

# Epidemiolog

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Rates of

tion of recurrences during and following treatment.<sup>36</sup> The current study attempts to overcome some of these limitations by following a sufficient number of families over time and examining differences during and following treatment.

With respect to the frequency of child maltreatment recurrences, a previous review found that few studies have reported on the frequency of recurrences.<sup>37</sup> In two U.S. studies of CPS families the vast majority of recurrence cases had only one recurrence, that is, 67 percent for a national study of demonstration programs<sup>38</sup> and 83 percent for a 10-year follow-up of C

reports of the same incident were not counted as a recurrence. Data were collected and coded from archival sources.

*Sample*

Sampling for the current work involved two phases: (1) sampling from the population of substantiated CPS reports in 1988 following a set of inclusion and exclusion criteria, and (2) applying a second set of exclusionary criteria to se

and 798 of the 955 families who we

data was needed from case records. Each case was coded by one person and then edited by a second person. Staff was trained to 95 percent inter-rater reliability before they were permitted to edit another person's cases. A research supervisor resolved discrepancies between coders.

## Data Analysis

Data were analyzed with multipl

Tables procedures, which uses the Wilcoxon (Gehan) statistic, was run.<sup>47</sup>  
This procedure displays the number of censored (nonrecurrence) and uncensored (



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portion surviving), the relative risk of recurrence during that interval for families who had not yet experienced a recurrence (hazard rate), and the standard error for the hazard rate for that interval. Results suggest that the hazard rate (probability of recurrence) was highest (.0617) during the first 30 days following the index incident and steadily declined during the first year. By 270 days, 50 percent of recurrence families experienced their first recurrence. After about a year (360 days) the hazard rate leveled off and remained relatively constant, fluctuating between .0071 and .0030. Table 1 presents the Life Table divided into 30-day time periods over the 5 years.<sup>49</sup>

*Pattern of recurrences while services are provided.*—In contrast to the 42.6 percent of families who had a recurrence during the full, 5-year risk period, only 26.8 percent of them experienced a recurrence while either CPS intake or ongoing services were provided. Of course the beginning of the 5-year period overlapped with the active service period, and for this reason the hazard rates for the first four 30-day intervals are identical. However, among families still receiving services, the leveling-off time came somewhat sooner. Whereas the hazard rate leveled off for the earlier sample at about 360 days, it began to level off at about 210 days among families still receiving services. From this point forward the hazard rate ranged from .01 to .00.

*Pattern of recurrences following CPS closure.*—Among the primary purposes of CPS intervention is to reduce the likelihood of child maltreatment recurrences. Thus, one measure of treatment effectiveness is the degree to which families that received CPS intervention stopped their maltreatment. This analysis examined the time until recurrence by setting a 2-year follow-up beyond the CPS closing date. The date, of course varied with the length of services.

Eighty-five percent of families did not have a known recurrence of child maltreatment within 2 years of CPS closure. Yet, the hazard rate did not appear to decline dramatically over time. Instead, it started low .0074 and stayed relatively constant over the 2 years, ranging up to .01 for only one interval and down to .002 and .00 for other intervals. In practical terms this suggests that the likelihood of recurrences was not greater or higher at any particular interval following clos

received intake services, theoretically because the risk of maltreatment was low, would have a lower hazard rate.

survival experien

The hazard rate ranged from .01 to .0345 throughout the period, but it did not start high and decline with time. The hazard rate  $\lambda(t) = 0.036 - 0.0032t$

vals: throughout the 5 years, while active, and following closure. Tables 4, 5, and 6 reveal that these differences are statistically significant. Thus, the null hypotheses of no difference in the survival  $\exp\{TD(x_3 - b)\}$  0.7}t

than neglect cases. By the end of the 5-year period 66 percent of the abuse cases had survived without a recurrence compared to only 50 percent of the neglect cases.

