The Family Intensive Treatment (FIT) Evaluation Phase One Report

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April 30, 2018

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Executive Summary

The Family Intensive Treatment (FIT) team model is designed to provide intensive team-based, family-focused, comprehensive services to families in the child welfare system with parental substance use disorders. First implemented in Florida in 2014, FIT includes components of family engagement, routine screening and assessment, individualized treatment and case plans, support of parents in treatment and recovery, joint planning and case management, wraparound and comprehensive community services, and flexible financing strategies. In addition, the FIT model includes cross-system collaboration between child welfare, judicial, and behavioral health systems. This report provides results from an outcomes analysis conducted as a part of the FIT evaluation conducted by the University of South Florida and Casey Family Programs.

The outcomes analysis was performed in three steps: (1) Outcomes were computed for the overall FIT program to determine whether the FIT program led to improved outcomes; (2) Latent class analysis (LCA) was used to create latent sub-groups of parents that had similar baseline characteristics; and (3) Outcomes were compared across FIT agencies. The outcomes for the sample of 636 parents discharged from FIT were:

- Over one-half (56%) of the parents completed the treatment program.
- Eighty-two percent of 534 parents who enrolled in the first nine months of the state fiscal year 2016-17 had either completed treatment or remained enrolled three months later.
- Over three quarters of parents (78%) had an increase in their *Functional Assessment of Mental Health and Addiction* (FAMHA) score, while 58% had an increase in *the Adult Adolescent Parenting Inventory-2* (AAPI) score.
- Seventy-eight percent had stable housing at discharge.
- Parents with children remaining in the home had the smallest gains in FAMHA scores (3.21) and shortest treatment duration (181 days), but had the highest average gain in the AAPI score (2.25), were most likely to have stable housing at discharge (86.9%) and had the highest treatment completion rate (61.1%).
- Parents with children receiving non-licensed out-of-home care had the highest average gain in FAMHA score (7.46), were most likely to have an increase in the FAMHA score (80.5%) and had the highest retention rate (85.2%), but were least likely to have an increase in the AAPI score (54.8%), stable housing at discharge (71.9%) or complete treatment (51.6%).

- Parents with children receiving licensed out-of-home care were least likely to have an increase in the FAMHA score (75.6%), had the lowest retention rate (78.6%), and had the longest treatment duration (222.3 days).

Overall, many parents are benefiting from the FIT program, but program staff also want to determine if there are distinctive groups of parents being served that might have different service experiences and outcomes. Knowing this information can help in designing parent outreach and specific clinical interventions. Outcomes by class are summarized below:

- ***Class 1 – Complex needs:*** Forty percent of parents were in Class 1. Parents in Class 1 had high rates[1] of adverse childhood experiences adverse childhood experiences (71%), high (56%) or medium (44%) functioning needs, high (33%) or medium (35%) parenting needs, and high rates of domestic violence (63%) and mental health disorders (58%). Opioids (30%) and alcohol (21%) were the most commonly used drugs. Children of parents in Class 1 were often in non-licensed out-of-home care (e.g., relatives). Relatively few children remained in the home.
- ***Class 2 - High overall needs, moderate parenting needs:*** Eighteen percent of parents were in Class 2. Parents in Class 2 had high (55%) or medium (28%) functioning needs, high rates of domestic violence (70%) and mental health disorders (54%), medium parenting needs (55%), and moderate rates of adverse childhood experiences (49%). Opioids (49%) and stimulants (23%) were the most commonly used drugs. Similar to Class 1, children of parents in Class 2 were often placed with relatives and a low percentage remained in the home.
- ***Class 3 – High parenting needs; moderate DV needs;*** Thirty-one percent of parents were in Class 3. Parents in Class 3 had high (61%) or medium (39%) parenting needs, but did not appear to have substantial needs associated with adverse childhood experiences or poor functioning. There was a moderate rate of domestic violence (41%) among parents in Class 3. Twenty-seven percent were diagnosed with mental health disorders. Opioids (23%) and cannabis (24%) were the most commonly used drugs. Children of parents in Class 3 were most likely to remain in the home.

[1] A high rate of adverse childhood experiences and domestic violence is defined as more than 50% of the parents in the class reporting adverse childhood experiences or domestic violence, while a moderate rate is defined as between 40 and 50%. It should have also noted that a moderate rate differs from moderate need; those parents in the class with adverse childhood experiences or domestic violence may have considerable needs.

- ***Class 4 – Moderate adverse childhood experiences and DV needs:*** Eleven percent of parents were in Class 4. Parents in Class 4 had moderate rates of adverse childhood experiences (43%) and domestic violence (46%). Opioids (32%) and alcohol (24%) were the most commonly used drugs. Children of parents in Class 4 were among the most likely to remain in-home with their parents (34%), compared to Classes 1 or 2.

A comparison was made between the FIT providers. Retention rates ranged from 63.9% to 100.0%, while completion rates range from 33.3% to 93.3%. Assessment outcomes were compared for the nine providers that had at least 10 treatment completers. There was no adjustment for parent characteristics in the provider comparisons. On average, parents receiving services from most providers achieved gains in both the FAMHA and AAPI scores. The average length of treatment varied considerably -- ranging from 195.9 to 424.3 days. Rates of stable housing at discharge were high among parents that completed treatment. All but two providers were at 100%.

Several additional outcome measures would be useful for program monitoring. For example, adding a variable related to stable housing at admission would enable determination of how much of an effect the FIT program has on stable housing. Days of sobriety would be another important outcome variable to assess substance abuse treatment. Key child outcomes to measure include whether another substantiated report of child maltreatment occurs, and if a child living at home during FIT treatment needs to be placed in out-of-home care during or within 6 months of the end of FIT treatment.

In summary, a treatment completion rate of 56% is far superior to the 13% treatment completion rate for parents in the child welfare system found by U.S. GAO (1998) or the 21% treatment completion rate found in a more recent study by Choi and Ryan (2006). AAPI scores increased by 6.6%, which is comparable to an evaluation of a Nurturing Parenting program for parents involved in the child welfare system in Louisiana (Hodnett, Faulk, Dellinger, & Maher, 2009). Outcomes differed across the four classes, and those differences should be considered carefully in terms of how to optimize FIT intervention strategies for different kinds of families. Overall, the results suggest that parents with the greatest needs associated with functioning (as measured by the FAMHA score) achieved the greatest gains related to functioning, while parents with greater parenting needs (as measured by the AAPI score) achieved higher gains in parenting assessments. However, measured outcomes for one class (Class 4) were rather modest despite high rates of treatment retention and completion.

