

California Department of Social Services  
Children and Family Services Division

Risk Assessment Validation:  
A Prospective Study

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## **EXECUTIVE SUMMARY**

California's Department of Social Services (DSS) contracted with the Children's Research Center (CRC), a division of the National Council on Crime and Delinquency (NCCD), to conduct a validation study of the risk assessment used to assess the likelihood of future child maltreatment among families investigated by DSS. The objective of this validation study was to assess how well the current risk assessment estimates future maltreatment, particularly across subgroups, and, if necessary, propose revisions to improve its classification abilities.

The research was conducted using information available from California's Child Welfare Services/Case Management System (CWS/CMS) and the Structured Decision Making<sup>®</sup> (SDM) database. This information included data describing the type of abuse or neglect alleged and substantiated, demographic characteristics of children and other family members, child placement information, and findings from SDM<sup>®</sup> safety and risk assessments as recorded by workers at the time of the sample incident.

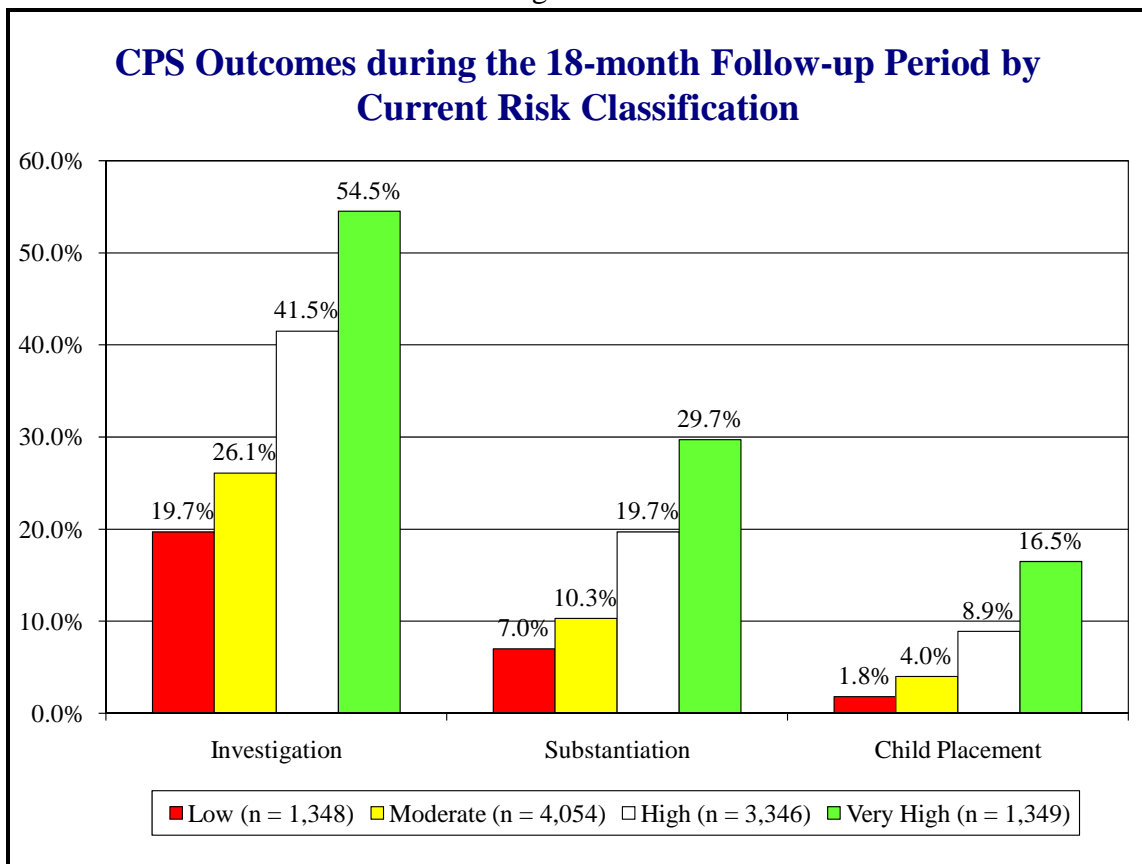
The sample consisted of families who were investigated between July 1 and December 31, 2005, in counties that had implemented the SDM system before March 2005 and had a risk assessment completion rate of at least 75%. Because completing the risk assessment for families with unfounded allegations was optional and done infrequently, the sample included only investigations with either an inconclusive or substantiated finding. Data describing subsequent child protective services (CPS) outcomes were observed for each of the 10,097 families in the sample during a standardized follow-up period of 18 months (1.5 years) after their sample assessment.<sup>1</sup> These outcome measures included investigations of abuse or neglect allegations, substantiations of maltreatment, and subsequent child placements during the follow-up period.

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<sup>1</sup> An 18-month follow-up period was chosen to ensure an adequate sample of families and to include counties that had recently implemented SDM. Outcomes were aggregated by children and/or perpetrators identified as part of the sample incident (if one child was involved in a subsequent investigation but a second child or the perpetrator was not, that investigation was included as an outcome).

As a first step, CRC staff examined the relationship between the current risk classification and subsequent CPS outcomes to determine how well the assessment estimated future maltreatment. The current risk assessment performed well when distinguishing between families classified at low, moderate, high, and very high risk levels for all CPS outcomes (see Figure ES1). That is, recidivism rates observed among low risk families were significantly lower than those of families classified at higher risk levels. For example, 7.0% of families classified as low risk had a subsequent substantiation during the 18-month follow-up period, a rate much lower than the average (15.6%) for the entire sample. Families classified as moderate risk had a subsequent substantiation rate of 10.3%, high risk families a rate of 19.7%, and very high risk families had a rate of 29.7%.

Figure ES1



While the current risk assessment works very well, results suggest that performance could be improved. For example: 1) a high proportion (46.5%) of families were classified as high or very high risk, 2) the abuse risk assessment did not distinguish as well between high and very high risk families, and 3) the current assessment did not differentiate between low and moderate risk Asian/Pacific Islander families very well (see Table 10).

An alternative risk assessment was developed to determine if the performance of the current risk assessment could be improved. While both assessments perform well, the proposed risk assessment classified fewer families as high and very high risk than the current assessment (27.7% compared to 46.5%; see Table ES1), and a greater proportion of these families had a subsequent investigation, substantiation, and child placement compared to families classified as high or very high risk by the current risk assessment. This finding suggests that although fewer families would be considered high or very high risk, the families who were in these risk categories would be the ones most likely to become involved in subsequent child abuse or neglect (CA/N) incidents.

<b>Table ES1</b>					
<b>Current and Proposed Risk Classification by Subsequent Maltreatment Outcomes</b>					
<b>Overall Risk Level</b>	<b>Sample Distribution</b>		<b>Case Outcome Rates during the 18-month Follow-up Period</b>		
	<b>N</b>	<b>%</b>	<b>Investigation for Any Allegation</b>	<b>Substantiation for Any Allegation</b>	<b>Child Out-of-home Placement</b>
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>
<b>Current Risk Assessment Classification</b>					
Low	1,348	13.4%	19.7%	7.0%	1.8%
Moderate	4,054	40.2%	26.1%	10.3%	4.0%
High	3,346	33.1%	41.5%	19.7%	8.9%
Very High	1,349	13.4%	54.5%	29.7%	16.5%
<b>Proposed Risk Assessment Classification</b>					
Low	2,862	28.3%	18.5%	7.2%	2.3%
Moderate	4,431	43.9%	33.2%	14.3%	5.9%
High	2,265	22.4%	49.5%	24.3%	12.5%
Very High	539	5.3%	60.9%	33.6%	18.2%

This pattern was true for sample subgroups as well. For every subgroup, the very high risk groups were smaller but had higher outcome rates than when families were classified by the current risk assessment. Asian/Pacific Islander families classified as high risk, however, had outcome rates similar to White/European American and Black/African American families classified as moderate risk. This was true for both the proposed and the current risk assessments. The base outcome rates for White/European American and Black/African American families were nearly twice that of Asian/Pacific Islander families, however, which makes equivalent classification findings difficult to achieve.

Adopting the proposed assessment should help improve workers' estimates of a family's risk of future maltreatment. This, in turn, would permit the agency to reduce subsequent maltreatment by more effectively targeting service interventions to higher risk families. Agency monitoring and quality improvement efforts may also improve the accuracy of worker risk assessment estimates and the management of service delivery.

## **I. INTRODUCTION**

California's Department of Social Services (DSS) contracted with the Children's Research Center (CRC), a division of the National Council on Crime and Delinquency (NCCD), to conduct a validation study of the risk assessment used to assess the likelihood of future child maltreatment among families investigated by DSS. Since 2003, when the current risk assessment was developed, an additional 29 counties have implemented Structured Decision Making<sup>®</sup> (SDM) and are completing the risk assessment for families at the end of maltreatment investigations.<sup>2</sup>

The objective of this validation study was to assess how well the current risk assessment estimates future maltreatment, particularly across subgroups, and, if necessary, propose revisions to improve its classification abilities.

## **II. BACKGROUND**

One of the primary goals of the SDM<sup>®</sup> model is to reduce the maltreatment of children in families who have had an abuse or neglect incident. The most effective way to accomplish this goal is to accurately identify families at high risk for future maltreatment, prioritize them for service intervention, then effectively deliver services appropriate to their needs.

California's SDM system for child protective services (CPS) was developed in 1998 by DSS staff in conjunction with CRC. During development, the objectives of the SDM model were to increase the consistency and validity of worker case management decisions, target service interventions to families at high risk of subsequent maltreatment, reduce subsequent child maltreatment, and increase the effectiveness of the child protection system. The key features of the SDM system are:

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<sup>2</sup> For a total of 43 counties.



- A safety assessment, which helps identify the immediate protective service interventions required during a CPS investigation, including removal of a child.
- A research-based risk assessment, which provides workers with an objective estimate of the family's risk of future maltreatment at the close of an investigation.
- A family strengths and needs assessment, which identifies case plan goals and appropriate service interventions.
- Agency policies that emphasize service intervention with high risk families.
- A risk reassessment for families receiving in-home services, which helps workers monitor progress toward treatment goals and make case decisions about continued services and the likelihood of subsequent child maltreatment.
- A reunification assessment for families with children in out-of-home placement, which helps workers monitor family progress toward service goals and make decisions about how to achieve safety and permanency for children in out-of-home care.
- Workload standards that encourage more frequent worker contact with high risk families in an effort to improve management of service interventions.
- Workload accounting, which identifies staff resources needed to reduce risk and strengthen families.

California's first research-based family risk assessment was developed in 1998 using a sample of 2,511 families investigated for child maltreatment during 1995. Most (91.6%) of the families in the sample were substantiated for child abuse or neglect (CA/N). While the risk assessment was to be applied in practice to both substantiated and inconclusive investigations, substantiated investigations were over-sampled to ensure the reliability of information found in the case files. Outcomes were observed for a standardized 24 months.<sup>3</sup> A work group of supervisors, workers, and administrators assisted in the design of the data collection survey. Information was collected from case files by case readers who were hired and trained by CRC staff. Periodic reliability checks ensured high quality data collection. CRC staff constructed the

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<sup>3</sup> After the sample investigation, 36.4% of the 2,511 sampled families were investigated again during a 24-month follow up. Of the families sampled, 22.1% were investigated and substantiated for CA/N. These are the base rates for the 1998 study.

risk assessment instrument by analyzing the characteristics of the families at the time of the sample investigation and their relationships with the identified outcomes, including subsequent investigation, substantiation, and child injury resulting from substantiated maltreatment. The 1998 study showed that the final risk classification clearly identified groups of families by the likelihood of future allegation(s) or substantiation.

The risk assessment currently in use reflects changes made based on a 2002 validation study conducted by CRC. DSS contracted for the 2002 study to ensure that the risk assessment classified families well according to their likelihood of subsequent maltreatment when completed by workers under field conditions, regardless of whether the sample incident was substantiated or not. This validation study also helped ensure the validity of the risk assessment after any policy changes in one or more counties, such as changes to procedures for intake, investigation, and ongoing service delivery. The 2002 validation study showed that the risk assessment implemented in 1998 classified families well by their likelihood of subsequent CPS involvement.<sup>4</sup> Some changes to the risk assessment, however, resulted in an improved classification of families by subsequent CPS involvement.

California counties using the SDM system implemented the revised (2002) risk assessment in February 2005. This report reviews how the current risk assessment performed when classifying families assessed or investigated by DSS by the likelihood of subsequent child maltreatment. CRC staff first assessed the ability of the current risk assessment to estimate future child maltreatment and then explored revisions to improve the performance of the risk assessment.

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<sup>4</sup> The research sample consisted of 5,694 families investigated for CA/N between January and March 2001, and included the following counties: Fresno, Humboldt, Los Angeles, Merced, Monterey, Orange, Sacramento, San Luis Obispo, and Sutter. Over one third (37.1%) were substantiated for CA/N at the time of the sampled incident. Of the sampled families, 46.4% were investigated at least once during a 24-month follow-up period, 20.4% were involved in a substantiated investigation of abuse or neglect, and 4.7% of sampled families had a child removed as a result of a subsequent investigation.

### **III. RESEARCH METHODOLOGY**

#### **A. Method of Analysis**

This research was conducted using information available from California's CWS/CMS and the SDM database. This included data describing the type of abuse or neglect alleged and substantiated, demographic characteristics of children and other family members, child placement information, and findings from SDM safety and risk assessments as recorded by workers at the time of the sample incident.

The sample consisted of families who were investigated between July 1 and December 31, 2005. If a family was investigated more than once during the sample period, the investigation with the greatest number of alleged victims was selected. Data describing subsequent CPS outcomes were observed for each family during a standardized follow-up period of 18 months (1.5 years) after their sample assessment.<sup>5</sup> These outcome measures included investigations of abuse or neglect allegations, substantiations of maltreatment, and subsequent child placements during the follow-up period.

The initial sample selection was based on how long counties had been using the SDM case management system.<sup>6</sup> Counties were eligible for sampling based on two criteria:

1. Counties must have implemented the SDM system at least four months prior to the start of the sample period (20 counties met this criteria). The most recent implementation was in March 2005. Nine of the counties implemented during 1999 or 2000.
2. Counties must have a risk assessment completion rate that was 75% or higher. That is, a risk assessment must have been available in the database for 75% or more of investigations that occurred during the sample period.

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<sup>5</sup> An 18-month follow-up period was chosen to ensure an adequate sample of families and to include counties that had recently implemented the SDM system. Outcomes were aggregated by children and/or perpetrators identified as part of the sample incident (if one child was involved in a subsequent investigation but a second child or the perpetrator was not, that investigation was included as an outcome).

<sup>6</sup> See Appendix F for a comparison of counties that had been using the SDM case management system as of March 2005.

Ten California counties were eligible for sampling based on these two criteria (see Table 2).

During the sample period, 45,837 families were investigated in one of the ten sample counties. Of these, 3,806 (8.3%) did not have a risk assessment available and were therefore excluded from analysis.<sup>7</sup> Completing the risk assessment for families with unfounded allegations is optional and was done rarely during the sample period. Thus, the 22,491 investigations in which allegations were unfounded were also excluded from analyses (Appendix C reports the risk classification findings for the 3,320 unfounded investigations with a risk assessment available). The remaining sample consisted of 19,540 families investigated for child maltreatment during the last six months of 2005 for whom a risk assessment was completed.

The 19,540 families with a completed risk assessment were randomly divided into two groups: a construction sample of 10,097 families and a validation sample of 9,443 families. The first group was used to examine the performance of the current risk assessment and construct a preliminary revised risk assessment, and the second was used for validation purposes. The use of construction and validation samples allowed an assessment to be developed on one population and tested on another. Validating the instrument on a separate population better indicates how a risk assessment will perform when actually implemented.<sup>8</sup>

As a first step, CRC staff examined the relationship between the current risk classification and subsequent CPS outcomes to determine how well the assessment estimated future maltreatment. This analysis was based on cross-tabulations of the risk classification with CPS outcomes observed during the follow-up period.

The second part of the research involved efforts to construct an improved actuarial risk assessment. The proposed assessment presented in this report was developed by observing the actuarial relationship between family characteristics observed at the time of the sample

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<sup>7</sup> Appendix E compares families with no risk assessment to families with a risk assessment.

<sup>8</sup> For more information about validation, please refer to Appendix C.

assessment and subsequent CPS investigations and their findings. This involved an extensive evaluation of how family risk factors could be combined to construct a risk assessment that could improve worker estimates of future maltreatment.

## **B. Sampled Family Characteristics**

The following tables describe the construction sample of 10,097 families investigated during the sample period. Table 1 shows that 42.3% of the families had only one child, 27.9% had two children, and 29.8% had three or more children listed as part of the household. In 26.3% of the sampled families, the youngest child was 1 year old or younger, while the youngest child was between 2 and 5 years of age in 27.9% of households. In almost half (45.6%) of the sampled families, the ethnicity of the youngest child was Hispanic/Latino or South/Central American. Just over one fourth (27.3%) of the youngest children were White/European American, 13.8% were Black/African American, and 7.2% were Asian or Pacific Islanders.

<b>Table 1</b>			
<b>Characteristics of Sampled Families</b>			
<b>Total Sample</b>		<b>N</b>	<b>%</b>
		<b>10,097</b>	<b>100.0%</b>
<b>Number of Children</b>	One	4,269	42.3%
	Two	2,813	27.9%
	Three	1,710	16.9%
	Four	817	8.1%
	Five or more	488	4.8%
<b>Age of Youngest Child</b>	1 or younger	2,657	26.3%
	2 – 5 years	2,813	27.9%
	6 – 10 years	2,308	22.9%
	11 – 15 years	1,811	17.9%
	16 – 17 years	493	4.9%
	Missing	15	0.1%
<b>Race/Ethnicity of Youngest Child</b>	Asian/Pacific Islander	723	7.2%
	Black/African American	1,396	13.8%
	Hispanic/Latino or South/Central American	4,609	45.6%
	White/European American	2,760	27.3%
	Other/Multiple ethnicities noted	104	1.0%
	Missing	505	5.0%

Table 2 reviews the nature of the sampled CPS investigations. More than half (56.4%) of the sampled families were referred to DSS for neglect, while 3.9% were referred for severe neglect. Approximately one third (31.3%) of families were referred for physical abuse, 21.0% for emotional abuse, and 11.0% for sexual abuse of a child. More than half (54.3%) of the sampled investigations were substantiated. Nearly half (46.2%) of the sampled investigations occurred in Los Angeles County. An additional 16.1% of investigations were conducted in Orange County, 11.7% in Riverside County, and 12.3% in Sacramento County.

<b>Table 2</b>			
<b>Characteristics of Sampled Referrals</b>			
		<b>N</b>	<b>%</b>
<b>Total Sample</b>		<b>10,097</b>	<b>100.0%</b>
<b>Sample Allegations<sup>9</sup></b>	Neglect	5,698	56.4%
	Physical abuse	3,161	31.3%
	Emotional abuse	2,123	21.0%
	Sexual abuse	1,109	11.0%
	Caregiver incapacitated	864	8.6%
	Severe neglect	391	3.9%
	Exploitation	27	0.3%
	At risk	1,809	17.9%
	Substantial risk	1,683	16.7%
<b>Investigation Disposition</b>	Inconclusive	4,613	45.7%
	Substantiation	5,484	54.3%
<b>County</b>	Del Norte	44	0.4%
	Humboldt	81	0.8%
	Kern	769	7.6%
	Los Angeles	4,667	46.2%
	Marin	118	1.2%
	Orange	1,626	16.1%
	Placer	148	1.5%
	Riverside	1,185	11.7%
	Sacramento	1,239	12.3%
	Santa Cruz	220	2.2%

<sup>9</sup> More than one allegation may have been received; thus, the sum of percentages will be greater than 100.0%.

### **C. Subsequent CPS Involvement of Sampled Families**

Outcomes consisted of subsequent CPS involvement observed for each family during the 18 months (1.5 years) following the sampled investigation. This standardized follow-up period ensured that each family in the sample had the same opportunity for subsequent involvement with DSS, including any assigned investigation of abuse or neglect, substantiation of maltreatment, and subsequent child placement by DSS.

While data are presented for all outcomes, the report emphasizes substantiated maltreatment. This outcome is consistent with the child safety standards applied by the Federal Child and Family Services Review (CFSR) and serves as an indicator that CA/N occurred.<sup>10</sup> Workers substantiate maltreatment when they find evidence that the alleged abuse or neglect meets the definition of child maltreatment imposed by state statutes. In effect, a substantiated maltreatment finding incorporates a standard of evidence applied after the worker has assessed the CPS incident.

The current risk assessment has two classification instruments. One assesses the likelihood of subsequent neglect and the other assesses the likelihood of subsequent abuse. The ability of these instruments to classify families by the likelihood of each maltreatment type was examined by looking at the relevant maltreatment outcomes. Subsequent CPS involvement related to neglect allegations was examined by referencing the classification resulting from the neglect risk assessment. The abuse instrument was examined relative to subsequent abuse involvement. The final risk classification, which is the higher of the neglect and abuse risk classifications, was examined by looking at any subsequent CPS involvement, regardless of allegation type.

