Final Report

A Retrospective Evaluation

of

North Carolina's

Intensive Family Preservation Services Program

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August 2000

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Introduction and Background

This report presents the results of a study conducted in response to a legislative mandate articulated in Section 5(n) of House Bill 168 of the 1999 Session of the North Carolina General Assembly. The mandate instructed the Division of Social Services to conduct a scientifically rigorous evaluation of the effectiveness of Intensive Family Preservation Services on the child welfare population (excluding mental health and juvenile justice programs), employing treatment and non-treatment (control) groups. It also called for the use of a standardized assessment of imminent risk and clear criteria for placement. The bill was introduced in response to questions raised by legislative analysts with respect to the effectiveness of Intensive Family Preservation Services in North Carolina. The questions arose in light of studies conducted elsewhere over the past decade indicating that IFPS is ineffective in preventing the out-of-home placement of children at high risk of placement prior to services. In light of the existing literature it is appropriate that North Carolina examine its own IFPS program.

While it is true that studies of IFPS employing experimental designs have produced equivocal findings, those findings are not consistent with practice wisdom emanating from IFPS practitioners. Practice wisdom suggests successful interventions with high-risk families when compared with traditional services available through the child welfare system. The inconsistency between the practice wisdom and the research findings begs a critical review of the research designs and methods employed in the research studies. Evidence exists that the research to date may have failed to detect treatment effects rather than demonstrating a lack of treatment effects.

A critical review of the literature reveals some issues in design and implementation of the studies, as well as possible problems with program maturity and model fidelity at the time the studies were conducted. Among the most widely referenced experimental studies are those by Feldman (1991), conducted in New Jersey; Shuerman, Rzipnicki, Littell and Chak (1993), conducted in Illinois; and Yuan, McDonald, Wheeler, Struckman-Johnson, and Rivest (1990), conducted in California. Each of these studies found that out-of-home placement rates did not differ significantly between the experimental groups that received IFPS, and the control groups that did not. However, other researchers (Fraser, Nelson & Rivard, 1997; Heneghan, Horwitz & Levinthal, 1996; Pecora, Fraser, Nelson, McCroskey & Meezan, 1995; and Rossi, 1992) contend that these studies may have suffered design and implementation problems.

For example, the Shuerman study of Illinois' IFPS program (Shuerman, et al, 1993) did not find differentially positive outcomes for IFPS families when compared to non-IFPS families, using placement prevention as the dependent variable. However, Heneghan (et al, 1996) and her colleagues at Yale analyzed this study, and several others, and found that they did not adhere to rigorous methodological criteria. These criteria included:

- Eligibility for services
- Standardized assessment of imminent risk
- Exclusionary criteria
- Assignment to experimental/control groups
- Purity of experimental/control cohorts (i.e., no crossover)
- Family Preservation Services
  Types/Intensity/Duration
- Customary Social Services (for the control group)

Types/Intensity/Duration

- Outcomes

  Criteria for Placement Defined

  Placement determined by observers blinded to treatment condition
- All families accounted for in analyses
- Outcomes other than placement noted

In all, 15 criteria were employed. The Shuerman study met only three (3) of the 15 criteria, which was the least number of criteria met among the 10 studies analyzed. None of the studies faired well using these criteria. Given the present state of management information systems throughout the states, the jurisdictional differences in definitions of terms like "placement" and "service," and the difficulties associated with attribution of placement decision making authority, it would be virtually impossible to comply with all of the Heneghan (et al, 1995) criteria. However, issues of adherence to methodological rigor are real and potentially serious impediments to detecting treatment effects in these studies.

Some of these issues may relate simply to the difficulties of employing randomization strategies in practice settings. Experimental models employ random assignment of potential service recipients into experimental groups (that receive the specified treatment) and control groups (that do not receive the specified treatment). The statistical methods used in experimental designs usually are based upon "difference testing" (e.g. t-tests, analysis of variance, etc). A major problem with the use of experimental designs in human services treatment settings is that many practitioners consider them to be unethical; and the research studies that have employed experimental designs may have suffered implementation problems as a result. It is possible that systematic bias among group assignment might occur because of family workers'

attempts to obtain the intensive services for their more difficult-to-serve families, allowing less service-needy families to be assigned to the control groups.

Rossi (1991, 1992) suggested that the equivocal findings in the early evaluations may have been due to differences in the experimental and control groups with respect to true risk of placement prior to receiving IFPS. Inadequate attempts by workers to judge risk and/or refer only high-risk cases resulted in lower-risk cases being served. Furthermore, attempts to recruit enough families during the studies to achieve adequate sample sizes (particularly in the control groups) may have led to control groups being at lower risk than treatment groups, a priori. With respect to inadequate judgement of risk, IFPS is typically intended for the highest risk families (usually referred to as "imminent risk of placement"), but low placement rates for both experimental and control groups suggests that lower risk families than intended were actually receiving the IFPS services. With respect to lower-risk families in the control groups than in the treatment groups, this situation would mitigate the detection of treatment effects in the experimental group when placement prevention is used as the dependent variable. Ironically, the degree of exposure to detection of abuse, neglect or other family dysfunction that a family receives during an intensive intervention might actually result in increased placement rates among the non-high-risk families that received IFPS when compared to similar families receiving less intensive services.

Observations such as these led Rossi (1991) and other researchers to question the emphasis on placement prevention as the measure of success (Berry, 1992; Meezan & McCroskey, 1996; Fraser, Walton, Lewis, Pecora, & Walton, 1996; Wells & Whittington, 1993). Each of these studies has called for analysis of questions relating to family issues,

family functioning, and different target populations, among other things. Relying on "placement prevention" as the sole indicator of success, which all of the large experimental studies have done, seems to rely on the assumption that all placements are "bad," and that all placements are "preventable." Neither of these is true. Logically, if after 6 weeks of intensive service an IFPS worker recommends that a child or children need to be "placed" in order to provide safety or to meet treatment needs, that decision is likely to be a good one: a success for the child or children, not a failure of IFPS. However, keeping children at home safely is a worthy policy objective. The problem with "placement prevention" is one of measurement more than it is one of philosophy or public policy. Whatever approach is used to critique the existing literature, the ubiquitous outcome measure has been placement prevention.

In addition to the methodological reviews of previous studies, they have been reviewed with respect to statistical and analytic approaches. Fraser, Nelson and Rivard (1997) conducted a meta-analysis of treatment effects in a large number of recent studies in the treatment literature relating to mental health, juvenile services and child welfare (including IFPS). Their approach addressed many of the same methodological and design issues that were included in the Heneghan (et al, 1996) review, but they also posited the deleterious effects of these problems on the interpretation of the statistical findings. They concluded:

> "The data might suggest that FPS does not offer a sufficient response to child abuse and neglect; however, this conclusion must be conditioned on the serious limitations in the research... Counterintuitively, in many of the smaller studies in which [statistical] power should be low, positive findings were observed, and in large studies in which power should be high, null findings were observed.

> These results imply that problems exist not so much in the use of control and comparison conditions (or even in data analyses) as in the sampling of families and the implementation of the independent variable. As with any research, negative findings may signify failure to achieve the desired outcome - in this case failure to avert placement...- or they may represent a failure of the research to detect the success of the program (Bickman, 1990)."

The authors' conclusion suggests that the desirability of large samples for purposes of increasing statistical power might fall victim to variations in treatment fidelity among the programs comprising the samples, thereby inflating the variance attributable to measurement error in relation to the variance attributable to treatment. The result would be the failure to detect statistically the treatment effect. However, if there is assurance of fidelity of the treatment model (in effect, confidence in the independent variable) then larger samples will increase the statistical power to detect the treatment effects, assuming that the effects are there.

To summarize the issues raised as potential problems with the existing research on IFPS include:

1. random assignment: workers or researchers may have wittingly or unwittingly violated random assignment strategies, resulting in non-equivalent experimental and control groups;
2. measuring the dependent variable: "placement prevention" is a problematic dependent variable if (a) the sample is not at high risk, a priori, of placement, (b) fidelity to the treatment model is weak, or (c) in spite of the nobility of the policy objective, placement becomes the best and most defensible case decision;

3. targeting IFPS to high-risk families: low placement rates among all groups receiving IFPS may have been because the samples were either not at high risk or not at equivalent risk; and,

4. treatment fidelity: data from divergent models was pooled in an attempt to increase sample size, possibly increasing the amount of error variance disproportionately compared to variance due to any treatment effect.

Logic Model and Design for the Present Study

The present study addresses the research issues presented at the end of the preceding section through a combination of circumstances in which IFPS operates in North Carolina and the design that was employed to study the program. The issue of model fidelity is addressed largely because IFPS in NC operates under a statutorily defined model. It is, literally, against the law to keep a case open for more than six weeks. Furthermore, policies and standards govern program behavior by specifying such things as the proportion of case time spent in face-to-face contact with clients, the location of service delivery, and types of activities required to be performed. Programs display a very high degree of stability and compliance with the quality assurance measures relating to policy implementation and adherence to program standards. (These data are available in detail in the Division of Social Services' annual reports. See: North Carolina Family Preservation Services Annual Reports 1994, 1995, 1996, 1997, 1998 , and 1999; 2000 forthcoming.)

Second, many of the remaining issues are addressed through the selected design. A retrospective, matched-groups design was employed, and a study population was used for which a standardized CPS risk assessment instrument was tied, by policy, to the placement decision. Data from several child welfare databases were merged to permit the identification and tracking of a variety of risk factors used to construct the equivalent IFPS and non-IFPS groups for purposes of statistical analysis.

The retrospective, matched-groups design allowed the comparison of the treatment outcomes (placement prevention) of children served by the IFPS program and

similar families that did not receive the service. The advantage of employing a retrospective design was that it obviated the need to employ prospective random assignment of service-needy families to experimental and control conditions. The referenced studies have raised many questions about the efficacy of random assignment in the field. The use of a retrospective design includes the advantage that no one had any prior knowledge that the administrative data routinely gathered on the IFPS program and other measures routinely gathered elsewhere would be used to test program effectiveness. No efforts, intended or unintended, are likely to have been made to influence the data with regard to this specific study, because the data used in the study were in existence before the study was envisioned. Thus, no artificial or novel changes in routine IFPS and non-IFPS case practice were implemented to accommodate a prospective study. Such changes have been suspected in the past of interfering with potential treatment effects of the programs under study.

The ratings on the standardized, statewide CPS risk assessment instrument were used to operationalize the definition of "imminent risk" of removal. The NC/CPS risk assessment instrument is completed on all children for whom there is a substantiated report of child maltreatment, and a risk rating of "high" carries with it a policy mandate to remove the child unless an approved alternative plan is immediately implemented. IFPS qualifies as such a plan. It is important to note that the non-IFPS cases in which immediate removal did not occur may be assumed to have approved, alternative "traditional" services plans with the similar intent of keeping the child(ren) at home.

The major tasks necessary to perform the required analyses included the merging of information from several large databases and matching the case records of children

throughout those databases. The final data set contained more than 111,000 records on children who have not received IFPS services throughout all 100 counties in North Carolina, and more than 1,200 children who have received IFPS in counties where the service is available.

Constructing Comparable IFPS and Non-IFPS Groups In order to assure comparability of the IFPS and non-IFPS groups, it was necessary to determine that all data were available for each case to be included in the analyses. The necessary data included the date and type of allegation, the date and type of substantiation, the basic demographics of the child, the CPS risk assessment rating, and specifics of the placement history of the child. The IFPS database, the NCCANS (child abuse and neglect statistics) database and the AFCARS (foster care/placements) database each contained some of these elements.