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Introduction

Literature Review

Substance use problems are common among parents with allegations of child maltreatment. Parental substance abuse is an important risk factor for child abuse or neglect (Dubowitz et al., 2011; USDHHS, 2017). According to data in the Adoption and Foster Care Analysis and Reporting System (AFCARS, 2017), parental substance abuse is frequently reported as a reason for removal. Nationally, in FFY 2015-16 for almost 38% of all children placed in out-of-home care parental alcohol or drug use was the documented reason for removal (U.S. Department of Health and Human Services [USDHHS], 2017). Marsh, Smith, and Bruni (2011), reported that an estimated 50-80% of parents involved in the child welfare system have a serious substance abuse problem. Parental drug use has been associated with lower reunification rates, and children who are removed due to parental substance abuse face the lowest probability of being reunified with their parents (Courtney & Hook, 2012; Green, Rockhill, & Furrer, 2007; McDonald, Poertner, & Jennings, 2007). According to Oliveros and Kaufman (2011), there are challenges to parents completing treatment. For every 100 parents in the child welfare system required to receive substance abuse treatment services, only 64% completed an intake assessment and 13% completed the services (US GAO, 1998). Choi and Ryan (2006) evaluated the Illinois Alcohol and Other Drug Abuse waiver demonstration for parents in the child welfare system and found that 21% completed substance abuse treatment.

Research has shown that the integration of substance abuse treatment services and child welfare services have led to the best outcomes for child welfare involved families, including increased retention in treatment, increased likeliness of a reduction in substance use, and increased likelihood of reunification (Marsh, Smith, & Bruni, 2011). Among integrated services, Family Treatment Drug Courts and home-based substance abuse treatment interventions have been reported to be effective at improving outcomes (Oliveros & Kaufman, 2011). Remaining in treatment for a sufficient time has been associated with positive outcomes. The National Institutes of Drug Abuse uses 3 months as the standard. The Drug Abuse Treatment Outcome Study found greater treatment gains among people retained in substance abuse treatment for six months or more compared to people receiving 0-3 months of treatment, while gains for people receiving treatment for 3-6 months were not different than people receiving 0-3 months of treatment (Hubbard, Craddock, Flynn et al., 1997, 2003). In a study examining treatment related factors to child reunification following the mother's participation in drug treatment the research found that the rate of treatment retention for at least 90 days in this study was associated with a greater likelihood of reunification (Grella, Needell, Shi, & Hser, 2009). It is

unclear whether the results in Grella et al. (2009) differed for mothers receiving 3-6 months and 6+ months of treatment.

FIT Program Model

The Family Intensive Treatment (FIT) team model has been designed to provide intensive team-based, family-focused, comprehensive services to families in the child welfare system with parental substance use disorders as a part of the General Appropriations Act, Specific Appropriation 372. The program goal is to help parents get timely treatment, retain parents in treatment, improve parenting skills, help children achieving legal permanency, and prevent foster care re-entry. There are unique aspects of the FIT Team treatment process which include the administration of specific assessments (American Society of Addiction Medicine, a biopsychosocial assessment, Functional Assessment of Mental Health and Addiction, Adult Adolescent Parenting Inventory, and the Adverse Childhood Experiences) as a minimum. FIT clients also receive treatment services from a clinician within two business days of completing the initial assessments. The FIT Team model includes a comprehensive family care plan within 30 calendar days of enrollment. The family care plan is meant to guide the provision of FIT services and includes:

- The family's participation,
- The alignment of clinical services received by children with clinical services received by parent(s),
- Identification of how support will be provided to parent(s) to address the child's needs,
- A review every three months or as needed, and
- Alignment of treatment plan for enrolled parent(s) to the child welfare case plan

The FIT Team treatment model also mandates the provision of process updates to child welfare case management, and the conduction of a multidisciplinary team (MDT) meeting prior to discharge from the treatment.

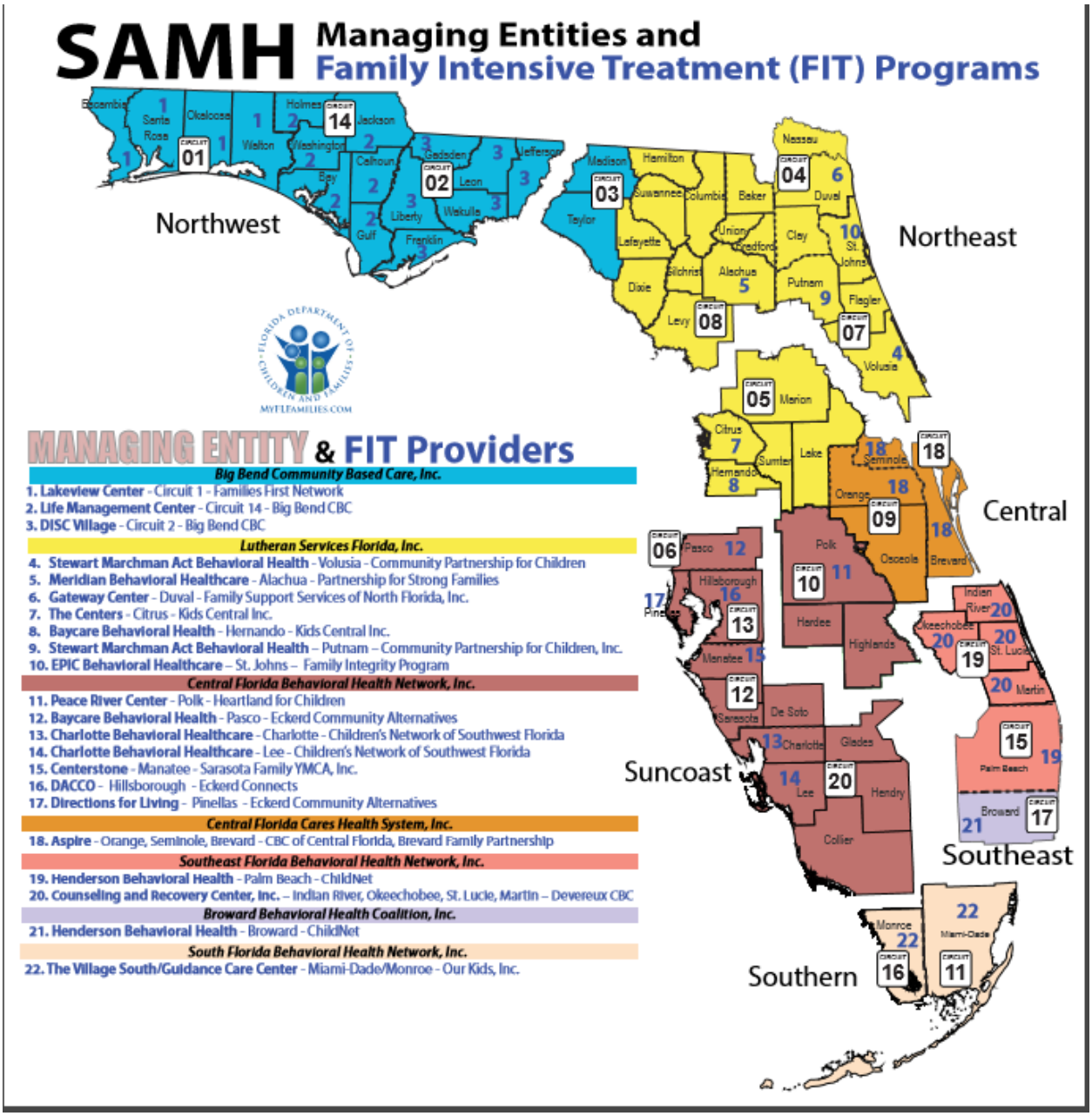
Current Evaluation

The model was first implemented in Florida in September of 2014. The framework for FIT included components of family engagement, routine screening and assessment, individualized treatment and case plans, support of parents in treatment and recovery, joint planning and case management, wraparound and comprehensive community services, and flexible financing strategies. Another component of the FIT services includes cross-system collaboration between child welfare, judicial, and behavioral health systems (FIT Evaluation Report, 2015).

