CHILDREN AND FAMILY RESEARCH CENTER

Illinois Child Endangerment Risk Assessment Protocol: FY06 Annual Evaluation

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Tamara L. Fuller, Ph.D.

Martin Nieto, M.A.

Children and Family Research Center
School of Social Work
University of Illinois at Urbana-Champaign

Executive Summary

In 1994, the Illinois Senate passed PA 88-614, which required the Department of Children and Family Services (DCFS) to develop a standardized child endangerment risk assessment protocol and to implement its use by training staff and certifying their proficiency. This act also required DCFS to provide an annual evaluation report to the General Assembly regarding the reliability and validity of the protocol, known as the **CERAP (Child Endangerment Risk Assessment Protocol)**.

The CERAP is a safety assessment instrument and was designed to evaluate the likelihood of immediate harm (to a child) of a moderate to severe nature. This report analyzes the impact of CERAP implementation on the safety of children investigated by the Illinois Department of Children and Family Services (DCFS) for abuse and neglect. For this purpose, safety is defined in terms of the occurrence/non-occurrence of an indicated allegation of moderate physical abuse, severe physical abuse, or severe sexual abuse within 60 days of an initial investigation (also referred to in the report as maltreatment *recurrence*). The evaluation utilizes a research design called a *secular trend analysis* that examines the child safety outcome (e.g., maltreatment recurrence rates) before and after CERAP implementation. Two sets of analyses were completed to examine CERAP effectiveness: 1) trend analysis of recurrence rates several years prior to CERAP implementation through the ninth year post-implementation and 2) comparisons of recurrence rates between investigation cases assessed by child protective services (CPS) workers as safe or unsafe.

Summary of Major Findings

- Similar to overall maltreatment recurrence, rates of moderate to severe maltreatment recurrence have declined in the nine years following the implementation of the safety assessment protocol, which suggests that the CERAP had a positive impact on child safety. However, the trend analyses also suggest that recurrence rates were declining prior to CERAP implementation and may have continued to decline without intervention. Unfortunately, the limitations of the available data prevent a definitive conclusion.
- 60-day recurrence rates for children with multiple maltreatment reports follow the same extended secular trend as those following first reports. Recurrence rates increase as the number of maltreatment reports increase; for example, children with four previous maltreatment reports are much more likely to experience an additional indicated report of maltreatment within 60 days than those with one, two, or three previous reports.
- Additional analyses examined maltreatment recurrence rates in cases with CERAP safety decisions of safe versus unsafe. On average, cases that were assessed by workers as "unsafe" were 2 – 4 times more likely to experience recurrence as those rated "safe."

Conclusions and Recommendations

After several years of evaluation of the CERAP, it can be concluded that children in Illinois are safer (i.e., less likely to experience repeat maltreatment) than they were prior to its implementation in 1995. Unfortunately, the lack of a true experimental design will always prevent definitive conclusions about the effects of a policy intervention such as the CERAP. In all likelihood, numerous and complex factors, including the introduction of the CERAP, led to the declines in recurrence rates seen in Illinois over the past several years.

Future research on the reliability and validity of the CERAP should go beyond the examination of maltreatment recurrence rates and begin to explore *how* CPS workers use the CERAP to make decisions about child safety. In addition, the findings of the current evaluation suggest that future research should involve a careful analysis of CERAP safety plans in an effort to identify the elements of effective plans. Other areas of possible exploration include the factors that predict child safety among groups of children known to be at-risk for maltreatment recurrence, such as infants and toddlers, children served in intact families, and children who experience chronic neglect.

Illinois Child Endangerment Risk Assessment Protocol: Impact on Recurrence of Moderate to Severe Maltreatment

Background and Introduction

Increased attention to incidents of severe child maltreatment in Illinois during 1993 and 1994 led to the passage of Senate Bill 1357, which became effective as PA 88-614 on September 7, 1994. In part, this bill required that the Illinois Department of Children and Family Services (DCFS/the Department):

- develop a standardized child endangerment risk assessment protocol, training procedures, and a method of demonstrating proficiency in the application of the protocol by July 1, 1996;
- train and certify all DCFS and private agency workers and supervisors in protocol use by July 1, 1996; and
- submit an annual evaluation report to the Illinois General Assembly, which includes an examination of the reliability and validity of the protocol.

In addition, the legislation specified the establishment of a multidisciplinary advisory committee, appointed by the Director of DCFS, which included representation from experts in child development, domestic violence, family systems, juvenile justice, law enforcement, health care, mental health, substance abuse, and social services. DCFS was also required to contract with an outside expert to provide services related to the development, implementation, and evaluation of the protocol.

