13th National Roundtable on CPS Risk Assessment

Using Actuarial Risk Assessment to Target Service Interventions in Pilot California Counties

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Appendix A: Findings for the Neglect and Abuse Indices Appendix B: Item Analysis for Neglect and Risk Indices In 1998, the state of California contracted with the Children's Research Center (CRC), a division of the National Council on Crime and Delinquency (NCCD), to assist them in developing a new child protective services (CPS) case management system in seven pilot counties. The goal of the new case management system is twofold:

- 1. To increase the consistency of decision making in child protective services; and
- 2. To serve families according to the likelihood that future maltreatment of a child will occur.

To support this effort, CRC and a state/county workgroup conducted a risk assessment study, which observed 2,511 sample families substantiated for abuse or neglect during 1995. Risk assessment study findings derived from observation of these cases were employed to construct an actuarial instrument for identifying high risk families for service intervention <u>and</u> to assist agency administrators in planning future service delivery efforts.

Conduct of the Risk Assessment Study

To increase the face validity and reliability of the risk assessment, a workgroup of pilot county representatives reviewed each step of the research effort. The workgroup's initial tasks were to identify potential risk factors to be examined by the research and to construct a survey instrument for reviewing case files. The survey instrument was designed to record CPS case characteristics that members, based on their experience, felt were strongly related to subsequent maltreatment <u>and</u> could reasonably be observed by a worker during a typical investigation.

The research population consisted of families investigated and substantiated for abuse or neglect in the seven pilot California counties during 1995. The case files of the 2,511 randomly sampled families were reviewed during July and August 1998 to collect the necessary data for the

actuarial research. Each family was observed for a 24-month period subsequent to the sample investigation. The risk assessment instrument was constructed by analyzing case outcomes and characteristics identified during the case review. To help ensure that items were clear and could be scored consistently, the workgroup reviewed all risk factors. Most of the risk characteristics identified as important by the workgroup during the initial design process proved to be strongly related to subsequent maltreatment, and appear on the actuarial risk assessment instrument. A comprehensive prospective validation will be completed at a later date to ensure that the scales are accurately classifying families in the pilot counties.

California Risk Assessment Instrument and Procedures

The family risk assessment shown below employs separate instruments for abuse and neglect. Items found on each instrument refer to the characteristics of caretakers or children that may be observed during a CPS investigation. The study emphasized case and family characteristics that workgroup members felt could be identified and scored by workers during an investigation.

The neglect instrument is composed of ten items that score a family's CPS history, child characteristics, and characteristics of adult caretakers (substance abuse, parental skills, mental health issues) and had a statistical relationship to subsequent neglect among sample cases. The abuse instrument is similarly constructed. There are ten items that score CPS history and family characteristics which had a statistical relationship to subsequent abuse.

In practice, the investigating worker scores each family based on observations made during the investigation. Once item scores are totaled, each instrument provides a classification of low, moderate, high, or very high risk. The <u>scored risk level</u> or classification assigned to the family at the close of the investigation is the <u>highest</u> risk level determined by either the abuse or neglect instrument.

This risk assessment information is used to help the worker set an appropriate service priority for families he or she investigates. Since the agency's mission is to reduce the incidence of abuse and neglect, it is important to ensure that families most likely to be involved in future maltreatment of a child receive a high priority for service provision. The primary purpose of the family risk assessment procedure is to help caseworkers identify these families more accurately and perform this service allocation task more effectively.

Policy and Discretionary Overrides

The scored risk level is not the only information used in making initial case service decisions. Actuarial procedures provide workers with estimates of future family behavior based on a limited set of observable factors. They do not yield infallible predictions for individual families.

Workgroup members proposed four policy overrides, which were incorporated in the preliminary risk assessment form. If any of the case circumstances described by the policy overrides shown on the instrument applies to a family under investigation, the family would be assigned to the very high risk classification, regardless of the scored risk level.

Investigating caseworkers and supervisors are also permitted to make 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 are informed by a scored risk classification that is systematically determined and has a strong empirical relationship to the incidence of future maltreatment. Discretionary decisions of the investigating worker may, in fact, improve the actuarial risk classification procedure described here.