The Department of Children and Families (DCF/ the Department) issued a report on the status of FIT implementation in 2015. Information from the 2015 FIT Evaluation Report indicated that since implementation of FIT services in Florida, the FIT providers have begun to identify and address family service barriers across systems, identify screening and assessment tools to be utilized by all FIT providers, develop an expanded data set to provide a comprehensive understanding of the entire family, began use and refinement of a SharePoint FIT data system, establish collaborative processes for analyzing the implementation of the FIT model, and began identifying and addressing data reporting issues (FIT Evaluation Report, 2015). The report also indicated that as of December 2014, 201 of the 208 individuals served, remained in treatment. The 2015 evaluation report was unable to determine efficacy related to the FIT program because the FIT teams had been operating for only a short amount of time.

Figure 1 contains the location of each providers on a map of the State. The FIT program started in 2014 with 10 providers, and has grown to 22 providers throughout Florida.

Figure 1. ***Location of FIT Providers in Florida***



The Department and Casey Family Programs partnered with the University of South Florida (USF) to build upon the initial FIT evaluation and conduct a formative evaluation that will utilize aspects of improvement science, which is a special form of evaluation that focuses on using data to learn about and improve policies and programs over time (Christie, Lemire & Inkelas, 2017).

In this new evaluation we are trying to answer these research questions:

1. What are the characteristics of the parents served by FIT?

2. What kinds of treatment retention and treatment completion are being achieved?
3. Using both demographic and outcome data, are there distinct groups of parents?
4. Are there differences in outcomes across sites?

This Phase One report includes results based on the descriptive statistics of parents involved in the FIT program in State Fiscal Year (SFY) 2016-17 (July 1, 2016 to June 30, 2017), and results from an outcomes analysis. The outcomes analysis was conducted in three steps. First, outcomes were examined for the FIT program as a whole. Second, FIT parents were placed into classes (or sub-groups) through a Latent Class Analysis, and then outcomes were compared across the classes to determine whether there was a relationship between parent characteristics and outcomes. Third, variation in outcomes across providers was examined.

Methods

Data

The primary source of data was the Family Intensive Treatment (FIT) database. The database contains records for each parent that received FIT services during SFY 2016-17. Key variables include:

- ***FAMHA – the Functional Assessment of Mental Health and Addiction (FAMHA) score.*** The FAMHA is a 44-item clinician-assessment tool designed to assess functioning in six domains; substance misuse and criminality, community living skills, interpersonal skills, mood, psychological state, and health and physical functioning (Anderson & Bellfield, 1999). Ratings range from 1 to 7 for each question with the total score equal to the sum of all ratings divided by 3.08. A higher score indicates greater functioning. The assessment was performed within 30 days of enrollment into the FIT program and at discharge.
- ***AAPI-2 – the Adult Adolescent Parenting Inventory-2 (AAPI) score***. The AAPI is a 40-question assessment tool designed to assess parenting and child-rearing attitudes (Bavolek & Keene, 2005). The AAPI encompasses six different types of behaviors including expectations of children, empathy towards children's needs, use of corporal punishment, parent-child roles, and children's power and independence. A higher score is indicative of better attitudes. The assessment was performed within 30 days of enrollment and at discharge.
- ***ACE – the Adverse Childhood Experiences (ACE) score, assessed within 60 days of enrollment.*** The ACE score is a count of adverse childhood experiences related to

abuse, domestic violence, substance abuse in household, mental health, and prison/jail incarceration (Felitti, Anda, Nordenberg, et al., (1998):

- Physical abuse
- Alcoholic or drug-addicted caregiver
- Loss of a parent to death, abandonment, or divorce
- Sexual abuse
- Mentally ill, depressed, or suicidal person in the home
- Emotional neglect
- Witnessing domestic violence against a parent or guardian
- Emotional abuse
- Physical neglect
- Incarceration of any family member

The score ranges from 0 (no adverse childhood experiences) to 10 and is frequently used to indicate exposure to traumatic events as a child.

- ***Demographics – parent's date of birth, race, gender, ethnicity.*** Race was coded as White or Other because the majority of the sample was White, and there were too few parents who were American Indian, Asian, or Native Hawaiian to analysis separately. Ethnicity was coded as Hispanic or Not Hispanic. While Hispanic ethnicity is reported in greater detail (e.g., Cuban, Haitian, Mexican, Puerto Rican, Spanish) there were not enough parents in each detailed ethnic category to analyze separately.
- ***Substance abuse diagnosis –*** the primary ICD-10 substance abuse diagnosis at intake***.***
- ***Mental health diagnosis –*** the ICD-10 diagnosis if the parent has a mental health condition.
- ***Child placement –*** indicates whether the family/child receives in-home child welfare services, or whether the child is placed in licensed out-of-home care or non-licensed out-of-home care. Information is provided for up to five children. Child placement was coded as out-of-home if any child was placed in licensed care, non-licensed foster/kinship care if no child was in licensed care but a child or children received services in non-licensed foster/kinship care settings. Finally, placement was coded as in-home if all children remained in the home.
- ***Domestic violence –*** indicates documented domestic violence in the household.
- ***Medicaid –*** indicates whether the parent is enrolled in Medicaid.
- ***Enrollment date –*** the date of enrollment in the FIT program.

- ***Discharge date –*** the date of discharge when the parent has completed treatment or left the program for other reasons.
- ***Discharge reason –*** the reason for discharge including completed treatment, moved, change in goal, transfer of providers, death, jail/prison, and disengaged.
- ***Stable housing at discharge –*** whether the parent has stable housing at the time of discharge.

Analysis Methods

The primary goal of the pre-post analysis of the FIT database was to examine parent outcomes. Eight different outcome measures were assessed:

- The length of treatment measured as the number of days enrolled in the FIT program
- Whether the parent completed treatment or disengaged (excludes those continuing in FIT program at the end of SFY 16-17)
- Treatment retention, as measured by the proportion of parents who began treatment in SFY 16-17 and were still enrolled or completed treatment 90 days later
- The change in FAMHA score
- Whether the FAMHA score increased, indicating higher functioning
- The change in AAPI score
- Whether the AAPI score increased, indicating higher functioning
- Whether the parent had stable housing at discharge

While most of the outcome variables are straightforward, treatment retention requires additional discussion. First, it is the only measure that is based on when the parent entered treatment. This step was necessary because the data were limited to parents receiving services in SFY 16-17. Thus, any parents starting and ending treatment in SFY 15-16 would be excluded, making it impractical to examine treatment retention for parents starting services prior to SFY 16-17. Second, the three-month time was selected based on research by the National Institutes of Drug Abuse that suggests patients who receive at least 90 days of substance abuse treatment have improved outcomes. However, the seminal Drug Abuse Treatment Outcome Study found that treatment gains were concentrated among people retained in substance abuse treatment for six months or more (Hubbard, Craddock, Flynn et al., 1997, 2003). While Phase 1 used 90 days to indicate treatment retention, Phase 2 of the quantitative analysis will consider whether outcomes from 3-6 months of FIT treatment are significantly different from 6+ months of treatment.

