ANNUAL EVALUATION SUMMARY: FISCAL YEAR 2017

Child & Adolescent Mental Health Division

Research, Evaluation & Training

Program Improvement & Communications Office

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April 2018
Overview

Review of major trends and findings in the following areas:

Overall
• Youth Served
• Services Rendered

Special Analyses
• Decreasing average age of youth clients
• Trends in youth and family reported outcomes
• Risk profiles revisited

Summary
YOUTH SERVED
CAMHD Youth Registered & With Procured & Direct Services
Fiscal Year 2012-2017

# Youth Registered
- 1954
- 2119
- 2225
- 2405
- 2496
- 2405

# Youth Enrolled and/or Receiving Services
- 1765
- 1965
- 2089
- 2070
- 2209
- 2162

# Youth with Direct Services
- 1230
- 1313
- 1337
- 1505
- 1528
- 1420

# Youth with Procured Services

Fiscal Year
2012
2013
2014
2015
2016
2017

Youth (N)
CAMHD Youth Enrolled & Receiving Direct & Procured Services by FGC
Fiscal Year 2013-2017

Registered Youth (N)

Enrolled
Procured Svc.
Direct Svc.

Fiscal Year by Family Guidance Center

Hawaii (Big Island)  Leeward Oahu  Central Oahu  Honolulu Oahu  Maui  Kauai  Family Court Liaison

<table>
<thead>
<tr>
<th>Primary Diagnosis</th>
<th># of Youth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety Disorders</td>
<td>79</td>
</tr>
<tr>
<td>Bipolar and Related Disorders</td>
<td>30</td>
</tr>
<tr>
<td>Depressive Disorders</td>
<td>235</td>
</tr>
<tr>
<td>Disruptive, Impulse-Control, and Conduct Disorders</td>
<td>406</td>
</tr>
<tr>
<td>Neurodevelopmental Disorders</td>
<td></td>
</tr>
<tr>
<td>Attention-Deficit/Hyperactivity Disorder</td>
<td>307</td>
</tr>
<tr>
<td>Autism Spectrum Disorder</td>
<td>15</td>
</tr>
<tr>
<td>Intellectual Disability</td>
<td>6</td>
</tr>
<tr>
<td>Other Neurodevelopmental Disorders</td>
<td>1</td>
</tr>
<tr>
<td>Obsessive-Compulsive and Related Disorders</td>
<td>10</td>
</tr>
<tr>
<td>Schizophrenia Spectrum and Other Psychotic Disorders</td>
<td>20</td>
</tr>
<tr>
<td>Substance-Related and Addictive Disorders</td>
<td>20</td>
</tr>
<tr>
<td>Trauma- and Stressor-Related Disorders</td>
<td></td>
</tr>
<tr>
<td>Adjustment Disorder</td>
<td>214</td>
</tr>
<tr>
<td>Posttraumatic Stress Disorder</td>
<td>156</td>
</tr>
<tr>
<td>Other Trauma- and Stressor-Related Disorders</td>
<td>25</td>
</tr>
<tr>
<td>Other Infrequent CAMHD Diagnoses</td>
<td>6</td>
</tr>
<tr>
<td>General Medical Conditions or Codes No Longer Used</td>
<td>136</td>
</tr>
<tr>
<td>Other Medical Conditions or Codes No Longer Used</td>
<td></td>
</tr>
</tbody>
</table>
Note. Data excludes Kauai from 2007-2011 because of Mokihana program.
Trend in % of Enrolled Youth 12 or Younger

<table>
<thead>
<tr>
<th>Year</th>
<th>Enrolled Youth 12 or Younger</th>
</tr>
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<tbody>
<tr>
<td>2013</td>
<td>28.6%</td>
</tr>
<tr>
<td>2014</td>
<td>29.9%</td>
</tr>
<tr>
<td>2015</td>
<td>33.1%</td>
</tr>
<tr>
<td>2016</td>
<td>35.3%</td>
</tr>
<tr>
<td>2017</td>
<td>37.5%</td>
</tr>
</tbody>
</table>
Youth Served-Key Findings

- The number of enrolled youth has decreased slightly from FY 2016 to FY 2017.
- CAMHD client population continues to have a younger average age.
SERVICES RENDERED

Youth (N)

