of all tracts in the state with respect to percent of the population below the federal poverty line). High Female-Headed Household rate (i.e., child entered from a census tract in the highest quartile of all tracts in the state with respect to percent of all families that are female-headed). High Non-Caucasian rate (i.e., child entered from a census tract in the highest quartile of all tracts in the state with respect to percent of the population that was non-Caucasian). These population factors are admittedly a crude indication of the familial environment for children in the study sample—as the census tract indicators may not represent the actual living condition of a given child. Nonetheless, since high poverty in this study was indicated by removal from a census tract with a poverty rate in the

highest quartile of all tracts in the state, it does not seem unreasonable as a gauge for child's larger community context.

#### Increasing Entry Rate

In an attempt to control for the potential influence of an increasing volume of children entering care on the likelihood of exits to reunification or adoption, a time-varying covariate was created at the county level which indicated whether the incidence of first entry to care (per thousand children in the population) increased in a given year with respect to the prior year. It could not be determined for a small proportion of the study sample (2 percent, n=3,117) who did not have a removal county coded in the data set whether they entered in a county with an increasing incidence rate. These observations were excluded in the final Cox models since this construct was an important control on caseload volume. This covariate did not change the statistical significance of other parameters, though it did slightly diminish the size of the entry cohort year effects. Interaction terms between this variable and each of the age and ethnic groups was included in an earlier model. None of them were statistically significant and were therefore dropped from the final model.

## **RESULTS**

### Study Objective 1

Table 1 displays the baseline time period frequencies and rates, current time period frequencies and rates, as well as relative percent change in performance on the 20 outcome measures examined by study objective 1. The data indicate that performance on all of the measures but one (incidence of first entries to care which increased by 2.9% since baseline) changed in a direction suggesting improvement. For example, on the federal measures,

recurrence of maltreatment and reentries both declined (14%, and 12.5%, respectively), and reunifications and adoptions increased (4.1%, and 19.7%, respectively). Similarly, on the state-enhanced entry cohort measures, some improvements were substantial (34.8% increase in adoptions within 24 months of entry and 21.9% increase in the percent of children entering who are placed initially with relatives), while others were modest (4.0% increase in reunification within 12 months). Yet even the small improvement in reunification was notable since it was coupled with a decrease in foster care reentry (12.0% decline).

### Study Objective 2

This analysis used competing risk Cox proportional hazards models to examine the concurrent impacts of selected variables on the likelihood of exits to reunification and adoption. All regression techniques assume independence of observations, yet outcomes experienced by siblings in foster care are not statistically independent of one another (Guo & Wells, 2003). Further, siblings comprise more than half of all children in out-of-home care (Needell et al., 2006; Wulczyn & Zimmerman, 2005). Therefore, to control for bias in parameter and standard error estimates that can result from autocorrelation, each child in the data set was coded as having (or not) other siblings also in foster care during the study period; and this indicator was employed in the event history models using the covariance sandwich technique (Stokes et al., 2001).

Parameter estimates of the final Cox models for these exits are summarized in Table 3, and Table 4. The risk ratios presented in Tables 3 and 4 provide the most easily-interpreted measure of association between the explanatory variables and the exits from care that were analyzed. Values greater than one in these tables represent increased likelihood, and values less than one represent decreased likelihood that a child would experience the event being examined.

(Insert Tables 3 & 4 about here.)

### *Reunification Model*

The Cox model for reunification versus other exits and remaining in care (Table 3) revealed results consistent with past research on this outcome (Courtney & Wong, 1996; Davis, Landsverk, and Newton, 1997; Goerge, 1990). That is, infant age group, African American ethnicity, mixed placement type (i.e., no placement setting accounted for at least half of care days experienced), neglect removal reason, and Los Angeles as county of removal were factors associated with significant decreased likelihood in the probability of reunification relative to other groups.

The census and entry rate variables were also associated with the hazard of exit to reunification. Children entering from those census tracts with high proportions of non-Caucasian population and persons below the poverty line had a slightly lower probability of reunification (hazard ratio=0.93 and 0.94, respectively) than those entering from other areas. By contrast, children removed in counties where the incidence rate of entry to care was higher during the year the child was removed than it had been in the prior year were slightly more likely to reunify (hazard ratio=1.04).

