

# BUILDING EVIDENCE AND INFORMING POLICY: THEN AND NOW

Re-examining the efficacy of IFPS  
using secondary data and  
advanced evaluation methods

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# Five foci of the Summit

- Evaluation Partnerships
- Data Use
- Measurement and Outcomes
- Intervention Evaluation
- Population-Specific Evaluation

Each of the 4 studies to be discussed in this workshop includes each of these foci; in some cases the emphasis is on methods, some emphasize measurement issues; each involves challenges associated with data acquisition/use; all are intervention evaluation; all involve University/state government/service provider partnerships.

# Population-Specific Evaluation

- All 4 studies: Families in which one or more children have suffered maltreatment and are at imminent risk of out-of-home placement (i.e. high risk children/families)
- One study: Families at imminent risk of out-of-home placement, and families in which one or more children were previously removed and reunification is being attempted.
- Methodological distinction for all studies: all are retrospective, population-based studies (i.e., not prospective RCTs)

# Intervention Evaluation

- Intervention: Intensive Family Preservation Services (IFPS Homebuilders® Model)
  - ▣ Definition: ...time-limited (usually 4 to 6 weeks), intensive, in-home services designed to prevent the unnecessary removal of children from home as a result of abuse or neglect (Kinney, Haapala, & Booth, 1991).
  - ▣ Fidelity characteristics:
    - High-risk families
    - Low caseloads (normally 2-3 families per worker)
    - 24/7 availability
    - Rapid response (w/in 24 hours of referral)
    - Front-loaded, intensive services (10+ f-2-f hrs 1<sup>st</sup> week)

# Measurement and Outcomes

- Measurement issues:
  - Defining success: “Prevention of unnecessary placements”
    - Measurement “baggage” associated with the definition
  - Determining program fidelity
  - Constructing the Independent Variable (IV)
- Outcomes (the Dependent Variables): Systems-level outcomes of central interest to policy/administrators (placement prevention) versus family-level outcomes of central interest to families & social workers (family functioning/skills/safety/child & family well-being)

# Data Use

- Secondary data
  - ▣ All studies used secondary data sources
    - Statewide SACWIS/AFCARS (3 of 4 studies)
    - Program-specific MISs (population based; all studies)

Use of secondary data removed from consideration  
any concerns about possible reactivity associated  
with prospective studies.

# Evaluation Partnerships

- All studies involved:
  - ▣ University-based (Social Work) researchers
    - Study design, IRB review, data management, analysis, interpretation, reports/publications
  - ▣ State DSS administrators
    - Shared interest in evaluation, data access, policy/funding considerations using evaluation findings
  - ▣ Private and public child serving agencies
    - Assuring model fidelity, data collection/reporting to state, responding to policy changes
- One study involved a 501(c)(3) national advocacy organization (National Family Preservation Network) and all of the above
  - ▣ Inter-state collaboration of state and county agencies affiliated with NFPN to provide “cleansed” data sets for analysis

# Original impetus for study series

- Early research on IFPS questioned model developers claims of efficacy
  - ▣ Some studies declared that IFPS “didn’t work”
  - ▣ “Post mortems” on early studies and philosophical treatises on the early research questioned the methodological rigor and appropriateness of early designs (Fraser, et al., Kirk)
  - ▣ Research findings not consistent with practice wisdom emerging from purveyors/early adopters experience
- Acquisition of secondary data archive sufficiently large to apply retrospectively bio-statistical methods (survival analysis) and Cox Regression modeling in lieu of RCTs

# Very brief review of shortcomings

- Methods
  - Study designs
- Fidelity
  - Model integrity
- Targeting
  - Defining and operationalizing imminent risk
- Measurement
  - Placement prevention

# Study 1: IFPS and Placement Prevention

- Fifty-one of North Carolina's 100 counties
- All have IFPS available, but in no case in adequate supply to serve all high-risk referrals
- Services available to families not receiving IFPS are typical public and contract agency services: counseling, parent skill tx, mental health referral and service, protective services day care, etc.
- Study population: all IFPS families and all non-IFPS families from same counties with the same substantiated report histories and risk levels

# Study 1, continued

- Analytic data set: 542 high-risk children who received IFPS; 25,722 high-risk children from same counties who did not receive IFPS
- Model fidelity: statutorily defined as Homebuilders® Model
  - ▣ Fidelity review concluded very high fidelity
- Outcome measure: Placement prevention defined as the absence of placement within one year from the beginning of IFPS for the IFPS treatment group, and one year from the date of a substantiated report of abuse and/or neglect the non-IFPS comparison group.