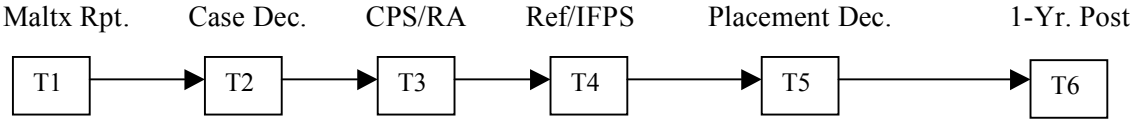
There were 3,258 unduplicated children in the IFPS database with a DSS referral source. These children were matched with families in the NCCANS database using county, date of birth, sex, race, social security number (when known), first name, and gender. The computer algorithms employed matched 2603 cases, for a match rate of 80%. From the 2,603 cases upon which IFPS data were complete and there was an NCCANS record available, cases were removed if the NCCANS record was incomplete (reducing N to 2,403); if there was no substantiated report (reducing N to 2060); or if there was no substantiated report prior to IFPS referral date (reducing N to 1,942). Although the IFPS database was available beginning on January 1, 1994, the CPS risk assessment process was not fully implemented until SFY 95-96. Therefore, IFPS cases with a report date on or after July 1, 1994 were included (reducing N to 1,803). Finally,

cases were removed if the type of maltreatment was "other" (and therefore unknown), "dependent" (because this group includes many non-abuse/non-neglect cases), if there was no maltreatment report prior to the referral date, or if the AFCARS placement data were unavailable. The end result was a population of 1,265 IFPS.

Performing the same processes with the original 146,464 non-IFPS cases in NCCANS (from all 100 counties) resulted in a comparison population of 110,622, including 59,398 non-IFPS cases from counties in which IFPS was available, and 51,224 non-IFPS cases from counties in which IFPS was not available.

Defining Time-to-Placement Having finalized the data set, the next task was to assure comparability of the IFPS and non-IFPS groups with regard to the measurement of the dependent variable: time to placement. This process began by focusing on the attributes and characteristics of IFPS and non-IFPS cases with respect to the occurrence of case activities. There is much variation in the manner in which cases begin and end, and in the order of case processes. The decision about when to "start the clock" when measuring time-to-placement is not a trivial one. The following scenarios demonstrate a few of the possible variations in case flow activity.

Scenario 1: A "model" IFPS Case



- T1 = the date that the maltreatment report is made;
- T2 = the date that the case decision is made (i.e., substantiation date);
- T3 = the date the CPS risk assessment is completed;

- T4 = the date that the case is referred to IFPS;
- T5 = the date of the placement decision; and,
- T6 = the end of the one-year measurement period.

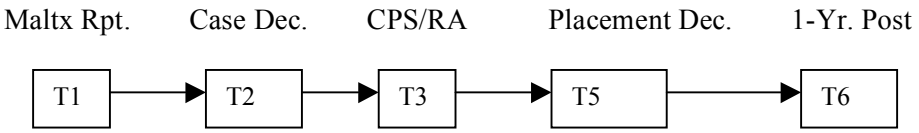
The model in Scenario 1 assumes discrete stages and dates. The timeline of those stages, specifically with respect to the measures taken at T2, T3, and T4, and T5, assume the order of events as depicted in the diagram. The events connected to T2, T3 and T4 can happen very quickly, sometimes simultaneously, but the time from T1 to T2 may take several days or even a few weeks, depending upon the complexity of the case. The interval betweenT4 and T5 is fixed at 1 day to 6 weeks maximum (the legal duration of an IFPS intervention), and T6 is fixed at 365 days from T4. The time from T4 to T5 is included in the time from T4 to T6, because the child is exposed to the risk of placement during the treatment period, as well as during the post treatment period.

Even assuming that the typical IFPS case was as simple and straightforward as depicted in Scenario 1, when comparing the results of IFPS interventions to other interventions experienced by the general CPS population, measures taken at time T4 do not obtain (since T4 relates only to the IFPS intervention). Therefore, while the placement prevention measurement interval in IFPS cases is fairly straightforward (placements made or not made in the 365 days following referral to IFPS), the measurement interval for the general CPS population is less clear. That is, T5, the placement decision, must be anchored by some specific event (and date). But the service history of non-IFPS cases is not as closely governed as in IFPS cases, and the placement decision relating to the services does not need to be made by a certain date after the beginning of service, as is the case during the 6-week IFPS intervention. To understand

the differences between IFPS and non-IFPS cases, additional scenarios are presented below. The definitions of case activities and dates are the same as in Scenario 1, except that there is no T4 (no IFPS service is provided). Therefore, T5, the CPS placement decision date, is not firmly anchored to any other specific case process or date.

Scenario 2, below, represents a CPS case that most closely resembles the IFPS case depicted in Scenario 1.

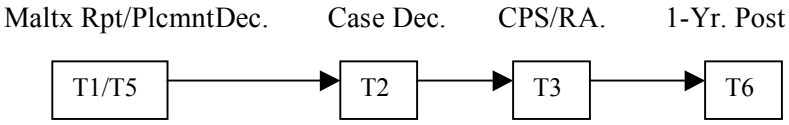
Scenario 2: A "model" CPS Case



Because these families do not receive IFPS, there is no T4 in Scenario 2. Therefore, the T5-time interval during which the occurrence of a placement would be noted may be linked to either the report date (T1), the case decision date (T2), or even the CPS risk assessment completion date (T3), since that date has policy implications linked to the placement decision. Some other date, such as the date of referral to other non-IFPS services might also be selected arbitrarily. However, since the time intervals from T1 to T2, T3, or T5 are not fixed, the relationship between the placement decision date at T5 and the one-year follow-up period ending at T6 becomes nebulous.

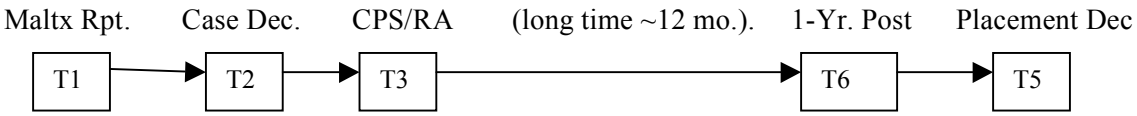
The following frequently occurring scenarios depicting CPS cases further illustrate the complicating factors associated with comparison between IFPS and non-IFPS cases.

Scenario 3: A Variation of the "model" CPS Case



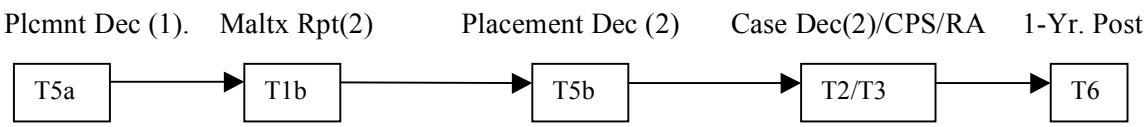
In Scenario 3, placement authority is given by the court through a non-secure custody order at the filing of the maltreatment petition. An actual out-of-home placement may or may not be made. However, a placement might be made prior to the case decision date (T2).

Scenario 4: A Variation of the "model" CPS Case



In Scenario 4, the report, case decision, and risk assessment are completed, and services are provided to the family. Although the family makes little progress, the T6 measure is taken indicating a "successful" non-placement, but a decision to place the child is made shortly thereafter.

Scenario 5: A Variation of the "model" CPS Case



Scenario 5 depicts a situation in which a family has had a prior substantiated report and is under placement authority when the second report is filed (T1b). Since DSS already had placement authority at the time of the second report, there was no need for a second case decision to occur prior to placing the child a second time (although the case decision and subsequent CPS risk assessment, T2/T3, were accomplished after placement at T5b).

Scenarios 2 through 5 depict only a few of the numerous variations among case experiences of the CPS population, and it is difficult to define a "typical" scenario. In any of the comparison scenarios, a referral could be made to IFPS at any time. Thus, for CPS cases not involving IFPS, the most logical link between a case event and a placement decision is the date of the maltreatment report and the date of the placement associated with that report if one occurs, or between T1 and T5. To assure the maximum degree of comparability between the two populations, decision algorithms for measuring time-to-placement for IFPS and non-IFPS/CPS cases are as follows:

> For IFPS cases time-to-placement is "anchored" to the date of referral to IFPS (T4) that is, in turn, linked to the most recent substantiated report if more than one exists (T1); and time-to-placement is measured relative to the date of referral to IFPS (T4).
>
> For non-IFPS cases (i.e., the remainder of the CPS population), time-to-placement is "anchored" to the report date (T1), and time-to-placement is measured from the date of the report.

In both cases, the measurement year is 365 days. For IFPS cases it is 365 days from the date of referral to IFPS (T4) following the most recent substantiated report, and reflects the efficacy of IFPS from the date that IFPS begins. For non-IFPS cases it is 365

days from the date of the substantiated report, and reflects the efficacy of traditional CPS services from the date that traditional CPS activities begin.

The one-year time period to monitor cases with regard to placement was chosen because it is common to much of the existing literature to which this study responds. It is also the typical measurement interval of interest to government programs or services that are funded on an annual basis. However, because the statistical techniques (survival curves/event history analysis) employed in this study include time as a dynamic variable, "time-to-placement" was measured daily throughout the entire measurement interval. This measurement strategy permits the detection of changes in the rate at which placements may occur throughout the one-year measurement interval. It is not used simply as an end-of-year measure.

Defining "Placement" In every comparison in which placement is measured, "placement" is defined as literal, physical placement of the child in an out-of-home setting, not simply the granting of placement authority to the child welfare agency by the courts. This definition controls the requirement that the IFPS cases also appear in the AFCARS database (not fully implemented until 1995) containing this specific out-of-home placement information. Historically, "placement authority" coupled with payment information has served as a proxy for actual placement.

General Comparability of IFPS and Non-IFPS Populations

"General comparability" relates to basic demographics and other potentially important factors that might bias comparisons between IFPS and non-IFPS counties, and between IFPS and non-IFPS cases in the IFPS counties. Particular attention was focused on variables that might influence placement, such as CPS risk assessment rating, types of maltreatment, and child histories of prior reports or prior out-of-home placements. (It will be argued later that these variables indicate differences in the IFPS and non-IFPS populations in the study, and that IFPS programs serve children at substantially higher levels of risk and with more extensive prior histories in child welfare than does the rest of the child welfare service system.) The overall "placement behavior" of IFPS and non-IFPS counties was also examined across all case types, risk levels, and case histories.

With regard to basic demographics, there were no differences found between IFPS and non-IFPS counties on the gender of victim of maltreatment. These data are presented in Table 1, and indicate that for each type of county, about 49.5 % of victims were male and 50.5 % were female.

Table 1. Gender of Children in IFPS and Non-IFPS Counties

Gender of Child	**IFPS County**	**Non-IFPS County**	**Total**
Male	29,991 49.4%	25,481 49.7%	55,472 49.6%
Female	30,661 50.6%	25,753 50.3%	56,414 50.4%
Total	60,652 100.0%	51,234 100.0%	111,886 100.0%

Similarly, as shown in Table 2, no meaningful differences in the age of victims of maltreatment at the date of report or referral were found: differences between the two types of counties across all age categories ranged from 0.3 % to 0.7 %.