Year of entry to care had a significant impact on exit to reunification<sup>2</sup>. Each successive entry cohort from 2002 through 2004 was associated with an increase in the likelihood of reunification relative to the year prior. That is, compared to the 2000 reference group, children entering care in calendar year 2002 (hazard ratio=1.07), 2003 (hazard ratio=1.1), and 2004

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<sup>2</sup> Please note that, for simplicity of display, the exact baseline entry cohort time period was not included in either of the multivariate models. For example, the baseline entry cohort examined for the AB636 state-enhanced measure of reunification at 12 months was comprised of children entering from July 1, 2000 to June 30, 2001 and thus overlaps the calendar years 2000 and 2001 in the model. This may be a factor in the non-significant difference in probability of reunification between the 2000 and 2001 entry year covariates. Given the steady increase in likelihood of exit to reunification with each successive year, this does not seem to confound the overall trend of apparent improving performance.

(hazard ratio=1.2) were more likely to reunify. Controlling for child characteristics (such as age at entry, ethnicity, gender, removal reason), child welfare system influences (reason for removal, placement type in care) , several population factors, and the rate of entry to care in the county from which a child was removed—these entry cohort effects were very robust and remained highly statistically significant at the  $p < 0.0003$  level and below.

#### *Adoption Model*

The Cox model for discharge to adoption versus other exits and remaining in care (Table 4) also yielded results that were largely consistent with past research (Barth et al., 2002; Courtney & Wong, 1996). In the final model, older age groups (particularly teens), African American and Native American ethnicity, congregate care placement type, physical or sexual abuse removal reason, and Los Angeles as county of removal were factors associated with significant decreased likelihood in the probability of adoption relative to other groups.

Census variables had an impact on the probability of adoption. Children entering from those census tracts with high proportions of non-Caucasian population and high proportions of female-headed households had a slightly lower probability of reunification (hazard ratio=0.91 and 0.89, respectively) than those entering from other areas. The incidence rate of entry to care for a child's removal county was not associated with the likelihood the child would be adopted.

As in the previous multivariate model, year of entry to care had a significant impact on discharge to adoption. Each successive entry cohort from 2001 through 2004 was associated with an increase in the likelihood of adoption relative to the year prior. Thus compared to the 2000 reference group, children entering care in calendar year 2001 (hazard ratio=1.07), 2002 (hazard ratio=1.23), 2003 (hazard ratio=1.34), and 2004 (hazard ratio=1.37) were more likely to be adopted. Again, controlling for child characteristics (such as age at entry, ethnicity, gender,

removal reason), child welfare system influences (reason for removal, placement type in care), several population factors, and the rate of entry to care in the county from which a child was removed—these entry cohort effects were very robust and remained highly statistically significant (for the 2002-2004 cohorts, the p-value was less than 0.0001). Finally, it is noteworthy that the 2004 entry year cohort included children who entered care after those who were used to calculate performance on the “adoption at 24 months” measure reported on the current AB636 report (i.e., the 2003 entry cohort). The greater probability of exit to adoption for these most recent data is promising indication of potential continued improvement on this outcome.

### **DISCUSSION**

This study is only an initial step toward assessing the impact of Assembly Bill 636. Clearly, a more comprehensive determination of whether AB636 has led to the observed changes in outcome measure performance would require more numerous and detailed analyses than were conducted for this paper. At a minimum, multivariate models such as those applied to reunification and adoption in this paper would need to be carried out for all 20 of the outcomes discussed in Table 1. Moreover, interplay between different outcomes would need to be considered. For example, the interrelated effects of outcomes such as incidence of first entry and concomitant trends in recurrence of maltreatment, or reunification and subsequent reentry to care following returning home.

