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CHILD AND YOUTH BEHAVIORAL HEALTH UTILIZATION AND EXPENDITURES IN HAWAIʻI

An Analysis of Service Utilization and Expenditures for Children and Youth Across Hawaiʻi's Child and Family-Serving Systems

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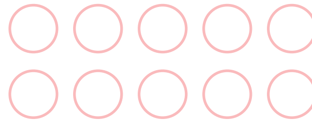

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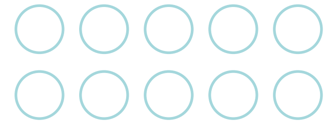
Acronyms and Abbreviations Used

Abbreviation	Full Name
ABI	Adaptive Behavioral Intervention
ADAD	Alcohol and Drug Abuse Division, Hawai'i Department of Health
ADHD	Attention Deficit/Hyperactivity Disorder
ASD	Autism Spectrum Disorder
CAMHD	Child and Adolescent Mental Health Division, Hawai'i Department of Health
CBRT	Community-Based Residential Treatment
CCSS	Comprehensive Counseling Support Services
CMO	Crisis Mobile Outreach
CWS	Child Welfare Services Branch, Social Services Division, Hawai'i Department of Human Services
DD	Developmental Disability
ED	Emergency Department
FFPSA	Family First Prevention Services Act
FFS	Fee for Service
FFT	Functional Family Therapy
GR	General Revenue
HBR	Hospital-Based Residential (Inpatient Hospital Psychiatric Services)
HISYNC	Hawai'i Interagency State Youth Network of Care
ICC	Intensive Care Coordination
ID	Intellectual Disability
IDD	Intellectual/Developmental Disability
IIHT	Intensive In-Home Therapy
IILS	Intensive Independent Living Skills
IP	Inpatient Hospitalization
IOH	Intensive Outpatient Hospitalization
IOP	Intensive Outpatient Program
MCO	Managed Care Organization
MHBG	Mental Health Block Grant
MST	Multisystemic Therapy

Acronyms and Abbreviations Used, continued

Abbreviation	Full Name
MTFC	Multidimensional Treatment Foster Care
NCDAS	National Center for Drug Abuse Statistics
OOS	Out-of-State
OOSR	Out-of-State Residential
PTSD	Post-Traumatic Stress Disorder
PPWC	Pregnant and Parenting Women and Dependent Children
RCSP	Residential Crisis Stabilization Program
SABG	Substance Abuse Block Grant
SAMHSA	Substance Abuse and Mental Health Services Administration
SED	Serious Emotional Disturbance or Disorder
SUD	Substance Use Disorder
SUD OP	Substance Use Disorder Outpatient
TANF	Temporary Assistance to Needy Families
TCH	Therapeutic Crisis Home
TFC	Therapeutic Foster Care (Transitional Family Home)
TSS	Transitional Support Services

Guide to Using This Document



This document is a point-in-time analysis of Hawai‘i's public child- and family-serving agency expenditures and utilization related to children's behavioral health services. The document is organized with the following sections:

- Introduction:
  - Background and Purpose: Explains the reason for engaging in this fiscal analysis
  - Services: Brief description of the structure of public behavioral health services for children and youth in Hawai‘i
  - Methods: Explains the sources of data and approaches used
- Individual Agency Findings: Provides a detailed review of the data provided by the public agencies, including analysis and recommendations related to each agency.
- Key Findings and Recommendations: Identifies interagency and other systems-level key findings and makes recommendations for next steps.

Readers are encouraged to review individual agency sections thoroughly, as they inform the interagency and systems-level findings and recommendations.

Introduction

Background and Purpose

The Hawaiʻi Interagency State Youth Network of Care (HISYNC) and the Child and Adolescent Mental Health Division (CAMHD) of the Hawaiʻi State Department of Health (DOH) decided to conduct an interagency analysis of behavioral health service utilization and expenditures in Hawaiʻi's public child- and family-serving systems as part of CAMHD's Data to Wisdom system of care grant from the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services.

CAMHD's Data to Wisdom initiative supports a system of care approach.[i] States engaged in building or enhancing systems of care often undertake fiscal mapping to identify public expenditures and related service use to improve efficiencies, maximize funding, address disparities, and increase the use of sustainable, cross-agency funding strategies. From a financing standpoint, systems of care promote more efficient, effective, and collaborative use of resources across systems to reduce duplication, fragmentation, disparities, and disproportionality to support better quality and cost outcomes for children and families.

Systems of care encourage:

- Maximization of revenue for children's behavioral health care through leveraging federal matching funds, particularly through Medicaid;
- Redirection of spending on "high-cost and/or poor outcome" services to effective home-and community-based services; and
- Collaborative financing across systems.

Hawaiʻi is interested in understanding how children's behavioral health services are funded across departments. This analysis is designed to help Hawaiʻi determine:

- How many and which children use behavioral health services in total and from each State agency that funds behavioral health services (i.e., mental health and substance use), in total and by service type;
- Which public agencies spend dollars on this population of children, youth, and families;
- How much is spent on which services and supports;
- The types of dollars used, by service type;
- Disparities and disproportionality in service utilization and expenditures, based on sex, age, race/ethnicity, and Island of residence; and
- Which challenges and opportunities are raised by the utilization and expenditure data.

The focus of this report is on the dollars that were spent by State systems for behavioral health services and supports. This analysis provides a focused look at certain parts of the system. These data start to tell a story that will help Hawaiʻi understand where there may be funding opportunities and gaps and where current approaches and expenditures are not aligned with the services and outcomes that Hawaiʻi wishes to advance. This analysis also provides a template and approach that can be used for future analyses, including to track the impact of strategies implemented by Hawaiʻi.

Services and Agencies

This analysis explores the public behavioral health services provided to children and youth in Hawai‘i. Multiple systems play roles in financing behavioral health services for children and families, including Medicaid, behavioral and public health, juvenile justice, education, child welfare, and others. Children with intensive behavioral health needs and those who are involved with child welfare and juvenile justice agencies often are involved with multiple child- and family-serving agencies.[ii]

In Hawai‘i, the agencies identified as having the largest share of expenditures related to children's behavioral health services were DOH (CAMHD, Alcohol and Drug Abuse Division (ADAD), and Early Intervention Section (EIS)); the Department of Human Services (Child Welfare Services Branch (CWS) and Med-QUEST Division (MQD; Medicaid)); the Judiciary (juvenile justice); and the Department of Education (DOE). Each of these entities uses a mix of federal and state funds to cover costs.

As described below, the following State agencies provided utilization and expenditure data, largely from State Fiscal Year (SFY)2019 or 2020:

- Child and Adolescent Mental Health Division (CAMHD), Department of Health (DOH) (SFY2020)
- Med-QUEST Division, Department of Human Services (SFY2019)
- Alcohol and Drug Abuse Division (ADAD), Department of Health (SFY2019)
- Child Welfare Services Branch (CWS), Department of Human Services (SFY2019)
- Judiciary (SFY2019)

Data were not available from the Early Intervention Section (EIS), DOH, and limited data were available from DOE, due largely to changes in data systems being made at the time of this analysis. Data from Maternal and Child Health Home Visiting Programs were not available. This analysis did not examine expenditures for psychotropic medications. In many states, this is a significant cost pressure and certain populations of children, such as those involved with child welfare, tend to have high utilization of psychotropic medications and are at-risk for multi-psychotropic drug use.[xxiv,iii]

Medicaid (DHS)

Across the country, "Medicaid is the single largest payer for mental health services in the United States and is increasingly playing a larger role in the reimbursement of substance use disorder services."[iv] Medicaid is a federal program that is administered by the states, with federal reimbursement ranging from 50-100% of costs depending on the type of cost (i.e., administrative, training, or service) and special eligibility or programs. In Federal Fiscal Year 2020, Hawai‘i's Federal Medical Assistance Percentage was 53.47%.[v]

In Hawai‘i, most Medicaid services are delivered through a Managed Care Organization (MCO), which is referred to as Medicaid managed care. Behavioral health services in Medicaid managed care include acute inpatient hospital for behavioral health services, ambulatory mental health services, psychiatric or psychological evaluations, prescription medication and management, services from qualified professionals, substance abuse treatment programs, and methadone treatment services.[1]

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[1] See https://humanservices.Hawai‘i.gov/mqd/.

CAMHD (DOH)

CAMHD provides behavioral health services to eligible children and youth with severe emotional and/or behavioral challenges. These services include Crisis Services, Family Therapy, Intensive Home-Based Therapy, Hospital-Based Services, Residential Treatment Programs, and Transitional Family Home Programs. Some of those services can be reimbursed by Medicaid but the total cost of care frequently is not covered.

ADAD (DOH)

ADAD provides substance use treatment services that include both residential and outpatient treatment and recovery support services. ADAD receives funding through SAMHSA's Substance Use Prevention, Treatment, and Recovery Services Block Grant, federal discretionary grants and state general funds and contracts out for services.

EIS (DOH)

DOH's Early Intervention Section (EIS) administers the Zero to Three Program, which includes services for infants and toddlers ages 0-3 and their parents to support child development. Behavioral health services include Care Coordination, Family Support and Education, Parent-to-Parent Support, Psychological Support, and Social Work/Counseling.[2]

DOE

DOE's services include those provided through the Student Services Branch, including School-Based Behavioral Health Services. Individual and Group Therapy, In-Class Support, and Crisis Intervention Services are examples of services provided. DOE also implements a Multi-Tiered System of Support to identify and provide support to struggling learners and supports students identified as experiencing homelessness. DOE also provides behavioral health services through the Individuals with Disabilities Education Act (IDEA), Parts B and C.

CWS (DHS)

Child Welfare Services provides services to children and families through prevention and in-home supports as well as services to children in foster care and their families. Behavioral health services are provided in a range of settings and address domestic violence, human trafficking, adolescent and young adult development, sexual abuse, substance abuse, and more. Services include Assessments, Counseling and Therapy, Multi-Disciplinary Team Meetings, Wraparound, and other supports.

JUDICIARY

Although many children and youth involved with the Judiciary receive services through CAMHD, the Judiciary does provide some behavioral health services. These include Mental Health Assessments, Anger Management Services, Substance Use Treatment Outpatient Services, Residential Substance Use Treatment Services, and Individual and Family Therapy.

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[2] See https://health.Hawaiʻi.gov/eis/.

Maternal and Child Health, Developmental Disabilities and Others

Home visiting providers, community-based organizations, and others also provide behavioral health services. Services for children with developmental or intellectual disabilities are provided through the Developmental Disabilities Division of DOH. These behavioral health costs are not easily identifiable, particularly when costs are not submitted for reimbursement through Medicaid.

Care Coordination and Case Management

Some services, such as case management and care coordination, are found across systems. The MCOs pay for case management, which typically is provided at very high ratios (e.g., 1:250) of case managers to children or families.[3] CAMHD's care coordinators provide intensive care coordination in support of a clinical team working with the child and family. ADAD also pays for care coordination as part of its substance use treatment and recovery support services. EIS provides care coordination to all children enrolled in their program and CWS pays for Wraparound.

Methods

This report utilizes a secondary data analysis of administrative data related to cost and service utilization.

The following Hawaiʻi State Agencies provided utilization and expenditure data from **State Fiscal Year (SFY) 2019 or SFY 2020:**[4]

- Child and Adolescent Mental Health Division (CAMHD), Department of Health (DOH) (SFY2020)
- Med-QUEST Division (MQD), Department of Human Services (SFY2019)
- Alcohol and Drug Abuse Division (ADAD), Department of Health (SFY2019)
- Child Welfare Services Branch (CWS), Department of Human Services (SFY2019)
- Judiciary (SFY2019)

These years were selected because they are mostly prior to the COVID-19 pandemic, and the data were complete (i.e., there were no lagging claims) at the time of this analysis in 2022 and 2023.

State agencies provided aggregated data at the service level (i.e., Number of Children Receiving Service Type, Total Expenditures per Service Type). Cost and utilization data were disaggregated by demographics: sex, age, race/ethnicity,[5] Island, and diagnosis. CAMHD and MQD administrators collaborated to categorize service codes into specific service types for data aggregation. Based on this collaboration, templates were created that State data personnel used to construct required reports to support these analyses. When applicable, data were further disaggregated by funding source (e.g., Medicaid, Community Mental Health Block Grant [MHBG], and General Revenue). Secondary data analyses utilized the aggregated data to calculate the percentage of youth utilizing

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[3] Ratios of children/families to case managers vary by population and MCO. They can range from 1:25 to 1:500 depending on the entity. See https://www.ahrq.gov/patient-safety/settings/long-term-care/resource/hcbs/medicaidmgmt/mm5.html

[4] The Hawaiʻi State Fiscal Year is July 1-June 30. SFY2019 was July 1, 2018-June 30, 2019. SFY2020 was July 1, 2019-June 30, 2020.

[5] We have used Census categories for race and ethnicity breakdowns of data. The labels for these data are consistent with those used by the Census. We acknowledge that other terms, such as Latinx, may be more inclusive to some individuals or communities.

each service, average expenditure per youth, and percentage of total expenditure for each service. To examine disparities in utilization and expenditure, these analyses were broken down by the variables of interest: sex, age, race/ethnicity, Island, and diagnosis. Administrators from each agency that contributed data reviewed the tables and provided feedback based on their general knowledge of service administration and population characteristics.

To protect the confidentiality of children and youth receiving services, cell counts of less than 11 were suppressed for the data provided for MQD and CAMHD. Thus, any percentages based on these counts could not be computed and are reported as N<11.

Note on race/ethnicity categories: This report uses Census categories of race/ethnicity to ensure applicability and consistency of data across agencies, but with the caveat that these categories and definitions may not align with all local categories and definitions. (For example, typically in Hawai‘i, Native Hawaiians are not categorized with Other Pacific Islanders, nor are Asians typically represented in a single category.)

Please note that some totals in tables may not equal the sum of the figures within those tables due to rounding.

Figure 1: *Map of islands included in analysis*
(Provided by CAMHD and the University of Hawai‘i)

Limitations and Considerations

The estimates in this report of how much is spent by public systems on behavioral health services for Hawai'i's children and youth and how many children are receiving services are partial estimates that may understate total spending and utilization due to missing data elements and limitations to some of the available data.

Missing and Incomplete Data

There are some data that are incomplete or missing, as is to be expected the first time a large fiscal analysis is undertaken. As noted earlier, data were not available from the DOH's Early Intervention Section and were only available in aggregate for DOE. Nationally, schools are one of the largest providers of children's behavioral health services, so this is not an insignificant missing data element. Also as noted, this analysis did not examine expenditures for psychotropic medications. In many states, this is a significant cost pressure, and certain populations of children, such as those involved with child welfare, tend to have high levels of psychiatric medication utilization and are at risk of psychotropic polypharmacy. The missing data elements – some significant like the schools – and limitations to some of the available data mean that the estimates in this report as to how much is spent by public systems on children's behavioral health services and how many children are receiving services are partial estimates that may understate total spending and utilization. That said, multiple agencies, including both EIS and DOE, have indicated that they are in the process of updating their reporting systems. Future iterations of these types of reports will likely have more extensive data.

Data Systems and Reporting

The ways in which data systems are structured impacts their ability to support an interagency analysis. There are typically gaps between what is requested and how systems can extract data, which can lead to potential error in the data requests or reports provided. For example, MQD is in the process of building a different analytic system that will lend itself to a more intuitive process. MQD data are represented as close as possible to accuracy; MQD observes that the data about the number of youth and number of claims are more accurate than some of the specific line-item costs. Some internal discrepancies between agencies are related to data systems, but larger themes related to MQD data are consistent with national findings. For example, data indicated that most children receive screening and assessment and brief outpatient, office-based therapies through MCOs, with access to few other home and community-based services, which is true nationally as well. The over-reliance on inpatient psychiatric services and Emergency Department (ED) use seen in MQD data is also seen nationally.

Complex System Structures

There are many challenges to analyzing public sector spending on behavioral health services for children, regardless of the state or community in question. There are many funding sources involved, which are controlled by multiple federal, state, and local systems, each of which has its own regulations and requirements. Many key funding sources, such as Medicaid, have federal, state and, sometimes, county-level parameters. Different funding streams may support different providers, or, alternatively, support the same providers but with different contracting and reporting parameters. Most significantly for the purposes of this project, data are collected across these funding streams in different formats and for different purposes and may not even disaggregate into a category of "children's behavioral health spending and utilization."

Hawai‘i-Specific Considerations

Hawai‘i stakeholders observed that there are some federal quality measures that look different on Hawai‘i than across the Mainland, such as medication use for some disorders. This raises the question of whether some of the data reflect actual over- or under-utilization. Additionally, this analysis provides a focused look at certain parts of the systems; therefore, interpretations in this report may not wholly reflect the current delivery system. **Hawai‘i stakeholders are encouraged to consider the findings and recommendations in this report through the collective lens of their considerably more extensive knowledge of Hawai‘i's child- and family-serving systems.**

Focus of This Analysis

This project is not an analysis of the entire service delivery system for child and youth behavioral health services in Hawai‘i. **This analysis focuses on what dollars are being spent, by which State systems, for what services and supports, on behalf of which children**. Certain observations can be made about the delivery system from this analysis, and these observations are included in the report. However, there are many other variables that affect service delivery that were not examined in this project, including but not limited to: service reimbursement rates; provider capacity, skills, knowledge and attitudes; availability and accessibility of services; the role and investment of families and youth in service delivery and system policymaking; the strength of clinical knowledge and leadership; staff recruitment and retention issues; the role of natural helpers and culturally humble and linguistically competent support structures in augmenting clinical capacity; contracting incentives and disincentives; billing and reporting structures; and utilization management. In addition, this analysis focuses mainly on treatment services, not on prevention.

The many challenges involved means that an analysis of public sector spending on behavioral health services for children is as much art as science. Obviously, the more data that can be provided for the analysis, the better, but often, the resources required to extract data from existing systems are not available or the cost or time involved in doing so is prohibitive. For this project, multiple State agencies made considerable efforts to provide data for the analysis, yet, as discussed, there are some data gaps and issues. This is not unusual in the world of children's behavioral health[6] financing. The State deserves credit for undertaking this initiative and can use the analysis as a starting point, proceeding strategically to fill in missing data that are identified in the report and improve existing data so that, ultimately, a more comprehensive picture can be drawn. **Analysis of children's behavioral health spending should not be a one-time exercise but undertaken regularly as part of a larger strategic planning and implementation process**.

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[6] Throughout this report, the term "children's behavioral health services" will be used to mean behavioral health services and supports provided to and on behalf of children, youth, young adults, and their families.

Individual State Agency Analyses

Child and Adolescent Mental Health Division (CAMHD), Department of Health

Total CAMHD Child Behavioral Health Utilization and Expenditures Across Funding Sources

Utilization and Expenditures by Funding Source

In State FY 2020, CAMHD spent $29.3m on behavioral health services, drawing on three funding sources: Medicaid, Community Mental Health Block Grant (MHBG), and General Revenue. This did not include SAMHSA System of Care grant funding.

The table below shows the percentage of each funding source contributing to the total spent. **Federal Medicaid dollars represent 42% of the total spent. General Revenue (GR) represents 54% of the total.** GR spending includes the State Medicaid match, as well as GR spent by CAMHD to augment Medicaid rates, pay for Medicaid-eligible children whose claims were denied for various reasons (e.g., lack of medical necessity, insufficient claims submissions), and to pay for services to non-Medicaid eligible children. MHBG spending represents a small percentage of the total (4%), which also is true nationally, as these funds are limited and have competing demands, notably for adults with serious mental illness. The total spent of $29.3m is understated because it does not include expenditures for State positions supporting Care Coordination services, which over 90% of children received.

CAMHD reported that 1,981 children received Medicaid-funded services, and 196 children received Block Grant-funded services in SFY 2020. For several reasons, it was not possible to ascertain from the available data how many unduplicated children in total received services. For one, as noted, GR dollars are used both as Medicaid match and to augment Medicaid rates, which would include the 1,981 children; however, GR also is used to provide services to a smaller[7] number of non-Medicaid eligible children and to a number of Medicaid-eligible children whose claims for service were denied. In addition, an unknown number of children may have received services across funding streams. Finally, complete utilization data were not available for every service type. CAMHD was able to provide comprehensive data, including by demographics and island, for the 1,981 children who received Medicaid-funded services, which is discussed in the next section.

The 1,981 children who received Medicaid-funded services through CAMHD represents about 0.6% of the Hawai‘i child population and about 1% of the Hawai‘i Medicaid child population. CAMHD is charged with serving children who meet clinical criteria for serious emotional or behavioral disturbance. Prevalence estimates for serious emotional disturbance (SED) range from about 6-10% of children.[xxviii] Children eligible for Medicaid are at higher risk than children in general, with poverty and social inequality associated with a greater need for behavioral health services.[vi] Due to several reasons (e.g., capacity, funding, willingness to accept services, etc.),

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[7] CAMHD did not provide these numbers in reporting for the current report.

it is not reasonable to expect CAMHD to meet the entire need for behavioral health care among children with serious behavioral health challenges in the Medicaid child population. Nonetheless, it does appear that CAMHD is reaching only a fraction of children with significant behavioral health challenges who need services.

Table 1: CAMHD. Total Utilization and Expenditures by Funding Source, SFY 2020

Funding Source	Number of Youth Served	Total Expenditure % Percentage of Total	% of Total Expenditures
Medicaid*	1,981	$12,250,348	42%
Block Grant	196	$ 1,206,401	4%
General Revenue	N/A	$15,859,016	54%
Total	N/A	**$29,315,765**	**100%**

**Includes Federal Medicaid dollars only*

Total Utilization and Expenditures by Type of Service

The table below shows the number of children receiving each service type, expenditures per service type, and average expenditure per child receiving the service. Thirty-eight percent (38%) of total spending supports residential treatment (Community-Based Residential Treatment, Hospital-Based Residential, and out-of-state residential.) Another 19% of funding supports other out-of-home treatment settings, some of which may be evidence-informed and/or have shorter lengths of stay than more traditional residential treatment. These include Transitional Family Homes, Residential Crisis Stabilization programs, Therapeutic Crisis Homes, and Therapeutic Respite Homes. Transitional Family Homes (also known as Therapeutic Foster Care or TFC) can be an evidence-based practice with strong outcomes; however, in some states, children stay too long in this setting, or the program model does not incorporate evidence-based components, suggesting opportunities for quality improvement.[vii]

Services with notably high average expenditures for children served include all hospital and residential programs, as well as Transitional Support Services. For example, the average expense per child served in out of-state residential treatment is $75,814, in Community-Based Residential Treatment is $70,817, and in Hospital-Based Residential is $44,447.

This analysis did not examine the quality and outcomes of services. However, given that CAMHD spends 57% of its dollars on out-of-home treatment settings, the State may want to look at lengths of stay and outcomes associated with these services. **The literature suggests that,**

in general, residential treatment, particularly out-of-state, does not produce robust outcomes, outcomes vary considerably across residential providers, and it is costly.[viii,ix,x]

For many children, investment in home- and community-based alternatives to out-of-home treatment settings, such as mobile response and stabilization, peer support, intensive in-home, respite, adjunctive therapies (e.g., music, art, recreation, equine), and others, can support improved cost and quality outcomes. **CAMHD does spend a significant portion of total dollars (31.2%) on intensive in-home treatment programs,** including Intensive In-Home Therapy (IIHT); Multisystemic Therapy (MST), an evidence-based in-home program; and Functional Family Therapy (FFT), an evidence-based program that can be provided in the home, clinic, and other community-based settings.

The services that children are most likely to receive through CAMHD are Care Coordination, received by 93% of children using services, and Intensive In-Home Services, received by 44% of children. Much smaller numbers and percentages of children receive any other type of home- and community-based service. For example, fewer than 10% of children received family peer support, crisis mobile outreach, or MST. About 5% of children received FFT, and less than 2% of children received therapeutic mentor services.

