Connecting Inpatient and Residential Treatment to Systems of Care

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Overview

- Demographics, service use and cost for children and youth with serious emotional disturbance served in Florida's Statewide Inpatient Psychiatric Programs
- Examination of factors that contribute to youth returning to inpatient care
- Examination of how youth move through Florida's publicly funded children's mental health, child welfare and justice systems
- Discuss findings in light of national *Building Bridges* initiative to more fully integrate inpatient and residential services into systems of care.

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Introduction

- In Florida, Medicaid funds 3 out-of-home treatment programs for children and youth with serious emotional disturbance.
  - Statewide Inpatient Psychiatric Program (SIPP)
  - Specialized Therapeutic Foster Care (STFC)
  - Specialized Therapeutic Group Care (STGC)
- SIPP Program
  - Intensive residential program
  - Child is considered a danger to self or others
  - Purpose: stabilize youth and connect youth and youth's family with community-based services
  - Average length of stay: 6 months
  - 17 SIPP programs operated by 14 providers
  - 415 beds statewide

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Learning about SIPP

- Pre-treatment/post discharge comparison of youth enrolled in SIPP
- Uses Medicaid claims and Baker Act initiations data to examine and compare the demographic, clinical, and service needs of youth
- Analysis of 12 months post discharge service patterns and costs of behavioral health treatment compared to 12 months pre-admission behavioral health service patterns and costs
- Analysis of administrative data from the SIPP Provider Monthly Report Database
  - ♦ Client demographics

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Demographic Characteristics

	n	%
Gender		
Male	325	52%
Female	298	48%
Race/Ethnicity		
White	359	58%
Black	184	30%
Hispanic/Latino	53	9%
Other	25	4%
Asian	2	<1%
Age		
Mean	13.8	
84% 12-17 y.o.		

N=623 admission events

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Primary diagnoses at admission

Diagnostic category	n	%
Mood & Affective	218	35%
Anxiety & Stress	131	21%
Disruptive Behavior Disorders	106	17%
ADHD	44	7%
Schizophrenia & Psychoses	42	7%
MR/DD	42	7%
Other non-psychotic	38	6%
Adjustment	5	1%
Alcohol & Drug	3	<1%

N=629

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Service Use & Costs Per User Per Eligible Month
(n=650)

	Pre		Post		%	$
	N (%)	Avg. cost	N (%)	Avg. cost		
General Inpt. MH	286 (44%)	1242	143 (22%)	1249	↓	↑
STFC	122 (19%)	1606	173 (27%)	2240	↑	↑
BHOS	74 (11%)	291	40 (6%)	223	↓	↓
Day Tx	116 (18%)	263	89 (14%)	173	↓	↓
Emergency MH	376 (58%)	11	281 (43%)	10	↓	↓
TCM	533 (82%)	335	537 (83%)	275	↑	↓
Community MH	420 (65%)	228	336 (52%)	201	↓	↓
School-based MH	65 (10%)	14	91 (14%)	16	↑	↑
Outpatient	640 (98%)	150	614 (94%)	89	↓	↓
Other MH	42 (6%)	13	148 (23%)	65	↑	↑
All MH	646 (99%)	1522	633 (97%)	2239	↓	↑

Services in *italics* were significantly different in the post period.

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Pharmacy Use & Costs
(n=650)

	Pre		Post		%	$
	N (%)	Avg. cost	N (%)	Avg. cost		
Stimulants	283 (44%)	43	218 (34%)	56	↓	↑
Alpha Agonists	168 (26%)	10	138 (21%)	8	↓	↓
SSRIs	319 (49%)	34	235 (36%)	33	↓	↓
Tricyclic	35 (5%)	5	26 (4%)	5	↓	-
Newer Antidep.	228 (35%)	27	184 (28%)	37	↓	↑
Standard Antipsychotics	119 (18%)	13	70 (11%)	9	↓	↓
Atypicals	428 (66%)	161	486 (75%)	192	↑	↑
Anxiolytics	139 (21%)	11	83 (13%)	5	↓	↓
Mood Stabilizers	364 (56%)	65	375 (58%)	87	↑	↑
Other MH	62 (10%)	4	45 (7%)	4	↓	-
All MH Pharmacy	549 (84%)	230	581 (89%)	267	↑	↑

Drug categories in *italics* were significantly different in the post period.