# Study 1, continued

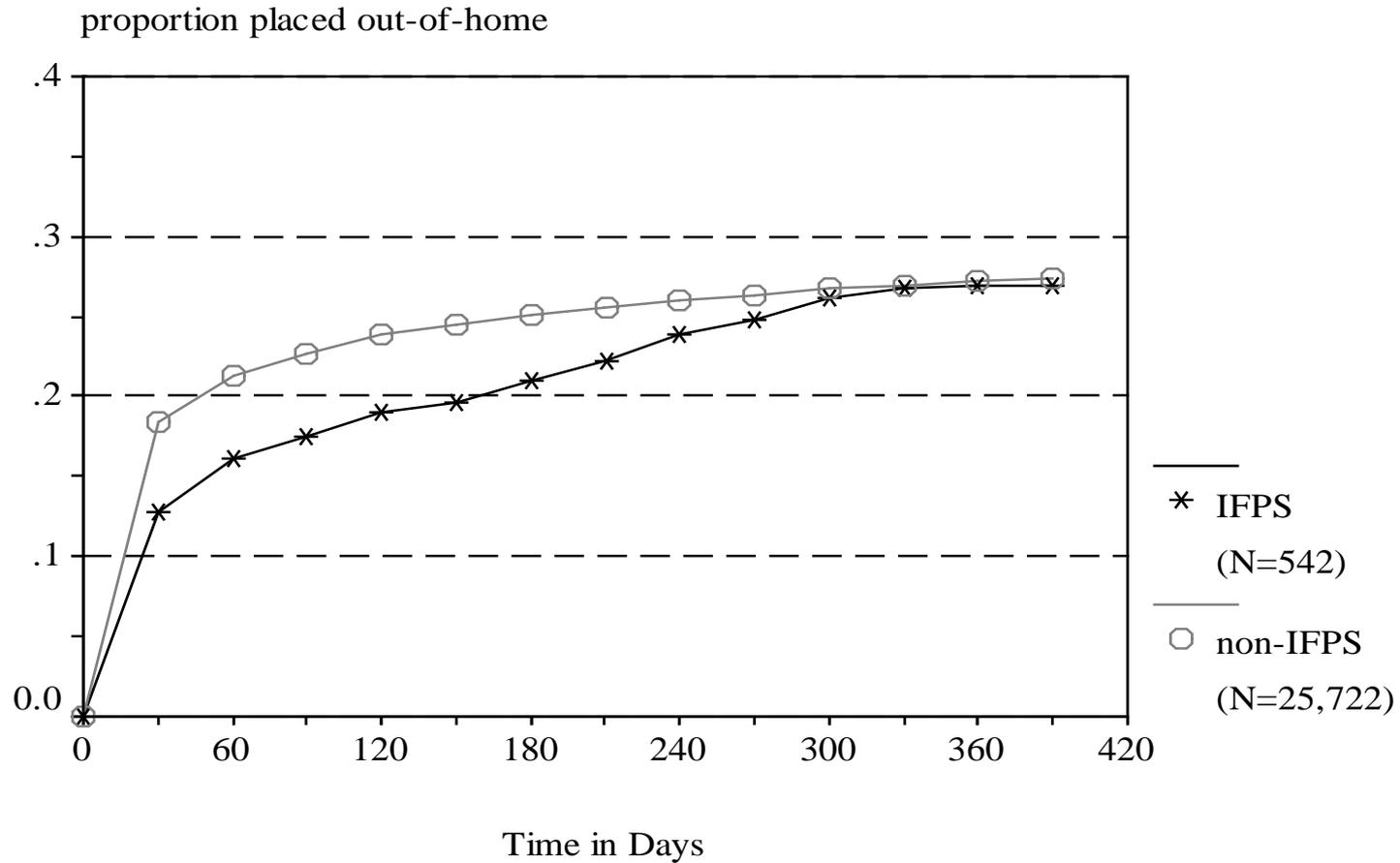
## □ Analyses

- Event history analysis was employed to assess differences in placement rates and patterns
  - Survival curves plotted as 1-survival function to illustrate the cumulative risk of placement over time
- Cox proportional hazards regression model (Cox model) to examine the associations between each independent variable and the hazard rate for placement while holding all other independent variables constant
  - Cox regression model with time-dependent covariates to examine time-related interactions

# Study 1: Results

- Chi<sup>2</sup> on all demographic variables: not sig ( $p > .05$ )
- Some indication that IFPS cases, as a group, had more prior placements and more high-risk substantiations than non-IFPS cases (any bias, therefore, favors non-IFPS cases for non-placement)
- Following 3 figures illustrate varying combinations of risk factors and associated cumulative risk of placement, both controlling and not controlling for risk.

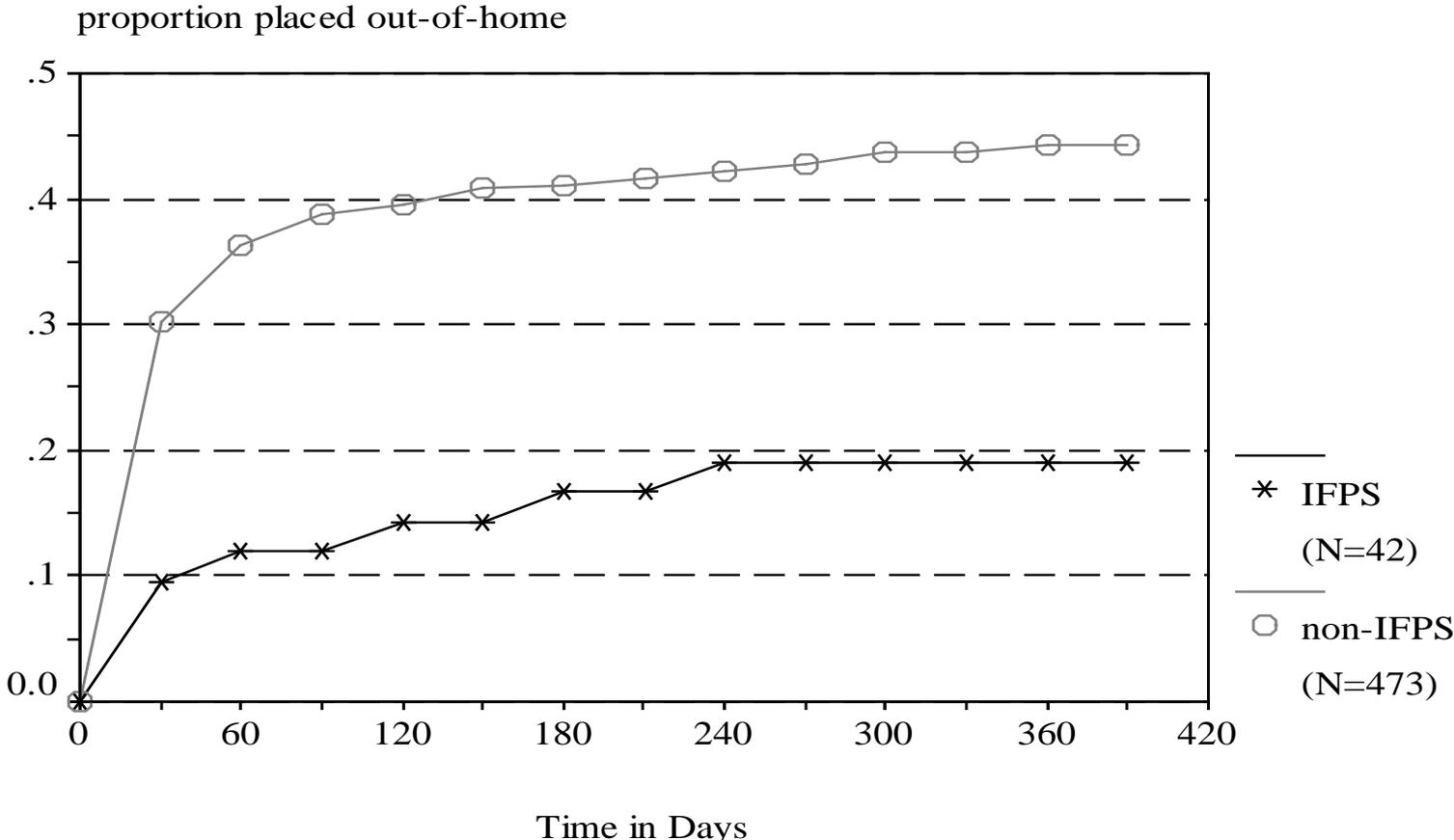
**Figure 1—Cumulative Risk of Placement for IFPS and Non-IFPS Cases**



