

Disrupting Disparities: Using Enhanced Systems of Care to Improve Treatment Access and Outcomes for Children

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BACKGROUND

- Poverty, violence and other community risk factors nearly double the 13-20% prevalence rates for child mental health disorders^{1,2}
- Barriers, such as stigma, language and geography create access disparities; only 1 in 5 U.S. children with a psychiatric or substance use disorder receives treatment^{3,4}
- Integrated care models between pediatrics and child psychiatry have shown significant benefits in improving health outcomes, service utilization, access to care, and engagement^{5,6}
- CHA's *Children's Health Initiative* received a federal SAMHSA grant titled "Enhancing Systems-of-Care, Supporting Families, and Improving Youth Outcomes" (E-SOC) to launch a multi-site integrated pediatric system-of-care model and investigate qualitative and quantitative outcomes.

AIMS

- 1) To assess the feasibility of implementing an integrated care delivery pilot for children and families within a community-based clinic setting, and
- 2) To examine the impact of integrated pediatric care on patterns of clinical functioning, service use and expense

METHODS: CPM MODEL

E-SOC relies on the Collaborative Practice Model (CPM)⁶ of pediatric integrated care.

CPM intervention has three major components:

- 1) **Integrated care**
 - Weekly on-site consultation to primary care pediatrics practice from a paired specialty team of a child psychiatrist and a family support specialist (FSS)
 - Pre-evaluation "huddles" with primary care to clarify the diagnostic questions and the reason for referral
 - Shared treatment planning with the family and PCP after the evaluation
- 2) **Peer-to-peer Parent Support**
 - Parents/Guardians were interviewed by the FSS as part of the team's evaluation, using a strengths-based approach to identify child and family needs
 - The FSS facilitated communication between families and providers to enhance engagement
 - The FSS offered outreach support, including home visits, if needed, to coach and encourage families to follow-up on the CPM team recommendations
- 3) **School and Community Linkages**
 - As needed, the CPM team coordinated with schools, courts, child welfare, natural supports and community resources to identify and foster an individualized plan of care for each family

METHODS: DATA ANALYSIS

Study data was obtained from three distinct sources:

- 1) **Electronic health records** – Demographic information and documented CHA service use
- 2) **E-SOC Study Interview data** – Includes measures of clinical functioning (CAFAS and CGAS) performed as part of longitudinal E-SOC assessment
- 3) **Medicaid claims** – Diagnosis and expense from mental health and pharmacy claims for CHA patients ages 3-18 years included in the E-SOC or TAU study populations

Analysis of clinical functioning: In Figs. 1&2, average CAFAS and CGAS scores were compared at baseline and six-month follow-up (functional measures were available for E-SOC study subjects only)

Claims analysis: In Figs. 3&4, expense trajectories are compared for children receiving care through the E-SOC model vs. TAU in the study period

- 1) **Total cost of care** - TCOC per member per month, based on 9 months of claims paid through Feb 28, 2019, is compared for E-SOC vs. TAU populations
- 2) **ED utilization** – Number of ED claims during the study period were compared for E-SOC vs. TAU participants



PRELIMINARY RESULTS

Table 1: Demographics

	TAU	E-SOC
Total N	695	25
Sex		
Male	54.8%	48.0%
Female	45.2%	52.0%
Total	100%	100%
Age		
0-5	9.5%	0.0%
6-12	50.5%	76.0%
13-18	40.0%	24.0%
Total	100%	100%
Race/Ethnicity		
White	45.0%	24.0%
Hispanic	36.4%	60.0%
Black	13.8%	16.0%
Asian	3.5%	0.0%
Unknown/Others	1.3%	0.0%
Total	100%	100%
Language		
English	58%	44%
Portuguese	19%	20%
Spanish	16%	32%
Haitian Creole	3%	4%
Other	4%	0%
Total	100%	100%
Diagnoses		
PTSD	8%	8%
Mood disorders	19%	20%
Anxiety disorders	30%	48%
ADHD/Conduct disorders	30%	28%
Autism Spectrum	6%	8%
Adj disorders	30%	56%

Note: Diagnoses do not sum to 100% since children may have more than one diagnosis.

Figs. 1 and 2: Changes in Clinical functioning for E-SOC Participants

- Pre-post improvements were noted using standardized measures of clinical functioning at baseline and 6 months post-enrollment in E-SOC
 - CGAS: higher scores indicate better functioning
 - CAFAS: lower scores indicate better functioning
- Measures of clinical functioning not collected in TAU setting

Fig. 1: CGAS Scores Baseline to 6 mos.

