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## **FAMILY TEAM DECISION-MAKING: DOES IT REDUCE RACIAL DISPROPORTIONALITY IN WASHINGTON'S CHILD WELFARE SYSTEM?**

The 2007 Washington State Legislature created the Washington State Racial Disproportionality Advisory Committee (WSRDAC).<sup>1</sup> The committee was charged with determining if children of racial and ethnic minorities were over-represented in Washington's child welfare system. The Washington State Institute for Public Policy (Institute) provided technical assistance to the committee. Findings published in 2008 indicated that American Indian, Black, and Latino children were more likely to be reported to Child Protective Services (CPS) than White children in Washington.<sup>2</sup> Among children referred to CPS, Indian and Black children were more likely to be placed in foster care<sup>3</sup> and more likely to remain in foster care for over two years than White children referred to CPS.

In 2009, based on recommendations in the WSRDAC remediation plan, the Legislature directed the Washington State Institute for Public Policy (Institute) to study the effects of the implementation of Family Team Decision Making (FTDM) and Structured Decision Making (SDM) on racial disproportionality.<sup>4</sup> This report focuses on findings for FTDM. SDM will be discussed in a subsequent report.

We present a brief description of FTDM and an overview of decision points in the child welfare system. We then present findings on the effects of implementing FTDM in Washington on the likelihood that children are removed from home and, if placed in foster care, the time to permanent placement for all children and for individual racial/ethnic groups. Finally, we evaluate the effect of FTDM on re-reports to CPS.

<sup>1</sup> SHB 1472, Chapter 465, Laws of 2007

<sup>2</sup> M. Miller. (2008). *Racial disproportionality in Washington State's child welfare system*. Olympia: Washington State Institute for Public Policy, Document No. 08-06-3901.

<sup>3</sup> Throughout this report, foster care refers to removal from home to placement in licensed foster homes, group homes, or the care of unlicensed relatives.

<sup>4</sup> Laws of 2009, ch. 213, § 2 (ESSB 5882)

### **SUMMARY**

In 2008, the Washington State Institute for Public Policy (Institute), together with the Washington State Racial Disproportionality Advisory Committee (WSRDAC), studied racial disproportionality in Washington's child welfare system. Findings indicated that following referrals to Child Protective Services (CPS), Indian and Black children (but not Asian or Latino children) were more likely to be placed in foster care, and to remain in care significantly longer than White children.

Washington's Children's Administration uses Family Team Decision Making (FTDM) meetings to involve parents and other family members, the child (when appropriate), friends, foster parents, caseworkers, and other professionals. Ideally, FTDM meetings are held for all decisions involving child removal, change of placement, and reunification or other permanency plan.

In 2009, the Legislature directed the Institute to study the effects of the implementation of FTDM on racial disproportionality.

### **Findings**

In 2008, DSHS convened 6,600 FTDM meetings regarding nearly 8,000 children. When we studied outcomes for the child welfare caseload statewide, we found that FTDM had no effect on:

- ✓ Out-of-home placement,
- ✓ Time to permanency, or
- ✓ New referrals to CPS.

When we examined outcomes by racial groups, however, we found three positive results for FTDM.

- ✓ Latino children experienced decreased rates of placement.
- ✓ Asian children achieved permanency more quickly than those in non-FTDM offices.
- ✓ Black children exiting to permanency were less likely to be the alleged victims of new accepted CPS referrals.

With the exception of these three favorable results, FTDM as implemented in Washington did not affect disproportionality for Indian or Black children with respect to placement in foster care or time to permanency.

## BACKGROUND

Family Team Decision Making (FTDM) is one of four strategies of the Casey Family Programs “Family to Family” initiative.<sup>5</sup> FTDM involves meetings that include parents and other family members, the child (when appropriate), friends, foster parents, caseworkers, and other professionals involved with the case. Meetings are led by an internal facilitator who is not a case-carrying social worker or supervisor. Ideally, meetings are held for all decisions involving child removal, change of placement, and reunification or other permanency plan.

In 2009, there were 47 DSHS field offices. FTDM was piloted in seven of the offices in Washington State in 2005. By 2009, 31 offices were holding FTDM meetings.

The most recent and complete information on FTDM meetings was available for 2008. In that year, 6,596 meetings were held in 27 DSHS offices. A total of 7,974 children were the subject of meetings related to their placements; on average, children who were the subject of meetings were involved with 1.3 meetings during 2008. About 36 percent of children in out-of-home placements were the subject of meetings in 2008.<sup>6</sup>

In the Institute’s 2008 report to the WSRDAC,<sup>7</sup> we found that, compared with White children, American Indian, Black, and Latino children were over-represented in Washington’s child welfare system. Much of the disproportionality occurred at the point of referral to CPS. Even after referral to CPS, Indian and Black children were at greater risk of removal from home and long-term foster care than White children whose cases were referred to CPS.

<sup>5</sup> Annie E. Casey Foundation. (2006). *Family to Family Key Elements*.  
<http://www.aecf.org/upload/pdf/familytofamily/keyelements.pdf>  
Team decision making is known by various names in different states. For example, in Washington it is Family Team Decision Making, in Texas it is referred to as Family Group Decision Making.

<sup>6</sup> The Children’s Administration (CA) FTDM database includes information on the reason for each meeting. We identified 5,276 children in out-of-home care who were the subjects of meetings for reasons of placement moves or exits in 2008. In the same year in those offices, 13,826 children were in out-of-home placements lasting at least one day.

<sup>7</sup> Miller (2008).

### STUDY LANGUAGE FROM THE 2009 LEGISLATURE

*“...the Washington state institute for public policy shall evaluate the department of social and health services’ use of structured decision-making practices and implementation of the family team decision-making model to determine whether and how those child protection and child welfare efforts result in reducing disproportionate representation of African-American, Native American, and Latino children in the state’s child welfare system.”*

*ESSB 5882, Laws of 2009  
(Emphasis added)*

In its remediation plan,<sup>8</sup> the WSRDAC noted that studies of effects of FTDM on child welfare outcomes and disproportionality have yielded mixed results. Thus, the WSRDAC recommended studying whether FTDM implementation in Washington reduced disproportionality.

FTDM meetings are convened when decisions are made about placements and exits from care. If FTDM affects disproportionality, we should observe less disproportionality for Indian and Black children with respect to:

- Removal from home, and
- Time to permanency.

**Decision Points and Outcomes.** Most children enter the child welfare system when a report is made to CPS about alleged child abuse or neglect. These reports are called “referrals.” Referrals are assigned a risk tag, ranging from zero (no risk) to 5 (very high risk).<sup>9</sup> Cases considered low risk may be referred to community services. Cases with risk tags of 3 or greater are accepted for investigation. Based on the findings of investigations, children may be placed in foster care, or families may be provided services while children remain at home.

If children are placed in foster care, they may achieve permanency through reunification with parents, establishment of legal guardianships, or adoption.

<sup>8</sup> Washington State Racial Disproportionality Advisory Committee. (2008). *Racial Disproportionality and Disparity in Washington State Child Welfare—Remediation Plan: Committee Recommendations to DSHS Secretary Robin Arnold-Williams*.  
<http://www.dshs.wa.gov/pdf/ca/disproportionremediationplan.pdf>

<sup>9</sup> Since the time of this study, DSHS has modified its CPS intake risk assessment.

## STUDY APPROACH

For this report, we asked the broad question: Does implementation of FTDM in DSHS offices reduce average rates of placement and time in care for children in those offices?

Our approach took advantage of the fact that FTDM was implemented over a period of time. If a child's case was opened (CPS referral or out-of-home placement) after the office had implemented FTDM, we considered it an FTDM case. If the case was opened before implementation, we considered the case non-FTDM.