6 mos: Wilcoxon=7.649, df=1, p<.01

12 mos: Wilcoxon=1.693, df=1, ns

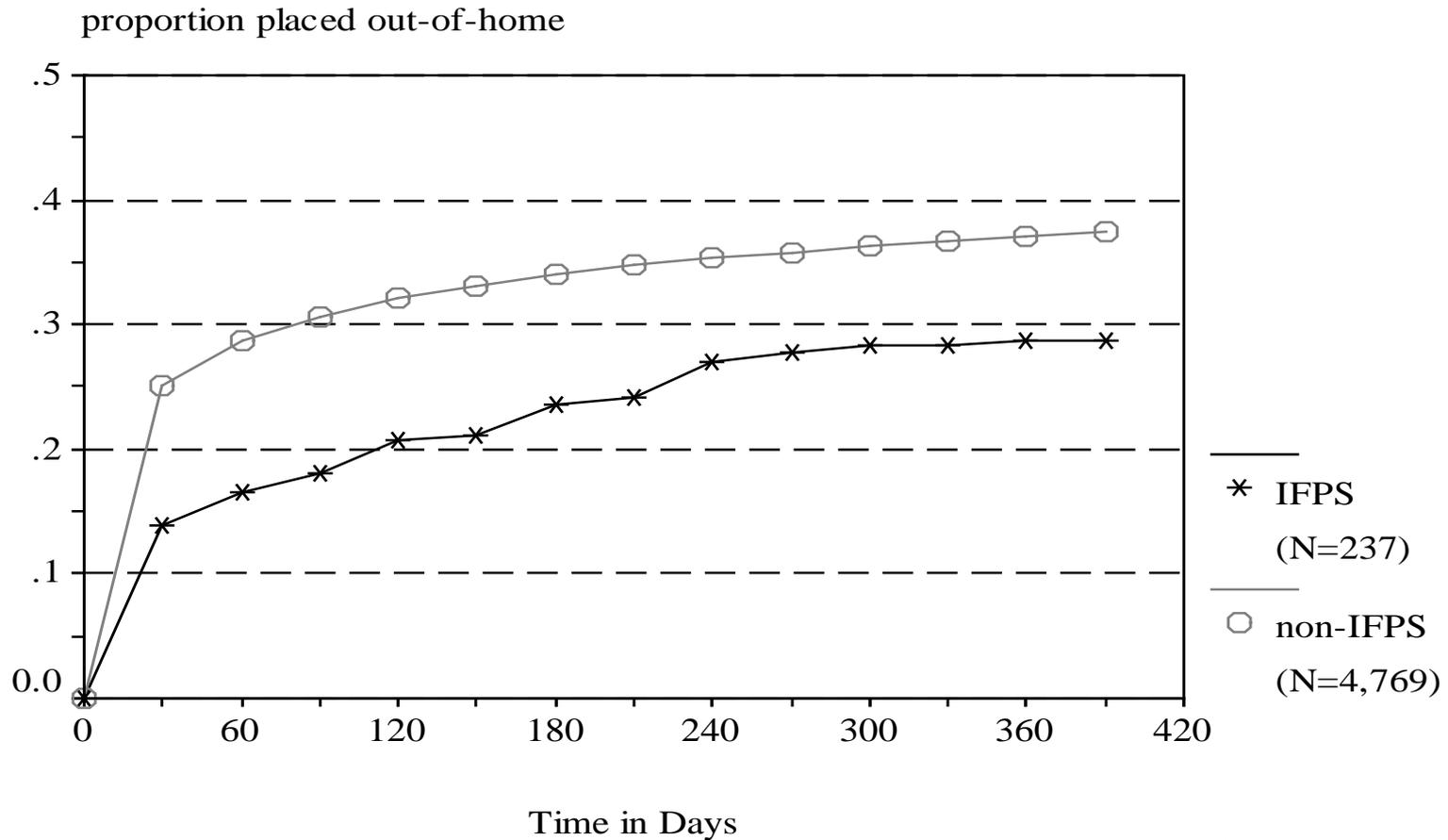
**Figure 2— Cumulative Risk of Placement for IFPS and Non-IFPS Cases with One or More Prior Spells Under Placement Authority**