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CALIFORNIA FAMILY RISK ASSESSMENT

Case N	Name:		_ Case #	Date:			_
Count	y Name:	Worker Name:		Work	er ID#:		_
NEGL N1.	Current Complaint is for Neglect	Score	ABUS A1.	Current Complaint is for Abuse		0	Score
	a. Nob. Yes			a. No			
N2.	Prior Investigations (assign highest score that app a. None		A2.	Number of Prior Abuse Investigat a. None			
	b. One or more, <u>abuse</u> only c. One or two for <u>neglect</u> d. Three or more for <u>neglect</u>	1		b. One			
N3.	Household has Previously Received CPS (volunt a. No	0	A3.	Household has Previously Receiva. No		0	
N4.	Number of Children Involved in the CA/N Incide	nt —	A4.	Prior Injury to a Child Resulting f			
	a. One, two, or three b. Four or more		A5.	b. Yes Primary Caretaker's Assessment of			d add for scor
N5.	Age of Youngest Child in the Home a. Two or older b. Under two		113.	a. Not applicableb. Blames childc. Justifies maltreatment of		0	a add for scor
	Primary Caretaker Provides Physical Care Incons with Child Needs a. No		A6.	Domestic Violence in the Househ a. No	old in the Past Year	0	
N7.	b. Yes	Iealth Problem	A7.	Primary Caretaker Characteristics a. Not applicable b Provides insufficient emo		0	er score)
N 10	b. Yes			c. Employs excessive/inapp d. Domineering parent			
	Primary Caretaker has an Alcohol or Drug Abuse (Check applicable items and add for score) a. Not applicable bAlcohol (current or historic)	0	A8.	Primary Caretaker has a History o a. No		0	
N9.	c Drug (current or historic)	1	A9.	Secondary Caretaker has Historic a. No		0	m
	a. Not applicable b Medically fragile/failure to thrive c Developmental or physical disability d Positive toxicology screen at birth	1 1	A10.	Alcohol Drug Characteristics of Children in Hot a. Not applicable	usehold (check appr	ropriate items an	ad add for sco
	Housing (check applicable items and add for scor a. Not applicable	0		d. Developmental disability d. Mental health/behavioral	problem	1	
TOTA	L NEGLECT RISK SCORE						
	EED RISK LEVEL. Assign the family's scored reference et Score Abuse Score 0 - 1 0 - 1 2 - 4 2 - 4 5 - 8 5 - 7	isk level based on the Scored Risk Leve Low Modera High	<u>el</u>	core on either the neglect or abuse	; instrument, using t	he following ch	art:
	9+ 3-8	Very H	ligh				
POLIO Yes Yes Yes Yes	No 1. Sexual abuse case AND the perpetra No 2. Non-accidental injury to a child undo No 3. Severe non-accidental injury. No 4. Parent/caretaker action or inaction re	tor is likely to have a er age two.	ccess to t	e child victim.		level to very his	<u>gh</u> .
level h	E		•			evel may be over	erridden one
Yes	No 5. If <u>yes</u> , override risk level (circle one)		Mod				
Supar	Discretionary override reason: visor's Review/Approval of Discretionary Overrid					. /	/
_	L RISK LEVEL (circle final level assigned):	e:		rate High Very I		/	

Final Family Risk Classification Findings

The following figures describe sample case outcomes for the scored risk classification during the 24-month follow-up period. The final or scored family risk classification shown was obtained by simply assigning the case to the highest scored risk level determined by either the abuse or neglect instrument. The result is a final risk classification that can be used to assist the worker in estimating the likelihood that a family will become involved in either an abuse or a neglect incident.

Follow-up Investigation and Substantiation

Figure 1 shows the follow-up investigation and substantiation rates for abuse or neglect for families placed in the four risk assessment classifications. Within 24 months of the sample investigation, 915 of 2,511 (36.4%) of the sampled families were investigated for another abuse or neglect allegation on at least one occasion (see Table 1). In comparison, the 352 families classified as low risk had an 18.5% follow-up investigation rate, and the 273 families classified as very high risk had a 60.1% rate.

The risk classification is also strongly related to subsequent substantiation in the follow-up period. Among sampled families, 554 (22.1%) had a substantiated investigation in the follow-up period (see Table 2). The 352 sample families classified as low risk had only a 7.7% substantiation rate, compared to a 44.3% rate among those classified as very high risk. Moderate and high risk families show a strong incremental progression between low and very high.

