

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

San Francisco County, California

INTRODUCTION

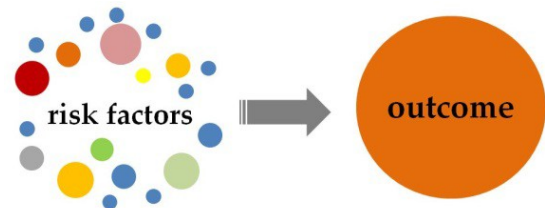
Much of what we know—or think we know— about risk factors for child abuse and neglect is based on cross-sectional and retrospective studies of children reported for maltreatment. Although these studies are useful for identifying and describing children reported to child protective services (CPS), substantiated 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 CPS-involvement.

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 San Francisco 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 San Francisco 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, 25,776 children were born.
- Although prenatal care began during the first trimester for a majority of children, 2981 children (11.6%) were born to mothers who received prenatal care that started late or not at all.
- A plurality of children (40.6%) were born to mothers of White race/ethnicity.
- A total of 3.2% of children were born to teen mothers.

- 6,404 births were paid for by public health insurance, 24.8% of all children born.
- Paternity was missing for 5.1% of children overall, but 14.8% among births covered by public health insurance compared with 1.9% 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
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.

- 2,106 children were reported to CPS for alleged child abuse or neglect before the age of 5, 8.2% of children.
- Notable differences emerged in the likelihood of being reported to CPS. Overall, 12.9% of children who were low birth weight (< 2500g) were reported compared to 7.7% of children who were not. In relative terms, that meant that a low-birth-weight child had a 67.0% greater likelihood of being reported for abuse or neglect (RR: 1.67***; 95% CI: 1.49, 1.88). After adjusting for other factors, the heightened risk associated with low birth weight diminished in magnitude, but was still statistically significant (RR: 1.23***; 95% CI: 1.10, 1.38).
- 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, 30.5% were reported. In contrast, only 4.7% of children born to a mother age 30 or older were reported. Before adjusting for other factors, children of teen mothers were almost 6.5 times as likely to

be reported to CPS as were those born to mothers 30 and older (RR: 6.49***; 95% CI: 5.74, 7.33).

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.

- 676 children were substantiated as victims of abuse or neglect before age 5, 2.6% of all children born.
- Notable differences emerged in the likelihood of being substantiated as victims. Among children whose births were covered by public insurance, 8.0% were substantiated as victims of maltreatment before age 5, compared to less than 1.0% among children with non-public insurance. Before adjusting for other factors, public insurance was associated with a 9 times greater risk of substantiation (RR: 9.22***; 95% CI: 7.76, 10.96). In the adjusted model, the risk ratio was attenuated (or weaker), but the relative difference was still large (RR: 2.37***; 95% CI: 1.88, 2.99).
- Risk of substantiated maltreatment varied with the commencement of prenatal care. Although representing only a small percentage of births overall, nearly 2 in 5 children with no recorded prenatal care were subsequently substantiated for abuse or neglect, 23 times the rate of children whose prenatal care began during the first trimester before adjusting for other factors (RR: 23.20***; 95% CI: 18.55, 29.02) and 3 times greater after adjustments were made (RR: 3.11***; 95% CI: 2.38, 4.07).

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.

- 323 children spent time in foster care before age 5. This represents 1.3% 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 less than 0.1% of children born to college graduates compared to 4.4% of children whose mothers had not finished high school.
- Among children for whom paternity was not established, 11.0% entered foster care at some point before age 5. The comparable share of children entering foster care was less than 1.0% among those with established paternity. Overall, missing paternity was associated with a 15 times greater risk of foster care placement (RR: 14.96***; 95% CI: 12.10, 18.50). After adjusting for other factors, the observed risk of foster care placement for children with missing paternity remained 2.5 times that of children with established paternity (RR: 2.51***; 95% CI: 1.97, 3.19).

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 San Francisco County represented 2.4% 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%.