<table>
<thead>
<tr>
<th>Services by Fiscal Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Out-of-State</td>
<td>14</td>
<td>25</td>
<td>35</td>
<td>38</td>
<td>29</td>
</tr>
<tr>
<td>Hospital Residential</td>
<td>77</td>
<td>74</td>
<td>70</td>
<td>69</td>
<td>85</td>
</tr>
<tr>
<td>Community High Risk</td>
<td>14</td>
<td>13</td>
<td>10</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Community Residential II</td>
<td>10</td>
<td>8</td>
<td>10</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Community Residential III</td>
<td>127</td>
<td>111</td>
<td>111</td>
<td>111</td>
<td>111</td>
</tr>
<tr>
<td>Transitional Family Home</td>
<td>192</td>
<td>168</td>
<td>173</td>
<td>145</td>
<td>134</td>
</tr>
</tbody>
</table>

12
CAMHD Intensive Home and Community and Outpatient Service Utilization FY 2013-2017

Youth (N)

Services by Fiscal Year

Intensive In-Home
Multisystemic Therapy
Functional Family Therapy
Comprehensive Behavioral Intervention
Partial Hospitalization
Outpatient Therapy
Assessment
CAMHD Supportive Service Utilization FY 2013-2017

Services by Fiscal Year

- Respite Home: 30, 39, 34, 39, 39
- Ancillary Service: 162, 142, 152, 148, 136
Procured Service Cost Per Youth Within Each Fiscal Year

- 2009: $28,725
- 2010: $27,898
- 2011: $26,853
- 2012: $25,187
- 2013: $24,450
- 2014: $23,235
- 2015: $21,338
- 2016: $20,835
- 2017: $21,834
Services Rendered – Key Findings

- The majority of services have shown slight declines in number of youth served.
- Use of Out-of-State services has declined.
- Increases in service use shown for hospital-based residential and functional family therapy.

What, if any, adjustments should be made?
DECREASING AVERAGE AGE OF YOUTH CLIENTS
CAMHD Enrolled Youth Average Age
Fiscal Years 2007-2017

Mean Age

Fiscal Year

Mean Age

14.6 14.5 14.4 14.5 14.4 14.2 14.0 13.9 13.6 13.5 13.3

Note. Data excludes Kauai from 2007-2011 because of Mokihana program.
Hawaii Island (N=712)
Kauai (N=202)
Maui (N=319)
Central Oahu (N=368)
Leeward Oahu (N=366)
Honolulu (N=325)
Family Court Liaison Branch (N=15)

Percent of 12 and Under/13 and Over Youth by Center/Branch

12 and Under  13 and Over

Percent of Youth
Percent of Male/Female Youth by Age Group

12 and Under

13 and Over

Male
Female
Percent of 12 and Under/13 and Over Youth by Primary Diagnosis Area

- Other Neurodevelopmental Disorders (n=1)
- Autism Spectrum Disorders (n=15)
- Attentional Disorders (n=307)
- Obsessive Compulsive and Related Disorders (n=10)
- Adjustment Disorder (n=214)
- General Medical Conditions or Codes No Longer Used (n=136)
- Trauma- and Stress-Related Disorders (n=25)
- Posttraumatic Stress Disorder (n=156)
- Intellectual Disabilities (n=6)
- Anxiety Disorders (n=79)
- Disruptive, Impulse-Control, and Conduct Disorders (n=406)
- Other Infrequent CAMHD Diagnoses (n=6)
- Depressive Disorders (n=235)
- Bipolar and Related Spectrum Disorders (n=30)
- Substance-Related and Addictive Disorders (n=20)
- Schizophrenia Spectrum and Other Psychotic Disorders (n=20)
### 12 and Under - 10 Most Frequently Endorsed Treatment Targets