Over the following 15 months, a training curriculum and certification criteria were developed, and over 6000 workers and supervisors were trained and tested for proficiency. CERAP implementation "officially" occurred on December 1, 1995, which is the date that all DCFS workers and private providers had been trained in the use of the protocol and over 99 percent had been successfully certified.

Evaluating the Validity of the CERAP

Evaluation Strategy

Public Act 88-614 mandates that the Department "submit an annual evaluation report to the Illinois General Assembly, which includes an examination of the reliability and validity of the protocol." Beginning in 1997, researchers at the Children and Family Research Center at the University of Illinois at Urbana-Champaign have conducted a program of research that examined the impact of the CERAP implementation on child safety in Illinois.

Although service and policy interventions are most reliably evaluated using an experimental research design with random assignment of subjects to treatment versus control groups, such designs are rarely feasible in natural settings. In such instances, observational research methods (sometimes referred to as quasi-experimental designs), which rely on naturally-occurring groups of people who were and were not exposed to the intervention, are often used. The two most common sources of comparison are historical groups (groups that temporally preceded the introduction of an intervention) and geographical groups (groups that are at a spatial distance from the intervention, e.g. other counties or states). In a quasi-experimental design, the hypothesis that an intervention *does* have an impact would be supported, but not proven, by results indicating significant differences on the outcome of interest between the group exposed to the intervention and the group not exposed. However, because naturally-occurring groups by history or geography will seldom be "statistically equivalent" to the group exposed to the intervention, relevant characteristics that might influence the outcome will be distributed non-randomly between the two groups. Therefore, the influence of these factors should be controlled or assessed through research design and statistical analysis in order to draw valid inferences.

Since it is unethical to purposefully withhold safety assessment from a random "control" group of children, the evaluation of the impact of CERAP implementation on child safety is an example of a program of research that must rely on observational research methods rather than experimental ones. To test the hypothesis that the implementation of the CERAP safety assessment protocol had a significant impact on child safety, researchers from the Children and Family Research Center (CFRC) at the University of Illinois have employed historical group comparisons in a design called a *secular trend analysis* that examines the child safety outcome before and after the point in time when the implementation of CERAP occurred (December 1, 1995). The hypothesis of CERAP effectiveness or validity would be supported, but not proven, by significant differences on the safety outcome between those exposed to the intervention and those that were not exposed. As with all quasi-experimental designs, however, alternative explanations for observed differences between the two historical groups are possible.

Defining Child Safety

The CERAP assesses child **safety**, defined in Illinois as the likelihood of **immediate harm of a moderate to severe nature**. This definition distinguishes safety/safety assessment from the broader concepts of risk/risk assessment in two ways: 1) the threat of harm to the child must be "immediate" and 2) the potential harm to the child must be of a "moderate to severe nature." CERAP evaluations completed from FY98 through FY04 defined child safety in terms of the occurrence (i.e., recurrence) of an indicated report of maltreatment within 60 days of an initial report. While this definition captured one aspect of child safety – its immediacy – by focusing on maltreatment recurrence within 60 days of an initial report, it failed to distinguish between harm of a moderate to severe nature and other degrees of harm. Therefore, beginning in FY05, the definition of child safety was refined to include only recurrences of indicated reports of moderate to severe maltreatment within 60 days of an initial report.

Neither DCFS policy nor the CANTS database include a specific definition of "moderate to severe harm." Therefore, three mutually exclusive groups were defined using allegation codes included in the CANTS database. *Moderate physical abuse* included allegations of cuts, welts, and bruises, human bites, and sprains/dislocations. *Severe physical abuse* included indicated allegations of brain damage/skull fracture, subdural hematoma, internal injuries, burns/scalding, poisoning, wounds, bone fractures, and torture. *Severe sexual abuse* included indicated allegations of sexually transmitted diseases, sexual penetration, sexual exploitation, and sexual molestation.

Computing Maltreatment Recurrence

Recurrence rates for the trend analyses were computed in a series of steps. First, for each year of observation, the total number of children living in households investigated for maltreatment was identified. This initial group of children includes those with *any* maltreatment allegation, regardless of the severity of the allegation or the allegation finding (i.e., indicated or unfounded). If a child appeared in more than one investigated maltreatment report during the observation year, only the first report for that child was included in the analyses.