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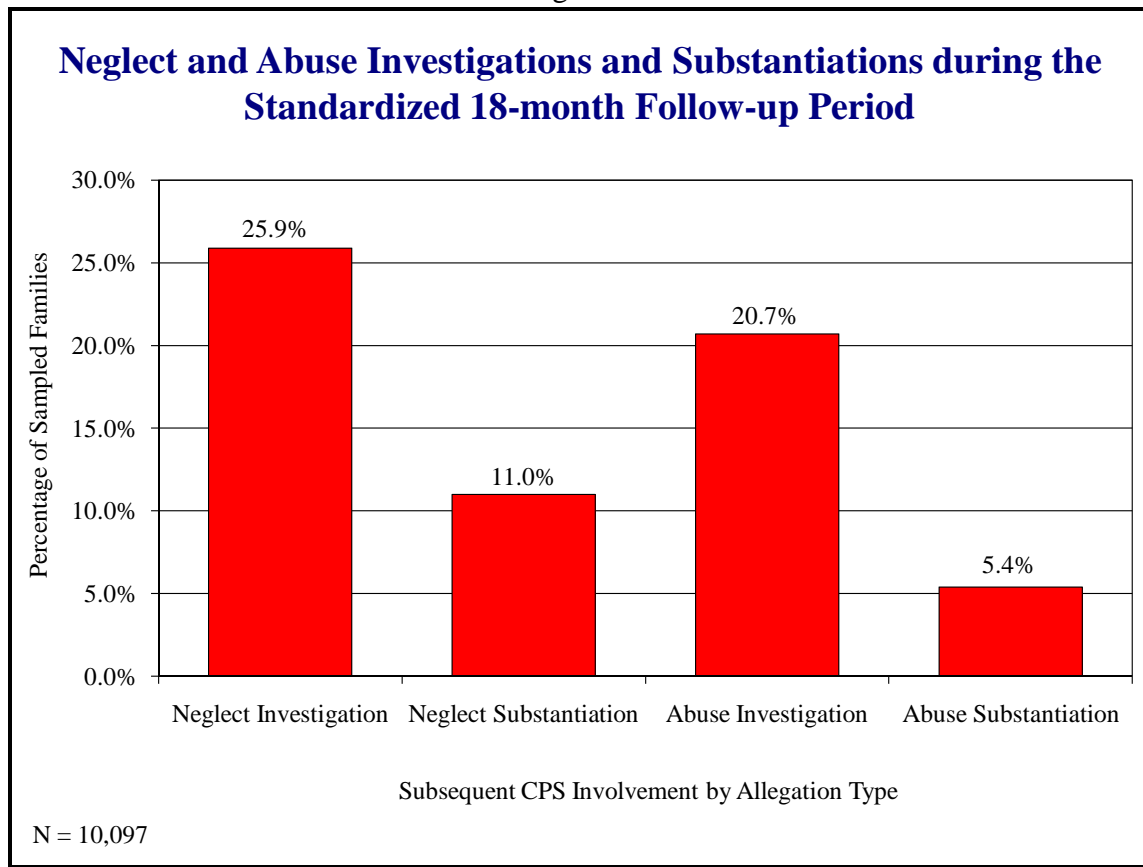
<sup>10</sup> The national standard is defined as follows: Of all child victims of a substantiated or indicated maltreatment allegation during a six-month period, 94.4% or higher are not victims of another substantiated/indicated incident during a six-month period. In other words, among a six-month cohort of substantiated child victims, the re-substantiation rate should be 5.6% or lower for a standardized six-month follow-up period.



Figure 1 reviews the neglect and abuse outcome rates for the sampled families.<sup>11</sup> Among the sample families, 25.9% had an investigation for neglect during the standardized 18-month follow-up period, and 11.0% were substantiated for neglect.

Rates for subsequent abuse allegations were lower than those for neglect. Among the 10,097 sampled families, 20.7% were investigated for an abuse allegation, and only a small percentage (5.4%) of families were substantiated for abuse.

Figure 1



<sup>11</sup> Neglect includes allegations of neglect, severe neglect, and caregiver incapacitated. Abuse allegations include physical abuse, sexual abuse, emotional abuse, and exploitation. “At risk” and “substantial risk” allegations were not included in either category because existing definitions are not specific to a maltreatment type and county use of the allegations varied dramatically during the sample period (see Appendix F for more details). Risk allegations were included in the count of any investigations and substantiations (note that substantiations of substantial or at risk allegations were infrequent).

Figure 2 shows rates of subsequent CPS involvement for the sampled families regardless of maltreatment type. One third (34.2%) of the sampled families were investigated at least once during the standardized 18-month follow-up period, and workers substantiated maltreatment for 15.6% of these families.

The final outcome observed was whether a child was placed out of the home by DSS during the standardized 18-month follow-up period. Only 7.0% of sampled families had a subsequent child placement.

Figure 2

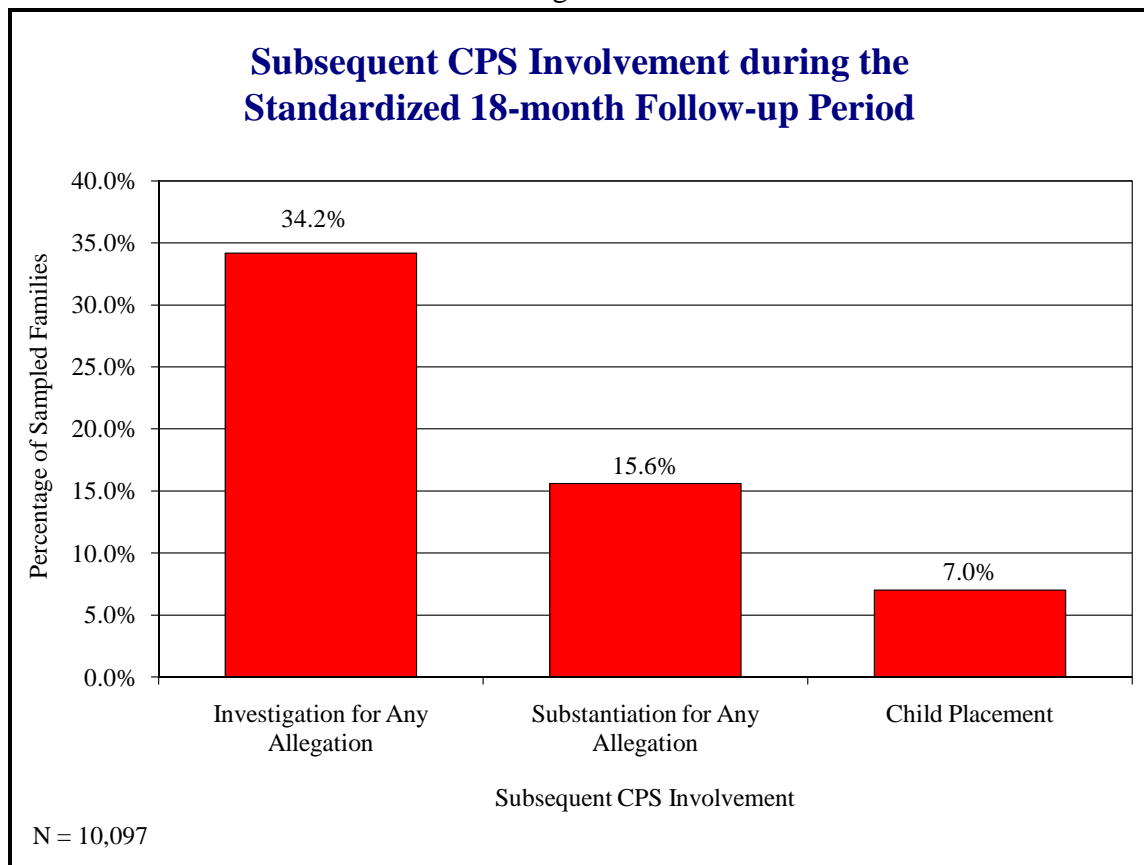


Table 3 reviews subsequent CPS involvement by the race/ethnicity of the youngest child. White/European American and Black/African American families had higher than average outcome rates, while Hispanic/Latino or South/Central American and Asian/Pacific Islander families had lower than average rates. For example, 40.8% of White/European American families were investigated and 19.3% were substantiated for maltreatment during the follow-up period. In comparison, 31.6% of Hispanic/Latino or South/Central American families had a subsequent investigation and 14.6% had a subsequent substantiation. Asian/Pacific Islander families had even lower rates; 22.3% had a subsequent investigation and 11.1% were subsequently substantiated for maltreatment.

Sample Characteristics	Sample	Investigation for Any Allegation	Substantiation for Any Allegation	Child Out-of-home Placement
<b>Total Sample</b>	<b>10,097</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>
White/European American	2,760	40.8%	19.3%	8.6%
Hispanic/Latino or South/Central American	4,609	31.6%	14.6%	6.2%
Black/African American	1,396	41.2%	17.0%	10.0%
Asian/Pacific Islander	723	22.3%	11.1%	4.4%
Other	104	46.2%	21.2%	10.6%
Unable to Determine	505	16.6%	5.1%	0.6%

Table 4 shows that the rate of subsequent CPS involvement varied by county. The rate at which families were re-investigated ranged from 32.7% in Los Angeles County to 56.8% in Del Norte County. County rates of subsequent substantiation ranged from 12.6% to 43.2%, and the rate of child placement ranged from 3.4% to 18.2%. In effect, there was significant variation in counties' subsequent investigation, substantiation, and placement rates. In some cases, counties had CPS outcome rates twice as high as those of other counties.<sup>12</sup>

<b>Table 4</b>				
<b>Subsequent CPS Involvement of Sampled Families by County during a Standardized 18-month Follow-up Period</b>				
<b>County</b>	<b>Sample</b>	<b>Investigation for Any Allegation</b>	<b>Substantiation for Any Allegation</b>	<b>Child Out-of-home Placement</b>
<b>Total Sample</b>	<b>10,097</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>
Del Norte	44	56.8%	43.2%	18.2%
Humboldt	81	53.1%	24.7%	7.4%
Kern	769	40.7%	23.0%	11.6%
Los Angeles	4,667	32.7%	12.6%	5.9%
Marin	118	39.0%	14.4%	3.4%
Orange	1,626	25.6%	15.2%	3.6%
Placer	148	35.8%	18.2%	10.1%
Riverside	1,185	36.2%	18.1%	10.5%
Sacramento	1,239	41.0%	17.8%	9.6%
Santa Cruz	220	40.9%	19.1%	4.5%

<sup>12</sup> The demographic characteristics of counties were compared to determine if the characteristics of the population might shed light on the variance in county rates of subsequent CPS involvement (see Appendix F; Table F4). No consistent patterns emerged, although the four sampled counties with the highest percentage of families living below the poverty level in 2004 (>15%) tended to have higher than average rates of CPS involvement. The exception to this pattern was Los Angeles County, which is larger and more urban than the other three counties (Del Norte, Humboldt, and Kern). If possible, it may be worthwhile to examine CPS expenditures per child across counties (both county and state funds; see 2004-2005 Santa Cruz County Grand Jury Final Report on *The Welfare of Child Welfare: Comparison of Budgets* at [http://www.co.santa-cruz.ca.us/grandjury/GJ2005\\_final/1%20-%202%20A&F%20CWS.pdf](http://www.co.santa-cruz.ca.us/grandjury/GJ2005_final/1%20-%202%20A&F%20CWS.pdf) for an example of this analysis).

#### **D. Characteristics of Sample Counties**

Given the variance in rates of subsequent CPS involvement for families across counties, it is not surprising that child protection practices also varied across the sampled counties. Table 5 reviews the characteristics of investigations conducted during the sample period by county. Whether a report meets the criteria for possible CA/N, how quickly a worker should begin investigating, and whether a child should be removed from the home are key decisions made by workers during the intake and investigation process. On average, the counties screened in 62.3% of the reports they recorded for investigation, though the counties' screen-in rate varied between 38.9% and 86.0% (see Table 5, column 2). The proportion of accepted referrals recommended for immediate response (within 24 hours) ranged from 17.4% to nearly half (47.3%). The proportion of investigations involving removal of a child ranged from 7.1% to 19.5%, with an average county-based removal rate of 14.9%.

Counties also varied in the type of allegations for which families were investigated, and the rate at which the county agencies substantiated them (see Table 5, columns 5-8). The proportion of investigations with an allegation of neglect ranged from 38.3% to 92.3%. Four counties had a neglect allegation rate that approached or exceeded 70%, and only one county had a neglect allegation rate lower than 40%. Approximately 50% to 64% of investigations in the majority of counties included allegations of neglect. There was slightly less variance in the rate of abuse allegations across counties (24.9% to 60.8%). Abuse was alleged in 45.4 to 60.8% of investigations conducted in seven counties, and only 24.9% to 40.2% of investigations conducted in the other three counties. Substantiation rates varied from 24.8% to 44.5%, with an average substantiation rate of 32.6%.

**Table 5**

**Sample County Variance in Referral Actions  
For Investigations Beginning July 1 – December 31, 2005**

County	% Screened In	% Immediate Response	% with Removal during Investigation	% with a Neglect Allegation	% with an Abuse Allegation	% with a Substantiated Allegation	% of Inconclusive/ Substantiated Referrals with a Risk Assessment Available
<b>Overall</b>							
Average	62.3%	29.7%	14.9%	63.6%	45.4%	32.6%	84.9%
Minimum	38.9%	17.4%	7.1%	38.3%	24.9%	24.8%	76.6%
Maximum	86.0%	47.3%	19.5%	92.3%	60.8%	44.5%	92.3%
<b>By County</b>							
Del Norte	61.6%	33.9%	13.8%	61.5%	26.0%	38.5%	84.9%
Humboldt	48.1%	22.3%	13.3%	77.3%	40.2%	25.2%	84.7%
Kern	58.7%	18.9%	19.5%	92.3%	24.9%	38.5%	86.4%
Los Angeles	86.0%	47.3%	17.0%	54.1%	55.8%	24.8%	81.1%
Marin	38.9%	17.4%	7.1%	38.3%	43.2%	28.9%	92.3%
Orange	67.5%	24.0%	12.1%	66.3%	47.4%	44.5%	87.9%
Placer	56.9%	32.4%	15.3%	49.1%	60.8%	29.1%	81.4%
Riverside	72.0%	24.0%	18.0%	77.7%	48.4%	30.3%	84.1%
Sacramento	74.8%	40.7%	18.7%	63.4%	48.3%	29.3%	76.6%
Santa Cruz	58.4%	36.0%	13.8%	56.2%	58.6%	36.5%	89.6%

As demonstrated in Sections C & D of this report, CPS outcome rates varied widely across ethnic groups and counties. In addition, the counties showed considerable variation in CPS practices relative to child abuse intake screening, allegation types, and investigation disposition (e.g., findings). All of these factors can have an impact on the performance of a risk assessment, particularly its ability to demonstrate comparable estimates of future maltreatment across subgroups.

## **E. Current Family Risk Assessment**

The risk assessment currently employed by the sampled California counties helps workers observe specific characteristics of families and children investigated for CA/N and objectively estimate the risk of future maltreatment of a child. At the close of the investigation, a worker completes the 12-item family neglect index *and* the 11-item abuse index. These scores determine an initial risk classification for abuse and neglect for each family, i.e., low, moderate, high, or very high risk. The final classification level assigned to the family is the higher risk classification reached by either the abuse or neglect risk indices. For example, a family scoring low risk for future abuse and high risk for future neglect would have a final classification of high risk.

The purpose of a scored actuarial risk classification is to help the worker and the agency prioritize service interventions according to the risk of future maltreatment. Focusing service provision and caseworker time on families at higher risk of future child maltreatment is likely to help the agency achieve its mission to reduce future occurrences of CA/N among investigated families. Actuarial risk assessment provides workers with an estimate of future family behavior based on a limited set of observable factors. It helps workers identify high risk families more accurately and thereby allocate available service interventions more effectively. It is important to note, however, that actuarial risk assessment is a classification tool designed to identify groups of families with low, moderate, or high rates of subsequent maltreatment. It does not yield infallible predictions for individual families.

Because actuarial risk assessment cannot address all aspects of an individual family case, DSS established policy reasons for overriding the scored risk level. If any of the case circumstances described by agency override policies (see the current risk assessment in Appendix A) apply to a family, the family is assigned to the very high risk classification, regardless of the scored risk level.

DSS also enabled investigating case workers and supervisors to exercise a discretionary override (also shown on the form) that increases the scored classification by one level. Discretionary overrides are based on the worker's professional judgment and observation of the family. Whether workers exercise a discretionary override or not, their decisions will be informed by a scored actuarial risk classification that has a strong empirical relationship to the incidence of future maltreatment.

The following section determines how well the risk assessment estimated future maltreatment among families investigated by DSS. This analysis references the risk classification resulting from item scoring rather than the risk classification after overrides because the focus is on the predictive validity of the scored risk assessment.



#### **IV. FINDINGS**

The following analyses observed case outcomes for the scored risk classification that workers completed for each sample family. As mentioned previously, outcomes for each family were observed for an 18-month period following the sample investigation to assess subsequent CPS involvement after the risk assessment was completed. Subsequent neglect investigation and substantiation rates are reported for the scored neglect classification, subsequent abuse rates are reported for the scored abuse classification, and overall rates of subsequent investigation or maltreatment substantiation are shown for the overall risk classification (before any overrides).

##### **A. Current Family Risk Assessment Classification Findings**

A valid risk assessment classifies families into risk categories with progressively higher rates of subsequent CPS involvement. Ideally, the rates between consecutive risk levels maximize the separation between the high and low risk groups as well as between consecutive risk groups. In other words, each increase in risk level should correspond to a significant increase in subsequent CPS investigation, substantiated maltreatment, and subsequent child placement by DSS.

##### **1. Current Family Risk Assessment Classification Findings for Neglect**

Table 6 shows the follow-up neglect investigation rates for families classified by the current neglect instrument. Less than one fifth (16.8%) of families were classified as low risk, while 37.8% of families were classified as moderate risk, 32.2% were classified as high risk, and 13.2% were classified as very high risk.

Eighteen months after the initial classification was assigned, 25.9% of the sampled families were investigated for a neglect allegation on at least one occasion. Of the families classified as low risk, 11.6% were subsequently investigated for neglect. Families classified as

moderate risk of neglect had a neglect investigation rate of 18.5%, high risk families had a rate of 33.4%, and very high risk families had a rate of 47.3%. The risk assessment performed as expected in that an increase in the neglect risk level corresponded to an increase in the rate of subsequent neglect investigation.

The current risk assessment of neglect performed similarly when the outcome was subsequent substantiation for a neglect allegation. Only 3.5% of sampled families assigned to the low risk classification had neglect substantiated during the follow-up period, compared to 6.4% of moderate risk families, 14.9% of high risk families, and 24.0% of very high risk families.

<b>Neglect Risk Level</b>	<b>Sample</b>		<b>Subsequent Neglect Investigation</b>		<b>Subsequent Neglect Substantiation</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Low	1,701	16.8%	197	11.6%	60	3.5%
Moderate	3,816	37.8%	706	18.5%	243	6.4%
High	3,251	32.2%	1,085	33.4%	485	14.9%
Very High	1,329	13.2%	628	47.3%	319	24.0%
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>2,616</b>	<b>25.9%</b>	<b>1,107</b>	<b>11.0%</b>

## 2. Current Family Risk Assessment Classification Findings for Abuse

The risk assessment performed similarly when classifying families by their likelihood of subsequent abuse (see Table 7). Nearly half (49.0%) of the sampled families were classified as low risk, 38.4% as moderate risk, and 11.7% as high risk. Only 89 (0.9%) families were classified as having a very high risk of abuse, which makes the evaluation of findings for this group difficult.

Among the 4,944 families classified as low risk, 15.9% were subsequently investigated for abuse allegations. Families classified as moderate, high, and very high risk had progressively

higher follow-up abuse investigation rates of 23.6%, 30.6%, and 32.6%, respectively. The risk assessment performed as expected in that an increase in the abuse risk level corresponded to an increase in the rate of subsequent abuse investigation. The exception to this was that the abuse investigation rate for families classified as very high risk of abuse was only slightly greater than the rate for high risk families. The low number of families in the very high risk category, however, makes findings difficult to evaluate.

The same pattern can be observed when the outcome is subsequent abuse substantiation. Families classified as having a low risk of abuse had a follow-up abuse substantiation rate of 3.8%. In comparison, moderate risk families had a rate of 6.5% and high risk families a rate of 8.0%. Families classified as very high risk had nearly the same abuse substantiation rate as high risk families (8.1%).

<b>Current Risk of Abuse Classification by Abuse Outcomes</b>						
<b>Abuse Risk Level</b>	<b>Sample</b>		<b>Subsequent Abuse Investigation</b>		<b>Subsequent Abuse Substantiation</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Low	4,944	49.0%	787	15.9%	189	3.8%
Moderate	3,882	38.4%	917	23.6%	253	6.5%
High	1,185	11.7%	363	30.6%	95	8.0%
Very High	86	0.9%	28	32.6%	7	8.1%
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>2,095</b>	<b>20.7%</b>	<b>544</b>	<b>5.4%</b>

### 3. Current Family Risk Assessment Classification Findings for Any Maltreatment

As mentioned previously, the overall risk classification is the highest risk level assigned by the abuse or neglect instrument. This classification establishes a risk level that estimates the likelihood of subsequent maltreatment of any kind (i.e., either abuse or neglect), and is used by agencies to inform case decisions.

Table 8 and Figure 3 report the follow-up investigation, substantiation, and child placement rates by the overall classification obtained by the current family risk assessment. During the 18 months following the sampled investigation, 34.2% of families had at least one investigation for a maltreatment report. Among families classified as low risk, 19.7% had a follow-up investigation. Families classified as moderate risk had a subsequent investigation rate of 26.1%. Families classified as high or very high risk had progressively higher rates (41.5% and 54.5%, respectively) of subsequent investigation for abuse or neglect.

Findings were similar when the outcome was subsequent substantiation for abuse or neglect. Families classified as low risk had a rate of 7.0%, while the corresponding rate was 10.3% for moderate risk families, 19.7% for high risk, and 29.7% for very high risk families.

The overall risk classification also demonstrated good discrimination by subsequent placement of a child (see Table 8). Only 1.8% of families classified as low risk had a subsequent child placement, compared to 4.0% of moderate risk families, 8.9% of high risk families, and 16.5% of very high risk families.

<b>Current Overall Risk Classification by Subsequent Maltreatment Outcomes</b>					
<b>Overall Risk Level</b>	<b>Sample Distribution</b>		<b>Case Outcome Rates during the 18-month Follow-up Period</b>		
	<b>N</b>	<b>%</b>	<b>Investigation for Any Allegation</b>	<b>Substantiation for Any Allegation</b>	<b>Child Out-of-home Placement</b>
Low	1,348	13.4%	19.7%	7.0%	1.8%
Moderate	4,054	40.2%	26.1%	10.3%	4.0%
High	3,346	33.1%	41.5%	19.7%	8.9%
Very High	1,349	13.4%	54.5%	29.7%	16.5%
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>

#### 4. Current Risk Assessment Classification Findings by the Investigation Disposition

Table 9 shows the overall risk assessment classification findings by workers' substantiation decision for the sampled investigation (inconclusive or substantiated). A greater proportion of families with a substantiated allegation were classified as high or very high risk. Over one third (37.4%) of families substantiated at the time of the sampled incident were classified as high risk and an additional 18.5% were classified as very high risk. In comparison, 28.1% of families with an inconclusive finding were classified as high risk and 7.3% were classified as very high risk.<sup>13</sup>

For each of the three CPS outcomes observed, an increase in the risk classification corresponds to an increase in the outcome rate for families regardless of the sampled investigation's disposition. When the outcome is subsequent substantiation or subsequent child placement, outcome rates within a risk classification were similar for families whether the sample incident was substantiated or not. For example, 6.9% of low risk families with an inconclusive finding were subsequently substantiated for child maltreatment during the standardized 18-month follow-up period, compared to 7.3% of substantiated low risk families. The corresponding rates for moderate risk families were 10.4% for inconclusive and 10.2% for substantiated families. The rates for high risk families were 20.5% for inconclusive and 19.1% for substantiated families, while subsequent substantiation rates for very high risk families were 30.6% for inconclusive and 29.4% for substantiated families.