The outcome analysis was performed in three steps, as outlined in the next sections.

1. *Outcomes analysis:* First, outcomes were computed for the overall FIT program to determine whether the FIT program led to improved outcomes.
2. *Latent Class Analysis:* Second, latent class analysis (LCA) was used to create latent sub-groups of parents that had similar baseline characteristics. LCA is a technique that groups individuals into unobserved latent classes (i.e., subgroups) based on observed characteristics. LCA has been used to group children placed in out-of-home care into groups based on observed characteristics (English & Pecora, 2017; Yampolskaya, Sharrock, Armstrong, Strozier, Swanke, 2014). LCA was performed with PROC LCA, a SAS procedure developed by the Methodology Center at Penn State University (Lanza, Collins, Lemmon, & Schafer, 2007). The appropriate number of classes was a function of the goals of the study and statistical criteria. First, model fit was compared for the solutions with two through six classes. PROC LCA provides numerous statistics to compare model results (e.g., Aikaike information criterion, Bayesian information criterion, G squared, and entropy). Second, all classes needed to have sufficient observations to draw conclusions. Solutions that provided small class sizes for some classes might be statistically superior, but not provide useful practical information for policy makers and providers. Third, classes needed to have sufficient differences in characteristics (and/or outcomes).

   Variables included in the LCA were selected based on a qualitative analysis of data collected during the January 2018 FIT statewide face-to-face meeting. Attendees (primarily FIT providers) were divided into 10 groups and each group identified the six characteristics they felt were most important in determining the treatment plan. The variables consistently identified by providers were adverse childhood experiences (ACE score), parent functioning (FAMHA), parenting skills (AAPI), domestic violence, substance of abuse, mental health, and child placement. Several variables were transformed for ease of interpretation. A dichotomous variable denoted that a parent had an ACE score greater than the median (3). Five categorical variables included: baseline FAMHA score [≤ 79 (high needs), 80-91 (medium needs); ref: ≥ 92 (low needs)], baseline AAPI score (≤ 23, 24-30; ref: ≥ 31), substance abuse diagnosis (opioid, alcohol, cocaine, stimulants, cannabis; ref: other), mental health diagnosis (mood disorders, anxiety

disorders, other; ref: none), and placement of children (licensed out-of-home, non-licensed out-of-home; ref: in-home). The cut-offs for the FAMHA and AAPI scores divided parents into three equally sized groups. Thus, functioning and parental needs are defined relative to other parents in FIT and do not represent clinical thresholds. Once the parents were placed into classes (or sub-groups), outcomes were compared across the classes to determine whether there was a relationship between parent characteristics and outcomes.

3. *FIT Provider Comparisons:* In the third step, outcomes were computed for each FIT team provider. While small sample sizes did not allow for a thorough analysis of differences across providers, a descriptive comparison of provider-level results provides additional information for the qualitative analysis in Phase 2 of the evaluation.

Findings

Descriptive Statistics

There were 1,166 records for parents that received FIT services in SFY 2016-17. Descriptive statistics are provided in Table 1 for the total sample, as well as separately for parents discharged from the program and parents that are continuing in the program at the end of SFY 2016-17. At this stage of the evaluation, we are unable to conclusively identify the factors that predict which parents will complete the FIT program. But two of the baseline characteristics (FAMHA score at baseline and having two parents enrolled in the FIT program) differed significantly between parents that were discharged and parents that were continuing in the program. Discharged parents had higher baseline FAMHA scores indicating better functioning at admission and were more likely to have two parents enrolled in the FIT program.

Table 1. **Descriptive Statistics for FIT Sample at Baseline**

	Total Sample		**Continuing at End of SFY 16-17**				
	n=1,166		**No (n=636)**		**Yes (n=530)**		
	N	**%/Mean**	**N**	**%/Mean**	**N**	**%/Mean**	**p<.05**
Baseline test scores							
ACE score	969	3.87	552	3.77	417	4	
FAMHA baseline	876	79.3	571	83.0	304	72.1	**
AAPI baseline	1002	27.4	565	27.4	437	27.4	

	Total Sample		Continuing at End of SFY 16-17				
	n=1,166		No (n=636)		Yes (n=530)		
	N	%/Mean	N	%/Mean	N	%/Mean	p<.05
Gender							
Male	186	16.0%	110	17.3%	76	14.3%	
Female	980	84.0%	526	82.7%	454	85.7%	
Race							
Other	251	21.5%	151	23.7%	100	18.9%	
White	915	78.5%	485	76.3%	430	81.1%	
Ethnicity							
Hispanic	112	9.6%	65	10.2%	47	8.9%	
Substance misuse							
Opioid	372	28.0%	194	30.5%	178	28.0%	
Alcohol	222	19.0%	127	20.0%	95	14.9%	
Cocaine	159	13.6%	90	14.2%	69	10.8%	
Stimulants	141	12.1%	73	11.5%	68	10.7%	
Cannabis	202	17.3%	115	18.1%	87	13.7%	
Other							
Mental health diagnosis							
Mood disorders	257	22.0%	135	21.2%	122	23.0%	
Anxiety-related disorders	207	17.8%	113	17.8%	94	17.7%	
Other mental health conditions	34	2.9%	23	3.6%	11	2.1%	
Domestic violence	649	55.7%	355	55.8%	294	55.5%	
Medicaid	371	31.8%	186	29.2%	185	34.9%	
Placement							
In-home	346	29.7%	182	28.6%	164	30.9%	
Licensed out-of-home	273	23.4%	148	23.3%	125	23.6%	
Non-licensed out-of-home	547	46.9%	306	48.1%	241	45.5%	
Children							
Multiple children	652	55.9%	358	56.2%	294	55.4%	
Age of youngest child	1166	2.80	636	2.80	530	2.81	
Parents in FIT							
Two parents enrolled in FIT	140	12.0%	91	14.3%	49	9.2%	**

Outcomes

The outcomes for the sample of 636 parents discharged from FIT are reported in Table 2. All but three of the providers in Figure 1 (Stewart Marchman Act Behavioral Health-Putnam, Charlotte Behavioral Health – Lee, and Counseling and Recovery Center, Inc.) were represented in the outcomes analysis. Charlotte Behavioral Health – Lee did not begin offering services until July 2017; the provider that formerly offered services in Lee County (SalusCare) was represented in the outcomes analysis. Counseling and Recovery Center, Inc. did not begin offering services until 2018. Over half of the parents (56%) had completed treatment. Eighty-two percent of 534 parents who enrolled in FIT during the first nine months of the fiscal year had either completed treatment or remained enrolled three months later. A treatment completion rate of 56% is similar to national data on substance abuse treatment, which found that 52% of patients competed outpatient substance abuse treatment (Stahler, Mennis, & DuCette, 2016). However, as stated earlier, the U.S. GAO (1998) found that of parents in the child welfare system with substance use disorders, only 13% completed treatment. A more recent evaluation found that 21% percent of child welfare involved parents completed substance abuse treatment (Choi & Ryan, 2006). Given the FIT program focuses on the child welfare population, with higher than average needs, achieving a treatment completion rate consistent with the average for national sample for this population can be viewed as a positive outcome. However, it should be noted that differences in the definition of treatment completion makes comparisons across studies challenging.

