

A Birth Cohort Study of Involvement with Child Protective Services before Age 5

Sutter County, California

INTRODUCTION

Much of what we know—or think we know—about risk factors for child abuse and neglect is based on cross-sectional and retrospective studies of children reported for maltreatment. Although these studies are useful for identifying and describing children reported for maltreatment, substantiated as victims, or placed in foster care, they do not offer information needed to understand how these children may (or may not) differ from other children in our communities. Without data concerning this broader population of children, we are unable to determine whether children with a particular combination of risk factors might have been identified or prioritized for early intervention services to prevent the conditions that led to involvement with child protective services.

Fortunately, the linkage and thoughtful configuration of administrative records can provide the necessary data for prevention focused studies. By linking CPS records to birth records from California, it is possible to answer prospective, population-based questions and generate information concerning the likelihood that children will be reported, substantiated, or placed in foster care because of maltreatment. In addition to providing information about the full population of children born in a given county and at risk of CPS involvement, birth records also include information not typically captured in administrative child protection systems, including infant weight at birth, maternal education, and whether paternity was established. Combining birth and CPS records allows us to better understand children involved with our local child protection systems and highlights opportunities

for being more strategic in our allocation and delivery of early intervention services.

Retrospective vs. Prospective Designs

The difference between a retrospective and prospective study design is a critical yet often misunderstood distinction. In a study with a retrospective design, individuals are sampled or studied because the outcome of interest has already occurred (e.g., a child has already been maltreated). They are selected based on the dependent variable. In contrast, a prospective study design identifies individuals who are at risk of the outcome and then follows them over time to see who does (and does not) experience the outcome. Prospective study designs can be employed using already collected, longitudinal administrative data.



METHODOLOGY

This report series details findings from a project in which the birth records of all children born in California in 2006 and 2007 were matched to statewide child protection records through each child's fifth birthday. These linked records were then analyzed by county, allowing us to describe the characteristics of children at birth and generate longitudinal, cumulative estimates of how many children were involved with CPS during the first 5 years of life. Additionally, these data provide an opportunity to examine child- and family-level characteristics at a population level, helping us to identify attributes that are most

strongly correlated with later CPS-involvement. In this report, we document findings for Sutter County, California.

Record Linkages 101

Quite simply, record linkage involves matching and integrating information about individuals (or other entities) from different data systems. An inherent limitation of administrative data is the scope of information contained in any one system. By linking records, it is possible to better understand the characteristics and trajectories of children over time and across service systems.



FINDINGS

Characteristics of Children Born (Table 1)

Table 1 presents descriptive information collected at birth for infants born during calendar years 2006 and 2007 in Sutter County. The total number (N) of births and the percentage (%) of the county's full birth cohort are reported for different characteristics at birth. Given the strong relationship between socioeconomic status and CPS involvement, we also present this same descriptive information based on whether the cost of birth was covered by private or public health insurance.

- Between 2006 and 2007, 4,481 children were born.
- Although prenatal care began during the first trimester for a majority of children, 2,312 children (51.6%) were born to mothers who received prenatal care that started late or not at all.
- A plurality of children (45.7%) were born to mothers of White race/ethnicity.
- A total of 12.3% of children were born to teen mothers.

- 2,868 births were paid for by public health insurance, 64% of all children born.
- Paternity was missing for 11.5% of children overall, but 15.9% among births covered by public health insurance compared with 3.5% of births covered by nonpublic insurance.

Selected Variables

✓ Birth Weight

A measure of infant weight at the time of birth. Low birth weight is defined as <2500 grams.

✓ Prenatal Care

A measure of the trimester that prenatal care began. Late prenatal care is defined as care that began after the first trimester or not at all.

✓ Paternity Establishment

A measure of whether paternity was established at birth through the legal naming of a father on the birth record.

✓ Number of Births

A measure of the number of live births to this mother. If this was a first birth, it was coded as one.

✓ Prior Pregnancy Terminations

A measure of whether or not the mother had terminated any earlier pregnancies.

✓ Birth Payment Method

A measure of how the birth was paid for. Non-public includes private health insurance companies and self-pay. Public refers to Medi-Cal and other forms of public health insurance coverage. In California, mothers who give birth without health insurance coverage are retroactively enrolled in a public program.