We took a slightly different approach when studying re-referrals after exit to permanency. According to the Children's Administration Practices and Procedures Guide, an FTDM should be held "...prior to reunification of a child with parent(s) or exiting from care."<sup>10</sup> By this rule, children exiting care in offices that had implemented FTDM should have had a meeting. For analysis of re-referrals to CPS, a case was considered FTDM if the office had implemented FTDM before the placement ended.

## DATA SOURCES

- The Children's Administration Management Information System (CAMIS) was the source for all referrals, accepted referrals, and placements (children removed from home).<sup>11</sup>
- The DSHS Family to Family database provided information on families and individual children who were the subjects of meetings and provided data on the number and types of attendees. For offices not in the original pilot, the first meeting date recorded was considered the implementation date.
- Food stamp records were used to determine if a child's family had been receiving food stamps at the time of the CPS referral. Receipt of food stamps was used as a measure of family poverty in the regression analyses.

- Population estimates by age and by county were obtained from Washington's Office of Financial Management.

We focused on children with CPS cases opened in 2005, 2007, and 2008. These years were chosen because Family to Family data were more complete than in other years.

For each of the three years, we identified all children whose CPS referrals were received from January through June.<sup>12</sup> If a CPS referral occurred after the office had implemented FTDM, the case was considered to reside in an FTDM office. Referrals occurring prior to the implementation date for an office were considered to be non-FTDM cases. For analysis of permanency, cases where placement occurred on or after the office had implemented FTDM were considered FTDM cases.

Data on cases for the three years were combined. Some children may have appeared multiple times in the data set; for example, if they had a CPS referral in 2005 and another in 2007, they would appear twice. Within a single year, however, a child would appear only one time.

**Defining Race.** Race is a complex concept that carries many cultural interpretations. Individuals may have more than one racial or ethnic heritage. In the 2000 census, respondents could choose as many races/ethnicities as were necessary to describe themselves.<sup>13</sup> While most Americans described themselves as one race, 2.4 percent indicated more than one race and some indicated up to six racial categories, in addition to Latino/Hispanic origin.

The WSRDAC specified the following rules for classifying multi-racial/ethnic children. We used these rules in this analysis.

- American Indian. If any of the six racial codes indicated American Indian background, the child was coded Indian in our analysis.

<sup>10</sup> Section 4302. Family Team Decision-Making Meetings. DSHS Children's Administration Practice and Procedures Guide. [http://www.dshs.wa.gov/ca/pubs/mnl\\_pnpg/chapter4\\_4300.asp](http://www.dshs.wa.gov/ca/pubs/mnl_pnpg/chapter4_4300.asp)

<sup>11</sup> CA transitioned to a new data system, FamLink, in February 2009. We do not use FamLink data here because the FTDM meeting information was only available through 2008.

<sup>12</sup> We used the first six months of each year because we knew with certainty which offices had implemented FTDM as part of the pilot during the first six months of 2005. Later in 2005, additional offices had begun implementing FTDM, but the identity of the offices and the implementation dates were not available. For consistency, we used the first six months for each of the years in the analysis.

<sup>13</sup> U.S. Census Bureau. (2001). *Census brief: Two or more races, population 2000*. Washington DC: Department of Commerce, U.S. Census Bureau. Accessed from <http://www.census.gov/prod/2001pubs/c2kbr01-6.pdf>

- Black. If a child had no Indian heritage, but any of the codes indicated Black or African American, the child was coded as Black.
- Asian/Pacific Islander. If a child was coded as Asian or one of the codes for Pacific Islander, with no Black or American Indian heritage, the child's race was coded as Asian.
- Latino. Any child with Latino/Hispanic heritage, but not Indian, Black or Asian was coded as Latino.
- White. Any child with no indication of Indian, Black, Asian, or Latino race/ethnicity was coded as White.

**Measuring Disproportionality.** This analysis employed the same two measures of disproportionality used in our report for the WSRDAC.<sup>14</sup>

The Disproportionality Index (DI) compares rates of occurrence of an event for the state population of children in various racial groups compared with that rate for White children. *The DI measures the chances of an event occurring for a child of color compared with the chances for a White child.*

First we calculated rates for each racial group at each decision point. For example, in the first six months of 2008, we observed 2,624 Indian children were referred to CPS. The estimated state population of Indian children was 63,202.<sup>15</sup> We calculated the rate for Indian children by dividing the number of children referred by the number of children in the population and multiplying the result by 1,000 to get the rate per 1,000 children:

$$\begin{aligned} &\text{Rate of referral for Indian children:} \\ &(2,624 \div 63,202) \times 1,000 = 42 \end{aligned}$$

This represents a rate of 42 Indian children referred for every 1,000 Indian children in the population.

At each event, we calculated the DI for each racial group compared with White children by dividing the rate of an event for a racial group by the rate for White children. Using this same example, the comparable rate of CPS referrals for White

children in the first six months of 2008 was 16 per 1,000 children.

DI at referral for Indian children:

$$42 \div 16 = 2.6$$

This means that in 2008, Indian children were 2.6 times as likely to be referred to CPS as White children.

We also created a second metric, the Disproportionality Index After Referral (DIAR). The DIAR compares outcomes for children with CPS referrals to White children with CPS referrals. This allows us to distinguish disproportionality that may occur **after** children become known to the child welfare system. For example, over the years of this study, 7.2 percent of Indian children who were the alleged victims in CPS referrals were placed in out-of-home care compared with 4.9 percent of White children.

DIAR for Indian children at the point of placement:

$$7.2 \div 4.9 = 1.5$$

That is, Indian children with CPS referrals were 1.5 times as likely to be placed in foster care as White children with CPS referrals.

In considering the effects of FTDM, we focused on DIAR because any effect of FTDM would be observed only after a referral to CPS.

**Regression Analyses.** Many characteristics may influence the outcomes of children involved in the child welfare system. In order to identify the effects of FTDM on outcomes—separate from the other case and office characteristics—we used multivariate regression analysis. Specifics of these analyses are included in the Appendix.

**Statistical Significance.** Tables in the text provide odds ratios and hazard ratios when the results indicated statistically significant effects of FTDM on outcomes. We designated a result significant if the p-value was less than 0.10. This means that we would observe the result by chance less than 10 percent of the time.<sup>16</sup>

**Averages by Race.** Appendix Exhibit A6 provides the overall average rates of placement, time in care and rates of new CPS referrals by race.

<sup>14</sup> Miller, 2008

<sup>15</sup> Based on Washington's Office of Financial Management intercensal populations estimates for 2008 of children 0 to 17 years of age. For a description of population estimates used in this study, see Appendix A2.

<sup>16</sup> Statisticians commonly define significance as p-value < 0.05. We choose 0.10 here to indicate trends that might be significant with larger samples. Tables in Appendix sections A3, A4, and A5 provide exact p-values for all outcomes and racial groups.

## STUDY QUESTIONS

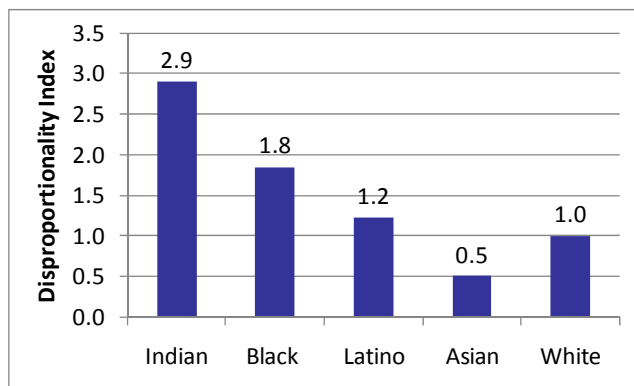
- Over the study period, what patterns of disproportionality were observed at the point of referral to CPS and removal from home?
- Did implementation of FTDM affect the rate at which children were removed from home?
- For children removed from home, did FTDM affect the time until children achieve permanency (reunification with their parents, legal guardianship, or adoption)?
- For children removed from home, did FTDM affect the time until they achieved permanency (reunification with their parents, legal guardianship, or adoption)?
- Did FTDM influence the rate of new referrals to CPS following exits to permanency?