The data representing first reports were further refined by selecting only Sequence A reports.[1] Because the CERAP is targeted at the prevention of future maltreatment and children with multiple investigations have higher rates of indication than those in their first investigation, controlling for previous investigations by selecting only Sequence A reports provides a clearer picture of the impact of CERAP implementation. After the total number of children with a Sequence A investigation of maltreatment was defined, children who were taken into temporary protective custody (PC) were excluded from the analyses. Eliminating children taken into

[1] Sequence A is the designation given to the first report on a given *household*, as opposed to the "first reports" on a particular *child*. To select this group, the first report for each child in a given time period is obtained, and then all Sequence A reports are selected. Thus, "Sequence A reports" are a subset of all first reports during a given time period.

protective custody theoretically excludes those children who spent a portion of time out of the investigated (and CERAP evaluated) household.

Using these criteria, the total number of children maltreated each year[2] was calculated. Then, for each year of observation, the number of children who experienced a subsequent indicated report of maltreatment within 60 days of the initial report was determined. Beginning in FY04, recurrence rates[3] were computed for four different groups: 1) all maltreatment, 2) moderate physical abuse, 3) severe physical abuse, and 4) severe sexual abuse.

Summary of Previous CERAP Recurrence Analyses

The results of previous trend analyses indicated that recurrence rates were at their highest level in 1986, after which they declined consistently until 1991, then remained relatively level until 1994, at which time they unexpectedly *increased* by 25%. In the year first year following CERAP implementation (1996), recurrence rates significantly declined and have continued to decline or remain constant each year through 2004. This *suggests* that the implementation of the CERAP had a demonstrable impact on overall short-term maltreatment recurrence rates. However, the trend analysis also reveals that with the exception of the anomalous rate increase in 1994, the decline in recurrence rates began several years prior to CERAP implementation, suggesting an alternative interpretation that maltreatment recurrence would have continued their decline without the CERAP intervention. Unfortunately, the quasi-experimental design of the available data does not permit a *definitive* conclusion about the impact of the CERAP safety intervention.

In FY04, additional analyses were conducted to examine the impact of the CERAP intervention on the recurrence of moderate phyiscal abuse, several phyiscal abuse, and sexual

[2] To coincide with the date of CERAP implementation, observation years begin on December 1 and end on November 30 of the following year (e.g., the first year post-CERAP included maltreatment reports that occurred between December 1, 1995 and November 30, 1996).

[3] Recurrence rates were defined as the number of children who experienced indicated maltreatment recurrence divided by the total number of children with a Sequence A maltreatment report (PCs excluded).

abuse. The results of these analyses revealed several interesting findings. First, rates of moderate to several maltreatment recurrence are *very low* when compared to the recurrence rates for all types of maltreatment combined. Short-term (i.e., within 60 days) maltreatment recurrence rates for all maltreatment types ranged from 2.55% in 1987 to slightly less than 1% in 2004. Recurrence rates for moderate physical abuse ranged from .31% to .06%, rates for severe physical abuse ranged from .05% to .02%, and rates for sexual abuse ranged from .31% to .03%. Although recurrence of moderate to severe maltreatment recurrence was rare, the secular trend analyses for these types of recurrence are roughly equivalent to that shown for all maltreatment. These results suggest that the implementation of the CERAP had the intended effect on child safety – leading to a consistent decline in short-term recurrence of moderate to severe abuse.

Results of the FY06 CERAP Recurrence Analyses

The current analyses update the secular trend analysis by adding recurrence rates for 2005. The data used in these analyses were obtained from the June 2005[4] update of the Department of Children and Family Services (DCFS) Child Abuse and Neglect Tracking System (CANTS) database, which contains information on all children involved in investigated reports of child abuse and neglect. Using the definitions described earlier, short-term (i.e., 60-day recurrence rates of all maltreatment types, moderate physical abuse, severe physical abuse, and sexual abuse were calculated for each year (1986-2005) and are presented in Table and Figure 1.