Over three quarters of parents (78%) had an increase in their FAMHA score, while 58% had an increase in the AAPI score. Seventy-seven percent had stable housing at discharge. The treatment retention rate was computed for parents that began treatment in the first 9-months of the fiscal year. Of the 534 parents that began treatment, 81.8% were retained in treatment for at least 90-days.

AAPI scores increased by 6.6% (1.83/27.4) which is comparable to an evaluation of a Nurturing Parenting program for parents involved in the child welfare system in Louisiana. Improvements in AAPI subscale scores in Louisiana ranged from 3-9% (Hodnett, Faulk, Dellinger, & Maher, 2009). In addition to comparing outcomes to published research, the FIT program has established performance targets for providers. Eighty percent of parents should achieve gains in FAMHA scores and AAPI scores, while 90% should have stable housing. Overall, providers did not achieve these targets; although it cannot be concluded whether this indicatives a lack of performance or ambitious performance standards.

Table 2. **Outcomes for Parents Discharged From FIT Program (n=636)**

Outcome	Parents with Measure	Mean/%
Pre-post difference in FAMHA	395	5.39
Increase in FAMHA score	395	78.0%
Pre-post difference in AAPI	316	1.83
Increase in AAPI score	316	58.2%
Days in FIT program	636	211.1
Stable housing at discharge	636	77.7%
Completed treatment	414	56.0%
Retention – 90 days	534	81.8%

The outcomes for parents discharged from FIT are reported in Table 3 by type of child placement. Parents with children remaining in the home had the smallest gains in FAMHA scores (3.21) and shortest treatment duration (181 days), but had the highest average gain in the AAPI score (2.25), were most likely to have stable housing at discharge (86.9%) and had the highest treatment completion rate (61.1%). Parents with children receiving non-licensed out-of-home care had the highest average gain in FAMHA score (7.46), were most likely to have an increase in the FAMHA score (80.5%) and had the highest retention rate (85.2%), but were least likely to have an increase in the AAPI score (54.8%), stable housing at discharge (71.9%) or complete treatment (51.6%). Parents with children receiving licensed out-of-home care were least likely to have an increase in the FAMHA score (75.6%), had the lowest retention rate (78.6%), and had the longest treatment duration (222.3 days).

Table 3. **Outcomes for Parents Discharged from FIT Program by Type of Child Placement**

	In-Home		Licensed Care		Non-licensed Care	
Outcome	**Parents with Measure**	**Mean/ %**	**Parents with Measure**	**Mean/ %**	**Parents with Measure**	**Mean/%**
Pre-post difference in FAMHA	98	3.21	123	4.20	174	7.46
Increase in FAMHA score	98	76.5%	123	75.6%	174	80.5%
Pre-post difference in AAPI	84	2.25	97	1.69	135	1.67

	In-Home		Licensed Care		Non-licensed Care	
Outcome	**Parents with Measure**	**Mean/ %**	**Parents with Measure**	**Mean/ %**	**Parents with Measure**	**Mean/%**
Increase in AAPI score	84	61.9%	97	60.0%	135	54.8%
Days in FIT program	161	181.2	190	222.3	285	220.6
Stable housing at discharge	161	86.9%	190	78.4%	285	71.9%
Completed treatment	108	61.1%	128	57.8%	178	51.6%
Treatment retention[a]	146	79.4%	145	78.6%	243	85.2%

[a]Parents who enrolled in the first nine months of the fiscal year and who had either completed treatment or remained enrolled 90 days later.

Latent Class Analysis

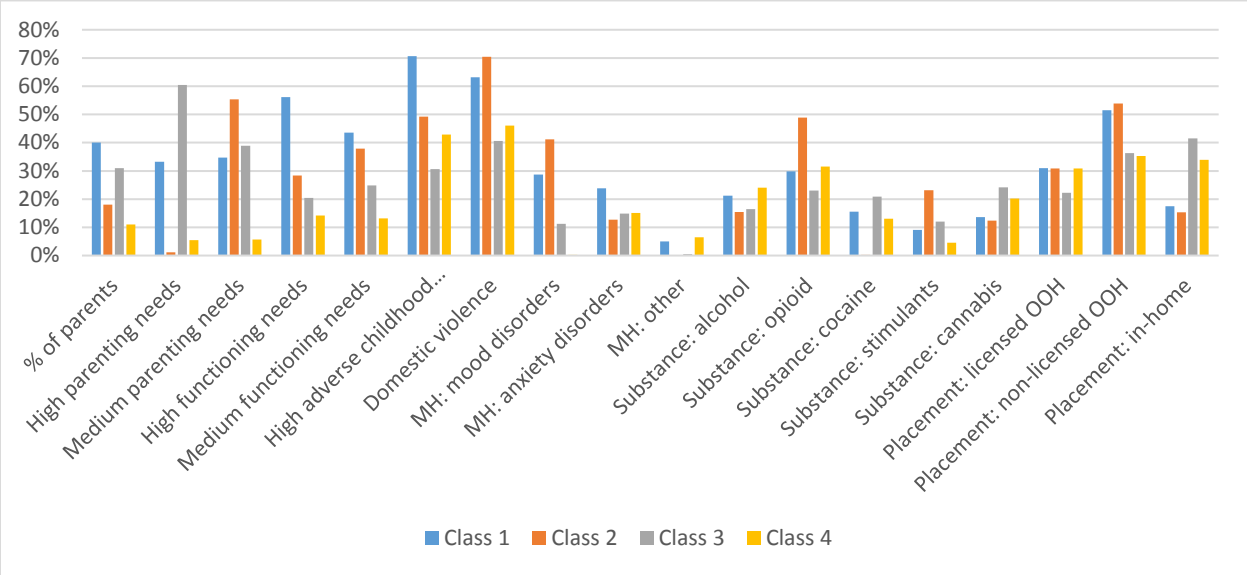
The latent class analysis results for a four-class solution are provided in Figure 1. A five-class solution had slightly better model fit statistics, but several classes had fewer than 30 parents. A four-class solution had better model fit statistics than a three-class solution, provided adequate sample sizes for each cell, and had meaningful differences across classes. In reviewing the classes, it is important to note that parents in all four classes have diagnosed substance abuse or dependence, and have a child deemed unsafe after investigation. Thus, a class that appears to have 'relatively' fewer needs still has multifaceted treatment needs. Note that the class label denotes a general data pattern and not an absolute set of scores:

- ***Class 1 – Complex needs:*** Forty percent of parents were in Class 1. Parents in Class 1 had high rates[2] of adverse childhood experiences (71%), high (56%) or medium (44%) functioning needs, high (33%) or medium (35%) parenting needs, and high rates of domestic violence (63%) and mental health disorders (58%). Opioids (30%) and alcohol (21%) were the most commonly used drugs. Children of parents in Class 1 were often in non-licensed out-of-home care (e.g., relatives). Relatively few children remained in the home.