Similar findings were observed when the outcome was subsequent child placement. For example, the placement rate for inconclusive families classified as very high risk was 17.2%, while the rate for substantiated, very high risk families was 16.2%.

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<sup>13</sup> Note that the substantiation decision is based on state statutes and is unrelated to the risk assessment completion.

<b>Table 9</b>					
<b>Current Overall Risk Classification by Subsequent Maltreatment Outcomes and Investigation Disposition</b>					
<b>Overall Risk Level</b>	<b>Sample Distribution</b>		<b>Case Outcome Rates during the 18-month Follow-up Period</b>		
	<b>N</b>	<b>%</b>	<b>Investigation for Any Allegation</b>	<b>Substantiation for Any Allegation</b>	<b>Child Out-of-home Placement</b>
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>
<b>Inconclusive for Current Allegation</b>					
Low	856	18.6%	21.8%	6.9%	1.4%
Moderate	2,124	46.0%	28.4%	10.4%	4.8%
High	1,296	28.1%	45.8%	20.5%	9.3%
Very High	337	7.3%	60.8%	30.6%	17.2%
<b>Total</b>	<b>4,613</b>	<b>100.0%</b>	<b>34.5%</b>	<b>14.1%</b>	<b>6.3%</b>
<b>Substantiation for Current Allegation</b>					
Low	492	9.0%	16.1%	7.3%	2.4%
Moderate	1,930	35.2%	23.6%	10.2%	3.2%
High	2,050	37.4%	38.7%	19.1%	8.7%
Very High	1,012	18.5%	52.4%	29.4%	16.2%
<b>Total</b>	<b>5,484</b>	<b>100.0%</b>	<b>33.9%</b>	<b>16.8%</b>	<b>7.6%</b>

5. Current Risk Assessment Classification Findings by Race/Ethnicity of Youngest Child

Table 10 compares risk assessment classification findings by the race/ethnicity of the youngest child in the household. Classification findings were compared for race/ethnic groups with a sample of 600 or more families to help ensure reliable estimates by risk level. The distribution of families by risk level classification was similar for White/European American and Black/African American families (see Table 10, columns two and three). For example, among Black/African American and White/European American families, approximately 39% of families were classified as high risk and approximately 18% were classified as very high risk. A lower proportion of Hispanic/Latino or South/Central American and Asian/Pacific Islander families were classified as high (30.3% and 23.7%, respectively) and very high risk (10.5% and 6.4%, respectively).

With one exception, an increase in the risk classification corresponded to an increase in the CPS outcome rate for families in every ethnic group. For example, among Hispanic/Latino or South/Central American families, the subsequent substantiation rate was 7.4% for low risk families, 9.9% for moderate risk, 20.2% for high risk, and 28.6% for very high risk families. The only exception to this pattern was Asian/Pacific Islander families, whose re-investigation and subsequent substantiation rates for moderate risk families were similar to the corresponding rates for low risk families. This is explained in part by the lower outcome base rate of Asian/Pacific Islander families, which is half that of Black/African American and White/European American families, and one quarter the rates for Hispanic/Latino or South/Central American families.

Among White/European American, Black/African American, and Hispanic/Latino or South/Central American families, rates within each risk classification were also similar. For example, 6.8% of White/European American families classified as low risk were substantiated during the standardized 18-month follow-up period, compared to 7.4% of low risk Hispanic/Latino or South/Central American and 7.9% of low risk Black/African American families. Very high risk Asian/Pacific Islander families, however, had a re-investigation and subsequent child placement rate similar to those of high risk families of the other three ethnic groups.

<b>Table 10</b>					
<b>Current Overall Risk Classification and Subsequent Maltreatment Outcomes by Ethnicity</b>					
<b>Overall Risk Level</b>	<b>Sample Distribution</b>		<b>Case Outcome Rates during the 18-month Follow-up Period</b>		
	<b>N</b>	<b>%</b>	<b>Subsequent Investigation</b>	<b>Subsequent Substantiation</b>	<b>Subsequent Child Placement</b>
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>
<b>Hispanic/Latino or South/Central American</b>					
Low	733	15.9%	19.4%	7.4%	1.5%
Moderate	1,992	43.2%	24.9%	9.9%	3.5%
High	1,398	30.3%	39.6%	20.2%	8.9%
Very High	486	10.5%	53.9%	28.6%	16.5%
<b>Subtotal</b>	<b>4,609</b>	<b>100.0%</b>	<b>31.6%</b>	<b>14.6%</b>	<b>6.2%</b>
<b>White/European American</b>					
Low	219	7.9%	25.1%	6.8%	1.8%
Moderate	946	34.3%	33.5%	13.7%	5.1%
High	1,086	39.3%	43.9%	20.6%	9.3%
Very High	509	18.4%	54.4%	32.2%	16.7%
<b>Subtotal</b>	<b>2,760</b>	<b>100.0%</b>	<b>40.8%</b>	<b>19.3%</b>	<b>8.6%</b>
<b>Black/African American</b>					
Low	127	9.1%	27.6%	7.9%	3.1%
Moderate	484	34.7%	31.6%	10.5%	6.2%
High	532	38.1%	45.7%	19.9%	11.1%
Very High	253	18.1%	56.9%	27.7%	18.2%
<b>Subtotal</b>	<b>1,396</b>	<b>100.0%</b>	<b>41.2%</b>	<b>17.0%</b>	<b>10.0%</b>
<b>Asian/Pacific Islander</b>					
Low	156	21.6%	14.1%	8.3%	2.6%
Moderate	350	48.4%	15.4%	8.0%	4.0%
High	171	23.7%	37.4%	15.8%	5.8%
Very High	46	6.4%	45.7%	26.1%	8.7%
<b>Subtotal</b>	<b>723</b>	<b>100.0%</b>	<b>22.3%</b>	<b>11.1%</b>	<b>4.4%</b>

6. Summary of Current Risk Assessment Classification Findings

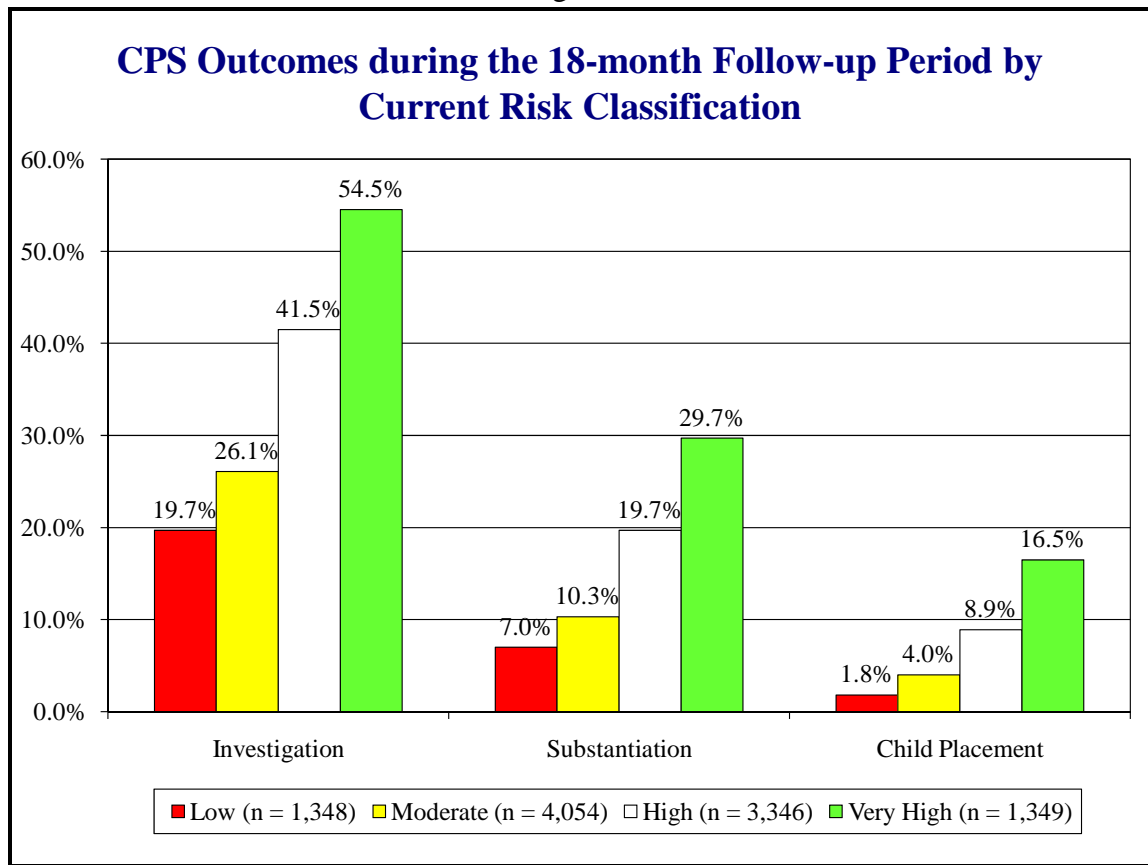
The current risk assessment performed well when distinguishing between families classified at low, moderate, high, and very high risk of subsequent substantiated maltreatment.

For all CPS outcomes (investigation, substantiation, and child placement) and among most



sample subgroups, the recidivism rates observed among low risk families were significantly lower than those of families classified at higher risk levels. For example, 7.0% of families classified as low risk had a subsequent substantiation during the 18-month follow-up period, a rate much lower than the average (15.6%) for the entire sample. Families classified as moderate risk had a subsequent substantiation rate of 10.3%, high risk families a rate of 19.7%, and very high risk families had a rate of 29.7% (see Figure 3). An increase from low to moderate, moderate to high, and high to very high risk corresponded to at least a 30% increase in the re-investigation rate, a 50% increase in the subsequent substantiation rate, and nearly a two-fold increase in the child placement rate.

Figure 3



While the current risk assessment works very well, results suggest that performance could be improved. For example, a high proportion (46.5%) of families were classified as high or very high risk, and the abuse risk assessment did not distinguish well between high and very high risk families. The families classified as having a very high risk of abuse had a subsequent abuse investigation rate of 32.6% and an abuse substantiation rate of 8.1%, very similar to the rates for families classified as high risk of abuse (30.6% and 8.0%, respectively; see Table 7). Also, the current assessment did not differentiate between low and moderate risk Asian/Pacific Islander families very well (see Table 10).

## **B. Development of the Proposed Risk Assessment**

An alternative risk assessment was developed to determine if the performance of the current risk assessment could be improved. The research was conducted by examining the relationship between the family case characteristics workers observed and recorded in a computer system at the time of the sample investigation, and subsequent CPS involvement. Each risk item on the current risk assessment was examined in the analysis, along with items from the safety assessment, allegations of abuse and neglect made at the time of the sample incident, and CPS involvement of families prior to the sample incident. Individual items were selected for inclusion in the abuse or neglect assessment based on their statistical association with subsequent maltreatment.<sup>14</sup>

The first step in the proposed risk assessment construction was to examine correlations and cross-tabulations between each potential risk factor available for study and each outcome measure. The primary maltreatment outcome was subsequent substantiation, because it indicates that abuse or neglect occurred, and is employed as a child safety outcome by the CFSR.

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<sup>14</sup> A variety of statistical methods could be used to conduct the analyses described. A prior study by Simon (1971) and an exhaustive study by Gottfredson and Gottfredson (1979), later substantiated by other researchers (see Wilbanks, 1985; and Benda, 1987), found that less precise methods of statistical evaluation (including bivariate analyses or least squares regression) often produce better overall results. More recent studies support the earlier findings: see Silver, Smith, & Banks, 2000. The abuse and neglect indices were developed separately because previous research indicates that the family risk characteristics associated with child abuse differ from those related to neglect.

Subsequent investigation and child placement were also reviewed. Risk factors that demonstrated a significant statistical association with any CPS outcome were selected for further analysis.<sup>15</sup> Multiple linear regression analyses were then conducted to identify which combination of risk factors to include in the proposed risk assessment. Item weights were determined by assessing their bivariate and multivariate relationship to maltreatment outcome measures. Since the instrument must be completed by workers under field conditions, the ease of observing and reliably scoring case characteristics was also considered in the selection of revised instrument items. After a preliminary instrument was developed, it was tested against outcomes to determine optimal cut-off points for classification categories and to evaluate its classification capabilities. The risk assessment was then applied to the validation sample to examine classification findings with a different sample.

This revalidation effort resulted in a proposed risk assessment that employs similar risk factors to the current one. The proposed neglect risk assessment, for example, lowers the score assigned to current report of neglect, prior CPS history, number of children involved in the incident, and primary caregiver history of maltreatment as a child, and makes the child characteristics a summative item (“add for score” versus one point if one or more apply). The abuse risk assessment replaces current substantiation for physical abuse with current report of physical abuse, alters the scoring for number of prior investigations (see item A2), adds prior substantiated physical abuse to the prior physical injury item (see item A4), and adds an item for primary caregiver mental health and number of children involved in the incident. Primary caregiver arrest history, caregiver drug or alcohol problem, and primary caregiver provides insufficient emotional support were removed from the abuse risk assessment. A domineering primary caregiver and one who employs excessive or inappropriate discipline are separate items on the proposed abuse risk assessment rather than one combined item as on the current risk assessment.

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<sup>15</sup> Pearson correlation significant at the .05 level.

**PROPOSED CALIFORNIA  
SDM® FAMILY RISK ASSESSMENT**

r: 12-07

Referral Name: \_\_\_\_\_ Referral #: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

County Name: \_\_\_\_\_ Worker Name: \_\_\_\_\_ Worker ID#: \_\_\_\_\_

NEGLECT	Score	ABUSE	Score
N1. Current Report Is for Neglect		A1. Current Report is for Physical Abuse	
a. No..... 0		a. No..... 0	
b. Yes..... 1	_____	b. Yes..... 1	_____
N2. Prior Investigations ( <i>assign highest score that applies</i> )		A2. Number of Prior Investigations	
a. None..... -1		a. None..... -1	
b. One or more, <u>abuse</u> only..... 1		b. One or more, neglect only..... 0	
c. One or two for <u>neglect</u> ..... 2		b. One for abuse..... 1	
d. Three or more for <u>neglect</u> ..... 3	_____	c. Two or more for abuse..... 2	_____
N3. Household Has Previously Received CPS ( <i>voluntary/court-ordered</i> )		A3. Household Has Previously Received CPS ( <i>voluntary/court-ordered</i> )	
a. No..... 0		a. No..... 0	
b. Yes..... 1	_____	b. Yes..... 1	_____
N4. Number of Children Involved in the Child Abuse/Neglect Incident		A4. Prior Substantiated Physical Abuse or Injury to a Child Resulting from Child Abuse/Neglect	
a. One, two, or three..... 0		a. No..... 0	
b. Four or more..... 1	_____	b. One or more apply..... 1	_____
N5. Age of Youngest Child in the Home		____ Prior substantiated physical abuse, AND/OR	
a. Two or older..... 0		____ Prior injury to a child resulting from child abuse/neglect	
b. Under two..... 1	_____	A5. Number of Children Involved in the Child Abuse/Neglect Incident	
N6. Primary Caregiver Provides Physical Care Inconsistent with Child Needs		a. One, two, or three..... 0	
a. No..... 0		b. Four or more..... 1	_____
b. Yes..... 1	_____	A6. Two or More Incidents of Domestic Violence in the Household in the Past Year	
N7. Primary Caregiver Has a History of Abuse or Neglect as a Child		a. No..... 0	
a. No..... 0		b. Yes..... 1	_____
b. Yes..... 1	_____	A7. Primary Caregiver Employs Excessive/Inappropriate Discipline	
N8. Primary Caregiver Has/Had a Mental Health Problem		a. No..... 0	
a. None/not applicable..... 0		b. Yes..... 1	_____
b. One or more apply..... 1	_____	A8. Primary Caregiver Is Domineering	
N9. Primary Caregiver Has/Had a Drug and/or Alcohol Problem		a. No..... 0	
a. None/not applicable..... 0		b. Yes..... 1	_____
b. One or more apply..... 2	_____	A9. Primary Caregiver Has a History of Abuse or Neglect as a Child	
Alcohol Problem:		a. No..... 0	
____ During the last 12 months, AND/OR		b. Yes..... 1	_____
____ Prior to the last 12 months		A10. Primary Caregiver Has/Had a Mental Health Problem	
Drug Problem:		a. None/not applicable..... 0	
____ During the last 12 months, AND/OR		b. One or more apply..... 1	_____
____ Prior to the last 12 months		____ During the last 12 months, AND/OR	
N10. Primary Caregiver Has Criminal Arrest History		____ Prior to the last 12 months	
a. No..... 0		A11. Characteristics of Children in Household ( <i>score 1 if any present</i> )	
b. Yes..... 1	_____	a. Not applicable..... 0	
N11. Characteristics of Children in Household ( <i>add for score</i> )		b. One or more present ( <i>mark all applicable</i> )..... 1	_____
a. Not applicable..... 0		____ Delinquency history	
b. ____ Developmental or physical disability..... 1		____ Developmental disability	
c. ____ Medically fragile/failure to thrive..... 1		____ Mental health/behavioral problem	
d. ____ Mental health or behavioral problem..... 1	_____		
N12. Current Housing			
a. Not applicable..... 0			
b. One or more present apply..... 1	_____		
____ Physically unsafe, AND/OR			
____ Family homeless			

**TOTAL NEGLECT RISK SCORE** \_\_\_\_\_ **TOTAL ABUSE RISK SCORE** \_\_\_\_\_

**SCORED RISK LEVEL.** Assign the family's scored risk level based on the highest score on either the neglect or abuse indices, using the following chart:

<u>Neglect Score</u>	<u>Abuse Score</u>	<u>Scored Risk Level</u>
_____ -1 - 1	_____ -1 - 0	_____ Low
_____ 2 - 5	_____ 1 - 3	_____ Moderate
_____ 6 - 8	_____ 4 - 6	_____ High
_____ 9 +	_____ 7 +	_____ Very High

**POLICY OVERRIDES.** Mark yes if a condition shown below is applicable in this case. If any condition is applicable, override final risk level to very high.

Yes     No    1. Sexual abuse case AND the perpetrator is likely to have access to the child.

Yes     No    2. Non-accidental injury to a child under age two years.

Yes     No    3. Severe non-accidental injury.

Yes     No    4. Caregiver action or inaction resulted in the death of a child due to abuse or neglect (previous or current).

**DISCRETIONARY OVERRIDE.** If a discretionary override is made, mark yes, increase risk by one level, and indicate reason.

Yes     No    5. If yes, override risk level (mark one):     Moderate     High     Very High

Discretionary override reason: \_\_\_\_\_

Supervisor's Review/Approval of Discretionary Override: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

**FINAL RISK LEVEL** (mark final level assigned):     Low     Moderate     High     Very High

**C. Performance of the Proposed Family Risk Assessment for Abuse and Neglect**

The following tables review the proposed risk assessment classification results for the construction sample, using the same maltreatment outcomes reviewed for assessing the performance of the current family risk assessment. Findings are shown for the proposed neglect assessment, the proposed abuse assessment, and then the overall risk classification.

1. Proposed Family Risk Assessment Classification Findings for Neglect

Table 11 shows that when classified by the proposed neglect risk assessment, an increase in the neglect risk level corresponded to an increase in rates for every neglect outcome. Among families classified as low risk of neglect, 13.9% had a subsequent investigation for neglect, compared to 28.9% of families classified as moderate risk, 43.6% as high risk families, and 52.1% as very high risk families. When the outcome was subsequent substantiation for neglect, the rate doubled between low (4.7%) to moderate (11.9%) and moderate to high (21.0%), and increased approximately 30% from high to very high risk (27.5%).

<b>Table 11</b>						
<b>Proposed Risk of Neglect Classification by Neglect Outcomes</b>						
<b>Neglect Risk Level</b>	<b>Sample</b>		<b>Subsequent Neglect Investigation</b>		<b>Subsequent Neglect Substantiation</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Low	4,175	41.3%	580	13.9%	198	4.7%
Moderate	3,994	39.6%	1,156	28.9%	474	11.9%
High	1,467	14.5%	640	43.6%	308	21.0%
Very High	461	4.6%	240	52.1%	127	27.5%
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>2,616</b>	<b>25.9%</b>	<b>1,107</b>	<b>11.0%</b>

2. Proposed Family Risk Assessment Classification Findings for Abuse

The proposed abuse risk assessment classified families by their likelihood of future abuse (physical, emotional, or sexual abuse) of a child more accurately than did the current assessment. As Table 12 indicates, families classified as very high risk had an abuse investigation and substantiation rate approximately four times greater than low risk families. Each increase in the abuse risk level demonstrated a significantly higher investigation and substantiation rate.

<b>Table 12</b>						
<b>Proposed Risk of Abuse Classification by Abuse Outcomes</b>						
<b>Abuse Risk Level</b>	<b>Sample</b>		<b>Subsequent Abuse Investigation</b>		<b>Subsequent Abuse Substantiation</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Low	4,162	41.2%	525	12.6%	122	2.9%
Moderate	4,300	42.6%	990	23.0%	255	5.9%
High	1,520	15.1%	523	34.4%	152	10.0%
Very High	115	1.1%	57	49.6%	15	13.0%
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>2,095</b>	<b>20.7%</b>	<b>544</b>	<b>5.4%</b>

3. Proposed Family Risk Assessment Classification Findings for Any Maltreatment

The proposed neglect and abuse assessments resulted in an improved overall risk classification for maltreatment. Table 13 shows that the proposed risk assessment classified fewer families as high or very high risk (27.7%) than did the current risk assessment (46.5%).