Table 2. Age of Child at Report or Referral in IFPS and Non-IFPS Counties

Age of Child	IFPS County	Non-IFPS County	Total
0 – 2 years old	15,189 25.2%	13,188 25.9%	28,377 25.5%
3 – 5 years old	13,266 22.0%	10,832 21.3%	24,098 21.7%
6 – 10 years old	17,752 29.4%	14,635 28.7%	32,387 29.1%
11 – 12 years old	4,957 8.2%	4,338 8.5%%	9,295 8.4%
13 years old or older	9,185 15.2%	7,940 15.6%	17,125 15.4%
Total	60,349 100.0%	50,933 100.0%	111,282 100.0%

Table 3 presents data on the race of victims of maltreatment. The IFPS counties had slightly more white children involved in the child welfare system that did non-IFPS counties (58.3 % vs. 53.6%, respectively), about the same number of African American (37.8% vs. 40.2%, respectively) and substantially fewer American Indian children (1.0 % vs. 3.6 %). Although these differences were statistically significant, they have little meaning without knowing the racial distributions in the general population that are exposed to possible CPS involvement in the same counties. Previous research has demonstrated that IFPS programs serve a disproportionately large number of African-American children relative to the population characteristics.

Table 3. Race of Children in IFPS and Non-IFPS Counties

Race of Child	IFPS County	Non-IFPS County	Total
White	35,345 58.3%	27,481 53.6%	62,826 56.2%
African American	22,921 37.8%	20,584 40.2%	43,505 38.9%
American Indian	596 1.0%	1,847 3.6%	2,443 2.2%
Other	1,790 3.0%	1,322 2.6%	3,112 2.8%
Total	60,652 100.0%	51,234 100.0%	111,886 100.0%

Factors other than demographics proved to be more revealing and compelling. Table 4 compares IFPS and non-IFPS counties with respect to the likelihood of occurrence of different types of maltreatment. Comparing IFPS to non-IFPS counties, IFPS counties had slightly lower rates of physical and emotional abuse (4.5 % vs. 5.3 %), substantially lower rates of neglect (53.8 % vs. 61.1 %) and substantially higher rates of injurious environment (35.4 % vs. 27.2 %). Conversely, differences between IFPS and non-IFPS counties on sexual abuse and "multiple types" were in the order of only 0.1 %. The overall chi-square statistic for these differences is significant ($X^2 = 888.11$, df = 4, $p<.001$; Nifps = 60, 652; Nnonifps = 51,235).

Table 4. Types of Maltreatment of Children in IFPS and Non-IFPS Counties

Type of Maltreatment	IFPS County	Non-IFPS County	Total
Physical/Emotional Abuse	2,710 4.5%	2,695 5.3%	5,405 4.8%
Sexual Abuse	2,921 4.8%	2,505 4.9%	5,426 4.8%
Neglect	32,628 53.8%	31,308 61.1%	63,936 57.1%
Injurious Environment	21,454 35.4%	13,918 27.2%	35,372 31.6%
Multiple Types	939 1.5%%	809 1.6%	1,748 1.6%
Total	60,652 100.0%	51,235 100.0%	111,886 100.0%

Typical CPS risk assessment ratings of cases also differed slightly, but significantly, between IFPS and non-IFPS counties. These data are presented in Table 5. IFPS counties had slightly higher rates of CPS-high-risk cases (23.6 % vs. 23.0 %). Since IFPS is typically targeted for high-risk cases, all lesser categories of CPS-rated risk were collapsed into a single non-high-risk category to simplify analysis and discussion. The chi-square for these differences is statistically significant ($X^2 = 133.83$, df = 3, $p<.001$; Nifps = 60, 146; Nnonifps = 50,842).

Table 5: CPS Risk Assessment Ratings of Children in IFPS and Non-IFPS Counties

CPS Risk Rating	IFPS County	Non-IFPS County	Total
High Risk	14,166 23.6%	11,717 23.0%	25,883 23.3%
Medium Risk	26,445 44.0%	22,774 44.8%	49,219 44.3%
Low Risk	17,355 28.9%	13,873 27.3%	31,228 28.1%
Not Required	2,180 3.6%	2,478 4.9%	4,658 4.2%
Total	60,146 100.0%	50,842 100.0%	110,988 100.0%

Table 6 presents data on another indicator of general risk in CPS populations: the number of prior substantiated reports of maltreatment. Cases in the study database were examined to see if there were substantiated reports prior to the most recent report responsible for a case being assigned to a study cohort. IFPS counties had higher rates of cases with a prior substantiation (11.3 % vs. 10.6 %) and also for multiple (2 or more) prior substantiations (2.7 % vs. 2.3 %). The overall chi-square for these differences was statistically significant ($X^2 = 33.62$, df = 2, $p<.001$; Nifps = 60, 652; Nnonifps = 51,235), although the differences were small.

Table 6. Prior Substantiated Reports for Children in IFPS and Non-IFPS Counties

Prior Substantiations	IFPS County	Non-IFPS County	Total
0 Prior Substantiations	52,173 86.0%	44,643 87.1%	96,816 86.5%
1 Prior Substantiation	6,846 11.3%	5,408 10.6%	12,254 11.0%
2 or More Prior Substantiations	1,633 2.7%%	1,184 2.3%	2,817 2.5%
Total	60,652 100.0%	51,235 100.0%	111,887 100.0%

Finally, overall placement rates were examined. These data are presented in Table 7. IFPS counties have a somewhat higher overall placement rate than non-IFPS counties when placement is measured as occurring within one year of the most recent report (11.3 % vs. 9.9 %, respectively). The chi-square statistic for this difference is significant ($X^2 = 56.53$, df = 1, $p<.001$; Nifpsco = 60, 652; Nnonifpsco = 51,235).

Table 7. Number of Children "Placed" Within One Year in IFPS and Non-IFPS Counties

Number Placed Within One Year	IFPS County	Non-IFPS County	Total
No Placement	53,781 88.7%	46,145 90.1%	99,926 89.3%
Placed Out-of-Home	6,871 11.3%	5,090 9.9%	11,961 10.7%
Total	60,652 100.0%	51,235 100.0%	111,887 100.0%

With the exception of some of the differences in maltreatment type, these differences are fairly small; sometimes only one or two percentage points. However,

they are systematic, as evidenced by the significant chi-square statistics in each case, and with an overall N of approximately 112,000 cases, even a few percentage points can mean several thousand cases. Thus, even though small, any reliable differences must be taken seriously.

Taken as a whole, the differences present an interesting combination of factors. In North Carolina, IFPS is asked to be a "placement prevention" program, but the IFPS providers operate in counties with higher general placement rates than non-IFPS counties. IFPS is intended to serve high-risk cases, but the counties in which IFPS is offered have general CPS populations with higher CPS risk ratings and with greater numbers of prior substantiated reports of maltreatment than non-IFPS counties. These are important because, it will be shown that even in the IFPS counties (already "stacked" with high-risk cases and an elevated predisposition to make placements) IFPS service providers serve the truly highest risk cases in the counties in which they operate.

The High-Risk Nature of the IFPS Population in North Carolina

In an attempt to reduce statistical "noise" and to reduce possible sources of systematic differences in CPS system behavior between IFPS and non-IFPS counties, IFPS cases were compared to cases in the IFPS-counties that did not receive IFPS services and also compared separately to the population of CPS cases in the non-IFPS counties. This decision not only reduces some sources of error variance by not pooling sub-populations with known statistically significant differences, but addresses directly one of the criticisms of previous studies of IFPS by accounting for large numbers of "non-high-risk" cases from counties with generally lower placement rates. Further, it is of interest to analyze them separately to explore the possibility of system-level influences of IFPS on placement rates in the two types of counties.

Before placement rates and placement behavior in the IFPS counties can be addressed meaningfully, it is important to know how IFPS is used in these counties with respect to risk level of families and types of cases served. Recall that IFPS counties had slightly lower rates of physical and emotional abuse that non-IFPS counties, substantially lower neglect rates, and substantially higher injurious environment rates (other types of maltreatment are essentially equally distributed across the two types of counties).

The data in Table 8 begin to tell the story of the risk levels experienced by IFPS families. In the IFPS counties, the IFPS providers serve a significantly larger proportion of physical and emotional abuse cases than does the remainder of the CPS service system in those same counties (5.9 % vs. 4.4 %, respectively); in the non-IFPS counties 5.3 % of caseloads involve physical or emotional abuse. Similarly, IFPS programs serve a higher

proportion of injurious environment cases (37.3 % vs. 33.4 %), although non-IFPS counties seem to experience fewer of these cases (27.2 %). IFPS providers also serve proportionally more "multiple maltreatment types" cases (2.5 % vs. 1.5 %) in the IFPS counties, with non-IFPS counties experiencing these cases at a rate of about 1.6 %. These data suggest strongly that the case referral mechanisms are referring disproportionately more serious types of maltreatment cases to IFPS providers than to the remainder of the child welfare service system in those counties ($X^2 = 920.37, df = 8$, $p<.001$; Nifps = 1,265; Nnonifps = 59,398; Nnonifpsco = 51,224).

Table 8. Type of Maltreatment of Children Receiving and Not Receiving IFPS

Type of Maltreatment	**Received IFPS**	**No IFPS, but IFPS County**	**No IFPS, Non-IFPS County**	**Total**
Physical/Emotional Abuse	75 5.9%	2,635 4.4%	2,695 5.3%	5,405 4.8%
Sexual Abuse	30 2.4%	2,893 4.9%	2,503 4.9%	5,426 4.8%
Neglect	657 51.9	31,975 53.8%	31,304 61.1%	63,936 57.1%
Injurious Environment	472 37.3%	20,987 35.3%	13,913 27.2%	35,372 31.6%
Multiple Types of Abuse	31 2.5%	908 1.5%	809 1.6%	1,784 1.6%
Total	1265 100.0%	59,398 100.0%	51,224 100.0	111,887 100.0%

In addition to disproportionality across types of maltreatment, IFPS providers serve disproportionately high numbers of high-risk cases, both with respect to CPS risk-rating and the child's prior history of maltreatment. These data are presented in Table 9. The proportion of CPS high-risk cases served by IFPS is compelling. CPS-high-risk

cases account for 38.8 % of IFPS cases, compared with only 23.2 % for non-IFPS cases in the same counties, and only 23.0% in non-IFPS counties. These differences are large numerically and are highly statistically significant ($X^2 = 432.32$, df = 6, $p<.001$; Nifps = 1,252; Nnonifps = 58, 905; Nnonifpsco = 50,831).

Table 9. CPS Risk Assessment Ratings of Children Receiving and Not Receiving IFPS

CPS Risk Rating	Received IFPS	No IFPS, but IFPS County	No IFPS, Non-IFPS County	Total
High Risk	486 38.8%	13,684 23.2%	11,713 23.0%	25,883 23.3%
Medium Risk	601 48.0%	25,850 43.9%	22,768 44.8%	49,219 44.3%
Low Risk	122 9.7%	17,234 29.3%	13,872 27.3%	31,228 28.1%
Not Required	43 3.4%	2,137 3.6%	2,478 4.9%	4,658 4.2%
Total	1265 100.0%	59,398 100.0%	51,224 100.0	111,887 100.0%

The data in Table 10 address the issue of prior maltreatment of children. Nearly one quarter (24.7 %) of IFPS cases have experienced a substantiated prior report of maltreatment, compared with only 11.0 % for the non-IFPS cases. An additional 11.0 % of IFPS cases have two or more prior substantiations vs. only 2.5 % for non-IFPS cases, and 2.3 % for cases in non-IFPS counties. Thus, whereas only 13.5% of non-IFPS cases and 12.9% of cases in non-IFPS counties have one or more prior substantiations, more than 1/3 (35.7%) of IFPS cases have prior substantiations. Again, these differences are

numerically large and statistically significant (X^2 = 670.82, df = 2, p<.001; Nifps = 1,265; Nnonifps = 59,398; Nnonifpsco = 51,224).

