

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

Alameda 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 Alameda 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 Alameda 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, 42,000 children were born.
- Although prenatal care began during the first trimester for a majority of children, 5,286 children (12.6%) were born to mothers who received prenatal care that started late or not at all.
- A plurality of children were born to Latina mothers (35.9%) (10.6% - US born / 25.3% - foreign born).
- A total of 7.4% of children were born to teen mothers.

- 15,802 births were paid for by public health insurance, 37.6% of all children born.
- Paternity was missing for 8.6% of children overall, but 16.1% among births covered by public health insurance compared with 4.1% 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.

- 4,491 children were reported to CPS for alleged child abuse or neglect before the age of 5, 10.7% of children.
- Notable differences emerged in the likelihood of being reported to CPS. Overall, 16.5% of children who were low birth weight (< 2500g) were reported compared to 10.2% of children who were not. In relative terms, that meant that a low-birth-weight child had a 61% greater likelihood of being reported for abuse or neglect (RR: 1.61***; 95% CI: 1.48, 1.75). After adjusting for other factors, the heightened risk associated with low birth weight diminished in magnitude, but was still statistically significant (RR: 1.26***; 95% CI: 1.15, 1.37).
- 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, 21.4% were reported. In contrast, only 6.7% of children born to a mother age 30 or older were reported. Before adjusting for other factors, children of teen mothers were more than 3 times as likely

to be reported to CPS as were those born to mothers 30 or older (RR: 3.22***; 95% CI: 2.96, 3.51).

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.

- 1,201 children were substantiated as victims of abuse or neglect before age 5, 2.9% of all children born.
- Notable differences emerged in the likelihood of being substantiated as victims.
- Among children whose births were covered by public insurance, 5.3% were substantiated as victims of maltreatment before age 5, compared to 1.4% among children with non-public insurance. Before adjusting for other factors, public insurance was associated with a nearly 4 times greater risk of substantiation (RR: 3.81***; 95% CI: 3.38, 4.30). In the adjusted model, the risk ratio was attenuated (or weaker), but the relative difference was still large (RR: 1.90***; 95% CI: 1.66, 2.18).
- 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, 12 times the rate of children whose prenatal care began during the first trimester before adjusting for other factors (RR: 12.40***; 95% CI: 10.12, 15.20) and 4 times greater after adjustments were made (RR: 4.39***; 95% CI: 3.64, 5.29).

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.

- 684 children spent time in foster care before age 5. This represents 1.6% 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 0.2% of children born to college graduates compared to 3.2% of children whose mothers had not finished high school.
- Among children for whom paternity was not established, 8.4% entered foster care at some point before age 5. The comparable share of children entering foster care was 1.0% among those with established paternity. Overall, missing paternity was associated with an 8 times greater risk of foster care placement (RR: 8.42***; 95% CI: 7.27, 9.75). After adjusting for other factors, the observed risk of foster care placement for children with missing paternity remained nearly 3 times that of children with established paternity (RR: 2.89***; 95% CI: 2.43, 3.43).

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 Alameda County represented 3.9% 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%.

Alameda County Quick Facts

Percentage of Children Reported to CPS before Age 5



10.7%

Percentage of Children Substantiated before Age 5



2.9%

Percentage of Children Entering Foster Care before Age 5



1.6%

IMPLICATIONS

Linked data for Alameda 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 Alameda, official cross-sectional data from 2013 indicate that 2.8% 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 10.7% 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 Alameda County by Birth Payment Method