Assessing the impact of this legislation is also complicated by the fact that AB636 is not a concrete practice intervention but is rather a system of mandates that could take different implementation forms in practice depending upon locality, outcome target, agency structure, and the like. Thus even the most nuanced analytical methods will likely encounter difficulty in

determining the effects of different aspects of AB636 (quarterly review of data, peer quality case review) as well as teasing apart the influence of national legislation such as ASFA, and numerous programmatic change efforts (e.g., Family to Family, wraparound services, and differential response) taking place in different counties across the state.

### *Limitations*

In addition to the challenges of future work on this topic, the present study has a number of limitations that bear noting. As mentioned in the methods section, the documented shortcomings of administrative data apply here. Further, no information was provided about placement availability, nor were particulars of the case plan, family circumstances, or services provided. Such details may be of critical import, especially caseworker reports of placement resource limitations and measures of child behavior problems (Terren-Sweeney & Hazell, 2005). Finally, regarding this latter, multivariate models do not include psychological or behavioral indicators. Child functionality covariates like emotional disturbance or DSM IV diagnoses could enrich our understanding of the factors affecting reunification, adoption, as well as many other important child welfare outcomes.

The study is also somewhat limited in the time span available for analysis. While five entry cohorts were tracked longitudinally over a study period of six full years, an even wider span of time will be needed in future analyses to more fully evaluate the impact of AB636. Future work on this issue should control for period effects prior to the introduction of the legislation, as well as allow for greater follow up time to examine whether the trends observed in this study continue to hold over time.

In spite of these limitations, however, it does not seem unreasonable to argue that AB636 has been an effective and successful piece of legislation. At the very least, analyses in this study

do not suggest negative effects of its implementation. Via its mandates, AB636 has created a systematic focus on accountability and a process for routine examination of progress toward sound performance outcomes (Courtney et al., 2004; Wulczyn, 1996; Wulczyn et al., 2001).

*Whither AB636?*

Child welfare services in California, as elsewhere, do not exist in a static environment. One imminent and significant change in the landscape in which AB636 will be operating is round two of the CFSR (Administration for Children and Families, 2006). California will be starting the process in 2008. The new federal standards based on composites, components, and measures pose a new challenge with respect to modification of the AB 636 reporting process. Considerable efforts will be needed to transform or cull existing indicators, and integrate the new federal measures into the current quarterly reports.

Once AB636 has been updated, other tasks will be to inform and educate public agency staff on the new measures, as well as how to use them to guide practice reform. This latter, the development of human capital (Wulczyn, Barth, Yuan, Harden, & Landsverk, 2005), is the ongoing challenge faced by AB636 and any enterprise which seeks to turn data into knowledge. It is necessary but not sufficient to have solid outcome measures and timely, accurate data. Ultimate success of AB636 will depend to a large degree upon counties' ability to develop analytic capacity by their staff to understand links between specific practice efforts and related changes in outcome measure performance.

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**Table 1: Comparison of Performance on 20 Child Welfare Outcomes from Baseline AB636 Reporting Period (disseminated on January 1, 2004) to Current AB636 Reporting Period (disseminated on July 1, 2006).**