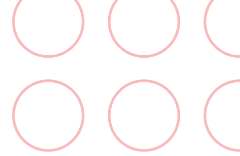
Table 2: CAMHD. Service Utilization and Expenditures by Type of Service Across Funding Sources (Medicaid, General Revenue, and Block Grant Funding)

CAMHD Service	Number of Children	% of All Children	Total Expenditure	% of All Expenditure	Average Expenditure
Care Coordination[8]	1,837	92.7%	$2,383,165	8.1%	$2,174
Intensive In-Home Services	873	44.1%	$5,121,247	17.40%	$5,866
Multisystemic Therapy	179	9.0%	$2,857,580	9.7%	$15,964
Crisis Mobile Outreach	170	8.6%	$1,361,287	4.6%	$8,008
Family Peer Support	158	8.0%	$350,000	1.2%	$2,215
Transitional Family Home (Therapeutic Foster Care)	114	5.8%	$4,179,945	14.3%	$36,666
Functional Family Therapy	107	5.4%	$1,200,119	4.1%	$11,216
Community-Based Residential Treatment	93	4.7%	$6,585,937	22.5%	$70,817
Transportation	69	3.5%	$53,661	0.2%	$778
Hospital-Based Residential (Inpatient Hospital Psychiatric Services)	68	3.4%	$3,022,419	10.3%	$44,447
Screening and Assessment	64	3.2%	$23,525	.08%	$368
Kealahou Services (Trauma Services)	37	1.9%	$514,000	1.8%	$13,892
Therapeutic Mentor (Ancillary One-to-One)	32	1.6%	$91,013	0.3%	$2,844
Residential Crisis Stabilization Program	29	1.5%	$876,000	3%	$30,207
Therapeutic Respite Home	25	1.3%	$33,163	0.1%	$1,327

[8]This figure represents the costs from the full Random Moment Survey and may not include other costs associated with care coordination, including any General Fund costs.

Table 2, continued: CAMHD. Service Utilization and Expenditures by Type of Service Across Funding Sources (Medicaid, General Revenue, and Block Grant Funding)

CAMHD Service	Number of Children	% of All Children	Total Expenditure	% of All Expenditure	Average Expenditure
Out-of-State Residential	21	1.1%	$1,592,093	5.4%	$75,814
Transitional Services	21	1.1%	$16,178	.06%	$770
Therapeutic Crisis Home	19	1.0%	$521,211	1.8%	$27,432
Transitional Support Services	11	0.6%	$558,535	1.9%	$50,776
Intensive Outpatient Hospitalization	***N<11***	***N<11***	$15,452	.05%	$15,452
First Episode Psychosis	***N<11***	***N<11***	$342,401	1.2%	$342,401
All Services	**1,981**	**100%**	**$29,315,765**	**100%**	**$14,798**



Breakdown of Service Type Expenditures by Funding Source

The table below shows the breakdown of funding, by funding source, for each type of service.

The data point to two important issues relevant to Medicaid:

1. There are several services that CAMHD provides that **could be covered and reimbursed by Medicaid that are not.** These include Crisis Mobile Outreach; Functional Family Therapy; Residential Crisis Stabilization (minus room and board); Parent Partner Support; Therapeutic Mentor; and OnTrack/First Episode Psychosis Services.
2. Of the services Medicaid *is* paying for, **CAMHD is augmenting the Medicaid dollars with non-Medicaid general revenue.** According to CAMHD, for most service types, CAMHD must supplement the Medicaid dollars because the Medicaid rates are too low to incentivize providers to offer the service and meet quality standards. While CAMHD deserves credit for using general revenue to encourage provision of these services, GR is limited and has competing demands, and this approach means that the State is foregoing Federal Medicaid match revenue that could ease some of the pressure on general revenue resources.

There are two services that CAMHD does not provide currently that could be Medicaid-covered, which CAMHD may want to consider: **Youth Peer Support and Adjunctive Therapies (e.g., music, drama, art, cultural practices, etc.).** A growing number of states are incorporating youth peer support into their behavioral health systems for youth and young adults (typically, ages 14 to 25) and covering this service under Medicaid[9]. While there is far more research on adult peer support, a growing body of research and state experience is finding that young people who have access to peer support are more satisfied with their services than young people who do not have access to peer support, are more satisfied with their participation in services and the appropriateness of the services received, and they report better outcomes in some areas of functioning. These findings are particularly salient given research also has found that existing services and systems often do not adequately attract, engage, or serve young people.[xxix]

States also may cover adjunctive therapies in Medicaid[10]. Research has found that creative therapies can help with engagement and symptom reduction, and some approaches, such as Hoʻoponopono, may be more culturally relevant than more traditional therapies.[xxx, xxxi, xxxii,]

[9] See for example, Georgia: http://dbhdd.org/files/Provider-Manual-BH.pdf.

[10] See, for example, Maryland's 1915(i) SPA that includes adjunctive therapies (referred to as expressive and experiential therapies): https://health.maryland.gov/mmcp/Documents/State%20Plan/January%202023/Attachments%203.1B%20to%203.2_1_6_23.pdf

Table 3: CAMHD. Breakdown of Service Type Expenditures by Type of Funding: Amount and Percent of Federally Medicaid-Funded vs. General Revenue-Funded vs. Block Grant

Type of Service	Total Expenditures	Federal Medicaid		General Revenue		Block Grant Funded	
		Amount	%	Amount	%	Amount	%
Community-Based Residential Treatment	$6,585,937	$1,767,744	27%	$4,818,193	73%	$0	0%
Intensive In-Home Services	$5,121,247	$3,431,722	67%	$1,689,525	33%	$0	0%
Transitional Family Home	$4,179,945	$1,985,377	47%	$2,194,568	53%	$0	0%
Hospital-Based Residential	$3,022,419	$1,738,750	58%	$1,283,669	42%	$0	0%
Multisystemic Therapy	$2,857,580	$25,069	1%	$2,832,511	99%	$0	0%
Care Coordination	$2,383,165[11]	$2,383,165	100%	Unknown	---	$0	0%
Out-of-State Residential	$1,592,092	$879,621	55%	$712,471	45%	$0	0%
Crisis Mobile Outreach	$1,361,287	$0	0%	$1,361,287	100%	$0	0%
Functional Family Therapy	$1,200,118	$0	0%	$1,200,119	100%	$0	0%
Residential Crisis Stabilization Program	$876,000	$0	0%	$876,000	100%	$0	0%
Transitional Support Services	$558,535	$0	0%	$558,535	100%	$0	0%
Therapeutic Crisis Home	$521,211	$9,753	2%	$511,458	98%	$0	0%
Kealahou Services	$514,000	$0	0%	$0	0%	$514,000	100%
Family Peer Support	$350,000	$0	0%	$0	0%	$350,000	100%
First Episode Psychosis	$342,401	$0	0%	$0	0%	$342,401	100%
Therapeutic Mentor	$91,013	$0	0%	$91,013	100%	$0	0%

[11] Does not include general funds.

Table 3, continued: CAMHD. Breakdown of Service Type Expenditures by Type of Funding: Amount and Percent of Federally Medicaid-Funded vs. General Revenue-Funded vs. Block Grant

Type of Service	Total Expenditures	Federal Medicaid		General Revenue		Block Grant Funded	
		Amount	%	Amount	%	Amount	%
Transportation	$53,661	$0	0%	$53, 661	100%	$0	0%
Therapeutic Respite Home	$33,163	$16,146	49%	$17,016	51%	$0	0%
Screening and Assessment	$23,525	$0	0%	$23,525	100%	$0	0%
Transitional Services	$16,178	$0	0%	$16,178	100%	$0	0%
Intensive Outpatient Hospitalization	$15,452	$13,000	84%	$2,452	16%	$0	0%
Individual Therapy*	$0	$0	0%	$0	N/A	$0	0%
Group Therapy*	$0	$0	0%	$0	N/A	$0	0%
Family Therapy*	$0	$0	0%	$0	N/A	$0	0%
Psychoeducation*	$0	$0	0%	$0	N/A	$0	0%

**Individual, Group, and Family Therapy and Psychoeducation are paid for through Medicaid managed care organizations and are discussed in the Med-QUEST section of this report.*

Medicaid-Supported Utilizations and Expenditures

Medicaid-Supported Utilization and Expenditures by Type of Service Received

As noted, CAMHD provided comprehensive data on services that drew down Federal Medicaid match dollars. The table below shows, by type of service, the Federal Medicaid amount spent, number of children served, and average expenditures per child served through CAMHD. (Note that this section covers only Federal Medicaid-supported behavioral health services provided through CAMHD; it does not include behavioral health services provided through Med-QUEST, which are discussed in the Med-QUEST section of this report.)

Table 4: CAMHD. Federal Medicaid*-Supported Utilization and Expenditures by Type of Service Received

Type of Service	# and % of Children Served	Expenditures by Service Type: Amount and % of Total	Average Expenditure Per Child Served
Care Coordination	1837 (93%)	$2,383,165 (19%)	$1,297
Intensive In-Home Services	774 (39%)**	$3,431,722 (28%)	$4,433
Multisystemic Therapy	147 (7%)	$25,069 (0.2%)	$171
Transitional Family Home	105 (5%)	$1,985,377 (16%)	$18,908
Community-Based Residential Treatment	81 (4%)	$1,767,744 (14%)	$21,824
Hospital-Based Residential	60 (3%)	$1,738,750 (14%)	$28,979
Therapeutic Respite Home	23 (1%)	$16,147 (0.1%)	$702
Out of State Residential	21 (1%)	$879,621 (7%)	$41,887
Residential Crisis Stabilization Program	12 (0.6%)	N/A	N/A
Transitional Support Services	11 (0.6%)	N/A	N/A
Therapeutic Crisis Home	***N<11***	$9,753 (0.07%)	***N<11***
Intensive Outpatient Hospitalization	***N<11***	$13,000 (0.1%)	***N<11***
Total Unduplicated Count	**1,981 (100%)**	**$12,250,348 (100%)**	**$6,184**

**Expenditures include Federal Medicaid dollars only, not the State match, which CAMHD indicated was difficult to identify due to several factors, for example, CAMHD's augmentation of Medicaid rates paid to providers.*
***This count includes four duplicated youth, due to combining multiple service types under the umbrella of Intensive In-Home Services.*
****Data was unavailable.*

Federal Medicaid expenditures through CAMHD primarily support home- and community-based services and care coordination, which, together, account for **65% of total CAMHD Medicaid spending. Thirty-five percent (35%) of total CAMHD Medicaid spending supports restrictive services,** including Hospital-Based Residential (Inpatient Psychiatric Hospitalization) and residential treatment, for 8% of children using these services.

For home- and community-based services, CAMHD invests 28% of total Medicaid dollars in Intensive In-Home Services, 16% in Transitional Family Home (Therapeutic Foster Care), and less than 1% combined in Respite and MST.

Care Coordination accounts for 19% of total Medicaid spending through CAMHD and is provided to 93% of children receiving Medicaid-supported services through CAMHD. **Care coordination and intensive in-home services are the two services that children are most likely to receive through CAMHD Medicaid-supported dollars,** received by 93% and 39% of children, respectively. Very small percentages of children (less than 7%) receive any other home- and community-based service type supported by CAMHD Federal Medicaid dollars.

As noted, about 8% of children received Medicaid-supported restrictive services (i.e., Inpatient Psychiatric Hospitalization and residential treatment), but **these services accounted for 35% of total Medicaid funding through CAMHD.** Out-of-State Residential Treatment had the highest average Medicaid expenditure per child served at $41,887, followed by Hospital-Based Residential at $28,979, and Community-Based Residential at $21,824.

Disparities and Disproportionality in Medicaid-Supported Utilization and Expenditures

CAMHD provided utilization and expenditure data stratified by sex, age, race/ethnicity, Island, and diagnosis for Medicaid-supported services. Those data were not available for services funded by the MHBG or general revenue only. The analyses that follow, which relate to differences in utilization and expenditures based on sex, age, race/ethnicity, Island, and diagnosis, pertain only to Medicaid-supported services. It should also be noted that what we are referring to as disparities may exist for any number of reasons, such as provider availability, cultural beliefs and biases, delivery system barriers, and the like. **This analysis did not examine the reasons for differences based on demographics**, but the analysis does shed light on them, providing opportunity for Hawai‘i stakeholders to explore disparities more fully.

Medicaid-Supported Utilization and Expenditures: Disparities and Disproportionality Based on Sex

Hawai‘i's child population is about half boys and half girls. **Boys receiving Medicaid-supported services through CAMHD have higher behavioral health utilization rates than girls, which also is true nationally.** Boys account for 58% of all children using Medicaid-supported services through CAMHD, and girls account for 42%.

The table below shows the number and percentage of boys versus girls receiving services by type of service and in total. The table shows rates of service use, that is, the percentage of boys using a particular service out of all boys using services, and the percentage of girls using a particular service type out of all girls using services. The table also shows the representation of boys versus girls

among all children using a service, that is, the percentage of boys using a service out of all children using the service.

While they are fewer in number, **girls have higher rates of service utilization than boys for most of the service types listed,** including Intensive In-Home Services, Transitional Family Homes, Hospital-Based Residential, Respite, Out-of-State Residential Treatment, Therapeutic Crisis Home, and Transitional Support Services. Boys have higher rates of utilization than girls for the following services: MST, Community-Based Residential Treatment, Residential Crisis Stabilization, ABI, and partial hospitalization.

While girls have higher rates of service use than boys for many services, there are more boys than girls using services in general (582 boys versus 419 girls), and thus boys represent the majority of those using most service types. The one service type of note where girls represent the majority using the service because of a significantly higher rate of use is inpatient hospital psychiatric services. Of the 60 children using inpatient psychiatric services for whom data by sex were provided, 38 (63%) are girls compared to 22 (37%) who are boys. **Nine percent (9%) of girls who used any service received inpatient psychiatric services, a rate that is 2.5 times greater than that of boys at 3.8%.** National analyses also have found higher rates of inpatient psychiatric services for girls versus boys, though not to the same extent. The *Faces of Medicaid* study, for example, which examined behavioral health service utilization among all children in Medicaid, found that girls had a 21% higher rate of service use than that of boys; 5.8% of girls used inpatient psychiatric services compared to 4.8% of boys.[xxiv]

Table 5: CAMHD. Medicaid-Supported Utilization: Disparities Based on Sex

Type of Service	Total Service Utilization % of All Children Served	Service Utilization Rate,* by Sex		Service Representation, ** by Sex	
		% of Boys Served	% of Girls Served	% Boys Receiving Service	% Girls Receiving Service
Intensive In-Home Services	77.1%	74.9%	80.1%	56.5%	43.5%
Multisystemic Therapy	14.5%	17.4%	10.5%	69.7%	30.3%
Therapeutic Family Home	10.5%	10.0%	11.2%	55.2%	44.8%
Community-Based Residential Treatment	8.1%	9.3%	6.4%	66.7%	33.3%
Hospital-Based Residential	6.0%	3.8%	9.1%	36.7%	63.3%
Therapeutic Respite Home	2.3%	2.2%	2.4%	56.5%	43.5%
Out-of-State Residential	1.9%	1.7%	2.4%	50.0%	50.0%
Residential Crisis Stabilization Program	1.2%	1.4%	1.0%	66.7%	33.3%
Transitional Support Services	1.1%	0.9%	1.4%	45.5%	54.5%
Therapeutic Crisis Home	0.9%	0.7%	1.2%	44.4%	55.6%
Intensive Outpatient Hospitalization	0.1%	0.2%	0%	100%	0%
All Services: Unduplicated Count	**100%**	**100%**	**100%**	**58.1%**	**41.9%**

Note: Care Coordination service utilization data were unavailable by sex and are excluded from this table. Further, data by sex were missing for three children; all counts and percentages are reported only for children for whom these data were available. In several cells, the N size is below 11. To be in alignment with Department of Health's data governance policy, the table provides percentages and not N sizes.

**Service utilization rate refers to the percentage of children in each cohort who use a particular service out of all children in that cohort.*

***Service Representation reflects the composition by sex of all children receiving each service type.*

The following table shows total expenditures, by type of service received, for boys and girls. The table shows the percentage of dollars that go to boys versus girls compared to their representation among those using services. Boys represent 58% of children using services and use 56% of Medicaid dollars through CAMHD. Girls represent 42% of children receiving services and use 44% of dollars. In terms of allocation of dollars based on type of service, both boys and girls use Intensive In-Home Services dollars in proportion to their representation among children using this service. For all other service types, there are certain disproportionalities in dollars allocated compared to representation among those using services. For example, girls represent 63% of those using inpatient psychiatric services, but use 58% of inpatient psychiatric expenditures. Boys represent 37% of those using inpatient psychiatric services and use 43% of inpatient psychiatric expenditures. As discussed below, **boys have an average expenditure for inpatient psychiatric services that is 28% higher than that of girls** ($33,580 versus $26,316), suggesting that they may have longer lengths of stay than girls. Interestingly, while most recipients of MST are boys (70%), they receive less than 50% of the Medicaid dollars supporting MST; girls represent only 30% of youth using MST but use 51% of the dollars.

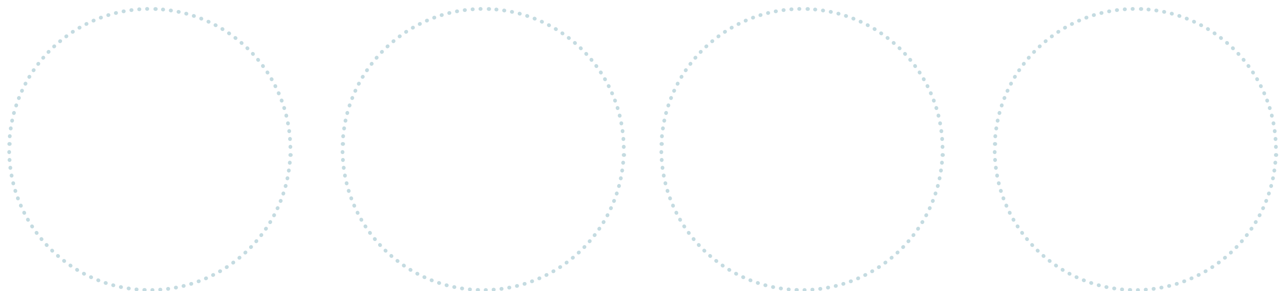


Table 6: CAMHD. Medicaid-Supported Total Expenditures: Disparities Based on Sex

Type of Service	Total Service Expenditures of Boys and Girls	Service Expenditures and Representation of Boys		Service Expenditures and Representation of Girls	
		Expenditures (% of Service Expense for All Children)	% of All Children Receiving Service	Expenditures (% of Service Expense for All Children)	% of All Children Receiving Service
Intensive in-Home Services	$3,427,495	$1,964,457 (57.3%)	56.5%	$1,463,039 (42.7%)	43.5%
Community-Based Residential Treatment	$1,767,744	$1,205,022 (68.2%)	66.7%	$562,722 (31.8%)	33.3%
Transitional Family Home	$1,985,377	$1,071,923 (54.0%)	55.2%	$913,453 (46.0%)	44.8%
Hospital-Based Residential	$1,738,750	$738,750 (42.5%)	36.7%	$1,000,000 (57.5%)	63.3%
Intensive Outpatient Hospitalization	$13,000	$13,000 (100%)	100%	$0 (0%)	0%
Multisystemic Therapy	$21,506	$10,621 (49.4%)	69.7%	$10,885 (50.6%)	30.3%
Therapeutic Respite Home	$16.147	$7,817 (48.4%)	56.5%	$8,330 (51.6%)	43.5%
Therapeutic Crisis Home	$9,753	$5,072 (52.0%)	44.4%	$4,681 (48.0%)	55.6%
Residential Crisis Stabilization Program	N/A	N/A	66.7%	N/A	33.3%
Transitional Support Services	N/A	N/A	45.5%	N/A	54.5%
All Services	**$8,979,773**	**$5,016,663 (55.9%)**	**58.1%**	**$3,963,110 (44.1%)**	**41.9%**

Note: Care Coordination, Out-of-State Residential Treatment, Residential Crisis Stabilization, and Transitional Support Services expenditure data were unavailable by sex.

The table below shows the average expenditure per child for boys and girls receiving services where service type data were available.

Table 7: CAMHD. Medicaid-Supported Average Expenditures Per Child Served*: Disparities Based on Sex

Type of Service	Average Expenditure Per Child Using Service	Boys: Average Expenditure Per Child Using Service	Girls: Average Expenditure Per Child Using Service
Out of State Residential	$41,887	N/A	N/A
Hospital-Based Residential	$28,979	$33,580	$26,316
Community-Based Residential	$21,824	$22,315	$20,842
Transitional Family Home	$18,908	$18,481	$19,435
Intensive Outpatient Hospitalization	$13,000	N/A	N/A
Intensive In-Home Services	$4,384	$4,468	$4,273
Care Coordination	$1,297	***N<11***	***N<11***
Therapeutic Crisis Home	$1,084	$1,268	$936
Therapeutic Respite Home	$702	$601	$833
Multisystemic Therapy	$171	$105	$247
Residential Crisis Stabilization Program	N/A	N/A	N/A
Transitional Support Services	N/A	N/A	N/A
Overall Average Expenditure (using Method One)**	**$11,963****	**$10,378****	**$8,591****
Overall Average Expenditures* (using Method Two)**	**$8,971*****	**$8,620*****	**$9,458*****

**Overall average expenditures for boys and girls do not include care coordination, intensive outpatient hospitalization, and out of state residential treatment where utilization data by sex were not available.*
***Method One Average Expense calculated by averaging mean expense across the available service types.*
****Method Two Average Expense calculated by dividing the total spent on girls versus boys from Table 7 by the total number of male and female service recipients from Table 6.*

National analysis of all children in Medicaid using behavioral health services found that boys have 18% higher mean expenditures for behavioral health services than girls and that they may be staying longer in psychiatric hospital and residential care. It is difficult to pinpoint whether the same is true in Hawaiʻi based on the available data. If one averages mean expense across the service types where mean expense was available, average expenditures for boys across behavioral health service types are 21% higher than those for girls ($10,378 versus $8,591); this is driven by boys' higher expenditures for Community-Based Residential Treatment, Hospital-Based Residential treatment, and Therapeutic Crisis Home. As noted earlier, while girls constitute 63% of the child population using Hospital-Based Residential Services (Inpatient Psychiatric Hospitalization), their average expense for use of this service is 22% less than that of boys ($26,316 versus $33,580); the average expenditure for girls using Community-Based Residential Treatment is 7% lower than boys'. These data may suggest longer lengths of stay in inpatient psychiatric and Community-Based Residential Treatment for boys compared to girls and/or, probably less likely, use of more expensive hospital and residential programs for boys versus girls. If, on the other hand, one takes the total amount spent on girls versus boys from Table 7 and divides by the unduplicated counts of male and female recipients from Table 6, then girls have higher mean expense at $9,458 compared to boys at $8,617. Girls have higher mean costs than boys for three service types: Therapeutic Respite Home, Multisystemic Therapy, and Transitional Family Home.

Medicaid-Supported Utilization and Expenditures: Disparities and Disproportionality Based on Age

Table 8 below shows utilization by service type and in total, based on age. To determine whether certain age cohorts of children are under or overrepresented among those receiving services, one needs to compare utilization of services based on age to the breakdown of age cohorts in the Medicaid child population overall, or, in the absence of that data, to the breakdown by age of the child population in Hawaiʻi as a whole. Demographic data for the Medicaid child population were not available, and U.S. Census data for the Hawaiʻi child population do not precisely match the age categories used for this analysis.[12] Despite these limitations, certain observations can be made from the available data.

An estimated 31.5% of children in Hawaiʻi are in the age cohort of 0-5 years old.[13] **Young children (0-5) comprise 5% of those using services and are underrepresented** among children who used Medicaid-supported behavioral health services through CAMHD. Similar underrepresentation of the 0-5 population is seen nationally as well.

An estimated 34.6% of children in Hawaiʻi are in the 6-12 year old age cohort. **Children ages 6-12 may be over-represented among those using Medicaid-supported services through CAMHD**

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[12] Of the Hawaiʻi child population ages 0-19, 26.7% are under 5, 27.5% are 5-9, 30.2% are 10-14, and 25.3% are 15-19. These figures are calculated by dividing the estimated population in the age category by the total number of children under 18 years old. However, the 15-19 year old age group extends beyond 18, which makes these figures approximate. https://data.census.gov/table?q=children+in+Hawaiʻi&tid=ACSDP1Y2021.DP05

[13] These figures come from a different U.S. Census Bureau analysis of child demographic characteristics, which provide estimated population for under 6 years old, 6-1 years old, and 12-17 years old (https://data.census.gov/table?q=children+in+Hawaiʻi&tid=ACSST1Y2021.S0901). The breakdown of children in Hawaiʻi's population is not necessarily analogous to the breakdown in Hawaiʻi's Medicaid child population. For example, nationally, the Medicaid child population breaks down as follows: 45%, ages 0-5; 33%, ages 6-12; 22%, ages 13-18. The estimates used in this report are closer to the overall Hawaiʻi child population breakdown; it would be more accurate to use the Hawaiʻi Medicaid child population data, if those data were available.

as they comprise 37% of those using services. Nationally, this age group also is overrepresented among children using behavioral health services.