[2] A high rate of adverse childhood experiences and domestic violence is defined as more than 50% of the parents in the class reporting adverse childhood experiences or domestic violence, while a moderate rate is defined as between 40 and 50%. It should have also noted that a moderate rate differs from moderate need; those parents in the class with adverse childhood experiences or domestic violence may have considerable needs.

- ***Class 2 - High overall needs, moderate parenting needs:*** Eighteen percent of parents were in Class 2. Parents in Class 2 had high (55%) or medium (28%) functioning needs, high rates of domestic violence (70%) and mental health disorders (54%), medium parenting needs (55%), and moderate rates of adverse childhood experiences (49%). Opioids (49%) and stimulants (23%) were the most commonly used drugs. Similar to Class 1, children of parents in Class 2 were often placed with relatives and a low percentage remained in the home.
- ***Class 3 – High parenting needs; moderate DV needs:*** Thirty-one percent of parents were in Class 3. Parents in Class 3 had high (61%) or medium (39%) parenting needs, but did not appear to have substantial needs associated with adverse childhood experiences or poor functioning. There was a moderate rate of domestic violence (41%) among parents in Class 3. Twenty-seven percent were diagnosed with mental health disorders. Opioids (23%) and cannabis (24%) were the most commonly used drugs. Children of parents in Class 3 were most likely to remain in the home.
- ***Class 4 – Moderate adverse childhood experiences and DV needs:*** Eleven percent of parents were in Class 4. Parents in Class 4 had moderate rates of adverse childhood experiences (43%) and domestic violence (46%). Opioids (32%) and alcohol (24%) were the most commonly used drugs. Children of parents in Class 4 were among the most likely to remain in-home with their parents (34%) as compared to Classes 1 or 2.

Figure 2. **Latent Class Analysis Results**



Outcomes by Class

Outcomes by class are provided in Table 4. As with most evaluations, there are areas of very positive outcomes and areas that might require more attention for people with specific characteristics.

- ***Class 1 – Complex needs:*** Parents in Class 1 had the highest average change in the FAMHA score, and 83.5% of parents had an increase in their FAMHA score. This is a positive outcome given that 98.6% of parents had either high or medium functioning needs. Although parents in Class 1 had a sizable increase in functioning, stable housing at discharge (71.4%) and treatment completion (49.7%) were the lowest of the four classes.
- ***Class 2 – High overall needs, moderate parenting needs:*** Parents in Class 2 had the smallest average change in the FAMHA score and were least likely to have an increase in the FAMHA score (70.0%). Gains in the AAPI were modest (1.26), but were the second highest class. Eighty-four percent of parents were retained for at least 90 days. Areas for additional attention may include establishing stable housing and completing treatment. In addition, two-thirds of parents in Class 2 had high or medium functioning needs, and nearly half had a diagnosis of opioid abuse while 23% were using stimulants. These findings suggest greater attention to these needs while acknowledging the challenges associated with opioid and stimulant abuse.
- ***Class 3 – High parenting needs; moderate DV needs:*** Parents in Class 3 had the highest change in AAPI scores (4.57) and were most likely to have an increase in the AAPI score (72.9%). Once again, this is a positive outcome given that 99.4% of parents in Class 3 had high or medium parenting needs. Parents in Class 3 also had gains in the average FAMHA score (3.76) and 75% had an increase in their FAMHA score. Rates of stable housing were among the highest at 84%. One area that might need further attention is the lower rate of retention among parents in Class 3 (76.8%).
- ***Class 4 – Moderate adverse childhood experiences and DV needs:*** Parents in Class 4 had modest gains in the FAMHA and AAPI, however only 11% had high or medium parenting needs and 27% had high or medium functioning needs. Thus, the smaller increases is not cause for concern. Given that parents in Class 4 have needs associated with substance abuse, adverse childhood experiences, and domestic violence, the

higher rates of stable housing, treatment retention, and treatment completion are positive outcomes.

Table 4. **Outcomes by Class**

	Class			
	1	**2**	**3**	**4**
FAMHA difference	**10.62**	-1.30	3.76	1.36
FAMHA increase	**83.5%**	70.0%	75.2%	76.8%
AAPI difference	0.66	1.26	**4.57**	0.02
AAPI increase	52.0%	55.8%	**72.9%**	48.0%
Days in FIT treatment	226	212	190	217
Stable housing	71.4%	72.8%	**84.2%**	**87.3%**
Retention 90 days	**83.8%**	**83.9%**	76.8%	**85.9%**
Completed treatment	49.7%	52.6%	54.4%	**79.0%**

The outcomes are also presented in Figures 2-4 in order to show differences across classes more clearly. Three figures are used due to the different units of measurement. Figure 2 contains the pre-post changes in the FAMHA and AAPI scores by class. The four classes exhibit very different patterns. Parents in Class 3 (high parenting needs; moderate DV needs) had the highest change in the AAPI score and the second highest change in the FAMHA score. Parents in Class 4 (moderate adverse childhood experiences and DV needs) also had gains in the FAMHA score, but the average change in the AAPI score was near zero. Parents in Class 1 (complex needs) had the strongest gains in the FAMHA and modest gains in the AAPI score. Parents in Class 2 (high overall needs, moderate parenting needs) had the second highest average gains in the AAPI score but the average FAMHA score declined, albeit only slightly.