Figure 1

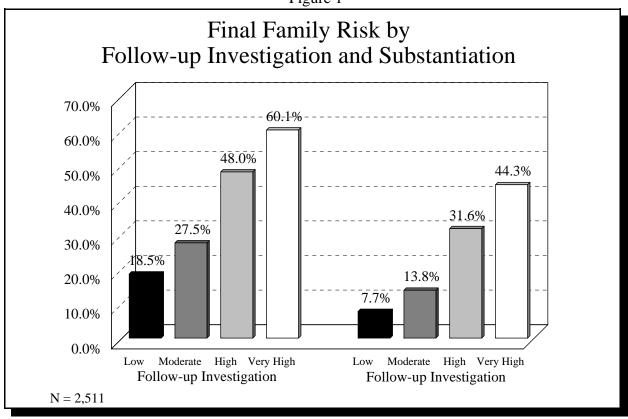


Table 1 Total Sample Cases: Final Risk Classification Findings for Follow-up Investigation						
Final Risk Sample Follow-up Investiga						
Classification	Cases	% Sample	Cases	Rate		
Low	352	14.0%	65	18.5%		
Moderate	1,067	42.5%	293	27.5%		
High	819	32.6%	393	48.0%		
Very High	273	10.9%	164	60.1%		
Total	2,511	100.0%	915	36.4%		

^{*}New investigation (one or more) within 24 months of the sample investigation.

	Table 2					
Total Sample Cases: Final Risk Classification Findings for Follow-up Substantiation						
Final Risk Sample Follow-up Substantiation*						
Classification	Cases	% Sample	Cases	Rate		
Low	352	14.0%	27	7.7%		
Moderate	1,067	42.5%	147	13.8%		
High	819	32.6%	259	31.6%		
Very High	273	10.9%	121	44.3%		
Total	2,511	100.0%	554	22.1%		

^{*}Substantiated allegation (one or more) within 24 months of the sample investigation.

Average Number of Follow-up Investigations and Substantiations

To compare the chronicity of families, that is, multiple investigations and substantiations, the average number of investigations and substantiations observed among sample families during the follow-up period is shown for each risk classification. Figure 2 and Table 3 indicate that low risk families were investigated, on average, only .32 times, and moderate risk families were investigated an average of .54 times during the 24-month follow-up period. This compares to 1.6 investigations for very high risk families and an average of 1.2 investigations among those classified as high risk.

Similar findings are observed for new substantiations. Low risk families averaged .12 follow-up substantiations versus .86 among families assigned to the very high risk level.

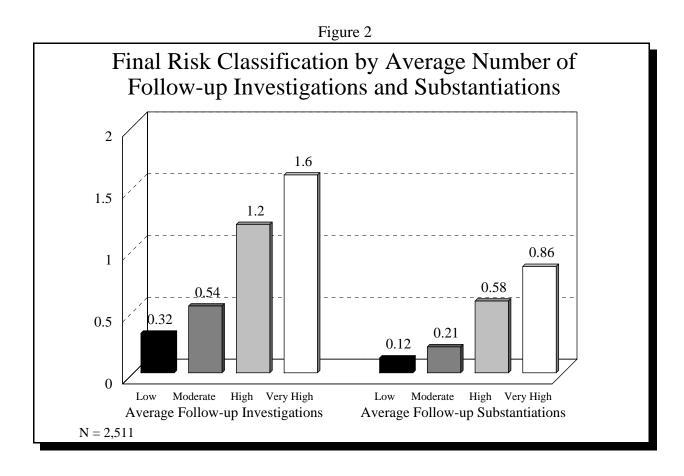


	Table 3					
Final Ri	sk Classification by A	verage Number of Inv	estigations and Substa	ntiations		
Final Risk Classification Sample Cases Sample % Sample % Sample for Follow-up Investigations Average Number of Follow-up Substantiations						
Low	352	14.0%	.32	0.12		
Moderate	1,067	42.5%	.54	0.21		
High	819	32.6%	1.20	0.58		
Very High	273	10.9%	1.60	0.86		
Total	2,511	100.0%	.84	0.39		

Follow-up Child Placement

In addition to new investigations and substantiations, the risk classification effectively classifies families based upon the likelihood of a future child placement from the home. Placement, as employed in the research, is defined as <u>any</u> removal of a child from the family after the sample investigation, including emergency removals. Approximately 13% of all sampled families had a child removed from the home subsequent to the sample investigation (see Table 4). As Figure 3 indicates, 1.4% of families classified as low risk had a child placed outside the home during the follow-up period, compared to 20.4% of high risk families and 27.8% of very high risk families. In effect, very high and high risk families were more than ten times as likely to have a child removed from the home during the 24-month follow-up than low risk families.