	Full Birth Cohort 2006 & 2007		Birth Payment Method			
	N	%	Public		Non-Public	
	N	%	N	%	N	%
Gender						
Female	20,416	48.6	7,710	48.8	12,706	48.5
Male	21,584	51.4	8,092	51.2	13,492	51.5
Birth Weight						
Normal	38,820	92.4	14,572	92.2	24,248	92.6
Low	3,180	7.6	1,230	7.8	1,950	7.4
Birth Abnormality						
None	36,683	87.3	13,466	85.2	23,217	88.6
One or More	5,317	12.7	2,336	14.8	2,981	11.4
Prenatal Care						
1st Trimester	36,714	87.4	12,644	80.0	24,070	91.9
2nd Trimester	4,395	10.5	2,648	16.8	1,747	6.7
3rd Trimester	633	1.5	395	2.5	238	0.9
None/Missing	258	0.6	115	0.7	143	0.6
Paternity Establishment						
Established	38,375	91.4	13,251	83.9	25,124	95.9
Missing	3,625	8.6	2,551	16.1	1,074	4.1
Maternal Race/Ethnicity						
White	9,844	23.4	1,666	10.5	8,178	31.2
Black	6,256	14.9	3,186	20.2	3,070	11.7
Latina, US-born	4,460	10.6	1,644	10.4	2,816	10.8
Latina, Foreign-born	10,638	25.3	7,225	45.7	3,413	13.0
Asian/Pacific Islander	10,668	25.4	1,997	12.6	8,671	33.1
Native American	134	0.3	84	0.5	50	0.2
Maternal Age						
≤ 19 yrs	3,102	7.4	2,124	13.4	978	3.7
20-24 yrs	7,902	18.8	4,880	30.9	3,022	11.5
25-29 yrs	10,766	25.6	4,303	27.2	6,463	24.7
30+ yrs	20,230	48.2	4,495	28.5	15,735	60.1
Maternal Education						
< HS	10,221	24.3	7,668	48.5	2,553	9.8
HS or GED	8,791	20.9	4,237	26.8	4,554	17.4
Some College	9,215	21.9	3,040	19.2	6,175	23.6
College+	13,773	32.8	857	5.4	12,916	49.3
Number of Births						
One	17,679	42.1	6,189	39.2	11,490	43.9
Two	14,088	33.5	4,773	30.2	9,315	35.6
Three+	10,233	24.4	4,840	30.6	5,393	20.6
Prior Pregnancy Terminations						
None	34,502	82.2	13,220	83.7	21,282	81.2
One+	7,498	17.9	2,582	16.3	4,916	18.8
Birth Payment Method						
Non-Public	26,198	62.4	--	--	--	--
Public	15,802	37.6	--	--	--	--

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 Alameda County and Reported to CPS

	Reported to CPS		Risk Comparisons				
	Before Age 5		Unadjusted		Adjusted		
	N	%	RR	95% CI	RR	95% CI	
Gender							
Female	2,192	10.7	ref.	---	ref.	---	
Male	2,299	10.7	0.99	(0.94, 1.05)	1.00	(0.95, 1.05)	
Birth Weight							
Normal	3,968	10.2	ref.	---	ref.	---	
Low	523	16.5	1.61***	(1.48, 1.75)	1.26***	(1.15, 1.37)	
Birth Abnormality							
None	3,716	10.1	ref.	---	ref.	---	
One or More	775	14.6	1.44***	(1.34, 1.55)	1.06	(0.98, 1.15)	
Prenatal Care							
1st Trimester	3,555	9.7	ref.	---	ref.	---	
2nd Trimester	698	15.9	1.64***	(1.52, 1.77)	1.10*	(1.02, 1.18)	
3rd Trimester	132	20.9	2.15***	(1.84, 2.51)	1.21**	(1.05, 1.40)	
None/Missing	106	41.1	4.24***	(3.65, 4.93)	2.04***	(1.79, 2.34)	
Paternity Establishment							
Established	3,373	8.8	ref.	---	ref.	---	
Missing	1,118	30.8	3.51***	(3.31, 3.72)	1.58***	(1.49, 1.69)	
Maternal Race/Ethnicity							
White	791	8.0	ref.	---	ref.	---	
Black	1,661	26.6	3.30***	(3.05, 3.57)	1.46***	(1.35, 1.59)	
Latina, US-born	724	16.2	2.02***	(1.84, 2.22)	1.05	(0.95, 1.15)	
Latina, Foreign-born	885	8.3	1.04	(0.94, 1.13)	0.42***	(0.38, 0.47)	
Asian/Pacific Islander	385	3.6	0.45***	(0.40, 0.51)	0.49***	(0.44, 0.55)	
Native American	45	33.6	4.18***	(3.26, 5.35)	1.62***	(1.28, 2.05)	
Maternal Age							
≤ 19 yrs	665	21.4	3.22***	(2.96, 3.51)	1.86***	(1.68, 2.07)	
20-24 yrs	1,289	16.3	2.45***	(2.28, 2.63)	1.51***	(1.40, 1.63)	
25-29 yrs	1,191	11.1	1.66***	(1.54, 1.79)	1.23***	(1.15, 1.32)	
30+ yrs	1,346	6.7	ref.	---	ref.	---	
Maternal Education							
< HS	1,769	17.3	7.45***	(6.63, 8.37)	3.42***	(2.98, 3.93)	
HS or GED	1,315	15.0	6.44***	(5.71, 7.25)	2.89***	(2.53, 3.30)	
Some College	1,087	11.8	5.08***	(4.49, 5.73)	2.57***	(2.25, 2.93)	
College+	320	2.3	ref.	---	ref.	---	
Number of Births							
One	1,415	8.0	ref.	---	ref.	---	
Two	1,221	8.7	1.08*	(1.01, 1.17)	1.41***	(1.31, 1.52)	
Three+	1,855	18.1	2.26***	(2.12, 2.42)	2.41***	(2.24, 2.60)	
Prior Pregnancy Terminations							
None	3,554	10.3	ref.	---	ref.	---	
One+	937	12.5	1.21***	(1.13, 1.30)	1.04	(0.98, 1.11)	
Birth Payment Method							
Non-Public	1,559	6.0	ref.	---	ref.	---	
Public	2,932	18.6	3.12***	(2.94, 3.30)	1.73***	(1.62, 1.85)	