6 mos: Wilcoxon=9.788, df=1, p<.01

12 mos: Wilcoxon=10.326, df=1, p<.01

**Figure 3— Cumulative Risk of Placement for IFPS and Non-IFPS Cases with One or More Prior Substantiations**



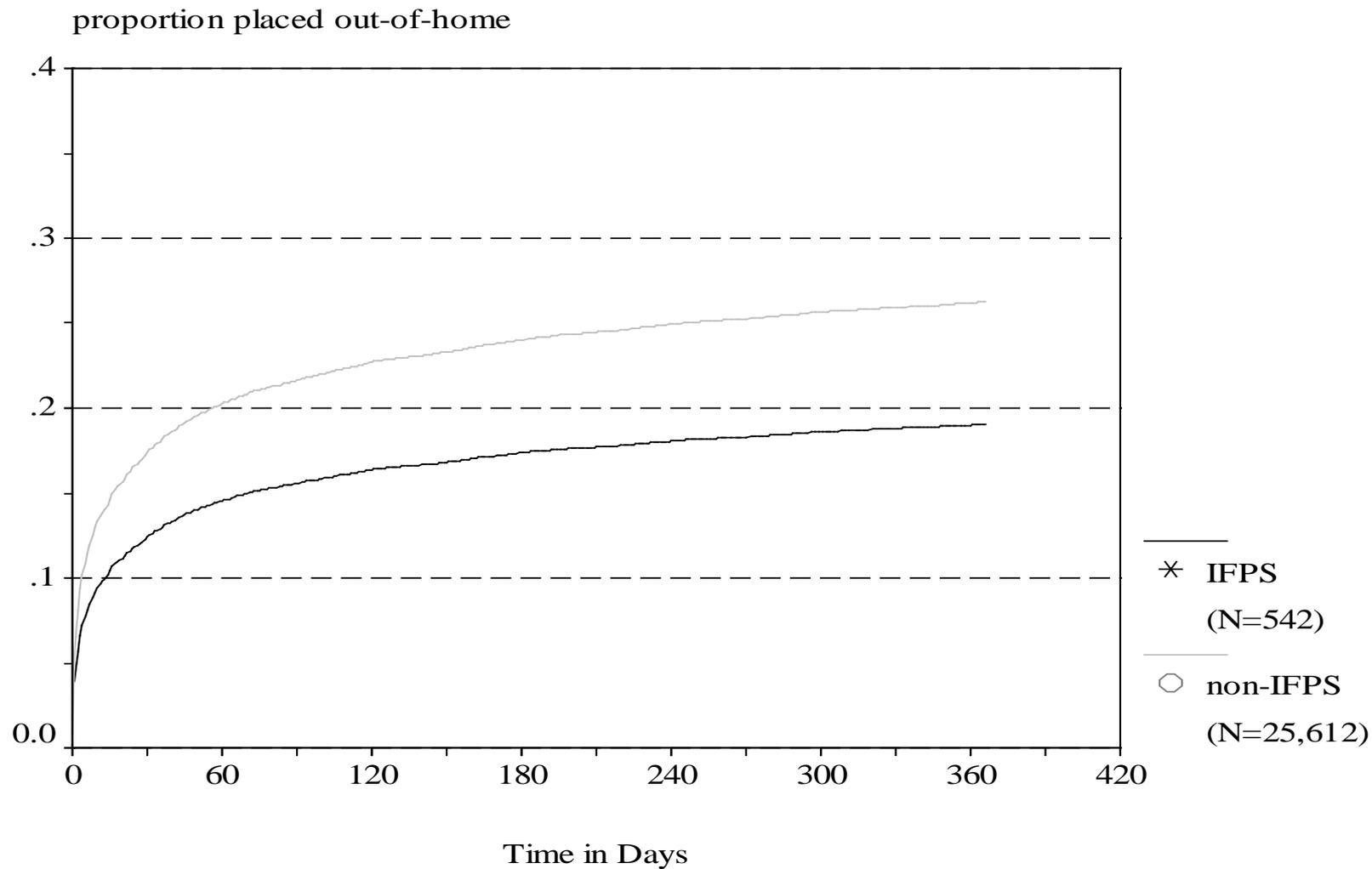
6 mos: Wilcoxon=14.818, df=1, p<.001

12 mos: Wilcoxon=12.055, df=1, p<.001

## Example of Cox Regression Analysis – Partial Table

Cox Regression Model		Model 2		
		B	Wald $\chi^2$	Exp(B)
<b>Gender (male)</b>				
	<b>Female</b>	<b>-.013</b>	<b>.293</b>	<b>.987</b>
<b>Age at report/referral (age 0 – 2)</b>				
	<b>Age 3 – 5</b>	<b>-.542</b>	<b>254.837</b>	<b>.582 ***</b>
	<b>Age 6 – 10</b>	<b>-.612</b>	<b>360.469</b>	<b>.542 ***</b>
	<b>Age 11 – 12</b>	<b>-.540</b>	<b>114.819</b>	<b>.583 ***</b>
	<b>Age 13 plus</b>	<b>-.444</b>	<b>134.306</b>	<b>.641 ***</b>
<b>Race (white)</b>				
	<b>Non-white</b>	<b>.075</b>	<b>9.583</b>	<b>1.078 **</b>
<b>Type of maltreatment (physical/emotional abuse)</b>				
	<b>Sexual abuse</b>	<b>-.045</b>	<b>.475</b>	<b>.956</b>
	<b>Neglect</b>	<b>-.362</b>	<b>78.434</b>	<b>.696 ***</b>
	<b>Injurious environment</b>	<b>-.540</b>	<b>163.849</b>	<b>.583 ***</b>
	<b>Multiple types</b>	<b>.137</b>	<b>4.429</b>	<b>1.146 *</b>

**Figure 4—Adjusted Cumulative Risk of Placement for IFPS and Non-IFPS Cases from the Cox Proportional Hazards Regression Model**



# Study 1, continued

- Study supports efficacy of IFPS, its superiority to “services as usual” when risk (as a variable) is controlled, and Tx/Control groups are matched
- Study countervails earlier studies criticized for premature or inappropriate use of RCTs on developing programs, with inadequate controls on targeting and risk definitions, and with measures subject to mitigating influence by these weaknesses in design and implementation.

# Study 2: IFPS and Disproportionality

- Racial/ethnic disproportionality in child welfare has been a topic interest and controversy among child welfare researchers and administrators since data became available that permitted its investigation
- Once acknowledged, the existence of disproportionality begged questions about its source
- Framed as extremes: are racial/ethnic minority children at greater risk of maltreatment, or is systematic discrimination or institutional racism responsible?

# Study 2, continued

- In the first instance, apparent disproportionality would be the logical result of serving the higher numbers of at-risk minority children
- In the second instance, minority children would be reported and substantiated at higher rates than their (presumably) equally at-risk counterparts from non-minority populations

# Study 2, continued

- Casey (2007)- relative to their base rate in the population:
  - Black children are overrepresented in foster care by a ratio of 2:1; Native Americans are overrepresented in foster care by a ratio of 2:1; and Whites are underrepresented by a ratio of 0.7:1. Hispanics and Asians are underrepresented in foster care by ratios of 0.9:1 and 0.25:1, respectively.
  - Citing Hill (2006), Casey Family Programs states that three national incidence studies revealed no significant differences between the base maltreatment rates of Black and White families.
- This lack of differences in base rates suggests that disproportionality in the child welfare system is not due to disproportionate need, but rather to discriminatory practices in society (reports) or within the child welfare system (investigations, substantiations, placements, permanency outcomes).

# Study 2, continued

- As Needell et al. (2003) noted:
  - “Perhaps it is time to stop trying to explain away ethnic differences, admit that our [child welfare] system may exacerbate rather than actively address ethnic overrepresentation, and move forward towards better policies and practices that enable us to optimally serve the children and families who need our help.” (p. 407)
- This study examines an effort to address disproportionality with a policy and practice initiative utilizing Intensive Family Preservation Services

# Study 2, continued

- Like Study 1, these are NC data.
- IFPS available in 70 of the State's 100 counties, although IFPS is not available in sufficient quantity in any county to respond to all eligible families.
  - ▣ Families eligible for IFPS but who did not receive it received traditional public and contract agency services such as counseling, skill training, protective supervision, day care, etc.
- The study employed a retrospective, population-based design that permitted the selection of all high-risk abuse and neglect cases
- Data were merged from various statewide (NCCANDS, AFCARS) and program-specific (IFPS) databases.