Outcome Indicators	Baseline AB636 Report					Current AB636 Report					Percent change <sup>2</sup>
	Cohort Start Date	Cohort End Date	Numerator	Denominator	Rate <sup>1</sup>	Cohort Start Date	Cohort End Date	Numerator	Denominator	Rate <sup>1</sup>	
<b>Federal Measures</b>											
Percent recurrence of maltreatment (Fed)	7/1/2002	6/30/2003	4,879	50,014	9.8	1/1/2005	12/31/2005	3,848	45,879	8.4	-14.0%
Percent with 1-2 placements within 12 months (Fed)	7/1/2002	6/30/2003	35,242	42,278	83.4	1/1/2005	12/31/2005	36,963	43,563	84.8	1.8%
Percent reunified within 12 months (Fed)	7/1/2002	6/30/2003	16,200	24,768	65.4	1/1/2005	12/31/2005	15,984	23,483	68.1	4.1%
Percent adopted within 24 months (Fed)	7/1/2002	6/30/2003	1,831	7,567	24.2	1/1/2005	12/31/2005	2,134	7,368	29.0	19.7%
Percent of admissions who are re-entries (Fed)	7/1/2002	6/30/2003	4,454	39,452	11.3	1/1/2005	12/31/2005	3,987	40,370	9.9	-12.5%
<b>State-Enhanced Measures</b>											
Rate of children with referrals	2002		488,760	9,436,475	51.8	2005		482,462	9,620,511	50.1	-3.2%
Rate of children with substantiated referrals	2002		115,739	9,436,475	12.3	2005		108,582	9,620,511	11.3	-8.0%
Percent rate of recurrence of abuse/neglect in homes where children were not removed	7/1/2001	6/30/2002			8.9	1/1/2004	12/31/2004			8.4	-5.6%
Percent recurrence of maltreatment within 12 months	7/1/2001	6/30/2002	13,400	101,232	13.2	1/1/2004	12/31/2004	11,260	90,744	12.4	-6.3%
Percent recurrence of maltreatment within 12 months after first substantiated allegation	7/1/2001	6/30/2002	9,403	80,806	11.6	1/1/2004	12/31/2004	7,353	68,659	10.7	-8.0%
Rate of first entries	2002		27,645	9,436,475	2.9	2005		28,999	9,620,511	3.0	2.9%
Initial Placement: Relative	7/1/2002	6/30/2003	4,449	27,018	16.5	1/1/2005	12/31/2005	5,677	28,290	20.1	21.9%
Initial Placement: Group/Shelter	7/1/2002	6/30/2003	5,475	27,018	20.3	1/1/2005	12/31/2005	4,732	28,290	16.7	-17.5%
Rate of children in care	7/1/2003		86,036	10,055,075	8.6	7/1/2005		79,378	10,161,885	7.8	-8.7%
Percent of children in foster care that are placed with ALL siblings	7/1/2003		24,313	58,534	41.5	1/1/2006		23,727	52,253	45.4	9.3%
Percent of children in foster care that are placed with SOME or ALL siblings	7/1/2003		38,479	58,534	65.7	1/1/2006		35,366	52,253	67.7	3.0%
Percent with 1-2 placements - if still in care at 12 months (entry cohort)	7/1/2001	6/30/2002	10,323	16,087	64.2	1/1/2004	12/31/2004	10,283	15,324	67.1	4.6%
Percent reunified within 12 months (entry cohort)*	7/1/2001	6/30/2002	9,667	26,783	36.1	1/1/2004	12/31/2004	9,754	25,994	37.5	4.0%
Percent adopted within 24 months (entry cohort)*	7/1/2000	6/30/2001	1,339	26,031	5.1	1/1/2003	12/31/2003	1,792	25,835	6.9	34.8%
Percent who re-entered within 12 months of reunification (entry cohort reunified within 12 months)	7/1/2000	6/30/2001	1,206	8,999	13.4	1/1/2003	12/31/2003	1,144	9,698	11.8	-12.0%

\* Outcome indicator examined with multivariate model for Study Objective number 2.

<sup>1</sup> Outcome indicators specifically identified as "Rate" (e.g., Rate of children in care) refer to rate per 1,000 children in the population at large. All other indicators in the Rate column are percents.

<sup>2</sup> Percent change column was calculated as follows: [(Current Numerator/Current Denominator)/(Baseline Numerator/Baseline Denominator)]-1

**Table 2: Study Sample—First Entries to Child Welfare Supervised Foster Care 2000-2004, Age 0-17, Remaining in Care 5+ Days, and Proportions Reunified and Adopted**