## FINDINGS

**Over the study period, what patterns of disproportionality were observed at the point of referral to CPS and removal from home?**

In Exhibit 1, the bars indicate the magnitude of racial disproportionality that exists at the point of referral to CPS. Over the three years of this study, as we observed in our earlier study, Indian,<sup>17</sup> Black and Latino children were more likely to be alleged victims in CPS referrals than White children. Asian children were about half as likely as White children to have CPS referrals.

**Exhibit 1**  
**Disproportionality Index at Referral to CPS**  
*Children Referred in 2005, 2007, and 2008*

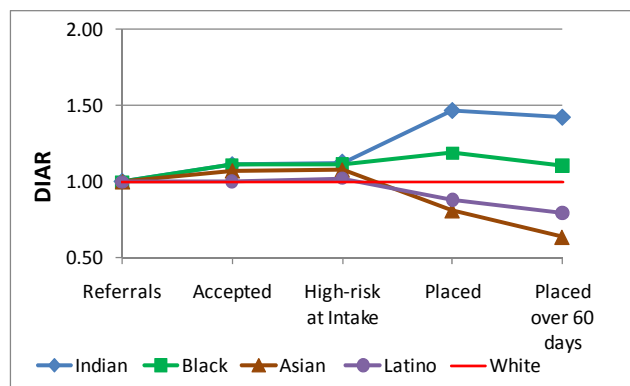


WSIPP, 2011

<sup>17</sup> Note that the value of disproportionality index for Indian children is slightly higher than the value calculated for 2008 in the example on the previous page. Exhibit 1 displays the average across the three years of the study period.

Exhibit 2 displays disproportionality after referral (DIAR) for the four racial/ethnic groups. Each race is represented by a line. By definition, DIAR is 1 at the point of referral to CPS. Compared with White children with CPS referrals, Indian children were about 1.5 and Black children about 1.2 times as likely to be placed in foster care. Latino and Asian children were less likely to be placed and to be in care more than 60 days. Using statewide data, we find disproportionate over-representation of Indian and Black children, but not Latino or Asian children after CPS referral.

**Exhibit 2**  
**Disproportionality After Referral**  
*Children Referred January through June 2005, 2007, and 2008*



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**Did implementation of FTDM affect the rate at which children were removed from home?**

Exhibit 3 shows the overall rates of removal for children whose CPS referral had been accepted for investigation. We observed slightly lower rates of removal in offices where FTDM had been implemented, but the difference did not approach statistical significance (p=0.29).

**Exhibit 3**  
**Effect of FTDM on Out-of-Home Placements**  
*Referrals January – June 2005, 2007 and 2008*

FTDM Office at Time of Referral	Children With an Accepted CPS Referral	Children Removed From Home	Percentage Removed
No	23,926	3,078	12.9%
Yes	32,996	4,158	12.6%
All Offices	56,922	7,236	12.7%

The percentages displayed in Exhibit 3 do not take into account any characteristics of the children or their cases. To learn whether case characteristics might influence conclusions about FTDM, we also used a statistical technique called logistic regression. The analysis controlled for child race, gender, age at referral, type of reporter (for example, law enforcement or medical professional), prior CPS history, year of referral, family receipt of food stamps, intake worker, DSHS region, and office size.

A summary of the logistic regression results is displayed in Exhibit 4. We show the statistically significant<sup>18</sup> odds ratio for FTDM cases compared with cases in non-FTDM offices. If the odds ratio is less than 1, then the likelihood of placement is less in FTDM offices than in non-FTDM offices.

We find that for Latino children, FTDM was associated with a significantly reduced rate of placement. After adjusting for known case characteristics, the estimated rate of placement for Latino children FTDM offices was reduced from 12.4 to 10.1 percent.

<sup>18</sup> A result is considered to be significant if the results could occur by chance less than 5 percent of the time.

We found no impact of FTDM on rates of out-of-home placement for other races. Implementation of FTDM did not affect disproportionality for Indian or Black children at the point of removal from home.

**Exhibit 4**  
**Effect of FTDM on Out-of-Home Placements**  
*Results of Logistic Regression<sup>19</sup>*

Child Race	N	Odds Ratio <sup>a</sup>
All races	55,788	ns
White	32,588	ns
Indian	5,951	ns
Black	5,028	ns
Asian	2,148	ns
Latino	7,456	0.82

<sup>a</sup> An odds ratios less than 1 indicate a reduced likelihood of placement in an FTDM office.

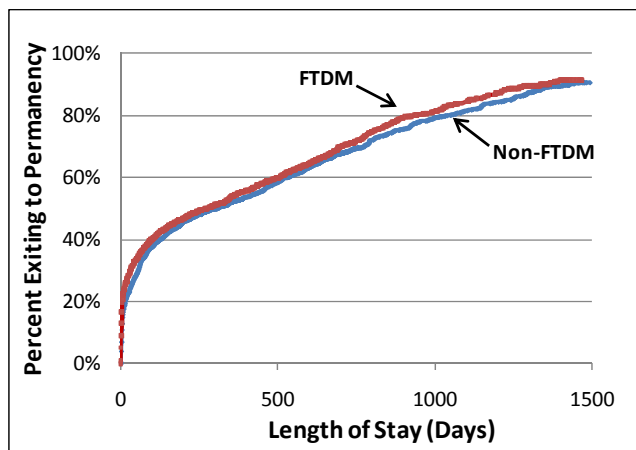
ns indicates that the effect of FTDM is not statistically significant (p<0.10).

**For children removed from home, did FTDM affect the time until they achieved permanency (reunification with their parents, legal guardianship, or adoption)?**

In Exhibit 5, we plot days in foster care until children move to a permanent placement (reunification, guardianship, or adoption). Children whose cases were opened in offices holding FTDM meetings are indicated in red; those whose cases were opened in offices where FTDM had not yet been implemented are shown in blue. As length of stay increased, more children achieved permanency. By 1,500 days after placement, 91 percent of children had moved to permanent placements. We see marginally faster permanency associated with FTDM.

<sup>19</sup> Full results of logistic regressions modeling likelihood of placement are provided in section A3 in the Appendix.

**Exhibit 5**  
**Effect of FTDM on Time to Permanency**



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Exhibit 5 represents the simple statistics, without controlling for case or regional characteristics. We further analyzed these data using Cox regression. Cox regression allows us to evaluate the effect of FTMD on time to permanency, controlling for other characteristics where the follow-up period varies.<sup>20</sup> That is, with all else being equal, what was the effect of implementation of FTDM in an office on time to permanency? Significant results of Cox regressions are shown in Exhibit 6. The analysis provides a hazard ratio—a comparison of the likelihood of a child achieving permanency in an FTDM office compared with an office that had not implemented FTDM. A hazard ratio greater than 1 indicates that children achieved permanency more quickly in an FTDM office.

Results of Cox regression analyses show that Asian children achieved permanency more quickly in FTDM offices. We estimate that time to permanency was reduced from 434 to 284 days for Asian children. We saw no significant impact of FTDM when we combined all races or for White, Indian, Black or Latino children separately.