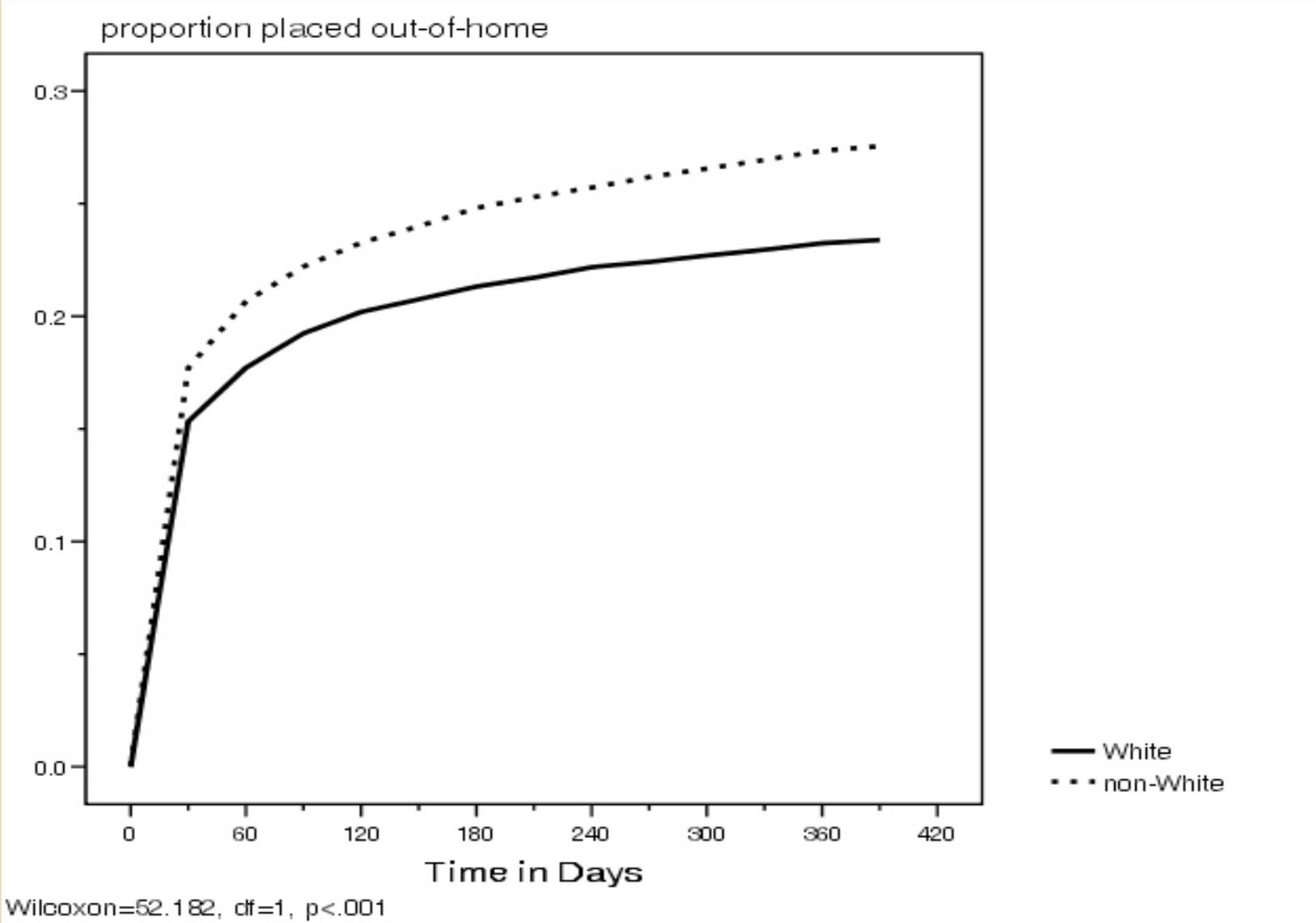
# Study 2, continued

- 2,056 high-risk families that received IFPS, and the comparison group includes 28,004 high-risk families
- About 3/5 of the treatment population is White, a little more than 1/3 is Black, and the remainder comprises American Indians, Hispanics, and Asians/Southeast Asians Families
- No differences on placement rates between Blacks and non-Black minorities, so these groups were combined
- White and non-White racial groups within the IFPS treatment condition are essentially equivalent with the exception of non-Whites having slightly more substantiated prior reports. Theoretically, any increased overall risk associated with this difference would be likely to diminish, rather than enhance the treatment outcome being investigated.

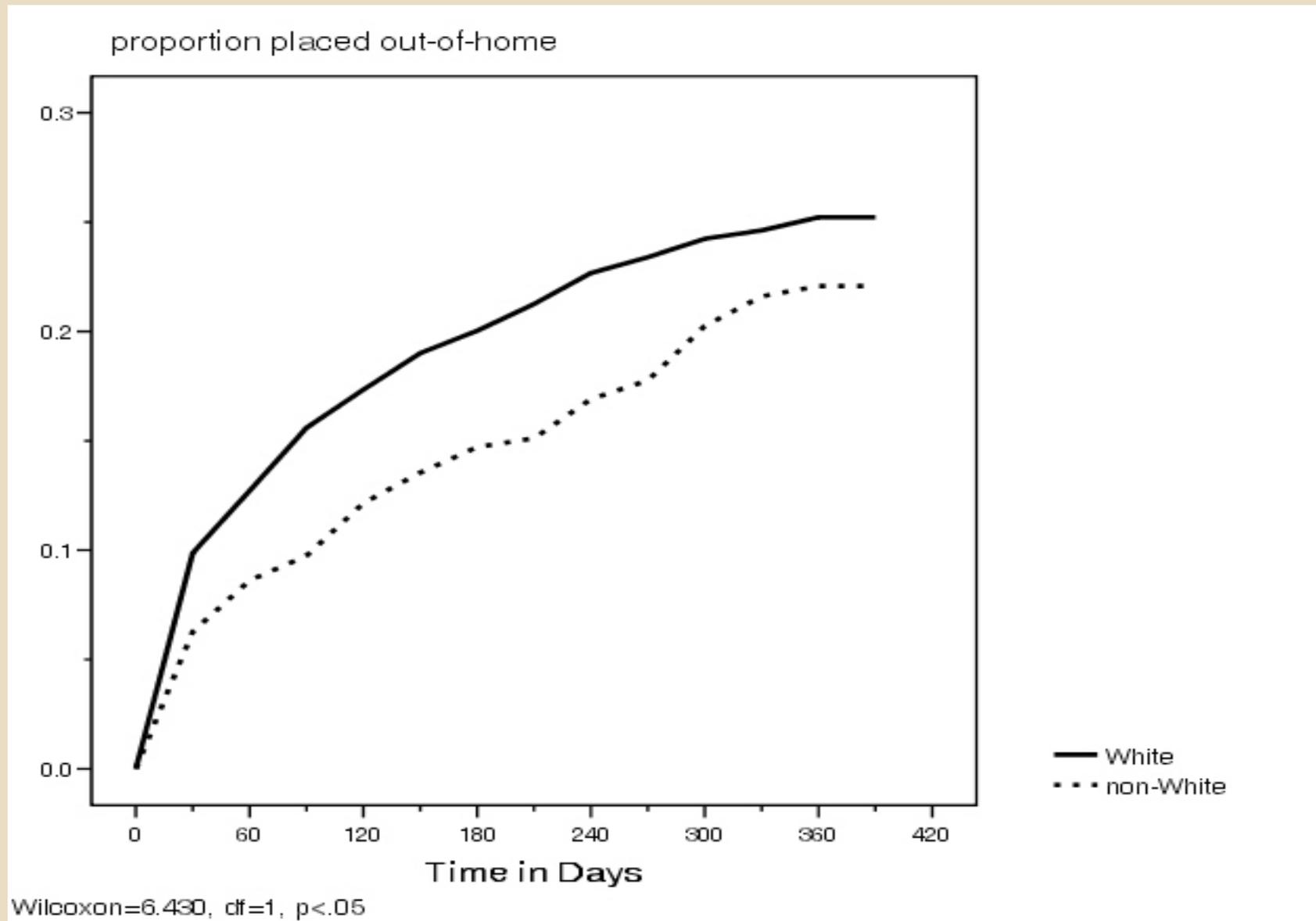
# Study 2, continued

- Independent variables: Race, risk, IFPS versus non-IFPS
- Dependent variable: cumulative risk of placement
- Results:
  - High-risk minority children receiving traditional services are at higher risk of placement than White children, but minority children receiving IFPS are less likely to be placed than White children
  - When only minority children are examined, those receiving IFPS are less likely to be placed than those receiving traditional services