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Cross system outcomes
Baker Act Initiations

Time frame	First 6 months (# initiations)	Second 6 months (# initiations)	12 months (# initiations)
Pre-SIPP admission	717	436	1153
Post-SIPP discharge	389	312	701
Total initiations (pre & post)			1854

The cost of Baker Act initiations decreased significantly between pre & post. (X^2=52.7; p<.0001).

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Cross system outcomes Juvenile Justice contacts

Time frame	First 6 months (# youth)	Second 6 months (# youth)	12 months (# youth)
Pre-SIPP admission	240 (30%)	185 (23%)	308
Post-SIPP discharge	165 (21%)	151 (19%)	241
Total youth (pre & post)			377

(n=792)

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Cross system outcomes FDLE contacts

Time frame	First 6 months (# youth)	Second 6 months (# youth)	12 months (# youth)
Pre-SIPP admission	159 (20%)	136 (17%)	229
Post-SIPP discharge	117 (15%)	121 (15%)	191
Total youth (pre & post)			401

(n=792)

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Post discharge child welfare placements

Placement category	n	%
Mental health placements (all)	344	73%
Group care (includes group shelters)	51	11%
Family foster, shelter or independent living	37	8%
Family or relatives	20	4%
Medical (hospital & foster care)	8	2%
Justice (juvenile & adult)	6	1%
Runaway	5	1%
Total	471	

60% of youth (n=471) were involved in the child welfare system at discharge

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Relevant findings

- All youth should be connected with Targeted Case Managers prior to discharge from SIPP
- Include surrogate caregivers, as well as biological caregivers, in discharge planning prior to discharge

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Why do they come back? The Recidivism Study

- Focus on youth who are readmitted to SIPP within 6 months of discharge
  - Characteristics of the youth
  - Behavioral health service use between discharge and readmission
  - Events leading to readmission, including access to recommended treatment and levels of care
  - Appropriate supports for youth's family and case manager
- Method: Interviews with Targeted Case Managers, Single Point of Access personnel, SIPP Discharge Planners & Regional Care Coordinators

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How are re-admitted youth different?

- Youth and Family Characteristics
  - More severe mental health symptoms
  - Less family support
  - Higher level of youth aggression
  - Lower level of youth hope and motivation
- System-level Factors
  - Inappropriate placements following discharge
  - Delays in service receipt following discharge
  - Dependency status
- Administrative data: Factors from qualitative study are confirmed in survival analysis

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What factors contribute to early re-admission?

- The setting to which the youth is discharged
  - Availability of appropriate placements
  - Inappropriate level of care
- Insufficient discharge planning
  - Youth preparation for transition
  - Family preparation
  - Lack of continuity of services

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What factors contribute to early re-admission?

- Family-level factors
  - Lack of family involvement
    - Dependent youth
  - Lack of family follow-up with referrals
  - Poor medication compliance

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Appropriateness of re-admission

- Think of a youth who was re-admitted to a SIPP within 6 months of discharge. Was SIPP the most appropriate placement for that youth?
- Yes: 67%
- No: 33%
  - Juvenile Justice
  - Developmental Disabilities
  - Youth who "burned bridges" everywhere else

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Recommendations for reducing early re-admission

- Ensure appropriate living arrangement following SIPP discharge
- Facilitate the transition process for youth
- Prepare caregivers to receive discharged youth
- Improve the systems and agencies serving SIPP youth
  - Communication between youth-serving agencies
  - Partner with the youth's school system

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SIPP in a broader context
The Trajectory Study

- Trajectories of residential care between programs and across systems (CW, JJ, adult law enforcement)
- Interviews with caregivers, providers, and key informants to examine:
  - Factors that affect client movement across levels of care
  - Extent to which the 3 programs are appropriately utilized
  - Whether or not home and community-based alternatives are appropriately used

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Study purpose

- To investigate:
  - Appropriate flow of youth through the levels of care
  - How system doorways (e.g., mental health, child welfare) affect treatment trajectories

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Markov Modeling

- A series of “pictures” are taken showing where an item of interest is now and where it was when the last “picture” was taken
- Item of interest (location, characteristic, etc.) is assigned a “bucket” or “node” to denote its categorization
- The item of interest MUST be placed in one of the buckets at each observation
- Can only be placed in one bucket per observation
- Many observations can be made—the more made, the closer the model comes to making the model “stable”
- Time between observations must be equal

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Markov Modeling, cont’d.