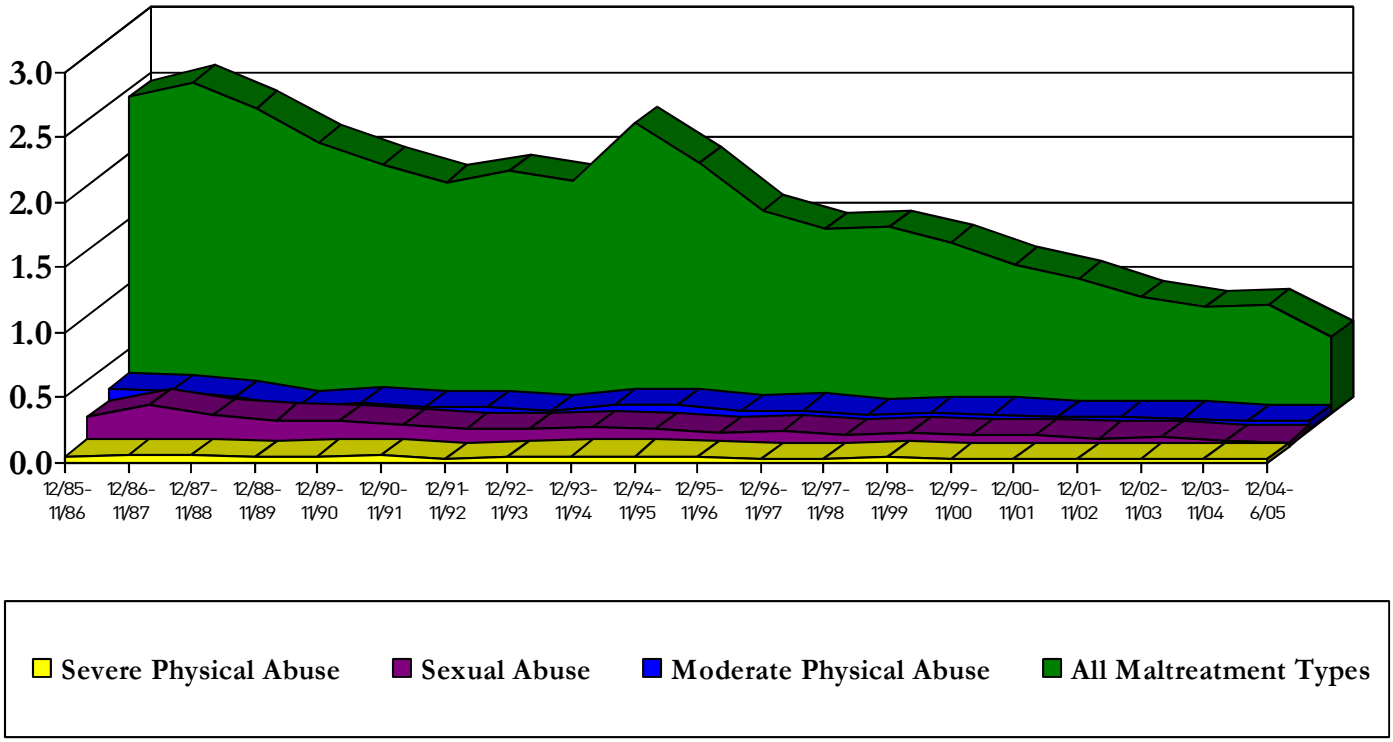
[4]

Table 1. 60-Day Maltreatment Recurrence[a] (1986 – 2005)

	Total	All Maltreatment Types		Moderate Physical Abuse		Severe Physical Abuse		Sexual Abuse	
		N	%	N	%	N	%	N	%
1986	66,778	1,626	2.43	206	.31	34	.05	149	.22
1987	73,957	1,888	2.55	221	.30	43	.06	227	.31
1988	78,290	1,836	2.35	193	.25	44	.06	189	.24
1989	82,062	1,716	2.09	149	.18	36	.04	163	.20
1990	81,975	1,572	1.92	167	.20	37	.05	152	.19
1991	87,954	1,565	1.78	153	.17	49	.06	142	.16
1992	94,721	1,758	1.86	171	.18	33	.03	119	.13
1993	91,901	1,645	1.79	126	.14	36	.04	123	.13
1994	98,180	2,196	2.24	184	.19	51	.05	139	.14
1995	95,388	1,837	1.93	182	.19	45	.05	127	.13
1996[b]	86,027	1,338	1.56	122	.14	35	.04	89	.10
1997	81,350	1,155	1.42	124	.15	20	.02	86	.11
1998	78,053	1,124	1.44	87	.11	20	.03	68	.09
1999	75,797	1,000	1.32	95	.13	33	.04	77	.10
2000	77,696	893	1.15	94	.12	27	.03	67	.09
2001	76,060	788	1.04	77	.10	26	.03	61	.08
2002	76,342	689	.90	78	.10	20	.03	43	.06
2003	76,573	629	.82	69	.09	16	.02	50	.07
2004	79,011	652	.83	51	.06	19	.02	32	.04
2005[c]	47,080	280	.59	27	.06	8	.02	14	.03

[a]The number of children with an indicated report occurring within 60 days of their first report in the time period observed.
[b]CERAP implementation year
[c]Recurrence rates for 2005 are based on an incomplete data year (December 1, 2004 through June 30, 2005).