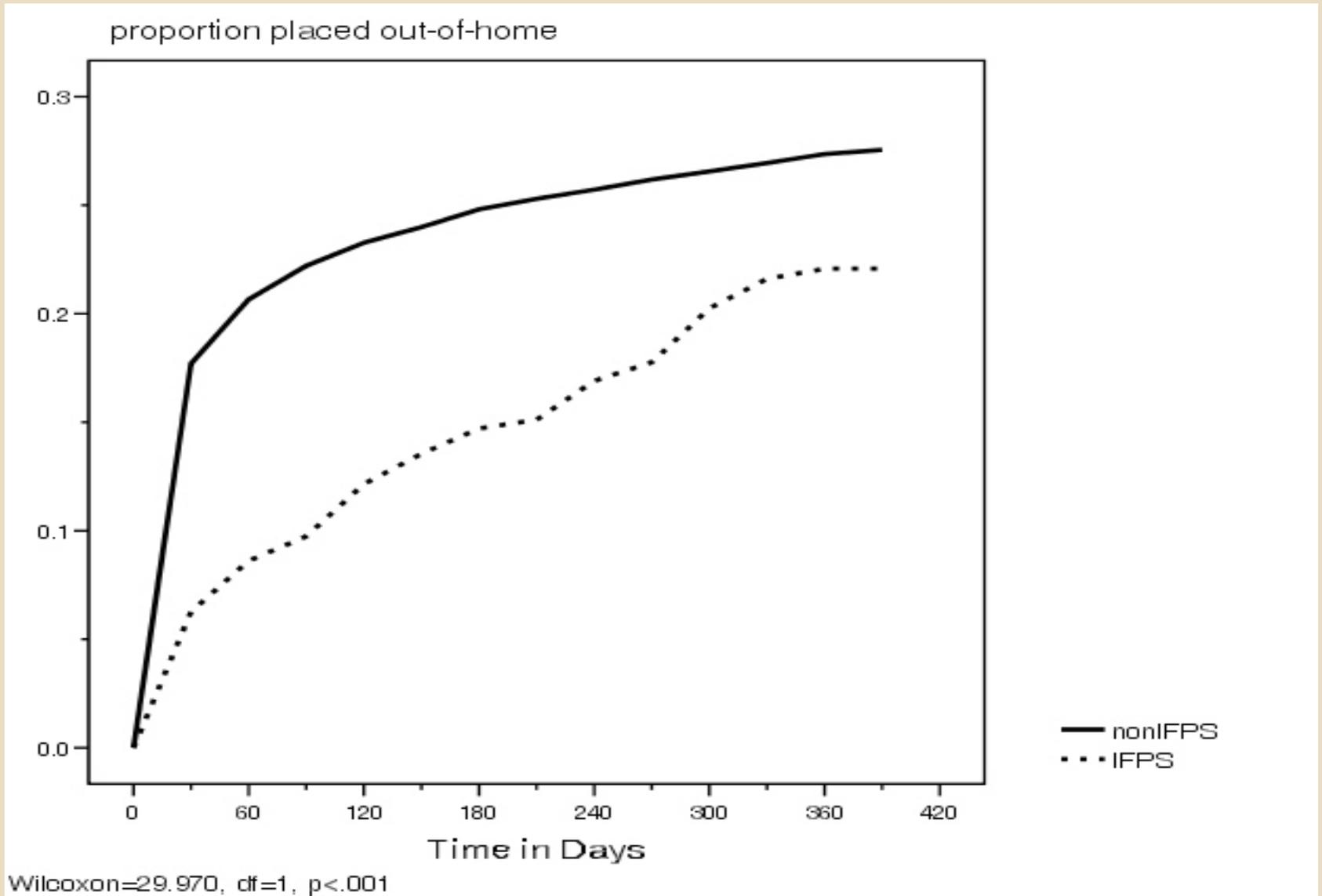
**Figure 1—Risk of Placement After CPS Report for Children Receiving Traditional CW Services by Race**