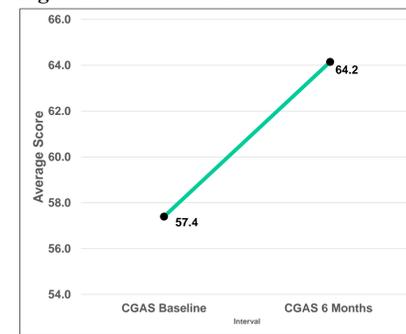
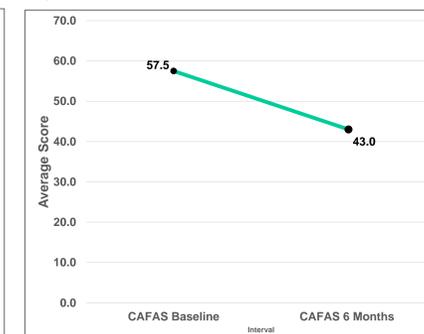


Fig. 2: CAFAS Scores Baseline to 6 mos.



Note: N=20; data for 6-month follow-up evaluation available to-date for 20 of 25 children enrolled in E-SOC who had corresponding claims.

Figs. 3 and 4: Comparative Trends in Total Medical Expense and ED Utilization

- Total cost-of-care per member per month rises much more steeply for the E-SOC group, peaks at 3 months post-enrollment, then falls by 6 months to below cost at enrollment
- Changes in rates of ED utilization were greater for ESOC participants than for TAU

Fig. 3: Trends in Total Cost of Care

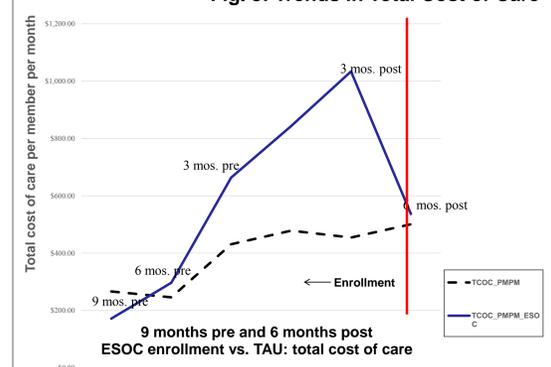
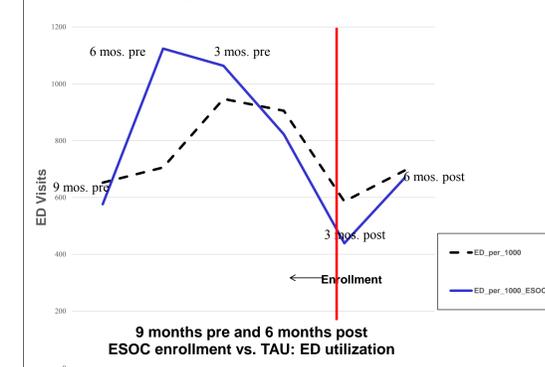


Fig. 4: Trends in ED utilization rates



DISCUSSION

This evaluation of E-SOC outcomes with treatment as usual (TAU) outcomes represents early results; limitations include the small sample size for the intervention group, and the relatively brief study interval.

Notable demographic variations between pilot and control groups include twice as many primary Spanish language-speakers in E-SOC vs. TAU, and a 60% higher rate of being diagnosed with an Anxiety Disorder.

Preliminary results signals of particular interest include:

- Within group pre-post improvement in clinical functioning for intervention youth is evident across two independent measures, despite the potential for cultural and linguistic barriers to engagement.
- Between group comparisons for E-SOC intervention youth versus those in TAU indicate reduced rates of ED utilization, as well as declining trends in total cost-of-care, for E-SOC study participants.

CONCLUSIONS

Social determinants of health, including poverty, racism, and linguistic and cultural isolation contribute to differences in how, when and where children with mental health needs present for care. Such factors may also act as barriers to treatment access for families. The early results from this study need to be repeated over time to see if trends hold as the sample size grows. However, the E-SOC integrated care team-based approach, with its emphasis on early and accurate identification of needs, along with peer-to-peer parent support and facilitation of engagement, appears to offer promise as a way to enhance mental health care access, and improve child mental health outcomes.

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