Thus, FTDM did not affect disproportionality associated with longer time to permanency for those two racial groups. Only Asian and Latino children in FTDM achieved permanency more quickly than children in non-FTDM offices.

<sup>20</sup> Cox regression results are provided in full in section A4 in the Appendix. For this analysis, we omitted children whose cases were transferred to other authorities—frequently to tribes. These analyses controlled for child age at referral, gender, child race, alleged type of maltreatment (physical abuse, sexual abuse, neglect, abandonment), type of reporter, DSHS region, year of referral, receipt of food stamps, the intake worker, and office size.

**Exhibit 6**  
**Effect of FTDM on Time to Permanency**  
*Results of Cox Regression<sup>21</sup>*

Child Race	N	Hazard Ratio <sup>a</sup>
All races	7,136	ns
White	4,162	ns
Indian	913	ns
Black	849	ns
Asian	208	1.53
Latino	862	ns

<sup>a</sup> A hazard ratio greater than 1 indicates a shorter time to permanency in FTDM offices.

ns indicates that the effect of FTDM is not statistically significant ( $p < 0.10$ ).

**Did FTDM influence the rate of new referrals to CPS following exits to permanency?**

The WSRDAC asked the Institute whether FTDM might increase the safety of children who exit care. For this analysis, we used new accepted referrals to CPS as a measure of safety. We identified children who exited care to a permanent placement and followed their status for six months to determine if they had a new report to CPS that was accepted for investigation. Exhibit 7 provides odds ratios where the effect of FTDM was statistically significant ( $p$ -value  $< 0.10$ ). An odds ratio less than 1 indicates a reduced likelihood of a new accepted referral. In this analysis, Black children who exited care from an FTDM office were less likely to have a new CPS referral than children exiting from non-FTDM offices (9 percent vs. 24 percent). FTDM had no effect on new CPS reports for other races.

**Exhibit 7**  
**Effect of FTDM on a New Referral to CPS**  
**Following an Exit to Permanency<sup>22</sup>**

Child Race	N	Odds Ratio <sup>a</sup>
All races	4,903	ns
White	2,940	ns
Indian	576	ns
Black	501	0.29
Asian	157	ns
Latino	614	ns

<sup>a</sup> An odds ratio less than 1 indicates a reduced likelihood of a new CPS report in FTDM offices.

ns indicates that the effect of FTDM is not statistically significant ( $p < 0.10$ ).

<sup>21</sup> Full results of Cox regressions modeling time to permanency are provided in section A4 in the Appendix.

<sup>22</sup> Full results of logistic regressions modeling likelihood of a new referral are provided in section A5 in the Appendix.

## CONCLUSIONS

A summary of study findings are displayed in Exhibit 8 (below). Washington’s implementation of the Family Team Decision-Making model had no overall significant impact on rates of placement following CPS referrals, time to permanency, or new accepted CPS referrals after an exit to a permanent placement.

In this analysis, FTDM had differential impact on outcomes, depending on race.

- Latino children in FTDM offices experienced decreased rates of placement. We observed no effect of FTDM on this outcome for other races/ethnicities.
- Asian children in FTDM offices achieved permanency more quickly than those in non-FTDM offices.
- Black children exiting to permanency in an FTDM office were less likely to have another accepted CPS referral.

Over the study period, Indian and Black children with CPS referrals were more likely to be removed from home and remain in care longer than White children with CPS referrals. This disproportionality was not affected by FTDM.

**Exhibit 8**

### Summary of Effects of FTDM by Racial Group

Child Race	Effect of FTDM On: <sup>a</sup>		
	Out-of-home	Time to Permanency	New CPS Referrals
All Races	ns	ns	ns
White	ns	ns	ns
Indian	ns	ns	ns
Black	ns	ns	Positive
Asian	ns	Positive	ns
Latino	Positive	ns	ns

<sup>a</sup> ns indicates that the effect of FTDM is not statistically significant ( $p < 0.10$ ).

## NEXT STEPS

The Legislature also asked the Institute asked to study the effects on disproportionality of another approach used by DSHS, Structured Decision Making® (SDM).<sup>23</sup> SDM is an actuarial instrument used as part of a CPS investigation to assess the risk of future child maltreatment. The final SDM report will be published in April, 2011.

The DSHS Children’s Administration has recently created the Family Engagement Implementation Team to increase the involvement of families in decision making. A significant focus of the team is to improve and standardize the FTDM process across offices. It is possible that, over time, this effort to increase family engagement will reduce placements and reduce the time children spend in foster care.

Later in 2011, the DSHS Children’s Administration (CA) will convert its contracts for purchased services to performance-based contracts.<sup>24</sup> CA anticipates that the new contracts will improve child outcomes by safely reducing out-of-home placements and shorter times to permanency. It would be valuable to continue to track outcomes for children to determine how the combination of performance based contracting and the efforts of the Family Engagement Implementation Team affect child outcomes.

<sup>23</sup> Laws of 2009, ch. 213, § 2 (ESSB 5882)

<sup>24</sup> The transition to performance-based contracting was mandated in Chapter 520, Laws of 2009 (E2SHB 2106).



## TECHNICAL APPENDIX

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A3. Logistic Regression Analyses of Likelihood of Placement .....	A-1
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**A1. Data Sources.** The Children’s Administration Management Information System (CAMIS) was the source for all referrals, accepted referrals, and placements (children removed from home). CAMIS does not identify out-of-home placements resulting from CPS referrals; therefore, we used the same procedure used by Children’s Administration in its federal reporting to the National Child Abuse and Neglect Data System (NCANDS). NCANDS defines an out-of-home placement as one occurring in the 90 days following a referral to be a CPS placement.<sup>25</sup>

Information on DSHS offices holding FTDM meetings in 2007 and 2008 was available in a DSHS database. The database provided information on families and children who were the subjects of meetings; it also provided data on the number and types of attendees. Offices began holding meetings at different times; the database allows us to identify the first date any particular office began implementing FTDM.

For 2005, we knew only the identity of the seven offices where FTDM had been piloted by January of that year.<sup>26</sup>

Staff at the Research and Data Analysis Division at DSHS matched children with referrals to CPS to records of families receiving food stamp at the time of each referral. We used food stamp receipt as a proxy for poverty.

**A2. Population Estimates of Children by Race.** Following the 2000 census, the Bureau of the Census released estimates of children in multiple racial categories by county. Similar estimates are not yet available for the 2010 Census. For this analysis, we used intercensal population estimates for 2008 available from Washington’s Office of Financial Management. The 2008 estimates provided only a count of children listed as “multi-racial.” We apportioned children listed as multi-racial in the same proportions as were observed in the 2000 Census. That is, if 20 percent of multi-racial children in 2000 were classified as Indian, we assumed 20 percent of multi-racial in 2008 were also Indian.

**A3. Logistic Regression Analyses of Likelihood of Placement.** The exhibits in this section display statistics from logistic regression analyses described in the report. The regression analyses model the likelihood of a decision or outcome that retains a child in the child welfare system, controlling for reporter type and other factors. We included all

the children with an accepted CPS referral in modeling the likelihood that a child would be placed in foster care. The variable, Historical Worker Risk, is the average risk tag assigned by the intake worker across his or her caseload. In previous studies, we observed that intake workers with a history of assigning higher levels of risk than their peers (which resulted in investigation and intervention) were more likely to continue to assign higher levels of risk. Historical worker risk was shown to be a predictor of child out-of-home placement.<sup>27</sup>

**How to read tables.** The next six tables provide the odds ratios of the effects of various case characteristics on the likelihood of removal from home. Exhibit A.3.1 combines children of all races. The other five tables provide analysis for each of the racial groups. Some variables are coded 0 or 1. For example, the variable FTDM would be coded 0 for children whose CPS referrals were filed before the office had begun implementing FTDM meetings and coded 1 if the office had implemented FTDM by the time of the referral. Except when factors were continuous, we omitted the variable for one group to serve as a comparison; then the odds ratios indicated the magnitude and direction of an effect.