Figure 3

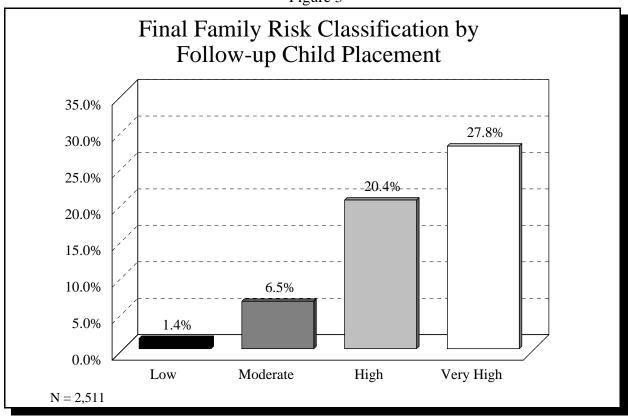


Table 4 Total Sample Cases: Final Risk Classification Findings for Follow-up Placement of Any Child					
Final Risk Sample Follow-up Placement*					
Classification	Cases	% Sample	Cases	Rate	
Low	352	14.0%	5	1.4%	
Moderate	1,067	42.5%	69	6.5%	
High	819	32.6%	167	20.4%	
Very High	273	10.9%	76	27.8%	
Total	2,511	100.0%	317	12.6%	

^{*}Any type of placement of any child within 24 months of the sample investigation.

Follow-up Child Injury

Similar findings are shown for injuries to children observed during a CPS incident occurring after the sample investigation. In Table 5, injury is defined as any bruise, scratch, or cut observed during a follow-up investigation for any child in the family, regardless of injury severity. Table 6 includes only injuries that were severe enough to require medical treatment (medical evaluations in which treatment was not required were excluded). In the total sample, follow-up injuries of any kind were observed in only 10.8% of the families, and injuries severe enough to require treatment were observed in only 5.7%.

As Figure 4 demonstrates, injury rates increase steadily as the family risk classification progresses from low to very high, i.e., only 1.7% of low risk families reported a child injury requiring medical treatment versus 12.1% of the very high risk families. Rates for any child injury were 4.3% among low risk cases and 22.7% among very high risk families.

Figure 4

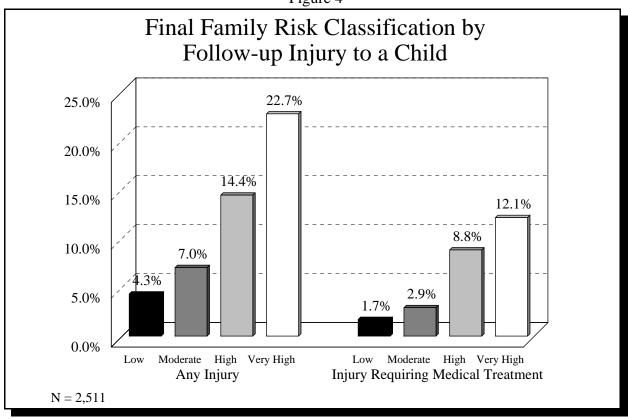


Table 5 Total Sample Cases: Final Risk Classification Findings for Follow-up Injury to Any Child Follow-up Injury* **Final Risk** Sample % Sample Classification Cases Cases Rate Low 352 14.0% 15 4.3% Moderate 1,067 75 7.0% 42.5% High 819 32.6% 118 14.4% Very High 273 10.9% 62 22.7% Total 2,511 100.0% 270 10.8%

^{*}Any type of injury to any child within 24 months of the sample investigation.