Cumulative Number of Children Reported for Alleged Abuse or Neglect before Age 5 (Table 2)

Table 2 presents the cumulative number (N) and percentage (%) of children born in 2006 and 2007 who were reported to CPS for alleged abuse or neglect before age 5. These data are stratified by the sociodemographic and health characteristics listed in Table 1. Additionally, we present unadjusted and adjusted risk ratios (RRs) to compare the likelihood that children with different characteristics were reported to CPS before age 5. These estimates of relative risk are accompanied by 95% confidence intervals (95% CI); statistical significance is reported and described in the table endnotes.

- 826 children were reported to CPS for alleged child abuse or neglect before the age of 5, 18.4% of children.
- Notable differences emerged in the likelihood of being reported to CPS. Overall, 41.6% of children without paternity established at birth were reported compared to 15.4% of children with paternity established. In relative terms, that meant that a child missing a named father on the birth record had a nearly 3 times greater likelihood of being reported for abuse or neglect (RR: 2.70***; 95% CI: 2.38, 3.06). After adjusting for other factors, the heightened risk associated with paternity diminished in magnitude, but was still statistically significant (RR: 1.45***; 95% CI: 1.28, 1.65).
- An inverse relationship was observed between a child's risk of being reported for alleged maltreatment and maternal age. Among children born to teen mothers, 29.9% were reported. In contrast, only 11.7% of children born to a mother age 30 or older were reported. Before adjusting for other factors, children of

teen mothers were more than 2.5 times as likely to be reported to CPS as were those born to mothers 30 and older (RR: 2.56***; 95% CI: 2.09, 3.12).

Cumulative Number of Children with Substantiated Reports of Abuse or Neglect before Age 5 (Table 3)

Table 3 presents the cumulative number (N) and percentage (%) of children born in 2006 and 2007 who were substantiated as victims of abuse or neglect before age 5. These data are separated by sociodemographic and health characteristics. Unadjusted and adjusted RRs (and 95% CIs) are used to compare the likelihood of substantiation across children with different characteristics. Statistical significance is reported and described in the table endnotes.

- 304 children were substantiated as victims of abuse or neglect before age 5, 6.8% of all children born.
- Notable differences emerged in the likelihood of being substantiated as victims. Among children whose births were covered by public insurance, 9.6% were substantiated as victims of maltreatment before age 5, compared to 1.8% among children with non-public insurance. Before adjusting for other factors, public insurance was associated with a 5 times greater risk of substantiation (RR: 5.33***; 95% CI: 3.66, 7.78). In the adjusted model, the risk ratio was attenuated (or weaker), but the relative difference was still large (RR: 3.47***; 95% CI: 2.30, 5.24).
- Risk of substantiated maltreatment varied with the commencement of prenatal care. Although representing only a small percentage of births overall, nearly 1 in 3 children with no recorded prenatal care were subsequently substantiated for abuse or neglect, 6.5 times the rate of children whose prenatal care began during the first trimester before adjusting for other factors (RR: 6.50***; 95% CI: 4.27, 9.90) and 2 times greater after adjustments were made (RR: 2.31***; 95% CI: 1.45, 3.68).

Unadjusted and Adjusted Risk Ratios

In this report, risk is conceptualized as the statistical likelihood that a child will experience various levels of involvement with child protective services (i.e., reported, substantiated, entered foster care).

A risk ratio (RR) is a measure used to compare risk across children with different characteristics. An unadjusted RR provides a simple comparison of the likelihood that a child in group A was reported, substantiated, or entered foster care versus a child in group B.

An adjusted RR attempts to isolate the measureable relationship of a particular factor to the outcome. Adjusted RRs estimate relative differences in the likelihood that a child in group A was reported, substantiated, or entered foster care compared to a child in group B, while holding constant the influence of other factors.

An RR of 1.0 (or a 95% confidence interval that includes 1.0) indicates that there is no discernible difference in risk between group A and B. An RR larger than 1.0 indicates that group A has a greater risk than group B. Meanwhile an RR of less than 1.0 indicates that group A has a lower risk than group B.

Cumulative Number of Children Placed in Foster Care before Age 5 (Table 4)

Table 4 presents the cumulative number (N) and percentage (%) of children born in 2006 and 2007 who entered an out-of-home foster care placement before age 5. These data are divided by sociodemographic and health characteristics. Unadjusted and adjusted RRs (and 95% CIs) are used to compare the likelihood of foster care entry across children with different characteristics. Statistical significance is reported and described in the table endnotes.