- The model produces probabilities that show the likelihood that a given “picture” is likely to occur in the model’s environment
  - For example, the probability that a youth who is in a SIPP at the first observation will be found in TGC at the next observation
  - Probability can be converted to a percentage
- The sum of the probabilities in a column or row of the matrix equal 1
- Values that fall on the diagonal in the matrix show the probabilities of the first and second observations returning the same information
- The diagonal, in our model of youth movement, shows that a given youth location was stable

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Findings

- From one week to the next, most (90%) of youth remain in their SIPP, TGC or STFC treatment setting
- Further, two-thirds of youth who leave these treatment settings go to less restrictive treatment settings
- But…there are groups whose movement warrants a closer look.
  - ‘Cyclers’ – kids cycling between inpatient or SIPP and the justice system
  - ‘0 to 60’ kids who move directly from the community to inpatient care
  - Kids who are discharged from restrictive settings to no mental health services

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Groups of interest

	Where they are after one week							
Where they started	SIPP	Inpt.	FDLE / JJ	TGC	STFC	Comm MH	CW no MH	Comm no MH
SIPP			1					2
Inpt.			1	2				
FDLE / JJ	1			2				
TGC			2			1		
STFC		2	1					
Comm. MH		2		1				
CW, no MH		2						1
Comm., no MH		2					1	

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Groups of interest

- Girls are more likely to move to more restrictive placements than boys
  - Girls are twice as likely to have been discharged from SIPP to STFC
  - Girls are five times more likely to move from TGC to a SIPP
- Boys are twice as likely to have been in general hospital inpatient settings prior to an STFC placement
  - Boys are twice as like to have been in the justice system prior to a TGC placement
  - Boys are twice as likely to move from the community, with or without mental health services, to TGC

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Odds Ratios: Female vs. Male

	Where they are after one week							
Where they started	SIPP	Inpt.	FDLE/ JJ	TGC	STFC	Comm MH	CW no MH	Comm no MH
SIPP					(F) 2.10			
Inpt.					(M) 0.51			
FDLE / JJ				(M) 0.46		(F) 3.12	(F) 2.10	(F) 2.60
TGC	(F) 5.00	(F) 4.08	(F) 2.42		(F) 3.39		(F) 2.07	
STFC	(F) 2.72							
Comm. MH			(F) 2.95	(M) 0.41				
CW, no MH	(F) 2.08		(F) 2.32	(M) 0.59				(F) 2.98
Comm., no MH				(M) 0.49				

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Factors that affect appropriate movement through the SOC

	System	Agency	Child & Family
Facilitate	▪Staffings ▪Completed paperwork ▪Coordination of available beds/wait list	▪Case manager involvement ▪Home visits and passes for transition ▪Communication and teamwork	▪Caregiver or family involvement ▪Child met criteria for placement ▪Child completed treatment
Impede	▪Lack of funding ▪Coordination with Juvenile Justice and Judiciary ▪Time to complete paperwork and process; ▪Gaps in levels of care	▪Lack of placement availability-especially STFC & TGC; ▪Waiting for placement; ▪Lack of TCM involvement ▪ Hasty discharge planning	▪Child's reputation with providers, ▪Lack of family involvement; ▪Family financial or emotional instability ▪Lack of participation in family therapy

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Recommendations

- More adequate and appropriate community placements
- Ensure community-based case managers are involved prior to discharge
- Look more closely into the reporting of behavioral incidents to law enforcement
- Look more closely at the subgroups of kids who do not move appropriately through the system

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Building Bridges

Convened in June, 2006, the purpose of the summit was to

- Establish defined areas of consensus, related to values, philosophies, services and outcomes;
- Develop a joint statement about the importance of creating a comprehensive service array for children, youth and families, inclusive of residential and out-of-home treatment settings as part of the entire range of services;
- Identify emerging best practices in linking and integrating residential and home and community-based services;
- Set the stage for strengthening relationships and promoting consensus building; and
- Create action steps for the future.

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Find the report on our website:

http://www.fmhi.usf.edu/institute/pubs/bysubject.html

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For the Building Bridges Joint Resolution, visit:
http://www.alliance1.org/Conferences/NLCCWI2007/everychild/BuildingBridges.pdf

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