The tables display measures of significance with asterisks (\*) for each observation where the p-value was less than 0.10; that is, where we might observe this outcome by chance less than 10 percent of the time. While p-values of more than 0.05 are usually considered non-significant, we include them here to indicate trends that might be significant with larger samples. Items without an asterisk are considered non-significant. For example, Exhibit A.3.1 indicates the effect of FTDM is statistically non-significant; that is, the p-value is greater than 0.10. In Exhibit A.3.1, when we combined children of all races, the odds of an infant being placed in foster care were 2.88 times greater than the odds for children 3 to 5 years old; this finding was highly significant, as signified by three asterisks (\*\*\*)

We also list the statistic, Area Under the Receiver Operating Characteristic (AUC). This statistic provides a measure of how well the model predicts an outcome. AUC can vary between 0 and 1. A value of 0.5 indicates the model does not predict the outcome. Values of 0.7 or greater indicate the model does a good job of predicting the outcome.

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<sup>25</sup> National Data Archive on Child Abuse and Neglect, State Mapping Form for the field “Foster Care Services.”

<sup>26</sup> D. Marshall. (2006). *Family to Family Outcomes Report #3: Evaluation of specific placement decisions in Family Team Decision meetings*. Olympia: Washington Department of Social and Health Services.

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<sup>27</sup> M. Miller. (2009). *Outcomes of referrals to Child Protective Services: Comparing reporters*. Olympia: Washington State Institute for Public Policy, Document No. 09-06-3901.

**Exhibit A.3.1**  
**Placement Given an Accepted Referral**  
**All Children**  
N=55,788 AUC=0.736

	Odds Ratio	P-Value
<b>FTDM Office</b>	0.992	0.790
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	2.877***	<.0001
Ages 1 to 2	1.251***	0.0001
Ages 6 to 9	0.757***	<.0001
Ages 10 to 13	0.800***	<.0001
Ages 14 and older	0.866***	0.005
<b>Male (Compare to Female)</b>	0.905***	0.0001
<b>Number of Prior Referrals</b>	1.152***	<.0001
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	0.764***	<.0001
Sex abuse	0.670***	<.0001
Abandoned	9.930***	<.0001
<b>Race (Compared to White)</b>		
Indian	1.298***	<.0001
Black	1.347***	<.0001
Asian	0.923	0.314
Latino	0.963	0.375
<b>Type of Reporter (Compared to Educators/child care)</b>		
Law Enforcement	4.066***	<.0001
Medical Professional	1.812***	<.0001
Mental Health Professional	0.768***	0.001
Social Service Professional	1.560***	<.0001
Friends/Relatives	0.760***	<.0001
Others	0.897	0.155
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	1.678***	<.0001
Region 2	1.374***	<.0001
Region 3	1.054	0.276
Region 5	1.515***	<.0001
Region 6	1.552***	<.0001
<b>Referral Year (Compared to 2007)</b>		
2005	0.998	0.952
2008	0.904***	0.002
<b>Food Stamps</b>	0.812***	<.0001

\* p-value < 0.10  
\*\* p-value <0.05  
\*\*\* p-value < 0.01

**Exhibit A.3.2**  
**Placement Given an Accepted Referral**  
**Indian Children Only**  
N=5,951 AUC=0.724

	Odds Ratio	P-Value
<b>FTDM Office</b>	1.028	0.773
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	2.912***	<.0001
Ages 1 to 2	1.426**	0.031
Ages 6 to 9	1.052	0.681
Ages 10 to 13	0.954	0.722
Ages 14 and older	0.746*	0.060
<b>Male (Compared to Female)</b>	1.075	0.335
<b>Number of Prior Referrals</b>	1.084***	<.0001
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	0.684***	0.005
Sex abuse	0.886	0.661
Abandoned	13.4***	0.000
<b>Type of Reporter (Compared to Educators/Childcare)</b>		
Law Enforcement	3.397**	<.0001
Medical Professional	1.376**	0.020
Mental Health Professional	0.626**	0.023
Social Service Professional	1.303**	0.021
Friends/Relatives	0.534***	<.0001
Others	0.727	0.178
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	1.831***	<.0001
Region 2	1.438**	0.015
Region 3	0.891	0.390
Region 5	1.454**	0.013
Region 6	1.604***	0.000
<b>Referral Year (Compared to 2007)</b>		
2005	1.100	0.314
2008	0.891	0.214
<b>Food Stamps</b>	0.605***	<.0001

\* p-value < 0.10  
\*\* p-value <0.05  
\*\*\* p-value < 0.01

**Exhibit A.3.3**  
**Placement Given an Accepted Referral**  
**Black Children Only**  
 N=5,028 AUC=0.738

	Odds Ratio	P-Value
<b>FTDM Office</b>	0.956	0.683
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	2.405***	<.0001
Ages 1 to 2	0.939	0.737
Ages 6 to 9	0.692***	0.008
Ages 10 to 13	0.738**	0.039
Ages 14 and older	0.693**	0.024
<b>Male (Compared to Female)</b>	0.781***	0.003
<b>Number of Prior Referrals</b>	1.155***	<.0001
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	1.199	0.105
Sex abuse	0.350**	0.049
Abandoned	11.341***	<.0001
<b>Type of Reporter (Compared to Educators/Childcare)</b>		
Law Enforcement	5.678***	<.0001
Medical Professional	2.461***	<.0001
Mental Health Professional	1.009	0.976
Social Service Professional	2.135***	<.0001
Friends/Relatives	1.050	0.726
Others	1.237	0.361
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	1.458**	0.021
Region 2	0.980	0.931
Region 3	1.259	0.128
Region 5	1.420***	0.007
Region 6	1.619***	0.003
<b>Referral Year (Compared to 2007)</b>		
2005	1.124	0.313
2008	1.217**	0.042
<b>Food Stamps</b>	0.704***	<.0001

\* p-value < 0.10  
 \*\* p-value <0.05  
 \*\*\* p-value < 0.01

**Exhibit A.3.4**  
**Placement Given an Accepted Referral**  
**Asian Children Only**  
 N=2,148 AUC=0.807

	Odds Ratio	P-Value
<b>FTDM Office</b>	1.221	0.306
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	2.646***	0.0001
Ages 1 to 2	0.916	0.810
Ages 6 to 9	0.686	0.153
Ages 10 to 13	0.774	0.329
Ages 14 and older	0.708	0.234
<b>Male (Compared to Female)</b>	0.944	0.725
<b>Number of Prior Referrals</b>	1.358***	<.0001
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	0.951	0.812
Sex abuse	1.041	0.922
Abandoned	NA	NA
<b>Type of Reporter (Compared to Educators/Childcare)</b>		
Law Enforcement	4.738***	<.0001
Medical Professional	0.777	0.482
Mental Health Professional	0.853	0.701
Social Service Professional	1.132	0.615
Friends/Relatives	0.708	0.216
Others	0.763	0.597
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	2.697***	0.005
Region 2	2.655**	0.018
Region 3	0.664	0.167
Region 5	2.445***	<.0001
Region 6	1.984**	0.014
<b>Referral Year (Compared to 2007)</b>		
2005	0.590***	0.010
2008	0.737	0.108
<b>Food Stamps</b>	0.572***	0.001

\* p-value < 0.10  
 \*\* p-value <0.05  
 \*\*\* p-value < 0.01  
 NA=too few observations to be meaningful.