- 115 children spent time in foster care before age 5. This represents 2.6% of all children born.
- Characteristic differences emerged in the likelihood of being placed in foster care. Maternal education was strongly correlated with the likelihood of foster care placement before age 5. The cumulative percentage of children placed in foster care across levels of maternal education ranged from 1.3% of children born to mothers with some college compared to 4.5% of children whose mothers had not finished high school.
- Among children for whom paternity was not established, 7.6% entered foster care at some point before age 5. The comparable share of children entering foster care was 1.9% among those with established paternity. Overall, missing paternity was associated with a 4 times greater risk of foster care placement (RR: 3.96***; 95% CI: 2.72, 5.76). After adjusting for other factors, the observed risk of foster care placement for children with missing paternity remained nearly 2 times that of children with established paternity (RR: 1.70*; 95% CI: 1.13, 2.55).

County Comparison Findings (Table 5)

Table 5 serves as a summary table for California and all 58 counties, presenting the overall number of births (N) as well as the cumulative percentage (%) of children reported to CPS, substantiated as victims of maltreatment, and entering foster care before age 5.

- Overall, 1,085,745 children were born in California in 2006 and 2007.
- Infants born in Sutter County represented less than 0.5% of births statewide.
- In California, 14.8% of children were reported to CPS, 5.1% were substantiated as victims of abuse or neglect, and 2.2% spent time in foster care before age 5.
- The cumulative percentage of children reported for alleged abuse or neglect ranged from less than 8.0% to more than 30.0% across California counties.
- The cumulative percentage of children substantiated as victims of abuse or neglect varied by county, from less than 2.0% to more than 16.0% of all children born.
- Across counties, the percentage of children who spent time in foster care before reaching their fifth birthday ranged from less than 0.5% to more than 7.0%.

Sutter County Quick Facts

Percentage of Children Reported to CPS before Age 5



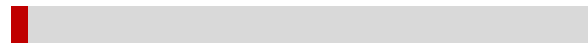
18.4%

Percentage of Children Substantiated before Age 5



6.8%

Percentage of Children Entering Foster Care before Age 5



2.6%

IMPLICATIONS

Linked data for Sutter County underscore that annual counts of children reported for maltreatment, substantiated as victims, and placed in foster care dramatically understate the number of children involved with the child protection system over time. In Sutter, official cross-sectional data from 2013 indicate that 5.1% of children under age 5 were reported for maltreatment. However, when we longitudinally follow children from birth through age 5—data from the present report indicate that 18.4% of children were reported—significantly more children than previously appreciated.

Research increasingly points to children under age 5 as a population acutely vulnerable to the consequences of maltreatment. A better understanding of the sociodemographic and health characteristics of children most likely to experience abuse or neglect between birth and age 5 is critical to improving and garnering support for prevention efforts. Population-level knowledge concerning the distribution of risk can be leveraged to enable a strategic and equitable

matching of public resources to community need. Linked records can be used to develop automated triaging tools to ensure our most vulnerable children and families are prioritized for scarce service intervention slots.

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QUESTIONS?

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Children's Data Network

www.datanetwork.org

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Table 1. Characteristics of Children born in Sutter County by Birth Payment Method