Variable	<u>Sample Total</u> (n=131,441) Percent	<u>Reunified</u> (n=72,369) Percent	<u>Adopted</u> (n=16,866) Percent
<b>Entry Cohort Year</b>			
2000	20.14	21.06	26.96
2001	20.44	21.44	26.62
2002	19.99	20.66	24.66
2003	19.66	19.79	16.49
2004	19.78	17.04	5.26
<b>Gender</b>			
Female	51.52	48.60	49.46
Male	48.48	51.40	50.54
<b>Age at Entry</b>			
< 1 Year	21.35	15.54	56.97
1-5 Years	31.39	34.08	31.38
6-10 Years	23.22	26.80	9.34
11-15 Years	19.60	20.29	2.23
16-17 Years	4.44	3.30	0.08
<b>Ethnicity</b>			
Black	18.80	16.59	18.21
White	31.70	32.81	34.87
Hispanic	44.63	45.05	43.55
Asian/PI	3.21	3.72	2.42
Native	1.27	1.29	0.83
<b>Removal Reason</b>			
Neglect	75.21	69.76	88.78
Physical Abuse	14.31	18.02	5.93
Sexual Abuse	5.43	6.70	1.56
Other	5.04	5.52	3.73
<b>Predominant Placement</b>			
Kin	39.70	34.87	41.79
Foster	20.15	22.55	28.43
FFA	28.03	30.08	24.19
Congregate	9.42	11.54	0.35
Other	0.50	0.33	1.31
Mixed	2.19	0.97	3.93
<b>Region</b>			
Los Angeles	25.82	23.64	22.20
Other Counties	74.18	76.36	77.80
<b>Census Data Constructs*</b>			
High Poverty Rate	25.00	24.04	24.33
High Female Headed-Household Rate	25.00	24.23	23.31
High Non-Caucasian Rate	25.00	23.88	21.77
<b>Increasing Rate of First Entry to Care</b>	40.36	41.17	37.82

\* Dummy variables coded as equal to 1 for those census tracts in highest quartile of all tracts in the state.  
 Note: Percents may not total to 100 due to rounding; n=3117 observations excluded due to missing data.

**Table 3: Cox Proportional Hazards Model on Reunification (n=72,369) Versus Other Exits and Remaining in Care (n=128,305) for 2000 to 2004 Entry Cohorts\***

<u>Variable</u>	<u>Probability</u>	<u>Hazard Ratio</u>	<u>Confidence Interval</u>
<u>Entry Year</u>			
<i>2000</i>		<i>1.00</i>	
2001	0.1115	1.03	(0.99, 1.06)
2002	0.0003	1.07	(1.03, 1.10)
2003	<.0001	1.10	(1.06, 1.14)
2004	<.0001	1.12	(1.08, 1.16)
<u>Gender</u>			
<i>Male</i>		<i>1.00</i>	
Female	0.681	1.00	(0.99, 1.02)
<u>Ethnicity</u>			
<i>White</i>		<i>1.00</i>	
African American	<.0001	0.85	(0.82, 0.88)
Hispanic	0.0048	0.96	(0.94, 0.99)
Asian/Pacific Islander	<.0001	1.23	(1.15, 1.31)
Native American	0.5759	1.03	(0.94, 1.13)
<u>Age at Entry</u>			
<i>&lt; 1 year</i>		<i>1.00</i>	
1-5 years	<.0001	1.66	(1.63, 1.70)
6-10 years	<.0001	1.71	(1.67, 1.76)
11-15 years	<.0001	1.41	(1.37, 1.46)
16-17 years	<.0001	1.20	(1.14, 1.26)
<u>Removal Reason</u>			
<i>Neglect</i>		<i>1.00</i>	
Physical Abuse	<.0001	1.54	(1.49, 1.58)
Sexual Abuse	<.0001	1.43	(1.36, 1.49)
Other Maltreatment	<.0001	1.24	(1.19, 1.30)
<u>Los Angeles vs. Not</u>			
<i>Los Angeles</i>		<i>1.00</i>	
Other Counties	<.0001	1.27	(1.24, 1.30)
<u>Primary Placement Type</u>			
<i>Foster</i>		<i>1.00</i>	
Kin	<.0001	0.54	(0.53, 0.56)
FFA	<.0001	0.73	(0.71, 0.76)
Group/Shelter	0.0007	1.08	(1.03, 1.12)
Other	<.0001	0.49	(0.41, 0.58)
Mixed	<.0001	0.21	(0.19, 0.23)
<u>Census Variables</u>			
<i>Not High Poverty</i>		<i>1.00</i>	
High Poverty	<.0001	0.93	(0.90, 0.96)
<i>Not High Female Headed</i>		<i>1.00</i>	
High Female Headed	0.9902	1.00	(0.97, 1.03)
<i>Not High Non-White</i>		<i>1.00</i>	
High Non-White	<.0001	0.94	(0.91, 0.97)
<u>County Incidence Rate</u>			
<i>Not Increasing Entry Rate</i>		<i>1.00</i>	
Increasing Entry Rate	0.0025	1.04	(1.01, 1.06)