**Exhibit A.3.5**  
**Placement Given an Accepted Referral**  
**Latino Children Only**  
 N=7,456 AUC=0.751

	Odds Ratio	P-Value
<b>FTDM Office</b>	0.812***	0.005
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	3.174***	<.0001
Ages 1 to 2	1.289	0.136
Ages 6 to 9	0.895	0.381
Ages 10 to 13	0.827	0.231
Ages 14 and older	1.333**	0.017
<b>Male (Compared to Female)</b>	0.891	0.134
<b>Number of Prior Referrals</b>	1.150***	<.0001
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	0.709***	0.008
Sex abuse	0.847	0.583
Abandoned	6.099***	0.010
<b>Type of Reporter (Compared to Educators/Childcare)</b>		
Law Enforcement	4.378***	<.0001
Medical Professional	1.650***	0.0001
Mental Health Professional	0.426***	0.003
Social Service Professional	1.415***	0.006
Friends/Relatives	0.745**	0.020
Others	1.100	0.659
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	1.540***	0.002
Region 2	1.475***	0.002
Region 3	1.144	0.352
Region 5	2.401***	<.0001
Region 6	2.335***	<.0001
<b>Referral Year (Compared to 2007)</b>		
2005	0.914	0.345
2008	0.832**	0.050
<b>Food Stamps</b>	0.954	0.555

\* p-value < 0.10  
 \*\* p-value <0.05  
 \*\*\* p-value < 0.01

**A4. Cox Regression Analyses of Time to Permanency.**

The exhibits in this section display statistics from Cox regression analyses, estimating effects on case characteristics, including FTDM, on time to permanency. We included all children removed from home following a CPS referral to model the length of time children remained in foster care until they were reunified with parents, in a legal guardianship, or adopted.

**How to read these tables.** The next six tables provide the hazard ratios of the effects of various case

**Exhibit A.3.6**  
**Placement Given an Accepted Referral**  
**White Children Only**  
 N=32,588 AUC=0.735

	Odds Ratio	P-Value
<b>FTDM Office</b>	0.996	0.915
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	2.944***	<.0001
Ages 1 to 2	1.299***	0.001
Ages 6 to 9	0.685***	<.0001
Ages 10 to 13	0.772***	<.0001
Ages 14 and older	0.820***	0.002
<b>Male (Compared to Female)</b>	0.885***	0.001
<b>Number of Prior Referrals</b>	1.152***	<.0001
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	0.711***	<.0001
Sex abuse	0.604***	<.0001
Abandoned	8.188***	<.0001
<b>Type of Reporter (Compared to Educators/Childcare)</b>		
Law Enforcement	3.869***	<.0001
Medical Professional	1.848***	<.0001
Mental Health Professional	0.823***	0.055
Social Service Professional	1.566***	<.0001
Friends/Relatives	0.756***	<.0001
Others	0.877	0.175
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	1.665***	<.0001
Region 2	1.348***	0.000
Region 3	1.070	0.297
Region 5	1.387***	<.0001
Region 6	1.458***	<.0001
<b>Referral Year (Compared to 2007)</b>		
2005	0.973	0.524
2008	0.888***	0.007
<b>Food Stamps</b>	0.831***	<.0001

\* p-value < 0.10  
 \*\* p-value <0.05  
 \*\*\* p-value < 0.01

characteristics on time to permanency. A hazard ratio is a measure of how quickly an event occurs. Hazard ratios greater than 1 indicate permanency was achieved faster, while hazard ratio less than 1 indicates a longer time to permanency. Note that, when all races were included in the analysis (Exhibit A.4.1), FTDM had no significant effect on time to permanency. The hazard ratio for infants indicates that compared with children 3 to 5 years old, infants experience a longer time to permanency.

**Exhibit A.4.1**  
**Time to Permanency**  
**All Children**  
**Removed From Home Following a CPS Referral**  
**N=7,136**

	Hazard Ratio	P-Value
<b>FTDM Office</b>	1.051	0.126
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	0.808***	<.0001
Ages 1 to 2	0.988	0.851
Ages 6 to 9	1.131	0.013
Ages 10 to 13	1.182***	0.001
Ages 14 and older	1.478***	<.0001
<b>Male (Compare to Female)</b>	1.008	0.778
<b>Number of Prior Referrals</b>	0.918***	<.0001
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	1.346***	<.0001
Sex abuse	0.989	0.918
Abandoned	0.756*	0.067
<b>Race (Compared to White)</b>		
Indian	0.878***	0.005
Black	0.983	0.726
Asian	1.236**	0.0111
Latino	1.036	0.439
<b>Type of Reporter (Compared to Educators/child care)</b>		
Law Enforcement	1.270***	<.0001
Medical Professional	0.831***	0.001
Mental Health Professional	0.804**	0.021
Social Service Professional	0.961	0.412
Friends/Relatives	0.971	0.556
Others	1.095	0.279
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	1.152***	0.005
Region 2	1.209***	0.001
Region 3	0.885**	0.025
Region 5	1.023	0.671
Region 6	1.135**	0.010
<b>Referral Year (Compared to 2007)</b>		
2005	0.978	0.536
2008	1.004	0.917
<b>Food Stamps</b>	1.193***	<.0001
<b>Any Placement with Relatives</b>	0.623***	<.0001

\* p-value < 0.10  
\*\* p-value <0.05  
\*\*\* p-value < 0.01

**Exhibit A.4.2**  
**Time to Permanency**  
**Indian Children Only**  
**Removed From Home Following a CPS Referral**  
**N=856**

	Hazard Ratio	P-Value
<b>FTDM Office</b>	0.901	0.3557
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	0.832	0.187
Ages 1 to 2	0.95	0.785
Ages 6 to 9	0.987	0.928
Ages 10 to 13	1.443**	0.015
Ages 14 and older	1.493**	0.023
<b>Male (Compare to Female)</b>	0.828**	0.027
<b>Number of Prior Referrals</b>	0.888***	<.0001
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	1.915***	<.0001
Sex abuse	1.773*	0.083
Abandoned	0.541	0.388
<b>Type of Reporter (Compared to Educators/child care)</b>		
Law Enforcement	1.515***	0.001
Medical Professional	0.856	0.365
Mental Health Professional	0.555**	0.034
Social Service Professional	1.037	0.791
Friends/Relatives	0.957	0.784
Others	2.236***	0.002
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	1.165	0.336
Region 2	0.988	0.939
Region 3	0.86	0.355
Region 5	0.866	0.396
Region 6	0.89	0.437
<b>Referral Year (Compared to 2007)</b>		
2005	0.987	0.908
2008	0.983	0.885
<b>Food Stamps</b>	1.534***	<.0001
<b>Any Placement with Relatives</b>	0.672***	<.0001

\* p-value < 0.10  
\*\* p-value <0.05  
\*\*\* p-value < 0.01

**Exhibit A.4.3**  
**Time to Permanency**  
**Black Children Only**  
**Removed From Home Following a CPS Referral**  
**N=802**