Table10. Prior Substantiated Reports for Children Receiving and Not Receiving IFPS

Prior Substantiations	**Received IFPS**	**No IFPS, but IFPS County**	**No IFPS, Non-IFPS County**	**Total**
0 Prior Substantiations	813 64.3%	51,371 86.5%	44,632 87.1%	96,816 86.5%
1 Prior Substantiation	313 24.7%	6,533 11.0%	5,408 10.6%	12,254 11.0%
2 or More Prior Substantiations	139 11.0%	1,419 2.5%	1,184 2.3%	2,817 2.5%
Total	1265 100.0%	59,398 100.0%	51,224 100.0	111,887 100.0%

Not only do IFPS cases represent children with more extensive histories of child maltreatment, but, as can be seen in Table 11, the level of risk as determined by the CPS risk assessment instrument is also higher. In fact, there is a 4:1 ratio of CPS high-risk prior substantiations served by IFPS providers compared to non-IFPS providers and cases in non-FPS counties (11.1 % for IFPS vs. 2.8 % for both non-IFPS cases and cases in non-IFPS counties). This indicates that the IFPS providers are serving disproportionately high numbers of families with high-risk ratings (X^2 = 308.48,df = 2, p<.001; Nifps = 1,265; Nnonifps = 59,398; Nnonifpsco = 51,224).

Table 11. CPS High-Risk Ratings on Prior Substantiated Reports for Children Receiving and Not Receiving IFPS

CPS High-Risk Prior Substantiated Reports	Received IFPS	No IFPS, but IFPS County	No IFPS, Non-IFPS County	Total
No Prior High-Risk Substantiated Reports	1,124 88.9%	57,741 97.2%	49,773 97.2%	108,638 97.1%
One or More High-Risk Substantiated Reports	141 11.1%	1,657 2.8%	1,451 2.8%	3,249 2.9%
Total	1265 100.0%	59,398 100.0%	51,224 100.0	111,887 100.0%

The child welfare literature suggests that a history of prior placement or "placement authority" is a predictor of future placement following a new substantiated report. These data were examined for the North Carolina program, and they are presented in Table 12. A significantly higher proportion of IFPS cases (16.6 %) had experienced a prior spell of "placement authority," compared to the non-IFPS cases (6.1 %), and cases in non-IFPS counties (5.1 %) ($X^2 = 329.06$, df = 1, $p<.001$; Nifps = 1,265; Nnonifps = 59,398; Nnonifpsco = 51,224).

Table 12. Number of Prior Spells of Placement Authority for Children Receiving and Not Receiving IFPS

Number of Prior Spells of Placement Authority	Received IFPS	No IFPS, but IFPS County	No IFPS, Non-IFPS County	Total
No Prior Spells of Placement Authority	1,055 83.4%	55,765 93.9%	48,614 94.9%	105,434 94.2%
One or More Spells of Placement Authority	210 16.6%	3,633 6.1%	2,610 5.1%	6,453 5.8%
Total	1265 100.0%	59,398 100.0%	51,224 100.0	111,887 100.0%

To summarize the data in Tables 8 though 12, in the approximately 40 counties in North Carolina where IFPS programs are, or have been, available they serve significantly disproportionately large numbers of cases with high-risk factors when compared with the rest of the CPS service system in those counties. These factors include high CPS risk ratings, prior substantiated reports, prior CPS high-risk substantiated reports, and prior spells of placement authority. Any discussion of placement prevention must be conducted in light of these factors and their individual and collective potential to mitigate the ability of any program to prevent placement.

Treatment Effects of Intensive Family Preservation Services

Because IFPS cases serve, disproportionately, the highest risk, most "historied" CPS cases, it is essential to control for these factors when comparing the success of IFPS, as measured by placement prevention. While IFPS can and should be compared to the entire, general CPS population (in both IFPS and non-IFPS counties) in order to inform policy decisions and program planning, its effectiveness with regard to placement prevention should be determined through comparisons with only the most similar, highest risk, most "historied" cases in the non-IFPS population.

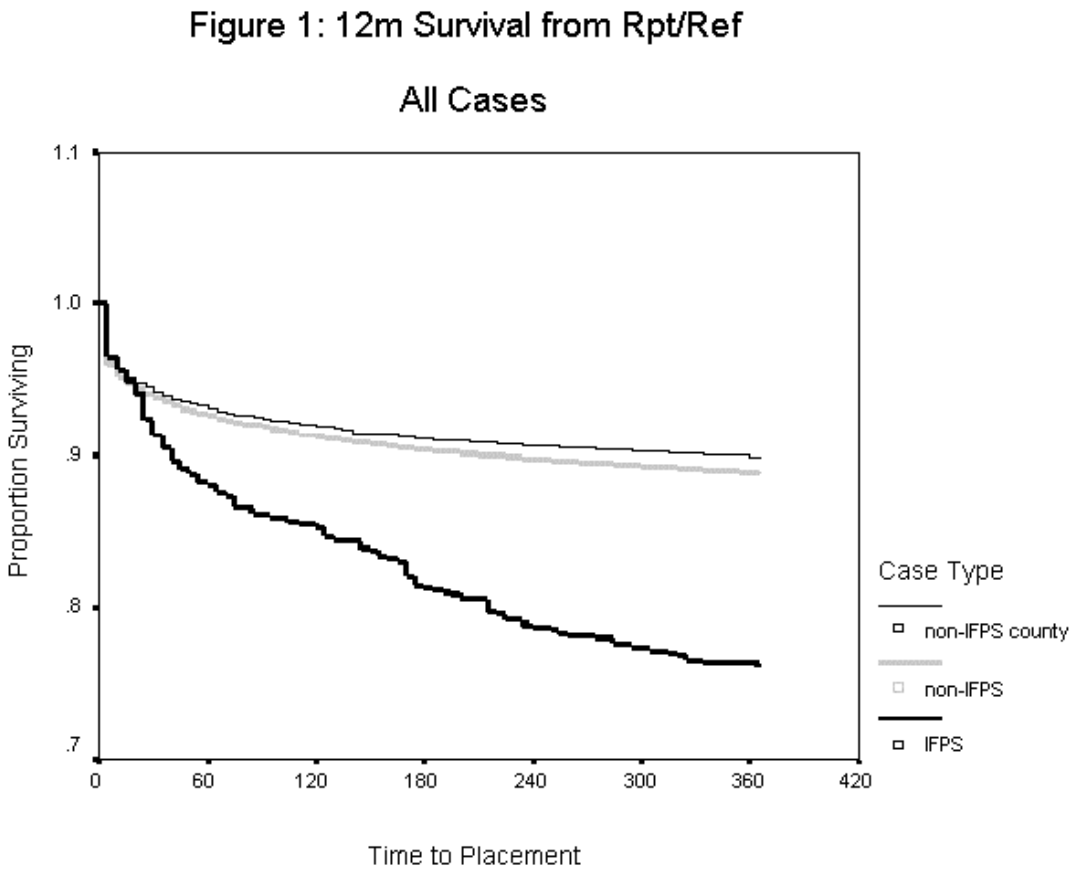
Event history analysis and survival curves are employed to assess differences in placement histories in this study. This analytic technique was first suggested for use in IFPS evaluations by Fraser and colleagues in 1992, (Fraser, Pecora, Papuang, & Haapala, 1992), but no subsequent studies are known to have used it until now. The three sub-populations of child welfare cases compared herein are: (a) those receiving IFPS; (b) those not receiving IFPS but residing in IFPS counties; and, (c) those residing in counties where IFPS is not available. This analytic technique is preferable to traditional discriminant function analysis, logistic regression, or difference testing of sample means in that it expressly accounts for the dynamic nature of time.

The following series of survival curves and their accompanying statistical summaries present an interesting picture of the effectiveness of IFPS services on both the prevention and the delaying of placements following maltreatment. The series of curves presents varying combinations of risk factors, including CPS risk rating, previous child welfare histories, and types of maltreatment. It will be seen that by focusing only on the

difference in the rate of placement at the end of a one-year, post-service, follow-up period, without controlling for these risk factors or the passage of time, it could be concluded that IFPS is ineffective. However, by controlling for risk and accounting for time, a very different picture of the effectiveness of IFPS is presented.

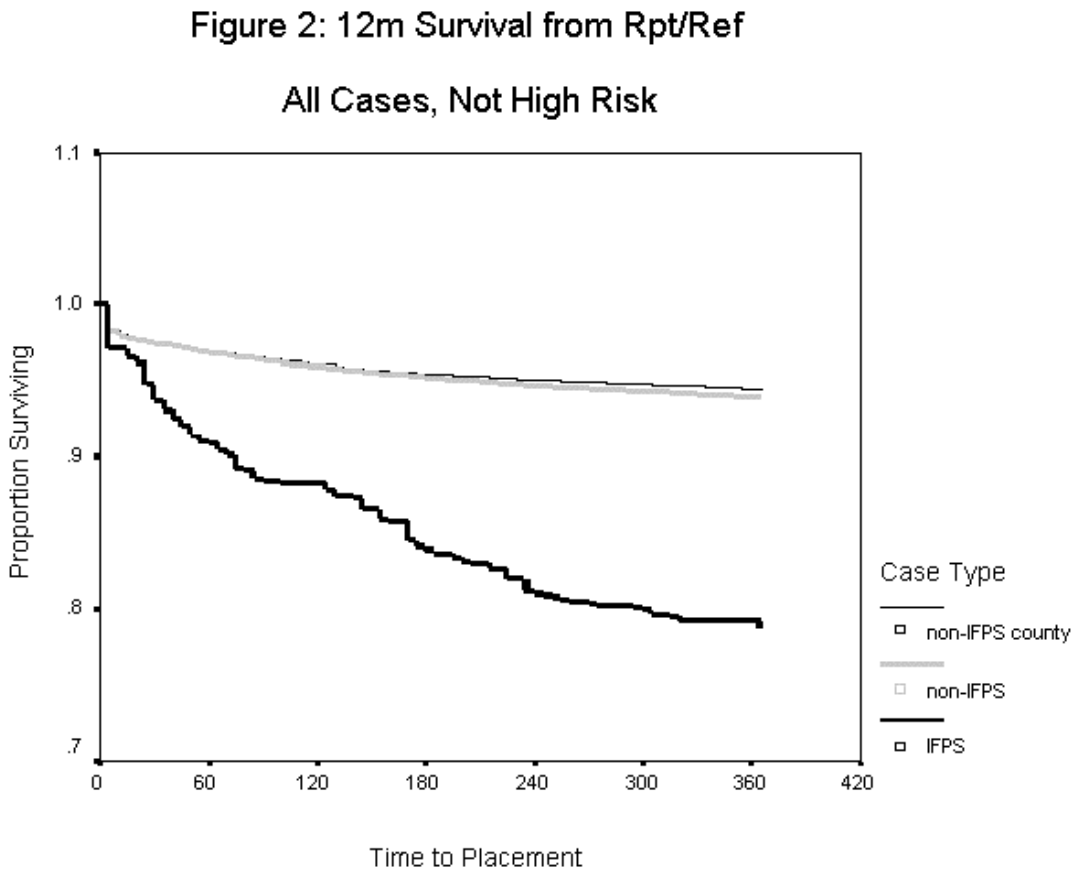
Figures 1 through 15 are "survival curves" and are based on "proportional hazard" models. The "hazard" to be avoided in each of these curves is "out-of-home placement," and "survival" means "staying at home." Each of these curves starts at "time zero" with 100% of the population of interest (represented as "1.0" on the y-axis) at home, and as time passes, some proportion of the population "experiences the hazard," and the curve drops away from 100%, or 1.0 on the y-axis. Therefore, the higher and flatter the curve, the better the placement outcomes for the population represented in the curve. Conversely, the steeper and lower the curve, the worse are the placement outcomes.