<table>
<thead>
<tr>
<th>Target</th>
<th>% Endorsed (N=569)</th>
<th>Average Progress Rating (0-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Peer Interaction</td>
<td>86.82</td>
<td>4.83</td>
</tr>
<tr>
<td>Oppositional or Non-Compliant Behavior</td>
<td>71.35</td>
<td>4.68</td>
</tr>
<tr>
<td>Anger</td>
<td>61.16</td>
<td>4.46</td>
</tr>
<tr>
<td>Aggression</td>
<td>59.40</td>
<td>4.78</td>
</tr>
<tr>
<td>Social Skills</td>
<td>53.60</td>
<td>4.54</td>
</tr>
<tr>
<td>Treatment Engagement</td>
<td>52.90</td>
<td>4.4</td>
</tr>
<tr>
<td>Activity Involvement</td>
<td>51.49</td>
<td>4.91</td>
</tr>
<tr>
<td>Anxiety</td>
<td>49.91</td>
<td>4.51</td>
</tr>
<tr>
<td>Peer or Sibling Conflict</td>
<td>49.91</td>
<td>4.43</td>
</tr>
<tr>
<td>Attention Problems</td>
<td>47.98</td>
<td>4.18</td>
</tr>
</tbody>
</table>

### 13 and Over - 10 Most Frequently Endorsed Treatment Targets

<table>
<thead>
<tr>
<th>Target</th>
<th>% Endorsed (N=1068)</th>
<th>Average Progress Rating (0-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Peer Interaction</td>
<td>86.61</td>
<td>5.21</td>
</tr>
<tr>
<td>Treatment Engagement</td>
<td>76.59</td>
<td>4.96</td>
</tr>
<tr>
<td>Oppositional or Non-Compliant Behavior</td>
<td>72.10</td>
<td>4.98</td>
</tr>
<tr>
<td>Activity Involvement</td>
<td>66.85</td>
<td>5.17</td>
</tr>
<tr>
<td>Anger</td>
<td>57.40</td>
<td>4.79</td>
</tr>
<tr>
<td>Anxiety</td>
<td>55.99</td>
<td>4.75</td>
</tr>
<tr>
<td>Depressed Mood</td>
<td>55.06</td>
<td>4.23</td>
</tr>
<tr>
<td>Aggression</td>
<td>54.12</td>
<td>5.14</td>
</tr>
<tr>
<td>Academic Achievement</td>
<td>48.50</td>
<td>4.92</td>
</tr>
<tr>
<td>School Involvement</td>
<td>47.66</td>
<td>4.81</td>
</tr>
</tbody>
</table>

Note. Treatment targets not present in the top 10 targets for both groups are highlighted in yellow.
### 12 and Under - 10 Most Frequently Endorsed Intervention Strategies

<table>
<thead>
<tr>
<th>Intervention Strategy</th>
<th>% Endorsed (N=569)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship or Rapport Building</td>
<td>92.27</td>
</tr>
<tr>
<td>Supportive Listening or Client Centered</td>
<td>87.35</td>
</tr>
<tr>
<td>Psychoeducational Parent</td>
<td>86.99</td>
</tr>
<tr>
<td>Communication Skills</td>
<td>84.18</td>
</tr>
<tr>
<td>Family Engagement</td>
<td>82.60</td>
</tr>
<tr>
<td><strong>Modeling</strong></td>
<td>80.84</td>
</tr>
<tr>
<td><strong>Therapist Praise or Rewards</strong></td>
<td>80.14</td>
</tr>
<tr>
<td>Skill Building</td>
<td>79.09</td>
</tr>
<tr>
<td>Parent Coping</td>
<td>78.21</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>75.92</td>
</tr>
</tbody>
</table>

### 13 and Over - 10 Most Frequently Endorsed Intervention Strategies

<table>
<thead>
<tr>
<th>Intervention Strategy</th>
<th>% Endorsed (N=1068)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship or Rapport Building</td>
<td>95.13</td>
</tr>
<tr>
<td>Supportive Listening or Client Centered</td>
<td>90.54</td>
</tr>
<tr>
<td>Communication Skills</td>
<td>89.89</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>89.04</td>
</tr>
<tr>
<td>Family Engagement</td>
<td>88.67</td>
</tr>
<tr>
<td><strong>Goal Setting</strong></td>
<td>87.73</td>
</tr>
<tr>
<td>Psychoeducational Parent</td>
<td>84.27</td>
</tr>
<tr>
<td>Skill Building</td>
<td>83.52</td>
</tr>
<tr>
<td><strong>Family Therapy</strong></td>
<td>82.49</td>
</tr>
<tr>
<td><strong>Emotional Processing</strong></td>
<td>81.74</td>
</tr>
</tbody>
</table>

**Note.** Intervention strategies not present in the top 10 strategies for both groups are highlighted in yellow.
Average Utilization of Intervention Strategy Factors by 12 and Under/13 and Over

- **Family Interventions**
  - 12 and Under
  - 13 and Over

- **Coping and Self Control**
  - 12 and Under
  - 13 and Over

- **Behavioral Management**
  - 12 and Under
  - 13 and Over

Note. Youth ages 13 and over receive significantly more Family Interventions and Coping and Self Control Interventions than youth ages 12 and under.
Decreasing Average Age of Youth Clients

SUMMARY

• The average age of CAMHD clients has continued to decrease over the past ten years.