Figure 1. 60-Day Maltreatment Recurrence (1986 – 2005)



There are several important facts to note when interpreting the results presented in Table and Figure 1. First, the recurrence analyses for 2005 are based on an incomplete data year. In general, recurrence rates for each year are based on maltreatment reports that occurred between December 1 through November 30 of the following year (e.g., rates for 2004 are based on maltreatment reports that occurred between December 1, 2003 and November 30, 2004). This time period was chosen so that observation years would coincide with the date of CERAP implementation, which occurred on December 1, 1995. Administrative data for the current year (2005) were only available through June 30, 2005, and as a result, recurrence rates for 2005 are computed an incomplete data year and should be considered preliminary until administrative data through November 30, 2005 becomes available. Although the recurrence rates for 2005 are

likely to increase slightly once complete data become available,[5] the preliminary analyses indicate that recurrence rates for all maltreatment types, moderate physical abuse, severe physical abuse, and sexual abuse continue to decline or remain constant in 2005.

In general, short-term recurrence of severe physical abuse is extremely rare, with rates ranging from .06% to .02%.

Maltreatment Recurrence in Cases Categorized as "Safe" versus "Unsafe"

While ethical considerations prevent true experimental evaluation of the impact of the CERAP on child safety, closer examination of the relationship between CERAP use in the field and subsequent maltreatment recurrence in specific child cases would provide valuable information about the utility of the CERAP. The intended purpose of the CERAP is not only to guide worker assessment of possible threats to child safety, but also to require workers to formulate a safety plan that will protect children from immediate harm of a moderate to severe nature. In theory, a well-designed and implemented safety plan should mitigate the immediate risks posed by the threats to child safety identified in the CERAP so that children in "unsafe" households are no more likely to experience maltreatment recurrence than those in "safe" households.

To investigate this assumption, the relationship between the CERAP safety decision and subsequent maltreatment recurrence was examined. First, CERAP safety decision information (safe versus unsafe) was obtained from the Illinois Statewide Automated Child Welfare Information System (SACWIS) database. This information was available for all investigation

[5] Because the administrative data are incomplete, many of the second (i.e., recurrence) reports are still "pending" at the time of analysis. It is likely that some of these reports will be indicated, which will lead to a slight increase in the 60-day recurrence rate for 2005.

cases that were opened after May 20, 2002, when Phase I of SACWIS implementation was completed. Safety decision information was then linked (via unique investigation numbers) to maltreatment recurrence information in the DCFS Child Abuse and Neglect Tracking System (CANTS) database.

Although the CERAP information currently available from SACWIS is very limited, the data indicate that each year, almost one-third of the investigation cases are linked to more than one CERAP assessment. Unfortunately, the only information available about the addition CERAP assessment is the date of assessment and the safety decision (safe or unsafe). Since the current information available does not indicate the reason for additional CERAP assessments, the recurrence analysis presented next will include only those cases in which a single CERAP assessment was completed.

As before, short-term recurrence rates were calculated by first identifying the total number of children living in households with Sequence A maltreatment investigations for each year of observation. This initial group of children includes those with *any* maltreatment allegation, regardless of the severity of the allegation or the allegation finding (i.e., indicated or unfounded). These children were then divided into two groups, consisting of those with CERAP safety decisions of safe versus unsafe. Finally, the number of children with safe versus unsafe safety decisions who experienced a subsequent indicated report within 60 days of the initial report was calculated. Results of these analyses for all maltreatment recurrences (Table 5), moderate physical abuse (Table 6), severe physical abuse (Table 7), and severe sexual abuse (Table 8) are presented below.