**Figure 2—Risk of Placement After Referral to IFPS for Children Receiving IFPS by Race**



**Figure 3—Risk of Placement After CPS Report/Referral to IFPS for Non-White Children**



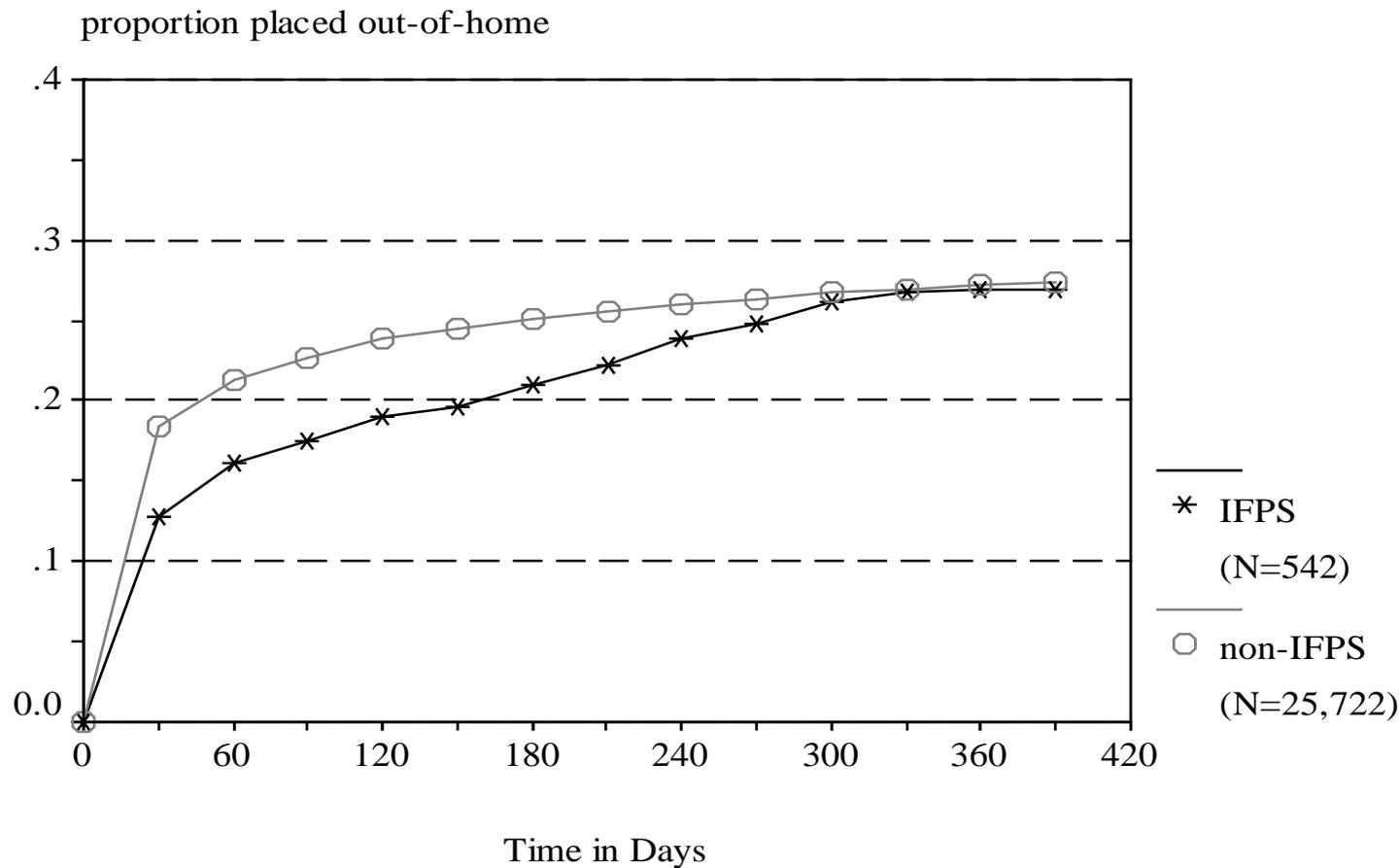
# Study 2, continued

- Conclusion: IFPS is associated with a reduction in racial disproportionality of out-of-home placement among high-risk families. Within-race analysis suggests that IFPS may mitigate racial disparity in out-of-home placement existing in the remainder of the child welfare population that receives traditional services

# Study 3: Fine-Tuning the Model

- Recall the shapes of the curves depicting the cumulative probability of placement
  - ▣ Curves are not “pre/post” exclusively, but also convey a sense of the dynamic nature of placement risk over time
- Cumulative probability curves suggest a “window of vulnerability” of placement following conclusion of IFPS

Note “window of vulnerability” from 120 day to 270 days post service



6 mos: Wilcoxon=7.649, df=1, p<.01

12 mos: Wilcoxon=1.693, df=1, ns

# Study 3, continued

- The placement dynamics evident from the retrospective study suggested that secondary interventions or additional services should be offered to families in the first 6 months post-IFPS
- Beginning in 2004, IFPS programs were required to track families for 6 months after receiving IFPS services
  - ▣ Contact families monthly, inquire about functioning & needs
  - ▣ Conduct a more comprehensive assessment of families during the 3<sup>rd</sup> month and 6<sup>th</sup> month contacts
  - ▣ Verify that families are receiving the services that they were supposed to receive after IFPS and to see if additional in-home services are needed

# Study 3, continued

- IFPS workers authorized to re-open services to the family for a maximum of 2 weeks and a maximum of 2 times during the 6 month follow-up period.
- Between 2004 and 2008, 999 families received follow-up contacts
  - ▣ 593 received 3-month comprehensive assessment
  - ▣ 381 received 6-month assessment
- Families have option to decline being contacted in the future; some families cannot be located

# Study 3, continued

## Family contacts during 6 months following case closure

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
<b>Number of Families Contacted</b>	<b>999</b>	<b>791</b>	<b>662</b>	<b>535</b>	<b>471</b>	<b>407</b>
<b>Average Hours of Phone Contacts<sup>1</sup></b>	<b>1.07</b>	<b>.92</b>	<b>.92</b>	<b>.77</b>	<b>.73</b>	<b>.78</b>
<b>Average Hours of In-Person Contacts<sup>1</sup></b>	<b>1.89</b>	<b>1.33</b>	<b>1.28</b>	<b>1.19</b>	<b>1.11</b>	<b>1.20</b>
<b>Average # Worker Initiated Contacts</b>	<b>1.66</b>	<b>1.43</b>	<b>1.42</b>	<b>1.39</b>	<b>1.35</b>	<b>1.32</b>
<b>Average # Family Initiated Contacts</b>	<b>1.55</b>	<b>1.35</b>	<b>1.32</b>	<b>1.02</b>	<b>.92</b>	<b>.95</b>
<b>Number of Case Re-Openings</b>	<b>17</b>	<b>10</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>5</b>

# Study 3, continued

- During the period 2000-2004, prior to implementation of follow-up contacts and possible additional services, the post service placement rate (attrition rate) during the first 6 months was approximately 7%, based on AFCARS data.
- Among families receiving follow-up services between 2004 and 2008, post service placement rate was
  - ▣ 3.0% during first 3 months
  - ▣ 1.5% during months 4-6

# Study 3, continued

- Conclusion:
  - ▣ Follow-up services during 1<sup>st</sup> 6 months post service appear to reduce the placement (attrition) rate by about 1/3
- Caveats:
  - ▣ Comparability limitations across study years preclude definitive conclusions (program became more effective, generally, with time)
  - ▣ There is additional attrition that occurs during months 7-12 that were not considered during this study
  - ▣ Workers conducting follow-up visits/contacts are not available to receive new cases; overall time commitment to follow-up services appears to be reasonable, but an in-depth cost analysis of the policy experiment is necessary

# Study 4: Expanding Our Inquiry

- Now that we know IFPS works for “placement prevention,” can the model also be used effectively for reunification?
- Are there differences in program impact associated with the ages of youth in participating families

# Study 4, continued

- Data were provided by large child-serving agencies in Washington State and Pennsylvania
- Both agencies adhered to high-fidelity Homebuilders IFPS models for both placement prevention and reunification cases.
- Study sample included 684 children receiving placement prevention services (486 younger children, 72%; and 180 older youths, 28%)

# Study 4, continued

- Secondary data included traditional CPS maltreatment codes, child welfare measures, family functioning measures
- Significant differences were observed across service types (placement prevention/reunification) and age groups (younger/older children) including race, gender, types of maltreatment, poverty, CPS risks, and living arrangement at the close of services