| | Full Birth Cohort 2006 & 2007 | | Birth Payment Method | | | |
|-------------------------------------|----------------------------------|------|----------------------|------|------------|------|
| | N | % | Public | | Non-Public | |
| | N | % | N | % | N | % |
| Gender | | | | | | |
| Female | 2,223 | 49.6 | 1,411 | 49.2 | 812 | 50.3 |
| Male | 2,258 | 50.4 | 1,457 | 50.8 | 801 | 49.7 |
| Birth Weight | | | | | | |
| Normal | 4,285 | 95.6 | 2,732 | 95.3 | 1,553 | 96.3 |
| Low | 196 | 4.4 | 136 | 4.7 | 60 | 3.7 |
| Birth Abnormality | | | | | | |
| None | 2,988 | 66.7 | 1,883 | 65.7 | 1,105 | 68.5 |
| One or More | 1,493 | 33.3 | 985 | 34.3 | 508 | 31.5 |
| Prenatal Care | | | | | | |
| 1st Trimester | 2,169 | 48.4 | 1,129 | 39.4 | 1,040 | 64.5 |
| 2nd Trimester | 1,863 | 41.6 | 1,355 | 47.3 | 508 | 31.5 |
| 3rd Trimester | 378 | 8.4 | 321 | 11.2 | 57 | 3.5 |
| None/Missing | 71 | 1.6 | 63 | 2.2 | 8 | 0.5 |
| Paternity Establishment | | | | | | |
| Established | 3,967 | 88.5 | 2,411 | 84.1 | 1,556 | 96.5 |
| Missing | 514 | 11.5 | 457 | 15.9 | 57 | 3.5 |
| Maternal Race/Ethnicity | | | | | | |
| White | 2,046 | 45.7 | 1,063 | 37.1 | 983 | 60.9 |
| Black | 92 | 2.1 | 64 | 2.2 | 28 | 1.7 |
| Latina, US-born | 677 | 15.1 | 461 | 16.1 | 216 | 13.4 |
| Latina, Foreign-born | 1,162 | 25.9 | 1,017 | 35.5 | 145 | 9.0 |
| Asian/Pacific Islander | 442 | 9.9 | 222 | 7.7 | 220 | 13.6 |
| Native American | 62 | 1.4 | 41 | 1.4 | 21 | 1.3 |
| Maternal Age | | | | | | |
| ≤ 19 yrs | 552 | 12.3 | 483 | 16.8 | 69 | 4.3 |
| 20-24 yrs | 1,414 | 31.6 | 1,063 | 37.1 | 351 | 21.8 |
| 25-29 yrs | 1,292 | 28.8 | 729 | 25.4 | 563 | 34.9 |
| 30+ yrs | 1,223 | 27.3 | 593 | 20.7 | 630 | 39.1 |
| Maternal Education | | | | | | |
| < HS | 1,345 | 30.0 | 1,231 | 42.9 | 114 | 7.1 |
| HS or GED | 1,510 | 33.7 | 1,046 | 36.5 | 464 | 28.8 |
| Some College | 1,213 | 27.1 | 535 | 18.7 | 678 | 42.0 |
| College+ | 413 | 9.2 | 56 | 2.0 | 357 | 22.1 |
| Number of Births | | | | | | |
| One | 1,567 | 35.0 | 988 | 34.5 | 579 | 35.9 |
| Two | 1,477 | 33.0 | 898 | 31.3 | 579 | 35.9 |
| Three+ | 1,437 | 32.1 | 982 | 34.2 | 455 | 28.2 |
| Prior Pregnancy Terminations | | | | | | |
| None | 3,778 | 84.3 | 2,445 | 85.3 | 1,333 | 82.6 |
| One+ | 703 | 15.7 | 423 | 14.8 | 280 | 17.4 |
| Birth Payment Method | | | | | | |
| Non-Public | 1,613 | 36.0 | -- | -- | -- | -- |
| Public | 2,868 | 64.0 | -- | -- | -- | -- |

Table Notes:

1. Cell sizes < 10 masked as indicated by [--].
2. Table based on the full population of children born in a given county in 2006 and 2007.

Table 2. Characteristics and Comparisons of Children born in Sutter County and Reported to CPS