In addition, the proposed risk assessment showed the same or better discrimination in CPS outcomes between risk levels, and achieved higher outcome rates for the very high risk group. For example, 7.2% of the sampled families classified as low risk had a subsequent substantiation, compared to 14.3% of moderate risk families, 24.3% of high risk, and 33.6% for very high risk families. By comparison (see Table 8), families classified as very high risk by the current risk assessment had a subsequent substantiation rate of 29.7%.

<b>Table 13</b>					
<b>Proposed Overall Risk Classification by Subsequent Maltreatment Outcomes</b>					
<b>Overall Risk Level</b>	<b>Sample Distribution</b>		<b>Case Outcome Rates during the 18-month Follow-up Period</b>		
	<b>N</b>	<b>%</b>	<b>Investigation for Any Allegation</b>	<b>Substantiation for Any Allegation</b>	<b>Child Out-of-home Placement</b>
Low	2,862	28.3%	18.5%	7.2%	2.3%
Moderate	4,431	43.9%	33.2%	14.3%	5.9%
High	2,265	22.4%	49.5%	24.3%	12.5%
Very High	539	5.3%	60.9%	33.6%	18.2%
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>

#### 4. Proposed Risk Assessment Classification Findings by the Investigation Disposition

Table 14 shows the overall risk assessment classification findings by the disposition decision (inconclusive or substantiated) for the sampled investigation. As with the current risk assessment, a greater proportion of families with a substantiated allegation were classified as high or very high risk compared to families with an inconclusive finding.

For each of the three CPS outcomes observed, an increase in the risk classification corresponded to an increase in the outcome rate for families regardless of the sampled investigation's disposition. In addition, subsequent substantiation and child placement rates within a risk level classification were similar regardless of the sampled investigation's disposition. For example, 36.0% of very high risk families with an inconclusive finding for the sample incident and 33.0% of very high risk families with a substantiated sample incident had a subsequent substantiation during the follow-up period. This rate is at least four times the rate of subsequent substantiation among low risk families.



<b>Table 14</b>					
<b>Proposed Overall Risk Classification by Subsequent Maltreatment Outcomes and Investigation Disposition</b>					
<b>Overall Risk Level</b>	<b>Sample Distribution</b>		<b>Case Outcome Rates during the 18-month Follow-up Period</b>		
	<b>N</b>	<b>%</b>	<b>Investigation for Any Allegation</b>	<b>Substantiation for Any Allegation</b>	<b>Child Out-of-home Placement</b>
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>13.6%</b>	<b>7.0%</b>
<b>Inconclusive for Current Allegation</b>					
Low	1,604	34.8%	19.6%	6.5%	2.4%
Moderate	2,088	45.3%	37.0%	14.5%	6.1%
High	821	17.8%	52.6%	25.1%	13.0%
Very High	100	2.2%	71.0%	36.0%	18.0%
<b>Total</b>	<b>4,613</b>	<b>100.0%</b>	<b>34.5%</b>	<b>14.1%</b>	<b>6.3%</b>
<b>Substantiation for Current Allegation</b>					
Low	1,258	22.9%	17.0%	8.1%	2.1%
Moderate	2,343	42.7%	29.8%	14.1%	5.8%
High	1,444	26.3%	47.8%	23.9%	12.1%
Very High	439	8.0%	58.5%	33.0%	18.2%
<b>Total</b>	<b>5,484</b>	<b>100.0%</b>	<b>33.9%</b>	<b>16.8%</b>	<b>7.6%</b>

## 5. Proposed Risk Assessment Classification Findings by Race/Ethnicity of Youngest Child

Table 15 compares the proposed risk assessment classification findings by the race/ethnicity of the youngest child in the household. The distribution of families by risk level classification was similar for White/European American and Black/African American families. For example, 36.0% of White/European American families and 36.2% of Black/African American families were classified as high or very high risk by the proposed risk assessment. A lower proportion of Hispanic/Latino or South/Central American (23.4%) and Asian/Pacific Islander (17.0%) families were classified as high or very high risk.

With one exception, an increase in the proposed risk classification corresponded to an increase in every outcome rate for every ethnic group observed. The only exception was the subsequent child placement rate for very high risk Asian/Pacific Islander families. Only 14 (1.9%) Asian/Pacific Islanders families were classified as very high risk, however, and subsequent child placement had the lowest base rate of the three outcomes. This makes it difficult to produce meaningful results for this small subset.

In almost all cases, outcome rates within a risk classification were similar across racial/ethnic groups. For example, White/European American families classified as low risk had a subsequent substantiation rate of 10.1%, compared to 6.3% of low risk Black/African American families, 6.9% for Hispanic/Latino or South/Central American families, and 7.1% of Asian/Pacific Islander families. The re-investigation and child placement rates for high risk Asian/Pacific Islander families, however, were similar to the corresponding rates for moderate risk White/European American and Black/African American families. In addition, the subsequent substantiation rate for high risk Asian/Pacific Islander families was similar to the rate for moderate risk White/European American families. Ideally, high risk families would have higher recidivism rates than moderate risk families in any ethnic group. The base rates for White/European American and Black/African American families were nearly twice that of

Asian/Pacific Islander families, however, which makes equivalent classification findings difficult to achieve. The outcome rates for high risk Asian/Pacific Islander families were greater than the average outcome rates for all moderate risk families (see Table 15).

<b>Table 15</b>					
<b>Proposed Overall Risk Classification by Subsequent Maltreatment Outcomes and Ethnicity</b>					
<b>Overall Risk Level</b>	<b>Sample Distribution</b>		<b>Case Outcome Rates during the 18-month Follow-up Period</b>		
	<b>N</b>	<b>%</b>	<b>Subsequent Investigation</b>	<b>Subsequent Substantiation</b>	<b>Subsequent Child Placement</b>
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>
<b>Hispanic/Latino or South/Central American</b>					
Low	1,491	32.3%	17.7%	6.9%	1.6%
Moderate	2,037	44.2%	31.8%	14.5%	5.9%
High	899	19.5%	48.9%	24.8%	12.1%
Very High	182	3.9%	56.6%	28.6%	17.6%
<b>Subtotal</b>	<b>4,609</b>	<b>100.0%</b>	<b>31.6%</b>	<b>14.6%</b>	<b>6.2%</b>
<b>White/European American</b>					
Low	562	20.4%	26.2%	10.1%	3.7%
Moderate	1,205	43.7%	38.0%	16.4%	6.5%
High	789	28.6%	50.3%	25.5%	12.7%
Very High	204	7.4%	60.8%	37.7%	19.1%
<b>Subtotal</b>	<b>2,760</b>	<b>100.0%</b>	<b>40.8%</b>	<b>19.3%</b>	<b>8.6%</b>
<b>Black/African American</b>					
Low	254	18.2%	21.3%	6.3%	3.5%
Moderate	636	45.6%	37.4%	13.5%	7.4%
High	391	28.0%	52.2%	23.5%	14.8%
Very High	115	8.2%	68.7%	37.4%	21.7%
<b>Subtotal</b>	<b>1,396</b>	<b>100.0%</b>	<b>41.2%</b>	<b>17.0%</b>	<b>10.0%</b>
<b>Asian/Pacific Islander</b>					
Low	309	42.7%	13.6%	7.1%	3.2%
Moderate	291	40.2%	23.4%	12.0%	4.8%
High	109	15.1%	39.4%	17.4%	7.3%
Very High	14	1.9%	57.1%	28.6%	0.0%
<b>Subtotal</b>	<b>723</b>	<b>100.0%</b>	<b>22.3%</b>	<b>11.1%</b>	<b>4.4%</b>

6. Summary of Proposed Risk Assessment Classification Findings

Table 16 provides a direct comparison of the current and proposed risk assessments. While both assessments perform well, one advantage of the proposed risk assessment is that it classified fewer families as high and very high risk than the current assessment (27.7% compared to 46.5%) and a greater proportion of these families had a subsequent investigation, substantiation, and child placement when compared to families classified as high or very high risk by the current risk assessment (see Table 16). This suggests that while the proposed risk assessment would classify fewer families as high or very high risk, the families in those classifications would be the ones most likely to become involved in subsequent CA/N activity.

<b>Table 16</b>					
<b>Current and Proposed Risk Classification by Subsequent Maltreatment Outcomes</b>					
<b>Overall Risk Level</b>	<b>Sample Distribution</b>		<b>Case Outcome Rates during the 18-month Follow-up Period</b>		
	<b>N</b>	<b>%</b>	<b>Investigation for Any Allegation</b>	<b>Substantiation for Any Allegation</b>	<b>Child Out-of-home Placement</b>
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>
<b>Current Risk Assessment Classification</b>					
Low	1,348	13.4%	19.7%	7.0%	1.8%
Moderate	4,054	40.2%	26.1%	10.3%	4.0%
High	3,346	33.1%	41.5%	19.7%	8.9%
Very High	1,349	13.4%	54.5%	29.7%	16.5%
<b>Proposed Risk Assessment Classification</b>					
Low	2,862	28.3%	18.5%	7.2%	2.3%
Moderate	4,431	43.9%	33.2%	14.3%	5.9%
High	2,265	22.4%	49.5%	24.3%	12.5%
Very High	539	5.3%	60.9%	33.6%	18.2%

This pattern was true for sample subgroups as well. For every subgroup, the very high risk groups were smaller and had higher outcome rates than when families were classified by the current risk assessment. Asian/Pacific Islander families classified as high risk, however, had outcome rates similar to White/European American and Black/African American families

classified as moderate risk. This was true for both the proposed and the current risk assessment.<sup>16</sup>

Another advantage of the proposed assessment was an enhanced ability to discriminate by substantiated maltreatment for low and moderate risk families. As Table 16 indicates, the transition from low to moderate risk moved the substantiation rate from 7.2% to 14.3% in the proposed assessment, versus 7.0% to 10.3% under the current one. This pattern was also maintained for ethnic subgroups.

Proposed classification findings were also examined by sample counties (see Appendix F, Table F6). In almost every county, an increase in risk level corresponded to an increase in the CPS outcome rate. There were two exceptions: in Orange County, families classified as high and very high risk had similar subsequent child placement rates, and high and very high risk families from smaller counties (the “Other” category) had similar subsequent substantiation rates. As noted previously, CPS outcome base rates for counties varied considerably.

## **V. SUMMARY**

When evaluated across all measures of subsequent maltreatment, the current risk assessment performed well when distinguishing between families classified at low, moderate, high, and very high risk of future child maltreatment. For all CPS outcomes (investigation, substantiation, and child placement) and among most sample subgroups, the recidivism rates observed among low risk families were significantly lower than those of families classified at higher risk levels. An increase in risk level corresponded to at least a 30% increase in the re-investigation rate, a 50% increase in the subsequent substantiation rate, and a two-fold increase in the child placement rate. A high proportion of families were classified as high and very high

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<sup>16</sup> As noted previously, the base rates for White/European American and Black/African American families were nearly twice that of Asian/Pacific Islander families, which makes equivalent classification findings difficult to achieve.

risk, however, and the abuse risk assessment did not distinguish well between high and very high risk families.

A proposed risk assessment was developed to determine whether the performance of the current risk assessment could be improved. This was achieved by independently analyzing the relationship between characteristics of the household and investigation observed at the time of the sample incident and case outcomes observed during the standardized 18-month follow-up period. The proposed risk assessment classified fewer families as high and very high risk, and these families had higher rates of subsequent CPS involvement than did families classified as high and very high risk by the current assessment. This was true for sample subgroups as well.

The proposed risk assessment was applied to a validation sample to assess its classification ability in a sample other than the one with which the tool was constructed. Shrinkage, the amount of classification power lost when risk assessment findings are compared in independent construction and validation samples, was between 5% and 12% (see Appendix C for more information), within acceptable limits. DSS may wish to monitor shrinkage by regularly examining risk assessment findings on an aggregate basis and examining the classification abilities of the risk assessment with a future sample.<sup>17</sup>

Adopting the proposed assessment should help improve workers' estimates of a family's risk of future maltreatment. This, in turn, would permit the agency to reduce subsequent maltreatment by more effectively targeting service interventions to high risk families. Agency monitoring and quality improvement efforts may also improve the accuracy of worker risk assessment estimates and the management of service delivery. DSS may wish to strengthen implementation by employing efforts used by other jurisdictions, such as:

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<sup>17</sup> Dispersion Index for Risk (DIFR) scores were also calculated and compared for the four counties that were represented in the current and the 2003 validation study (Humboldt, Los Angeles, Orange, and Sacramento counties). This comparison assessed the degree of shrinkage observed when a risk assessment developed on one sample (the 2003 proposed risk assessment) was applied under field conditions to a new population of families (the 2007 current risk assessment). When assessed for the outcomes of re-investigation and subsequent substantiation, the degree of shrinkage was 7% – 9%.

- Emphasizing worker use of risk assessment scoring definitions to promote accurate and consistent assessment scoring. Ensuring that scoring definitions are easily accessible to workers may increase the accuracy of their risk estimates.
- Including a review of risk and other SDM assessment scoring as part of routine case reviews conducted by supervisors or other staff. For example, Michigan's Department of Human Services developed a comparative case reading program, designed to improve supervisors' evaluation of SDM practices as well as workers' SDM-related assessment practices. Supervisors and quality experts independently review a sample of case files, and then the two groups' findings are compared. These findings are reviewed in a summary meeting with supervisors and area managers.
- Encouraging supervisors to routinely review risk scoring and include it in case discussions with workers.
- Ensuring that agency managers are systematically monitoring assessment and service delivery data for CPS cases through SafeMeasures<sup>®</sup> and other reporting mechanisms. For example, managers can use SafeMeasures to examine risk assessment completion rates by office. DSS staff may benefit from systematically monitoring information such as:
  - ▶ Safety factors indicated at the time of assessment and the interventions used to help ensure child safety.
  - ▶ The risk and needs profiles of the families served.
  - ▶ The frequency and nature of overrides to the risk classification.
  - ▶ The case opening decision by the risk classification after any overrides.
  - ▶ Information about the availability and use of service interventions. Service interventions could be examined relative to priority needs identified on the family strengths and needs assessment.

Periodic validations are required to ensure that risk assessments continue to effectively classify families by their likelihood of future child maltreatment. If DSS operations change significantly in the next few years, CRC strongly recommends that another validation study be conducted to ensure that the risk assessment is effectively classifying families.

## **Appendix A**

### **Current Family Risk Assessment Form and Item Analysis**



**CALIFORNIA  
SDM® FAMILY RISK ASSESSMENT**

r: 08-06

Referral Name: \_\_\_\_\_ Referral #: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

County Name: \_\_\_\_\_ Worker Name: \_\_\_\_\_ Worker ID#: \_\_\_\_\_

NEGLECT	Score	ABUSE	Score
N1. Current Complaint Is for Neglect		A1. Current Physical Abuse Complaint is Substantiated	
a. No..... 0		a. No..... 0	
b. Yes..... 2		b. Yes..... 1	
N2. Prior Investigations ( <i>assign highest score that applies</i> )		A2. Number of Prior Abuse Investigations	
a. None..... -1		a. None..... 0	
b. One or more, <u>abuse</u> only..... 1		b. One..... 1	
c. One or two for <u>neglect</u> ..... 2		c. Two or more..... 2	
d. Three or more for <u>neglect</u> ..... 3		A3. Household Has Previously Received CPS ( <i>voluntary/court-ordered</i> )	
N3. Household Has Previously Received CPS ( <i>voluntary/court-ordered</i> )		a. No..... 0	
a. No..... 0		b. Yes..... 2	
b. Yes..... 3		A4. Prior Injury to a Child Resulting from Child Abuse/Neglect	
N4. Number of Children Involved in the Child Abuse/Neglect Incident		a. No..... 0	
a. One, two, or three..... 0		b. Yes..... 2	
b. Four or more..... 2		A5. Primary Caregiver's Assessment of Incident ( <i>score 1 if any present</i> )	
N5. Age of Youngest Child in the Home		a. Not applicable..... 0	
a. Two or older..... 0		b. One or more present ( <i>mark all applicable</i> )..... 1	
b. Under two..... 1		___ Blames child, AND/OR	
N6. Primary Caregiver Provides Physical Care Inconsistent with Child Needs		___ Justifies maltreatment of a child	
a. No..... 0		A6. Two or More Incidents of Domestic Violence in the Household in the Past Year	
b. Yes..... 1		a. No..... 0	
N7. Primary Caregiver Has a History of Abuse or Neglect as a Child		b. Yes..... 1	
a. No..... 0		A7. Primary Caregiver Characteristics ( <i>check applicable items and add for score</i> )	
b. Yes..... 2		a. Not applicable..... 0	
N8. Primary Caregiver Has/Had a Mental Health Problem		b. One or more present ( <i>mark all applicable</i> )..... 1	
a. None/not applicable..... 0		___ Provides insufficient emotional/psychological support	
b. One or more apply..... 1		___ Employs excessive/inappropriate discipline	
___ During the last 12 months, AND/OR		___ Domineering caregiver	
___ Prior to the last 12 months		A8. Primary Caregiver Has a History of Abuse or Neglect as a Child	
N9. Primary Caregiver Has/Had a Drug and/or Alcohol Problem		a. No..... 0	
a. None/not applicable..... 0		b. Yes..... 1	
b. One or more apply..... 2		A9. One or More Caregiver(s) Has/Had a Drug and/or Alcohol Problem	
___ During the last 12 months, AND/OR		a. No..... 0	
___ Prior to the last 12 months		b. Yes ( <i>mark all applicable</i> )..... 1	
N10. Primary Caregiver Has Criminal Arrest History		During the last 12 months:	
a. No..... 0		[ ] Primary Caregiver [ ] Secondary Caregiver	
b. Yes..... 1		Prior to the last 12 months:	
N11. Characteristics of Children in Household ( <i>score 1 if any present</i> )		[ ] Primary Caregiver [ ] Secondary Caregiver	
a. Not applicable..... 0		A10. Primary Caregiver Has a Criminal Arrest History	
b. One or more present ( <i>mark all applicable</i> )..... 1		a. No..... 0	
___ Developmental or physical disability		b. Yes..... 1	
___ Medically fragile/failure to thrive		A11. Characteristics of Children in Household ( <i>score 1 if any present</i> )	
___ Positive toxicology screen at birth		a. Not applicable..... 0	
N12. Current Housing		b. One or more present ( <i>mark all applicable</i> )..... 1	
a. Not applicable..... 0		___ Delinquency history	
b. One or more present apply..... 1		___ Developmental disability	
___ Physically unsafe, AND/OR		___ Mental health/behavioral problem	
___ Family homeless			
<b>TOTAL NEGLECT RISK SCORE</b> _____		<b>TOTAL ABUSE RISK SCORE</b> _____	

**SCORED RISK LEVEL.** Assign the family's scored risk level based on the highest score on either the neglect or abuse indices, using the following chart:

<u>Neglect Score</u>	<u>Abuse Score</u>	<u>Scored Risk Level</u>
_____ -1 - 0	_____ 0 - 1	_____ Low
_____ 1 - 3	_____ 2 - 4	_____ Moderate
_____ 4 - 8	_____ 5 - 8	_____ High
_____ 9 +	_____ 9 +	_____ Very High

**POLICY OVERRIDES.** Mark yes if a condition shown below is applicable in this case. If any condition is applicable, override final risk level to very high.

- |                              |                             |   |
|------------------------------|-----------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 1. Sexual abuse case AND the perpetrator is likely to have access to the child.                                 |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 2. Non-accidental injury to a child under age two years.  |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 3. Severe non-accidental injury.  |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 4. Caregiver action or inaction resulted in the death of a child due to abuse or neglect (previous or current). |

**DISCRETIONARY OVERRIDE.** If a discretionary override is made, mark yes, increase risk by one level, and indicate reason.

- Yes     No    5. If yes, override risk level (mark one):     Moderate     High     Very High

Discretionary override reason: \_\_\_\_\_

Supervisor's Review/Approval of Discretionary Override: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

**FINAL RISK LEVEL** (mark final level assigned):     Low     Moderate     High     Very High

The purpose of an item analysis is to describe the bivariate relationship between individual risk factors scored on the neglect and abuse assessments and the outcomes observed during the standardized 18-month follow-up period. Table A1 reviews the neglect risk factors and their relationship to subsequent neglect outcomes. Columns two and three show the prevalence of each risk factor among the sample. Columns four and five show, for each of the risk characteristics, the proportion of families with a subsequent investigation for neglect. Column six reports the Pearson correlation for each risk factor and subsequent neglect investigation, while column seven reports the significance of that correlation. The expectation is that each risk factor will have a significant relationship with the relevant CPS outcomes in the expected direction. For example, 60.4% of sampled families were investigated for neglect at the time of the sample incident. Among families with no current allegations of neglect, 19.6% were re-investigated for neglect. Approximately one third (30.1%) of families investigated for neglect at the time of the sample incident were re-investigated for neglect. The correlation between current neglect allegation and subsequent neglect investigation (.117) is significant. Columns eight through eleven show the rate and correlation for each risk factor with subsequent neglect substantiation.

Table A1 shows that every risk factor in the neglect instrument has a significant relationship to at least one of the two outcomes shown ( $p \leq .05$ ). Table A2 shows findings for abuse risk factors. All but two abuse items have a significant relationship to at least one of the two abuse outcomes. The exceptions were current substantiated allegation of physical abuse, and a caregiver's past or current drug or alcohol problem.