Table 6 Total Sample Cases: Final Risk Classification Findings for Follow-up Injury Requiring Medical Treatment to Any Child						
Final Risk Sample Follow-up Injury Requiring Medical Treatme						
Classification	Cases	% Sample Cases	Cases	Rate		
Low	352	14.0%	6	1.7%		
Moderate	1,067	42.5%	31	2.9%		
High	819	32.6%	72	8.8%		
Very High 273 10.9% 33 12.1%						
Total	2,511	100.0%	142	5.7%		

^{*}Injury which required medical treatment or hospitalization to any child within 24 months of the sample investigation.

California Pilot County Case Management Procedures

The risk assessment is completed at the close of an investigation on unsubstantiated <u>and</u> substantiated investigations. Both the final risk level and the results of the investigation guide the case opening decision.¹ The following table reviews the guidelines for opening a case based upon the final risk level and the investigation findings.

Risk-based Case Open/Close Guidelines					
	Investiga	ation Finding			
Risk Level	Substantiated	Inconclusive/ Unsubstantiated			
Low	Open or Close	Close			
Moderate	Open	Open or Close			
High	Open	Open			
Very High	Open	Open			

These guidelines, determined by a core team of pilot county representatives, suggest opening high and very high risk cases for service whether or not child maltreatment was substantiated as a result of the investigation. Therefore, families with a high likelihood of future maltreatment of a child are recommended for services even if maltreatment was unsubstantiated in the current incident. Moderate risk families with substantiated allegations of abuse or neglect are also recommended for services, while substantiated low risk families and unsubstantiated moderate risk families may be opened or closed based more upon worker discretion.

Once a family case is opened for services, the final risk level is employed to recommend a service level that suggests the number and nature of case contacts made by the worker or a contracted service provider during each month. The service levels and associated standards are

¹ The final risk level is the risk level assigned to a family after policy or discretionary overrides have been exercised.

designed to ensure that high risk families receive priority for service intervention. Pilot county representatives established the following case contact standards.

MONTHLY MINIMUM CASE CONTACT GUIDELINES FOR IN-HOME SERVICES					
Risk Level	Parent/Guardian and Child Contacts	Location			
Low	One face-to-face per month with parent/guardian and child One collateral contact	Must be in parent/guardian's residence			
Moderate	te Two face-to-face per month with parent/guardian and child Two collateral contacts One must be in parent/guardian's residence				
High	Three face-to-face per month with parent/guardian and child Three collateral contacts	One must be in parent/guardian's residence			
Very High	Four face-to-face per month with parent/guardian and child Four collateral contacts	Two must be in parent/guardian's residence			
Additional Co	onsiderations				
Contact Definition	1				
Designated Contacts	The ongoing worker/supervisor/service team may delegate face-to-face contacts to providers with contractual relationship to the Department and/or other Department staff such as social work aids. However, the ongoing worker must always maintain at least one face-to-face contact with the parent/guardian and child per month, as				

Note: A collateral contact is a contact made to any service provider or other source of information regarding the family case (e.g., other staff, school, personnel, reporters, etc.) made by phone or in person.

Periodic reassessments of risk and needs occur at three-month intervals to help ensure the appropriateness of case plans and service levels. As a family's risk of future maltreatment decreases, the suggested number of case contacts also decreases.

It should be noted that risk assessment is only one step in the CPS case assessment and planning process. Other pilot county workgroups developed consensus-based assessment instruments to guide worker decisions at other points in the CPS delivery process. California's pilot Structured Decision Making® system to be implemented in the seven pilot counties consists of the following:

- A response priority decision-making guide to help determine how quickly investigative staff should respond to a referral alleging child abuse/neglect;
- A safety assessment to determine the threat of immediate harm during an investigation and identify interventions needed to protect children;
- A risk assessment, which estimates the likelihood of future abuse/neglect at the close of an investigation; and
- An assessment of family and child strengths and needs to identify priorities for service planning.

These assessments support a comprehensive approach to case management. The intent of the entire system is 1) to provide workers with simple, objective, and reliable tools to help them make the best possible decisions for individual cases; and 2) to provide managers with information for improved policy development, planning, and resource allocation.