Youth ages 13-18 constitute about 33.9% of the child population in Hawai‘i and are **overrepresented** among children using Medicaid-supported services through CAMHD, comprising **58% of those using services.** This age group also is overrepresented among children using behavioral health services nationally. Very few youth ages 19-20 received Medicaid-supported services through CAMHD (six youth in total). In some ways, this is to be expected, as youth must consent to their own CAMHD services once they turn 18.

Youth, ages 13-18, constitute a majority or greater of those receiving almost every type of Medicaid-supported service through CAMHD. The exceptions are for Therapeutic Respite Program and Intensive In-Home Services, where children ages 6-12 are the majority.

The data raise questions as to whether CAMHD could be strengthening earlier intervention with younger children. The Centers for Disease Control and Prevention notes that mental health symptoms often start in early childhood, and there is increasing recognition of the importance of early intervention.[xi]

Similar to national findings, youth, ages 13-18, in the CAMHD Medicaid population, have the highest rates of service use for most service types. This includes out-of-home services (Community-Based Residential Treatment, Hospital-Based Residential, Out-of-State Residential Treatment, Residential Crisis Stabilization, Transitional Family Home (Therapeutic Foster Care), and Therapeutic Crisis Home and the highest rate of use for Multisystemic Therapy (MST)). Children, ages 6-12, have the highest rate of use for Therapeutic Respite Home. Young children, age 0-5, as noted, have the highest rate of use for Intensive In-Home services.

While the 13-18-year-old population constitutes the majority of those receiving virtually every service type, analysis of rates of service use – that is, the percentage of children within each age cohort using a particular service out of all children within that age cohort – sheds light on what types of services children are most likely to receive based on age. For example, while they comprise only 6% of those using Intensive In-Home services, the 0-5 population has the highest rate of use of this service at 98% – that is, 98% of children, 0-5, who use services receive Intensive In-Home services. (This is to be expected, as the youngest group does not have access to more residential, congregate care programs.) Eighty-nine percent (89%) of the 6–12-year-old population receives Intensive In-Home services though they make up only 42% of all children using this service because of their smaller numbers. In contrast, the 13–18-year-old age cohort has the lowest rate of use of Intensive In-Home services at 68% but constitutes 51% of recipients of this service because of their larger overall numbers.

Table 9 below shows total expenditures by service type based on age cohort. The tables compare percentage of dollars used by age group to representation among those using services by age group. Young children, ages 0-5, represent about 5% of all children using Medicaid-supported services through CAMHD, but they receive only 2% of overall dollars. Children, ages 6-12, represent 37% of all children using services and account for 35% of overall expenditures. **Youth, ages 13-18,**

represent 58% of all children using services and receive 63% of overall dollars. As discussed earlier, this age group uses more services in general and more expensive out-of-home services than other age cohorts, thus accounting for their higher use of dollars compared to their representation among those using services.

Table 10 below shows average expenditures by service type based on age. **The 6–12-year-old age cohort has higher average expenditures for every type of service than other age cohorts, with the most notable being the average expense for Inpatient Psychiatric Hospital Services, which are 69% higher than the average expense for 13–18-year-old youth. This differential suggests that children ages 6-12 are staying longer in Inpatient Psychiatric Hospital Services than are older youth and/or using more expensive hospital services.** (It also is possible, because the number of children ages 6-12 using inpatient psychiatric services is relatively small (n=17), that their average expense is skewed by a small subset of these children with high outlier expense.)

As noted earlier, it is difficult to pinpoint average expenditures across all services, given available data. If one averages mean expense across the service types where mean expense was available, average expenditures for the 6–12-year-old age cohort are the highest among all children, at $11,067. However, if one takes the total amount spent on each age group from Table 9 and divides by the unduplicated counts of recipients by age group from Table 8, then the 13–18-year-old age group has the highest mean expense at $9,591. Young children, ages 0-5, have the lowest mean expense, which also is true nationally.

Table 8: CAMHD. Medicaid-Supported Utilization: Disparities Based on Age*

Type of Service	Total Service Utilization All Age Groups: % of All Children Served	Service Utilization Rate**, by Age Group % of children in the age cohort receiving the service type out of all children in that age cohort receiving services				Service Representation***, by Age Group (% of All Children Using Service Type)			
		Ages 0-5	Ages 6-12	Ages 13-18	Ages 19-20	Ages 0-5	Ages 6-12	Ages 13-18	Ages 19-20
Intensive In-Home Services	77.1%	97.8%	89.1%	67.9%	83.3%	5.7%	42.2%	51.4%	0.7%
Multisystemic Therapy	14.6%	0%	6.3%	21.2%	0%	0%	15.6%	84.4%	0%
Transitional Family Home	10.5%	4.4%	9.8%	11.4%	0%	1.9%	34.3%	63.8%	0%
Community-Based Residential Treatment	8.1%	0%	1.4%	13.0%	13.0%	0%	6.2%	93.8%	0%
Hospital-Based Residential	6.0%	0%	4.6%	7.3%	0%	0%	28.3%	71.7%	0%
Therapeutic Respite Home	2.3%	2.2%	4.4%	1.0%	0%	4.3%	69.6%	26.1%	0%
Out-of-State Residential	2.0%	0%	0.3%	3.2%	0%	0%	5.0%	95.0%	0%
Residential Crisis Stabilization Program	1.2%	0%	0.8%	1.5%	0%	0%	25.0%	75.0%	0%
Transitional Support Services	1.1%	2.2%	0.8%	1.0%	16.7%	9.1%	27.3%	54.5%	9.1%
Therapeutic Crisis Home	0.9%	0%	0.5%	1.2%	0%	0%	22.2%	77.8%	0%
Intensive Outpatient Hospitalization	0.1%	0%	0%	0.2%	0%	0%	0%	100%	0%
All Services	**100%**	**100%**	**100%**	**100%**	**100%**	**4.5%**	**36.6%**	**58.4%**	**0.6%**
Estimated % of Children in Hawai'i Medicaid Population^						**31.5%**	**34.6%**	**33.9%**	**2%**

**Care Coordination service utilization data were unavailable for age breakdown.*
***Service utilization rate refers to the percentage of children in each age cohort who use a particular service out of all children in that age cohort.*
****Service Representation reflects the age composition of all children receiving each service type*
^Estimated percentages of children may be different than elsewhere in the report due to the inclusion of the 18-20 year old population.
Note: In several cells, the N size is below 11. To be in alignment with Department of Health's data governance policy, the table provides percentages and not N sizes.

Table 9: CAMHD. Medicaid-Supported Expenditures: Disparities Based on Age

Type of Service	Total Service Expenditures across Children of All Age Groups ($)	Service Expenditures (% of Service Expense for All Children) and Representation by Cohort							
		Ages 0-5		Ages 6-12		Ages 13-18		Ages 19-20	
		Expenditures (%)	Rec'd Service	Expenditures (%)	Rec'd Service	Expenditures (%)	Rec'd Service	Expenditures (%)	Rec'd Service
Intensive In-Home Services	$3,431,722	$131,698 (3.8%)	5.7%	$1,598,842 (42.2%)	43%	$1,679,802 (48.9%)	51.4%	$21,380 (0.6%)	.6%
Transitional Family Home	$1,985,377	$64,664 (3.3%)	1.9%	$718,153 (36.2%)	34.3%	$1,202,560 (60.6%)	63.8%	$0 (0%)	0%
Community-Based Residential Treatment	$1,767,744	$0 (0%)	0%	$110,986 (6.3%)	6.2%	$1,656,758 (93.7%)	93.8%	$0 (0%)	0%
Hospital-Based Residential	$1,738,750	$0 (0%)	0%	$696,250 (40%)	28.3%	$1,042,500 (60%)	71.7%	$0 (0%)	0%
Multisystemic Therapy	$25,069	$0 (0%)	0%	$8,092 (32.3%)	15.6%	$16,976 (67.7%)	84.4%	$0 (0%)	0%
Therapeutic Respite Home	$16,147	$641 (4%)	4.3%	$13,712 (84.9%)	69.6%	$1,794 (11.1%)	26.1%	$0 (0%)	0%
Intensive Outpatient Hospitalization	$13,000	$0 (0%)	0%	$0 (0%)	0%	$13,000 (100%)	100%	$0 (0%)	0%
Therapeutic Crisis Home	$9,753	$0 (0%)	0%	$2,731 (28%)	22.2%	$7,022 (72.0%)	77.8%	$0 (0%)	0%
Out-of-State Residential	N/A	N/A	0%	N/A	5%	N/A	95.0%	N/A	0%
Residential Crisis Stabilization Program	N/A	N/A	0%	N/A	25%	N/A	75.0%	N/A	0%
Transitional Support Services	N/A	N/A	9.1%	N/A	27.3%	N/A	54.5%	N/A	9.1%
All Services	**$8,987,561**	**$197,003 (2.2%)**	**4.5%**	**$3,148,765 (35%)**	**36.6%**	**$5,620,413 (62.5%)**	**58.4%**	**$21,380 (0.2%)**	**0.6%**

Note: Care Coordination utilization data were unavailable for age breakdown and are thus excluded from this table. Expenditure data were not available for Out-of-State Residential, Residential Crisis Stabilization, and Transitional Support Services.

Table 10: *CAMHD. Medicaid-Supported Average Expenditures Per Child Served:* Disparities Based on Age*

Type of Service	Average Expenditure Per Child Using Service	Ages 0-5: Average Expenditure Per Child Using Service	Ages 6-12: Average Expenditure Per Child Using Service	Ages 13-18: Average Expenditure Per Child Using Service	Ages 19-20: Average Expenditure Per Child Using Service
Out-of-State Residential	$41,887	N/A	N/A	N/A	N/A
Hospital-Based Residential	$28,979	$0	$40,956	$24,244	$0
Community-Based Residential Treatment	$21,824	$0	$22,197	$21,799	$0
Transitional Family Home	$18,908	$32,332	$19,949	$17,949	$0
Intensive Outpatient Hospitalization	$13,000	$0	$0	$13,000	$0
Intensive In-Home Services	$4,384	$2,993	$4,889	$4,221	$4,276
Care Coordination	$1,297	N/A	N/A	N/A	N/A
Therapeutic Crisis Home	$1,084	$0	$1,365	$1,003	$0
Therapeutic Respite Home	$702	$641	$857	$299	$0
Multisystemic Therapy	$171	$0	$352	$137	$0
Residential Crisis Stabilization Program	N/A	N/A	N/A	N/A	N/A
Transitional Support Services	N/A	N/A	N/A	N/A	N/A
Overall Average Expenditure (using Method One)**	**$11,963**	**$3,996**	**$11,067**	**$8,972**	**$4,276**
Overall Average Expenditure (using Method Two)**	**$8,952***	**$4,378***	**$8,580***	**$9,591***	**$3,563***

*Overall average expenditures for each age group do not include Care Coordination, Out-of-State Residential, Transitional Support Services, and Residential Crisis Stabilization Program for which data by age were not available.
**Method One: Average Expense calculated by averaging mean expense across the service types.
***Method Two: Average Expense calculated by dividing the total spent on each age group from Table 9 by the total number of service recipients by age group from Table 8.

Medicaid-Supported Utilization and Expenditures: Disparities and Disproportionality Based on Race/Ethnicity

Table 11 below shows rates of service use by type of service, broken down by racial/ethnic grouping. Children may be included in more than one grouping; in other words, each racial/ethnic grouping has duplicated counts of children. Because of the duplication, the rates of service use are not absolute, but, rather, show rates of one group relative to that of another. In addition, Multiracial children are included in multiple racial/ethnic groupings; they are pulled out for purposes of this analysis because of the State's interest in this population.

Although they represent 0.1% of Hawai'i's child population, American Indian/Alaskan Native children had the highest rate of use for Inpatient Psychiatric Hospital Services, which also is true nationally. They also had higher rates of use relative to other racial/ethnic groups for Residential Crisis Stabilization and Therapeutic Respite Home. These children had the lowest rates of use for Transitional Family Home and Out-of-State Residential Treatment, and, apparently, no American Indian/Alaskan Native children accessed Transitional Support Services. **Native Hawaiian/ Other Pacific Islander children had the lowest rate of use for inpatient psychiatric services** and the highest rates of use for Community-Based Residential Treatment and Transitional Support Services. Black or African American children had the highest rate of use for Transitional Family Home and TCH. They had the lowest rate of use for MST and Therapeutic Respite Program, and no Black or African American children used TSS. Hispanic/Latino children had the highest rates of use for Multisystemic Therapy and the lowest rates of use for Community-Based Residential Treatment. No Hispanic/Latino children used a Residential Crisis Stabilization Program. White children had the highest rate of use for Out-of-State Residential Treatment. Intensive Outpatient Hospitalization was the only service that had the highest rate of use by Asian children, with the only child using that service identified as Asian. There was no service for which Multiracial children had the highest rate of use.

Examining rates of service use helps to shed light on populations that may be at higher risk for more costly and more restrictive services. Also, **data on rates of service use enable stakeholders to consider whether there is a correlation between a population's relatively high rate of use for a restrictive service and low rate of use for a key home- and community-based service.**

Table 12 shows the representation or composition by race/ethnicity of children receiving services by service type and in total. **Native Hawaiian/Other Pacific Islander children make up the largest cohort (29%) of children receiving services** overall and for all service types, except Hospital-Based Residential (Inpatient Psychiatric Hospitalization), Residential Crisis Stabilization Program, and Therapeutic Crisis Home, where **White children are the largest cohort. White children at 27% are the second largest cohort receiving services overall. Asian children at 25% represent the third largest cohort. Together, these three groups – Native Hawaiian, White, and Asian – comprise 81% of the service recipient population but represent only 49% of the state population overall.**

To gauge whether racial/ethnic groups of children are over-or under-represented among those receiving services, Table 12 compares the representation of children receiving services by racial/ ethnic grouping to their representation in the Hawai'i child population. (Note. Racial/ethnic

breakdown data on the Medicaid child population in Hawai‘i in 2019 were not available so the data used apply to the total Hawai‘i child population, which may not be entirely accurate for the Medicaid child population.)

Several racial/ethnic cohorts of children appear to be overrepresented among service users compared to their representation in the Hawai‘i child population. Native Hawaiian/ Pacific Islander children comprise 29% of all children using services but 11% of the Hawai‘i child population. **White children** comprise 27% of service users but 14% of the Hawai‘i child population. Nationally, White children have had better access to Medicaid behavioral health services than other racial and ethnic groups of children, which the data suggest is true in Hawai‘i as well, but, nationally, Native Hawaiian/Pacific Islander children have been underrepresented, which is not the case in Hawai‘i. **American Indian/Alaskan Native children** also are overrepresented among those receiving services compared to their representation in the Hawai‘i child population, which also is true nationally. American Indian/Alaskan Native children represent 3.4% of children using services but 0.1% of children in the state child population. They are overrepresented in all services except TSS, and are particularly overrepresented in inpatient psychiatric services, Therapeutic Respite Home, and Residential Crisis Stabilization. **Black/African American children** also seem to be overrepresented, constituting 5% of service recipients but 2% of the state population. They are particularly overrepresented in Therapeutic Crisis Home.

In contrast, Hispanic/Latino children are underrepresented in service use compared to their representation in the Hawai‘i child population, comprising 9% of service users but 19% of the Hawai‘i child population. **Similar underrepresentation also is seen nationally and may be due to multiple factors, such as stigma, lack of culturally responsive outreach and services, language barriers, racial and ethnic bias, etc. Multiracial children also appear to be underrepresented,** comprising 28% of service users but 31% of the Hawai‘i child population. (Multiracial children may also be included in other racial/ethnic groups so it is difficult to determine whether they are indeed under-or over-represented.) **Asian children appear to use services basically in proportion to their representation in the state child population.** They represent 25% of service recipients and 24% of the state population. Nationally, Asian children are underrepresented among children in Medicaid using behavioral health care.

Table 11: CAMHD. Medicaid-Supported Utilization: Rates of Service Use by Race/Ethnicity

Type of Service	Total Service Utilization Rate for All Race/ Ethnicity Groups: % of All Children Served	Service Utilization Rate, by Identified Race/Ethnicity							
		% American Indian/ Alaska Native	% Asian	% Black/ African American	% Hispanic/ Latino	% Native Hawaiian/ Pacific Islander	% White	% Other Race	% Multi-racial
Intensive In-Home Services	77.3%	89.9%	89.1%	94.7%	87.5%	85.6%	84.1%	89.6%	88.2%
Multisystemic Therapy	14.5%	17.4%	18.0%	10.6%	19.9%	19.3%	17.7%	14.6%	17.5%
Transitional Family Home	10.5%	8.7%	10.5%	14.9%	9.1%	12.2%	12.5%	14.6%	11.4%
Community-Based Residential Treatment	8.3%	8.7%	11.3%	11.7%	8.5%	13.9%	11.2%	2.1%	13.2%
Hospital-Based Residential	6.0%	11.6%	7.1%	8.5%	9.1%	5.9%	8.1%	8.3%	8.0%
Therapeutic Respite Home	2.4%	4.3%	2.0%	1.1%	4.0%	3.0%	3.1%	0%	2.3%
Out-of-State Residential	2.0%	1.4%	1.6%	2.1%	1.7%	2.0%	2.2%	0%	2.1%
Residential Crisis Stabilization Program	1.2%	2.9%	1.6%	2.1%	0%	0.8%	2.5%	0%	1.8%
Transitional Support Services	1.1%	0%	0.8%	0%	1.1%	1.5%	0.5%	0%	0.7%
Therapeutic Crisis Home	0.9%	1.4%	1.2%	3.2%	1.7%	1.2%	1.6%	0%	1.8%
Intensive Outpatient Hospitalization	0.1%	0%	0.2%	0%	0%	0%	0%	0%	0%
All Services	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Note: Race/ethnicity categories are not mutually exclusive.

Table 12: CAMHD. Medicaid-Supported Utilization: Representation by Race/Ethnicity in Services

Type of Service	% Service Representation, by Duplicated Race/Ethnicity							
	American Indian/ Alaska Native	Asian	Black/ African American	Hispanic/ Latino	Native Hawaiian/ Pacific Islander	White	Other Race	Multi-racial
Intensive In-Home Services	3.5%	25.4%	5.0%	8.70%	28.6%	26.3%	2.4%	27.4%
Multisystemic Therapy	3.3%	24.8%	***N<11***	9.5%	31.1%	26.7%	1.9%	26.7%
Transitional Family Home	2.5%	22.4%	5.9%	6.8%	30.4%	29.1%	3.0%	27%
Community-Based Residential Treatment	2.6%	24.4%	4.7%	6.4%	35%	26.5%	0.4%	31.6%
Hospital-Based Residential	5.3%	23.7%	5.3%	10.5%	23%	29.6%	2.6%	29.6%
Therapeutic Respite Home	5.4%	17.9%	1.8%	12.5%	32.1%	30.4%	0%	23.2%
Out-of-State Residential	2.6%	21.1%	5.3%	7.9%	31.6%	31.6%	0%	31.6%
Residential Crisis Stabilization Program	6.5%	25.8%	6.5%	0%	16.1%	45.2%	0%	32.3%
Therapeutic Crisis Home	3.4%	20.7%	10.3%	10.3%	24.1%	31%	0%	34.5%
Transitional Support Services	0%	22.2%	0%	11.1%	50%	16.7%	0%	22.2%
Intensive Outpatient Hospitalization	0%	100%	0%	0%	0%	0%	0%	0%
Any Services	**3.4%**	**24.8%**	**4.6%**	**8.6%**	**29%**	**27.2%**	**2.4%**	**27.5%**
Racial/Ethnic Breakdown of Hawai'i Child Population**	**0.1%**	**23.6%**	**1.9%**	**18.6%**	**11%**	**14.1%**	**N/A**	**30.7%**

Note: Race/ethnicity categories are not mutually exclusive; children may be counted multiple times in the duplicated counts (i.e., child-race/ethnicities), although Multiracial children are not counted as a separate group in the duplicated counts as they are already counted in at least two individual race/ethnicity groups.
***US Census Bureau. Population Division. 2019. "Annual Estimates of the Resident Population by Sex, Age, Race, and Hispanic Origin for the United States and States"*

The next three tables are a series of continued tables that show the amount spent, by type of service and in total, by primary race/ethnicity grouping. **Eighty percent (80%) of total expenditures are used by three racial/ethnic groups of children:** Native Hawaiian/Pacific Islander children at almost 30% of total dollars; Asian children at 25%; and White children at 25%. These three cohorts also comprise the three largest groups of service users, as noted earlier, representing 81% of all children using services. **However, these three groups comprise less than half (48.7%) of the state child population**. These tables also show, by service type and in total, the percentage of dollars each racial/ethnic group of children receives compared to their representation among service users. Most cohorts of children receive a slightly higher percentage of dollars than their representation among service users, except for White children, who are 27.2% of service users and receive 25.1% of total dollars.

Table 13: CAMHD. Medicaid-Supported Expenditures: Expenditures by Service Type and in Total by Race/Ethnicity

Type of Service	Total Service Expenditures across Duplicated Children of All Race/ Ethnicity Groups	Service Expenditures (% of Service Expense for All Children) & Representation by Cohort					
		American Indian/Alaska Native Children		Asian Children		Black/African American Children	
		Expenditures (%)	Duplicated Count Rec'd Service	Expenditures (%)	Duplicated Count Rec'd Service	Expenditures (%)	Duplicated Count Rec'd Service
Intensive In-Home Services	$8,081,991	$365,778 (4.5)	3.5%	$2,115,245 (26.2)	25.4%	$364,520 (4.1)	5.0%
Community-Based Residential Treatment	$5,003,334	$169,549 (3.4)	2.6%	$1,296,881 (25.9)	24.4%	$309,816 (6.2)	4.7%
Hospital-Based Residential	$4,417,500	$160,000 (3.6)	5.3%	$1,049,375 (23.8)	23.7%	$273,125 (6.2)	5.3%
Transitional Family Home	$4,190,377	$73,814 (1.8)	2.5%	$999,698 (23.9)	22.4%	$169,542 (4.0)	5.9%
Multisystemic Therapy	$55,481	$2,925 (5.3)	3.3%	$10,071 (18.2)	24.8%	$1,913 (3.4)	2.7%
Therapeutic Respite Home	$44,340	$2,307 (5.2)	5.4%	$6,023 (13.6)	17.9%	$769 (1.7)	1.8%
Therapeutic Crisis Home	$29,844	$585 (2)	3.4%	$5,072 (17)	20.7%	$6,437 (21.6)	10.3%
Intensive Outpatient Hospitalization	$13,000	$0 (0)	0%	$13,000 (100)	100%	$0 (0)	0%
Out-of-State Residential	N/A	***N<11***	2.6%	N/A	21.1%	N/A	5.3%
Residential Crisis Stabilization Program	N/A	***N<11***	6.5%	N/A	25.8%	N/A	6.5%
Transitional Support Services	N/A	***N<11***	0%	N/A	22.2%	N/A	0%
All Services	**$21,835,867**	**$774,958 (3.5)**	**3.4%**	**$5,495,365 (25.2)**	**24.8%**	**$1,126,123 (5.2)**	**4.6%**

Note: Care Coordination services data were unavailable for race/ethnicity breakdown. Expenditure data were not available for Out-of-State Residential, Crisis Stabilization – Residential, or Transitional Support Services. Race/ethnicity categories are not mutually exclusive; Multiracial children are counted in at least two separate groups but are not counted as a separate group in the duplicated expenditures as they are already counted at least twice in multiple race/ethnicity groups.