Figure 3. **Pre-post Changes in Assessment Scores by Class**

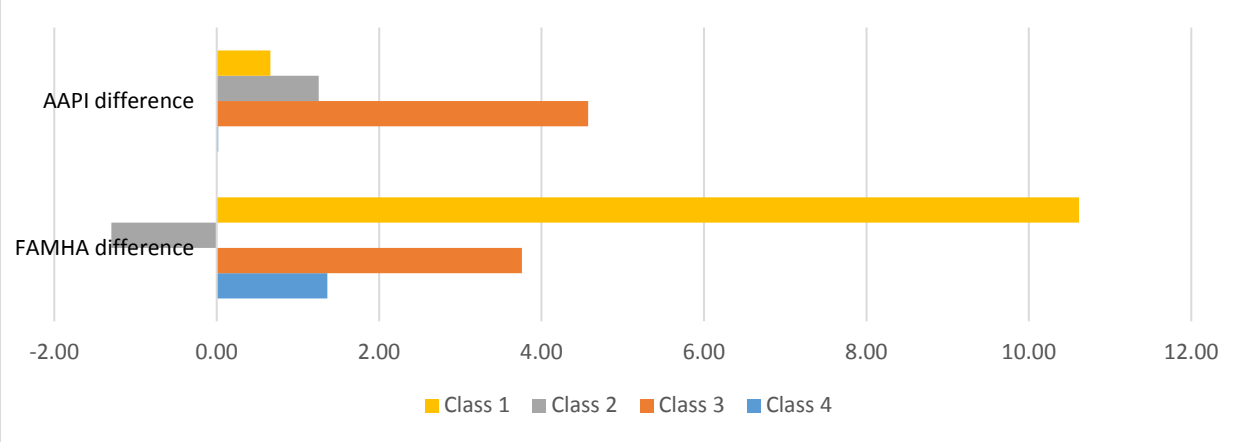
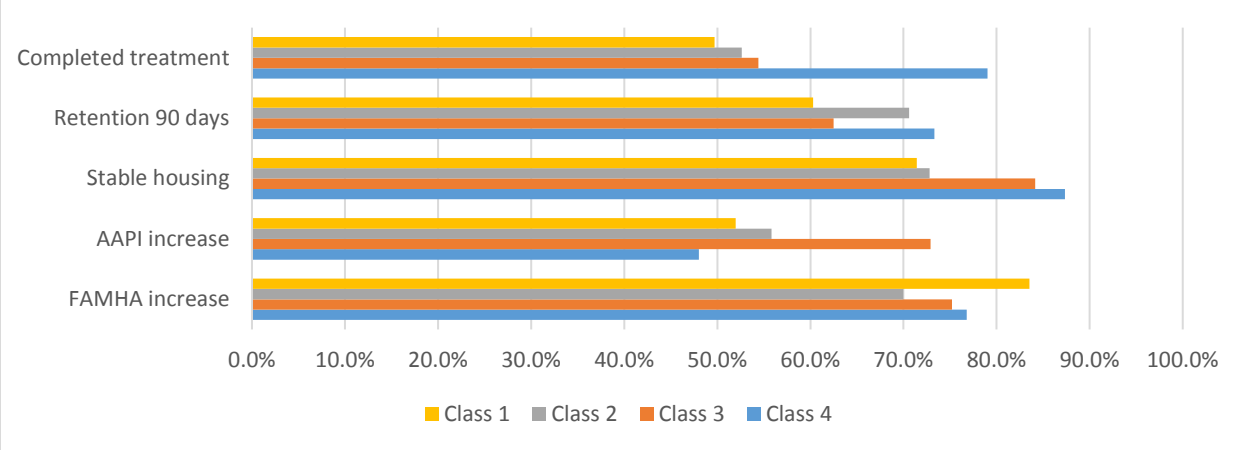


Figure 3 contains the percentage of parents that completed treatment, were retained in treatment, the percentage that had stable housing at discharge, the percentage that had an increase in the FAMHA score, and the percentage that had an increase in the AAPI score. Parents in Class 1 (complex needs) were the least likely to be retained in treatment, complete treatment, or have stable housing at discharge. However, parents in Class 1 were most likely to have an increase in the FAMHA score. Parents in Class 2 (high needs, moderate parenting needs) had the second highest retention rates and were second most likely to have an increase in the AAPI score. Otherwise, Class 2 ranked third in completed treatment and stable housing at discharge, and were least likely to have an increase in the FAMHA score.

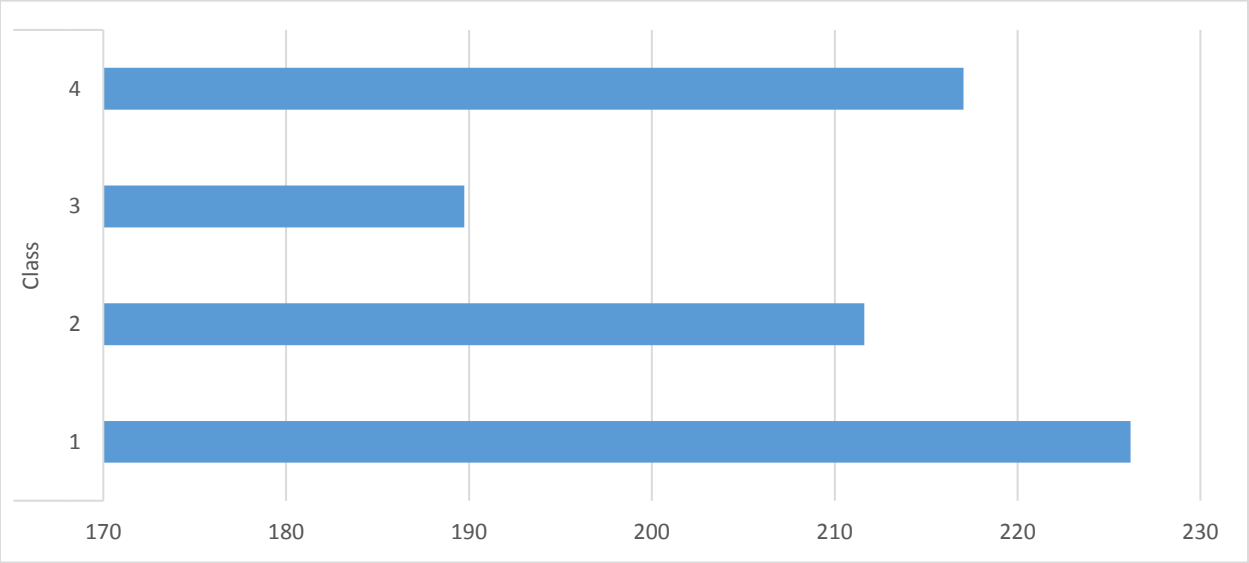
Parents in Class 3 (high parenting needs; moderate DV needs) were the most likely to have an increase in the AAPI score, and were second most likely to complete treatment and have stable housing at discharge. Class 3 ranked third in treatment retention and the likelihood of having an increase in the FAMHA score. Parents in Class 4 (moderate adverse childhood experiences and DV needs) were most likely retained in treatment, complete treatment and have stable housing at discharge. Class 4 had the second highest rate of increased FAMHA scores, but the lowest rate of increased AAPI scores.

***Figure 4*. Treatment Completion, Housing, and Assessment Scores by Class**



The average number of days enrolled in the FIT program is reported by class in Figure 4. Parents in Class 1 (complex needs) spent the most time enrolled in the FIT program, while parents in Class 3 (high parenting needs; moderate DV needs) spent the shortest amount of time.

Figure 5. **Days Enrolled in FIT Program by Class**



FIT Team Providers

The analysis also considered whether outcomes varied across providers. The outcome variables were computed for each of the 20 providers that reported data for SFY 2016-17. One data limitation was that some providers have not had many parents complete treatment. The FIT program has been expanding and newer providers have not had sufficient time to have many treatment completers. Thus, treatment retention and completion rates are only reported when the provider had at least 10 cases have sufficient data to measure retention rates or completion rates.

Another data limitation was that several providers only collect post-assessment data (i.e., FAMHA and AAPI scores after treatment) from parents who complete treatment. Others attempt to collect post-assessment data from all parents who are no longer receiving FIT services. If outcomes are related to treatment completion, it would be inappropriate to compare providers that only collect post-assessment data for treatment completers with providers that collect post-assessment data from all clients. To make the providers more comparable the sample was limited to parents that completed treatment when comparing assessment outcomes.