	Hazard Ratio	P-Value
<b>FTDM Office</b>	1.080	0.469
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	0.616***	0.001
Ages 1 to 2	0.947	0.788
Ages 6 to 9	0.977	0.877
Ages 10 to 13	0.774	0.112
Ages 14 and older	1.141	0.442
<b>Male (Compare to Female)</b>	0.900	0.237
<b>Number of Prior Referrals</b>	0.933***	0.006
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	1.215	0.118
Sex abuse	0.768	0.653
Abandoned	0.873	0.713
<b>Type of Reporter (Compared to Educators/child care)</b>		
Law Enforcement	1.461***	0.004
Medical Professional	0.777	0.168
Mental Health Professional	0.484**	0.043
Social Service Professional	1.169	0.304
Friends/Relatives	0.736	0.067
Others	0.912	0.711
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	1.008	0.960
Region 2	1.352	0.242
Region 3	0.645***	0.009
Region 5	0.993	0.954
Region 6	1.349**	0.050
<b>Referral Year (Compared to 2007)</b>		
2005	0.989	0.922
2008	0.930	0.5192
<b>Food Stamps</b>	1.195*	0.053
<b>Any Placement with Relatives</b>	0.474	<.0001

\* p-value < 0.10  
\*\* p-value <0.05  
\*\*\* p-value < 0.01

**Exhibit A.4.4**  
**Time to Permanency**  
**Asian Children Only**  
**Removed From Home Following a CPS Referral**  
**N=203**

	Hazard Ratio	P-Value
<b>FTDM Office</b>	1.528*	0.068
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	0.443**	0.011
Ages 1 to 2	0.664	0.293
Ages 6 to 9	0.707	0.208
Ages 10 to 13	0.623	0.122
Ages 14 and older	0.764	0.420
<b>Male (Compare to Female)</b>	0.941	0.754
<b>Number of Prior Referrals</b>	0.866***	0.001
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	1.271	0.356
Sex abuse	0.785	0.651
Abandoned	0.132***	0.003
<b>Type of Reporter (Compared to Educators/child care)</b>		
Law Enforcement	1.132	0.614
Medical Professional	0.848	0.690
Mental Health Professional	0.619	0.312
Social Service Professional	0.348***	0.001
Friends/Relatives	1.013	0.970
Others	0.593	0.409
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	0.955	0.912
Region 2	3.539***	0.003
Region 3	3.212**	0.001
Region 5	1.241	0.459
Region 6	1.177	0.586
<b>Referral Year (Compared to 2007)</b>		
2005	0.589	0.042
2008	0.786	0.286
<b>Food Stamps</b>	1.372	0.102
<b>Any Placement with Relatives</b>	0.427***	<.0001

\* p-value < 0.10  
\*\* p-value <0.05  
\*\*\* p-value < 0.01

**Exhibit A.4.5**  
**Time to Permanency**  
**Latino Children Only**  
**Removed From Home Following a CPS Referral**  
**N=814**

	Hazard Ratio	P-Value
<b>FTDM Office</b>	1.167	0.1061
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	0.787*	0.071
Ages 1 to 2	0.757	0.148
Ages 6 to 9	1.008	0.954
Ages 10 to 13	0.983	0.913
Ages 14 and older	1.339*	0.074
<b>Male (Compare to Female)</b>	0.977	0.782
<b>Number of Prior Referrals</b>	0.904***	<.0001
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	1.246*	0.093
Sex abuse	0.776	0.428
Abandoned	1.807	0.256
<b>Type of Reporter (Compared to Educators/child care)</b>		
Law Enforcement	1.186	0.137
Medical Professional	0.622***	0.003
Mental Health Professional	1.221	0.517
Social Service Professional	0.916	0.535
Friends/Relatives	0.877	0.374
Others	0.793	0.375
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	0.934	0.656
Region 2	0.998	0.988
Region 3	0.74*	0.071
Region 5	0.749*	0.089
Region 6	0.726**	0.032
<b>Referral Year (Compared to 2007)</b>		
2005	1.01	0.920
2008	0.842	0.137
<b>Food Stamps</b>	1.34***	0.001
<b>Any Placement with Relatives</b>	0.516***	<.0001

\* p-value < 0.10  
\*\* p-value <0.05  
\*\*\* p-value < 0.01

**Exhibit A.4.6**  
**Time to Permanency**  
**White Children Only**  
**Removed From Home Following a CPS Referral**  
**N=3,894**

	Hazard Ratio	P-Value
<b>FTDM Office</b>	1.054	0.207
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	0.855**	0.010
Ages 1 to 2	1.071	0.408
Ages 6 to 9	1.238***	0.001
Ages 10 to 13	1.276***	0.001
Ages 14 and older	1.651***	<.0001
<b>Male (Compare to Female)</b>	1.088**	0.025
<b>Number of Prior Referrals</b>	0.932***	<.0001
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	1.353***	<.0001
Sex abuse	1.001	0.994
Abandoned	0.998	0.993
<b>Type of Reporter (Compared to Educators/child care)</b>		
Law Enforcement	1.210***	0.001
Medical Professional	0.865**	0.048
Mental Health Professional	0.918	0.464
Social Service Professional	0.951	0.430
Friends/Relatives	1.053	0.408
Others	1.110	0.320
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	1.222***	0.004
Region 2	1.287***	0.002
Region 3	0.912	0.213
Region 5	1.103	0.207
Region 6	1.25***	0.001
<b>Referral Year (Compared to 2007)</b>		
2005	0.968	0.491
2008	1.043	0.431
<b>Food Stamps</b>	1.125***	0.002
<b>Any Placement with Relatives</b>	0.662***	<.0001

\* p-value < 0.10  
\*\* p-value <0.05  
\*\*\* p-value < 0.01

**A5. Logistic Regression Analyses of New Reports to CPS Following Exits to Permanency.** For this analysis, we first identified children in our sample who exited care to permanency and looked for new accepted referrals to CPS over the six months following exit. Odds ratios greater than 1 indicate an increased likelihood to have a new report to CPS within six months after exit; odds ratios less than 1 indicate a decreased likelihood.

**Exhibit A.5.1**  
**New Referrals to CPS After Exit to Permanency**  
**All Children**  
 N=4,903 AUC=0.621

	Odds Ratio	P-Value
<b>FTDM Office</b>	0.873	0.188
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	0.989	0.944
Ages 1 to 2	1.290	0.194
Ages 6 to 9	0.831	0.252
Ages 10 to 13	0.943	0.719
Ages 14 and older	1.370*	0.063
<b>Male (Compare to Female)</b>	1.037	0.696
<b>Number of Prior Referrals</b>	1.082***	<.0001
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	1.182	0.226
Sex abuse	0.937	0.852
Abandoned	1.767	0.161
<b>Race (Compared to White)</b>		
Indian	1.711***	<.0001
Black	1.672***	0.001
Asian	1.857***	0.007
Latino	0.926	0.616
<b>Type of Reporter (Compared to Educators/child care)</b>		
Law Enforcement	0.840	0.180
Medical Professional	0.795	0.223
Mental Health Professional	0.822	0.529
Social Service Professional	0.881	0.402
Friends/Relatives	0.847	0.292
Others	1.141	0.586
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	0.983	0.912
Region 2	1.274	0.155
Region 3	0.712*	0.061
Region 5	0.768	0.126
Region 6	0.872	0.383
<b>Referral Year (Compared to 2007)</b>		
2005	0.879	0.235
2008	0.980	0.871
<b>Food Stamps</b>	1.066	0.505

\* p-value < 0.10  
 \*\* p-value <0.05  
 \*\*\* p-value < 0.01

**Exhibit A.5.2**  
**New Referrals to CPS After Exit to Permanency**  
**Indian Children Only**  
 N=576 AUC=0.702

	Odds Ratio	P-Value
<b>FTDM Office</b>	1.051	0.862
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	1.520	0.279
Ages 1 to 2	1.348	0.562
Ages 6 to 9	0.604	0.260
Ages 10 to 13	0.499	0.143
Ages 14 and older	1.209	0.700
<b>Male (Compared to Female)</b>	0.992	0.975
<b>Number of Prior Referrals</b>	1.155**	0.013
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	1.555	0.271
Sex abuse	NA	NA
Abandoned	NA	NA
<b>Type of Reporter (Compared to Educators/Childcare)</b>		
Law Enforcement	0.936	0.855
Medical Professional	1.532	0.357
Mental Health Professional	0.000	0.964
Social Service Professional	0.889	0.773
Friends/Relatives	1.251	0.622
Others	3.396	0.049
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	0.443**	0.050
Region 2	0.889	0.773
Region 3	0.711	0.406
Region 5	0.382*	0.051
Region 6	0.361	0.018
<b>Referral Year (Compared to 2007)</b>		
2005	1.004	0.988
2008	0.843	0.625
<b>Food Stamps</b>	1.360	0.239

\* p-value < 0.10  
 \*\* p-value <0.05  
 \*\*\* p-value < 0.01  
 NA=too few observations to be meaningful.