| | Reported to CPS | | Risk Comparisons | | | |
|-------------------------------------|-----------------|------|------------------|---------------|----------|--------------|
| | Before Age 5 | | Unadjusted | | Adjusted | |
| | N | % | RR | 95% CI | RR | 95% CI |
| Gender | | | | | | |
| Female | 449 | 20.2 | ref. | --- | ref. | --- |
| Male | 377 | 16.7 | 0.83** | (0.73, 0.94) | 0.86** | (0.77, 0.96) |
| Birth Weight | | | | | | |
| Normal | 783 | 18.3 | ref. | --- | ref. | --- |
| Low | 43 | 21.9 | 1.20 | (0.92, 1.58) | 0.91 | (0.69, 1.19) |
| Birth Abnormality | | | | | | |
| None | 534 | 17.9 | ref. | --- | ref. | --- |
| One or More | 292 | 19.6 | 1.09 | (0.96, 1.24) | 1.01 | (0.89, 1.13) |
| Prenatal Care | | | | | | |
| 1st Trimester | 304 | 14.0 | ref. | --- | ref. | --- |
| 2nd Trimester | 379 | 20.3 | 1.45*** | (1.26, 1.67) | 1.17* | (1.03, 1.33) |
| 3rd Trimester | 108 | 28.6 | 2.04*** | (1.68, 2.47) | 1.39*** | (1.16, 1.66) |
| None/Missing | 35 | 49.3 | 3.52*** | (2.72, 4.55) | 1.53** | (1.17, 1.99) |
| Paternity Establishment | | | | | | |
| Established | 612 | 15.4 | ref. | --- | ref. | --- |
| Missing | 214 | 41.6 | 2.70*** | (2.38, 3.06) | 1.45*** | (1.28, 1.65) |
| Maternal Race/Ethnicity | | | | | | |
| White | 521 | 25.5 | ref. | --- | ref. | --- |
| Black | 28 | 30.4 | 1.20 | (0.87, 1.64) | 0.81 | (0.60, 1.08) |
| Latina, US-born | 147 | 21.7 | 0.85 | (0.73, 1.00) | 0.65*** | (0.56, 0.76) |
| Latina, Foreign-born | 82 | 7.1 | 0.28*** | (0.22, 0.35) | 0.18*** | (0.14, 0.23) |
| Asian/Pacific Islander | 28 | 6.3 | 0.25*** | (0.17, 0.36) | 0.35*** | (0.24, 0.51) |
| Native American | 20 | 32.3 | 1.27 | (0.88, 1.83) | 0.98 | (0.69, 1.38) |
| Maternal Age | | | | | | |
| ≤ 19 yrs | 165 | 29.9 | 2.56*** | (2.09, 3.12) | 1.63*** | (1.27, 2.08) |
| 20-24 yrs | 311 | 22.0 | 1.88*** | (1.57, 2.26) | 1.37*** | (1.14, 1.66) |
| 25-29 yrs | 207 | 16.0 | 1.37** | (1.12, 1.67) | 1.15 | (0.96, 1.38) |
| 30+ yrs | 143 | 11.7 | ref. | --- | ref. | --- |
| Maternal Education | | | | | | |
| < HS | 338 | 25.1 | 9.44*** | (5.23, 17.03) | 4.72*** | (2.56, 8.72) |
| HS or GED | 317 | 21.0 | 7.88*** | (4.36, 14.24) | 3.53*** | (1.93, 6.48) |
| Some College | 160 | 13.2 | 4.95*** | (2.72, 9.03) | 2.64** | (1.44, 4.85) |
| College+ | 11 | 2.7 | ref. | --- | ref. | --- |
| Number of Births | | | | | | |
| One | 258 | 16.5 | ref. | --- | ref. | --- |
| Two | 225 | 15.2 | 0.93 | (0.79, 1.09) | 1.17 | (1.00, 1.37) |
| Three+ | 343 | 23.9 | 1.45*** | (1.25, 1.68) | 1.74*** | (1.47, 2.06) |
| Prior Pregnancy Terminations | | | | | | |
| None | 675 | 17.9 | ref. | --- | ref. | --- |
| One+ | 151 | 21.5 | 1.20* | (1.03, 1.41) | 1.21** | (1.05, 1.39) |
| Birth Payment Method | | | | | | |
| Non-Public | 121 | 7.5 | ref. | --- | ref. | --- |
| Public | 705 | 24.6 | 3.28*** | (2.73, 3.93) | 2.43*** | (1.98, 2.97) |

Table Notes:

1. RR = Risk Ratio; 95% CI = 95% Confidence Interval; ref = Reference group for Risk Ratio calculations; [---] indicates no corresponding statistic given reference group status.
2. Cell sizes < 10 masked as indicated by [---]; statistical significance denoted as: $P < .05^*$; $P < .01^{**}$; $P < .001^{***}$.