Table 5. 60-Day Maltreatment Recurrence in Cases[d] with Safe versus Unsafe Safety Decisions

		Safe	Unsafe	Total

2003[a]	Number	82,188	6,280	88,468
	Number Recurrent	785	109	894
	% Recurrent	1.0%	1.7%	1.0%
2004[b]	Number	74,216	6,223	80,439
	Number Recurrent	616	98	714
	% Recurrent	.8%	1.6%	.9%
2005[c]	Number	75,218	5,672	80,890
	Number Recurrent	579	70	649
	% Recurrent	.8%	1.2%	.8%

[a]May 20, 2002 – May 19, 2003
[b]May 20, 2003 – May 19, 2004
[c]May 20, 2004 - May 19, 2005
[d]Sequence A cases, PCs removed

Table 6. 60-Day Recurrence of Moderate Physical Abuse in Cases[d] with Safe versus Unsafe Safety Decisions

		Safe	Unsafe	Total
2003[a]	Number	82,188	6,280	88,468
	Number Recurrent	90	8	98
	% Recurrent	.11%	.13%	.11%
2004[b]	Number	74,216	6,223	80,439
	Number Recurrent	72	15	87
	% Recurrent	.10%	.24%	.11%
2005[c]	Number	75,218	5,672	80,890
	Number Recurrent	40	6	46
	% Recurrent	.05%	.11%	.06%

[a]May 20, 2002 – May 19, 2003
[b]May 20, 2003 – May 19, 2004
[c]Sequence A cases, PCs removed

Table 7. 60-Day Recurrence of Severe Physical Abuse in Cases with Safe versus Unsafe Safety Decisions

		Safe	Unsafe	Total
2003[a]	Number	82,188	6,280	88,468
	Number Recurrent	17	3	20
	% Recurrent	.02%	.05%	.02%
2004[b]	Number	74,216	6,223	80,439

	Number Recurrent	14	5	19
	% Recurrent	.02%	.08%	.02%
2005[c]	Number	75,218	5,672	80,890
	Number Recurrent	12	2	14
	% Recurrent	.02%	.04%	.02%

[a]May 20, 2002 – May 19, 2003
[b]May 20, 2003 – May 19, 2004
[c]Sequence A cases, PCs removed

Table 8. 60-Day Recurrence of Sexual Abuse in Cases with Safe versus Unsafe Safety Decisions

		Safe	**Unsafe**	**Total**
2003[a]	Number	82,188	6,280	88,468
	Number Recurrent	59	5	64
	% Recurrent	.07%	.08%	.07%
2004[b]	Number	74,216	6,223	80,439
	Number Recurrent	42	4	46
	% Recurrent	.06%	.06%	.06%
2005[c]	Number	75,218	5,672	80,890
	Number Recurrent	37	0	37
	% Recurrent	.05%	-	.05%

[a]May 20, 2002 – May 19, 2003
[b]May 20, 2003 – May 19, 2004
[c]Sequence A cases, PCs removed

The results presented in Tables 5 – 8 highlight several interesting findings. First, the number of children in Sequence A investigations considered "unsafe" is relatively small: 3.8% in 2003 and 4.1% in 2004. Although only a relatively small number of cases are classified as "unsafe," these cases are at higher risk for short-term maltreatment recurrence when compared to those classified as "safe." Specifically, cases categorized as unsafe were approximately 3 times more likely to experience short-term maltreatment recurrence of any type, 2-3 times more likely to experience recurrence of moderate physical abuse, 4.5 times more likely to experience severe

physical abuse, and approximately 1.5 times more likely to experience severe sexual abuse than cases categorized as safe.

Although additional information about CERAP use in the field is clearly needed before definitive conclusions can be made, the results of this analysis suggest two interpretations. The first is that workers are using the safety factor checklists to correctly identify many families that are at risk of immediate harm, as demonstrated by the higher recurrence rates among families categorized as unsafe on the CERAP safety decision. However, the fact that these families experience higher recurrence rates also suggests that for some families, the safety plans developed by the worker are not preventing subsequent maltreatment.

Conclusions and Recommendations

The results of the current evaluation reveal that similar to overall maltreatment recurrence, rates of moderate to severe maltreatment recurrence have declined in the nine years following the implementation of the CERAP. However, maltreatment recurrence rates began their decline several years prior to CERAP implementation, offering the possibility that similar declines would have occurred without the CERAP intervention. In all likelihood, numerous and complex factors, including the introduction of the CERAP, led to the declines in recurrence rates seen in Illinois over the past several years.

Future research on the reliability and validity of the CERAP should go beyond the examination of maltreatment recurrence rates and begin to explore *how* CPS workers use the CERAP to make decisions about child safety. In addition, future research should involve a careful analysis of CERAP safety plans in an effort to identify the elements of effective plans. Other areas of possible exploration include the factors that predict child safety among groups of children known to be at-risk for maltreatment recurrence, such as infants and toddlers, children served in intact families, and children who experience chronic neglect.