• The proportion of younger clients varies by Family Guidance Center.

• The demographic and clinical profile of clients 12 and under differs slightly from the profile of youth 13 and older.

How should we adjust our services (e.g., LOCs, training, specific practices) to address this emerging trend?
TRENDS IN YOUTH AND FAMILY REPORTED OUTCOMES

*Based on CAMHD outcome measures
Average of Youth's Earliest and Most Recent Ohio Scale Total Problems Score: Youth Enrolled in FY 2017

OS Total Score Range: 0-100
*Clinical cutoff recommended by a study by the Ohio Scales author.
Average of Youth's Earliest and Most Recent Ohio Scale Problems Subscale Scores: Youth Enrolled in FY 2017

Parent
Youth
Parent
Youth

Externalizing
Internalizing

OS Total Score

Earliest OS
Latest OS

OS Externalizing Scale Range: 0-40
OS Internalizing Scale Range: 0-45

16.1
11.2
9.7

10.9
7.2
6.2

9.3
5.8
Average of Youth's Earliest and Most Recent Ohio Scale Total Problems Score by FGC: Youth Enrolled in FY 2017

Family Guidance Center
OS Total Score Range: 0-100, Clinical cutoff=20
Average of Youth's Earliest and Most Recent CAFAS Total Score by FGC: Youth Enrolled in FY 2017

**CAFAS Total Score Range: 0-240**
Percent of Monthly Treatment and Progress Summaries with Discharge Data

Note. Successful discharge was defined as “success/goals met” indicated on the MTPS. Not successful discharge was defined as “runaway/elope/ment,” “insufficient progress,” “refuse/withdraw.”
Percent of Youth Demonstrating Improvement Between the First and Most Recent Ohio Scales Problems Scales (Youth and Parent) in FY 2016 and FY 2017

Percent of Clients With at Least Two Ohio Scales

Parent Improvement
Youth Improvement

FY 2016
FY 2017
Outcomes—Key Findings

• On average, youth and families report statistically and clinically significant improvements between their first and most recent Ohio Scales administrations.

• On average, youth tend to report fewer problems on the Ohio Scales than parents.

• On average, CAMHD staff report statistically significant improvements for youth and families between the first and most recent CAFAS administrations.

• On average, therapists report a slight increasing trend in successful discharges.

How can we continue to support positive outcomes for our youth and families?
RISK PROFILES: INITIAL RISK

(REVISITED)
## Risk Profiles: Initial CAFAS

<table>
<thead>
<tr>
<th>Initial CAFAS Score</th>
<th>Success Rate at This Level or Higher</th>
<th>N at This Level or Higher (Denominator)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>70.4%</td>
<td>81</td>
</tr>
<tr>
<td>90+</td>
<td>71.4%</td>
<td>77</td>
</tr>
<tr>
<td>110+</td>
<td>71.6%</td>
<td>67</td>
</tr>
<tr>
<td>130+</td>
<td>66.0%</td>
<td>47</td>
</tr>
<tr>
<td>150+</td>
<td>47.8%</td>
<td>23</td>
</tr>
<tr>
<td>170+</td>
<td>20.0%</td>
<td>5</td>
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</tbody>
</table>

Initial CAFAS is a significant predictor of discharge success.
## Risk Profiles: Initial CAFAS

<table>
<thead>
<tr>
<th>Level of Care</th>
<th>CAFAS Cutoff For Higher Risk Cases</th>
<th>Probability of Successful Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Based Residential III</td>
<td>150+</td>
<td>47.8%</td>
</tr>
<tr>
<td>Transitional Family Home</td>
<td>120+</td>
<td>45.2%</td>
</tr>
<tr>
<td>Intensive In-Home</td>
<td>130+</td>
<td>46.7%</td>
</tr>
</tbody>
</table>
Risk Profiles: Initial CAFAS
Average Total Procured Service Cost Per Youth Starting From Service in Which Initial Risk Indicated