Table 3. Characteristics and Comparisons of Children born in Sutter County and Substantiated

| | Substantiated Before Age 5 | | Risk Comparisons | | | |
|-------------------------------------|-------------------------------|------|------------------|-------------|----------|-------------|
| | N | % | Unadjusted | | Adjusted | |
| | | | RR | 95% CI | RR | 95% CI |
| Gender | | | | | | |
| Female | 161 | 7.2 | ref. | --- | ref. | --- |
| Male | 143 | 6.3 | 0.87 | (0.70,1.09) | 0.93 | (0.75,1.14) |
| Birth Weight | | | | | | |
| Normal | 292 | 6.8 | ref. | --- | ref. | --- |
| Low | 12 | 6.1 | 0.90 | (0.51,1.57) | 0.58 | (0.33,1.00) |
| Birth Abnormality | | | | | | |
| None | 191 | 6.4 | ref. | --- | ref. | --- |
| One or More | 113 | 7.6 | 1.18 | (0.95,1.48) | 1.07 | (0.86,1.33) |
| Prenatal Care | | | | | | |
| 1st Trimester | 94 | 4.3 | ref. | --- | ref. | --- |
| 2nd Trimester | 139 | 7.5 | 1.72*** | (1.33,2.22) | 1.32* | (1.03,1.69) |
| 3rd Trimester | 51 | 13.5 | 3.11*** | (2.25,4.30) | 1.90*** | (1.39,2.61) |
| None/Missing | 20 | 28.2 | 6.50*** | (4.27,9.90) | 2.31*** | (1.45,3.68) |
| Paternity Establishment | | | | | | |
| Established | 217 | 5.5 | ref. | --- | ref. | --- |
| Missing | 87 | 16.9 | 3.09*** | (2.46,3.90) | 1.38** | (1.09,1.75) |
| Maternal Race/Ethnicity | | | | | | |
| White | 200 | 9.8 | -- | -- | -- | -- |
| Black | 14 | 15.2 | -- | -- | -- | -- |
| Latina, US-born | 50 | 7.4 | -- | -- | -- | -- |
| Latina, Foreign-born | 19 | 1.6 | -- | -- | -- | -- |
| Asian/Pacific Islander | <10 | -- | -- | -- | -- | -- |
| Native American | 12 | 19.4 | -- | -- | -- | -- |
| Maternal Age | | | | | | |
| ≤ 19 yrs | 56 | 10.1 | 2.03*** | (1.44,2.88) | 1.24 | (0.78,1.97) |
| 20-24 yrs | 118 | 8.4 | 1.67*** | (1.24,2.26) | 1.18 | (0.84,1.65) |
| 25-29 yrs | 69 | 5.3 | 1.07 | (0.77,1.50) | 0.86 | (0.62,1.18) |
| 30+ yrs | 61 | 5.0 | ref. | --- | ref. | --- |
| Maternal Education | | | | | | |
| < HS | 142 | 10.6 | -- | -- | -- | -- |
| HS or GED | 117 | 7.8 | -- | -- | -- | -- |
| Some College | 43 | 3.5 | -- | -- | -- | -- |
| College+ | <10 | -- | -- | -- | -- | -- |
| Number of Births | | | | | | |
| One | 75 | 4.8 | ref. | --- | ref. | --- |
| Two | 85 | 5.8 | 1.20 | (0.89,1.63) | 1.55** | (1.13,2.12) |
| Three+ | 144 | 10.0 | 2.09*** | (1.60,2.74) | 2.29*** | (1.62,3.23) |
| Prior Pregnancy Terminations | | | | | | |
| None | 242 | 6.4 | ref. | --- | ref. | --- |
| One+ | 62 | 8.8 | 1.38* | (1.05,1.80) | 1.36* | (1.05,1.76) |
| Birth Payment Method | | | | | | |
| Non-Public | 29 | 1.8 | ref. | --- | ref. | --- |
| Public | 275 | 9.6 | 5.33*** | (3.66,7.78) | 3.47*** | (2.30,5.24) |

Table Notes:

1. RR = Risk Ratio; 95% CI = 95% Confidence Interval; ref = Reference group for Risk Ratio calculations; [---] indicates no corresponding statistic given reference group status.
2. Cell sizes < 10 masked as indicated by [--]; statistical significance denoted as: *P* < .05*; *P* < .01**; *P* < .001***.