Table A1

## Neglect Instrument Item Analysis of Current Risk Assessment: Construction Sample

Item	Sample Distribution		Cases with Subsequent Neglect Allegation				Cases with Subsequent Neglect Substantiation			
	N	%	N	%	Corr.	P Value	N	%	Corr.	P Value
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>2,616</b>	<b>25.9%</b>			<b>1,107</b>	<b>11.0%</b>		
<b>N1. Current Complaint Is for Neglect</b>					.117	.001			.119	.001
No	3,994	39.6%	781	19.6%			255	6.4%		
Yes	6,103	60.4%	1,835	30.1%			852	14.0%		
<b>N2. Prior Investigations</b>					.247	.001			.177	.001
None	4,973	49.3%	832	16.7%			322	6.5%		
One or more, <u>abuse</u> only	1,477	14.6%	356	24.1%			125	8.5%		
One or two for <u>neglect</u>	2,284	22.6%	745	32.6%			336	14.7%		
Three or more for <u>neglect</u>	1,363	13.5%	683	50.1%			324	23.8%		
<b>N3. Household Has Previously Received CPS (voluntary/court-ordered)</b>					.159	.001			.126	.001
No	8,457	83.8%	1,931	22.8%			781	9.2%		
Yes	1,640	16.2%	685	41.8%			326	19.9%		
<b>N4. Number of Children Involved in the CA/N Incident</b>					.095	.001			.057	.001
One, two, or three	9,014	89.3%	2,205	24.5%			933	10.4%		
Four or more	1,083	10.7%	411	38.0%			174	16.1%		
<b>N5. Age of Youngest Child in the Home</b>					.066	.001			.066	.001
2 or older	7,375	73.0%	1,782	24.2%			716	9.7%		
Under 2	2,722	27.0%	834	30.6%			391	14.4%		
<b>N6. Primary Caregiver Provides Physical Care Inconsistent with Child Needs</b>					.045	.001			.052	.001
No	9,104	90.2%	2,300	25.3%			949	10.4%		
Yes	993	9.8%	316	31.8%			158	15.9%		
<b>N7. Primary Caregiver Has a History of Abuse or Neglect as a Child</b>					.076	.001			.057	.001
No	9,097	90.1%	2,256	24.8%			944	10.4%		
Yes	1,000	9.9%	360	36.0%			163	16.3%		
<b>N8. Primary Caregiver Has/Had a Mental Health Problem</b>					.079	.001			.066	.001
No	9,239	91.5%	2,296	24.9%			955	10.3%		
Yes	858	8.5%	320	37.3%			152	17.7%		
<b>N9. Primary Caregiver Has/Had a Drug and/or Alcohol Problem (past or current)</b>					.141	.001			.140	.001
No	7,818	77.4%	1,764	22.6%			673	8.6%		
Yes	2,279	22.6%	852	37.4%			434	19.0%		
<b>N10. Primary Caregiver Has Criminal Arrest History</b>					.093	.001			.085	.001
No	8,366	82.9%	2,012	24.0%			816	9.8%		
Yes	1,731	17.1%	604	34.9%			291	16.8%		
<b>N11. Characteristics of Children in Household (Score 1 if any present: developmental or physical disability, medically fragile/failure to thrive, or positive toxicology screen at birth)</b>					.069	.001			.044	.001
Not	9,298	92.1%	2,326	25.0%			982	10.6%		
One or more present	799	7.9%	290	36.3%			125	15.6%		

**Table A1**

**Neglect Instrument Item Analysis of Current Risk Assessment: Construction Sample**

Item	Sample Distribution		Cases with Subsequent Neglect Allegation				Cases with Subsequent Neglect Substantiation			
	N	%	N	%	Corr.	P Value	N	%	Corr.	P Value
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>2,616</b>	<b>25.9%</b>			<b>1,107</b>	<b>11.0%</b>		
<b>N12. Current Housing</b>					.070	.001			.069	.051
No	9,590	95.0%	2,417	25.2%			1,004	10.5%		
Yes	507	5.0%	199	39.3%			103	20.3%		

Table A2

## Abuse Instrument Item Analysis of Current Risk Assessment: Total Sample

Item	Sample Distribution		Cases with Subsequent Abuse Investigation				Cases with Subsequent Abuse Substantiation			
	N	%	N	%	Corr.	P Value	N	%	Corr.	P Value
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>2,095</b>	<b>20.7%</b>			<b>544</b>	<b>5.4%</b>		
<b>A1. Current Physical Abuse Complaint Is Substantiated</b>					.007	.250			-.003	.382
No	8,849	87.6%	1,827	20.6%			479	5.4%		
Yes	1,248	12.4%	268	21.5%			65	5.2%		
<b>A2. Number of Prior Abuse Investigations</b>					.159	.001			.088	.001
None	6,497	64.3%	1,050	16.2%			258	4.0%		
One	1,892	18.7%	489	25.8%			133	7.0%		
Two or more	1,708	16.9%	556	32.6%			153	9.0%		
<b>A3. Household Has Previously Received CPS (voluntary/court-ordered)</b>					.089	.001			.048	.001
No	8,527	84.5%	1,637	19.2%			420	4.9%		
Yes	1,570	15.5%	458	29.2%			124	7.9%		
<b>A4. Prior Injury to a Child Resulting from CA/N</b>					.030	.001			.028	.002
No	9,626	95.3%	1,971	20.5%			505	5.2%		
Yes	471	4.7%	124	26.3%			39	8.3%		
<b>A5. Primary Caregiver's Assessment of Incident (Score 1 if present: Blames child and/or justifies maltreatment of child)</b>					.017	.048			.004	.335
No	9,472	93.8%	1,949	20.6%			508	5.4%		
Yes	625	6.2%	146	23.4%			36	5.8%		
<b>A6. Two or More Incidents of Domestic Violence in the Household in Past Year</b>					.010	.166			.020	.021
No	8,499	84.2%	1,749	20.6%			441	5.2%		
Yes	1,598	15.8%	346	21.7%			103	6.4%		
<b>A7. Primary Caregiver Characteristics (Score 1 if present: provides insufficient emotional/psychological support, employs excessive/inappropriate discipline, or domineering caregiver)</b>					.043	.001			.029	.002
Not applicable	9,127	90.4%	1,842	20.2%			472	5.2%		
One or more present	970	9.6%	253	26.1%			72	7.4%		
<b>A8. Primary Caregiver Has a History of Abuse or Neglect as a Child</b>					.042	.001			.029	.002
No	9,097	90.1%	1,836	20.2%			484	5.3%		
Yes	1,000	9.9%	259	25.9%			60	6.0%		
<b>A9. One or More Caregiver(s) Has/Had Drug and/or Alcohol Problem</b>					.008	.199			.011	.136
No	6,988	69.2%	1,434	20.5%			365	5.2%		
Yes	3,109	30.8%	661	21.3%			179	5.8%		
<b>A10. Primary Caregiver Has Criminal Arrest History</b>					.017	.042			.006	.262
No	8,397	83.2%	1,716	20.4%			447	5.3%		
Yes	1,700	16.8%	379	22.3%			97	5.7%		
<b>A11. Characteristics of Children in Household (Score 1 if any present: delinquency history, developmental disability, or mental health/behavioral problem)</b>					.077	.001			.031	.001
Not applicable	8,808	87.2%	1,723	19.6%			451	5.1%		
One or more present	1,289	12.8%	372	28.9%			93	7.2%		

## **Appendix B**

### **Review of Proposed Risk Assessment**

**PROPOSED CALIFORNIA  
SDM® FAMILY RISK ASSESSMENT**

r: 12-07

Referral Name: \_\_\_\_\_ Referral #: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

County Name: \_\_\_\_\_ Worker Name: \_\_\_\_\_ Worker ID#: \_\_\_\_\_

<b>NEGLECT</b>	<b>Score</b>	<b>ABUSE</b>	<b>Score</b>
N1. Current Report Is for Neglect		A1. Current Report is for Physical Abuse	
a. No.....	0	a. No.....	0
b. Yes.....	1	b. Yes.....	1
N2. Prior Investigations ( <i>assign highest score that applies</i> )		A2. Number of Prior Investigations	
a. None.....	-1	a. None.....	-1
b. One or more, <u>abuse</u> only.....	1	b. One or more, neglect only.....	0
c. One or two for <u>neglect</u> .....	2	b. One for abuse.....	1
d. Three or more for <u>neglect</u> .....	3	c. Two or more for abuse.....	2
N3. Household Has Previously Received CPS ( <i>voluntary/court-ordered</i> )		A3. Household Has Previously Received CPS ( <i>voluntary/court-ordered</i> )	
a. No.....	0	a. No.....	0
b. Yes.....	1	b. Yes.....	1
N4. Number of Children Involved in the Child Abuse/Neglect Incident		A4. Prior Substantiated Physical Abuse or Injury to a Child Resulting from Child Abuse/Neglect	
a. One, two, or three.....	0	a. No.....	0
b. Four or more.....	1	b. One or more apply.....	1
N5. Age of Youngest Child in the Home		___ Prior substantiated physical abuse, AND/OR	
a. Two or older.....	0	___ Prior injury to a child resulting from child abuse/neglect	
b. Under two.....	1	A5. Number of Children Involved in the Child Abuse/Neglect Incident	
N6. Primary Caregiver Provides Physical Care Inconsistent with Child Needs		a. One, two, or three.....	0
a. No.....	0	b. Four or more.....	1
b. Yes.....	1	A6. Two or More Incidents of Domestic Violence in the Household in the Past Year	
N7. Primary Caregiver Has a History of Abuse or Neglect as a Child		a. No.....	0
a. No.....	0	b. Yes.....	1
b. Yes.....	1	A7. Primary Caregiver Employs Excessive/Inappropriate Discipline	
N8. Primary Caregiver Has/Had a Mental Health Problem		a. No.....	0
a. None/not applicable.....	0	b. Yes.....	1
b. One or more apply.....	1	A8. Primary Caregiver Is Domineering	
N9. Primary Caregiver Has/Had a Drug and/or Alcohol Problem		a. No.....	0
a. None/not applicable.....	0	b. Yes.....	1
b. One or more apply.....	2	A9. Primary Caregiver Has a History of Abuse or Neglect as a Child	
Alcohol Problem:		a. No.....	0
___ During the last 12 months, AND/OR		b. Yes.....	1
___ Prior to the last 12 months		A10. Primary Caregiver Has/Had a Mental Health Problem	
Drug Problem:		a. None/not applicable.....	0
___ During the last 12 months, AND/OR		b. One or more apply.....	1
___ Prior to the last 12 months		___ During the last 12 months, AND/OR	
N10. Primary Caregiver Has Criminal Arrest History		___ Prior to the last 12 months	
a. No.....	0	A11. Characteristics of Children in Household ( <i>score 1 if any present</i> )	
b. Yes.....	1	a. Not applicable.....	0
N11. Characteristics of Children in Household ( <i>add for score</i> )		b. One or more present ( <i>mark all applicable</i> ).....	1
a. Not applicable.....	0	___ Delinquency history	
b. ___ Developmental or physical disability.....	1	___ Developmental disability	
c. ___ Medically fragile/failure to thrive.....	1	___ Mental health/behavioral problem	
d. ___ Mental health or behavioral problem.....	1		
N12. Current Housing			
a. Not applicable.....	0		
b. One or more present apply.....	1		
___ Physically unsafe, AND/OR			
___ Family homeless			

**TOTAL NEGLECT RISK SCORE** \_\_\_\_\_ **TOTAL ABUSE RISK SCORE** \_\_\_\_\_

**SCORED RISK LEVEL.** Assign the family's scored risk level based on the highest score on either the neglect or abuse indices, using the following chart:

<u>Neglect Score</u>	<u>Abuse Score</u>	<u>Scored Risk Level</u>
_____ -1 - 1	_____ -1 - 0	_____ Low
_____ 2 - 5	_____ 1 - 3	_____ Moderate
_____ 6 - 8	_____ 4 - 6	_____ High
_____ 9 +	_____ 7 +	_____ Very High

**POLICY OVERRIDES.** Mark yes if a condition shown below is applicable in this case. If any condition is applicable, override final risk level to very high.

Yes     No    1. Sexual abuse case AND the perpetrator is likely to have access to the child.

Yes     No    2. Non-accidental injury to a child under age two years.

Yes     No    3. Severe non-accidental injury.

Yes     No    4. Caregiver action or inaction resulted in the death of a child due to abuse or neglect (previous or current).

**DISCRETIONARY OVERRIDE.** If a discretionary override is made, mark yes, increase risk by one level, and indicate reason.

Yes     No    5. If yes, override risk level (mark one):     Moderate     High     Very High

Discretionary override reason: \_\_\_\_\_

Supervisor's Review/Approval of Discretionary Override: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

**FINAL RISK LEVEL** (mark final level assigned):     Low     Moderate     High     Very High

**Table B1**

**Neglect Instrument Item Analysis of Proposed Risk Assessment: Construction Sample**

Item	Sample Distribution		Cases with Subsequent Neglect Allegation				Cases with Subsequent Neglect Substantiation			
	N	%	N	%	Corr.	P Value	N	%	Corr.	P Value
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>2,616</b>	<b>25.9%</b>			<b>1,107</b>	<b>11.0%</b>		
<b>N1. Current Report Is for Neglect</b>					.117	.001			.119	.001
No	3,994	39.6%	781	19.6%			255	6.4%		
Yes	6,103	60.4%	1,835	30.1%			852	14.0%		
<b>N2. Prior Investigations</b>					.247	.001			.177	.001
None	4,973	49.3%	832	16.7%			322	6.5%		
One or more, <u>abuse</u> only	1,477	14.6%	356	24.1%			125	8.5%		
One or two for <u>neglect</u>	2,284	22.6%	745	32.6%			336	14.7%		
Three or more for <u>neglect</u>	1,363	13.5%	683	50.1%			324	23.8%		
<b>N3. Household Has Previously Received CPS (voluntary/court-ordered)</b>					.159	.001			.126	.001
No	8,457	83.8%	1,931	22.8%			781	9.2%		
Yes	1,640	16.2%	685	41.8%			326	19.9%		
<b>N4. Number of Children Involved in the CA/N Incident</b>					.095	.001			.057	.001
One, two, or three	9,014	89.3%	2,205	24.5%			933	10.4%		
Four or more	1,083	10.7%	411	38.0%			174	16.1%		
<b>N5. Age of Youngest Child in the Home</b>					.066	.001			.066	.001
2 or older	7,375	73.0%	1,782	24.2%			716	9.7%		
Under 2	2,722	27.0%	834	30.6%			391	14.4%		
<b>N6. Primary Caregiver Provides Physical Care Inconsistent with Child Needs</b>					.045	.001			.052	.001
No	9,104	90.2%	2,300	25.3%			949	10.4%		
Yes	993	9.8%	316	31.8%			158	15.9%		
<b>N7. Primary Caregiver Has a History of Abuse of Neglect as a Child</b>					.076	.001			.057	.001
No	9,097	90.1%	2,256	24.8%			944	10.4%		
Yes	1,000	9.9%	360	36.0%			163	16.3%		
<b>N8. Primary Caregiver Has/Had a Mental Health Problem</b>					.079	.001			.066	.001
No	9,239	91.5%	2,296	24.9%			955	10.3%		
Yes	858	8.5%	320	37.3%			152	17.7%		
<b>N9. Primary Caregiver Has/Had a Drug and/or Alcohol Problem</b>					.141	.001			.140	.001
No	7,818	77.4%	1,764	22.6%			673	8.6%		
Yes	2,279	22.6%	852	37.4%			434	19.0%		
<b>N10. Primary Caregiver Has Criminal Arrest History</b>					.093	.001			.085	.001
No	8,366	82.9%	2,012	24.0%			816	9.8%		
Yes	1,731	17.1%	604	34.9%			291	16.8%		



**Table B1**

**Neglect Instrument Item Analysis of Proposed Risk Assessment: Construction Sample**

Item	Sample Distribution		Cases with Subsequent Neglect Allegation				Cases with Subsequent Neglect Substantiation			
	N	%	N	%	Corr.	P Value	N	%	Corr.	P Value
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>2,616</b>	<b>25.9%</b>			<b>1,107</b>	<b>11.0%</b>		
<b>N11. Characteristics of Children in Household</b>										
Child in Household Has Developmental or Physical Disability					.052	.001			.029	.002
No	9,635	95.4%	2,448	25.4%			1,037	10.8%		
Yes	462	4.6%	168	36.4%			70	15.2%		
Child in Household Is Medically Fragile/Failure to Thrive					.036	.001			.037	.001
No	9,981	98.9%	2,569	25.7%			1,082	10.8%		
Yes	116	1.1%	47	40.5%			25	21.6%		
Child in Household Has Mental Health/Behavioral Problem					.050	.001			.018	.036
No	9,347	92.6%	2,364	25.3%			1,010	10.8%		
Yes	750	7.4%	252	33.6%			97	12.9%		
<b>N12. Current Housing</b>					.070	.001			.069	.051
No	9,590	95.0%	2,417	25.2%			1,004	10.5%		
Yes	507	5.0%	199	39.3%			103	20.3%		

Table B2										
Abuse Instrument Item Analysis of Proposed Risk Assessment: Construction Sample										
Item	Sample Distribution		Cases with Subsequent Abuse Investigation				Cases with Subsequent Abuse Substantiation			
	N	%	N	%	Corr.	P Value	N	%	Corr.	P Value
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>2,095</b>	<b>20.7%</b>			<b>544</b>	<b>5.4%</b>		
<b>A1. Current Report Is for Physical Abuse</b>					.073	.001			.035	.001
No	6,936	68.7%	1,301	18.8%			337	4.9%		
Yes	3,161	31.3%	794	25.1%			207	6.5%		
<b>A2. Number of Prior Investigations</b>					.196	.001			.106	.001
None	4,635	45.9%	630	13.6%			157	3.4%		
One, or more for neglect	1,391	13.8%	264	19.0%			55	4.0%		
One for abuse	1,871	18.5%	453	24.2%			123	6.6%		
Two or more for abuse	2,200	21.8%	748	34.0%			209	9.5%		
<b>A3. Household Has Previously Received CPS (voluntary/court-ordered)</b>					.091	.001			.048	.001
No	8,527	84.5%	1,637	19.2%			420	4.9%		
Yes	1,570	15.5%	458	29.2%			124	7.9%		
<b>A4. Prior Substantiated Physical Abuse or Injury to a Child Resulting from CA/N</b>					.091	.001			.078	.001
No	8,941	88.6%	1,737	19.4%			425	4.8%		
Yes	1,156	11.4%	358	31.0%			119	10.3%		
<b>A5. Number of Children Involved in the CA/N Incident</b>					.095	.001			.057	.001
One, two, or three	9,014	89.3%	2,205	24.5%			933	10.4%		
Four or more	1,083	10.7%	411	38.0%			174	16.1%		
<b>A6. Two or More Incidents of Domestic Violence in the Household in Past Year</b>					.010	.166			.020	.021
No	8,499	84.2%	1,749	20.6%			441	5.2%		
Yes	1,598	15.8%	346	21.7%			103	6.4%		
<b>A7. Primary Caregiver Employs Excessive/Inappropriate Discipline</b>					.024	.008			.016	.049
No	9,663	95.7%	1,985	20.5			513	5.3%		
Yes	434	4.3%	110	25.3			31	7.1%		
<b>A8. Primary Caregiver Is Domineering</b>					.030	.008			.017	.043
No	9,944	98.5%	2,048	20.6%			531	5.3%		
Yes	153	1.5%	47	30.7%			13	8.5%		
<b>A9. Primary Caregiver Has a History of Abuse or Neglect as a Child</b>					.042	.001			.029	.002
No	9,097	90.1%	1,836	20.2%			484	5.3%		
Yes	1,000	9.9%	259	25.9%			60	6.0%		
<b>A10. Primary Caregiver Has/Had a Mental Health Problem</b>					.040	.001			.009	.181
No	9,239	91.5%	1,871	20.3%			492	5.3%		
Yes	858	8.5%	224	26.1%			52	6.1%		
<b>A11. Characteristics of Children in Household (Score 1 if any present: delinquency history, developmental disability, or mental health/behavioral problem)</b>					.077	.001			.031	.001
Not applicable	8,808	87.2%	1,723	19.6%			451	5.1%		
One or more present	1,289	12.8%	372	28.9%			93	7.2%		

## **Appendix C**

### **Comparison of Proposed Risk Assessment Classification Findings for Construction and Validation Samples**

## **Comparison of Proposed Risk Assessment Classification Findings for the Construction and Validation Samples**

### **A. Four-level Classification Scale**

The sample population of 19,540 families with an inconclusive or substantiated investigation during the latter half of 2005 was divided randomly into two groups: a construction sample of 10,097 families and a validation sample of 9,443 families. The use of two samples allows a scale to be developed on one population (the construction sample) and tested on another (the validation sample).

Classification results will be the most robust for the sample from which the assessment was constructed. Validating the scale on a separate population provides a reasonable approximation of how a risk assessment will perform when actually implemented. The ability of a risk assessment to classify families by maltreatment outcomes is expected to decrease somewhat when the risk assessment is applied to samples other than the construction sample. The amount of classification power lost from construction to validation sample is called shrinkage. Shrinkage is normal and expected.<sup>18</sup>

Table C1 compares findings by the overall risk classification level obtained for families in the construction versus the validation sample. For families in the construction sample, the risk assessment classified families such that an increase of one level from low to moderate or moderate to high risk corresponded to a 50.0% or more increase in the outcome rate across all maltreatment outcomes observed, while an increase from high to very high risk corresponded to an increase of approximately 25% for subsequent investigation, and approximately 40% – 48% for the remaining outcomes.

Findings were similar when the proposed risk assessment was applied to the validation sample. Table C1 shows that for families in the validation sample, an increase in the risk level

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<sup>18</sup> See Silver, E., Smith, W., & Banks, S. (2000). Constructing actuarial devices for predicting recidivism. *Criminal Justice and Behavior*, 29(5), 733-764. See also Altman, D. & Royston, P. (2000). What do we mean by validating a prognostic model? *Statistics in Medicine*, 19, 453-473.

corresponded to at least a 60.0% increase in the outcome rate. The distribution of the families classified by the proposed risk assessment was also very similar in the validation as compared to the construction sample. Among families in the validation sample, 27.1% were classified as low risk, 44.3% as moderate, 22.7% as high risk, and 5.9% as very high risk.

Table C1 also reviews the performance of the proposed risk classification as applied to unfounded investigations with a risk assessment available. Among families with unfounded allegations, an increase from low to moderate risk corresponded to at least a 100% increase across outcomes, at least a 50% increase across outcomes between moderate and high risk, and a 25% to 58% increase in outcome rates with a move from high to very high risk.