Table 14: CAMHD. Medicaid-Supported Expenditures: Expenditures by Service Type and in Total by Race/Ethnicity (Continued)

Type of Service	Total Service Expenditures across Duplicated Children of All Race/ Ethnicity Groups	Service Expenditures (% of Service Expense for All Children) & Representation by Cohort					
		Hispanic/ Latino Children		Native Hawaiian/ Pacific Islander		White Children	
		Expenditures (%)	Duplicated Count Rec'd Service	Expenditures (%)	Duplicated Count Rec'd Service	Expenditures (%)	Duplicated Count Rec'd Service
Intensive In-Home Services	$8,081,991	$636,092 (7.9%)	8.7%	$2,344,782 (29%)	28.6%	$2,058,468 (25.5%)	26.3%
Community-Based Residential Treatment	$5,003,334	$500,145 (10%)	6.4%	$1,633,617 (32.7%)	35.0%	$1,086,008 (21.7%)	26.5%
Hospital-Based Residential	$4,417,500	$523,750 (11.9%)	10.5%	$1,151,875 (26.1%)	23.0%	$1,173,125 (26.6%)	29.6%
Transitional Family Home	$4,190,377	$326,526 (7.8%)	6.8%	$1,351,470 (32.3%)	30.4%	$1,122,722 (26.8%)	29.1%
Multisystemic Therapy	$55,481	$7,455 (13.4%)	9.5%	$14,887 (26.8%)	31.1%	$13,084 (23.6%)	26.7%
Therapeutic Respite Home	$44,340	$8,458 (19.1%)	12.5%	$14,737 (33.2%)	32.1%	$12,046 (27.2%)	30.4%
Therapeutic Crisis Home	$29,844	$3,511 (11.8%)	10.3%	$2,926 (9.8%)	24.1%	$11,313 (37.9%)	31.0%
Intensive Outpatient Hospitalization	$13,000	$0 (0%)	0%	$0 (0%)	0%	$0 (0%)	0%
Out-of-State Residential	N/A	N/A	7.9%	N/A	31.6%	N/A	31.6%
Residential Crisis Stabilization Program	N/A	N/A	0%	N/A	16.1%	N/A	45.2%
Transitional Support Services	N/A	N/A	11.1%	N/A	50.0%	N/A	16.7%
All Services	**$21,835,867**	**$2,005,936 (9.2%)**	**8.6%**	**$6,514,294 (29.8%)**	**29.0%**	**$5,476,767 (25.1%)**	**27.2%**

Note: Care Coordination services data were unavailable for race/ethnicity breakdown. Expenditure data were not available for Out-of-State Residential, Crisis Stabilization – Residential, or Transitional Support Services. Race/ethnicity categories are not mutually exclusive; Multiracial children are counted in at least two separate groups but are not counted as a separate group in the duplicated expenditures as they are already counted at least twice in multiple race/ethnicity groups.

Table 15: CAMHD. Medicaid-Supported Expenditures: Expenditures by Service Type and in Total by Race/Ethnicity (Continued)

Type of Service	Total Service Expenditures across Duplicated Children of All Race/ Ethnicity Groups	Service Expenditures (% of Service Expense for All Children) and Representation by Cohort			
		Children with Other Race/Ethnicity		Multi-Racial Children	
		Expenditures (%)	Duplicated Count Rec'd Service	Expenditures (%)	Duplicated Count Rec'd Service
Intensive In-Home Services	$8,081,991	$197,105 (2.4)	2.4%	$2,286,106 (28.3)	27.4%
Community-Based Residential Treatment	$5,003,334	$7,320 (0.1)	0.4%	$1,541,522 (30.8)	31.6%
Hospital-Based Residential	$4,417,500	$86,250 (2.0)	2.6%	$1,300,000 (29.4)	29.6%
Transitional Family Home	$4,190,377	$146,604 (3.5)	3.0%	$1,056,597 (25.2)	27.0%
Multisystemic Therapy	$55,481	$5,146 (9.3)	1.9%	$12,864 (23.2)	26.7%
Therapeutic Respite Home	$44,340	$0 (0)	0%	$11,149 (25.1)	23.2%
Therapeutic Crisis Home	$29,844	$0 (0)	0%	$10,923 (36.6)	34.5%
Intensive Outpatient Hospitalization	$13,000	$0 (0)	0%	$0 (0)	0%
Out-of-State Residential	N/A	N/A	0%	***N<11***	31.6%
Residential Crisis Stabilization Program	N/A	N/A	0%	***N<11***	32.3%
Transitional Support Services	N/A	N/A	0%	***N<11***	22.2%
All Services	**$21,835,867**	**$442,425 (2.0)**	**2.4%**	**$6,219,161 (28.5)**	**27.5%**

Note: Care Coordination services data were unavailable for race/ethnicity breakdown. Expenditure data were not available for Out-of-State Residential, Crisis Stabilization – Residential, or Transitional Support Services. Race/ethnicity categories are not mutually exclusive; Multiracial children are counted in at least two separate groups but are not counted as a separate group in the duplicated expenditures as they are already counted at least twice in multiple race/ethnicity groups.

Table 16 below shows average expenditures, by service type and in total, by race/ethnicity. It would appear from the data that **less is spent on average for White children for most service types and in total than for other racial/ethnic groups (with the exception of the Other Race category). Black/African American children seem to have higher average expenditures for out-of-home services,** including for inpatient psychiatric services, Community-Based Residential Treatment, and Therapeutic Crisis Home. Hispanic/Latino children have higher average expenditures than children in general for Community-Based Residential Treatment, as well as Therapeutic Respite Home. **Hispanic/Latino children appear to have the highest overall average expenditures, although their total expense is less than 10% of expenditures in general because they are a relatively small group of service users. Please note the smaller sample sizes for some of these data.**

Higher average expenditures for a given service type typically reflect longer lengths of stay in that service (rather than use of a more expensive program of the same service type). For example, while Hispanic/Latino children have the lowest rate of use for Community-Based Residential Treatment, they have the highest average expenditure for this service, suggesting they may be staying longer in this setting than other cohorts of children. However, since their overall numbers in Community-Based Residential Treatment are small (n=15), their average expense also could be skewed by a small number of children with high outlier expense.

Table 16: CAMHD. Medicaid-Supported Average Expenditures Per Child Served by Race/Ethnicity*

Type of Service	All Racial/ Ethnic Groups	Average Expenditure Per Child Using Service							
		American Indian/ Alaska Native	Asian	Black/ African American	Hispanic/ Latino	Native Hawaiian/ Pacific Islander	White	Other Race	Multi-racial
Out-of-State Residential	$41,887	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Hospital-Based Residential	$28,979	$29,375	$29,149	$34,141	$32,734	$32,911	$26,069	$21,563	$28,889
Community-Based Residential Treatment	$21,824	$21,824	$22,752	$28,165	$33,343	$19,922	$17,516	$7,320	$20,831
Transitional Family Home	$18,908	$19,099	$18,862	$12,110	$20,408	$18,770	$16,271	$20,943	$16,509
Intensive Outpatient Hospitalization	$13,000	$13,000	$13,000	$0	$0	$0	$0	$0	$0
Intensive In-Home Services	$10,690	$5,900	$4,701	$4,096	$4,130	$4,625	$4,417	$4,584	$4,618
Case Management	$1,297	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Therapeutic Crisis Home	$1,084	$1,084	$845	$2,146	$1,170	$418	$1,257	$0	$1,092
Therapeutic Respite Home	$702	$702	$602	$769	$1,208	$819	$709	$0	$858
Multisystemic Therapy	$171	$175	$111	$191	$213	$131	$134	$735	$131
Residential Crisis Stabilization Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Transitional Support Services	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Overall Average Expenditure (using Method One)**	**$11,963**	**$10,103**	**$9,977**	**$9,231**	**$10,355**	**$9,077**	**$7,648**	**$5,515**	**$8,305**
Overall Average Expenditure* (using Method Two)**	**$9,134**	**$11,231**	**$10,882**	**$11,980**	**$11,397**	**$11,004**	**$9,886**	**$9,217**	**$11,086**

**Overall average expenditures for each age group do not include Case Management or Out-of-State Residential services for which data by race/ethnicity were not available.*
***Method One: Average Expense calculated by averaging mean expense across the available service types.*
****Method Two: Average Expense calculated by dividing the total spent on children from each age group from the prior tables by the total number of service recipients from each race/ethnicity group from Table 11.*

Medicaid-Supported Utilization and Expenditures: Disparities and Disproportionality Based on Island

Table 17 below shows utilization by service type, and in total, based on Island of residence and displays both rate of service use and breakdown by Island of those using services. To determine whether children are under or overrepresented among those receiving services based on the island where they reside, one needs to compare utilization of services based on island residence to the Medicaid-enrolled child population on each of the islands. If those data are not available, comparison can be made to the relative size of the Island child populations. If those data are not available, then comparisons can be made to the relative size of the Island populations in general, which is the approach used for this analysis because child population data were not available.

Oʻahu represents 70% of Hawaiʻi's population, but only 51% of children receiving Medicaid-supported behavioral health services through CAMHD. This suggests **children on Oʻahu may be underrepresented among children receiving services**, even though they comprise 51% of those using services. **Children on Oʻahu seem to be overrepresented in their use of out-of-state residential services** (80% of those using this service). Some underrepresentation is seen as well in Maui (including Lānaʻi and Molokaʻi), which represents 11% of Hawaiʻi's population but 9.5% of children receiving services.

By contrast, the data suggest overrepresentation of children receiving services on the Islands of Hawaiʻi and Kauaʻi. The Island of Hawaiʻi represents 14% of Hawaiʻi's population but 31% of children receiving services. **To a lesser degree, overrepresentation is seen in Kauaʻi,** which constitutes 5% of Hawaiʻi's population but 8% of those receiving services. Compared to their population size, **children on the Island of Hawaiʻi are overrepresented in most service types.** Their rate of service use (that is, the percentage of children on the Island using a given service out of all children on the Island using services) exceeds that of all children in general for every service type except community-based residential, out-of-state residential and TSS. Compared to their population size, **children on Kauaʻi are overrepresented in all but Respite and Out-of-State Residential Treatment.** Their rates of service use exceed that of all children for every service except Respite and Out-of-State Residential Treatment, and no children on Kauaʻi appear to be using TSS or TCH. Compared to their population size, children on Maui are underrepresented in many service types,

Table 17: CAMHD. *Medicaid-Supported Utilization: Service Utilization Rates and Representation Based on Island of Residence

Type of Service	Total Service Utilization across All Islands: % of All Children Served	Service Utilization Rate**, by Island % of Children from the Island Receiving Service Type Out of All Children on the Island Receiving Services				Service Representation***, by Island			
		Island of Hawai'i	Kaua'i	Maui, Lāna'i, and Moloka'i	O'ahu	Island of Hawai'i	Kaua'i	Maui, Lāna'i, and Moloka'i	O'ahu
Intensive In-Home Services	77.5%	73.5%	71.1%	57.4%	84.5%	29.2%	7.7%	7.0%	56.1%
Multisystemic Therapy	14.5%	13.7%	15.7%	30.9%	11.7%	29.2%	9.0%	20.1%	41.7%
Transitional Family Home	10.2%	18.0%	13.3%	1.1%	6.7%	54.5%	10.9%	1.0%	33.7%
Community-Based Residential Treatment	7.9%	7.2%	8.4%	11.7%	7.6%	27.8%	8.9%	13.9%	49.4%
Hospital-Based Residential	5.9%	7.8%	6.0%	7.4%	4.5%	40.7%	8.5%	11.9%	39.0%
Therapeutic Respite Home	2.3%	5.6%	1.2%	0%	1.0%	73.9%	4.3%	0%	21.7%
Out-of-State Residential	2.0%	0.3%	1.2%	2.1%	3.1%	5.0%	5.0%	10.0%	80.0%
Residential Crisis Stabilization Program	1.1%	1.3%	1.2%	0%	1.2%	36.4%	9.1%	0%	54.5%
Transitional Support Services	1.1%	2.9%	0%	0%	0.4%	81.8%	0%	0%	18.2%
Therapeutic Crisis Home	0.8%	1.3%	0%	1.1%	0.6%	50.0%	0%	12.5%	37.5%
Intensive Outpatient Hospitalization	0.1%	0%	0%	0%	0.2%	0%	0%	0%	100%
All Services	**100%**	**100%**	**100%**	**100%**	**100%**	**30.8%**	**8.4%**	**9.5%**	**51.4%**
% of Hawai'i Population						**14%**	**5%**	**11%**	**70%**

**Care Coordination service utilization data were unavailable for Island breakdown and are thus excluded from this table.*
***Service utilization rate refers to the percentage of children on a given Island who use a particular service out of all children on the island using services.*
****Service Representation reflects the Island composition of all children receiving each service type*

although they are overrepresented in three: MST, Community-Based Residential Treatment, and Inpatient Psychiatric Hospital Services. Their rate of service use is well below that of children in general for Transitional Family Home, RCSP, and TSS. No children on Maui appear to be using Therapeutic Respite Home.

As noted earlier, compared to their population size, children on Oʻahu are underrepresented in every service type except for Out-of-State Residential Treatment. While their rates of service use are not notably different from children in general, the overall number of children on Oʻahu using services is small compared to the Oʻahu population size, leading to overall underrepresentation in service use. Even with this underrepresentation, however, children on **Oʻahu represent over half of all service users (51.4%). Oʻahu children, representing 51% of service recipients, and children on the Island of Hawaiʻi, who represent 31% of service users, together comprise over 82% of all children using services.**

Table 18 shows the breakdown of total expenditures by Island. **Eighty-five percent (85%) of total dollars were used by children on the Island of Hawai'i and on O'ahu, which, together, account for 82% of all children using Medicaid-supported behavioral health services through CAMHD,** as noted earlier. Children on the Island of Hawai'i use a larger share of dollars (37%) than their representation among children using services (31%). This differential is driven by their use of a greater share of dollars compared to their representation among recipients for inpatient hospital psychiatric services, MST, and Respite.

In contrast, children on the other Islands use fewer total dollars compared to their representation among recipients. Children on Kaua'i are 8% of recipients and use 7% of dollars. They use fewer total expenditures than their representation among recipients for every service type, except Transitional Family Home. Children on Maui, Lāna'i, and Moloka'i represent 10% of recipients but use 7% of dollars. They use fewer total dollars compared to their representation among recipients for every service type, except Community-Based Residential Treatment. Children on O'ahu represent 51% of recipients and use 49% of dollars. Even with their relatively lower use of overall expenditures, children on O'ahu still use a greater share of expenditures than their representation among recipients of Community-Based Residential Treatment, MST, and TCH.

Table 19 shows the average expenditure per child served on each of the Islands by type of service and across services. **Children on the Island of Hawai'i have the highest mean expense** for the following services: inpatient hospital psychiatric services, Respite, and MST. Children on the Island of Hawai'i have the highest overall mean expense at $9,877 or $10,727, depending on how overall mean expense is calculated (as discussed earlier). Children on Kaua'i have the highest mean expense for Transitional Family Home and lower mean expenditures compared to other Island children for every other service type. Children on Maui, Lāna'i, and Moloka'i do not have the highest mean expense for any service type, although they have close to the highest mean expense for Community-Based Residential Treatment ($24,022), second to children on O'ahu for this service ($24,916). Children on O'ahu also have the highest mean expense for TCH.

Table 18: CAMHD. Medicaid-Supported Total Expenditures: Disparities Based on Island*

Type of Service	Total Service Expenditures Across All Islands	Service Expenditures (% of Service Expenditure for All Children)							
		Island of Hawai'i		Kaua'i		Maui, Lāna'i, and Moloka'i		O'ahu	
		Expenditure (%)	% Rec'd Service	Expenditure (%)	% Rec'd Service	Expenditure (%)	% Rec'd Service	Expenditure (%)	% Rec'd Service
Intensive In-Home Services	$3,418,902	$1,033,066 (30.2%)	29.2%	$133,816 (3.9%)	7.7%	$211,900 (6.2%)	7.0%	$2,040,121 (59.7%)	56.1%
Transitional Family Home	$1,958,850	$1,058,160 (54.0%)	54.5%	$247,586 (12.6%)	10.9%	$11,790 (0.6%)	1.0%	$641,314 (32.7%)	33.7%
Community-Based Residential Treatment	$1,712,960	$364,600 (21.3%)	27.8%	$112,403 (6.6%)	8.9%	$264,241 (15.4%)	13.9%	$971,716 (56.7%)	49.4%
Hospital-Based Residential	$1,656,875	$801,875 (48.4%)	40.7%	$98,125 (5.9%)	8.5%	$161,250 (9.7%)	11.9%	$595,625 (35.9%)	39%
Multisystemic Therapy	$25,069	$9,654 (38.5%)	29.2%	$0(0%)	9.0%	$4,332 (17.3%)	20.1%	$4,332 (17.3%)	41.7%
Therapeutic Respite Home	$16,147	$12,815 (79.4%)	73.9%	$513 (3.2%)	4.3%	$0 (0%)	0%	$2,819 (17.5%)	21.7%
Intensive Outpatient Hospitalization	$13,000	$0 (0%)	0%	$0 (0%)	0%	$0 (0%)	0%	$13,000 (100%)	100%
Therapeutic Crisis Home	$7,607	$2,341 (30.8%)	50.0%	$0 (0%)	0%	$780 (10.3%)	12.5%	$4,489 (59%)	37.5%
Out-of-State Residential	N/A	N/A	5.0%	N/A	5%	N/A	10%	N/A	80%
Residential Crisis Stabilization Program	N/A	N/A	36.4%	N/A	9.1%	N/A	0%	N/A	54.5%
Transitional Support Services	N/A	N/A	81.8%	N/A	0%	N/A	0%	N/A	18.2%
All Services	**$8,809,409**	**$3,282,510**	**30.8%**	**$592,442 (6.7%)**	**8.4%**	**$654,293 (7.4%)**	**9.5%**	**$4,280,165 (48.6%)**	**51.4%**

**Care Coordination utilization data were unavailable for Island breakdown. Expenditure data were not available for Out-of-State Residential, Residential Crisis Stabilization Program, and Transitional Support Services.*

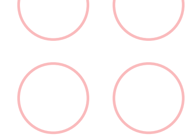
Table 19: CAMHD. Medicaid-Supported Average Expenditures Per Child Served*: Disparities Based on Island

Type of Service	Average Expenditure Per Child Using Service	Island of Hawaiʻi: Average Expenditure Per Child Using Service	Kauaʻi: Average Expenditure Per Child Using Service	Maui, Lānaʻi, and Molokaʻi: Average Expenditure Per Child Using Service	Oʻahu: Average Expenditure Per Child Using Service
Out-of-State Residential	$41,887	***N<11***	***N<11***	***N<11***	***N<11***
Hospital-Based Residential	$28,979	$33,411	$19,625	$23,036	$25,897
Community-Based Residential Treatment	$21,824	$16,573	$16,058	$24,022	$24,916
Transitional Family Home	$18,908	$19,239	$22,508	$11,790	$18,862
Intensive Outpatient Hospitalization	$13,000	$0	$0	$0	$13,000
Intensive In-Home Services	$4,440	$4,591	$2,268	$3,924	$4,723
Care Coordination	$1,297	***N<11***	***N<11***	***N<11***	***N<11***
Therapeutic Crisis Home	$1,084	$585	$0	$780	$1,495
Therapeutic Respite Home	$702	$754	$513	$0	$564
Multisystemic Therapy	$171	$230	$0	$149	$185
Residential Crisis Stabilization Program	N/A	N/A	N/A	N/A	N/A
Transitional Support Services	N/A	N/A	N/A	N/A	N/A
Overall Average Expenditure**(using Method One)	**$11,963*** **	**$9,877*** **	**$7,056*** **	**$8,089*** **	**$9,844*** **
Overall Average Expenditures***(using Method Two)	**$8,863*** **	**$10,727*** **	**$7,138*** **	**$6,961*** **	**$8,376*** **

*Overall average expenditures for each Island do not include Care Coordination or Out-of-State Residential services for which data by Island were not available.

**Method One: Average Expense calculated by averaging mean expense across the service types. (For Oʻahu, intensive outpatient hospitalization mean expense was not included as it was only one youth and is a service no other Island children accessed.)

***Method Two: Average Expense calculated by dividing the total spent on children from each Island from Table 18 by the total number of service recipients from each island from Table 17



Medicaid-Supported Utilization and Expenditures by Diagnoses

Table 20 below shows the primary diagnoses received by children using Medicaid-supported services through CAMHD. **The three most prevalent diagnoses given to children are: Disruptive/Impulse Control/Conduct Disorder** (24% of children with diagnoses); **Attention-Deficit/Hyperactivity Disorder** (ADHD, 18% of children with diagnoses); and **Depressive Disorders** (18% of children with diagnoses). National analyses similarly have found that ADHD, conduct disorder, and mood disorders are the diagnoses most frequently received by children in Medicaid using behavioral health care.[xxiv] The next most frequent diagnoses among children receiving Medicaid-supported services through CAMHD are Adjustment Disorder (14%) and Post-Traumatic Stress Disorder (PTSD, 14%). Fewer than 5% of children received other types of diagnoses. National analyses have found that very few children are given diagnoses of schizophrenia or bipolar disorders, which also is true in Hawai‘i, where 2% of children received these diagnoses, respectively. National analyses also have found that few children receiving behavioral health services in Medicaid receive a primary diagnosis of substance use disorder, which also is true in Hawai‘i. While Medicaid dollars through CAMHD may be supporting youth with co-occurring SUD who have a primary mental health diagnosis, it does not appear that Medicaid dollars through CAMHD are supporting youth with primary SUD challenges. This is to be expected, given CAMHD's eligibility criteria.

Table 20: CAMHD. Breakdown of Primary Diagnoses Received by Children Using Medicaid-Supported Behavioral Health Services through CAMHD*

Diagnoses	# of Children Receiving Diagnosis	% of Children Receiving Diagnosis (out of all children with diagnoses)
Disruptive, Impulse-Control, and Conduct Disorders	233	23.5%
Depressive Disorders	180	18.1%
Attention-Deficit/Hyperactivity Disorder	180	18.1%
Adjustment Disorder	138	13.9%
Posttraumatic Stress Disorder	134	13.5%
Anxiety Disorders	46	4.6%
Other Trauma- and Stressor-Related Disorders	33	3.3%
Bipolar and Related Disorders	22	2.2%
Schizophrenia Spectrum and Other Psychotic Disorders	17	1.7%
Other Infrequent Diagnoses**	***N<11***	***N<11***
Obsessive-Compulsive and Related Disorders	***N<11***	***N<11***
Substance-Related and Addictive Disorders	***N<11***	***N<11***
Missing Diagnosis or Primary Diagnosis was not Mental Health	*11*	--
All Children with Diagnoses	**993**	**100%**

**Does not include children using Care Coordination or Out-of-State Residential Services, for whom diagnoses data were not available.*
***Includes Dissociative Disorders, Elimination Disorders, Feeding & Eating Disorders, Sex Dysphoria, Neurocognitive Disorders, Paraphilic Disorders, Personality Disorders, "Other Mental Disorders," and medical or other conditions that may be a focus of attention.*

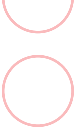
Table 21 shows total and mean expenditures for children using Medicaid-supported services through CAMHD based on diagnosis. **Nearly 75% of total dollars are allocated to children with the most frequently given diagnoses** (Disruptive/Impulse Control/Conduct Disorder, ADHD, and Depressive Disorders) **plus children with diagnoses of PTSD. While fewer children received a diagnosis of PTSD (13%), the mean expense of these children is the highest among all diagnoses** ($13,607 per child with a diagnosis of PTSD, compared to an average expenditure of $9,051 per child across all diagnoses).

While diagnoses data stratified by race/ethnicity were not available for this analysis, national studies have found that Multiracial and Black/African American children in Medicaid who use behavioral health care most frequently receive diagnoses of Conduct Disorder.[xxxiv,xii,xiii] The *Faces of Medicaid*[xxiv] study also found that Conduct Disorder was the most frequently given diagnosis to very young children, 0-5. **Conduct Disorder in young children may mask other issues such as learning problems or trauma, and it often manifests in early childhood** settings like Head Start and preschool programs. There is significant potential for early intervention and partnerships between these settings, as well as primary care, and the mental health community.[xiv] **In general, a quality improvement focus on serving children and youth with aggressive behaviors may be warranted,** given the seeming prevalence of this population among those served by CAMHD and relative extent of resources used.