Table 4. Characteristics and Comparisons of Children born in Sutter County and Placed in Foster Care

| | Placed in Care Before Age 5 | | Risk Comparisons | | | |
|-------------------------------------|--------------------------------|-----|------------------|-------------|----------|--------------|
| | N | % | Unadjusted | | Adjusted | |
| | | | RR | 95% CI | RR | 95% CI |
| Gender | | | | | | |
| Female | 65 | 2.9 | ref. | --- | ref. | --- |
| Male | 50 | 2.2 | 0.76 | (0.53,1.09) | 0.81 | (0.57,1.15) |
| Birth Weight | | | | | | |
| Normal | 108 | 2.5 | -- | -- | -- | -- |
| Low | <10 | -- | -- | -- | -- | -- |
| Birth Abnormality | | | | | | |
| None | 66 | 2.2 | ref. | --- | ref. | --- |
| One or More | 49 | 3.3 | 1.49* | (1.03,2.14) | 1.29 | (0.89,1.86) |
| Prenatal Care | | | | | | |
| 1st Trimester | 35 | 1.6 | -- | -- | -- | -- |
| 2nd Trimester | 48 | 2.6 | -- | -- | -- | -- |
| 3rd Trimester | 24 | 6.4 | -- | -- | -- | -- |
| None/Missing | <10 | -- | -- | -- | -- | -- |
| Paternity Establishment | | | | | | |
| Established | 76 | 1.9 | ref. | --- | ref. | --- |
| Missing | 39 | 7.6 | 3.96*** | (2.72,5.76) | 1.70* | (1.13,2.55) |
| Maternal Race/Ethnicity | | | | | | |
| White | 82 | 4.0 | -- | -- | -- | -- |
| Black | <10 | -- | -- | -- | -- | -- |
| Latina, US-born | 18 | 2.7 | -- | -- | -- | -- |
| Latina, Foreign-born | <10 | -- | -- | -- | -- | -- |
| Asian/Pacific Islander | <10 | -- | -- | -- | -- | -- |
| Native American | <10 | -- | -- | -- | -- | -- |
| Maternal Age | | | | | | |
| ≤ 19 yrs | 19 | 3.4 | 1.68 | (0.94,3.03) | 2.00 | (0.94,4.28) |
| 20-24 yrs | 49 | 3.5 | 1.70* | (1.05,2.73) | 1.62 | (0.97,2.73) |
| 25-29 yrs | 22 | 1.7 | 0.83 | (0.47,1.47) | 0.68 | (0.39,1.18) |
| 30+ yrs | 25 | 2.0 | ref. | --- | ref. | --- |
| Maternal Education | | | | | | |
| < HS | 60 | 4.5 | -- | -- | -- | -- |
| HS or GED | 39 | 2.6 | -- | -- | -- | -- |
| Some College | 16 | 1.3 | -- | -- | -- | -- |
| College+ | <10 | -- | -- | -- | -- | -- |
| Number of Births | | | | | | |
| One | 18 | 1.2 | ref. | --- | ref. | --- |
| Two | 25 | 1.7 | 1.47 | (0.81,2.69) | 2.19* | (1.17,4.10) |
| Three+ | 72 | 5.0 | 4.36*** | (2.62,7.28) | 6.55*** | (3.44,12.48) |
| Prior Pregnancy Terminations | | | | | | |
| None | 90 | 2.4 | ref. | --- | ref. | --- |
| One+ | 25 | 3.6 | 1.49 | (0.97,2.31) | 1.38 | (0.90,2.11) |
| Birth Payment Method | | | | | | |
| Non-Public | <10 | -- | -- | -- | -- | -- |
| Public | 106 | 3.7 | -- | -- | -- | -- |

Table Notes:

1. RR = Risk Ratio; 95% CI = 95% Confidence Interval; ref = Reference group for Risk Ratio calculations; [---] indicates no corresponding statistic given reference group status.
2. Cell sizes < 10 masked as indicated by [---]; statistical significance denoted as: *P* < .05*; *P* < .01**; *P* < .001***.

Table 5. Summary of County Data for California: Children Born in 2006/2007 and Reported to Child Protective Services, Substantiated as Victims, or Entering Foster Care before Age 5