San Francisco County Quick Facts

Percentage of Children Reported to CPS before Age 5



8.2%

Percentage of Children Substantiated before Age 5



2.6%

Percentage of Children Entering Foster Care before Age 5



1.3%

IMPLICATIONS

Linked data for San Francisco 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 San Francisco, official cross-sectional data from 2013 indicate that 3.4% 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 8.2% 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 San Francisco County by Birth Payment Method

	Full Birth Cohort		Birth Payment Method			
	2006 & 2007		Public		Non--Public	
	N	%	N	%	N	%
Gender						
Female	12,554	48.7	3,152	49.2	9,402	48.5
Male	13,222	51.3	3,252	50.8	9,970	51.5
Birth Weight						
Normal	23,510	91.2	5,755	89.9	17,755	91.7
Low	2,266	8.8	649	10.1	1,617	8.4
Birth Abnormality						
None	18,553	72.0	4,716	73.6	13,837	71.4
One or More	7,223	28.0	1,688	26.4	5,535	28.6
Prenatal Care						
1st Trimester	22,795	88.4	4,349	67.9	18,446	95.2
2nd Trimester	2,409	9.4	1,623	25.3	786	4.1
3rd Trimester	424	1.6	331	5.2	93	0.5
None/Missing	148	0.6	101	1.6	47	0.2
Paternity Establishment						
Established	24,461	94.9	5,459	85.2	19,002	98.1
Missing	1,315	5.1	945	14.8	370	1.9
Maternal Race/Ethnicity						
White	10,455	40.6	705	11.0	9,750	50.3
Black	1,523	5.9	869	13.6	654	3.4
Latina, US--born	1,653	6.4	567	8.9	1,086	5.6
Latina, Foreign--born	3,681	14.3	2,477	38.7	1,204	6.2
Asian/Pacific Islander	8,400	32.6	1,760	27.5	6,640	34.3
Native American	64	0.3	26	0.4	38	0.2
Maternal Age						
≤ 19 yrs	823	3.2	617	9.6	206	1.1
20--24 yrs	2,549	9.9	1,628	25.4	921	4.8
25--29 yrs	4,923	19.1	1,852	28.9	3,071	15.9
30+ yrs	17,481	67.8	2,307	36.0	15,174	78.3
Maternal Education						
< HS	3,609	14.0	3,046	47.6	563	2.9
HS or GED	3,613	14.0	1,588	24.8	2,025	10.5
Some College	4,214	16.4	1,193	18.6	3,021	15.6
College+	14,340	55.6	577	9.0	13,763	71.1
Number of Births						
One	12,956	50.3	2,680	41.9	10,276	53.1
Two	8,600	33.4	2,039	31.8	6,561	33.9
Three+	4,220	16.4	1,685	26.3	2,535	13.1
Prior Pregnancy Terminations						
None	21,540	83.6	5,490	85.7	16,050	82.9
One+	4,236	16.4	914	14.3	3,322	17.2
Birth Payment Method						
Non--Public	19,372	75.2	---	---	---	---
Public	6,404	24.8	---	---	---	---

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 San Francisco County and Reported to CPS