Table 21: CAMHD. Breakdown of Primary Diagnoses Received by Children Using Medicaid-Supported Behavioral Health Services through CAMHD*

Diagnoses	Total Expenditure	% of All Expenditures	Mean Expenditure
Disruptive, Impulse-Control, and Conduct Disorders	$1,890,236	21.3%	$8,113
Post-Traumatic Stress Disorders (PTSD)	$1,823,386	20.5%	$13,607
Attention-Deficit/Hyperactivity Disorders (ADHD)	$1,472,167	16.6%	$8,179
Depressive Disorders	$1,435,819	16.1%	$7,977
Adjustment Disorder	$1,170,506	13.2%	$8,482
Other Trauma- and Stressor-Related Disorders	$345,857	3.9%	$10,481
Anxiety Disorders	$256,390	2.9%	$5,574
Bipolar and Related Disorders	$239,836	2.7%	$10,902
Schizophrenia Spectrum and Other Psychotic Disorders	$152,981	1.7%	$8,999
Other Infrequent Diagnoses**	$68,032	0.8%	$13,606
Obsessive-Compulsive and Related Disorders	$33,922	0.4%	$11,307
Substance-Related and Addictive Disorders	$5,677	0.1%	$2,838
Missing Diagnosis or Primary Diagnosis was not Mental Health	*$92,755*	--	*$8,432*
All Children with Diagnoses	**$8,894,807**	**100%**	**$8,958**

**Does not include children using Care Coordination or Out-of-State Residential Services, for whom diagnoses data were not available.*
***Includes Dissociative Disorders, Elimination Disorders, Feeding & Eating Disorders, Sex Dysphoria, Neurocognitive Disorders, Paraphilic Disorders, Personality Disorders, "Other Mental Disorders," and medical or other conditions that may be a focus of attention.*



Med-QUEST Division, Department of Human Services

Total Med-QUEST Child Behavioral Health Utilization and Expenditures

The table below shows total Med-QUEST SFY 2019 child behavioral health utilization and expenditures across its three program areas, i.e., Managed Care, CAMHD, and Fee-for-Service (FFS). The Med-Quest data include children, youth, and young adults, ages 0-25.

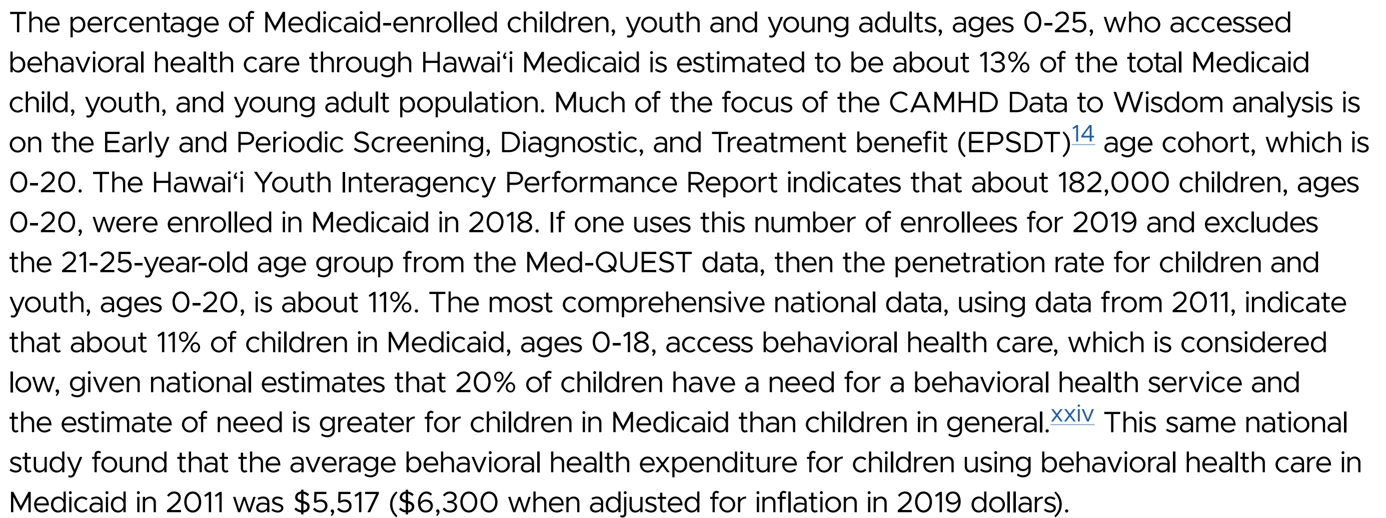
Table 22: Med-QUEST. SFY 2019 Total Child Behavioral Health Utilization and Expenditures and Average Expenditure Per Child Served

Program Area	# and % of Children Served	Total Expenditure and % of Total	Average Expenditure per Child Served
Managed Care	24,327 *98% of Total	$166,446,499 94% of Total	$6,842
CAMHD	979 4% of Total	$7,573,715 4% of Total	$7,736
Fee-for-Service	638 3% of Total	$3,347,922 2% of Total	$5,248
Total	24,848 100% Unduplicated Count	$177,368,136 100%	$7,138

**Note. Percentages of children served exceed 100% because 1,096 children received services from more than one program area. A follow up data pull not included in the current report found a total of $10,613,157.68 paid by Med-Quest to CAMHD for the same fiscal year.*

The Med-QUEST data indicate that most **Medicaid-enrolled children, youth, and young adults who used behavioral health care received services through Medicaid managed care plans:** 24,327 children out of 24,848 total (98%). **Managed care expenditures accounted for 94% of total child behavioral health Medicaid expense.** The Managed Care section below explores the types of behavioral health services that children received through the managed care organizations (MCOs).

The CAMHD data provided by Med-QUEST differ from the data provided by CAMHD for this analysis. The Med-QUEST data show that 979 children received services through CAMHD at an expense of $7.6m, while the CAMHD data indicate that 1,981 children received Medicaid-reimbursed services at an expense of $12.3m. The discrepancy appears, in part due to CAMHD's inclusion of certain Medicaid-financed services that are not included in the Med-QUEST data. For example, CAMHD included care coordination, which is reimbursed by Medicaid through time studies, not via claims, while the Med-QUEST data are based solely on claims. Other services not included in the Med-QUEST data, but provided by CAMHD, are Community-Based Residential Treatment, Out-of-State Residential Treatment centers, TCH, ABI, Therapeutic Respite Home, and RCSP. It should be noted that a follow up data pull not included in the current report found a total of $10,613,157.68 paid by Med-Quest to CAMHD for the same fiscal year.



The percentage of Medicaid-enrolled children, youth and young adults, ages 0-25, who accessed behavioral health care through Hawai'i Medicaid is estimated to be about 13% of the total Medicaid child, youth, and young adult population. Much of the focus of the CAMHD Data to Wisdom analysis is on the Early and Periodic Screening, Diagnostic, and Treatment benefit (EPSDT)[14] age cohort, which is 0-20. The Hawai'i Youth Interagency Performance Report indicates that about 182,000 children, ages 0-20, were enrolled in Medicaid in 2018. If one uses this number of enrollees for 2019 and excludes the 21-25-year-old age group from the Med-QUEST data, then the penetration rate for children and youth, ages 0-20, is about 11%. The most comprehensive national data, using data from 2011, indicate that about 11% of children in Medicaid, ages 0-18, access behavioral health care, which is considered low, given national estimates that 20% of children have a need for a behavioral health service and the estimate of need is greater for children in Medicaid than children in general.[xxiv] This same national study found that the average behavioral health expenditure for children using behavioral health care in Medicaid in 2011 was $5,517 ($6,300 when adjusted for inflation in 2019 dollars).

The Med-QUEST data indicate an average expenditure of $7,138 in 2019. However, this amount includes the 21-25-year-old age cohort, which has the highest average expenditure across the 0-25 age groups (see below discussion). If the average expense were adjusted to exclude the 21-25-year-old group and include only the 0-20 age group, **the average expenditure is estimated to be $5,600 per child, which is less than the inflation-adjusted national average in 2011 of $6,300. It appears that the penetration rate** (the percentage of children accessing behavioral health care in Medicaid out of all children in Medicaid) **is low, as is the average amount spent per child.**

Managed Care Utilization and Expenditures

Table 23 shows, by type of service and in total, the number of children in Managed Care using behavioral health services, their expenditures, and average expenditure per child using services. **Most children in Managed Care who used behavioral health services received Screening and Assessment (58% of children) and Individual Therapy (49% of children). Fewer than 10% of children received any other service type.** For example, 6% of children received Family Therapy, not quite 2% received Group Therapy, less than 1% received Mobile Crisis Intervention, and less than 1% received SUD Outpatient Treatment. By contrast, larger percentages of children used the ED (7.3%) and Inpatient Psychiatric Hospital-related services, with 9.5% using Other Services, which are primarily inpatient-related, and 4% using inpatient hospital psychiatric services.

Table 23 below shows the top three expenditure services in Managed Care: Other Services (primarily inpatient-related, though exact amounts are unknown) at $100.2m, comprising 60% of total dollars; Individual Therapy at $37.1m, comprising 22% of total dollars; and Emergency Department at $14.7m, comprising 9% of total dollars. **The top three services with the highest mean expense per child served** are: Other Services (inpatient-related claims) at $43,247 per child; Group Therapy at $11,383 per child; and Emergency Department at $8,269.

[14] Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefit, which provides comprehensive and preventive health care services for children under age 21 who are enrolled in Medicaid. See www.medicaid.gov/medicaid/benefits/early-and-periodic-screening-diagnostic-and-treatment/index.html

Table 23: Managed Care Services: Greatest Expenditures and Highest Mean Expense Per Child

Services with the Greatest Expenditures in Managed Care		Services with the Highest Mean Expense Per Child Served in Managed Care	
Service	**Expenditure (Percent of Managed Care Expenditures)**	**Service**	**Mean Expense Per Child**
Other Services*	$100.2 million (60%)	**Other Services***	$43,247
Individual Therapy	$37.1 million (22%)	**Group Therapy**	$11,383
Emergency Department	$14.7 million (9%)	**Emergency Department**	$8,269

**Primarily inpatient-related services.*

The very low mean expense for Inpatient Hospital Psychiatric Services at $340 per child (Table 24) and the high mean expense for Other Services at $43,247 reinforces that most inpatient-related claims would appear to be included in the Other Services category. As noted earlier, Other Services (primarily inpatient-related) constitute 60% of all managed care child behavioral health expenditures for fewer than 10% of children served and with a high average expenditure of over $43,000 per child. **It would be advisable for stakeholders to further explore the Other Services category to understand precisely what claims are included.** The data suggest there may be opportunity to reduce reliance on Hospital-Based Residential (Inpatient Psychiatric Hospitalization), as well as ED use, through expanded use of Mobile Crisis Intervention, IIH, and Family Peer Support, which now are received by very few children through managed care.

The mean expense for youth receiving SUD Outpatient at $7 per youth suggests a **very minimal amount of SUD service is being provided through managed care.** Better access to SUD services through managed care may help to reduce use of inpatient hospital and ED use. **It may also be advisable to look at what type of Individual Therapy children are receiving, given that it is provided to almost half of children who use behavioral health services, and whether it includes components of evidence-based practice or is largely more traditional, office-based therapy.** Similarly, the relatively high average expenditure for Group Therapy at $11,383 (compared to the mean expense for Individual Therapy at $3,116) suggests **a need to examine what is being provided through Group Therapy.**

Table 24: Med-QUEST. Managed Care Service Utilization and Expenditures by Type of Service and in Total

Type of Service	Number of Children	% of All Children	Total Expenditure	% of All Expenditures	Average Expenditure
Screening and Assessment (including psych evaluations and psychosexual assessment)	14,033	57.7%	$4,811,147	2.9%	$343
Individual Therapy	11,901	48.9%	$37,079,803	22.3%	$3,116
Group Therapy	381	1.6%	$4,336,910	2.6%	$11,383
Family Therapy	1,429	5.9%	$2,317,060	1.4%	$1,621
Medication Management	1,232	5.1%	$306,210	0.2%	$249
Mobile Crisis Intervention	199	0.8%	$93,882	0.1%	$472
Intensive In-Home Services	***N<11***	***N<11***	$241	0%	***N<11***
Family Peer Support	***N<11***	***N<11***	$1,706	0%	***N<11***
Case Management	1,903	7.8%	$154,349	0.1%	$81
Therapeutic Foster Care	35	0.1%	$267,396	0.2%	$7,640
Inpatient Hospital Psychiatric Services	989	4.1%	$335,829	0.2%	$340
Partial Hospitalization/Day Treatment	29	0.1%	$201,088	0.1%	$6,934
ED (for behavioral health)	1,778	7.3%	$14,702,134	8.8%	$8,269
Telebehavioral Health	24	0.1%	$1,680	0%	$70
SUD Outpatient	218	0.9%	$1,538	0%	$7
Adaptive Behavioral Intervention	192	0.8%	$1,490,877	0.9%	$7,765
Transitional Services	709	2.9%	$141,334	0.1%	$199
Other Services*	2,317	9.5%	$100,203,316	60.2%	$43,247
All Services	**24,327**	**100%**	**$166,446,499**	**100%**	**$6,842**

**According to Med-QUEST, most of the claims that comprise Other Services are inpatient-related.*

Managed Care Utilization and Expenditures Based on Diagnosis

Representation of Managed Care Diagnoses Among Children Receiving Behavioral Health Services

The table below shows the breakdown of the diagnoses that children received who used behavioral health care through Managed Care, by type of service and across services. Note that a large percentage of children – nearly 40% - received diagnoses of Other, which may also include children with no diagnosis. Diagnoses of Other primarily fall into the Screening and Assessment and Case Management service categories. *The discussion that follows pertains only to those children who received specific diagnoses.* Also, it should be noted that children may receive multiple diagnoses so percentages across diagnoses may exceed 100%.

Across services, children with **Adjustment Disorders constitute the largest cohort (14%**) of those with specific diagnoses who received services, followed by children with **Depressive Disorders (10%),** and children with **ADHD (9%)**. Very few children received diagnoses of Schizophrenia and Other Psychotic Disorders (1.7%) or Bipolar Disorders (1.4%), which also is true nationally. **Nearly 6% of youth received a diagnosis of SUD, yet, as noted earlier, fewer than 1% of youth received SUD OP services through Managed Care.**

Children with a diagnosis of Adjustment Disorder constitute the largest group receiving Screening and Assessment, Individual Therapy, Group Therapy, Family Therapy, and Mobile Crisis Intervention. Children with a diagnosis of Depressive Disorder were the largest cohort using Inpatient Hospital Psychiatric Services, Other Services (inpatient-related), and ED. The diagnostic groups with the lowest representation (less than 2%) included: Schizophrenia and Other Psychotic Disorders, Bipolar Disorders, OCD, and IDD.

Table 25: Med-QUEST. Representation of Managed Care Diagnoses Among Children Receiving Behavioral Health Services

Type of Service	% Children by diagnosis who used behavioral health care through Managed Care, by type of service													
	Schizophrenia Spectrum & Other Psychotic Disorders	Bipolar and Related Disorders	Anxiety Disorders	Obsessive-Compulsive and Related Disorders	Post-Traumatic Stress Disorder	Adjustment Disorder	Attention-Deficit/ Hyperactivity Disorder	Disruptive, Impulse-Control, and Conduct Disorders	Intellectual Disability	Autism Spectrum Disorder	Depressive Disorders	Substance Use Disorders	Other Infrequent Diagnoses	Other
Screening and Assessment (including psych evaluations and psychosexual assessment)	1.3	1.0	3.3	0.1	2.5	12.6	4.4	1.2	0.3	1.9	7.0	2.7	0.5	68.4
Individual Therapy	2.9	2.8	15.4	0.5	8.0	27.9	21.7	4.7	3.5	5.1	18.6	5.5	2.6	7.6
Group Therapy	4.2	2.9	4.7	***N<11***	3.1	54.9	6.0	***N<11***	0	***N<11***	11.8	14.2	***N<11***	***N<11***
Family Therapy	0.8	1.0	7.6	***N<11***	7.3	38.6	23.3	7.1	0.8	6.3	11.3	***N<11***	1.0	2.8
Intensive In-Home Services	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Family Peer Support	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Medication Management	7.9	6.3	11.3	***N<11***	9.0	5.8	33.5	3.4	***N<11***	4.9	25.2	3.0	***N<11***	3.4
Mobile Crisis Intervention	5.5	6.5	***N<11***	0	***N<11***	64.8	6.0	***N<11***	***N<11***	***N<11***	9.5	***N<11***	0	***N<11***
Case Management	***N<11***	***N<11***	1.2	***N<11***	***N<11***	***N<11***	3.5	1.3	0.7	1.9	1.1	***N<11***	0.8	92.3
Transitional Family Homes	***N<11***	***N<11***	0	0	***N<11***	***N<11***	0	0	0	0	***N<11***	51.4	0	0
Inpatient Hospital Psychiatric Services	16.6	7.3	3.7	***N<11***	5.1	15.9	3.7	8.3	1.7	***N<11***	35.7	19.8	1.9	11.9
Partial Hospitalization/Day Treatment	***N<11***	***N<11***	0	0	0	***N<11***	0	0	0	0	***N<11***	37.9	***N<11***	0
ED (for behavioral health)	10.5	4.0	14.8	***N<11***	3.0	10.8	1.6	5.2	***N<11***	0.7	39.2	32.1	3.2	***N<11***
Telebehavioral Health	0	0	0	0	0	0	0	0	***N<11***	0	0	0	0	95.8
SUD Outpatient	0	0	***N<11***	0	0	0	0	0	0	0	0	40.4	***N<11***	60.1
Adaptive Behavioral Intervention	0	0	0	0	0	0	0	0	***N<11***	99.5	0	0	0	***N<11***
Transitional Services	1.7	2.1	8.6	0	13.3	46.3	18.1	6.6	***N<11***	2.4	7.1	***N<11***	***N<11***	***N<11***
Other Services*	8.0	4.5	4.7	***N<11***	3.3	13.9	12.6	4.4	0.9	8.7	18.9	30.7	1.0	1.7
All Services	**1.7**	**1.4**	**7.2**	**0.2**	**3.7**	**13.8**	**9.2**	**2.4**	**1.5**	**2.7**	**9.6**	**5.6**	**1.4**	**39.7**

Managed Care Rates of Service Utilization for Child Behavioral Health Services Based on Diagnosis

The table below shows rates of service use, by type of service, based on diagnosis. Rates of service show the percentage of children with a given diagnosis who use a particular service out of all children with that diagnosis. It is a different measure from the percentage of children with a given diagnosis who use a particular service out of all children using that service.

Children with diagnoses of ADHD and IDD had the highest rates of Individual Therapy use, with over 90% of these children using this service. Children with an SUD diagnosis had the lowest rate of Individual Therapy use at 37%. Children with diagnoses of Adjustment Disorder had the highest Group Therapy rate of use at 5%; children with an Anxiety diagnosis had the lowest at 0.8%. Children with Disruptive, Impulse Control and Conduct Disorders, and children with a diagnosis of Adjustment Disorder, had the highest Family Therapy rate of use at 13% each; children with a diagnosis of Schizophrenia and Other Psychotic Disorders had the lowest rate of use at 2.3%.

Children with a diagnosis of Schizophrenia and Other Psychotic Disorders, and those with a diagnosis of Bipolar Disorder, had the highest rates of use for Medication Management at 19% and 17%, respectively; children with an Anxiety Disorder had the lowest Medication Management rate at 1.7%.

Children with a diagnosis of Schizophrenia and Other Psychotic Disorders, and those with a diagnosis of Bipolar Disorder, had the highest rates of use of Inpatient Hospital Psychiatric Services at 32% and 16%, respectively. Children with a diagnosis of ADHD had the lowest rate at 1.3%. (Note: Use of inpatient hospital psychiatric services can help to illustrate the difference between rate of service use and representation among all children using a service. While children with a diagnosis of Schizophrenia and Other Psychotic Disorders had the highest rate of use for IP at 36%, they represent only 17% of those using IP because of their smaller numbers among all children with diagnoses. In contrast, children with Depressive Disorders have a lower rate of IP use at 12%, but they constitute 36% of those using IP because of their higher numbers among children with diagnoses.)

Youth with a diagnosis of SUD had the highest rate of use for Other Services (inpatient-related claims), with 40% of these youth using Other Services. They were followed by youth with a diagnosis of Schizophrenia and Other Psychotic Disorders at 36%, and children with ASD at 25%. Children with a diagnosis of Anxiety and children with a diagnosis of IDD had the lowest rates of use of Other Services at about 4% each. Youth with a diagnosis of Schizophrenia and Other Psychotic Disorders, and those with a SUD diagnosis, had the highest rates of ED use, at 36% and 33%, respectively. (Note: While youth with a diagnosis of Schizophrenia and Other Psychotic Disorders had the highest rate of ED use at 36%, they constitute only 11% of those using ED because of their overall smaller numbers among children with diagnoses. Children with Depressive Disorders, because of their higher numbers among all children with diagnoses, constitute the largest group using ED, with 39% of these children using ED, even though their rate of use is lower at 24%.)

To summarize, among children with specific diagnoses, diagnoses associated with the highest use of specific service types were:

- *Schizophrenia and other Psychotic Disorders:* Inpatient Hospital Psychiatric Services, ED, Medication Management
- *Adjustment Disorder:* Screening and Assessment, Group Therapy, Mobile Crisis Intervention
- *ADHD:* Individual Therapy
- *Disruptive, Impulse Control Conduct Disorder:* Family Therapy
- *Autism Spectrum Disorder:* ABI, Case Management
- *SUD:* Other (inpatient-related), Therapeutic Foster Care, SUD Outpatient, Partial Hospitalization

It should also be noted, as referenced earlier, that, regardless of diagnosis, children were most likely to receive Screening and Assessment and Individual Therapy.

Table 26: Managed Care Rates of Service Utilization for Child Behavioral Health Services

Type of Service	Total Service Utilization #(%) of Children Using Service	# (%) of Children with the diagnosis served													
		Schizophrenia Spectrum & Other Psychotic Disorders	Bipolar and Related Disorders	Anxiety Disorders	Obsessive-Compulsive and Related Disorders	Post-Traumatic Stress Disorder	Adjustment Disorder	Attention-Deficit/ Hyperactivity Disorder	Disruptive, Impulse-Control, and Conduct Disorders	Intellectual Disability	Autism Spectrum Disorder	Depressive Disorders	Substance Use Disorders	Other Infrequent Diagnoses	Other
Screening and Assessment	*14033 (45.2)*	181 (34.9)	146 (32.5)	470 (21.1)	15 (22.1)	357 (31.2)	1765 (41.1)	620 (21.7)	169 (22.5)	38 (8.2)	264 (32.0)	976 (32.9)	377 (32.9)	65 (15.4)	9601 (77.9)
Individual Therapy	*11901 (38.3)*	342 (65.9)	336 (74.8)	1832 (82.3)	56 (82.4)	957 (83.7)	3320 (77.3)	2586 (90.6)	555 (73.9)	420 (90.3)	604 (73.1)	2217 (74.7)	653 (37.3)	314 (74.6)	906 (7.3)
Group Therapy	*381 (1.2)*	16 (3.1)	11 (2.4)	18 (0.8)	*N<11*	12 (1.0)	209 (4.9)	23 (0.8)	*N<11*	*N<11*	*N<11*	45 (1.5)	54 (3.1)	*N<11*	*N<11*
Family Therapy	*1429 (4.6)*	12 (2.3)	14 (3.1)	108 (4.9)	*N<11*	105 (9.2)	551 (12.8)	333 (11.7)	101 (13.4)	11 (2.4)	90 (10.9)	162 (5.5)	*N<11*	14 (3.3)	40 (0.3)
Medication Management	*1232 (4.0)*	97 (18.7)	77 (17.1)	139 (6.2)	*N<11*	111 (9.7)	71 (1.7)	413 (14.5)	42 (5.6)	*N<11*	60 (7.3)	311 (10.5)	37 (2.1)	*N<11*	42 (0.3)
Mobile Crisis Intervention	*199 (0.6)*	11 (2.1)	13 (2.9)	13 (2.9)	*N<11*	*N<11*	129 (3.0)	12 (0.4)	*N<11*	*N<11*	*N<11*	19 (0.6)	*N<11*	*N<11*	*N<11*
Intensive In-Home Services	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Family Peer Support	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Case Management	*1903 (6.1)*	*N<11*	*N<11*	23 (1.0)	*N<11*	*N<11*	*N<11*	67 (2.3)	24 (3.2)	14 (3.0)	36 (4.4)	20 (0.7)	*N<11*	15 (3.6)	1757 (14.3)
Therapeutic Foster Care	*35 (0.1)*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	18 (1.0)	*N<11*	*N<11*
Inpatient Hospitalization	*989 (3.2)*	164 (31.6)	72 (16.0)	37 (1.7)	*N<11*	50 (4.4)	157 (3.7)	37 (1.3)	82 (10.9)	17 (3.7)	*N<11*	353 (11.9)	196 (11.2)	19 (4.5)	118 (1.0)
Partial Hosp./ Day Treatment	*29 (0.1)*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	11 (0.6)	*N<11*	*N<11*
ED (behavioral health)	*1778 (5.7)*	186 (35.8)	71 (15.8)	264 (11.9)	*N<11*	54 (4.7)	192 (4.5)	28 (1.0)	92 (12.3)	*N<11*	13 (1.6)	697 (23.5)	570 (32.6)	57 (13.5)	N<11
Telebehavioral Health	*24 (0.1)*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	23 (0.2)
SUD Outpatient	*218 (0.7)*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	88 (5.0)	*N<11*	131 (1.1)
Adaptive Behavioral Intervention	*192 (0.6)*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	191 (23.1)	*N<11*	*N<11*	*N<11*	*N<11*
Transitional Services	*709 (2.3)*	12 (2.3)	15 (3.3)	61 (2.7)	*N<11*	94 (8.2)	328 (7.6)	128 (4.5)	47 (6.3)	*N<11*	17 (2.1)	50 (1.7)	*N<11*	*N<11*	*N<11*
Other Services	*2317 (7.5)*	185 (35.6)	105 (23.4)	110 (4.9)	*N<11*	77 (6.7)	323 (7.5)	291 (10.2)	101 (13.4)	20 (4.3)	202 (24.5)	437 (14.7)	712 (40.7)	23 (5.5)	40 (0.3)
All Services	*31061 (100)*	*519 (100)*	*449 (100)*	*2225 (100)*	*68 (100)*	*1143 (100)*	*4295 (100)*	*2853 (100)*	*751 (100)*	*465 (100)*	*826 (100)*	*2967 (100)*	*1751 (100)*	*421 (100)*	*12328 (100)*

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.