The survival curves in Figure 1 depict the pattern of out-of-home placement for the entire child welfare population during the period between January 1994 and June 1999, inclusive. There is virtually no difference between the three curves during the first several weeks of case activity, and also very little difference between the placement rates of the non-IFPS counties and the non-IFPS cases in counties in which IFPS is offered. In both cases the initial placement rates are about 4 percent and at the end of one-year the placement rate at 8 to 9 percent. These curves are based on more than 111,000 cases, and are highly reliable. Viewed in isolation, the placement rate of the IFPS cases appears to exceed dramatically the placement rate in the general population after the first few weeks of case activity, with the one-year placement rate at 23 to 24 percent. However, no risk factors are controlled in the analysis in Figure 1, and it has been demonstrated in



preceding tables that the IFPS providers serve the highest risk and most "historied" child welfare cases. Thus, these curves illustrate the potential for misinterpretation of data if only the end-of-year placement rates are examined, without consideration of compelling differences among the populations represented by the curves.

In fact, if all cases that received high-risk ratings on the standardized CPS risk assessment instrument are eliminated from the analysis, as has been done in Figure 2, the initial placement rate remains low and the placement rate at the end of one year is only 3 or 4 percent among cases not served by IFPS. This is not surprising since there is no



policy mandate to remove children from the home when moderate to low risk ratings are assigned.

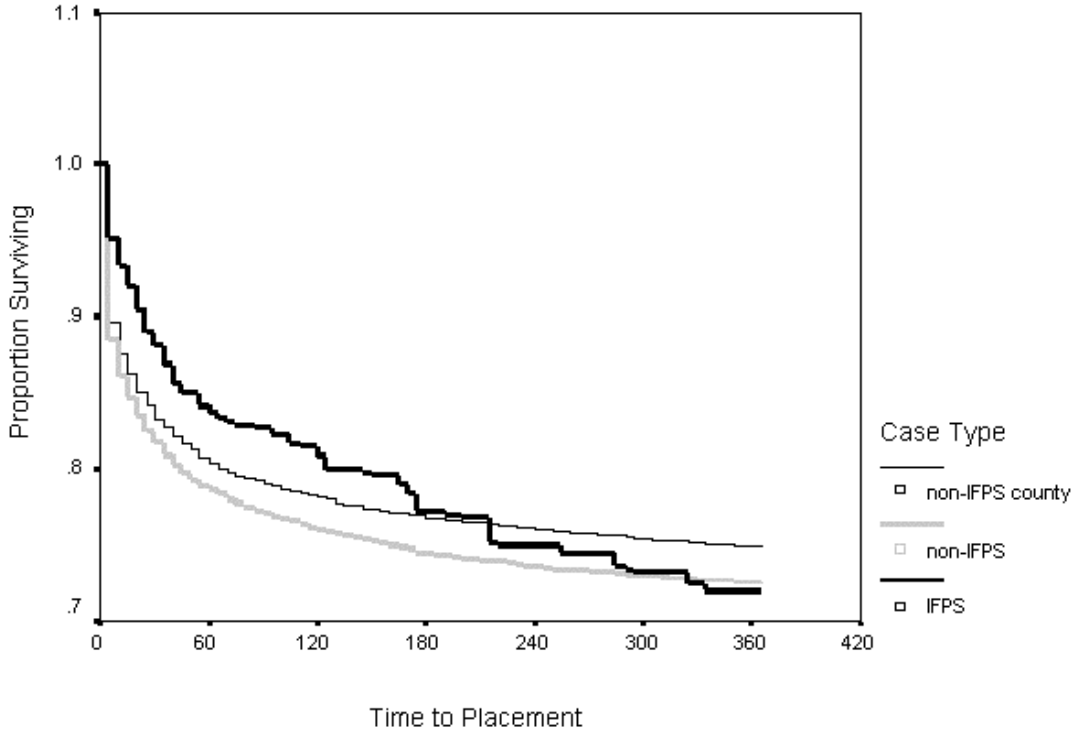
The placement rate for IFPS cases that are not high-risk remains low at the beginning of the case, but increases for the first 60 to 70 days of case activity. The rate of placements declines after that point, and stabilizes at about 20 percent at the end of one year. Although the placement rates are lower for all three curves when high-risk cases are removed from the analysis, the curves in Figure 2 are consistent with the research literature. Some studies have suggested that the increased exposure to "the system" that families receive during intensive in-home services results in higher subsequent detection of abuse and/or neglect, and therefore higher placement rates than similar cases receiving

traditional services involving much less case contact. Also, it has been suggested that families referred to IFPS that have not been assessed as being at a high-risk level on the CPS risk assessment instrument represent the upper end of the medium-risk cases. This situation would account for some of the difference in the placement rates among these curves, since virtually no low risk cases are referred to IFPS. The general child welfare population curves, on the other hand, include many low-risk cases in which placement is highly unlikely.

Conversely, as depicted in Figure 3, if all CPS non-high-risk cases are eliminated from the analysis leaving only the high-risk cases for both IFPS and non-IFPS services (where there is a CPS policy mandate to place the child out of home based on the standardized CPS risk assessment instrument), a very different picture emerges of placement rates and placement behavior of the IFPS cases and non-IFPS cases. The survival curves in Figure 3 clearly show a lower placement rate and delayed placements for IFPS cases for the first six months of case activity. At the six-month measurement interval these differences are statistically significant. Between six and 12 months this treatment effect for the IFPS cases appears to diminish, and at one year there is no significant difference between the IFPS curve and the and to non-IFPS curves. However, it has been demonstrated that the IFPS cases are "pre-loaded" with multiple high-risk factors. Therefore a finding of “no difference” in the placement rates between IFPS and non-IFPS cases at one-year is actually indicative of good performance in the IFPS cases, but to a non-measurable degree unless specific risk factors are identified. Subsequent figures will demonstrate just how powerful the treatment effect of IFPS is when the multiple risk factors are controlled in the analyses.

Figure 3: 12m Survival from Rpt/Ref

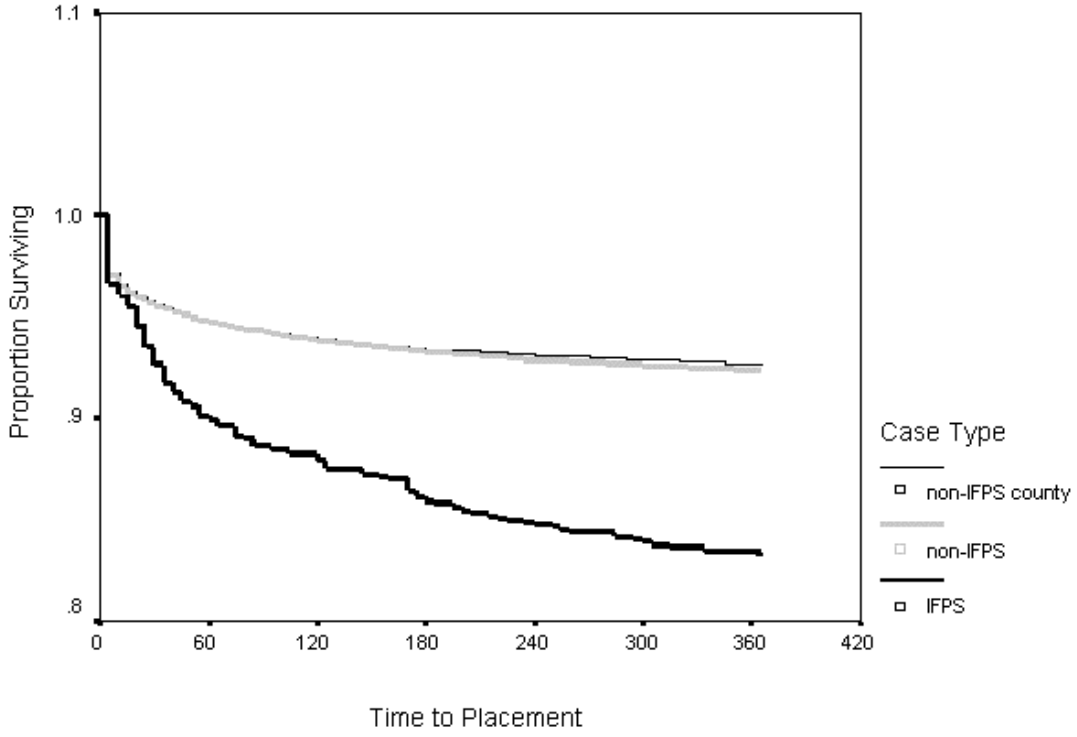
All Cases, High Risk



The placement history of a child is a recognized predictor of the likelihood of future placement. If cases in which no prior placements have occurred are selected for analysis (Figure 4), the placement rate among IFPS cases is about 16 percent at the end of one-year post service, compared with 5 to 6 percent for non-IFPS cases. However, the higher placement rate among IFPS cases is most likely attributable to the disproportionately high risk ratings and multiple risk factors present in the IFPS cases compared with the non-IFPS cases. The non-IFPS cases disproportionately comprise more low and moderate risk cases irrespective of prior placement histories.

Figure 4: 12m Survival from Rpt/Ref

All Cases, No Prior Placement



If only high-risk cases with no prior placements are selected (Figure 5) than the IFPS placement rate once again emerges as lower and delayed when compared with the rest of the child welfare system. The child placement rate approximates 18 percent for the entire child welfare population of high-risk cases at the end of one year, with the initial treatment effects associated with IFPS diminishing at about that same time.