Thus, the comparison of assessment outcomes is between the nine providers that had at least 10 treatment completers. Due to the small sample sizes, interpretation of the results must be done cautiously. Optimally, it would be preferable to compare outcomes across providers for each class in the latent class analysis. However, this was not practical due to the small sample

sizes. Thus, there was also no adjustment for parent characteristics in the provider comparisons. As a result, due to the analytical limitations the providers are not identified in the tables.

Table 5 contains the treatment retention and treatment completion rates for each provider. Retention rates ranged from 63.9% to 100.0%, while completion rates range from 33.3% to 93.3%.

Table 5. **Outcomes by Provider – Treatment Retention and Completion**

	Treatment retention		Treatment completion	
Provider	**n**	**%**	**n**	**%**
A	59	69.5%	62	45.2%
B	36	63.9%	46	69.6%
C	16	87.5%	<10	
D	39	97.4%	<10	
E	43	90.7%	13	61.5%
F	25	92.0%	<10	
G	23	87.0%	<10	
H	16	81.3%	<10	
I	13	76.9%	14	57.1%
J–	27	81.5%	32	59.4%
K	24	75.0%	31	58.1%
L	40	90.0%	<10	
M	15	100.0%	<10	
N	21	90.5%	15	93.3%
O	13	84.6%	13	53.8%
P	25	68.0%	26	69.2%
Q	44	77.3%	42	33.3%
R	14	64.3%	23	65.2%
S	35	82.9%	47	72.3%

Despite the data limitations, there are some interesting differences across providers. Parents receiving services from provider B had the strongest gains in FAMHA scores and had one of the longer treatment durations, but did not improve their AAPI scores. Parents receiving services from providers P and Q also struggled to achieve gains in AAPI scores. Parents receiving services from provider A had moderate gains in AAPI scores and had the shortest treatment duration, but did not improve their average FAMHA scores (although 70.8% had an increase in their FAMHA score). On average, parents receiving services from other providers achieved gains in both the FAMHA and AAPI scores. The average length of treatment varied considerably (ranging from 195.9 days for provider A to 424.3 days for provider R). Rates of

stable housing at discharge were high among parents that completed treatment. All but two providers were at 100%.

Compared to the FIT performance benchmarks, most plans were able to achieve the target that 80% of parents have improvements in FAMHA scores. However, only three providers met the target for AAPI scores. All but one provider met the 90% target for stable housing. Given that the rate of stable housing among all discharged parents was 77.7%, the findings for providers (which were based on parents that completed treatment) suggest parents that did not report stable housing at discharge did not complete treatment.

Table 6. **Outcomes by Provider – Treatment Completers Only**

	A	B	J	K	N	P	Q	R	S
Pre-Post Difference in FAMHA	-3.91	16.86	6.71	5.13	8.71	9.69	5.36	9.92	6.97
Increase in FAMHA score	70.8%	90.3%	94.7%	88.9%	100.0%	88.2%	85.7%	93.3%	83.3%
Pre-Post Difference in AAPI	1.88	-0.56	1.28	6.07	3.89	-1.46	-2.54	3.47	5.87
Increase in AAPI score	66.7%	40.6%	61.1%	92.9%	88.9%	30.8%	30.8%	60.0%	83.9%
Days in FIT program	195.9	314.8	272.4	231.6	269.0	322.5	275.5	424.3	245.5
Stable housing at discharge	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	85.7%	100.0%	91.2%
Parents completing treatment	28	32	19	18	14	18	14	15	34

Notes: 1 – The average of 424 days in treatment was longer than expected. The computed average is an accurate representation of the data in the FIT database, but we are working to determine whether the length represents a true difference in treatment, a definitional difference in how to measure the enrollment and discharge dates, or something else.

Discussion

The results of the Phase One report suggest that the FIT program has positive effects on parental outcomes. AAPI scores increased by 6.6%, which is comparable to an evaluation of a

Nurturing Parenting program for parents involved in the child welfare system in Louisiana (Hodnett, Faulk, Dellinger, & Maher, 2009). FAMHA scores increased by 6.8% with scores increasing for 78% of parents.

A treatment completion rate of 56% is superior to the 13% treatment completion rate for parents in the child welfare system found by Oliveros and Kaufman (2011), although differences in definitions limit comparability. The FIT database only contains information on parents that enrolled in treatment, and a decision was made in consultation with DCF to exclude parents from the calculation of treatment completion who were discharged for 'other' reasons including court closure of the case (n=21), moving (n=23), death (n=1), transfer to a different treatment program (n=68), goal change (n=51), or incarceration (n=33). The percentage of all FIT discharges that completed treatment was 36.5% (232/636). The U.S. GAO (1998) computed the treatment completion rate as the percentage of parents that were required to receive treatment who completed treatment. Sixty-four percent of parents completed an intake, suggesting that 20.3% (13/64) of parents that completed an intake went on to complete treatment. Choi and Ryan (2006) computed treatment completion as the percentage of parents that enrolled in treatment who completed treatment. Thus, even when altering the measures to be more comparable, the FIT program has a greater treatment completion rate than other programs for child welfare involved parents.

The results of the Phase One Report also indicate that parents can be placed into groups based on their baseline characteristics. Outcomes differed across the four classes and those differences should be considered carefully in terms of how to optimize FIT intervention strategies for different kinds of families. Overall, the results suggest that parents with the greatest needs associated with functioning (as measured by the FAMHA score) achieved the greatest gains related to functioning, while parents with greater parenting needs (as measured by the AAPI score) achieved higher gains in parenting assessments. However, parents in Class 1 with complex needs had the lowest rates of stable housing at discharge (71.4%) and treatment completion (49.7%), indicating an opportunity for greater emphasis on incremental parent achievements and strengthening of parent engagement strategies. Improvements in assessment outcomes for one class (Class 4) were modest, however parents in Class 4 had the highest rates of stable housing, treatment retention, and treatment completion. From a practical perspective, FIT programs can use the results of the LCA to assign new enrollees to classes, and use the information to develop treatment plans even more tailored to client needs.

As with any study, there are limitations to this analysis. The most important issue is the amount of missing data. The baseline FAMHA and AAPI scores are not available for 10-15% of

the sample. The discharge FAMHA and AAPI scores are not available for most parents that did not complete treatment. Thus, only about half of the parents that were discharged have a recorded pre-post difference for the AAPI score. Thus, one implication for the Department is that ways should be explored to increase the amount of discharge assessment data that is collected from parents that do not complete treatment. From a practical perspective, such a large amount of missing data would make any statistical corrections (such as imputation, or last observation carried forward) challenging to implement because the choice of correction could have a large effect on the results. As such, the results for the assessment measures in this report are based on parents that have valid data, limiting generalizability. It is also important to note however, that outcome measures for treatment completion and treatment retention are not subject to this limitation. Second, there was a notable amount of measurement error in the data. The Department should screen data upon submission to ensure the data contain valid values. Finally, several additional outcome measures would be useful for program monitoring. For example, adding a variable related to stable housing at admission would enable determination of how much of an effect the FIT program has on stable housing. Days of sobriety would be another important outcome variable to assess substance abuse treatment. Key child outcomes to measure include whether another substantiated report of child maltreatment occurs, and if a child living at home during FIT treatment needs to be placed in out-of-home care during or within 6 months of the end of FIT treatment.

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