	Reported to CPS		Risk Comparisons			
	Before Age 5		Unadjusted		Adjusted	
	N	%	RR	95% CI	RR	95% CI
Gender						
Female	1,017	8.1	ref.	-----	ref.	-----
Male	1,089	8.2	1.02	(0.94, 1.10)	1.05	(0.98, 1.13)
Birth Weight						
Normal	1,814	7.7	ref.	-----	ref.	-----
Low	292	12.9	1.67***	(1.49, 1.88)	1.23***	(1.10, 1.38)
Birth Abnormality						
None	1,544	8.3	ref.	-----	ref.	-----
One or More	562	7.8	0.93	(0.85, 1.03)	0.99	(0.90, 1.09)
Prenatal Care						
1st Trimester	1,464	6.4	ref.	-----	ref.	-----
2nd Trimester	454	18.9	2.93***	(2.66, 3.23)	1.17**	(1.07, 1.29)
3rd Trimester	111	26.2	4.08***	(3.45, 4.82)	1.28**	(1.09, 1.50)
None/Missing	77	52.0	8.10***	(6.89, 9.53)	1.77***	(1.49, 2.10)
Paternity Establishment						
Established	1,667	6.8	ref.	-----	ref.	-----
Missing	439	33.4	4.90***	(4.48, 5.36)	1.53***	(1.39, 1.69)
Maternal Race/Ethnicity						
White	430	4.1	ref.	-----	ref.	-----
Black	560	36.8	8.94***	(7.98, 10.02)	1.88***	(1.65, 2.13)
Latina, US---born	286	17.3	4.21***	(3.66, 4.84)	1.34***	(1.16, 1.54)
Latina, Foreign---born	467	12.7	3.08***	(2.72, 3.50)	0.73***	(0.63, 0.84)
Asian/Pacific Islander	347	4.1	1.00	(0.87, 1.15)	0.60***	(0.52, 0.68)
Native American	16	25.0	6.08***	(3.94, 9.38)	1.62*	(1.07, 2.46)
Maternal Age						
≤ 19 yrs	251	30.5	6.49***	(5.74, 7.33)	2.03***	(1.74, 2.37)
20---24 yrs	482	18.9	4.02***	(3.62, 4.46)	1.46***	(1.30, 1.64)
25---29 yrs	551	11.2	2.38***	(2.15, 2.64)	1.28***	(1.15, 1.41)
30+ yrs	822	4.7	ref.	-----	ref.	-----
Maternal Education						
< HS	796	22.1	11.06***	(9.71, 12.60)	3.51***	(2.94, 4.20)
HS or GED	546	15.1	7.58***	(6.60, 8.70)	3.55***	(3.00, 4.19)
Some College	478	11.3	5.69***	(4.93, 6.56)	3.14***	(2.68, 3.69)
College+	286	2.0	ref.	-----	ref.	-----
Number of Births						
One	750	5.8	ref.	-----	ref.	-----
Two	628	7.3	1.26***	(1.14, 1.40)	1.35***	(1.23, 1.50)
Three+	728	17.3	2.98***	(2.71, 3.28)	2.07***	(1.86, 2.30)
Prior Pregnancy Terminations						
None	1,724	8.0	ref.	-----	ref.	-----
One+	382	9.0	1.13*	(1.01, 1.25)	1.12*	(1.02, 1.24)
Birth Payment Method						
Non---Public	733	3.8	ref.	-----	ref.	-----
Public	1,373	21.4	5.67***	(5.20, 6.17)	1.91***	(1.70, 2.14)

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 San Francisco County & Substantiated

	Substantiated Before Age 5		Risk Comparisons			
	N	%	Unadjusted RR	Unadjusted 95% CI	Adjusted RR	Adjusted 95% CI
Gender						
Female	318	2.5	ref.	-----	ref.	-----
Male	358	2.7	1.07	(0.92,1.24)	1.13	(0.98,1.30)
Birth Weight						
Normal	558	2.4	ref.	-----	ref.	-----
Low	118	5.2	2.19***	(1.81,2.66)	1.23*	(1.00,1.51)
Birth Abnormality						
None	453	2.4	ref.	-----	ref.	-----
One or More	223	3.1	1.26**	(1.08,1.48)	1.22*	(1.03,1.44)
Prenatal Care						
1st Trimester	385	1.7	ref.	-----	ref.	-----
2nd Trimester	176	7.3	4.33***	(3.64,5.14)	1.52***	(1.27,1.82)
3rd Trimester	57	13.4	7.96***	(6.13,10.33)	1.91***	(1.49,2.45)
None/Missing	58	39.2	23.20***	(18.55,29.02)	3.11***	(2.38,4.07)
Paternity Establishment						
Established	458	1.9	ref.	-----	ref.	-----
Missing	218	16.6	8.85***	(7.61,10.30)	2.04***	(1.72,2.42)
Maternal Race/Ethnicity						
White	135	1.3	ref.	-----	ref.	-----
Black	218	14.3	11.09***	(9.01,13.65)	1.57***	(1.25,1.97)
Latina, US---born	110	6.7	5.15***	(4.03,6.59)	1.31*	(1.02,1.68)
Latina, Foreign---born	111	3.0	2.34***	(1.82,2.99)	0.41***	(0.31,0.54)
Asian/Pacific Islander	92	1.1	0.85	(0.65,1.10)	0.46***	(0.35,0.60)
Native American	10	15.6	12.10***	(6.68,21.91)	1.91	(0.97,3.78)
Maternal Age						
≤ 19 yrs	83	10.1	6.91***	(5.45,8.77)	1.51**	(1.13,2.03)
20---24 yrs	158	6.2	4.25***	(3.50,5.16)	1.26*	(1.01,1.56)
25---29 yrs	180	3.7	2.51***	(2.08,3.03)	1.19	(0.99,1.44)
30+ yrs	255	1.5	ref.	-----	ref.	-----
Maternal Education						
< HS	308	8.5	21.47***	(16.22,28.41)	6.08***	(4.21,8.78)
HS or GED	167	4.6	11.63***	(8.63,15.67)	5.03***	(3.54,7.16)
Some College	144	3.4	8.60***	(6.34,11.66)	4.24***	(3.02,5.94)
College+	57	0.4	ref.	-----	ref.	-----
Number of Births						
One	222	1.7	ref.	-----	ref.	-----
Two	178	2.1	1.21	(0.99,1.47)	1.28*	(1.06,1.56)
Three+	276	6.5	3.82***	(3.21,4.54)	2.13***	(1.74,2.61)
Prior Pregnancy Terminations						
None	556	2.6	ref.	-----	ref.	-----
One+	120	2.8	1.10	(0.90,1.33)	1.04	(0.87,1.26)
Birth Payment Method						
Non---Public	167	0.9	ref.	-----	ref.	-----
Public	509	8.0	9.22***	(7.76,10.96)	2.37***	(1.88,2.99)