Figure 5: 12m Survival from Rpt/Ref

High Risk Cases, No Prior Placement

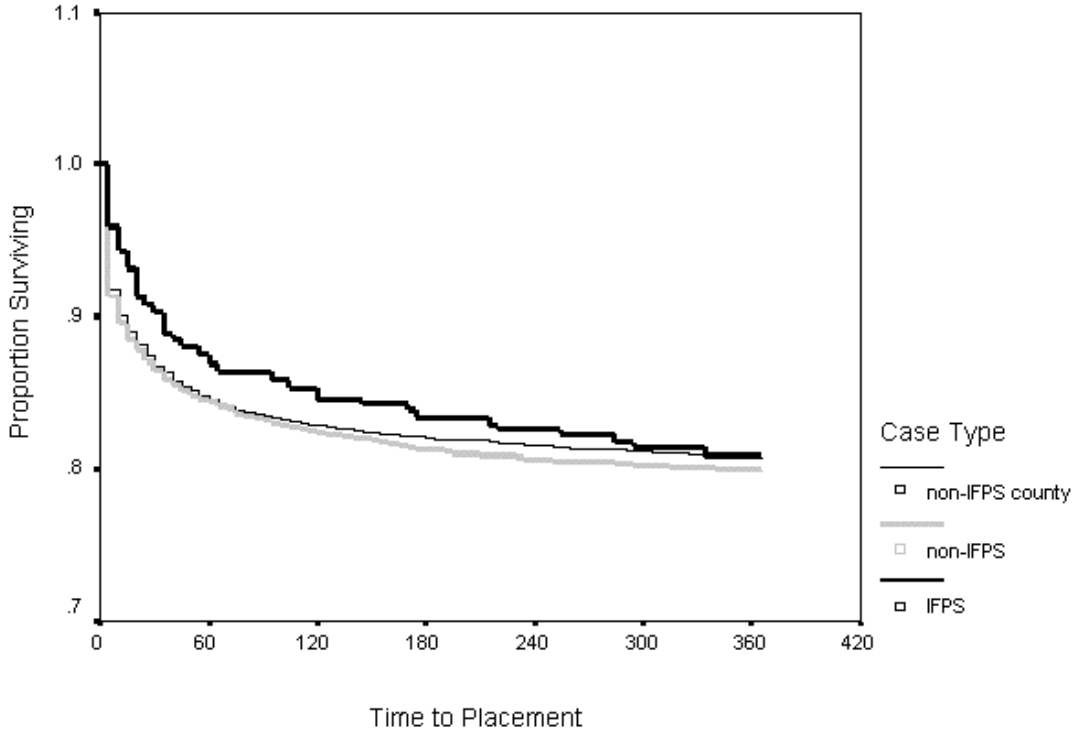
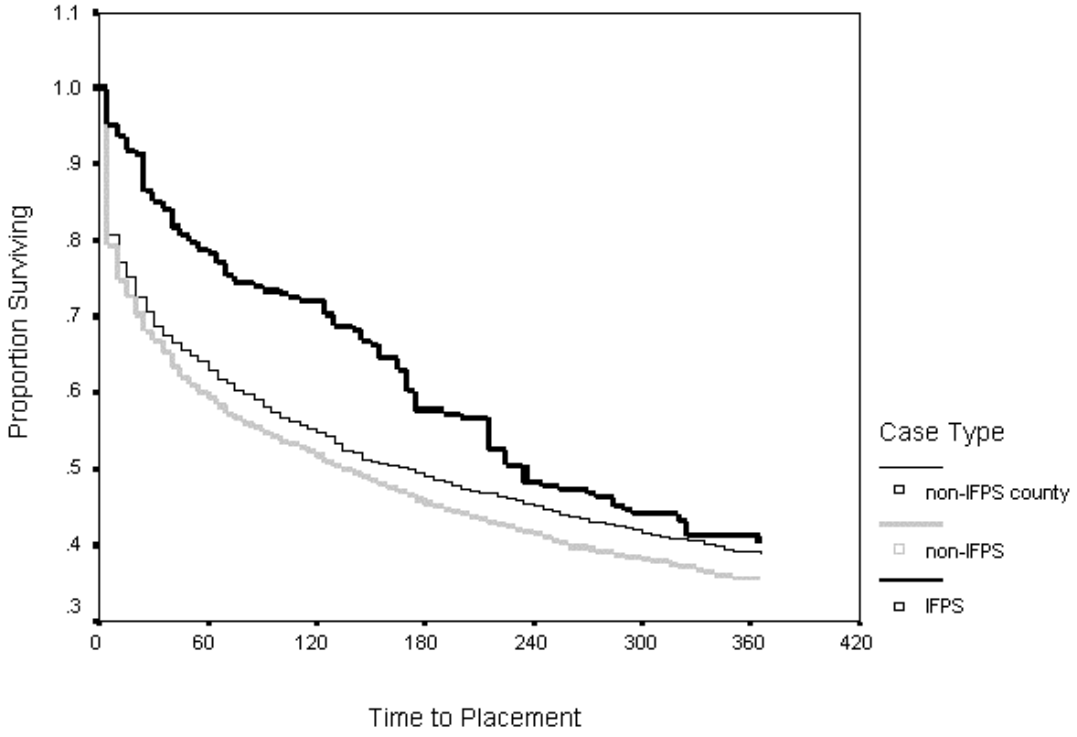


Figure 6 presents the results of survival analysis on all cases in which one or more prior placements have occurred. Other risk factors (CPS risk assessment rating, prior substantiations, etc.) are not controlled in Figure 6. Among families that had experienced one or more prior placements, IFPS is substantially more effective in preventing or delaying placements than the rest of the child welfare system. The difference between the IFPS curve and the non-IFPS curves is statistically significant (Wilcoxon/Gehen statistic = 28.55, df = 2, $p < .001$).

Figure 6: 12m Survival from Rpt/Ref

All Cases, One+ Prior Placement



As risk factors are combined, IFPS appears to become increasingly effective. Figure 7 displays the results of survival analysis on cases selected on the basis of being both CPS high-risk cases and having experienced one or more prior placements. The IFPS and non-IFPS curves are essentially parallel, with the IFPS performance being substantially superior to the rest of the child welfare system with these multiple-risk cases. At any point in time, IFPS posts 20% to 30% fewer out-of-home placements than the child welfare system at large. The difference between the IFPS and non-IFPS curves is statistically significant (Wilcoxon/Gehen statistic = 56.31, df = 2, $p < .001$); and recall that the comparison (general child welfare) population is based upon more than 111,000

cases, so that differences of even a few percentage points represents thousands of children and families.

Figure 7: 12m Survival from Rpt/Ref

High Risk Cases, One+ Prior Placement

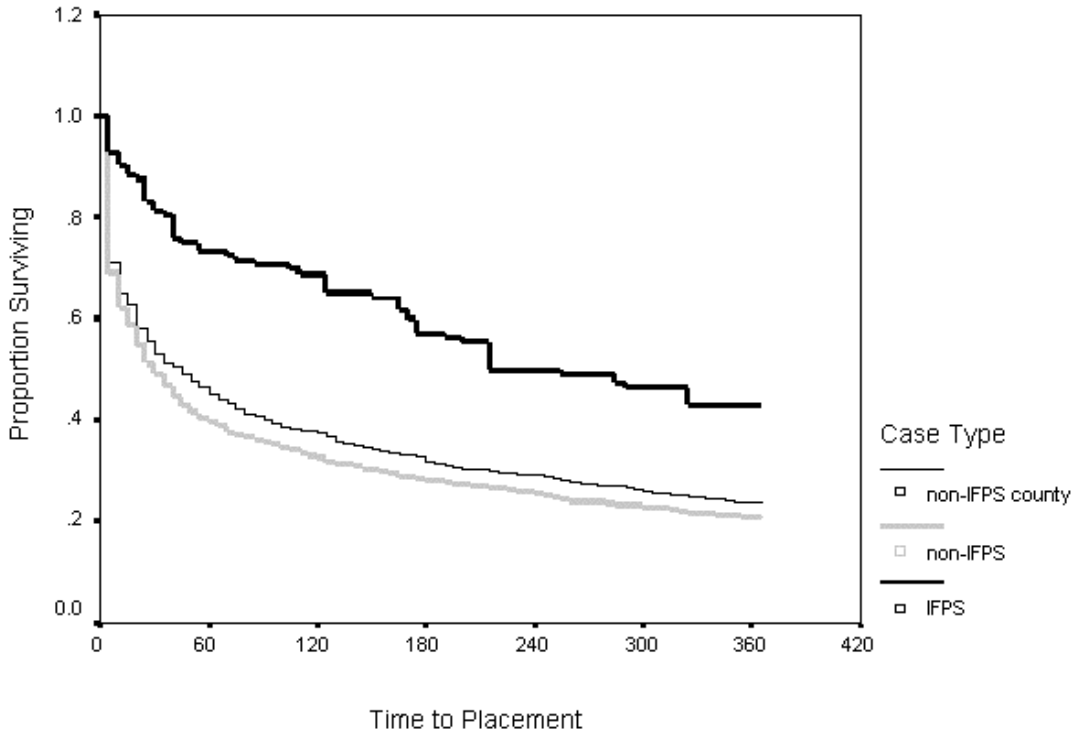
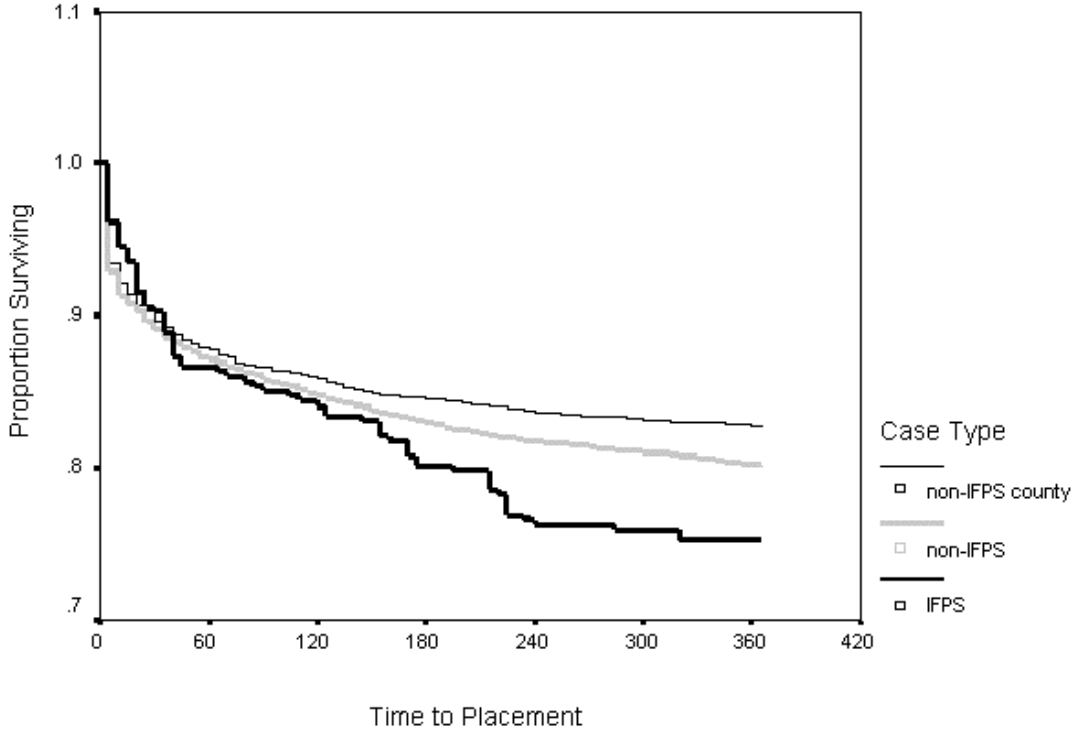


Figure 8 illustrates that "prior substantiations" alone does not affect the shape of the curves for the first six months of case activity. However, controlling for no other risk factors, the IFPS case placement rate is higher than the remainder of the child welfare system, stabilizing at about 24 percent after eight months. The non-IFPS rate and the non-IFPS county rate stabilize at about 18% and 16%, respectively. Recall, however, that unlike the rest of the child welfare cases, those receiving IFPS are pre-loaded with

other risk factors. Therefore, once again, the lack of statistically significant differences in the placement rates among these three curves could be interpreted as evidence of successful placement prevention in the IFPS cases. Recall also that the non-IFPS counties have, a priori, a lower overall placement rate than IFPS counties.

Figure 8: 12m Survival from Rpt/Ref

All Cases, 1 Prior Subs.