| County of Birth | Births 2006 & 2007 | % Reported | % Substantiated | % Entering Foster Care |
|-----------------|-----------------------|---------------|--------------------|---------------------------|
| California | 1,085,745 | 14.8% | 5.1% | 2.2% |
| Alameda | 42,000 | 10.7% | 2.9% | 1.6% |
| Alpine | -- | -- | -- | -- |
| Amador | 619 | 24.4% | 7.8% | 3.2% |
| Butte | 5,940 | 25.1% | 10.3% | 5.7% |
| Calaveras | 107 | 41.1% | 16.8% | -- |
| Colusa | 456 | 14.5% | 5.7% | 3.5% |
| Contra Costa | 23,219 | 10.3% | 3.4% | 1.4% |
| Del Norte | 709 | 28.3% | 15.2% | 6.8% |
| El Dorado | 2,403 | 19.7% | 9.7% | 4.7% |
| Fresno | 35,056 | 19.2% | 5.0% | 2.7% |
| Glenn | -- | -- | -- | -- |
| Humboldt | 3,202 | 22.3% | 7.1% | 3.4% |
| Imperial | 6,205 | 13.2% | 5.4% | 2.8% |
| Inyo | 451 | 16.4% | 3.5% | -- |
| Kern | 28,099 | 22.3% | 10.7% | 4.3% |
| Kings | 5,182 | 16.6% | 5.0% | 3.2% |
| Lake | 1,084 | 27.1% | 8.5% | 5.4% |
| Lassen | 453 | 21.9% | 7.9% | 3.8% |
| Los Angeles | 310,700 | 14.6% | 5.2% | 2.4% |
| Madera | 4,014 | 22.0% | 9.0% | 5.1% |
| Marin | 3,451 | 9.8% | 3.2% | 0.8% |
| Mariposa | -- | -- | -- | -- |
| Mendocino | 1,980 | 23.3% | 11.1% | 4.1% |
| Merced | 6,804 | 21.6% | 7.6% | 3.9% |
| Modoc | -- | -- | -- | -- |
| Mono | 279 | 7.9% | -- | -- |
| Monterey | 14,196 | 8.9% | 2.4% | 1.0% |
| Napa | 2,593 | 11.2% | 3.5% | 1.7% |
| Nevada | 1,990 | 14.2% | 4.3% | 2.0% |
| Orange | 93,963 | 11.5% | 4.9% | 1.4% |
| Placer | 6,771 | 13.8% | 5.2% | 1.7% |
| Plumas | 210 | 23.3% | 10.5% | -- |
| Riverside | 57,031 | 18.3% | 7.1% | 3.5% |
| Sacramento | 47,277 | 17.1% | 6.5% | 3.2% |
| San Benito | 1,191 | 17.0% | 6.3% | 2.9% |
| San Bernardino | 57,807 | 17.4% | 5.3% | 2.6% |
| San Diego | 85,349 | 15.9% | 5.0% | 1.8% |
| San Francisco | 25,776 | 8.2% | 2.6% | 1.3% |
| San Joaquin | 21,183 | 17.4% | 6.1% | 2.2% |
| San Luis Obispo | 5,445 | 17.3% | 5.1% | 2.1% |
| San Mateo | 10,599 | 6.0% | 1.3% | 0.5% |
| Santa Barbara | 11,903 | 12.6% | 4.3% | 2.0% |
| Santa Clara | 56,832 | 9.8% | 2.4% | 1.2% |

| County of Birth | Births 2006 & 2007 | % Reported | % Substantiated | % Entering Foster Care |
|-----------------|-----------------------|---------------|--------------------|---------------------------|
| Santa Cruz | 7,379 | 14.3% | 4.7% | 1.9% |
| Shasta | 4,556 | 27.6% | 12.9% | 6.6% |
| Sierra | -- | -- | -- | -- |
| Siskiyou | 805 | 30.7% | 13.5% | 5.7% |
| Solano | 10,978 | 15.2% | 4.0% | 1.5% |
| Sonoma | 11,397 | 10.3% | 3.9% | 1.2% |
| Stanislaus | 19,632 | 16.9% | 6.3% | 1.4% |
| Sutter | 4,481 | 18.4% | 6.8% | 2.6% |
| Tehama | 1,412 | 30.7% | 11.8% | 7.1% |
| Trinity | -- | -- | -- | -- |
| Tulare | 14,900 | 18.8% | 5.0% | 2.6% |
| Tuolumne | 1,169 | 23.9% | 9.5% | 4.4% |
| Ventura | 21,713 | 13.0% | 2.8% | 1.4% |
| Yolo | 4,097 | 12.8% | 4.6% | 2.1% |
| Yuba | -- | -- | -- | -- |

Table Notes:

1. Cell sizes < 10 masked as indicated by [--].