Table Notes:

- RR = Risk Ratio; 95% CI = 95% Confidence Interval; ref = Reference group for Risk Ratio calculations; [-----] indicates no corresponding statistic given reference group status.
- 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 San Francisco County and Placed in Foster Care

	Placed in Care		Risk Comparisons			
	Before Age 5		Unadjusted		Adjusted	
	N	%	RR	95% CI	RR	95% CI
Gender						
Female	166	1.32	ref.	-----	ref.	-----
Male	157	1.19	0.90	(0.72,1.12)	0.98	(0.80,1.20)
Birth Weight						
Normal	251	1.07	ref.	-----	ref.	-----
Low	72	3.18	2.98***	(2.30,3.85)	1.37*	(1.01,1.84)
Birth Abnormality						
None	203	1.09	ref.	-----	ref.	-----
One or More	120	1.66	1.52***	(1.21,1.90)	1.26	(0.98,1.63)
Prenatal Care						
1st Trimester	149	0.65	ref.	-----	ref.	-----
2nd Trimester	96	3.99	6.10***	(4.73,7.85)	1.80***	(1.37,2.35)
3rd Trimester	36	8.49	12.99***	(9.14,18.45)	2.23***	(1.59,3.14)
None/Missing	42	28.38	43.42***	(32.10,58.71)	3.27***	(2.23,4.79)
Paternity Establishment						
Established	179	0.73	ref.	-----	ref.	-----
Missing	144	10.95	14.96***	(12.10,18.50)	2.51***	(1.97,3.19)
Maternal Race/Ethnicity						
White	63	0.60	-----	-----	-----	-----
Black	135	8.86	-----	-----	-----	-----
Latina, US---born	65	3.93	-----	-----	-----	-----
Latina, Foreign---born	19	0.52	-----	-----	-----	-----
Asian/Pacific Islander	34	0.40	-----	-----	-----	-----
Native American	<10	---	-----	-----	-----	-----
Maternal Age						
≤ 19 yrs	38	4.62	6.41***	(4.49,9.14)	1.26	(0.80,1.97)
20---24 yrs	77	3.02	4.19***	(3.17,5.55)	1.10	(0.80,1.50)
25---29 yrs	82	1.67	2.31***	(1.75,3.05)	0.99	(0.75,1.30)
30+ yrs	126	0.72	ref.	-----	ref.	-----
Maternal Education						
< HS	159	4.41	57.43***	(31.21,105.70)	13.15***	(6.37,27.12)
HS or GED	83	2.30	29.95***	(15.98,56.11)	10.31***	(5.12,20.77)
Some College	70	1.66	21.66***	(11.48,40.85)	8.56***	(4.30,17.03)
College+	11	0.08	ref.	-----	ref.	-----
Number of Births						
One	80	0.62	ref.	-----	ref.	-----
Two	77	0.90	1.45*	(1.06,1.98)	1.59**	(1.16,2.17)
Three+	166	3.93	6.37***	(4.89,8.30)	3.10***	(2.23,4.31)
Prior Pregnancy Terminations						
None	265	1.23	ref.	-----	ref.	-----
One+	58	1.37	1.11	(0.84,1.48)	0.92	(0.71,1.20)
Birth Payment Method						
Non---Public	52	0.27	ref.	-----	ref.	-----
Public	271	4.23	15.76***	(11.73,21.18)	3.12***	(2.12,4.57)

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. Cellsizes < 10 masked as indicated by [-----].