<b>Table C1</b>					
<b>Proposed Four-level Risk Classification by Subsequent Maltreatment Outcomes for Sample Groups: Construction, Validation, and Families with Unfounded Sample Investigations</b>					
<b>Overall Risk Level</b>	<b>Sample Distribution</b>		<b>Case Outcome Rates during the 18-month Follow-up Period</b>		
	<b>N</b>	<b>%</b>	<b>Investigation, Any Allegation</b>	<b>Maltreatment Substantiation</b>	<b>Child Out-of-Home Placement</b>
<b>Construction Sample</b>					
Low	2,862	28.3%	18.5%	7.2%	2.3%
Moderate	4,431	43.9%	33.2%	14.3%	5.9%
High	2,265	22.4%	49.5%	24.3%	12.5%
Very High	539	5.3%	60.9%	33.6%	18.2%
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>
<b>Validation Sample</b>					
Low	2,563	27.1%	18.4%	7.1%	2.4%
Moderate	4,181	44.3%	34.4%	15.1%	6.7%
High	2,145	22.7%	49.3%	23.8%	12.0%
Very High	554	5.9%	53.1%	30.5%	17.1%
<b>Total Sample</b>	<b>9,443</b>	<b>100.0%</b>	<b>34.5%</b>	<b>15.8%</b>	<b>7.3%</b>
<b>Families with Sampled Investigation Finding of Unfounded and Risk Assessment Completed</b>					
Low	1,246	37.5%	15.7%	3.9%	0.6%
Moderate	1,436	43.3%	33.3%	12.4%	5.4%
High	565	17.0%	50.8%	23.9%	12.0%
Very High	73	2.2%	64.4%	37.0%	19.2%
<b>Total Sample</b>	<b>3,320</b>	<b>100.0%</b>	<b>30.3%</b>	<b>11.7%</b>	<b>5.0%</b>

One way to assess the degree of shrinkage is to look at changes in scores for the Dispersion Index for Risk (DIFR). The DIFR was introduced in 1998 by Silver and Banks as an alternative method for assessing the classification abilities of a risk assessment. Traditional measures of predictive accuracy such as sensitivity and specificity are based on the assumption of a dichotomous decision, and therefore have limited usefulness for measures with more than two classification categories.

The DIFR measures the potency of a risk assessment by assessing how an entire cohort is partitioned into different groups, and the extent to which group outcomes vary from the base rate for the entire cohort. In essence, it weights the distance between a subgroup’s outcome rate from the cohort’s base rate by the subgroup size to estimate the “potency” of a classification system. Because this measure considers proportionality and differences in outcome rates among several subgroups, it is a measure of the efficacy of classification systems. The DIFR formula is:

$$DIFR = \sqrt{\sum_{i=1}^k \left( \ln\left(\frac{P}{1-P}\right) - \ln\left(\frac{p_i}{1-p_i}\right) \right)^2 * \frac{n_i}{N}}$$

where  $k$  is the number of subgroups in the risk classification model,  $P$  is the total sample base rate of the outcome,  $N$  is the total sample size,  $p_i$  represents the base rate of each of the  $k$  subgroups, and  $n_i$  is the size of each  $k$  subgroup. In sum, the DIFR considers the degree to which outcomes of each subgroup (classification level) differ from the mean for the study sample and adjusts for the size of the group classified to each level.<sup>19</sup>

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<sup>19</sup> The limitations of the DIFR are:

1. It measures distance from the mean without considering whether it is in the expected or logical direction. Therefore, when outcome rates do not conform to the basic expectations (i.e., that failure rates will increase as risk levels increase), the test is inappropriate.
2. It measures overall dispersion from the base rate and does not assess the degree of separation between any two risk categories. In a similar fashion, the DIFR cannot help assess whether a risk classification model is classifying two subgroups similarly, but rather assesses the dispersion within a subgroup (given that group’s base rate).

Table C2 compares the DIFR scores for the construction and validation samples by each maltreatment outcome observed. Based on changes in the DIFR scores, the amount of shrinkage is estimated to be 9.2%.<sup>20</sup>

<b>Table C2</b>				
<b>Proposed Four-level Risk Assessment Dispersion Index for Risk by Subsequent Maltreatment Outcomes for the Construction and Validation Samples</b>				
<b>Sample Group</b>	<b>Sample Size</b>	<b>DIFR Index for CPS Outcomes and Their Differences</b>		
		<b>Investigation, Any Allegation</b>	<b>Maltreatment Substantiation</b>	<b>Child Out-of-home Placement</b>
Construction	10,097	.58	.58	.74
Validation	9,443	.47	.57	.69
Change in DIFR Score		0.11	.01	.05

## **B. Three-level Classification Scale**

As part of the validation effort, a three-level risk assessment was also examined (see Appendix G). Table C3 shows the outcomes by risk classification for the various sample subgroups. The distribution and outcome rates by risk level for the validation sample were similar to those obtained for the construction sample. Table C3 also shows that the proposed three-level risk assessment performs well when classifying families with an unfounded sample investigation.

<sup>20</sup> The percent change (the difference in scores divided by the score for the construction sample) is 19.0% for subsequent investigation, 1.7% for subsequent substantiation, and 6.8% for subsequent child placement. The percent change averaged over the three outcomes is 9.2%.

Table C3

**Proposed Three-level Risk Classification by Subsequent Maltreatment Outcomes for Sample Groups:  
Construction, Validation, and Families with Unfounded Sample Investigations**

Overall Risk Level	Sample Distribution		Case Outcome Rates during the 18-month Follow-up Period		
	N	%	Investigation, Any Allegation	Maltreatment Substantiation	Child Out-of-home Placement
<b>Construction Sample</b>					
Low	2,862	28.3%	18.5%	7.2%	2.3%
Moderate	5,436	53.8%	35.7%	15.5%	6.7%
High	1,799	17.8%	54.6%	29.2%	15.5%
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>
<b>Validation Sample</b>					
Low	2,563	27.1%	18.4%	7.1%	2.4%
Moderate	5,134	54.4%	36.5%	16.1%	7.3%
High	1,746	18.5%	52.5%	27.7%	14.8%
<b>Total Sample</b>	<b>9,443</b>	<b>100.0%</b>	<b>34.5%</b>	<b>15.8%</b>	<b>7.3%</b>
<b>Families with Sampled Investigation Finding of Unfounded and Risk Assessment Completed</b>					
Low	1,246	37.5%	15.7%	3.9%	0.6%
Moderate	1,703	51.3%	35.5%	13.8%	6.2%
High	371	11.2%	56.1%	28.3%	14.3%
<b>Total Sample</b>	<b>3,320</b>	<b>100.0%</b>	<b>30.3%</b>	<b>11.7%</b>	<b>5.0%</b>



Table C4 shows that the DIFR scores for the construction and validation samples when the three-level risk assessment was applied were similar to those obtained with the four-level risk assessment. With the proposed three-level risk assessment, the average amount of shrinkage is estimated to be 8.5%.

<b>Table C4</b>				
<b>Dispersion Index for the Proposed Three-Level Risk by Subsequent Maltreatment Outcomes for the Construction and Validation Samples</b>				
<b>Sample Group</b>	<b>Sample Size</b>	<b>DIFR Index for CPS Outcomes and Their Differences</b>		
		<b>Investigation, Any Allegation</b>	<b>Maltreatment Substantiation</b>	<b>Child Out-of-Home Placement</b>
Construction	10,097	.57	.57	.72
Validation	9,443	.45	.56	.70
Change in DIFR Score		.12	.01	.02

It should be noted that validating by splitting the sample may underestimate shrinkage (see Silver and Banks, 2000). The construction and validation samples originate from the same initial sample, and are therefore subject to the same type of measurement bias. In addition, implementation of the risk assessment under field conditions may impact the classification abilities of the risk assessment. The best approach for determining shrinkage is to monitor use of the risk assessment with regular data reporting and case reviews, and examine the classification abilities of the risk assessment in the future.

## **Appendix D**

### **Review of the Risk Reassessment**

## **Review of the Risk Reassessment**

The purpose of risk reassessment is to measure change in families' risk of future maltreatment based on response to services, as well as other changes in the household. Workers reassess families with an open service case every six months, and a significant change within a family may affect risk level.

The California family risk reassessment for in-home cases (shown on page D2) combines items from the original risk assessment with additional items that evaluate a family's progress toward case plan goals. Unlike the initial risk assessment, which contains separate assessments for risk of neglect and risk of abuse, the risk reassessment tool is comprised of a single assessment.

**CALIFORNIA  
SDM® FAMILY RISK REASSESSMENT FOR IN-HOME CASES**

r: 11/05

Case Name: \_\_\_\_\_ Case #: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_  
 County Name: \_\_\_\_\_ Worker Name: \_\_\_\_\_ Worker ID#: \_\_\_\_\_

- | R1. Number of Prior Neglect or Abuse CPS Investigations  | Score |
|--|-------|
| a. None .....  | 0     |
| b. One .....   | 1     |
| c. Two or more .....   | 2     |
| <hr/>  |       |
| <b>R2. Household Has Previously Received CPS (voluntary/court ordered)</b>                               |       |
| a. No .....  | 0     |
| b. Yes .....   | 1     |
| <hr/>  |       |
| <b>R3. Primary Caregiver Has a History of Abuse or Neglect as a Child</b>                                |       |
| a. No .....  | 0     |
| b. Yes .....   | 1     |
| <hr/>  |       |
| <b>R4. Child Characteristics (mark applicable items and add for score)</b>                               |       |
| a. ___ No child has any of the characteristics below .....   | 0     |
| b. ___ One or more children in household are developmentally or physically disabled .....                | 1     |
| c. ___ One or more children in household are medically fragile or diagnosed with failure to thrive ..... | 1     |

*The following case observations pertain to the period since the last assessment/reassessment.*

- |   |   |
|---|---|
| <b>R5. New Investigation of Abuse or Neglect since the Initial Risk Assessment or the Last Reassessment</b>                                   |   |
| a. No .....   | 0 |
| b. Yes .....  | 2 |
| <hr/>   |   |
| <b>R6. Caregiver Has Not Addressed Alcohol or Drug Abuse Problem since the Last Assessment/Reassessment (mark one)</b>                        |   |
| a. ___ No history of alcohol or drug abuse problem .....  | 0 |
| b. ___ No current alcohol or drug abuse problem; no intervention needed .....   | 0 |
| c. ___ Yes, alcohol or drug abuse problem; problem is being addressed .....   | 0 |
| d. ___ Yes, alcohol or drug abuse problem; problem is <u>not</u> being addressed .....  | 1 |
| <hr/>   |   |
| <b>R7. Problems with Adult Relationships</b>  |   |
| a. None applicable .....  | 0 |
| b. Yes, harmful/tumultuous relationships with adults .....  | 1 |
| c. Yes, domestic violence .....   | 2 |
| <hr/>   |   |
| <b>R8. Primary Caregiver Provides Physical Care Inconsistent with Child Needs</b>   |   |
| a. No problems .....  | 0 |
| b. Yes, problems .....  | 1 |
| <hr/>   |   |
| <b>R9. Caregiver's Progress with Case Plan (mark one, based on the caregiver demonstrating the least progress)</b>                            |   |
| a. ___ Not applicable; all services unavailable .....   | 0 |
| b. ___ Successfully completed all services recommended or actively participating in services; pursuing objectives detailed in case plan ..... | 0 |
| c. ___ Minimal participation in pursuing objectives in case plan .....  | 2 |
| d. ___ Has participated but is not meeting objectives; refuses involvement in services or failed to comply/participate as required .....      | 4 |

**TOTAL SCORE**

**SCORED RISK LEVEL.** Assign the family's risk level based on the following chart:

Score	Risk Level
0 - 2	_____ Low
3 - 5	_____ Moderate
6 - 8	_____ High
9 - 16	_____ Very High

**POLICY OVERRIDES.** Mark yes if condition is applicable in the current review period. If any condition is applicable, override final risk level to very high.

- |                              |                             |   |
|------------------------------|-----------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 1. Sexual abuse case AND the perpetrator is likely to have access to the child.       |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 2. Non-accidental injury to a child under age two years.                              |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 3. Severe non-accidental injury.  |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 4. Caregiver action or inaction resulted in death of a child due to abuse or neglect. |

**DISCRETIONARY OVERRIDE.** If a discretionary override is made, mark yes, mark override risk level, and indicate reason. Risk level may be overridden one level higher or lower.

- |                              |                             |  |                              |                                   |                               |                                    |
|------------------------------|-----------------------------|--|------------------------------|-----------------------------------|-------------------------------|------------------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | 5. If <u>yes</u> , override risk level (mark one): | <input type="checkbox"/> Low | <input type="checkbox"/> Moderate | <input type="checkbox"/> High | <input type="checkbox"/> Very High |
|------------------------------|-----------------------------|--|------------------------------|-----------------------------------|-------------------------------|------------------------------------|

Discretionary override reason: \_\_\_\_\_

Supervisor's Review/Approval of Discretionary Override: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

**FINAL RISK LEVEL** (mark final level assigned):  Low  Moderate  High  Very High

A formal validation of the risk reassessment is difficult for many reasons. Workers complete this instrument for families served by the department. If services are effective, then these families are less likely to subsequently maltreat a child. While the case is open, however, service providers have more contact with the families and may report allegations that otherwise would not have been reported. If a family does not comply with the case plan and child safety is a concern, the department may remove a child from the home. Each of these factors would affect the likelihood that a caregiver would maltreat a child in the future.

Assessing the performance of the risk reassessment is also difficult because the instrument is applied to different groups of families at multiple times during the life of a case. The likelihood of a family being assessed for child maltreatment allegations at the time of the first reassessment may be very different compared to the likelihood at the time of the second or the last reassessment. The performance of the risk reassessment can still be reviewed, but the results of analysis and proposed changes need to be evaluated within this context.

To review the performance of the risk reassessment factors, CRC selected two samples. The first sample consisted of the first risk reassessment within eight months of the sampled initial risk assessment. In other words, the sample for this risk reassessment analysis is a subgroup of the sample selected for the risk assessment validation (those families who received in-home child protective services). The second sample consisted of the second risk reassessment completed for these families, but was limited to second risk reassessments completed within eight months of the first reassessment (to enable a standardized follow-up period). Analysis was conducted using available information from CWS/CMS, which included demographics about children and other family members, findings from the risk reassessment, and the prior CPS history of the family, as well as information from the SDM database. CPS outcomes were observed for each family in both samples during a standardized follow-up period of six months from the sampled reassessment date. These outcomes included an investigation of abuse or

neglect allegations, substantiation of maltreatment, and subsequent placement of a child out-of-home.

The first risk reassessment sample consisted of 2,104 families with a new case opening during the latter half of 2005. Among sampled families, 15.5% were investigated for abuse or neglect allegations during the six month follow-up period, and 5.8% were substantiated for maltreatment during that period (see Table D1). Workers completed a second risk reassessment within eight months for 764 of these families. Among this second risk reassessment sample, 14.7% were investigated and 5.2% were substantiated during a standardized six-month follow-up period.

Table D1 shows that only 8.2% of sampled families were classified as high risk and 2.4% were classified as very high risk at the time of the first risk reassessment. With so few families, it is difficult to make reliable comparisons between very high risk and other families. A comparison of families classified as low to moderate and moderate to high risk, however, shows that an increase in risk level corresponded to an increase in every outcome rate. For example, 9.8% of low risk families had a subsequent investigation, compared to 20.5% of moderate risk and 29.5% of high risk families. The outcome rates for very high risk families were slightly lower than the rates for high risk families.

Similarly, at the time of the second reassessment, very few families were classified as high (7.5%) or very high risk (1.8%). Classification findings were similar for the second risk reassessment sample, with one exception. The subsequent substantiation rate for high risk families was lower than that of moderate risk families. For every risk level, however, an increase in risk level corresponded to an increase in the re-investigation rate.

<b>Table D1</b>				
<b>Current Risk Reassessment Classification by Subsequent Maltreatment Outcomes</b>				
<b>Risk Reassessment Level</b>	<b>Sample Distribution</b>		<b>Case Outcome Rates during the 18-month Follow-up Period</b>	
	<b>N</b>	<b>%</b>	<b>Investigation of Any Allegation</b>	<b>Substantiation for Any Allegation</b>
<b>First Risk Reassessment Sample</b>				
Low	1,159	55.1%	9.8%	3.1%
Moderate	722	34.3%	20.5%	8.3%
High	173	8.2%	29.5%	13.3%
Very High	50	2.4%	26.0%	8.0%
<b>Total Sample</b>	<b>2,104</b>	<b>100.0%</b>	<b>15.5%</b>	<b>5.8%</b>
<b>Second Risk Reassessment Sample</b>				
Low	440	57.6%	10.0%	3.6%
Moderate	253	33.1%	19.0%	7.9%
High	57	7.5%	24.6%	5.3%
Very High	14	1.8%	42.9%	7.1%
<b>Total Sample</b>	<b>764</b>	<b>100.0%</b>	<b>14.7%</b>	<b>5.2%</b>

Table D2 reviews the individual reassessment items by subsequent CPS involvement. The item analysis indicates that some risk reassessment factors could be modified based on their relationship to outcomes. For example, examining outcome rates by the workers' assessment of caregiver progress (item R9) shows that caregivers who demonstrated minimal participation had the same or slightly higher rates of subsequent CPS investigation or substantiation as did caregivers who did not meet objectives or refused involvement.

Table D2

## Item Analysis of Current Risk Reassessment For the First Risk Reassessment Sample

Item	Sample Distribution		Cases with Subsequent Investigation				Cases with Subsequent Substantiation			
	N	%	N	%	Corr.	P Value	N	%	Corr.	P Value
<b>Total Sample</b>	<b>2,104</b>	<b>100.0%</b>	<b>326</b>	<b>15.5%</b>			<b>123</b>	<b>5.8%</b>		
<b>R1. Number of Prior Neglect or Abuse CPS Investigations</b>					.199	.001			.128	.001
None	909	43.2%	80	8.8%			27	3.0%		
One	553	26.3%	79	14.3%			31	5.6%		
Two or more	642	30.5%	167	26.0%			65	10.1%		
<b>R2. Household Has Previously Received CPS</b>					.084	.001			.033	.068
No	1,776	84.4%	252	14.2%			98	5.5%		
Yes	328	15.6%	74	22.6%			25	7.6%		
<b>R3. Primary Caregiver Has a History of Abuse or Neglect as a Child</b>					.053	.008			.027	.107
No	1,761	83.7%	258	14.7%			98	5.6%		
Yes	343	16.3%	68	19.8%			25	7.3%		
<b>R4. Child Characteristics</b>					.051	.010			.038	.043
No	1,910	90.8%	284	14.9%			106	5.5%		
One	191	9.1%	42	22.0%			17	8.9%		
Two	3	0.1%	0	0.0%			0	0.0%		
<b>R5. New Investigation of Abuse/Neglect since Initial Risk or Last Reassessment</b>					.098	.001			.034	.059
No	1,884	89.5%	269	14.3%			105	5.6%		
Yes	220	10.5%	57	25.9%			18	8.2%		
<b>R6. Caregiver Has Not Addressed Alcohol or Drug Abuse Problem Since Last Assessment/Reassessment</b>					.062	.002			.047	.015
No problem or Caregiver is addressing problem	1,925	91.5%	285	14.8%			106	5.5%		
Yes, problem; Caregiver is not addressing problem	179	8.5%	41	22.9%			17	9.5%		
<b>R7. Problems with Adult Relationships</b>					.064	.002			.058	.004
No	1,685	80.1%	241	14.3%			86	5.1%		
Yes, harmful/tumultuous relationships	267	12.7%	53	19.9%			24	9.0%		
Yes, domestic violence	152	7.2%	32	21.1%			13	8.6%		
<b>R8. Primary Caregiver Provides Physical Care Inconsistent with Needs</b>					.052	.009			.064	.002
No problems	1,988	94.5%	299	15.0%			109	5.5%		
Yes, problems	116	5.5%	27	23.3%			14	12.1%		
<b>R9. Caregiver's Progress with Case Plan</b>					.046	.017			.050	.010
Successfully completed all services or actively participating	1,284	61.0%	182	14.2%			60	4.7%		
Minimal participation	556	26.4%	95	17.1%			45	8.1%		
Is not meeting objectives; refuses involvement or fails to participate	264	12.5%	49	18.6%			18	6.8%		



These findings suggest that changes may improve the classification abilities of the risk reassessment. A proposed reassessment was developed using the same methods applied for the proposed initial risk instrument.

Changes to the resulting reassessment (shown on the following page) were similar to changes in the initial risk assessment. The items for problematic adult relationships (R7) and case plan progress (R10) were simplified based on their relationship to outcomes. Item weights for child characteristics (R4) and a recent investigation of child maltreatment investigations (R5) were revised. Given its strong relationship to outcomes, the mental health of the caregiver was added as an item (see R8).

**PROPOSED CALIFORNIA  
SDM® FAMILY RISK REASSESSMENT FOR IN-HOME CASES**

r: 12-07

Case Name: \_\_\_\_\_ Case #: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_  
 County Name: \_\_\_\_\_ Worker Name: \_\_\_\_\_ Worker ID #: \_\_\_\_\_

- | R1. Number of Prior Neglect or Abuse CPS Investigations                                   | Score |
|---|-------|
| a. None .....   | 0     |
| b. One .....  | 1     |
| c. Two or more .....  | 2     |
| <hr/>   |       |
| R2. Household Has Previously Received Child Protective Services (voluntary/court ordered) |       |
| a. No .....   | 0     |
| b. Yes .....  | 1     |
| <hr/>   |       |
| R3. Primary Caregiver Has a History of Abuse or Neglect as a Child                        |       |
| a. No .....   | 0     |
| b. Yes .....  | 1     |
| <hr/>   |       |
| R4. Child Characteristics (mark applicable items)   |       |
| a. No, no child has any of the characteristics below .....                                | 0     |
| b. Yes (mark all that apply) .....  | 1     |
| ___ One or more children in household is developmentally disabled                         |       |
| ___ One or more children in household has learning disability                             |       |
| ___ One or more children in household is physically disabled                              |       |
| ___ One or more children in household is medically fragile or diagnosed failure to thrive |       |

The following case observations pertain to the period since the last assessment/reassessment.