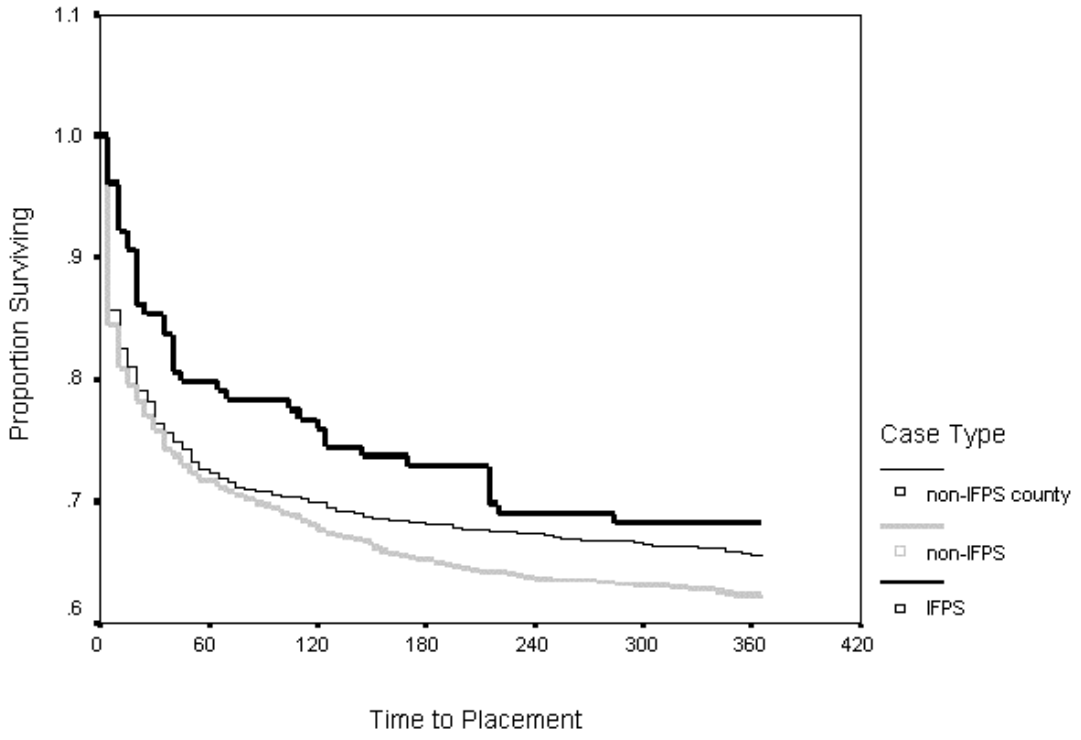


When "prior substantiations" is combined with CPS high-risk ratings, the trends again change and clearly indicate that cases receiving IFPS services have the best placement prevention rates. Figure 9 displays these results, with the difference between

the IFPS curve and the non-IFPS curve being statistically significant (Wicoxon/Gehen = 4.4, df = 1, p< .01).

Figure 9: 12m Survival from Rpt/Ref

High Risk Cases, 1 Prior Subs.



Figures 10 and 11 illustrate the impact of multiple prior substantiations on the child welfare system's ability to prevent placement. Looking only at multiple prior substantiations (controlling for no other risk factors) IFPS appears to outperform the rest of the system for the first six months of case activity. After six months the survival curves cross, the treatment effect dissipates, and the differences are not significant. However, when multiple prior substantiations are coupled with CPS high-risk as a sorting

factor (Table 11), IFPS clearly outperforms the remainder of the system with dramatically lower placement rates for the first nine months of case activity, and is statistically significantly better than non-IFPS cases throughout the entire measurement period (Wilcoxon/Gehen = 5.7, df = 1, p< .02).

Figure 10: 12m Survival from Rpt/Ref

All Cases, 2+ Prior Subs.

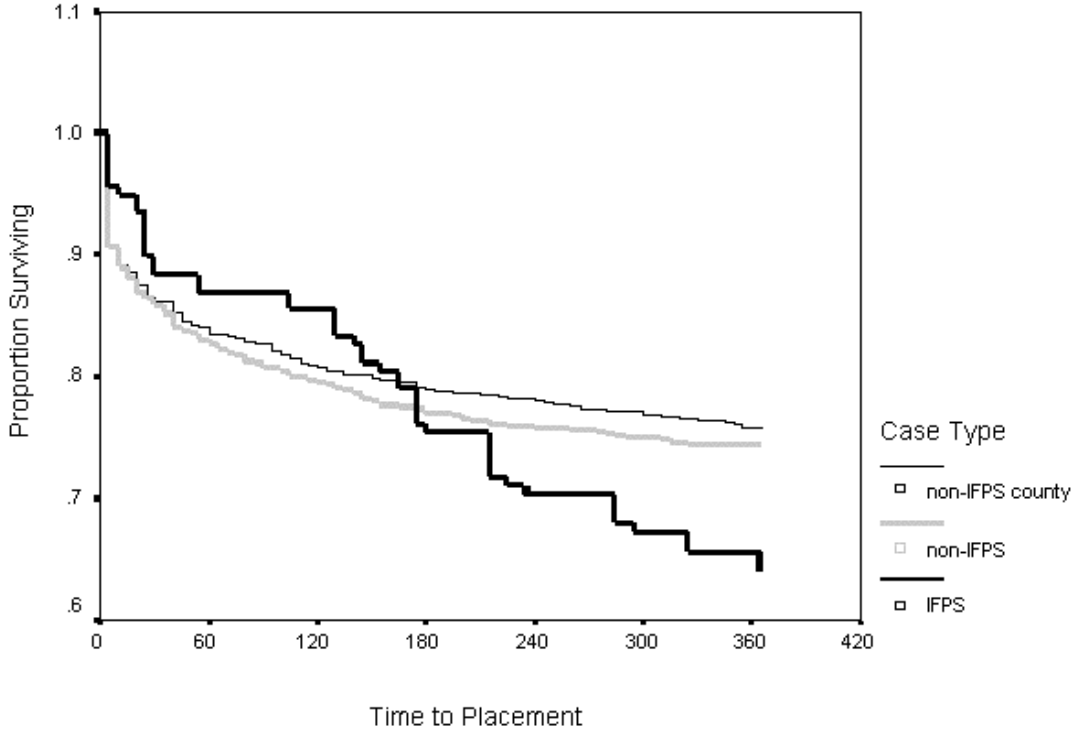
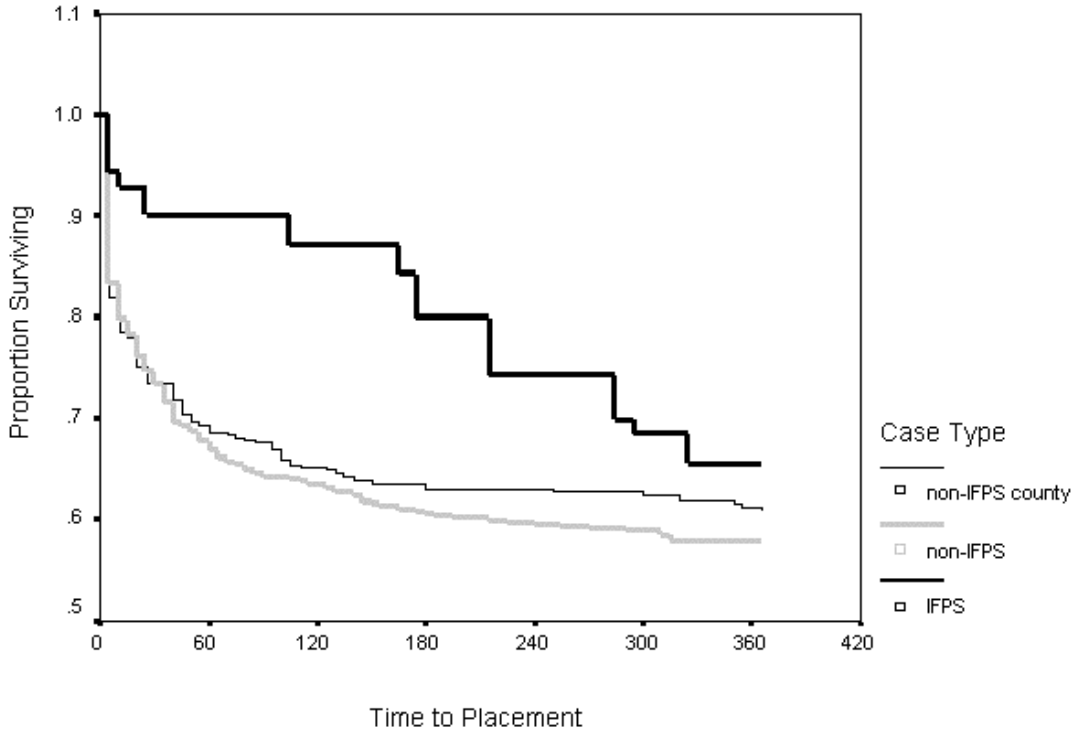


Figure 11: 12m Survival from Rpt/Ref

High Risk Cases, 2+ Prior Subs.



The four remaining figures (Figures 12, 13, 14 and 15) illustrate the individual and combined influences of CPS high-risk and prior high-risk substantiations on placement prevention among cases receiving IFPS and those not receiving IFPS. Figure 12 displays the survival curves of all cases in which no prior high-risk substantiations occurred. Not surprisingly, Figure 12 resembles previous presentations in which all cases were included without controlling for factors associated with high-risk. The "no prior high-risk substantiation" cases served by the non-IFPS child welfare providers appear to

remain at home at higher rates than the IFPS cases. Again, however, the IFPS cases are known to be "pre-loaded" with multiple risk factors.

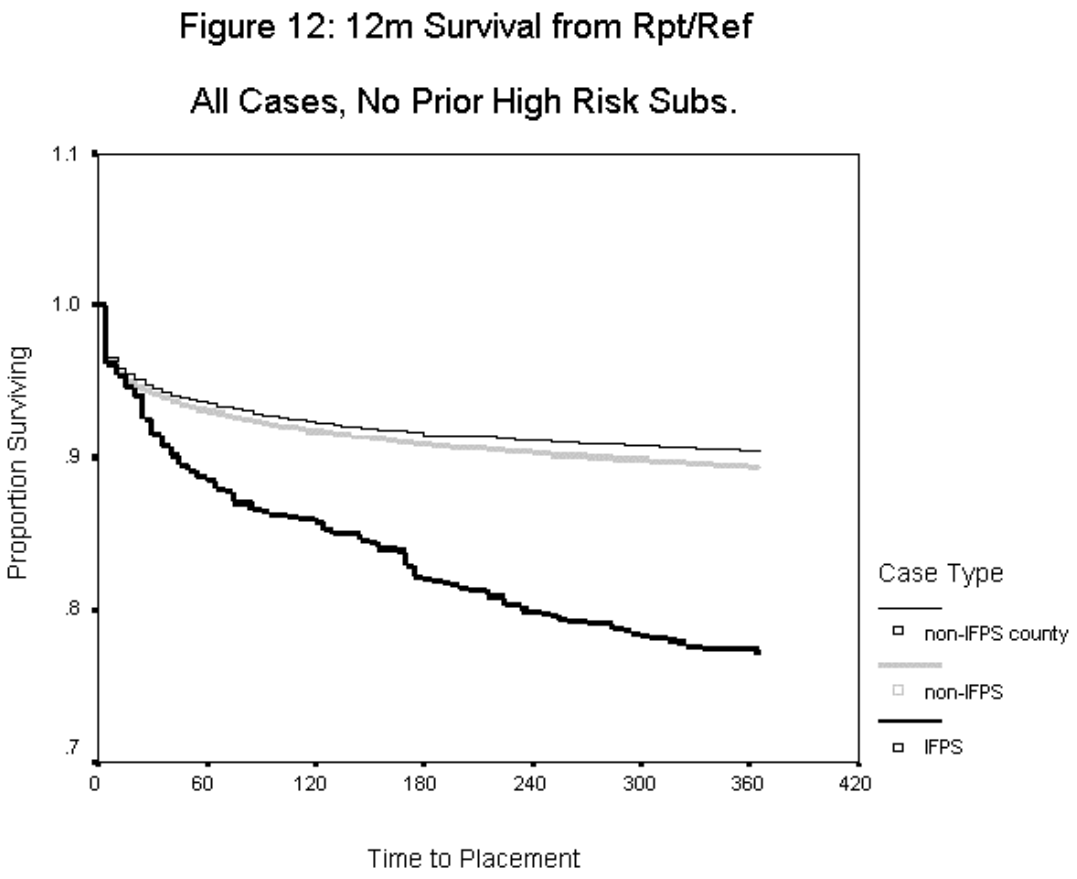


Figure 13 displays the survival curves of CPS high-risk cases where no prior high-risk substantiations occurred. As with other compelling risk factors, the trends evident in the IFPS and non-IFPS curves change, in terms of placement prevention, with IFPS outperforming the rest of the child welfare system for the first six months but with those differences dissipating during the last six months of case folow-up. The differences at the end of one year are not statistically significant.