Managed Care Behavioral Health Service Expenditures by Diagnosis

The table below shows Managed Care expenditures broken down by diagnosis, across services and by type of service. **The diagnoses that consumed the largest share of total expenditures were: Depressive Disorders, which represents 28% of total expense, or $46.1m; SUD, which constitutes 22% of total expense, or $36.2m; and Bipolar Disorders, which represent 12% of total expense, or $20m. Together, these three diagnoses consumed 62% of total expenditures.** The diagnoses with the lowest share of total expense were Anxiety Disorders and ASD, each representing 2% of total expense, and ADHD, representing 3% of total expense.

The diagnoses that consumed the largest share of total expenditures per type of service were as follows:

- *Screening and Assessment:* Bipolar Disorders, which used 35% of total expenditures for this service
- *Individual Therapy:* Intellectual Disability, 30% of total Individual Therapy expense
- *Group Therapy:* Bipolar Disorders, 81% of total Group Therapy expense
- *Family Therapy:* Depressive Disorders, 19% of total Family Therapy expense
- *Medication Management:* ADHD, 29% of total Med Management expense
- *Mobile Crisis Intervention:* Adjustment Disorders, 38% of total MCI expense
- *Therapeutic Foster Care:* SUD, 80% of total TFC expense
- *Partial Hospitalization:* Schizophrenia and Other Psychotic Disorders, 39% of total Partial Hospitalization expense
- *Inpatient Hospital Based Psychiatric Services:* Depressive Disorders, 30% of total IP expense
- *Emergency Department (ED):* Depressive Disorders, 38% of total ED expense
- *Other Services (inpatient-related):* Depressive Disorders, 33% of total Other Services expense

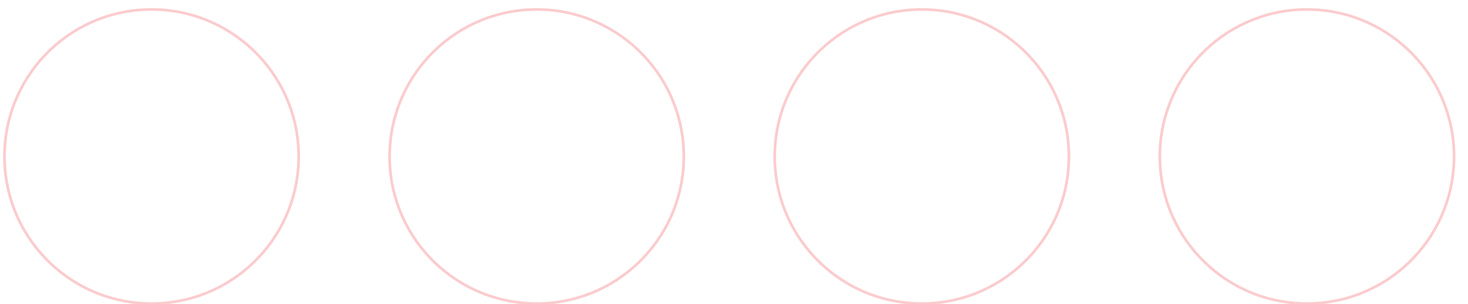


Table 27: Managed Care Service Expenditures by Diagnosis

Type of Service	Service Expenditures for all Children	Expenditure for Children with the Diagnosis (% of Expenditure for All Children)													
		Schizophrenia Spectrum & Other Psychotic Disorders	Bipolar and Related Disorders	Anxiety Disorders	Obsessive-Compulsive and Related Disorders	Post-Traumatic Stress Disorder	Adjustment Disorder	Attention-Deficit/ Hyperactivity Disorder	Disruptive, Impulse-Control, and Conduct Disorders	Intellectual Disability	Autism Spectrum Disorder	Depressive Disorders	Substance Use Disorders	Other Infrequent Diagnoses	Other Disorders
Screening and Assessment	**$4,811,148**	$83,994 (1.7%)	$1,660,633 (34.5%)	$184,662 (3.8%)	$3,729 (0.1%)	$66,188 (1.4%)	$343,554 (7.1%)	$202,619 (4.2%)	$28,811 (0.6%)	$11,252 (0.2%)	$215,258 (4.5%)	$1,053,156 (21.9%)	$324,693 (6.7%)	$14,903 (0.3%)	$617,695 (12.8%)
Individual Therapy	**$37,079,803**	$1,518.072 (4.1%)	$5,672,193 (15.3%)	$1,479,882 (4.0%)	$33,430 (0.1%)	$1,701,863 (4.6%)	$3,116,880 (8.4%)	$2,135,593 (5.8%)	$452,499 (1.2%)	$11,175,885 (30.1%)	$642,676 (1.7%)	$5,052,996 (13.6%)	$849,727 (2.3%)	$132,342 (0.4%)	$3,115,766 (8.4%)
Group Therapy	**$4,336,910**	$1,068 (0%)	$3,520,963 (81.2%)	$326,243 (7.5%)	$238 (0%)	$2,102 (0%)	$21,103 (0.5%)	$4,182 (0.1%)	$154 (0%)	*N<11*	$639 (0%)	$392,389 (9.0%)	$66,931 (1.5%)	$156 (0%)	$1,012 (0%)
Family Therapy	**$2,317.060**	$80,891 (3.5%	$9,572 (0.4%)	$49,644 (2.1%)	$1,884 (0.1%)	$54,221 (2.3%)	$221,050 (9.5%)	$185,652 (8.0%)	$49,968 (2.2%)	$3,146 (0.1%)	$33,015 (1.4%)	$448,866 (19.4%)	$22,340 (1.0%)	$4,291 (0.2%)	$1,152,520 (49.7%)
Medication Managment	**$306,210**	$20,414 (6.7%)	$17,571 (5.7%)	$20,001 (6.5%)	$1,032 (0.3%)	$16,342 (5.3%)	$9,257 (3.0%)	$89,151 (29.1%)	$6,267 (2.0%)	$661 (0.2%)	$36,173 (11.8%)	$80,869 (26.4%)	$4,195 (1.4%)	$1,194 (0.4%)	$3,084 (1.0%)
Mobile Crisis Intervention	**$93,882**	$16,396 (17.5%)	$15,082 (16.1%)	$866 (0.9%)	*N<11*	$3,529 (3.8%)	$35,514 (37.8%)	$5,924 (6.3%)	$697 (0.7%)	$108 (0.1%)	$600 (0.6%)	$7,030 (7.5%)	$8,030 (8.6%)	*N<11*	$108 (0.1%)
Intensive In-Home Services	**$241**	$162 (67.0%)	*N<11*	*N<11*	*N<11*	$80 (33.0%)	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Family Peer Support	**$1,706**	$1,654 (96.9%)	$52 (3.1%)	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Case Management	**$154,349**	$253 (0.2%)	$939 (0.6%)	$2,919 (1.9%)	$270 (0.2%)	$140 (0.1%)	$359 (0.2%)	$7,950 (5.2%)	$3,443 (2.2%)	$1,197 (0.8%)	$5,217 (3.4%)	$1,934 (1.3%)	$273 (0.2%)	$1,357 (0.9%)	$128,098 (83.0%)

Table 27, continued: Managed Care Service Expenditures by Diagnosis

Type of Service	Service Expenditures for all Children	Expenditure for Children with the Diagnosis (% of Expenditure for All Children)													
		Schizophrenia Spectrum & Other Psychotic Disorders	Bipolar and Related Disorders	Anxiety Disorders	Obsessive-Compulsive and Related Disorders	Post-Traumatic Stress Disorder	Adjustment Disorder	Attention-Deficit/ Hyperactivity Disorder	Disruptive, Impulse-Control, and Conduct Disorders	Intellectual Disability	Autism Spectrum Disorder	Depressive Disorders	Substance Use Disorders	Other Infrequent Diagnoses	Other Disorders
Therapeutic Foster Care	**$267,396**	$12,413 (4.6%)	$17,579 (6.6%)	***N<11***	***N<11***	$708 (0.3%)	$1,906 (0.7%)	***N<11***	***N<11***	***N<11***	***N<11***	$22,224 (8.3%)	$212,564 (79.5%)	***N<11***	***N<11***
Inpatient Hospitalization	**$335,829**	$51,048 (15.2%)	$15,590 (4.6%)	$5,853 (1.7%)	$213 (0.1%)	$11,549 (3.4%)	$32,508 (9.5%)	$10,418 (3.1%)	$27,237 (8.1%)	$10,466 (0.8%)	$2,239 (0.7%)	$100,396 (29.9%)	$48,301 (14.4%)	$2,993 (0.9%)	$17,468 (5.2%)
Partial Hosp/ Day Treat.	**$201,088**	$77,472 (10.4%)	$20,886 (10.4%)	***N<11***	***N<11***	***N<11***	$2,668 (1.3%)	***N<11***	***N<11***	***N<11***	***N<11***	$14,732 (7.3%)	$29,230 (14.5%)	$56,100 (27.9%)	***N<11***
ED (behavioral health)	**$14,702,134**	$1,500,821 (10.2%)	$1,143,221 (7.8%)	$874,685 (5.9%)	$4,331 (0%)	$119,757 (0.8%)	$490,440 (3.3%)	$16,307 (0.1%)	$701,090 (4.8%)	$197 (0%)	$5,510 (0%)	$5,543,060 (37.7%)	$4,097,448 (27.9%)	$205,019 (1.4%)	$246 (0%)
Telebehavioral Health	**$1,680**	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	$74 (4.4%)	***N<11***	***N<11***	***N<11***	***N<11***	$1,606 (95.6%)
SUD Outpatient	**$1,538**	***N<11***	***N<11***	$11 (0.7%)	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	$577 (37.5%)	$470 (30.6%)	$480 (31.2%)
Adaptive Behavioral Intervention	**$1,490,877**	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	$400 (0%)	$1,481,283 (99.4%)	***N<11***	***N<11***	***N<11***	$9,194 (0.6%)
Transitional Services	**$141,334**	$136 (0.1%)	$124,212 (0.1%)	$1,528 (1.1%)	***N<11***	$2,805 (2.0%)	$7,346 (5.2%)	$2,603 (1.8%)	$1,133 (0.8%)	$86 (0.1%)	$414 (0.3%)	$977 (0.7%)	$3 (0%)	$10 (0%)	$82 (0.1%)
Other	**$100,203,316**	$7,938,453 (7.9%)	$7,882,104 (7.8%)	$606,903 (0.6%)	$16,393 (0%)	$4,233,351 (4.2%)	$4,542,616 (4.2%)	$2,036,498 (2.0%)	$6,282,713 (6.3%)	$2,868 (0%)	$1,199,025 (1.2%)	$33,386,785 (33.3%)	$30,538,713 (30.5%)	$1,589,243 (1.6%)	$7,653 (0%)
All Services	***$166,446,499***	*$11,303,245 (6.8%)*	*$20,040,327 (12.0%)*	$3,553,196 (2.1%)	$61,520 (0%)	$6,212,635 (3.7%)	$8,824,749 (5.3%)	$4,696,897 (2.8%)	$7,554,013 (4.5%)	$11,206,338 (6.7%)	$3,622,052 (2.2%)	$46,105,413 (27.7%)	$36,203,026 (21.8%)	$2,008,077 (1.2%)	$5,055,010 (3.0%)

The table below shows average expenditures per child served, by type of service and across services, by diagnosis. Across services, **children with the following diagnoses had the three highest average expenditures per child served:**

- **Bipolar Disorders: $44,633**
- **Intellectual Disability: $25,000**
- **Schizophrenia and Other Psychotic Disorders: $21,779 (followed closely by SUD at $20,676 per youth served).**

Assuming the data are correct, youth with Bipolar Disorders had average expenditures for Screening and Assessment and for Group Therapy that were roughly 300% higher than for children in general, and their average expenditure for Mobile Crisis Intervention was over 200% higher.

Children with Intellectual Disability had an average expenditure for Individual Therapy that was over eight times higher than for children in general, and their average expenditure for Inpatient Hospital Psychiatric Services was 81% higher.

Youth with a diagnosis of Schizophrenia or Other Psychotic Disorder had an average expenditure for Family Therapy that was over four times higher than that of other children, and their average expenditure for Mobile Crisis Intervention was over four times higher as well.

Other diagnoses that had higher average expenditures compared to all diagnoses included:

- *SUD*, where average expenditures were nearly four times higher than for children in general, driven largely by Therapeutic Foster Care expense
- *Depressive Disorders*, where average expense was nearly three times higher than for children in general, driven by 77% higher average expenditures for Other Services (inpatient-related), 71% higher average expenditure for Family Therapy, and average expenditures for Screening and Assessment that were three times higher.
- *Disruptive, Impulse Control and Conduct Disorders*, where average expense across services was over twice as high as for children in general, driven primarily by 44% higher average expenditures for Other Services (inpatient-related).

Diagnoses associated with lower average expenditures than for all diagnoses included the following, and it should be noted that all of them had lower average expenditures than diagnoses in general for expensive, facility-based services, including ED, Inpatient Hospital Psychiatric Services, and Other Services (inpatient-related):

- *OCD*, where average expense was nearly six times lower
- *Anxiety Disorders*, where average expense was three and a half times lower
- *ADHD*, where average expense was over three times lower
- *Adjustment Disorders*, where average expense was two and a half times lower
- *ASD*, where average expense was 18% lower

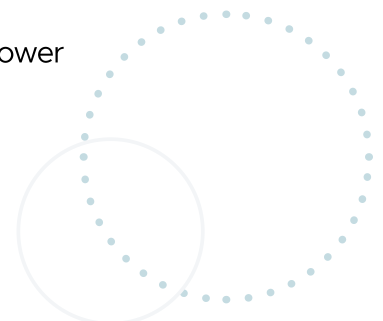


Table 28: Managed Care Services: Average Expenditures per Child Served, by Diagnosis

Type of Service	Average Expenditure Per Child Using Service	Average Expenditure per Child Served with Diagnosis													
		Schizophrenia Spectrum & Other Psychotic Disorders	Bipolar and Related Disorders	Anxiety Disorders	Obsessive-Compulsive and Related Disorders	Post-Traumatic Stress Disorder	Adjustment Disorder	Attention-Deficit/ Hyperactivity Disorder	Disruptive, Impulse-Control, and Conduct Disorders	Intellectual Disability	Autism Spectrum Disorder	Depressive Disorders	Substance Use Disorders	Other Infrequent Diagnoses	Other Disorders
Screening and Assessment	**$343**	$464	$11,374	$393	$249	$185	$194.65	$327	$171	$296	$815	$1,079	$861	$229	$64
Individual Therapy	**$3,116**	$4,439	$16,882	$808	$597	$1,778	$939	$826	$815	$26,609	$1,064	$2,279	$1,301	$422	$3,439
Group Therapy	**$11,383**	$67	$320,063	$18,125	N<11	$175	$101	$182	N<11	N<11	N<11	$8,720	$1,240	N<11	N<11
Family Therapy	**$1,621**	$6,741	$684	$460	N<11	$516	$401	$558	$495	$286	$367	$2,771	N<11	$307	$28,813
Medication Management	**$249**	$210	$228	$144	N<11	$147	$130	$216	$149	N<11	$603	$260	$114	N<11	$73
Mobile Crisis Intervention	**$472**	$1,491	$1,160	N<11	N<11	N<11	$275	$494	N<11	N<11	N<11	$370	N<11	N<11	N<11
Intensive In-Home Services	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Family Peer Support	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Case Management	**$81**	N<11	N<11	$127	N<11	N<11	N<11	$119	$144	$86	$145	$97	N<11	N<11	$73

Table 28, continued: Managed Care Services: Average Expenditures per Child Served, by Diagnosis

Type of Service	Average Expenditure Per Child Using Service	Average Expenditure per Child Served with Diagnosis													
		Schizophrenia Spectrum & Other Psychotic Disorders	Bipolar and Related Disorders	Anxiety Disorders	Obsessive-Compulsive and Related Disorders	Post-Traumatic Stress Disorder	Adjustment Disorder	Attention-Deficit/ Hyperactivity Disorder	Disruptive, Impulse-Control, and Conduct Disorders	Intellectual Disability	Autism Spectrum Disorder	Depressive Disorders	Substance Use Disorders	Other Infrequent Diagnoses	Other
Therapeutic Foster Care	$7,640	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	$11,809	*N<11*	*N<11*
Inpatient Hospitalization	$340	$311	$217	$158	*N<11*	$231	$204	$282	$332.16	$616	*N<11*	$284	$246	$158	$148
Partial Hosp/ Day Treatment	$6,934	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	$2,657	*N<11*	*N<11*
ED (behavioral health)	$8,269	$8,069	$16,102	$3,313.20	*N<11*	$2,218	$2,554	$582	$7,621	*N<11*	$424	$7,953	$7,189	$3,597	*N<11*
Telebehavioral Health	$70	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	$70
SUD Outpatient	$7	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	$6.56	*N<11*	$3.66
Adaptive Behavioral Intervention (youth with ID/DD)	$7,765	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	$7,755.41	*N<11*	*N<11*	*N<11*	*N<11*
Transitional Services	$199	$11	$8,281	$25.05	*N<11*	$30	$22	$20	$24	*N<11*	$24	$20	*N<11*	*N<11*	*N<11*
Other	$43,247	$42,911	$74,496	$5,517	*N<11*	$54,979	$14,064	$6,999	$62,205	$143	$5,936	$76,400	$42,891	$69,098	$191
Overall Average Expenditure	***$5,359***	***$21,779***	***$44,633***	***$1,597***	***$905***	***$5,435***	***$2,055***	***$1,646***	***$10,059***	***$24,100***	***$4,385***	***$15,539***	***$20,676***	***$4,770***	***$410***

Disparities and Disproportionality in Managed Care Utilization and Expenditures

Med-QUEST provided utilization and expenditure data stratified by sex, age, race/ethnicity, Island, and diagnosis. Disparities may exist for any number of reasons, such as provider availability, cultural beliefs and biases, delivery system barriers, and the like. This analysis did not examine the reasons for differences based on demographics, but the analysis does shed light on them, providing opportunity for Hawai'i stakeholders to explore disparities more fully.

Managed Care Utilization Disparities Based on Sex

The table below shows the number and percentage of boys versus girls receiving managed care behavioral health services by type of service and in total. The table shows rates of service use, that is, the percentage of boys using a particular service out of all boys using services, and the percentage of girls using a particular service type out of all girls using services. The table also shows the representation of boys versus girls among all children using a service, that is, the percentage of boys using a service out of all children using the service.

Hawai'i's child population is about half boys and half girls. **Boys receiving managed care behavioral health services in Hawai'i have slightly higher representation than girls, which also is true nationally.** Boys accounted for 50.4% of all children using Med-QUEST managed care behavioral health services, and girls accounted for 49.6%. This difference is very slight and contrasts with the CAMHD utilization data submitted by Med-QUEST (discussed below), which show much greater representation among boys at 59% of those receiving services, compared to girls at 41%. The disparity is also much greater among the FFS population, where boys represent nearly 66% of all behavioral health recipients and girls, 35%.

While boys have slightly greater representation among managed care behavioral health recipients, girls have higher rates of use for several key services, including ED, Inpatient Hospital Psychiatric Services, Case Management, and Screening and Assessment. Boys have higher rates of use for virtually all other service types, including, for example, individual, family and group therapy, medication management, mobile crisis intervention, Adaptive Behavioral Intervention (ABI), and Therapeutic Foster Care. The data submitted by CAMHD also showed higher rates of Hospital-Based Residential (Inpatient Hospital Psychiatric) Services by girls than boys.

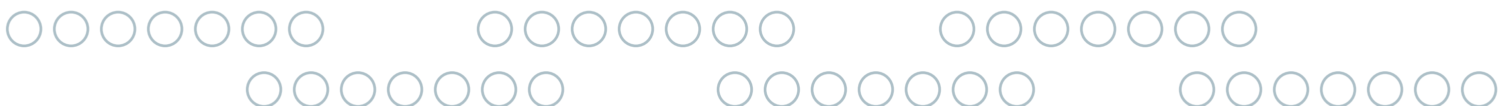


Table 29: Managed Care Service Utilization: Disparities Based on Sex

Type of Service	Total Service Utilization: #(%) of Children Using Service	Service Utilization Rates*, by Sex		Service Representation**, by Sex	
		# (%) of Males Served	# (%) of Females Served	Male Children	Female Children
Screening and Assessment (including psych evaluations and psychosexual assessment)	14,033 (57.7%)	6,950 (56.6%)	7,083 (58.8%)	49.5%	50.5%
Individual Therapy	11,901 (48.9%)	6,092 (49.6%)	5,809 (48.2%)	51.2%	48.8%
Other Services (Unspecified)	2,317 (9.5%)	1,304 (10.6%)	1,013 (8.4%)	56.3%	43.7%
Case Management	1,903 (7.8%)	903 (7.4%)	1,000 (8.3%)	47.5%	52.5%
ED (for behavioral health)	1,778 (7.3%)	841 (6.9%)	937 (7.8%)	47.3%	52.7%
Family Therapy	1,429 (5.9%)	819 (6.7%)	610 (5.1%)	57.3%	42.7%
Medication Management	1,232 (5.1%)	686 (5.6%)	546 (4.5%)	55.7%	44.3%
Inpatient Hospital Psychiatric Services	989 (4.1%)	479 (3.9%)	510 (4.2%)	48.4%	51.6%
Transitional Services	709 (2.9%)	342 (2.8%)	367 (3.0%)	48.2%	51.8%
Group Therapy	381 (1.6%)	242 (2.0%)	139 (1.2%)	63.5%	36.5%
SUD Outpatient	218 (0.9%)	111 (0.9%)	107 (0.9%)	50.9%	49.1%
Mobile Crisis Intervention	199 (0.8%)	119 (1.0%)	80 (0.7%)	59.8%	40.2%
Adaptive Behavioral Intervention (youth with ID/DD)	192 (0.8%)	159 (1.3%)	33 (0.3%)	82.8%	17.2%
Therapeutic Foster Care	35 (0.1%)	24 (0.2%)	11 (0.1%)	68.6%	31.4%
Partial Hosp./Day Treatment	29 (0.1%)	19 (0.2%)	***N<11***	65.5%	***N<11***
Telebehavioral Health	24 (0.1%)	13 (0.1%)	11 (0.1%)	54.2%	45.8%
Family Peer Support	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Intensive In-Home Services	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
All Services	**24,327 (100%)**	**12,271 (100%)**	**12,056 (100%)**	**50.4%**	**49.6%**

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.
***Service utilization rate refers to the percentage of children in each sex cohort who use a particular service out of all children in that sex cohort who use services.*
****Service Representation reflects the sex composition of all children receiving each service type*

Managed Care Expenditure Disparities Based on Sex

The table below shows expenditures by service type and in total based on sex. **Boys use a disproportionately lower share of Managed Care dollars (45%)** compared to their representation of 50.4% among behavioral health recipients, **while girls use a larger proportion of dollars (55%)** compared to their 49.6% representation among service recipients. Girls' use of a larger proportion of dollars is driven primarily by their expenditures for ED, Screening and Assessment, Group Therapy, Family Therapy, and Other Services. For example, while girls represent about half of all recipients of Screening and Assessment services, they utilize 77% of the dollars for Screening and Assessment. **Girls represent about 44% of all children receiving Other Services, but they use 57% of the dollars for Other Services.** Girls represent only 37% of those receiving Group Therapy, but they use 84% of the Group Therapy dollars.