Appendix A

Findings for the Neglect and Abuse Indices

Preliminary Risk Assessment Instrument and Findings Risk Classification for Neglect

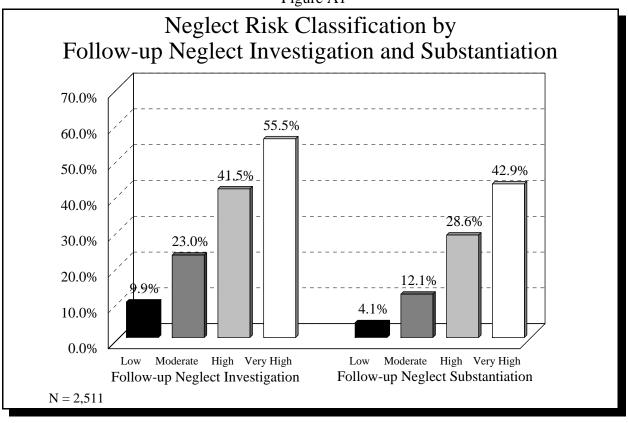
	Table A1					
Total Sample Cases: Neglect Risk Classification Findings for Follow-up Neglect Allegation						
Neglect Sample 9/ Sample Follow-up Neglect Allegation						
Classification	Cases	% Sample	Cases	Rate		
Low	727	29.0%	72	9.9%		
Moderate	903	36.0%	208	23.0%		
High	699	27.8%	290	41.5%		
Very High	182	7.2%	101	55.5%		
Total	2,511	100.0%	671	26.7%		

^{*}Investigated allegation (one or more) within 24 months of the sample investigation.

	Table A2				
Total Sample Cases: Neglect Risk Classification Findings for Follow-up Neglect Substantiation					
Neglect Sample Follow-up Neglect Subs					
Classification	Cases	% Sample	Cases	Rate	
Low	727	29.0%	30	4.1%	
Moderate	903	36.0%	109	12.1%	
High	699	27.8%	200	28.6%	
Very High 182 7.2% 78 42.9%					
Total	2,511	100.0%	417	16.6%	

^{*} Substantiated allegation (one or more) within 24 months of the sample investigation.

Figure A1



Risk Classification for Abuse

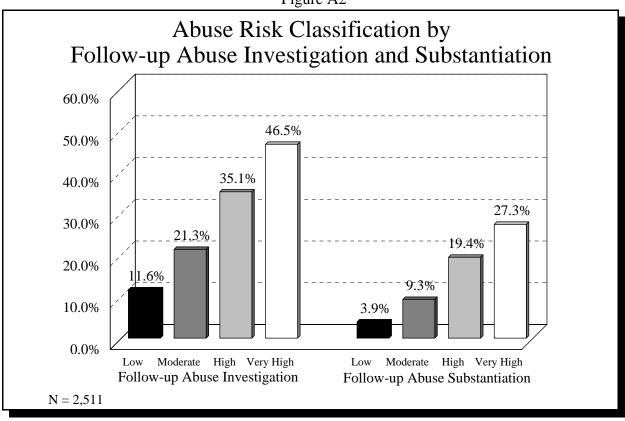
	Table A3						
	Total Sample Cases: Abuse Risk Classification Findings for Follow-up Abuse Allegation						
Abuse Sample Follow-up Abuse Allegation*							
Classification	Cases	% Sample	Cases	Rate			
Low	955	38.0%	111	11.6%			
Moderate	1081	43.1%	230	21.3%			
High	376	15.0%	132	35.1%			
Very High	Very High 99 3.9% 46 46.5%						
Total	2511	100.0%	519	20.7%			

^{*}Investigated allegation (one or more) within 24 months of the sample investigation.

Table A4 Total Sample Cases: Abuse Risk Classification Findings for Follow-up Abuse Substantiation						
Cases	Rate					
Low	955	38.0%	37	3.9%		
Moderate	1081	43.1%	100	9.3%		
High	376	15.0%	73	19.4%		
Very High	99	3.9%	27	27.3%		
Total	2511	100.0%	237	9.4%		

^{*}Substantiated allegation (one or more) within 24 months of the sample investigation.