Figure 13: 12m Survival from Rpt/Ref

High Risk Cases, No Prior High Risk Subs.

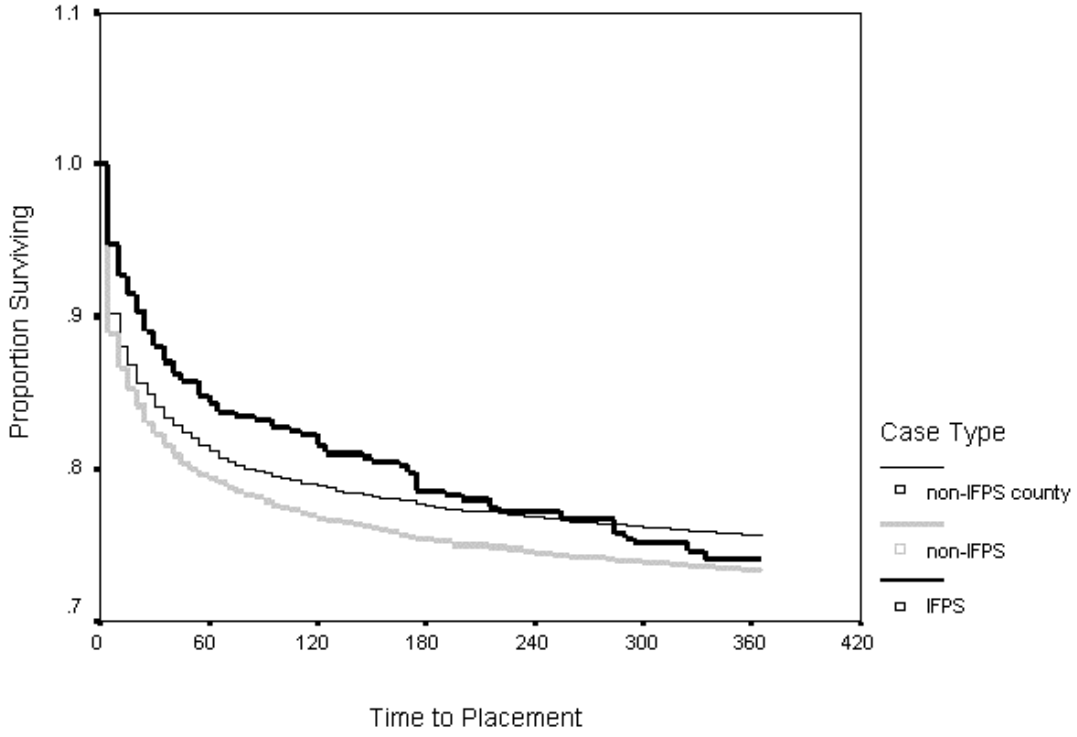


Figure 14 displays the survival curves of all cases in which one or more prior high-risk substantiation occurred, and IFPS outperforms other service providers for the first six months, with those differences dissipating during the last six months of the measurement-year. However, when CPS high-risk cases that had experienced one or more prior high-risk substantiation are selected, as displayed in Figure 15, IFPS emerges as the statistically significantly superior method of intervention when compared to non-IFPS cases (Wilcoxon/Gehen = 4.71, df = 1, p< 05).

Figure 14: 12m Survival from Rpt/Ref

All Cases, 1+ Prior High Risk Subs.

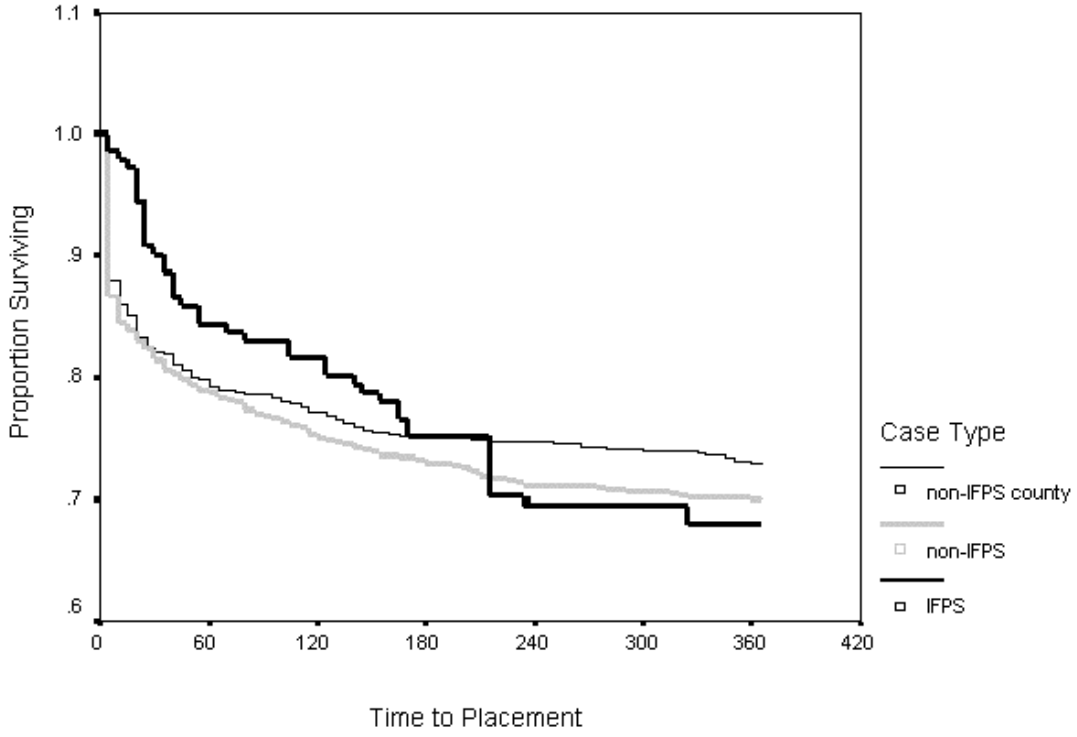
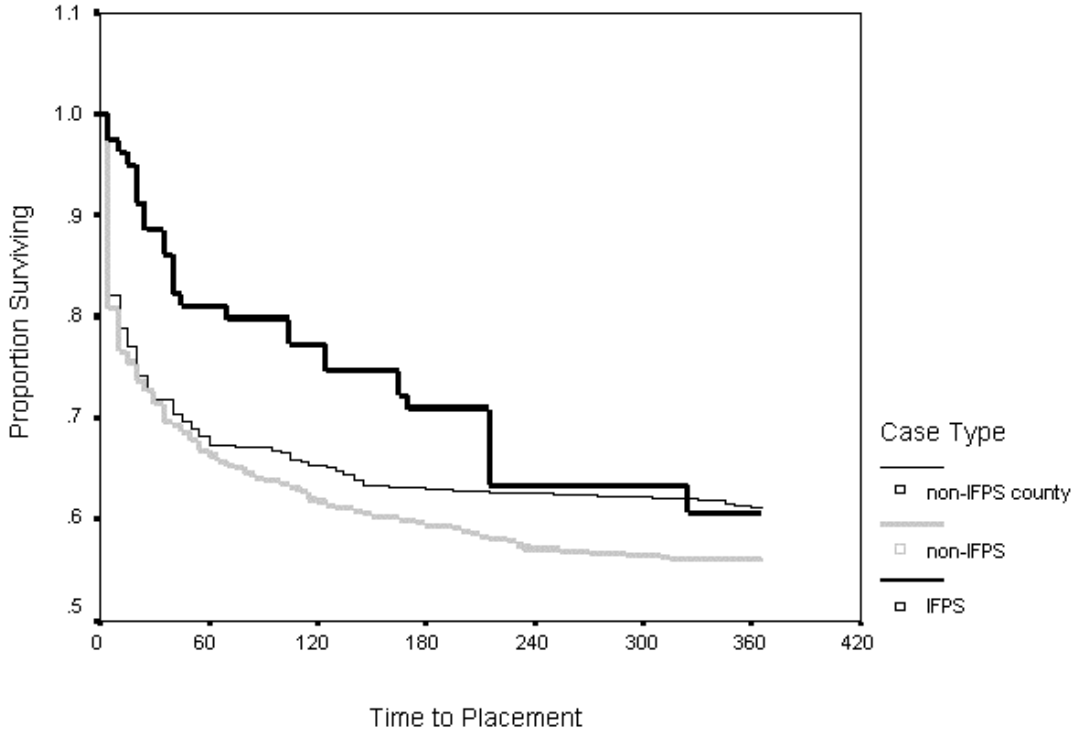


Figure 15: 12m Survival from Rpt/Ref

High Risk Cases, 1+ Prior High Risk Subs.



Taken as a whole, the preceding figures illustrate the effectiveness of IFPS when compared to traditional child welfare services. These figures also shed light on the apparent difficulty that other researchers have had in detecting treatment effects of IFPS. If effects are tested on the basis of comparing and testing sample means at a single point in time (e.g., the end of IFPS treatment, or at one year post service), the sample means at those moments on the "curves" may not have diverged sufficiently or may have re-converged in a way that masked the effects that are detected using survival analysis. A more likely explanation, however, is the probable lack of sufficient control or isolation of

risk factors when constructing comparison groups, and the lack of fidelity to the treatment model.

The figures and findings in this study clearly demonstrate the importance of isolating and controlling for various risk factors when comparing treatment approaches and treatment outcomes. When risk factors were not accounted for in the analyses, not only did IFPS appear not to be more effective in preventing placement than traditional services, in some cases IFPS appeared to be less effective. However, when the risk factors are accounted for in both the treatment and comparison groups, IFPS outperforms traditional child welfare services in every case by reducing the number of placements and/or delaying placements. In many cases the differences are statistically significant. Interestingly, and importantly, when multiple risk factors are present (e.g., CPS high-risk combined with multiple prior substantiations and/or multiple prior placements) IFPS becomes increasingly effective at preventing placement when compared to the rest of the child welfare system.

It is important to note that some of the positive treatment effects produced by IFPS interventions diminish in the closing months of the one-year measurement period used in this study. In several cases the treatment effect diminished at about six months after referral to IFPS. This should not be interpreted as a failing of IFPS. After all, the IFPS case has already been closed for four and one-half months when a measurement is taken at six months; and it has been closed for 10 and one-half months when a measurement is taken at the end of a one-year period. Rather, the shapes of these curves suggest the need for policy review and possible implementation of follow-up interventions in IFPS cases to sustain and prolong the initial treatment effects. Perhaps a

mandatory "booster shot" of services, or at least the offer of services at four months or six months post-IFPS would make services available at critical junctures in family development after the receipt of intensive home-based services.

Executive Summary

The Intensive Family Preservation Services program in North Carolina is effective. It is effective in preventing or delaying out-of-home placement among the target population of high-risk families when compared to the same types of families receiving traditional services. IFPS is most effective among the highest-risk families when compared with traditional services available in the child welfare system. In fact, careful examination of the placement rates indicates the decreasing effectiveness of the traditional service system to prevent placement as much as it indicates increased effectiveness of IFPS.

The treatment effects attributable to IFPS sustain for a five to six-month period, after which they may diminish, depending on the risk factors involved. In a few cases the effects diminish so as to be indistinguishable from traditional services at the end of one-year. These results suggest the need to establish interventions designed to sustain treatment effects of IFPS through follow-up services delivered at 4 to 6 months post-IFPS, and perhaps again at a later point.

The results of this study stand in contradistinction to previous research that did not detect positive treatment effects attributable to IFPS. The shapes of the survival curves derived from population data in North Carolina suggest that the inability to detect treatment effects elsewhere may have resulted from the implementation of designs that did not adequately control for various risk factors, or from measurement strategies that did not expressly account for time as a dynamic variable.

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