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 Alameda County and Substantiated

	Substantiated Before Age 5		Risk Comparisons				
	N	%	RR	95% CI	RR	95% CI	
Gender							
Female	578	2.8	ref.	---	ref.	---	
Male	623	2.9	1.02	(0.91,1.14)	1.03	(0.93,1.15)	
Birth Weight							
Normal	1,005	2.6	ref.	---	ref.	---	
Low	196	6.2	2.38***	(2.05,2.76)	1.57***	(1.32,1.87)	
Birth Abnormality							
None	934	2.6	ref.	---	ref.	---	
One or More	267	5.0	1.97***	(1.73,2.25)	1.27**	(1.09,1.48)	
Prenatal Care							
1st Trimester	849	2.3	ref.	---	ref.	---	
2nd Trimester	219	5.0	2.15***	(1.86,2.49)	1.34***	(1.16,1.55)	
3rd Trimester	59	9.3	4.03***	(3.13,5.19)	1.88***	(1.48,2.39)	
None/Missing	74	28.7	12.40***	(10.12,15.20)	4.39***	(3.64,5.29)	
Paternity Establishment							
Established	779	2.0	ref.	---	ref.	---	
Missing	422	11.6	5.73***	(5.12,6.42)	2.15***	(1.90,2.45)	
Maternal Race/Ethnicity							
White	254	2.6	ref.	---	ref.	---	
Black	491	7.9	3.04***	(2.62,3.53)	1.10	(0.94,1.28)	
Latina, US-born	216	4.8	1.88***	(1.57,2.24)	0.88	(0.74,1.05)	
Latina, Foreign-born	121	1.1	0.44***	(0.36,0.55)	0.16***	(0.12,0.19)	
Asian/Pacific Islander	98	0.9	0.36***	(0.28,0.45)	0.41***	(0.33,0.52)	
Native American	21	15.7	6.07***	(4.03,9.16)	1.78**	(1.20,2.65)	
Maternal Age							
≤ 19 yrs	172	5.5	3.29***	(2.75,3.94)	1.58***	(1.26,1.99)	
20-24 yrs	378	4.8	2.84***	(2.46,3.28)	1.61***	(1.38,1.89)	
25-29 yrs	310	2.9	1.71***	(1.47,1.99)	1.16*	(1.00,1.35)	
30+ yrs	341	1.7	ref.	---	ref.	---	
Maternal Education							
< HS	516	5.1	13.37***	(10.07,17.76)	6.30***	(4.54,8.74)	
HS or GED	374	4.3	11.27***	(8.44,15.04)	4.67***	(3.40,6.41)	
Some College	259	2.8	7.44***	(5.53,10.02)	3.49***	(2.54,4.78)	
College+	52	0.4	ref.	---	ref.	---	
Number of Births							
One	344	2.0	ref.	---	ref.	---	
Two	301	2.1	1.10	(0.94,1.28)	1.52***	(1.29,1.78)	
Three+	556	5.4	2.79***	(2.45,3.19)	2.90***	(2.48,3.39)	
Prior Pregnancy Terminations							
None	942	2.7	ref.	---	ref.	---	
One+	259	3.5	1.27***	(1.11,1.45)	1.00	(0.87,1.14)	
Birth Payment Method							
Non-Public	364	1.4	ref.	---	ref.	---	
Public	837	5.3	3.81***	(3.38,4.30)	1.90***	(1.66,2.18)	