Whereas in the 5-year survival distribution neglect families were more likely to have recurrences sooner than abuse families, while the case is active there is only a slight trend toward earlier recurrence by neglect families. Fifty percent of the physical abuse recurrence families experienced their first recurrence within 120 days following the index report. This compared to 90 days for the neglect recurrence families. This 30-day difference held true when comparing the point at which 66 percent of families had their recurrences (210 days for the abuse group and 180 days for the neglect group). Because many other events may occur, it is not as clear that original report should affect recurrences after the case was closed. Indeed, as table 6 suggests, the difference between families charged with abuse and neglect is not great at this point. The rate of repeat families is slightly higher throughout the 2-year in

### *Findings—Frequency of Recurrences*

Looking at all 497 families in the full cohort of 1,167 who experienced at least one recurrence over a 5 year

Over Five Years

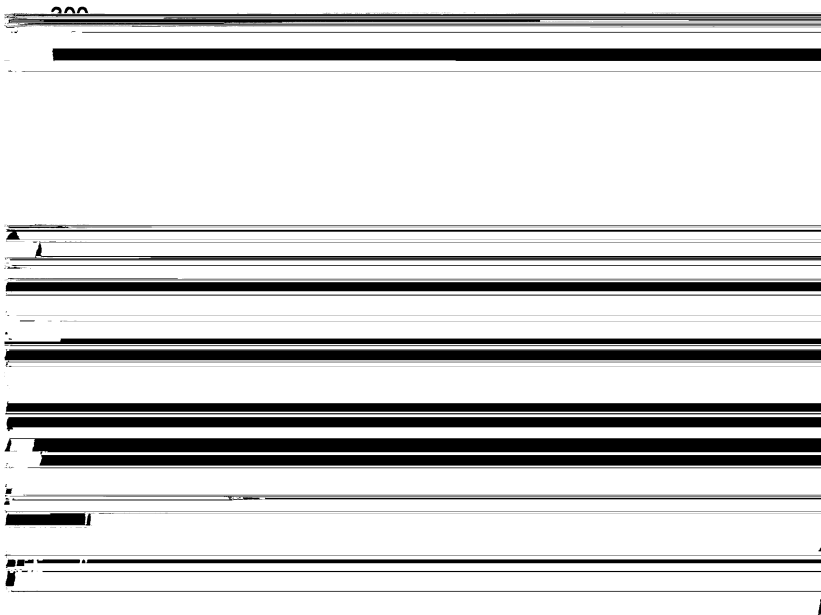


Fig. 3

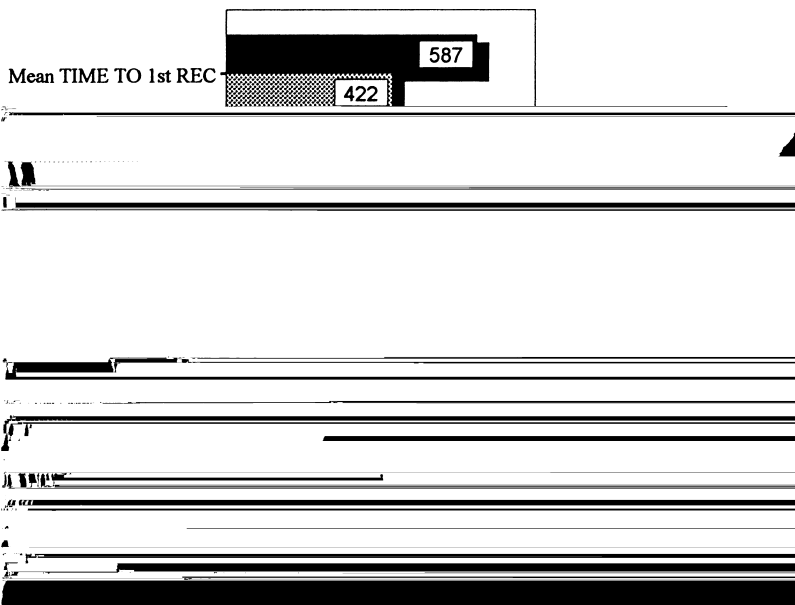


Fig. 4



recurrence occurred for each

The declining hazard rate of recurrence was consistent with the life table analysis on Colorado Central Registry data<sup>51</sup> but not consistent with the life table analysis of a medical clinic population.<sup>52</sup> Possible interpretations of these results suggest that a combination of factors may explain a declining risk of recurrence over time; in particular, control brought on by CPS intervention and/or actual changes in client behavior or conditions due to other factors in the lives of families. This has significant positive implications for the CPS system, since it is largely portrayed as an overburdened system that may be ineffective in meeting the needs of maltreating families.

An important rival explanation may be related to the differences in the surveillance of families over time. Following an initial report to CPS, new incidents of maltreatment may be more likely to be detected by neighbors, friends, professionals, or the CPS worker. Over the course of intervention there may be less surveillance of families by CPS workers and others; therefore, new incidents of maltreatment may be less likely to be detected. Following the closure of CPS, persons may be less likely to report new incidents if they believe nothing was done by the system before. Future research that specifically examines the timing of casework contacts over time could help increase the interpretation of these findings. 8-1.273

determines whether CPS continuing services are needed. These explanations are just possible explanations. Analysis would be difficult since there are not enough families with recurrences within 30 days (only 72 of 1,167) to be able to identify correlates of maltreatment recurrence within a 30-day interval. Future research that identifies specific family and situational characteristics related to recurrence in the short term would have immediate implications for the safety evaluation models increasingly used by CPS agencies.