## Study 4, continued. Demographics: younger vs. older children in the Placement Prevention cohort

<b>Variable</b>	<b>Younger Youths</b>	<b>Older Youths</b>	<b>Chi<sup>2</sup> value</b>	<b>df</b>	<b>P-value</b>
<b>Age (mean)</b>	<b>4.5 years (sd=3.5)</b>	<b>14.3 years (sd=1.6)</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Gender (% Male)</b>	<b>55% Male 45% Female</b>	<b>45% Male 55% Female</b>	<b>5.58</b>	<b>1</b>	<b>p &lt; .05</b>
<b>Race*</b>	<b>66% White 10% Black</b>	<b>58% White 18% Black</b>	<b>19.56</b>	<b>5</b>	<b>p &lt; .01</b>
<b>Poverty (TANF assistance)</b>	<b>54%</b>	<b>29%</b>	<b>20.76</b>	<b>1</b>	<b>p &lt; .001</b>
<b>Child's relationship with primary caregiver</b>	<b>86% bio child 1% adopted child</b>	<b>75% bio child 8% adopted child</b>	<b>34.1</b>	<b>4</b>	<b>p &lt; .001</b>
<b>Child living arrangement at case opening</b>	<b>86% bio/adoptive 3% other relative 4% guardianship 7% CPS system**</b>	<b>74% bio parent 11% other relative 7% guardianship 7% CPS system</b>	<b>19.2</b>	<b>3</b>	<b>p &lt; .001</b>
<b>Child living arrangement at case closure</b>	<b>83% bio/adopt 6% relative 3% guardianship 8% CPS system**</b>	<b>73% bio parent 9% other relative 6% guardianship 11% CPS system</b>	<b>8.55</b>	<b>3</b>	<b>p &lt; .05</b>

Study 4, continued: Maltreatment risks of younger vs. older children in the Placement Prevention cohort.

<b>Type of Maltreatment</b>	<b>Younger Youths</b>	<b>Older Youths</b>	<b>Chi<sup>2</sup> value</b>	<b>df</b>	<b>P-value</b>
<b>Physical Abuse</b>	<b>26%</b>	<b>36%</b>	<b>6.6</b>	<b>1</b>	<b>p &lt; .01</b>
<b>Sexual Abuse</b>	<b>5%</b>	<b>18%</b>	<b>29.7</b>	<b>1</b>	<b>p &lt; .001</b>
<b>Neglect</b>	<b>83%</b>	<b>67%</b>	<b>17.9</b>	<b>1</b>	<b>p &lt; .001</b>
<b>Family Conflict</b>	<b>27%</b>	<b>51%</b>	<b>32.9</b>	<b>1</b>	<b>p &lt; .001</b>
<b>Other</b>	<b>0%</b>	<b>13%</b>	<b>60.6</b>	<b>1</b>	<b>p &lt; .001</b>

## Study 4, continued. Demographics: younger vs. older children in the Reunification cohort

Variable	Younger Youths	Older Youths	Chi <sup>2</sup> value	df	P-value
Age (mean)	4.8 years (sd=3.5)	14.4 years (sd=1.5)	-	-	-
Gender	49% Male 51% Female	40% Male 60% Female	1.17	1	ns
Race*	51% White 11% Black 18% Multi-racial	79% White 10% Black 3% Multi-racial	14.47	5	p < .05
Poverty (TANF assistance)	44%	32%	1.18	1	ns
Child' relationship with primary caregiver	97% bio child	90% bio child	2.72	4	ns
Child living arrangement at case opening	56% bio/adoptive 12% other relative 2% guardianship 31% CPS system**	58% bio parent 8% other relative 0% guardianship 34% CPS system	1.37	3	ns
Child living arrangement at case closure	93% bio/adopt 1% relative 4% guardianship 1% CPS system**	84% bio parent 5% other relative 3% guardianship 8% CPS system	7.33	3	ns (p = .06)

## Study 4, continued. Maltreatment risks of younger vs. older children in the Reunification cohort

<b>Type of Maltreatment</b>	<b>Younger Youths</b>	<b>Older Youths</b>	<b>Chi<sup>2</sup> value</b>	<b>df</b>	<b>P-value</b>
<b>Physical Abuse</b>	<b>25%</b>	<b>34%</b>	<b>1.3</b>	<b>1</b>	<b>ns</b>
<b>Sexual Abuse</b>	<b>6%</b>	<b>21%</b>	<b>8.1</b>	<b>1</b>	<b>p &lt; .01</b>
<b>Neglect</b>	<b>84%</b>	<b>71%</b>	<b>3.6</b>	<b>1</b>	<b>ns</b> <b>p = .06</b>
<b>Family Conflict</b>	<b>23%</b>	<b>66%</b>	<b>25.3</b>	<b>1</b>	<b>p &lt; .001</b>
<b>Other</b>	<b>0%</b>	<b>0%</b>	<b>-</b>	<b>1</b>	<b>-</b>

## Study 4, continued. Achievement of permanency plan

<b>Variable</b>	<b>Younger Children</b>	<b>Older Children</b>	<b>Chi<sup>2</sup> value</b>	<b>df</b>	<b>P-value</b>
<b>Achievement of permanent plan: PP</b>	<b>88%</b>	<b>92%</b>	<b>2.68</b>	<b>1</b>	<b>ns</b>
<b>Achievement of permanent plan: Reun.</b>	<b>97%</b>	<b>92%</b>	<b>2.22</b>	<b>1</b>	<b>ns</b>

# Study 4, continued

## □ Conclusion

- In the two study sites, mechanisms of entry into care varied significantly as a function of age (and other demographics) and types of maltreatment
- Those differences attenuated substantially for those leaving care to reunification
- The high fidelity IFPS service model appears to address the differences in the placement prevention cases and address the issues extant in reunification cases, and achieved high rates of permanency for both types, in accordance with the service plans

# Presentation conclusions

- Many methods are available to program evaluators, and must be selected based on the evaluation questions, the data at hand (or to be collected), and the ease of use and costs associated with each
- Evidence is cumulative, and not dependent on a single methodology
- Secondary data can be a rich source of information, although there may be limitations on the direct link between the available data and the evaluation questions

# Presentation conclusions, continued

- Secondary data sources can often provide large data sets that permit sophisticated statistical modeling
- Decisions about definitions of success frequently are accompanied by competing values
- Beware of unrealistic expectations for large treatment effects when testing new interventions, because “services as usual” is NOT a “no treatment” condition.

# Studies used as basis for presentation

- Kirk, R.S. (2002) A critique of the evaluation of family preservation and reunification programs: Interim report. Available at <http://www.nfpn.org>
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- Kirk, R.S. & Griffith, D.P. (2008) Impact of intensive family preservation services on disproportionality of out of home placement of children of color. *Child Welfare* 87(5), 87-105.
- Kirk, R.S. & Griffith, D.P. (2008) SFY 2007-2008 annual report to the General Assembly of the state of North Carolina on the Intensive Family Preservation Services Program. Available at [www.ncdhhs.gov/dss/stats/reports.htm](http://www.ncdhhs.gov/dss/stats/reports.htm)
- Kirk, R.S. (2010) A comparative study of older-youth families and younger-youth families in placement prevention and reunification cases using traditional child protection services measures and the NCFAS and NCFAS-R assessment data. Available at <http://www.nfpn.org>