Using a Data Support System to Build an Empirically-Based Culture

Or, continuously striving to improve services to children & families by using data as a guide for decision making

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Tampa, February 24, 2006

The “System” for Parents

Provider Resistance to Collecting Data

Effective Systems of Care: A Summary of Implementation Factors
Performance Measurement System
Used in Michigan for Children
and Families Served by Public
Mental Health

Reflections on Our Journey:
A Distillation of Core Principles
Based on Hindsight

LEADING TO SYSTEM
TRANSFORMATION

Evidence-Based Culture:
Everyone Asks “Where’s the data!”

WHERE’S THE DATA?

Cornerstone Measure

- CAFAS – Child and
  Adolescent Functional
  Assessment Scale

- Livingston County
  began using in 1994 to
  assess outcome

- Spread to rest of state

CAFAS Assesses Day-to-Day
Functioning Across 8 Domains

- School/Work
- Moods/Emotions
- Home
- Self-Harmful Behavior
- Community
- Substance Use
- Behavior Toward Others
- Thinking

CAFAS: The Essentials

Each of the 8 subscales has problems,
strengths and goals.
For each Subscale, problems are divided into
4 levels of impairment:

<table>
<thead>
<tr>
<th>Severity</th>
<th>Severe</th>
<th>Moderate</th>
<th>Mild</th>
<th>Minimal/None</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30</td>
<td>20</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

For problems, raters select behavioral descriptors
that describe child’s severest functioning in the
last 3 months.
Outcomes Valued by Families

"Families want their children to get better. Expressed in functional terms, this means we want our children to be able to live at home, to go to school and get good grades, to enjoy friends and activities in the community, and become responsible adults living independently."

Trina Other: Federation of Families for Children’s Mental Health (1996, p. 234)

CAFAS Used for Treatment Planning

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems</td>
<td>D43 Deliberate and serious threats of physical harm to household members</td>
</tr>
<tr>
<td>Goals</td>
<td>G31 Behavior at home is devoid of aggressive acts or threats</td>
</tr>
<tr>
<td></td>
<td>G33 Reacts non-impulsively over disagreements</td>
</tr>
<tr>
<td>Strengths</td>
<td>S53 Takes pride in being able to do some actions independently</td>
</tr>
<tr>
<td>Plan</td>
<td></td>
</tr>
</tbody>
</table>

Parents Taught Us That Valued Data Becomes Refrigerator Art

Charting Progress Sustains Hope

Comparison for Intake, 3 months, & Exit

CAFAS Profile Gives Overview

CAFAS Scale Scores at Intake

CAFAS Subscales

#1 Measures are Youth and Family Centered

Performance Measurement System
The CAFAS is simple to rate and read once trained on its use. Families and professionals alike can use it. It is a tool with the ability to meet multiple needs.

The family may use the CAFAS Score to remind them of their achievements. Home down from 30 to 10. HOORAY!! Life is getting better at home.

The family may also use the CAFAS Score to help them set the next goal. Home is down. GREAT! School is still at 20. Let’s work on that next.

#1 Measures are Youth and Family Centered
Measure outcomes that are:
• Valued by families
• Useful in prioritizing goals with families
• Useful in developing a plan of care with families
• Helpful to families in monitoring effectiveness of services

#2 Feedback is Provider Centered

Agreement with Providers
Send:
- Monthly export of data
  - CAFAS ratings at intake, 3 months, and exit
  - Item level data collected with CAFAS software
  - Other information on services and risk factors

Receive:
- Provider-specific data monthly
- Provider-specific data compared to state-wide benchmarks at data parties held at University (2 to 4 per year)
  - Data privacy: Providers compared only to statewide averages (not to each other)
Generating Meaningful Feedback

• Outcome indicators for individual clients
• Aggregated averages by provider
• Aggregated averages for state

Outcome Indicators

For each youth,
• Track progress during treatment
• Select most appropriate indicator
• Move to a more ambitious indicator if target goal achieved

For aggregated data,
• Calculate the proportion improved

Outcome Indicators

Goal: Reduction in overall impairment
Criteria: Reduce total score by 20 points or more
Total Score
Intake 150
Exit 80
70 point improvement

Outcome Indicators

Goal: Reduce behaviors that jeopardize the youth being in a “normal” environment
Criteria: No severe ratings on any subscales
Severe Impairments
Intake 3
Exit 0
No severe impairments

Generating Meaningful Feedback

• Designation of “client type” for individual clients
• Outcome indicators for individual clients
• Aggregated averages by provider
• Aggregated averages for state

Client Types

• Purpose
  Simplify data to make more meaningful

• Method for Determining
  “Glance” at CAFAS profile
  Which subscales are rated as severe or moderate?
  Assign to first client type youth qualifies for (i.e., hierarchically arranged)
Client Types
- Thinking Problems (irrationality)
- Maladaptive Substance Use
- Self-Harmful Potential (includes severe depression)
- Delinquency
- Behavior Problems with Moderate Mood Disturbance (School, Home, or Behavior Toward Others)
- Behavior Problems without Moderate Mood Disturbance
- Moderate Mood
- Mild Behavioral or Mood Problems