Figure A2



Appendix B

Item Analysis for Neglect and Risk Indices

		Table B	1				
	N	eglect Scale Iter Total Sam	m Analysis nole				
	Item	Sample Di		Cases With Follow-up Neglect Substantiation			
		N	%	N	%	Correlation	P Value
N1.	Current Complaint is for Neglect					.164	.001
	No	927	36.9%	80	8.6%		
	Yes	1584	63.1%	337	21.3%	1	
N2.	Any Prior Investigations					.179	.001
	No	1233	49.1%	121	9.8%		
	Yes	1278	50.9%	296	23.2%	1	
N3.	Number of Prior Neglect Investigations					.229	.001
	None	1535	61.1%	161	10.5%		
	One to two	722	28.8%	164	22.7%	1	
	Three or more	254	10.1%	92	36.2%	1	
N4.	Household has Previously Received CPS						.001
	No	1993	79.4%	271	13.6%		•
	Yes	518	20.6%	146	28.2%	1	
N5.	Number of Children Involved in Incident		•	•	•	.130	.001
	One, two, or three	2239	89.2%	334	14.9%		•
	Four or more	272	10.8%	83	30.5%	1	
N6.	Age of Youngest Child in the Home	•	•			.123	.001
	Two or older	1788	71.2%	245	13.7%		•
	One or younger	723	28.8%	172	23.8%	1	
N7.	Caretaker Provides Physical Care Inconsistent	.187	.001				
	No	1793	71.4%	219	12.2%		
	Yes	718	28.6%	198	27.6%	1	
N8.	Primary Caretaker has a Past or Current Diagnosed Mental Condition						.001
	No	2362	94.1%	364	15.4%		
	Yes	149	5.9%	53	35.6%	1	
N9.	Primary Caretaker has an Alcohol or Drug Ab						
	Alcohol	412	16.4%	107	26.0%	.111	.001
	Drug	867	34.5%	216	24.9%	.162	.001
N10.	Characteristics of Children in Household*	_ 					
	Medically fragile/failure to thrive	113	4.5%	37	32.7%	.094	.001
	Developmental or physical disability	274	10.9%	68	24.8%	.077	.001
	Positive toxicology screen at birth	325	12.9%	86	26.5%	.102	.001
N11.	Housing*	•					
	Current housing is physically unsafe	202	8.0%	59	29.2%	.100	.001
	Homeless at time of investigation	191	7.6%	65	34.0%	.134	.001

*Multiple response items; percentages do not total 100%.

Table B2
Abuse Scale Item Analysis
Total Sample

	T	otal Sample					
	Item	Sample Distribution		Fo	Ca ollow Up A	ases With buse Substantiation	
		N	%	N	%	Correlation	P Value
A1.	Prior Complaint is for Abuse					.052	.009
	No	1199	47.7%	94	7.8%		
	Yes	1312	52.3%	143	10.9%		
A2.	Number of Prior Abuse Investigations					.152	.001
	None	1691	67.3%	113	6.7%		
	One	486	19.4%	59	12.1%		
	Two or more	334	13.3%	65	19.5%		
A3.	Household has Previously Received CPS						.001
	No	1993	79.4%	159	8.0%		
	Yes	518	20.6%	78	15.1%		
A4.	Prior Injury to a Child Resulting from CA/N					.096	.001
	No	1952	77.7%	155	7.9%		
	Yes	559	22.3%	82	14.7%		
A5.	Primary Caretaker's Assessment of Incident*						
	Blames child	160	6.4%	30	18.8%	.083	.001
	Justifies maltreatment of a child	88	3.5%	19	21.6%	.079	.001
A6.	Domestic Violence in the Household in the Past Year						.001
	No	2282	90.9%	198	8.7%		
	Yes	229	9.1%	39	17.0%		
A7.	Primary Caretaker Characteristics*						
	Provides insufficient emotional/psychological support	509	20.3%	72	14.1%	.081	.001
	Employs excessive/inappropriate discipline	378	15.1%	55	14.6%	.074	.001
	Domineering parent	91	3.6%	20	22.0%	.083	.001
A8.	Primary Caretaker has a History of Abuse or Neglect as a Child						.006
	No	2231	88.8%	198	8.9%		
	Yes	280	11.2%	39	13.9%		
A9.	Secondary Caretaker has Current or Historic Alcohol or Drug Problem						.001
	No	2041	81.3%	170	8.3%		
	Yes	470	18.7%	67	14.3%	1	
A10.	Characteristics of Children in Household*						
	Delinquency history	202	8.0%	33	16.3%	.070	.001
	Developmental disability	226	9.0%	35	15.5%	.065	.001
	Mental health/behavioral problem	255	10.2%	36	14.1%	.054	.007

*Multiple response items; percentages do not total 100%.