- |  |   |
|--|---|
| R5. New Investigation of Abuse/Neglect since the Initial Risk Assessment or Last Reassessment                            |   |
| a. No .....  | 0 |
| b. Yes .....   | 1 |
| <hr/>  |   |
| R6. Caregiver(s) Has Not Addressed Substance Abuse Problem Since Last Assessment/Reassessment (mark one)                 |   |
| a. ___ No history of substance abuse problem .....   | 0 |
| b. ___ No current substance abuse problem; no intervention needed .....  | 0 |
| c. ___ Yes, substance abuse problem; caregiver is addressing the problem .....   | 0 |
| d. ___ Yes, substance abuse problem; caregiver is not addressing the problem .....                                       | 1 |
| <hr/>  |   |
| R7. Problematic Relationships between Adults   |   |
| a. None applicable .....   | 0 |
| b. Yes, harmful/problematic relationships with adults, or domestic violence .....  | 1 |
| <hr/>  |   |
| R8. Primary Caregiver Has a Mental Health Problem  |   |
| a. No .....  | 0 |
| b. Yes .....   | 1 |
| <hr/>  |   |
| R9. Primary Caregiver Provides Physical Care Inconsistent with Child Needs   |   |
| a. No .....  | 0 |
| b. Yes .....   | 1 |
| <hr/>  |   |
| R10. Caregiver's Progress with Case Plan (mark one based on the caregiver demonstrating the least progress)              |   |
| a. Successfully completed recommended services or actively participating in services/pursuing case plan objectives ..... | 0 |
| b. Minimal or no participation in pursuing objectives in the case plan/refuses involvement in services .....             | 1 |

**TOTAL SCORE** \_\_\_\_\_

**SCORED RISK LEVEL.** Assign the family's risk level based on the following chart:

Score	Risk Level
0 - 1	Low
2 - 4	Moderate
5 - 7	High
8+	Very High

**VERY HIGH RISK CASE STATUS CONDITIONS.** Circle yes if applicable during the current reassessment period. If yes, the final risk level is very high.

- |     |    |  |
|-----|----|--|
| Yes | No | 1. Sexual abuse case AND the perpetrator may have access to the child victim.                                  |
| Yes | No | 2. Non-accidental injury to a child under age 3 years.   |
| Yes | No | 3. Severe non-accidental injury.   |
| Yes | No | 4. Caregiver(s) action or inaction resulted in death of a child due to abuse or neglect (previous or current). |

**DISCRETIONARY OVERRIDE.** If yes, circle override risk level, and indicate reason. Risk level may be overridden one level higher or lower.

- |     |    |   |                              |                                   |                               |                                    |
|-----|----|---|------------------------------|-----------------------------------|-------------------------------|------------------------------------|
| Yes | No | 5. If <u>yes</u> , override risk level (check one): | <input type="checkbox"/> Low | <input type="checkbox"/> Moderate | <input type="checkbox"/> High | <input type="checkbox"/> Very High |
|-----|----|---|------------------------------|-----------------------------------|-------------------------------|------------------------------------|

Discretionary override reason: \_\_\_\_\_

**FINAL RISK LEVEL** (check final level assigned):  Low  Moderate  High  Very High

Supervisor Review/Approval: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

The proposed risk reassessment resulted in a better classification of families. Sampled families were classified such that an increase in risk level corresponded to an increase in every outcome rate (see Table D3). For example, 2.9% of families classified as low risk at the time of the first reassessment had a subsequent substantiation during the six-month follow-up period, compared to 6.8% of moderate risk, 11.2% of high risk, and 23.5% of very high risk families.

At the time of the second reassessment, very few families were classified as very high risk. The proposed risk assessment classified families at the time of the second reassessment such that an increase from moderate to high risk corresponded to an increase in both outcomes. The increases were larger than those obtained by the current risk reassessment (see Table D1).

<b>Table D3</b>				
<b>Proposed Risk Reassessment Classification by Subsequent Maltreatment Outcomes</b>				
<b>Risk Reassessment Level</b>	<b>Sample Distribution</b>		<b>Case Outcome Rates during the 18-month Follow-up Period</b>	
	<b>N</b>	<b>%</b>	<b>Investigation of Any Allegation</b>	<b>Substantiation for Any Allegation</b>
<b>First Risk Reassessment Sample</b>				
Low	807	38.4%	8.4%	2.9%
Moderate	1,075	51.1%	18.1%	6.8%
High	205	9.7%	27.3%	11.2%
Very High	17	0.8%	41.2%	23.5%
<b>Total Sample</b>	<b>2,104</b>	<b>100.0%</b>	<b>15.5%</b>	<b>5.8%</b>
<b>Second Risk Reassessment Sample</b>				
Low	284	37.2%	8.8%	3.5%
Moderate	406	53.1%	16.0%	5.9%
High	71	9.3%	31.0%	8.5%
Very High	3	0.4%	0.0%	0.0%
<b>Total Sample</b>	<b>764</b>	<b>100.0%</b>	<b>14.7%</b>	<b>5.2%</b>

## **Appendix E**

### **Comparison of Sampled Families with and without a Risk Assessment**

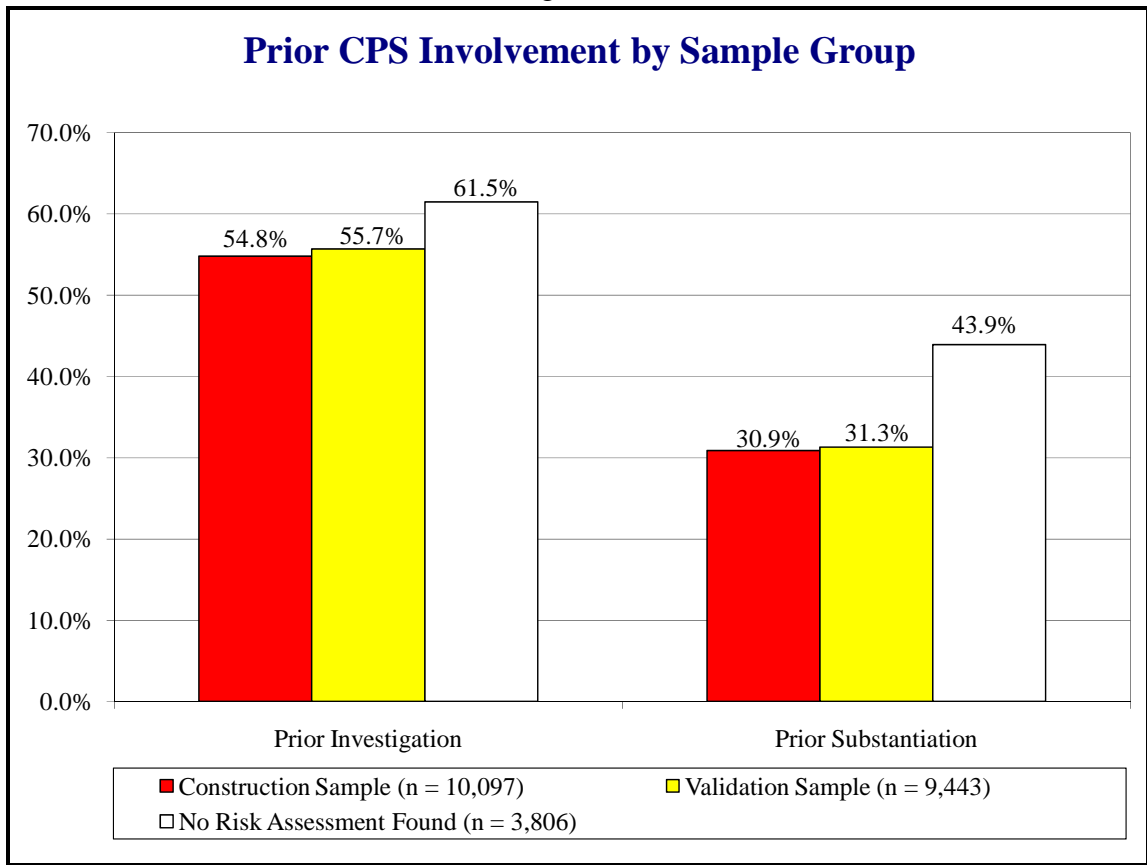
To validate the current risk assessment, CRC staff divided the sample of families into three groups: a construction sample, a validation sample, and families for whom no risk assessment was found. The following tables and figures compare available information for these three groups.

Table E1 reviews characteristics of the sampled investigation for the three groups. The construction and validation samples had similar rates for each of the allegations. Families without a risk assessment were slightly more likely to have an allegation of neglect. The substantiation rate was 52.3% to 54.3% for the construction and validation sample groups. The substantiation rate for families with no risk assessment was much lower (34.3%).

<b>Table E1</b>				
<b>Current Allegations of Sampled Families</b>				
<b>Sample Characteristics</b>	<b>Total Sample</b>	<b>Construction Sample</b>	<b>Validation Sample</b>	<b>Families with No Risk Assessment</b>
<b>Total Sample</b>	<b>23,346</b>	<b>10,097</b>	<b>9,443</b>	<b>3,806</b>
<b>Sample Allegations</b>				
Neglect, but not abuse	44.5%	42.8%	43.9%	50.4%
Neglect and abuse	19.7%	20.4%	19.9%	17.6%
Abuse, but not neglect	32.5%	33.6%	33.0%	27.9%
At risk only	3.3%	3.2%	3.1%	4.1%
<b>Investigation Disposition</b>				
Inconclusive	49.8%	45.7%	47.7%	65.7%
Substantiation	50.2%	54.3%	52.3%	34.3%

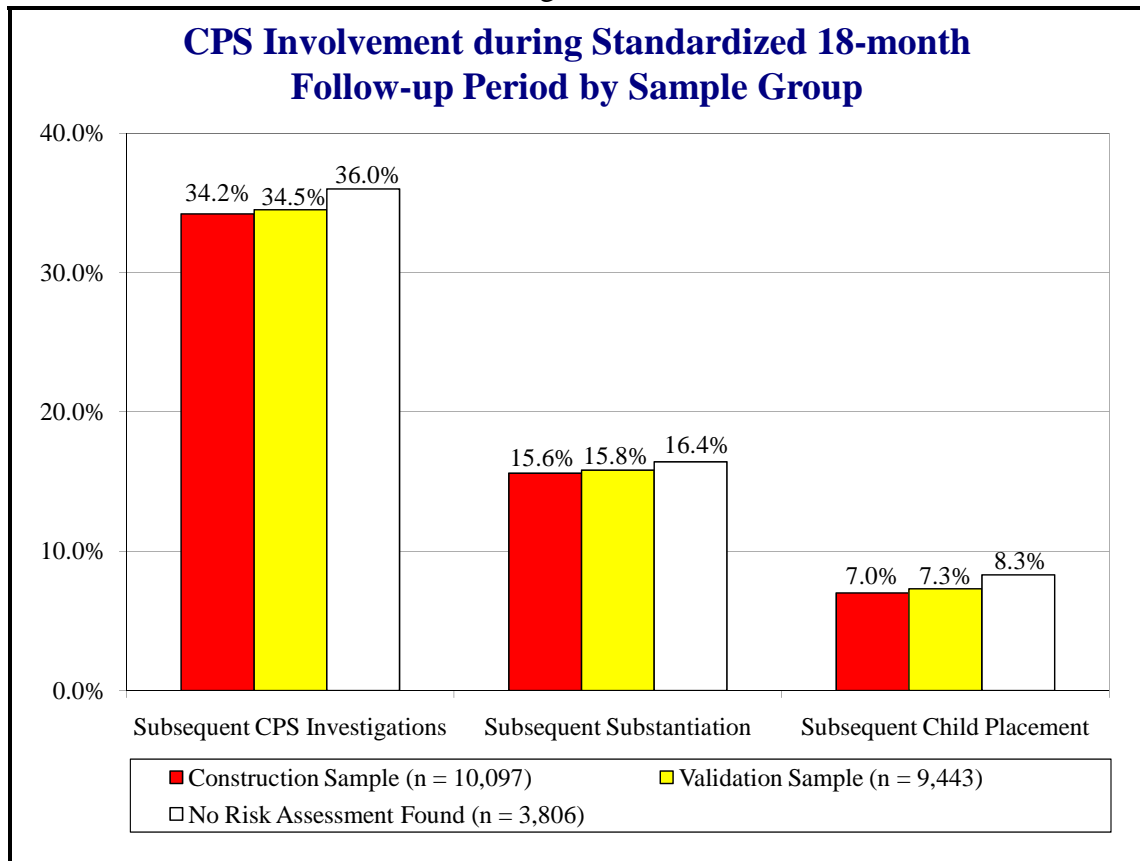
Figure E1 compares prior CPS involvement for the sample groups. The construction and validation samples have similar rates for prior investigation and substantiation of child maltreatment allegations. Sampled families with no risk assessment had slightly higher rates of prior CPS involvement. Nearly two thirds (61.5%) of families without a risk assessment were previously investigated for child maltreatment and 43.9% were previously substantiated for child maltreatment. In comparison, approximately 55% of the remaining sample had a prior investigation and approximately 30% had a prior substantiation for child maltreatment.

Figure E1



Each sampled family was observed for a standardized 18-month period following the sampled investigation to determine subsequent involvement with CPS. Figure E2 shows that sampled families without a risk assessment were as likely to be subsequently involved with CPS as families for whom a risk assessment was completed. While approximately 34% of the construction and validation samples were investigated for child maltreatment during the standardized 18-month follow-up period, 36.0% of sampled families without a risk assessment were subsequently investigated. In addition, a similar proportion of families without a risk assessment were subsequently substantiated for child maltreatment and had a child placed by the agency as compared to the remaining sample.

Figure E2



CRC recommends that DSS staff investigate why risk assessments are unavailable for some families and whether risk assessment completion rates differ by office. SafeMeasures may be helpful in comparing risk assessment completion rates by office; the risk assessment completion report is available under the SDM submenu.



## **Appendix F**

### **Description of Counties Eligible for Sampling and Risk Classification Findings by County**

## Description of Counties Eligible for Sampling

Counties eligible for sampling must have implemented the SDM system at least four months prior to the start of the sample period (20 counties met this criteria). Table F1 shows that child protection practices varied across these counties. On average, the counties screened in approximately 62% of the reports they recorded for investigation, though the counties' screen-in rates varied between approximately 39% and 86%. The proportion of accepted referrals recommended for immediate response (within 24 hours) ranged from 4.5% to nearly half (47.3%) of the referrals. The proportion of investigations involving removal of a child ranged from approximately 5% to 25%. Counties also varied in the type of allegations families were investigated for and the rate at which the county agencies substantiated them.

<b>Table F1</b>			
<b>County Variance in Case Actions Taken</b>			
	<b>Average</b>	<b>Minimum</b>	<b>Maximum</b>
Percentage of reports screened in	61.9%	38.9%	86.0%
Percentage of screened-in reports assigned	26.3%	4.5%	47.3%
Percentage of referrals with a child removal during the investigation	14.0%	5.1%	24.9%
Percentage of referrals with a neglect allegation	58.2%	9.8%	92.3%
Percentage of referrals with abuse allegation	44.6%	9.0%	60.8%
Percentage of referrals with substantiated allegations	29.4%	13.2%	44.5%
Percentage of inconclusive or substantiated referrals with a risk assessment available	74.8%	49.4%	92.3%

Table F2 illustrates case practices, allegations, and substantiation rates for each county. Table F3 reviews risk assessment completion rates and distribution for each county. Only counties with a risk assessment completion rate of 75% or higher were selected for sampling. Ten California counties were eligible for sampling. Table F4 reviews demographic information for the sampled counties.

**Table F2**

**Prevalence of Case Actions by County  
For Investigations Beginning July 1 – December 31, 2005**

County	Total Reports	% Screened In	Total Referrals	% Immediate Response	% with Removal during Investigation	Allegations				Investigation Disposition		
						Neglect and No Abuse	Neglect and Abuse	Abuse and No Neglect	At Risk Only	Unfounded	Inconclusive	Substantiated
Alameda	4,992	60.2%	3,007	43.2%	24.9%	45.4%	2.1%	52.5%	0.0%	46.9%	26.6%	26.5%
Del Norte	388	61.6%	239	33.9%	13.8%	55.6%	5.9%	20.1%	18.4%	36.4%	25.1%	38.5%
El Dorado	1,042	62.7%	653	13.8%	10.6%	41.8%	7.8%	29.2%	21.1%	42.7%	27.3%	30.0%
Fresno	6,243	76.7%	4,786	32.9%	16.0%	52.4%	14.3%	25.4%	7.8%	62.5%	18.7%	18.9%
Humboldt	1,156	48.1%	556	22.3%	13.3%	59.0%	18.3%	21.9%	0.7%	54.1%	20.7%	25.2%
Kern	5,435	58.7%	3,191	18.9%	19.5%	74.9%	17.4%	7.5%	0.2%	33.8%	27.7%	38.5%
Los Angeles	35,242	86.0%	30,306	47.3%	17.0%	36.0%	18.1%	37.7%	8.1%	51.5%	23.7%	24.8%
Marin	899	38.9%	350	17.4%	7.1%	33.4%	4.9%	38.3%	23.4%	29.7%	41.4%	28.9%
Merced	1,737	83.7%	1,454	34.3%	14.4%	43.0%	16.0%	38.4%	2.6%	49.1%	21.3%	29.6%
Monterey	1,838	51.2%	941	32.0%	10.8%	38.9%	15.3%	37.9%	7.9%	34.5%	38.4%	27.1%
Orange	8,951	67.5%	6,045	24.0%	12.1%	52.5%	13.8%	33.6%	0.1%	30.6%	24.9%	44.5%
Placer	1,665	56.9%	947	32.4%	15.3%	38.6%	10.5%	50.3%	0.6%	49.9%	20.9%	29.1%
Riverside	10,557	72.0%	7,606	24.0%	18.0%	49.1%	28.6%	19.8%	2.5%	51.5%	18.2%	30.3%
Sacramento	8,443	74.8%	6,314	40.7%	18.7%	51.1%	12.3%	36.0%	0.7%	39.3%	31.5%	29.3%
San Luis Obispo	1,970	54.6%	1,076	15.6%	7.3%	45.4%	13.5%	40.9%	0.2%	69.6%	7.1%	23.3%
Santa Cruz	1,523	58.4%	890	36.0%	13.8%	40.2%	16.0%	42.6%	1.2%	35.3%	28.2%	36.5%
Sutter	575	45.4%	261	18.4%	6.1%	48.3%	7.3%	42.1%	2.3%	53.3%	18.0%	28.7%
Tehama	930	40.4%	376	23.4%	22.9%	57.7%	10.9%	21.5%	9.8%	41.5%	29.8%	28.7%
Trinity	189	70.4%	133	4.5%	12.8%	8.3%	1.5%	7.5%	82.7%	34.6%	28.6%	36.8%
Ventura	3,495	70.1%	2,450	10.9%	5.1%	46.3%	11.8%	41.7%	0.2%	71.7%	15.1%	13.2%

**Table F3**

**Risk Assessment Information by County  
For Investigations Beginning July 1 – December 31, 2005**

County	Total Referrals	% Investigations with Inconclusive/ Substantiated Finding	% with Risk Assessment	Risk Assessment Distribution			
				Low	Moderate	High	Very High
Alameda	3,007	53.1%	61.2%	15.8%	34.0%	32.1%	18.1%
Del Norte	239	63.6%	84.9%	3.9%	14.7%	25.6%	55.8%
El Dorado	653	57.3%	67.6%	8.7%	31.6%	34.0%	25.7%
Fresno	4,786	37.6%	64.7%	5.2%	26.6%	39.0%	29.2%
Humboldt	556	45.9%	84.7%	2.3%	17.6%	35.2%	44.9%
Kern	3,191	66.2%	86.4%	1.3%	24.0%	41.7%	33.0%
Los Angeles	30,306	48.5%	81.1%	15.3%	36.1%	31.5%	17.0%
Marin	350	70.3%	92.3%	9.3%	40.5%	33.0%	17.2%
Merced	1,454	50.9%	67.0%	8.9%	24.0%	37.5%	29.6%
Monterey	941	65.5%	72.4%	18.2%	32.7%	31.4%	17.7%
Orange	6,045	69.4%	87.9%	8.9%	41.6%	35.6%	13.9%
Placer	947	50.0%	81.4%	10.6%	28.0%	31.6%	29.8%
Riverside	7,606	48.5%	84.1%	3.7%	27.0%	41.1%	28.1%
Sacramento	6,314	60.8%	76.6%	8.4%	29.2%	37.8%	24.6%
San Luis Obispo	1,076	30.4%	58.4%	5.2%	19.4%	42.9%	32.5%
Santa Cruz	890	64.7%	89.6%	10.5%	28.9%	36.2%	24.4%
Sutter	261	46.7%	68.0%	12.0%	31.3%	34.9%	21.7%
Tehama	376	58.5%	67.7%	4.0%	18.8%	34.2%	43.0%
Trinity	133	65.4%	49.4%	2.3%	16.3%	37.2%	44.2%
Ventura	2,450	28.3%	71.6%	9.9%	28.8%	34.2%	27.2%

Table F4 compares the demographic characteristics of counties included in the sample. No consistent patterns emerged, although the four sampled counties with the highest percentage of families living below the poverty level in 2004 (>15%) tended to have higher than average rates of CPS involvement. The exception to this pattern was Los Angeles County, which is larger and more urban than the other counties (Del Norte, Humboldt, and Kern).<sup>21</sup>

County	Population 2006 Estimate	Population % Change April 1, 2000 to July 1, 2006	Persons per Square Mile 2000	% Below Poverty 2004	% White Persons 2005	% Black Persons 2005	% Hispanic or Latino Origin 2005
State of California	36,457,549	7.6%	217.2	13.2%	77.0%	6.7%	35.2%
Del Norte	28,893	5.0%	27.3	19.2%	83.3%	4.6%	15.0%
Humboldt	128,330	1.4%	35.4	15.4%	87.5%	1.1%	7.6%
Kern	780,117	17.9%	81.3	17.8%	85.8%	6.2%	44.1%
Los Angeles	9,948,081	4.5%	2,344.1	16.7%	74.1%	9.7%	46.8%
Marin	248,742	0.6%	475.6	7.0%	88.7%	3.1%	12.6%
Orange	3,002,048	5.5%	3,607.5	10.2%	78.9%	1.9%	32.5%
Placer	326,242	31.3%	176.9	5.6%	90.2%	1.3%	10.7%
Riverside	2,026,803	31.2%	214.4	11.9%	84.5%	6.5%	41.0%
Sacramento	1,374,724	12.4%	1,266.6	13.6%	70.0%	10.5%	18.7%
Santa Cruz	249,705	-2.3%	574.4	10.8%	90.9%	1.2%	27.8%

<sup>21</sup> If possible, it may be worthwhile to examine CPS expenditures per child across counties (both county and state funds; see 2004-2005 Santa Cruz County Grand Jury Final Report on *The Welfare of Child Welfare: Comparison of Budgets* at [http://www.co.santa-cruz.ca.us/grandjury/GJ2005\\_final/1%20-%202%20A&F%20CWS.pdf](http://www.co.santa-cruz.ca.us/grandjury/GJ2005_final/1%20-%202%20A&F%20CWS.pdf) for an example of this analysis).