Transitional Family Home
- Lower Risk: $194,451
- Higher Risk: $195,376

Community-Based Residential III
- Lower Risk: $140,007
- Higher Risk: $152,249

Intensive In-Home
- Lower Risk: $74,560
- Higher Risk: $198,859
Risk Profiles: Initial CAFAS

SUMMARY

- Initial CAFAS significantly predicts success at discharge for TFH, CBRIII, & IIH

- Initial CAFAS Risk Indicator
  - In TFH, CBRIII, & IIH: Indicates the dysfunction level where youth has <50% probability of success in that level of care
  - In IIH: Indicates a dysfunction level where cost of services is significantly greater
RISK PROFILES: EARLY PROGRESS

(REVISITED)
Intensive In-Home Average MTPS Progress Ratings With 95% CI

Mean MTPS Progress Rating

Successful
Unsuccessful

Treatment Episode Month

Month1
Month2
Month3
Month4
Month5
Month6
Month7
Month8
Month9
Month10
Month11
Month12
Month13
Month14
Month15
Month16
Month17
Month18
Month19
Month20
Month21
Month22
Month23
Month24
### Risk Profiles: Early Progress

**Levels of Care and Their Early Progress Risk Indicators That Were Predictive of Discharge Success with Cutoff Scores Where Probability of Discharge Success <50%**

<table>
<thead>
<tr>
<th>Level of Care</th>
<th>Assessment</th>
<th>Early Progress Risk Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Based Residential III</td>
<td>4&lt;sup&gt;th&lt;/sup&gt; (Month) MTPS Average MTPS Progress Rating</td>
<td>Below 2.9</td>
</tr>
<tr>
<td></td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; (Quarter) CAFAS CAFAS Score</td>
<td>150 or higher</td>
</tr>
<tr>
<td>Transitional Family Home</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt; (Month) MTPS Average MTPS Progress Rating</td>
<td>Below 3.6</td>
</tr>
<tr>
<td></td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; (Quarter) CAFAS CAFAS Score</td>
<td>140 or higher</td>
</tr>
<tr>
<td>Intensive-In Home</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; (Month) MTPS Average MTPS Progress Rating</td>
<td>Below 2.0</td>
</tr>
<tr>
<td></td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; (Quarter) CAFAS CAFAS Score</td>
<td>120 or higher</td>
</tr>
<tr>
<td>Hospital-Based Residential</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; (Month) MTPS Average MTPS Progress Rating</td>
<td>Below 2.8</td>
</tr>
<tr>
<td>Multisystemic Therapy</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt; (Month) MTPS Average MTPS Progress Rating</td>
<td>Below 3.3</td>
</tr>
<tr>
<td>Functional Family Therapy</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt; (Month) MTPS Average MTPS Progress Rating</td>
<td>Below 3.6</td>
</tr>
</tbody>
</table>
Average Total Procured Service Cost Per Youth Starting From Service in Which Early Progress Risk Indicated

<table>
<thead>
<tr>
<th>Risk Indicator Level by Service Type</th>
<th>Cost Per Youth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower HBR</td>
<td>$200,000</td>
</tr>
<tr>
<td>Higher TFH</td>
<td>$300,000</td>
</tr>
<tr>
<td>Lower CBRII</td>
<td>$150,000</td>
</tr>
<tr>
<td>Higher IIH</td>
<td>$250,000</td>
</tr>
<tr>
<td>Lower MST</td>
<td>$100,000</td>
</tr>
<tr>
<td>Higher FFT</td>
<td>$50,000</td>
</tr>
</tbody>
</table>
Risk Profiles: Early Progress

SUMMARY

• Early progress is predictive of discharge success across levels of care.
• Cost of total services is higher for youth with early progress risk at all major LOCs examined, although only minimally higher for MST.
Reflections

• Dr. Kurt Humphrey
• Dr. Scott Shimabukuro
• Dr. Lesley Slavin
• Dr. M. Stanton Michels
Mahalo!

• For more information, please contact:

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