**Exhibit A.5.3**  
**New Referrals to CPS After Exit to Permanency**  
**Black Children Only**  
N=501 AUC=0.732

	Odds Ratio	P-Value
<b>FTDM Office</b>	0.286***	0.001
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	0.822	0.676
Ages 1 to 2	2.392	0.126
Ages 6 to 9	1.690	0.244
Ages 10 to 13	1.578	0.373
Ages 14 and older	1.003	0.995
<b>Male (Compared to Female)</b>	0.963	0.894
<b>Number of Prior Referrals</b>	1.069	0.319
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	0.565	0.165
Sex abuse	NA	NA
Abandoned	0.865	0.904
<b>Type of Reporter (Compared to Educators/Childcare)</b>		
Law Enforcement	0.420**	0.025
Medical Professional	0.561	0.319
Mental Health Professional	0.496	0.576
Social Service Professional	0.652	0.315
Friends/Relatives	0.166***	0.005
Others	NA	NA
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	1.771	0.301
Region 2	10.223	0.001
Region 3	2.092	0.179
Region 5	1.324	0.533
Region 6	2.188	0.070
<b>Referral Year (Compared to 2007)</b>		
2005	0.555	0.101
2008	1.150	0.684
<b>Food Stamps</b>	1.176	0.573

\* p-value < 0.10

\*\* p-value < 0.05

\*\*\* p-value < 0.01

NA=too few observations to be meaningful.

**Exhibit A.5.4**  
**New Referrals to CPS After Exit to Permanency**  
**Asian Children Only**  
N=157 AUC=0.769

	Odds Ratio	P-Value
<b>FTDM Office</b>	0.840	0.784
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	0.438	0.411
Ages 1 to 2	0.923	0.942
Ages 6 to 9	0.595	0.499
Ages 10 to 13	0.834	0.834
Ages 14 and older	0.569	0.572
<b>Male (Compared to Female)</b>	0.611	0.350
<b>Number of Prior Referrals</b>	1.162	0.184
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	1.066	0.933
Sex abuse	NA	NA
Abandoned	NA	NA
<b>Type of Reporter (Compared to Educators/Childcare)</b>		
Law Enforcement	3.147	0.135
Medical Professional	1.880	0.686
Mental Health Professional	0.662	0.765
Social Service Professional	1.299	0.810
Friends/Relatives	1.886	0.528
Others	NA	NA
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	7.202*	0.075
Region 2	1.572	0.678
Region 3	0.000	0.959
Region 5	3.221	0.120
Region 6	1.398	0.712
<b>Referral Year (Compared to 2007)</b>		
2005	2.248	0.185
2008	1.460	0.586
<b>Food Stamps</b>	1.287	0.659

\* p-value < 0.10

\*\* p-value < 0.05

\*\*\* p-value < 0.01

NA=too few observations to be meaningful.

**Exhibit A.5.5**  
**New Referrals to CPS After Exit to Permanency**  
**Latino Children Only**  
N=614 AUC=0.706

	Odds Ratio	P-Value
<b>FTDM Office</b>	1.432	0.257
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	1.643	0.269
Ages 1 to 2	0.770	0.715
Ages 6 to 9	0.721	0.533
Ages 10 to 13	1.095	0.866
Ages 14 and older	1.160	0.794
<b>Male (Compared to Female)</b>	1.351	0.303
<b>Number of Prior Referrals</b>	1.063	0.315
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	1.763	0.172
Sex abuse	1.600	0.677
Abandoned	1.965	0.591
<b>Type of Reporter (Compared to Educators/Childcare)</b>		
Law Enforcement	0.814	0.592
Medical Professional	0.599	0.378
Mental Health Professional	NA	NA
Social Service Professional	0.986	0.975
Friends/Relatives	0.721	0.536
Others	1.121	0.891
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	1.401	0.463
Region 2	0.856	0.724
Region 3	0.878	0.815
Region 5	0.224*	0.067
Region 6	0.490	0.186
<b>Referral Year (Compared to 2007)</b>		
2005	0.537*	0.073
2008	1.130	0.732
<b>Food Stamps</b>	1.975	0.039

\* p-value < 0.10

\*\* p-value < 0.05

\*\*\* p-value < 0.01

NA=too few observations to be meaningful.

**Exhibit A.5.6**  
**New Referrals to CPS After Exit to Permanency**  
**White Children Only**  
N=2,940 AUC=0.627

	Odds Ratio	P-Value
<b>FTDM Office</b>	0.929	0.597
<b>Child's Age (Compared to Ages 3 to 5)</b>		
Infant	0.771	0.213
Ages 1 to 2	1.064	0.818
Ages 6 to 9	0.725	0.152
Ages 10 to 13	0.966	0.870
Ages 14 and older	1.393	0.134
<b>Male (Compared to Female)</b>	1.063	0.630
<b>Number of Prior Referrals</b>	1.081***	0.000
<b>Type of Maltreatment (Compared to Neglect)</b>		
Physical abuse	1.111	0.582
Sex abuse	1.190	0.664
Abandoned	1.093	0.888
<b>Type of Reporter (Compared to Educators/Childcare)</b>		
Law Enforcement	0.808	0.234
Medical Professional	0.778	0.336
Mental Health Professional	1.227	0.562
Social Service Professional	0.829	0.380
Friends/Relatives	1.034	0.866
Others	1.527	0.158
<b>DSHS Region (Compared to Region 4 King Co.)</b>		
Region 1	1.033	0.888
Region 2	1.296	0.311
Region 3	0.649	0.105
Region 5	0.940	0.814
Region 6	0.969	0.890
<b>Referral Year (Compared to 2007)</b>		
2005	0.945	0.700
2008	0.998	0.990
<b>Food Stamps</b>	0.859	0.239

\* p-value < 0.10

\*\* p-value < 0.05

\*\*\* p-value < 0.01

**A6. Child Outcomes by Race.** Exhibit A.6 displays by race the average percentages of children removed from home following an accepted CPS referral, the average time to permanency, and the rates of re-referral to CPS following exits from care.

**Exhibit A.6**  
**Child Outcomes by Race**

Child Race	Removed From Home After Accepted CPS Referral		Time to Permanency (Days)		New Accepted Referral After Permanency	
	N	Percentage	N	Ave (SD)	N	Percentage
All	55,788	12.8%	7,138	477 (6.7)	4,903	11.3%
White	32,588	12.8%	4,164	478 (8.5)	2,940	10.0%
Indian	5,951	16.5%	913	561 (20.1)	576	15.8%
Black	5,028	15.5%	849	477 (19.2)	501	14.8%
Asian	2,148	9.5%	208	349 (31.0)	157	16.6%
Latino	7,456	11.6%	862	434 (18.5)	614	9.8%

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