

# TREATMENT COMPLETER ANALYSIS: ANALYSIS OF IICAPS CASES CLOSED DURING CALENDAR YEARS 2010-2013

*(MEDICAID – COVERED CHILDREN ONLY)*

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# STUDY SAMPLE

## Children and Families . . .

- With an IICAPS episode of care ending between 1/1/2010 and 12/31/2013 at any of the 20 CT IICAPS sites
- Covered by Medicaid

## N=6633 unduplicated children

- 5599 (84.5%) with only one IICAPS EOC during study period
- 1034 (15.6%) with multiple IICAPS EOCs during study period; first EOC chosen for study analysis

## Treatment Completion:

- Completers = 4326 (65.2%)
- Non-completers = 2307 (34.8%)
  - *(Non-completer cases include 340 "Evaluation Only" cases; without these, Treatment Completion percentage = 68.7%)*

# POPULATION CHARACTERISTICS

Child Gender: Male = 60.2%

Female = 39.8%

Child Age: 3 – 12 years = 52.4%

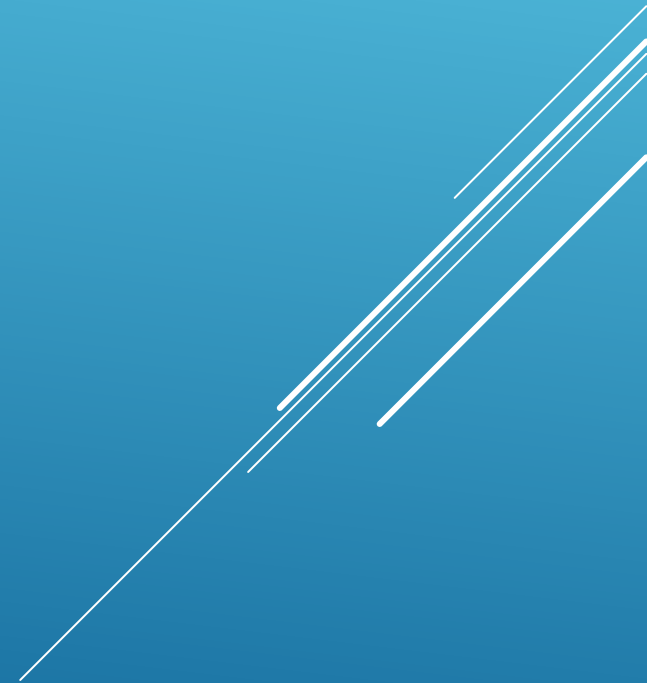
13 – 18 years = 47.6%

Child Race: Black, non-Hispanic = 14.2%

White, non-Hispanic = 40.9%

Of Hispanic Origin = 37.9%

Other Race or Multi-racial = 7.0%



# BIVARIATE ASSOCIATIONS: TREATMENT COMPLETION AND . . .

Associated with treatment completion at bivariate level ( $p \leq .1$ ):

- Younger age
- White, non-Hispanic
- Referred by Other Community Provider or Other Program within Agency
- Primary Caregiver is Mother or Relative
- Child Dx of ADHD, Anxiety, or ASD
- Medical Dx of Asthma
- Good/Fair School Attendance per Parent Rating
- Higher Satisfaction & Hopefulness Ohio Scales scores at Intake per parent report
- Lower Problem Severity & higher Functioning Ohio Scales scores at Intake per worker report

# BIVARIATE ASSOCIATIONS: NON-TREATMENT COMPLETION AND . . .

Associated with non-completion at bivariate level ( $p \leq .1$ ):

- Black, non-Hispanic
- Referred by DCF, Probation, or a Psychiatric Inpatient Unit
- Primary Caregiver is Father or Foster Parent
- Parent with Identified Service Need negatively impacting family functioning, specifically Alcohol/Substance Abuse and Housing Problem
- History of Trauma, specifically Disrupted Attachments/Multiple Placements
- Dx of Adjustment Disorder, Disruptive Behavior Disorder, or Substance Related Disorder
- DCF Involvement at Intake
- Suspension/Expulsion from school in 6 months prior to Intake
- Arrested, Detained, or Incarcerated in 6 months prior to intake
- Alcohol or Drug Abuse during lifetime, 6 months prior to intake, or during IICAPS
- Psychiatric Hospitalization in lifetime and 6 months prior to IICAPS, and more psychiatric hospital days in 6 months prior to IICAPS
- ED Visits in 6 months prior to IICAPS
- Out-of-Home Placement for behavioral reasons in lifetime and 6 months prior to IICAPS

# MULTIVARIATE MODEL (LOGISTIC REGRESSION)

## Model Summary:

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	8088.081 <sup>a</sup>	.069	.095

Nagelkerke R Square =  
only 9.5% of variance in  
 treatment completion  
 can be predicted  
 based on these  
 variables and  
 this model