A third finding was that families who were closed at intake had fewer reported recurrences. For the 331 families closed at intake after their index reports were confirmed, 94 percent of them survived without a recurrence for 2 years following the closure of their cases. Since this rate was significantly lower than the rate for families that had been provided continuing services (both of which should have been affected equally by the lack of surveillance following closure), this could indicate that CPS workers are accurate in their initial risk assessments. These results are consistent with those of a Washington state study that conducted a follow-up of low risk CPS cases.<sup>54</sup> Future research is indicated to examine the characteristics of families that may have led to the decision to close their cases at intake and to separate families whose cases may have been closed in CPS intake because all children were placed versus families whose cases were closed due to assessed low risk.

A fourth finding contributes to knowledge building but also has implications for policy and practice. Results indicate that neglect may be a more chronic form of maltreatment than is physical abuse. Over all three time periods the time until first recurrence was significantly shorter for families confirmed for neglect (only) than for families confirmed for abuse (only) at their index report. This was even true for the survival experience following CPS closure. Looking carefully at the time while CPS was active, neglect families had hazard rates ranging from .076<sup>†</sup>

gested by this research to reevaluate both formal and informal policies that suggest neglect cases be given less priority than abuse cases. Future research that examines differences in neglect versus abuse cases and uses the family as the unit of analysis should control for the number of children, since families that experience more neglect are more likely to be larger and, thus, have an increased likelihood to experience recurrences.

The findings of this study further indicate that the time until recurrences decreases as the number of recurrences increases. This suggests that there may be something different about multiple-recurrence families versus single-recurrence families. Further research is needed to explain what accounts for multiple recurrences and to determine if different factors predict the second or third recurrences versus the first recurrence.

## Notes

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36. Fryer and Miyoshi (n. 12 above); Levy et al. (n. 12 above); and Schuerman, Rzepnicki, and Littell (n. 12 above).
37. DePanfilis and Zuravin (n. 5 above).
38. Browne (n. 13 above).
39. Herrenkohl et al. (n. 13 above).
40. Taw (n. 13 above).
41. Levy et al. (n. 12 above).
42. Susan J. Zuravin, Katya Maznyk, and Diane DePanfilis, "Teenage Motherhood: Its Relationship to Child Abuse and Neglect Final Report" (Baltimore: University of Maryland, Baltimore, 1993).
43. Ibid.
44. Lee (n. 14 above), p. 78.
45. The second two intervals o