Similarly, they represent only 43% of those receiving Family Therapy but use 72% of the Family Therapy dollars. Boys use a larger proportion of dollars for Individual Therapy, using 56% of Individual Therapy dollars while representing 51% of recipients. They also use a larger proportion of dollars for Medication Management, Transitional Family Home (Therapeutic Foster Care), Transitional Services, and Mobile Crisis, although the overall expenditures for these services are relatively small.

Table 30: Managed Care Service Utilization: Disparities Based on Sex

Type of Service	Service Expenditures for All Children	Service Expenditures and Representation for Male Children		Service Expenditures and Representation for Female Children	
		Expenditure for Male Children (% of Expenditure for All Children)	% of Children Receiving Service	Expenditure for Female Children (% of Expenditure for All Children)	% of Children Receiving Service
Other Services (Unspecified)	$100,203,316	$43,462,892 (43.4%)	56.3%	$56,740,424 (56.6%)	43.7%
Individual Therapy	$37,079,803	$20,718,427 (55.9%)	51.2%	$16,361,376 (44.1%)	48.8%
ED (for behavioral health)	$14,702,134	$5,748,264 (39.1%)	47.3%	$8,953,870 (60.9%)	52.7%
Screening and Assessment (incl. psych evaluations & psychosexual assessment)	$4,811,147	$1,098,019 (22.8%)	49.5%	$3,713,128 (77.2%)	50.5%
Group Therapy	$4,336,910	$677,722 (15.6%)	63.5%	$3,659,187 (84.4%)	36.5%
Family Therapy	$2,317,060	$659,537 (28.5%)	57.3%	$1,657,523 (71.5%)	42.7%
Adaptive Behavioral Intervention (youth with ID/DD)	$1,490,877	$1,222,985 (82.0%)	82.8%	$267,891 (18.0%)	17.2%
Inpatient Hospital Psychiatric Services	$335,829	$162,218 (48.3%)	48.8%	$173,611 (51.7%)	51.6%
Medication Management	$306,210	$179,121 (58.5%)	55.7%	$127,090 (41.5%)	44.3%
Therapeutic Foster Care	$267,396	$234,278 (87.6%)	68.6%	$33,117 (12.4%)	31.4%
Partial Hospitalization/Day Treatment	$201,088	$104,549 (52.0%)	65.5%	$96,539 (48.0%)	***N<11***
Case Management	$154,349	$77,279 (50.1%)	47.5%	$77,070 (49.9%)	52.5%
Transitional Services	$141,334	$132,743 (93.9%)	48.2%	$8,591 (6.1%)	51.8%
Mobile Crisis Intervention	$93,882	$62,904 (67.0%)	59.8%	$30,978 (33.0%)	40.2%
Family Peer Support	$1,706	$1,660 (97.3%)	***N<11***	$46 (2.7%)	***N<11***
Telebehavioral Health	$1,680	$768 (45.7%)	54.2%	$912 (54.3%)	45.8%
SUD Outpatient	$1,538	$561 (36.5%)	50.9%	$976 (63.5%)	49.1%
Intensive In-Home Services	$241	$80 (33.0%)	***N<11***	$162 (67.0%)	***N<11***
All Services	**$166,446,499**	**$74,544,006 (44.8%)**	**50.4%**	**$91,902,493 (55.2%)**	**49.6%**

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.

The table below shows average Managed Care expenditures by service type and in total based on sex. Girls' average expenditures for certain services are appreciably higher than those of boys. For example, **the average expenditure for girls for Other Services (inpatient-related) at $56,012 is 68% higher than that of boys at $33,330.** Since much of Other Services is inpatient-related, these higher expenditures suggest that girls may be staying longer in inpatient settings than boys. (Note that this is the opposite of what the CAMHD-submitted data suggest. In the CAMHD data, girls have 22% lower mean expenditures than boys, with the suggestion that boys served through CAMHD, rather than girls, may be staying longer in inpatient settings.)

The average expenditure for girls for group therapy is over nine times higher, at $26,325, than that of boys at $2,801. The average expenditure for girls for ED use at $9,556 is 40% higher than that of boys at $6,835. Family therapy average expense for girls at $2,717 is over three times higher than that of boys at $805. **Across all services, girls have 25% higher average expenditures at $7,623 than boys at $6,075.**

Boys have higher average expenditures for therapeutic foster care at $9,762, which is over three times higher than that of girls at $3,011. Individual Therapy average expenditures for boys at $3,401 are 20% higher than for girls at $2,817. Mobile Crisis average expense for boys at $529 is 37% higher than that of girls at $387.

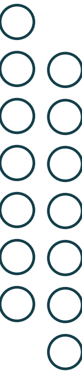
Table 31: Managed Care Services: Average Expenditures Per Child Served, by Sex

Type of Service	Average Expenditure Per Child Using Service	Average Expenditure Per Male Child Using Service	Average Expenditure Per Female Child Using Service
Other Services (unspecified)	$43,247	$33,330	$56,012
Group Therapy	$11,383	$2,801	$26,325
ED (for behavioral health)	$8,269	$6,835	$9,556
Adaptive Behavioral Intervention (youth with ID/IDD)	$7,765	$7,692	$8,118
Therapeutic Foster Care	$7,640	$9,762	$3,011
Partial Hospitalization/Day Treatment	$6,934	$5,503	***N<11***
Individual Therapy	$3,116	$3,401	$2,817
Family Therapy	$1,621	$805	$2,717
Mobile Crisis Intervention	$472	$529	$387
Screening and Assessment (including psych evaluations and psychosexual assessment)	$343	$158	$524
Inpatient Hospital Psychiatric Services	$340	$339	$340
Medication Management	$249	$261	$233
Transitional Services	$199	$388	$23
Case Management	$81	$86	$77
Telebehavioral Health	$70	$59	$83
SUD Outpatient	$7	$5	$9
Family Peer Support	***N<11***	***N<11***	***N<11***
Intensive In-Home-Services	***N<11***	***N<11***	***N<11***
Overall Average Expenditure	**$6,842**	**$6,075**	**$7,623**

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.

Managed Care Utilization Disparities Based on Age

The table below shows Managed Care utilization based on age. To determine whether certain age cohorts of children are under or overrepresented among those receiving services, one needs to compare utilization of services based on age to the breakdown of age cohorts in the Medicaid child population overall, or, in the absence of that data, to the breakdown by age of the child population in Hawaiʻi as a whole. Demographic data for the Medicaid child population were not available, and Census data for the Hawaiʻi child population do not precisely match the age categories used for this analysis.[xxvii] Despite these limitations, certain observations can be made from the data at hand.



We estimate that children, 0-5, constitute 31.5%% of the Hawaiʻi child population (0-21). Representing about 12% of those receiving Managed Care behavioral health services, 0–5-year-olds are underrepresented among children who used Medicaid-supported behavioral health services through Managed Care. (Note that when the 21-25 age group is excluded, children, ages 0-5, are 14% of those receiving services, still an underrepresentation.) Similar underrepresentation of the 0-5 population is seen nationally as well. Among children in the EPSDT age groupings (i.e., 0 to 21), children, ages 0-5, had the highest rates of service use for Therapeutic Foster Care, Case Management, and Applied Behavioral Interventions.

We estimate that children, ages 6-12, comprise 34.6% of the Hawaiʻi child population (0-21). Representing 29% of those receiving services through Managed Care, 6–12-year-olds also are under-represented among children who used Medicaid-supported behavioral health services through Managed Care. (Note that when the 21-25 age group is excluded, children, ages 6-12, are 34% of those receiving services, no longer an under-representation.) Among children in the EPSDT age groupings, the only service for which 6-12-year-olds have the highest rate of service use was Family Therapy.

We estimate that youth, ages 13-18, constitute about 33.9% of the Hawaiʻi child population (0-21). Representing 38% of those receiving services through Managed Care, 13–18-year-olds are over-represented among children who used Medicaid-supported behavioral health services through Managed Care. (Note that when the 21-25 age group is excluded, youth, ages 13-18, are 45% of those receiving services, a larger over-representation.) They represent the largest age cohort using every service type, except Family Therapy, Case Management, and Applied Behavioral Intervention. They have the highest rates of service use for Mobile Crisis Intervention, Group Therapy, and Screening and Assessment.

Youth, ages 19-20, are a relatively small group, representing about 2% (7% if the 21-25 age group is excluded) of those using behavioral health services through Managed Care. However, while they constitute a small fraction of the EPSDT age groupings, they have the highest rates of service use for Inpatient Hospital Psychiatric Services, Other Services (largely inpatient-related), ED, Medication Management, Individual Therapy, and SUD Outpatient. (Note: The CAMHD Data to Wisdom analysis focuses primarily on the EPSDT age groupings in Medicaid, ages 0 to 21. Med-QUEST also provided data on young adults, ages 21-25. When this group is included, they have the highest rates of service use for Inpatient Hospital Psychiatric Services, Other Services, ED, Medication Management, Individual Therapy, and Group Therapy.)

Table 32: Managed Care Service Utilization: Disparities by Age

Type of Service	Total Service Utilization: # (%) of Children Using Service	Service Utilization Rate*, by Age					Service Representation**, by Age				
		# (%) of Ages 0-5 Served	# (%) of Ages 6-12 Served	# (%) of Ages 13-18 Served	# (%) of Ages 19-20 Served	# (%) of Ages 21-25 Served	0-5	6-12	13-18	19-20	21-25
Screening and Assessment	14033 (57.7%)	1210 (41.9%)	3847 (55.5%)	6387 (70.1%)	796 (54.0%)	1793 (45.7%)	8.6%	27.4%	45.5%	5.7%	12.8%
Individual Therapy	11901 (48.9%)	1264 (43.8%)	3648 (52.6%)	3646 (40.0%)	810 (54.9%)	2533 (64.6%)	10.6%	30.7%	30.6%	6.8%	21.3%
Group Therapy	381 (1.6%)	N<11	27 (0.4%)	207 (2.3%)	32 (2.2%)	111 (2.8%)	N<11	7.1%	54.3%	8.4%	29.1%
Family Therapy	1429 (5.9%)	169 (5.8%)	586 (8.5%)	544 (6.0%)	44 (3.0%)	86 (2.2%)	11.8%	41%	38.1%	3.1%	6.0%
Medication Management	1232 (5.1%)	31 (1.1%)	288 (4.2%)	446 (4.9%)	107 (7.3%)	360 (9.2%)	2.5%	23.4%	36.2%	8.7%	29.2%
Mobile Crisis Intervention	199 (0.8%)	N<11	14 (0.2%)	128 (1.4%)	11 (0.7%)	45 (1.1%)	N<11	7%	64.3%	5.5%	22.6%
Intensive In-Home Services	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Family Peer Support	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Case Management	1903 (7.8%)	694 (24.0%)	539 (7.8%)	417 (4.6%)	70 (4.7%)	183 (4.7%)	36.5%	28.3%	21.9%	3.7%	9.6%
Therapeutic Foster Care	35 (0.1%)	24 (0.8%)	N<11	N<11	N<11	25 (0.6%)	68.6%	N<11	N<11	N<11	71.4%
Inpatient Hospital Psychiatric Services	989 (4.1%)	51 (1.8%)	108 (1.6%)	410 (4.5%)	113 (7.7%)	637 (16.2%)	5.2%	10.9%	41.5%	11.4%	31%
Partial Hospitalization/ Day Treatment	29 (0.1%)	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	79.3%
ED (for behavioral health)	1778 (7.3%)	13 (0.4%)	148 (2.1%)	757 (8.3%)	223 (15.1%)	123 (3.1%)	0.7%	8.3%	42.6%	12.5%	35.8%
Telebehaviorial Health	24 (0.1%)	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
SUD Outpatient	218 (0.9%)	N<11	N<11	N<11	45 (3.1%)	44 (1.1%)	N<11	N<11	22.9%	20.6%	56.4%
Adaptive Behavioral Intervention (youth with ID/DD)	192 (0.8%)	84 (2.9%)	81 (1.2%)	19 (0.2%)	N<11	N<11	43.8%	42.2%	9.9%	N<11	N<11
Transitional Services	709 (2.9%)	107 (3.7%)	361 (5.2%)	177 (1.9%)	20 (1.4%)	44 (1.1%)	15.1%	50.9%	25%	2.8%	6.2%
Other Services	2317 (9.5%)	167 (5.8%)	414 (6.0%)	784 (8.6%)	209 (14.2%)	743 (18.9%)	7.2%	17.9%	33.8%	9%	32.1%
All Services	24327 (100%)	2889 (100%)	6930 (100%)	9111 (100%)	1475 (100%)	3922 (100%)	11.9%	28.5%	37.5%	6.1%	16.1%
All Services – 21-25 age cohort excluded	20315 (100%)	2889 (100%)	6930 (100%)	9111 (100%)	1475 (100%)	3922 (100%)	14%	34%	45%	7%	

*Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11. *Service utilization rate refers to the percentage of children in each age cohort who use a particular service out of all children in that age cohort who use services. **Service Representation reflects the age composition of all children receiving each service type.*

Managed Care Expenditure Disparities Based on Age

The table below shows Managed Care expenditures, in total and by service type, based on age, and compares the percentage of dollars received by children by age, compared to their representation among those using services. **The largest share of Managed Care behavioral health dollars – 49% – is consumed by youth 13-18.** The percentage of dollars used by this age group at 49% exceeds their 38% representation among those using services. It is driven by their **disproportionately higher spending for Other Services (inpatient-related claims), which constitute 62% of all dollars used by this age group,** ED, Group Therapy, Individual Therapy, and Screening and Assessment. **The only service for which they had disproportionately low use of dollars was Mobile Crisis Intervention. More effective use of Mobile Crisis Intervention with this age cohort could help to reduce reliance on ED and inpatient hospital psychiatric services.**

The 21–25-year-old age group used the next largest share of dollars at 29%. Their use of Other Services (inpatient-related claims) constituted 72% of total dollars used by this age group, followed by 12% for ED, and 12% for Individual Therapy. While 19–20-year-old youth consumed only 9% of total dollars, nearly three-quarters (74%) of the dollars they used were for Other Services (inpatient-related claims).

Young children, ages 0-5 and 6-12, also consumed relatively low shares of behavioral health Managed Care total dollars. The 0-5 population represents 12% of those using services but only 8% of dollars spent, and the 6–12-year-old group represents 29% of those using services but only 7% of total dollars spent. Relative to their representation among children using services, 0–5-year-old children had disproportionately low expenditures for most services and disproportionately high expenditures for only two services, ABI and Individual Therapy. Individual Therapy for the 0-5 age cohort represented 88% of the total dollars they used for behavioral health care ($11.7m of $13.3m). Given the amount spent on Individual Therapy, it would be advisable to examine what very young children are receiving that is being claimed as Individual Therapy. Evidence-based outpatient practices for this population involve the family, but less than 1% of total Managed Care spending for this age group was for family therapy.

Relative to their representation among children using services, **6–12-year-old children had disproportionately low expenditures for every service type.** For example, they represented 18% of children receiving Other Services (inpatient-related claims) but used only 6% of dollars for this service (compared to, for example, 13–18-year-olds, who represented 34% of those using Other Services but used 51% of the dollars for these claims). Similarly, 6–12-year-olds represented 31% of those using Individual Therapy but used less than 10% of the dollars for this service. Other Services and Individual Therapy constituted 82% of all expenditures for 6–12-year-olds.

As noted earlier, **regardless of age, most Managed Care behavioral health dollars – 82% – are spent on Other Services (inpatient-related claims) and Individual Therapy, and these are the top two expenditure items for every age cohort, except 0–5-year-olds,** where the top two are Individual Therapy and ABI. Stakeholders may want to consider whether a broader, more flexible array of home- and community-based services within Managed Care may reduce reliance on and the cost of inpatient-related services and whether the amount invested in Individual Therapy is producing desired quality and cost outcomes.

Table 33: Managed Care Service Expenditures: Disparities by Age

Type of Service	Service Expenditures for All Children	Service Expenditures and Representation									
		Children Ages 0-5		Children Ages 6-12		Children Ages 13-18		Children Ages 19-20		Children Ages 21-25	
		Expenditures (% expend. all children)	(%) Rec'd Service	Expenditures (% expend. all children)	(%) Rec'd Service	Expenditures (% expend. all children)	(%) Rec'd Service	Expenditures (% expend. all children)	(%) Rec'd Service	Expenditures (% expend. all children)	(%) Rec'd Service
Screening and Assessment	**$4,811,148**	$138,432 (2.9%)	8.6%	$437,185 (9.1%)	27.4%	$3,477,442 (72.3%)	45.5%	$129,081 (2.7%)	5.7%	$629,008 (13.1%)	12.8%
Individual Therapy	**$37,079,803**	$11,681,485 (31.5%)	10.6%	$3,601,109 (9.7%)	30.7%	$14,783,246 (39.9%)	30.6%	$1,709,049 (4.6%)	6.8%	$5,304,914 (14.3%)	21.3%
Group Therapy	**$4,336,910**	$1,065 (0%)	*N<11*	$4,687 (0.1%)	7.1%	$3,172,834 (73.2%)	54.3%	$393,434 (9.1%)	8.4%	$764,889 (17.6%)	29.1%
Family Therapy	**$2,317,060**	$97,670 (4.2%)	11.8%	$318,831 (13.8%)	41%	$1,764,038 (76.1%)	38.1%	$20,696 (0.9%)	3.1%	$115,825 (5.0%)	6%
Medication Management	**$306,210**	$3,135 (1.0%)	2.5%	$59,672 (19.5%)	23.4%	$104,958 (34.3%)	36.2%	$38,972 (12.7%)	8.7%	$99,474 (32.5%)	29.2%
Mobile Crisis Intervention	**$93,882**	$152 (0.2%)	*N<11*	$5,166 (5.5%)	7%	$36,332 (38.7%)	64.3%	$5,197 (5.5%)	5.5%	$47,035 (50.1%)	22.6%
Intensive In-Home Services	**$241**	$0 (0%)	*N<11*	$0 (0%)	*N<11*	$0 (0%)	*N<11*	$80 (33%)	*N<11*	$162 (67%)	*N<11*
Family Peer Support	**$1,706**	$0 (0%)	*N<11*	$0 (0%)	*N<11*	$629 (36.9%)	*N<11*	$65 (3.8%)	*N<11*	$1,011 (59.3%)	*N<11*
Case Management	**$154,349**	$51,495 (33.3%)	36.5%	$44,796 (29.0%)	28.3%	$36,300 (23.5%)	21.9%	$6,749 (4.4%)	3.7%	$15,039 (9.7%)	9.6%
Therapeutic Foster Care	**$267,396**	$0 (0%)	68.6%	$0 (0%)	*N<11*	$4,976 (1.9%)	*N<11*	$35,850 (13.4%)	*N<11*	$226,570 (84.7%)	71.4%
Inpatient Hospitalization	**$335,829**	$15,383 (4.6%)	5.2%	$35,304 (10.5%)	10.9%	$163,429 (48.7%)	41.5%	$31,545 (9.4%)	11.4%	$90,169 (26.8%)	31%
Partial Hosp./ Day Treatment	**$201,088**	$0 (0%)	*N<11*	$0 (0%)	*N<11*	$74,157 (36.9%)	*N<11*	$11,984 (6%)	*N<11*	$114,947 (57.2%)	79.3%
ED (behavioral Health)	**$14,702,134**	$46,779 (0.3%)	0.7%	$649,333 (4.4%)	8.3%	$7,357,925 (50%)	42.6%	$1,267,766 (8.6%)	12.5%	$5,380,331 (36.6%)	35.8%
Telebehavioral Health	**$1,680**	$778 (46.3%)	*N<11*	$330 (19.7%)	*N<11*	$495 (29.5%)	*N<11*	$0 (0%)	*N<11*	$76 (4.6%)	*N<11*
SUD Outpatient	**$1,538**	$0 (0%)	*N<11*	$0 (0%)	*N<11*	$102 (6.6%)	22.9%	$205 (13.3%)	20.6%	$1,231 (80.1%)	56.4%

Table 33, continued: Managed Care Service Expenditures: Disparities by Age

Type of Service	Service Expenditures for All Children	Service Expenditures and Representation									
		Children Ages 0-5		Children Ages 6-12		Children Ages 13-18		Children Ages 19-20		Children Ages 21-25	
		Expenditures (% expend. all children)	(%) Rec'd Service	Expenditures (% expend. all children)	(%) Rec'd Service	Expenditures (% expend. all children)	(%) Rec'd Service	Expenditures (% expend. all children)	(%) Rec'd Service	Expenditures (% expend. all children)	(%) Rec'd Service
Adaptive Behavioral Intervention	**$1,490,877**	$880,005 (59.0%)	43.8%	$513,739 (34.5%)	42.2%	$76,339 (5.1%)	9.9%	$16,846 (1.1%)	***N<11***	$3,947 (0.3%)	***N<11***
Transitional Services	**$141,334**	$2,641 (1.9%)	15.1%	$9,440 (6.7%)	50.9%	$3,869 (2.7%)	25%	$124,553 (88.1%)	2.8%	$831 (0.6%)	6.2%
Other	**$100,203,316**	$332,404 (0.3%)	7.2%	$5,691,514 (5.7%)	17.9%	$50,801,977 (50.7%)	33.8%	$10,675,596 (10.7%)	9.0%	$32,701,825 (32.6%)	32.1%
All Services	**$166,446,499**	$13,251,395 (8.0%)	11.9%	$11,371,104 (6.8%)	28.5%	$81,859,047 (49.2%)	37.5%	$14,467,667 (8.7%)	6.1%	$45,497,286 (27.3%)	16.1%

The table below shows average expenditures, by service type and in total, by age cohort. Across all age groups, 21–25-year-olds have the highest average expense at $11,601, followed by 19–20-year-olds at $9,809- and 13–18-year-olds at $8,985. Children, ages 6-12, have very low average expenditures at $1,640 compared to other age groups, even compared to 0–5-year-olds at $4,587.

Young children, 0-5, have lower average expenditures than children in general for every service type except Individual Therapy and ABI. Their average expense of $9,242 for Individual Therapy is nearly three times higher than that of all children at $3,116. Similarly, their average expenditure for ABI at $10,476 is 35% higher than that of children in general at $7,765.

Children, ages 6-12, have lower average expenditures than children in general for every service type except Case Management where it is comparable.

Youth, ages 13-18, have higher average expenditures than children in general for every service type, except Mobile Crisis Intervention and SUD Outpatient. Their higher average expense is especially notable with respect to Other Services (inpatient-related claims), where their average expense of $64,798 is 50% higher than that of children in general at $43,247. Their mean expense for Family Therapy at $3,243 is twice that of other children at $1,621. Their mean expense for Group Therapy is 35% higher than that of children in general ($15,328 versus $11,383), and their ED mean expense is 18% higher than that of children in general ($9,720 versus $8,269).

The 19–20-year-old age group has lower or comparable mean expenditures than those of children in general for most service types, except Other Services, where their mean expense of $51,079 is 18% higher than for children in general, Group Therapy, where their mean expenditure of $12,295 is 8% higher than that of children in general, and Medication Management, where their mean expense of $364 is 46% higher than for children in general at $249. Young adults, ages 21-25, have lower or comparable mean expenditures than those of children in general for most service types, except Mobile Crisis Intervention, where their mean expenditure of $1,045 is nearly two and half times higher than that of children in general at $472, Therapeutic Foster Care, where their mean expense of $9,063 is 19% higher than that of children in general at $7,640, and SUD Outpatient, where their average expense of $10 is 43% higher than that of other children at $7.