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 Alameda 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	328	1.6	ref.	---	ref.	---	
Male	356	1.7	1.03	(0.88,1.19)	1.03	(0.89,1.19)	
Birth Weight							
Normal	578	1.5	ref.	---	ref.	---	
Low	106	3.3	2.24***	(1.83,2.75)	1.36*	(1.07,1.72)	
Birth Abnormality							
None	527	1.4	ref.	---	ref.	---	
One or More	157	3.0	2.06***	(1.72,2.45)	1.36**	(1.11,1.66)	
Prenatal Care							
1st Trimester	452	1.2	ref.	---	ref.	---	
2nd Trimester	133	3.0	2.46***	(2.03,2.97)	1.43***	(1.18,1.74)	
3rd Trimester	36	5.7	4.62***	(3.32,6.43)	1.91***	(1.38,2.64)	
None/Missing	63	24.4	19.83***	(15.71,25.05)	5.71***	(4.56,7.13)	
Paternity Establishment							
Established	381	1.0	ref.	---	ref.	---	
Missing	303	8.4	8.42***	(7.27,9.75)	2.89***	(2.43,3.43)	
Maternal Race/Ethnicity							
White	153	1.6	ref.	---	ref.	---	
Black	295	4.7	3.03***	(2.50,3.68)	0.98	(0.80,1.20)	
Latina, US-born	127	2.9	1.83***	(1.45,2.31)	0.83	(0.66,1.05)	
Latina, Foreign-born	45	0.4	0.27***	(0.20,0.38)	0.09***	(0.06,0.12)	
Asian/Pacific Islander	49	0.5	0.30***	(0.21,0.41)	0.35***	(0.25,0.48)	
Native American	15	11.2	7.20***	(4.36,11.90)	1.75*	(1.06,2.89)	
Maternal Age							
≤ 19 yrs	97	3.1	2.97***	(2.34,3.76)	1.22	(0.90,1.65)	
20-24 yrs	196	2.5	2.36***	(1.94,2.86)	1.22	(0.99,1.51)	
25-29 yrs	178	1.7	1.57***	(1.29,1.91)	0.98	(0.81,1.18)	
30+ yrs	213	1.1	ref.	---	ref.	---	
Maternal Education							
< HS	322	3.2	21.70***	(13.82,34.06)	9.87***	(5.97,16.32)	
HS or GED	217	2.5	17.00***	(10.76,26.85)	6.72***	(4.11,10.99)	
Some College	125	1.4	9.34***	(5.83,14.97)	4.23***	(2.58,6.95)	
College+	20	0.2	ref.	---	ref.	---	
Number of Births							
One	178	1.0	ref.	---	ref.	---	
Two	162	1.2	1.14	(0.92,1.41)	1.60***	(1.28,2.00)	
Three+	344	3.4	3.34***	(2.79,3.99)	3.07***	(2.47,3.83)	
Prior Pregnancy Terminations							
None	526	1.5	ref.	---	ref.	---	
One+	158	2.1	1.38***	(1.16,1.65)	1.04	(0.87,1.24)	
Birth Payment Method							
Non-Public	177	0.7	ref.	---	ref.	---	
Public	507	3.2	4.75***	(4.01,5.63)	2.21***	(1.83,2.67)	

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 [--].