Median CAFAS Score for Client Types at Intake Shows Hierarchy

Example 3: Outcome Indicator
- **Goal:** Reduce problems with more pervasive effects
- **Criteria:** Progress to client type lower in the hierarchy
  - Thinking
  - Substance Use
  - Self-Harmful Potential
  - Delinquency
  - Behavior Problems with Moderate Mood Disturbance
  - Behavioral Problems without Mood
  - Moderate Mood/Mild Behavioral

Generating Meaningful Feedback
- Outcome by client type for each provider
- Designation of “client type” for individual clients
- Outcome indicators for individual clients
- Aggregated averages by provider
- Aggregated averages for state

Feedback: Graphic & Frequent
- 49 charts that compare provider’s yearly aggregated data to state benchmarks

“49” Charts for Yearly Report Answers...
- Who do we serve?
- What are the types & extent of youths’ impairments at intake?
- Is the agency serving targeted youths?
- What are the outcomes for youths?
  - Breakdown by outcome indicator and by client type
- Are services appropriate?
- Who drops out?
Example from “49” Charts for Yearly Report

<table>
<thead>
<tr>
<th>Percentage of Youths Improved by 20 Points or More</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
</tr>
</tbody>
</table>

Feedback: Graphic & Frequent
- Monthly charts of aggregated data
  - IMPACT: Encouraging local continuous quality improvement efforts
  - 49 charts that compare provider’s yearly aggregated data to state benchmarks

Example from Monthly Aggregated Data Report

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Thinking</th>
<th>Substance Use</th>
<th>Self-Harm</th>
<th>Delinquency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild Mood/Behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Feedback: Graphic & Frequent
- Monthly charts of individual client level data
  - IMPACT: Preventing poor outcome for individual clients by monitoring progress during treatment
  - 49 monthly charts of aggregated data
  - 49 charts that compare provider’s yearly aggregated data to state benchmarks

Example from Monthly Charts of Client Level Data

<table>
<thead>
<tr>
<th>Client Research ID</th>
<th>Client Type</th>
<th>Intake CAPAS</th>
<th>Most Recent CAPAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Substance</td>
<td>120</td>
<td>170</td>
</tr>
<tr>
<td>02</td>
<td>Self-harm</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>03</td>
<td>Delinquent</td>
<td>80</td>
<td>120</td>
</tr>
<tr>
<td>04</td>
<td>Sch/Mood</td>
<td>50</td>
<td>80</td>
</tr>
</tbody>
</table>

Identifies youths making poor progress during treatment

Youth (Substance use client type) is getting worse (120 to 170)

Provider-Centered Feedback

Providers submit outcome data monthly

Impact: Data used for local continuous quality improvement (CQI)

University sends feedback monthly
#2 Feedback is Provider Centered
Assures that local providers:
- Participate in generating type of data feedback
- Get timely data feedback
- Get meaningful data for continually improving services to:
  - Develop programs
  - Determine training needs
  - Avoid poor outcomes with feedback during treatment

#3 Community Programs are Supported

Recognizing Community Programs Which Have Exemplary Outcomes
Hear All About It!!
Propensity Analysis Shows Family Guidance Home-Based Program Performs better than other Michigan Programs Serving Similar Children

Propensity Study
This study compared Family Guidance with clients at comparison sites to determine if there were differences in 3 outcomes, after controlling for length of treatment and the following covariates:
- age,
- sex,
- race,
- family income,
- parental education,
- year entered, and
- number of severe impairments at intake

Propensity Analysis
Propensity analysis can be used to estimate treatment effects in community settings, where randomly assigning clients to treatment and control groups is not feasible
Propensity scores method permits:
- Determining that a treatment program does as well as or better than programs at comparison sites (i.e., local custom care), controlling for the severity of the client population
- Controlling for many covariates by reducing the total collection of pretreatment covariates to a single composite

For clients treated at Family Guidance, the odds of having...
A 20-point reduction in Total CAFAS score are 2.19 times higher than at comparison sites
No severe impairments at exit are 1.69 times higher
A total score of 40 or lower at exit are 1.60 times higher

Based on Logit model where the outcome is log odds of the subject being located at Family Guidance.
Identify Provider Strengths

**Why:**
Good news is important. Providers usually have good outcomes for some client types.

**Supportive Action:**
Help providers evaluate programmatic changes
Provide a forum for providers to share successes

**Goal:**
Each provider strives towards personal best for each client type

**Model:**
Golden Rule - Treat providers as you want them to treat families

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# 3 Community Programs Are Supported

**Identifies & Supports**
- Exemplary programs developed within the community
- Strengths of other providers

**Monitors**
- Effectiveness of new interventions as they are introduced

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Data Answers Questions


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Who Do We Serve?