\* n=3,117 observations excluded due to missing values on county incidence rate variable. The reference group is shown in italics for categorical variables. The -2 log likelihood without covariates is 1628281.9; with covariates is 1614345.4. Model Chi-Square: 6832.95; (df = 26), p < .0001.

**Table 4: Cox Proportional Hazards Model on Adoption (n=16,866) Versus Other Exits and Remaining in Care (128,305) for 2000 to 2004 Entry Cohorts**

<u>Variable</u>	<u>Probability</u>	<u>Hazard Ratio</u>	<u>Confidence Interval</u>
<u>Entry Year</u>			
<i>2000</i>		<i>1.00</i>	
2001	0.0097	1.07	(1.02, 1.13)
2002	<.0001	1.23	(1.17, 1.31)
2003	<.0001	1.34	(1.26, 1.43)
2004	<.0001	1.37	(1.25, 1.50)
<u>Gender</u>			
<i>Male</i>		<i>1.00</i>	
Female	0.1624	1.02	(0.99, 1.06)
<u>Ethnicity</u>			
<i>White</i>		<i>1.00</i>	
African American	<.0001	0.58	(0.55, 0.62)
Hispanic	<.0001	0.81	(0.77, 0.85)
Asian/Pacific Islander	0.1287	0.90	(0.79, 1.03)
Native American	<.0001	0.56	(0.44, 0.70)
<u>Age at Entry</u>			
<i>&lt; 1 year</i>		<i>1.00</i>	
1-5 years	<.0001	0.38	(0.37, 0.39)
6-10 years	<.0001	0.14	(0.13, 0.15)
11-15 years	<.0001	0.04	(0.04, 0.05)
16-17 years	<.0001	0.03	(0.02, 0.05)
<u>Removal Reason</u>			
<i>Neglect</i>		<i>1.00</i>	
Physical Abuse	<.0001	0.67	(0.62, 0.72)
Sexual Abuse	<.0001	0.71	(0.61, 0.84)
Other Maltreatment	0.9256	1.00	(0.89, 1.11)
<u>Los Angeles vs. Not</u>			
<i>Los Angeles</i>		<i>1.00</i>	
Other Counties	<.0001	1.97	(1.88, 2.07)
<u>Primary Placement Type</u>			
<i>Foster</i>		<i>1.00</i>	
Kin	<.0001	0.61	(0.58, 0.64)
FFA	<.0001	0.62	(0.58, 0.65)
Group/Shelter	<.0001	0.09	(0.07, 0.11)
Other	0.0519	1.26	(1.00, 1.59)
Mixed	<.0001	0.62	(0.57, 0.69)
<u>Census Variables</u>			
<i>Not High Poverty</i>		<i>1.00</i>	
High Poverty	0.3125	0.97	(0.92, 1.03)
<i>Not High Female Headed</i>		<i>1.00</i>	
High Female Headed	<.0001	0.89	(0.84, 0.94)
<i>Not High Non-White</i>		<i>1.00</i>	
High Non-White	0.0016	0.91	(0.86, 0.97)
<u>County Incidence Rate</u>			
<i>Not Increasing Entry Rate</i>		<i>1.00</i>	
Increasing Entry Rate	0.153	1.03	(0.99, 1.08)

\* n=3,117 observations excluded due to missing values on county incidence rate variable. The reference group is shown in italics for categorical variables. The -2 log likelihood without covariates is 341727.67; with covariates is 322031.33. Model Chi-Square: 8798.73; (df = 26), p < .0001.