	B	S.E.	Wald	df	p	OR
Age (Under 12 yrs, 13 – 18 yrs)	-.148	.063	5.565	1	.018	.863
Race: Black, non-Hispanic	-.259	.076	11.644	1	.001	.772
Primary Caregiver: Father	-.297	.105	8.056	1	.005	.743
Primary Caregiver: Foster Parent	-.338	.158	4.580	1	.032	.713
Primary Caregiver: Relative	.228	.094	5.920	1	.015	1.256
Poor/No School Attendance 6m Prior	-.198	.065	9.451	1	.002	.820
Alcohol or Drug Use Problem in Lifetime	-.240	.093	6.602	1	.010	.787
Ohio Hopefulness at Intake per parent	.014	.006	5.218	1	.022	1.014
Ohio Satisfaction at Intake per parent	-.011	.006	3.232	1	.072	.989
Ohio Functioning at Intake per worker	.020	.002	120.166	1	.000	1.021
Ohio Prob Severity at Intake per worker	.008	.002	15.145	1	.000	1.008
ADHD	.328	.057	32.935	1	.000	1.388
Adjustment Disorder	-.620	.129	23.288	1	.000	.538
Anxiety Disorder	.275	.073	14.043	1	.000	1.317
Disruptive Behavior Disorder	-.269	.059	20.537	1	.000	.764
Substance Related Disorder	-.370	.158	5.482	1	.019	.691
Asthma	.122	.066	3.386	1	.066	1.130
Incarcerated or Detained 6m Prior	-.452	.123	13.587	1	.000	.636
Psych Inpatient Admission in Lifetime	-.247	.057	18.543	1	.000	.781
DCF Involvement at Intake	-.188	.057	11.032	1	.001	.829
Parent Housing Problem	-.210	.096	4.779	1	.029	.811
Traumatic History: Multiple Placements	-.125	.068	3.397	1	.065	.882
Constant	.113	.135	.699	1	.403	1.120

	Components				
	1	2	3	4	5
Primary Caregiver: Father					.624
Primary Caregiver: Foster Parent			.709		
Alcohol or Drug Use Problem in Lifetime		.789			
Ohio Hopefulness at Intake per parent	.603				
Ohio Functioning at Intake per worker	-				
Ohio Prob Severity at Intake per worker	.824				
ADHD	.827				
Anxiety Disorder				-	
Disruptive Behavior Disorder				.579	
Substance Related Disorder				.616	
Asthma				-	
Incarcerated or Detained 6m Prior to IICAPS		.744		.542	
Psych Inpatient Admission in Lifetime					-
DCF Involvement at Intake		.608			.728
Traumatic History: Multiple Placements			.595	.434	
			.620		

# PRINCIPAL COMPONENTS ANALYSIS:

## ROTATED COMPONENT MATRIX\*

Rotation method: Varimax with Kaiser Normalization

\* Rotation converged in 5 iterations



# PCA COMPONENTS

Four of the five of the PCA components cluster variables in interpretable clusters which could be summarized as follows:

1. Child Functioning/Severity: Ohio Scales scores at intake
2. Juvenile delinquency: substance use problem, a substance related disorder, history of incarceration or detention
3. Child welfare involvement: foster parent as primary caregiver, DCF involvement at intake, multiple out-of-home placement trauma
4. Psychiatric status: ADHD, an anxiety disorder, a disruptive behavior disorder, a psychiatric inpatient admission
5. Other: father, asthma



# SUMMARY: LOGISTIC REGRESSION

Data provide very little information for predicting the likelihood of IICAPS treatment completion

- regression model predicts only 9.5% of the variance
- predictive value shared by 22 individual data elements; thus the predictive value of the individual variables extremely limited
- Some variables (e.g., Ohio Scales scores) are statistically significant but have very small parameter estimates and odds ratios almost equal to one
- some variables pose challenges to interpretation (e.g., statistically significant diagnostic categories do not appear to associate with treatment completion in consistent ways; many children with multiple and varying Axis I diagnoses likely complicates the analytic findings)

## SUMMARY (CONT.)

PCA analysis: some indication of particular child characteristics and experiences that cluster together in ways that warrant further examination

- The “juvenile delinquency” component includes three variables that, in the logistic regression model, individually predicted less likelihood of treatment completion.
- The “child welfare involvement” component includes three variables that individually predicted less likelihood of treatment completion

Further investigation of the impact of these types of child characteristics and experiences on the ability of children and families to fully utilize the IICAPS intervention could provide useful information for providers serving them.

## SUMMARY (CONT.)

The ability to predict IICAPS treatment completion is a complicated endeavor

- the group of children and families serviced by the IICAPS network are overburdened with multiple risk factors and present with severely debilitating life situations
- no obvious subgroups of non-completers

Results overall suggest that the cumulative effect of risk factors needs to be considered rather than single indicators.

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