## Risk Classification Results by County

The following tables compare risk assessment classification findings for the current and proposed risk assessments for counties with sample sizes over 750 families. Table F5 compares risk assessment classification findings for the current risk assessment. The distribution of families by risk level classification differed across counties (see Table F5, columns two and three), but, an increase in risk level corresponded to an increase for each outcome rate in every county.

<b>Table F5</b>					
<b>Current Overall Risk Classification Results by County</b>					
<b>Overall Risk Level</b>	<b>Sample Distribution</b>		<b>Outcome Rates during 18-month Follow-up Period</b>		
	<b>N</b>	<b>%</b>	<b>Subsequent Investigation</b>	<b>Subsequent Substantiation</b>	<b>Subsequent Child Placement</b>
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>
<b>Los Angeles County</b>					
Low	929	19.9%	20.3%	6.6%	1.8%
Moderate	2,024	43.4%	28.5%	9.4%	4.2%
High	1,264	27.1%	42.3%	17.2%	8.5%
Very High	450	9.6%	50.2%	26.0%	14.2%
<b>Subtotal</b>	<b>4,667</b>	<b>100.0%</b>	<b>32.7%</b>	<b>12.6%</b>	<b>5.9%</b>
<b>Orange</b>					
Low	157	9.7%	16.6%	9.6%	0.6%
Moderate	821	50.5%	17.9%	10.8%	1.7%
High	518	31.9%	35.7%	21.6%	6.6%
Very High	130	8.0%	44.6%	23.8%	7.7%
<b>Subtotal</b>	<b>1,626</b>	<b>100.0%</b>	<b>25.6%</b>	<b>15.2%</b>	<b>3.6%</b>
<b>Riverside</b>					
Low	59	5.0%	13.6%	5.1%	1.7%
Moderate	387	32.7%	22.7%	9.6%	5.2%
High	508	42.9%	39.8%	21.1%	11.6%
Very High	231	19.5%	56.7%	29.0%	19.0%
<b>Subtotal</b>	<b>1,185</b>	<b>100.0%</b>	<b>36.2%</b>	<b>18.1%</b>	<b>10.5%</b>

<b>Table F5</b>					
<b>Current Overall Risk Classification Results by County</b>					
<b>Overall Risk Level</b>	<b>Sample Distribution</b>		<b>Outcome Rates during 18-month Follow-up Period</b>		
	<b>N</b>	<b>%</b>	<b>Subsequent Investigation</b>	<b>Subsequent Substantiation</b>	<b>Subsequent Child Placement</b>
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>
<b>Sacramento</b>					
Low	126	10.2%	23.8%	8.7%	3.2%
Moderate	391	31.6%	33.2%	11.8%	6.4%
High	507	40.9%	44.0%	17.9%	8.5%
Very High	215	17.4%	58.1%	34.0%	21.9%
<b>Subtotal</b>	<b>1,239</b>	<b>100.0%</b>	<b>41.0%</b>	<b>17.8%</b>	<b>9.6%</b>
<b>Kern</b>					
Low	16	2.1%	12.5%	6.3%	0.0%
Moderate	216	28.1%	25.5%	12.0%	5.1%
High	350	45.5%	42.3%	24.0%	11.1%
Very High	187	24.3%	57.8%	35.3%	20.9%
<b>Subtotal</b>	<b>769</b>	<b>100.0%</b>	<b>40.7%</b>	<b>23.0%</b>	<b>11.6%</b>
<b>Other</b>					
Low	61	10.0%	18.0%	6.6%	1.6%
Moderate	215	35.2%	29.8%	13.0%	3.7%
High	199	32.6%	47.7%	23.1%	8.0%
Very High	136	22.3%	64.0%	34.6%	13.2%
<b>Subtotal</b>	<b>611</b>	<b>100.0%</b>	<b>42.1%</b>	<b>20.5%</b>	<b>7.0%</b>

Table F6 compares risk assessment classification findings for the proposed four-level risk assessment. The distribution of families by risk level classification differed across counties, although to a lesser degree than when families were classified by the current risk assessment (see Table F5). Under the proposed risk assessment, the proportion of families classified as high or very high risk ranged from 19.2% to 41.0%. Across counties, an increase in risk level corresponded to an increase in every outcome rate examined. Outcome rates for families classified as high and very high risk were higher than those of families similarly classified by the current risk assessment.

<b>Table F6</b>					
<b>Proposed Overall Risk Classification Results by County</b>					
<b>Overall Risk Level</b>	<b>Sample Distribution</b>		<b>Outcome Rates during 18-month Follow-up Period</b>		
	<b>N</b>	<b>%</b>	<b>Investigation</b>	<b>Substantiation</b>	<b>Child Placement</b>
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>
<b>Los Angeles County</b>					
Low	1,492	32.0%	19.5%	6.0%	2.2%
Moderate	2,076	44.5%	32.9%	12.1%	5.5%
High	916	19.6%	48.8%	21.1%	10.9%
Very High	183	3.9%	57.9%	28.4%	14.2%
<b>Subtotal</b>	<b>4,667</b>	<b>100.0%</b>	<b>32.7%</b>	<b>12.6%</b>	<b>5.9%</b>
<b>Orange</b>					
Low	614	37.8%	16.3%	9.6%	1.3%
Moderate	701	43.1%	24.7%	15.7%	3.4%
High	271	16.7%	45.0%	24.0%	8.9%
Very High	40	2.5%	52.5%	32.5%	7.5%
<b>Subtotal</b>	<b>1,626</b>	<b>100.0%</b>	<b>25.6%</b>	<b>15.2%</b>	<b>3.6%</b>
<b>Riverside</b>					
Low	248	20.9%	14.9%	6.9%	3.2%
Moderate	525	44.3%	33.3%	15.6%	8.6%
High	325	27.4%	49.5%	25.5%	15.4%
Very High	87	7.3%	64.4%	36.8%	24.1%
<b>Subtotal</b>	<b>1,185</b>	<b>100.0%</b>	<b>36.2%</b>	<b>18.1%</b>	<b>10.5%</b>
<b>Sacramento</b>					
Low	228	18.4%	21.9%	7.5%	3.5%
Moderate	575	46.4%	38.6%	15.0%	7.3%
High	356	28.7%	53.4%	24.7%	14.0%
Very High	80	6.5%	57.5%	37.5%	23.8%
<b>Subtotal</b>	<b>1,239</b>	<b>100.0%</b>	<b>41.0%</b>	<b>17.8%</b>	<b>9.6%</b>
<b>Kern</b>					
Low	151	19.6%	18.5%	10.6%	4.6%
Moderate	303	39.4%	38.3%	19.5%	8.3%
High	226	29.4%	49.1%	29.6%	16.8%
Very High	89	11.6%	65.2%	39.3%	21.3%
<b>Subtotal</b>	<b>769</b>	<b>100.0%</b>	<b>40.7%</b>	<b>23.0%</b>	<b>11.6%</b>



**Table F6****Proposed Overall Risk Classification Results by County**

<b>Overall Risk Level</b>	<b>Sample Distribution</b>		<b>Outcome Rates during 18-month Follow-up Period</b>		
	<b>N</b>	<b>%</b>	<b>Investigation</b>	<b>Substantiation</b>	<b>Child Placement</b>
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>
<b>Other</b>					
Low	129	21.1%	17.8%	5.4%	1.6%
Moderate	251	41.1%	40.6%	17.5%	4.4%
High	171	28.0%	53.2%	32.2%	11.7%
Very High	60	9.8%	68.3%	31.7%	16.7%
<b>Subtotal</b>	<b>611</b>	<b>100.0%</b>	<b>42.1%</b>	<b>20.5%</b>	<b>7.0%</b>

## **Appendix G**

### **Classification Findings for a Proposed Three-level Risk Classification**

## **Classification Findings for a Proposed Three-level Risk Classification**

A three-level risk classification was explored for policy considerations as well as empirical issues. The policy implications of moving from a four-level to a three-level risk assessment are minimal because agency responses to high and very high risk cases are similar. While agency guidelines recommend that workers make an additional face-to-face contact with very high risk cases, high and very high risk families are assigned the same priority for case opening. As noted in the preceding findings, the CPS outcome base rates, the average rate of occurrence for a given group, varied significantly by ethnic group (Table 3) and by county (see Table 4). Such dramatic differences in base rates make it somewhat difficult to achieve a classification in which families in a given risk level have similar outcome rates across each subgroup. A three-level risk assessment was constructed to determine if it provided improvements beyond the four-level assessment.

The three-level risk assessment was achieved by altering the cut points that define the risk classifications (see Table G1).<sup>22</sup> The abuse and neglect risk assessments are constructed to achieve, insofar as it is possible, an increase in the relevant CPS outcome rate for each increase in the index score. In practice, the ability to achieve this is dependent on sample size (in other words, the pattern may not hold if a small number of families obtained that score). Redefining cut points to create three risk classifications can improve the risk assessment's performance across subgroups (such as those defined by ethnic group or county).

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<sup>22</sup> This change in cut points resulted in 1,005 families classified as high risk by the four-level assessment being classified as moderate by the three-level risk assessment (families that received a neglect risk score of six and/or an abuse risk score of four). This change in classification highlights both the strengths and limitations of actuarial risk assessment. The research-based risk assessment classifies families based on group characteristics, and is not predictive of any one family's future behavior. The moderate risk category includes some families that were subsequently involved with CPS. Theoretically, workers may identify safety concerns for these families and/or, based on clinical observations of family functioning, apply a discretionary override with supervisory approval to increase the risk level and provide services to these families. For example, of the 1,005 families, workers identified 55.6% as conditionally safe and 12.4% as safe, and opened a case for 43.8%.

<b>Table G1</b>		
<b>Comparison of Cut Points for the Proposed Four-level and Three-level Risk Assessments</b>		
	<b>Neglect Cut Points</b>	<b>Abuse Cut Points</b>
<b>Four-level Risk Assessment</b>		
Low	-1 – 1	-1 – 0
Moderate	2 – 5	1 – 3
High	6 – 8	4 – 6
Very High	9 +	7 +
<b>Three-level Risk Assessment</b>		
Low	-1 – 1	-1 – 0
Moderate	2 – 6	1 – 4
High	7 +	5 +

The following tables review outcomes for the proposed three-level risk assessment.

1. Proposed Family Risk Assessment Classification Findings for Neglect

Table G2 shows that, when classified by the three-level proposed risk assessment, families classified as moderate risk of neglect had a 30.6% re-investigation rate and a 12.7% substantiation rate. Corresponding rates for high risk families were 47.6% and 24.6%.

<b>Table G2</b>						
<b>Proposed Three-level Risk of Neglect Classification by Neglect Outcomes</b>						
<b>Neglect Risk Level</b>	<b>Sample</b>		<b>Subsequent Neglect Investigation</b>		<b>Subsequent Neglect Substantiation</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Low	4,175	41.3%	580	13.9%	198	4.7%
Moderate	4,616	45.7%	1,414	30.6%	588	12.7%
High	1,306	12.9%	622	47.6%	321	24.6%
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>2,616</b>	<b>25.9%</b>	<b>1,107</b>	<b>11.0%</b>

2. Proposed Family Risk Assessment Classification Findings for Abuse

Table G3 shows that 38.8% of families classified as high risk of abuse had a subsequent investigation, compared to 24.5% of moderate risk families. Findings were similar when the outcome was subsequent substantiation for abuse.

Abuse Risk Level	Sample		Subsequent Abuse Investigation		Subsequent Abuse Substantiation	
	N	%	N	%	N	%
Low	4,162	41.2%	525	12.6%	122	2.9%
Moderate	5,113	50.6%	1,251	24.5%	325	6.4%
High	822	8.1%	319	38.8%	97	11.8%
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>2,095</b>	<b>20.7%</b>	<b>544</b>	<b>5.4%</b>

3. Proposed Family Risk Assessment Classification Findings for Any Maltreatment

Table G4 shows that the proposed three-level risk assessment classified fewer (17.8%) families as high risk than did the proposed four-level risk assessment (27.7%). The proposed three-level risk assessment also showed distinction between risk levels across outcomes. For example, while 7.2% of the sampled families classified as low risk had a subsequent substantiation, 15.5% of moderate risk families, and 29.2% of high risk families had a subsequent substantiation.

Overall Risk Level	Sample Distribution		Case Outcome Rates During the 18-month Follow-up Period		
	N	%	Investigation for Any Allegation	Substantiation for Any Allegation	Child Out-of-home Placement
Low	2,862	28.3%	18.5%	7.2%	2.3%
Moderate	5,436	53.8%	35.7%	15.5%	6.7%
High	1,799	17.8%	54.6%	29.2%	15.5%
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>

4. Proposed Three-level Risk Assessment Classification Findings by the Investigation Disposition

Table G5 shows the proposed three-level risk assessment classification findings by the substantiation decision for the sampled investigation. As with the current risk assessment, a greater proportion of families with a substantiated allegation were classified as high risk. One quarter (23.6%) of families substantiated for the sampled incident were classified as high risk, compared to 11.0% of families with an inconclusive finding.

For each of the three CPS outcomes observed, an increase in the risk classification corresponds to an increase in the outcome rate for families regardless of the sampled investigation's disposition. In addition, outcome rates within a risk classification are similar for families whether the sample incident was substantiated or not. For example, 29.2% of high risk families were subsequently substantiated for child maltreatment, regardless of whether the sample incident was substantiated or not. This rate is more than three times the rate of subsequent substantiation among low risk families.

<b>Table G5</b>					
<b>Proposed Overall Three-level Risk Classification by Subsequent Maltreatment Outcomes and Investigation Disposition</b>					
<b>Overall Risk Level</b>	<b>Sample Distribution</b>		<b>Case Outcome Rates during the 18-month Follow-up Period</b>		
	<b>N</b>	<b>%</b>	<b>Investigation for Any Allegation</b>	<b>Substantiation for Any Allegation</b>	<b>Child Out-of-home Placement</b>
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>13.6%</b>	<b>7.0%</b>
<b>Inconclusive for Current Allegation</b>					
Low	1,604	34.8%	19.6%	6.5%	2.4%
Moderate	2,502	54.2%	39.4%	15.9%	6.8%
High	507	11.0%	56.8%	29.2%	16.0%
<b>Total</b>	<b>4,613</b>	<b>100.0%</b>	<b>34.5%</b>	<b>14.1%</b>	<b>6.3%</b>
<b>Substantiated for Current Allegation</b>					
Low	1,258	22.9%	17.0%	8.1%	2.1%
Moderate	2,934	53.5%	32.4%	15.1%	6.5%
High	1,292	23.6%	53.7%	29.2%	15.3%
<b>Total</b>	<b>5,484</b>	<b>100.0%</b>	<b>33.9%</b>	<b>16.8%</b>	<b>7.6%</b>

5. Proposed Three-level Risk Assessment Classification Findings by Race/Ethnicity of Youngest Child

The proposed three-level risk assessment was also effective at classifying families within and across racial or ethnic groups. Table G6 shows that for each ethnic group, an increase in risk level corresponded to a significant increase in every outcome rate with one exception. The subsequent child placement rate for moderate and high risk Asian/Pacific Islander families was similar. Across racial or ethnic groups, an increase from low to moderate risk corresponded to at least an 80% increase in the subsequent substantiation rate and at least a two-fold increase in the child placement rate. A move from moderate to high risk corresponded to at least a 67% increase in the substantiation rate, and a two-fold increase in the child placement rate for every group except Asian/Pacific Islanders.

In almost all cases, outcome rates within a risk classification were similar across racial/ethnic groups. For example, White/European American families classified as high risk had a subsequent substantiation rate of 30.0%, compared to 31.4% for high risk Black/African American families, 28.3% for Hispanic/Latino or South/Central American families, and 21.4% for Asian/Pacific Islander families. The re-investigation rate for moderate risk Asian/Pacific Islander families, however, was similar to the re-investigation rate of low risk White/European American and Black/African American families. In addition, the re-investigation and substantiation rates for high risk Asian/Pacific Islander families were only slightly greater than those of moderate risk White/European American families. Ideally, moderate risk families would have higher outcome rates than low risk families in any ethnic group, and high risk families would have higher outcome rates than moderate risk families. The base rate for White/European American families is nearly twice that of Asian/Pacific Islander families, however, which makes equivalent classification findings difficult to achieve.

<b>Table G6</b>					
<b>Proposed Overall Three-level Risk Classification by Subsequent Maltreatment Outcomes and Ethnicity</b>					
<b>Overall Risk Level</b>	<b>Sample Distribution</b>		<b>Case Outcome Rates during the 18-month Follow-up Period</b>		
	<b>N</b>	<b>%</b>	<b>Subsequent Investigation</b>	<b>Subsequent Substantiation</b>	<b>Subsequent Child Placement</b>
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>
<b>Hispanic/Latino or South/Central American</b>					
Low	1,491	32.3%	17.7%	6.9%	1.6%
Moderate	2,450	53.2%	34.2%	15.6%	6.5%
High	668	14.5%	52.7%	28.3%	15.3%
<b>Subtotal</b>	<b>4,609</b>	<b>100.0%</b>	<b>31.6%</b>	<b>14.6%</b>	<b>6.2%</b>
<b>White/European American</b>					
Low	562	20.4%	26.2%	10.1%	3.7%
Moderate	1,528	55.4%	40.3%	18.0%	7.5%
High	670	24.3%	54.2%	30.0%	15.2%
<b>Subtotal</b>	<b>2,760</b>	<b>100.0%</b>	<b>40.8%</b>	<b>19.3%</b>	<b>8.6%</b>
<b>Black/African American</b>					
Low	254	18.2%	21.3%	6.3%	3.5%
Moderate	817	58.5%	39.5%	14.6%	8.1%
High	325	23.3%	60.9%	31.4%	19.7%
<b>Subtotal</b>	<b>1,396</b>	<b>100.0%</b>	<b>41.2%</b>	<b>17.0%</b>	<b>10.0%</b>
<b>Asian/Pacific Islander</b>					
Low	309	42.7%	13.6%	7.1%	3.2%
Moderate	344	47.6%	26.2%	12.5%	5.2%
High	70	9.7%	41.4%	21.4%	5.7%
<b>Subtotal</b>	<b>723</b>	<b>100.0%</b>	<b>22.3%</b>	<b>11.1%</b>	<b>4.4%</b>

Table G7 compares county risk assessment classification findings for the proposed three-level risk assessment. Under the proposed three-level risk assessment, the proportion of families classified as high risk ranged from 10.9% to 30.2%. As with the four-level risk assessment, an increase in risk level corresponded to an increase in every outcome rate examined. In addition, outcome rates within a risk level classification were similar across counties.



**Table G7**

**Proposed Overall Three-level Risk Classification Results by County**

Overall Risk Level	Sample Distribution		Outcome Rates during 18-month Follow-up Period		
	N	%	Investigation	Substantiation	Child Placement
<b>Total Sample</b>	<b>10,097</b>	<b>100.0%</b>	<b>34.2%</b>	<b>15.6%</b>	<b>7.0%</b>
<b>Los Angeles County</b>					
Low	1,492	32.0%	19.5%	6.0%	2.2%
Moderate	2,502	53.6%	35.2%	13.5%	6.4%
High	673	14.4%	52.6%	23.6%	12.2%
<b>Subtotal</b>	<b>4,667</b>	<b>100.0%</b>	<b>32.7%</b>	<b>12.6%</b>	<b>5.9%</b>
<b>Orange</b>					
Low	614	37.8%	16.3%	9.6%	1.3%
Moderate	835	51.4%	27.4%	16.2%	4.0%
High	177	10.9%	49.2%	29.9%	10.2%
<b>Subtotal</b>	<b>1,626</b>	<b>100.0%</b>	<b>25.6%</b>	<b>15.2%</b>	<b>3.6%</b>
<b>Riverside</b>					
Low	248	20.9%	14.9%	6.9%	3.2%
Moderate	660	55.7%	36.4%	17.3%	9.2%
High	277	23.4%	54.9%	30.0%	19.9%
<b>Subtotal</b>	<b>1,185</b>	<b>100.0%</b>	<b>36.2%</b>	<b>18.1%</b>	<b>10.5%</b>
<b>Sacramento</b>					
Low	228	18.4%	21.9%	7.5%	3.5%
Moderate	735	59.3%	40.3%	15.0%	7.2%
High	276	22.3%	58.7%	34.1%	21.0%
<b>Subtotal</b>	<b>1,239</b>	<b>100.0%</b>	<b>41.0%</b>	<b>17.8%</b>	<b>9.6%</b>
<b>Kern</b>					
Low	151	19.6%	18.5%	10.6%	4.6%
Moderate	386	50.2%	40.7%	20.7%	9.3%
High	232	30.2%	55.2%	34.9%	19.8%
<b>Subtotal</b>	<b>769</b>	<b>100.0%</b>	<b>40.7%</b>	<b>23.0%</b>	<b>11.6%</b>
<b>Other</b>					
Low	129	21.1%	17.8%	5.4%	1.6%
Moderate	318	52.0%	42.5%	19.8%	6.6%
High	164	26.8%	60.4%	33.5%	12.2%
<b>Subtotal</b>	<b>611</b>	<b>100.0%</b>	<b>42.1%</b>	<b>20.5%</b>	<b>7.0%</b>

6. Summary of Findings for the Proposed Three-level Risk Assessment

Findings indicate that changing the proposed risk assessment from a four-level to a three-level risk classification improved the differentiation in outcome rates by risk level across sampled counties, but not across ethnic groups. Fewer classification categories may, however, lead to more reliability in scoring across workers. While a three-level assessment has some advantages, adapting it would require a significant and expensive update of the SDM database, since the risk levels are referenced by three assessments (the initial risk assessment, risk reassessment, and reunification assessment).

The California SDM core team determined that moving to a three-level risk assessment was cost-prohibitive at this time, especially given state plans to revise CWS/CMS and incorporate SDM assessments into the new data system. CRC recommends that counties continue with efforts to increase the consistency of practice statewide, and consider the relative benefits of a three-level risk assessment in the future.