**Percentage of Youths in Client Type**

<table>
<thead>
<tr>
<th>Mild Mood/Behavior</th>
<th>Thinking</th>
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<tr>
<td>Substance Use</td>
<td>Self-Harm</td>
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Which EBPs Could Help the Most Youths?

**Cognitive Behavior Therapy for Depression (CBT)**

- Parent Management Training (PMT)

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Who is less likely to improve with treatment-as-usual?

At intake, significant predictors of poor outcome are:
- Prior psychiatric hospitalization
- Comorbid delinquency
- Prior juvenile justice involvement
- Severely or moderately impaired caregiving environment (CAFAS Caregiver scale)

So, what’s new?

What is a Stronger Predictor?

Pervasive Behavioral Impairment
Defined as moderate or severe impairment on three CAFAS subscales:
- School
- Home
- Behavior Toward Others

Pervasive Behavioral Impairment Predicts at All Ages

Severely or Moderately Impaired on School, Home and Behavior Toward Others

How Many Families Could Benefit from PMT?

Groups defined by CAFAS Profile

Leading System Change

- Data is used to help lead system change/system transformation.
- Data is used to shape people’s behavior. It is the change in behavior that leads to system change.
- Systems don’t change; people do.
- Client level outcome data is now changing what we do and how we do it.
- Data support system is at the heart of our efforts to improve mental health services for children and families.

Shared Data Broadly

- Disseminated these data and information on linking client types to EBPs*
- Stakeholders, including parent advocates, developed logic model for state implementation of trainings
- Parent advocates wrote Guide to EBPs for Parents

IMPACT: Introducing EBPs within our empirically-based culture has met with enthusiasm by providers and parent advocates

*Reference: Evidence-based Treatments for Children And Adolescent Matching CAFAS Profiles to Treatment Types. Hodges, 2004
Data for the people, Data by the people, Data with the people

Performance Measurement System

Leading with Data

70% facts, figures, and experience
30% working in the dark
Data makes
Less time operating in the dark
Operating in the dark much easier!!!
Data helps me see the light before I feel the heat

Data Facilitates Broad Participatory Planning with Large Groups

• Data is a loud voice
  • It levels the playing field for everyone
• Data focuses discussion
  • People are willing to follow rational decisions made with data
• Group discussion
  • Facilitates collaboration
  • Elicits the best ideas from partners

Performance Management System is a Powerful Tool

• Minimizes conflict based on unfounded fears
• Can lead to system change
• Shows our partners in child welfare, juvenile justice, & education that we can make a difference

Dashboard Indicators Developed with Stakeholders

<table>
<thead>
<tr>
<th>Community-based services if CAFAS &gt; 100</th>
<th>No severe impairments at exit</th>
<th>Decrease of 20 points or more on the overall CAFAS</th>
</tr>
</thead>
</table>

Summary:

#4 State Policies and Planning Are Data Informed

Assists policymakers and administrators who use the data to:

• Know about their consumers, by having outcome data at the level of the individual client
• Collaborate with all stakeholders, including families
• Continually evaluate the impact of change
• Motivate providers to strive for excellence by actively engaging in continuous quality improvement
  • Raise the bar and look at results of services

19th Annual RTC Conference
Presented in Tampa, February 2006
#5 System of Care is Data Informed, Family Driven, and Outcomes Focused

Collaboration to Establish Criteria for Specific Interventions
- Statewide blended funding project using 1915(c) waiver and county funding for services
  - Eligibility criteria for the waiver includes the CAFAS
    - 90 if 12 or younger
    - 120 if 13 or older
- Detroit/Wayne County blended funding project between mental health and juvenile justice will target youths for more intensive services who have
  - Pervasive behavioral impairment (severely or moderately impaired on School, Home, & Behavior Toward Others)

Collaboration to Monitor Client Outcomes Across Agencies
Outcome monitoring follows the youth across agency boundaries
Example initiative
- Blended funding project for children who are adopted
  - CAFAS will be our outcome measure

Summary: #5 System of Care is Data Informed, Family Driven, & Outcomes Focused
Help partners in the system of care to:
- Identify services youths and families need, regardless of entry agency
- Track outcomes for youth and families, regardless of entry agency
- Study relationship between services, cost, and outcomes to promote effective services which are family driven and outcomes focused

Continue Search for Quality
"If you accept the expectations of others, especially negative ones, then you never will change the outcome."  
**Michael Jordan**

"Who says wheelchair bound kids can’t wrestle!"
Gabrielle and Manny Pennell

"Teamwork divides the task and doubles the Success"

"I’ll change the diaper and stretch Gabby while you make us dinner!"
Renee Williams

Partnering with Families can help break system barriers and change policies

"We do want the same things, so let’s work together to get them done."
Renee Williams and Jonica Pennell

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