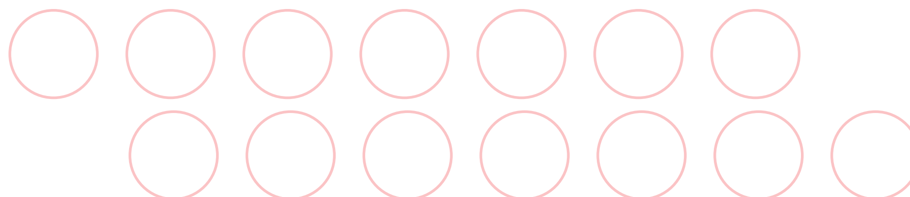


Table 34: Managed Care Services: Average Expenditures per Child Served, by Age

Type of Service	Average Expenditure Per Child Using Service	Average Expenditure Per Child age 0-5 Using Service	Average Expenditure Per Child age 6-12 Using Service	Average Expenditure Per Child age 13-18 Using Service	Average Expenditure Per Child age 19-20 Using Service	Average Expenditure Per Child age 21-25 Using Service
Screening and Assessment (including psych evaluations and psychosexual assessment)	**$343**	$114	$113.64	$544	$162	$351
Individual Therapy	**$3,116**	$9,242	$987	$4,055	$2,110	$2,094
Group Therapy	**$11,383**	***N<11***	$173	$15,328	$12,295	$6,891
Family Therapy	**$1,621**	$578	$544	$3,243	$470	$1,347
Medication Management	**$249**	$101	$207	$235	$394	$276
Mobile Crisis Intervention	**$472**	***N<11***	$368	$283	$472	$1,045
Intensive In-Home Services	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Family Peer Support	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Case Management	**$81**	$74	$83	$87	$96	$82
Therapeutic Foster Care	**$7,640**	$0	***N<11***	***N<11***	***N<11***	$9,063
Inpatient Hospital Psychiatric Services	**$340**	$302	$327	$399	$279	$294
Partial Hospitalization/Day Treatment	**$6,934**	***N<11***	***N<11***	***N<11***	***N<11***	$4,998
ED (for behavioral health)	**$8,269**	$3,598	$4,387	$9,720	$5,685	$8,446
Telebehavioral Health	**$70**	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
SUD Outpatient	**$7**	***N<11***	***N<11***	$2	$5	$10
Adaptive Behavioral Intervention (youth with ID/DD)	**$7,765**	$10,476	$6,342	$4,018	***N<11***	***N<11***
Transitional Services	**$199**	$25	$26	$22	$6,228	$19
Other Services	**$43,247**	$1,990	$13,748	$64,798	$51,079	$44,013
Overall Average Expenditure	**$6,842**	**$4,587**	**$1,640**	**$8,985**	**$9,809**	**$11,601**

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.

Managed Care Utilization Disparities Based on Race/Ethnicity

The table below shows the representation or composition by race/ethnicity of children receiving services through Managed Care by service type and in total. **Native Hawaiian/Pacific Islander children comprise the largest cohort of children receiving services at 43%.** White children comprise the next largest cohort at 19%, followed by Asian children at 16%. (Note. Med-QUEST did not provide data on Hispanic/Latino children, and it is unclear who is included in their Other category.) Together, Native Hawaiian/Pacific Islander, White and Asian children represent 78% of those receiving services.

To gauge whether racial/ethnic groups of children are over-or under-represented among those receiving services, Table 35 compares the representation of children receiving services by racial/ethnic grouping to their representation in the Hawai'i child population. (Note. Racial/ethnic breakdown data on the Medicaid child population in Hawai'i in 2019 were not available so the data used apply to the total Hawai'i child population, which may not be entirely accurate for the Medicaid child population.)

Native Hawaiian/Pacific Islander children seem to be appreciably overrepresented among those receiving services, comprising 43% of those receiving services but only 11% of the Hawai'i population.[15] Nationally, Native Hawaiian/Pacific Islander children have been underrepresented among children in Medicaid receiving behavioral health care, but this does not appear to be the case in Hawai'i. **American Indian/Alaskan Native children also are overrepresented among children receiving behavioral health services through Managed Care,** comprising 2% of those receiving services and 0.1% of the Hawai'i population. Similar overrepresentation is seen nationally. **White children also are overrepresented,** comprising nearly 19% of behavioral health care recipients through Managed Care but only 14% of the state child population. **Historically, White children have had better access to behavioral health services in Medicaid than other racial/ethnic groups, which appears to be the case in Hawai'i as well.**

In contrast, **Asian children are appreciably underrepresented, comprising 16% of service recipients but 24% of the Hawai'i population. Similar underrepresentation is seen nationally as well.** As noted earlier, the Med-QUEST data do not provide information on Hispanic/Latino children, who, historically, have been underrepresented among children in Medicaid receiving behavioral health care. Underrepresentation in service use may be due to stigma, lack of culturally responsive outreach and services, language barriers, racial and ethnic bias, etc. This analysis did not explore the reasons for either over or underrepresentation in service use, which is something stakeholders may want to examine more closely. Black/African American children appear to use services in proportion to their representation in the Hawai'i population.

This table also shows rates of service use by type of service, broken down by racial/ethnic grouping. As noted earlier, rates of service use have to do with the percentage of children in a given racial/ethnic group who use a particular service out of all children in that racial/ethnic group. It is a different measure from the percentage of children in a racial/ethnic group who use a particular service out of all children using that service (which is about representation). It should be noted that the table includes many small cell sizes, relative to the size of the population.

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[15] Note that this reflects any endorsement of that particular ethnicity.

American Indian/Alaskan Native children have higher rates of service use than children in general for Individual and Family Therapy, Inpatient Hospital Psychiatric Services, ED, and Other Services (inpatient-related). Black/African American children also have higher rates of service use than children in general for Individual and Family Therapy, Inpatient Hospital Psychiatric Services, ED, and Other Services (inpatient-related), as well as Medication Management. Both American Indian/Alaskan Native and Black/African American children have lower rates of Screening and Assessment use than children in general. In contrast, Asian children have higher rates of Screening and Assessment use but lower or comparable rates of use for all other service types than children in general. Native Hawaiian/Pacific Islander children also have higher rates of Screening and Assessment use but lower or comparable rates of use for all other service types than children in general (except SUD OP, which is slightly higher and which very few youth receive in general.) White children have higher rates of service use for Individual and Family Therapy, Medication Management, Other Services (inpatient-related), and slightly higher rates for ABI and ED; they have lower Screening and Assessment rates of use than children in general.

Table 35: Managed Care Service Utilization: Disparities by Race/Ethnicity

Type of Service	Total Service Utilization #(%) of Children Using Service	*Service Utilization Rate, by Race #/% population of children served						**Service Representation, by Race and Ethnicity						
		American Indian / Alaskan Native	Black / African-American	Asian	Native Hawaiian / Pacific Islander	White	Other	American Indian / Alaskan Native	Black / African-American	Asian	Native Hawaiian / Pacific Islander	White	Hispanic / Latino	Other
Screening and Assessment (incl. psych eval & psychosexual assessment)	14033 (57.7%)	241 (47.8%)	226 (47.7%)	2513 (63.3%)	6456 (61.2%)	2455 (54.5%)	2142 (49.4%)	1.7%	1.6%	17.9%	46%	17.5%	*N<11*	15.3%
Individual Therapy	11901 (48.9%)	317 (62.9%)	299 (63.1%)	1844 (46.5%)	4723 (44.8%)	2636 (58.6%)	2082 (48%)	2.7%	2.5%	15.5%	39.7%	22.1%	*N<11*	17.5%
Group Therapy	381 (1.6%)	*N<11*	*N<11*	55 (1.4%)	174 (1.7%)	72 (1.6%)	62 (1.4%)	*N<11*	*N<11*	14.4%	45.7%	18.9%	*N<11*	16.3%
Family Therapy	1429 (5.9%)	35 (6.9%)	38 (8%)	209 (5.3%)	537 (5.1%)	384 (8.5%)	226 (5.2%)	2.4%	2.7%	14.6%	37.6%	26.9%	*N<11*	15.8%
Medication Management	1232 (5.1%)	26 (5.2%)	37 (7.8%)	241 (6.1%)	452 (4.3%)	280 (6.2%)	196 (4.5%)	2.1%	3%	19.6%	36.7%	22.7%	*N<11*	15.9%
Mobile Crisis Intervention	199 (0.8%)	*N<11*	*N<11*	*N<11*	99 (0.9%)	37 (0.8%)	27 (0.6%)	*N<11*	*N<11*	*N<11*	49.7%	18.6%	*N<11*	13.6%
Intensive In-Home Services	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	0 (0%)	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Family Peer Support	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	0 (0%)	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Case Management	1903 (7.8%)	41 (8.1%)	35 (7.4%)	236 (5.9%)	680 (6.4%)	303 (6.7%)	608 (14%)	2.2%	1.8%	12.4%	35.7%	15.9%	*N<11*	31.9%
Therapeutic Foster Care	35 (0.1%)	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	0 (0%)	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	0%
Inpatient Hospital Psychiatric Services	989 (4.1%)	27 (5.4%)	29 (6.1%)	139 (3.5%)	398 (3.8%)	182 (4%)	214 (4.9%)	2.7%	2.9%	14.1%	40.2%	18.4%	*N<11*	21.6%

Table 35, continued: Managed Care Service Utilization: Disparities by Race/Ethnicity

Type of Service	Total Service Utilization # (%) of Children Using Service	*Service Utilization Rate, by Race #/% population of children served						**Service Representation, by Race and Ethnicity						
		American Indian / Alaskan Native	Black / African-American	Asian	Native Hawaiian / Pacific Islander	White	Other	American Indian / Alaskan Native	Black / African-American	Asian	Native Hawaiian / Pacific Islander	White	Hispanic / Latino	Other
Partial Hospitalization/ Day Treatment	29 (0.1%)	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	0 (0%)	***N<11***	***N<11***	***N<11***	***N<11***	**N<11**	***N<11***	***N<11***
ED (for behavioral health)	1778 (7.3%)	53 (10.5%)	49 (10.3%)	254 (6.4%)	773 (7.3%)	354 (7.9%)	295 (6.8%)	3%	2.8%	14.3%	43.5%	19.9%	***N<11***	16.6%
Telebehavioral Health	24 (0.1%)	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	0 (0%)	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
SUD Outpatient	218 (0.9%)	***N<11***	***N<11***	22 (0.6%)	105 (1%)	37 (0.8%)	31 (0.7%)	***N<11***	***N<11***	10.1%	48.2%	17%	***N<11***	14.2%
Adaptive Behavioral Intervention (youth with ID/DD)	192 (0.8%)	***N<11***	***N<11***	25 (0.6%)	55 (0.5%)	42 (0.9%)	49 (1.1%)	***N<11***	***N<11***	13%	28.6%	21.9%	***N<11***	25.5%
Transitional Services	709 (2.9%)	18 (3.6%)	28 (5.9%)	108 (2.7%)	274 (2.6%)	165 (3.7%)	116 (2.7%)	2.5%	3.9%	15.2%	38.6%	23.3%	***N<11***	16.4%
Other	2317 (9.5%)	70 (13.9%)	64 (13.5%)	373 (9.4%)	924 (8.8%)	496 (11%)	390 (9.0%)	3%	2.8%	16.1%	39.9%	21.4%	***N<11***	16.8%
All Services	24327 (100%)	504 (100%)	474 (100%)	3967 (100%)	10543 (100%)	4501 (100%)	4338 (100%)	2.1%	1.9%	16.3%	43.3%	18.5%	***N<11***	17.8%
Racial/Ethnic Breakdown of Hawai‘i Child Population* **								**0.1%**	**1.9%**	**23.6%**	**11%**	**14.1%**	**18.6%**	**30.7% (Multi racial)**

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11
**Service utilization rate refers to the percentage of children in each racial/ethnic cohort who use a particular service out of all children in that racial/ethnic cohort who use services. All counts for youth identified as Hispanic/Latino were N<11 and are not included in this table. **Service Representation reflects the racial/ethnic breakdown of all children using services.*
**** Race/ethnicity categories are not mutually exclusive. US Census Bureau. Population Division. 2019. "Annual Estimates of the Resident Population by Sex, Age, Race, and Hispanic Origin for the United States and States"*

Managed Care Expenditure Disparities Based on Race/Ethnicity

The table below shows Managed Care child behavioral health expenditures by service type and in total, broken down by racial/ethnic group. The table also shows the proportion of dollars used by a given racial/ethnic group compared to their representation among service recipients. Native Hawaiian/ Pacific Islander children use 43% of total dollars, followed by White children at 19% and Asian children at 16%. Together, **Native Hawaiian/Pacific Islander, White and Asian children represent 72% of total expenditures, while they represent 78% of total service recipients.** Native Hawaiian/ Pacific Islander children appear to use dollars in proportion to their representation among those using services, representing 43% of service recipients and 43% of total dollars. In contrast, **Asian and White children use a disproportionately lower share of dollars than their representation among service recipients.** Asian children use 14% of total dollars but are 16% of total service recipients. White children use 15% of total dollars but are 19% of total service recipients.

Black/African American children are the only group whose share of total expenditures exceeds their representation among service recipients. They represent 2% of Managed Care child behavioral health service recipients but 3% of total expenditures. This appears to be driven by disproportionately higher expenditures for Individual and Family Therapy, ED, and Other Services (inpatient-related).

Table 36: Managed Care Service Expenditures: Disparities by Race*

Type of Service	Service Expenditures for all Children	American Indian/ Alaskan Native (n=504)		Black/African American (n=474)		Asian (n=3967)		Native Hawaiian/ Pacific Islander (n=10,543)		White (n=4501)		Other Race (n=4338)	
		Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service
Screening and Assessment (incl. psych eval & psychosexual assessment)	$4,811,148	$29,267 (0.6%)	1.7%	$38,630 (0.8%)	1.6%	$462,535 (9.6%)	17.9%	$3,306,375 (68.7%)	46%	$458,871 (9.5%)	17.5%	$515,469 (10.7%)	15.3%
Individual Therapy	$37,079,803	$232,752 (0.6%)	2.7%	$517,812 (1.4%)	2.5%	$3,427,287 (9.2%)	15.5%	$14,012,388 (37.8%)	39.7%	$3,452,290 (9.3%)	22.1%	$15,437,275 (41.6%)	17.5%
Group Therapy	$4,336,910	$1,372 (0%)	*N<11*	$1,640 (0%)	*N<11*	$925,121 (21.3%)	14.4%	$3,184,148 (73.4%)	45.7%	$15,079 (0.3%)	18.9%	$209,549 (4.8%)	16.3%
Family Therapy	$2,317,060	$16,266 (0.7%)	2.4%	$14,790 (0.6%)	2.7%	$178,219 (7.7%)	14.6%	$1,625,956 (70.2%)	37.6%	$286,508 (12.4%)	26.9%	$195,322 (8.4%)	15.8%
Medication Management	$306,210	$5,233 (1.7%)	2.1%	$12,041 (3.9%)	3%	$55,096 (3.9%)	19.6%	$121,887 (39.8%)	36.7%	$55,896 (18.3%)	22.7%	$56,058 (18.3%)	15.9%
Mobile Crisis Intervention	$93,882	$1,080 (1.2%)	*N<11*	$3,851 (4.1%)	*N<11*	$24,148 (25.7%)	*N<11*	$41,050 (43.7%)	49.7%	$12,786 (13.6%)	18.6%	$10,967 (11.7%)	13.6%
Intensive In-Home Services	$241	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	$241 (100%)	N<11	*N<11*	*N<11*	$0 (0%)	*N<11*
Family Peer Support	$1,706	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	$1,693 (99.2%)	N<11	$13 (0.8%)	*N<11*	$0 (0%)	*N<11*
Case Management	$154,349	$4,771 (3.1%)	2.2%	$2,404 (1.6%)	1.8%	$17,307 (11.2%)	12.4%	$54,808 (35.5%)	35.7%	$27,888 (18.1%)	15.9%	$47,172 (30.6%)	31.9%
Therapeutic Foster Care	$267,396	*N<11*	*N<11*	$5,358 (2%)	*N<11*	$40,730 (15.2%)	*N<11*	$184,431 (69%)	*N<11*	$17,699 (6.6%)	*N<11*	$19,177 (7.2%)	*N<11*
Inpatient Hospital Psychiatric Services	$335,829	$8,136 (2.4%)	2.7%	$9,734 (2.9%)	2.9%	$53,879 (16%)	14.1%	$132,357 (39.4%)	40.2%	$65,053 (19.4%)	18.4%	$66,670 (19.9%)	21.6%

Table 36, continued: Managed Care Service Expenditures: Disparities by Race*

Type of Service	Service Expenditures for all Children	American Indian/ Alaskan Native (n=504)		Black/African American (n=474)		Asian (n=3967)		Native Hawaiian/ Pacific Islander (n=10,543)		White (n=4501)		Other Race (n=4338)	
		Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Receive Service
Partial Hospitalization/ Day Treatment	$201,088	$2,948 (1.5%)	*N<11*	$140 (0.1%)	*N<11*	$22,560 (11.2%)	*N<11*	$72,068 (35.8%)	*N<11*	$22,426 (11.2%)	*N<11*	$80,946 (40.3%)	*N<11*
ED (for behavioral health)	$14,702,134	$304,240 (2.1%)	3.0%	$884,396 (6%)	2.8%	$1,912,455 (13%)	14.3%	$6,685,399 (45.5%)	43.5%	$2,464,599 (16.8%)	19.9%	$2,451,044 (16.7%)	16.6%
Telebehavioral Health	$1,680	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	$951 (56.6%)	*N<11*	*N<11*	*N<11*	$729 (43.4%)	*N<11*
SUD Outpatient	$1,538	$19 (1.3%)	*N<11*	$32 (2.1%)	*N<11*	$159 (10.3%)	10.1%	$503 (32.7%)	48.2%	$211 (13.8%)	17%	$614 (39.9%)	14.2%
Adaptive Behavioral Intervention (youth with ID/DD)	$1,490,877	$78,894 (5.3%)	*N<11*	$58,531 (3.9%)	*N<11*	$161,369 (10.8%)	13.0%	$375,096 (25.2%)	28.6%	$396,408 (26.6%)	21.9%	$420,578 (28.2%)	25.5%
Transitional Services	$141,334	$478 (0.3%)	2.5%	$846 (0.6%)	3.9%	$2,018 (1.4%)	15.2%	$6,312 (4.5%)	38.6%	$4,886 (3.5%)	23.3%	$126,794 (89.7%)	16.4%
Other	$100,203,316	$1,210,918 (1.2%)	3.0%	$3,246,781 (3.2%)	2.8%	$16,537,808 (16.5%)	16.1%	$40,885,430 (40.8%)	39.9%	$18,110,903 (18.1%)	21.4%	$20,211,476 (20.2%)	16.8%
All Services	***$166,446,499***	***$1,896,373 (1.1%)***	***2.1%***	***$4,796,986 (2.9%)***	***1.9%***	***$23,820,691 (14.3%)***	***16.3%***	***$70,691,090 (42.5%)***	***43.3%***	***$25,391,518 (15.3%)***	***18.5%***	***$39,849,841 (23.9%)***	***17.8%***

**Counts of Hispanic/Latino children were too low to be displayed and are not included*

Table 37 below shows average expenditures by type of service and in total, broken down by race/ethnicity. **Black/African American children are the only racial/ethnic group (besides Other) that have higher than average expenditures than children in general across services.** Their average expenditure of $10,120 is 48% higher than the average for children in general at $6,842. **This disproportionately higher average expense is driven largely by use of ED, where Black/African American children had an average expense that was 118% higher than that of children in general** ($18,049 versus $8,269), and, to a lesser extent, by use of Other Services (inpatient-related) where their average expense was 17% higher. (Children in the Other category had 34% higher average expenditures across services; as noted earlier, it is unclear which children are in this category.)

All other racial/ethnic groups had lower than average expenditures across services. American Indian/Alaskan Native and White children had appreciably lower average expenditures than their representation among service users. American Indian/Alaskan Native children had a 45% lower average expenditure, driven by lower average expenditures for every service type except Case Management, where average expense was 43% higher. White children had an 18% lower average expenditure, driven by lower or comparable average expenditures for every service type except ABI, where average expenditures were 22% higher. Native Hawaiian/Pacific Islander and Asian children had lower average expenditures but not to the same extent as American Indian/Alaskan Native and White children. Average expense for Native Hawaiian/Pacific Islander children was 2% lower than for children in general, and average expense for Asian children was 1% lower.

The racial/ethnic Managed Care data raise several issues that stakeholders may wish to explore further, including:

- Reasons for the appreciable overrepresentation of Native Hawaiian/Pacific Islander children among service recipients
- Whether more focused outreach and culturally relevant approaches are warranted for Asian children, who are appreciably underrepresented among service recipients
- Whether more culturally relevant prevention and home- and community-based services are needed for Black/African American children, who have disproportionately higher rates of use for most service types, including facility-based services (i.e., ED and Other Services (inpatient-related) and disproportionately high total and average expenditures, particularly for ED and Other Services
- Determining which children are included in the Other racial/ethnic category and why they seem to have appreciably higher total expenditures
- Whether Med-QUEST has data available on Hispanic/Latino children and how that data might affect findings in this analysis.

Table 37: Managed Care Services: Average Expenditures per Child Served, by Race

Type of Service	Average Expenditure Per Child Using Service	Average Expenditure Per Child Using Service						
		American Indian/ Alaskan Native (n=504)	Black/African American (n=474)	Asian (n=3967)	Native Hawaiian/ Pacific Islander (n=10,543)	White (n=4501)	Hispanic/ Latino*	Other Race (n=4338)
Screening and Assessment (incl. psych eval, psychosexual assessment)	$343	$121	$171	$184	$512	$187	N<11	$241
Individual Therapy	$3,116	$734	$1,732	$1,859	$2,967	$1,310	N<11	$7,415
Group Therapy	$11,383	N<11	N<11	$16,820	$18,300	$209	N<11	$3,380
Family Therapy	$1,621	$465	$389	$853	$3,028	$746	N<11	$864
Medication Management	$249	$201	$325	$229	$270	$200	N<11	$286
Mobile Crisis Intervention	$472	N<11	N<11	N<11	$415	$346	N<11	$406
Intensive In-Home Services	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Family Peer Support	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Case Management	$81	$116	$69	$73	$81	$92	N<11	$78
Therapeutic Foster Care	$7,640	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Inpatient Hospitalization	$340	$301	$336	$388	$333	$357	N<11	$312
Partial Hospitalization/ Day Treatment	$6,934	N<11	N<11	N<11	N<11	N<11	N<11	N<11
ED (behavioral health)	$8,269	$5,740	$18,049	$7,529	$8,649	$6,962	N<11	$8,309
Telebehavioral Health	$70	N<11	N<11	N<11	N<11	N<11	N<11	N<11
SUD Outpatient	$7	N<11	N<11	$7	$5	$6	N<11	$20
Adaptive Behavioral Intervention	$7,765	N<11	N<11	$6,455	$6,820	$9,438	N<11	$8,583
Transitional Services	$199	$27	$30	$19	$23	$30	N<11	$1,093
Other	$43,247	$17,299	$50,731	$44,337	$44,248	$36,514	N<11	$51,824
Overall Average Expenditure	**$6,842**	**$3,763**	**$10,120**	**$6,005**	**$6,705**	**$5,641**	N<11	**$9,186**

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.
** All counts for youth identified as Hispanic/Latino were N<11 and are not included in this table.*

Managed Care Utilization Disparities Based on Island

Children on Oʻahu represent 61% of children in Managed Care who received behavioral health services. While they are the majority of those receiving services, they also appear to be **underrepresented compared to data indicating that Oʻahu represents 70% of the Hawaiʻi population.** While children on Oʻahu constitute the majority of those receiving every service type except Family Therapy, they also have lower rates of service use, compared to all children, for Individual Therapy, Group Therapy, Family Therapy, SUD OP, and Other Services (inpatient-related claims). They have higher rates of service use for Case Management, Therapeutic Foster Care, Inpatient Hospital Psychiatric Services, and ABI.

Children on the Island of Hawaiʻi represent the next largest cohort of those receiving behavioral health services at 26%. **The Island of Hawaiʻi represents about 14% of the Hawaiʻi state population, suggesting that their 26% representation among service users is an overrepresentation.** Children on the Island of Hawaiʻi have higher rates of service use than all children for Screening and Assessment, Group Therapy, Family Therapy, SUD OP, and Other Services (inpatient-related claims). They have lower rates of use for Individual Therapy, Medication Management, Inpatient Hospital Psychiatric Services, ED, and ABI, and their numbers are too small to register as receiving Case Management or Therapeutic Foster Care through Managed Care.

Children on Maui (and including children on Lānaʻi and Molokaʻi) represent 9% of those using behavioral health services through Managed Care, and the Maui, Lānaʻi and Molokaʻi populations represent about 11% of the Hawaiʻi state population, suggesting they **are somewhat under-represented among those using services. Children on Maui have higher rates of use, compared to all children, for every type of service, except Screening and Assessment.** (Note this is not necessarily true of children on Lānaʻi and Molokaʻi, whose numbers are too small to register for many service types.) Children on Maui, for example, have rates of use for Case Management that are 115% higher than that of children in general, rates of use for Family Therapy that are 49% higher, ED use that is 42% higher, Inpatient Hospital Psychiatric Services use that is 24% higher, and use of Individual Therapy that is 22% higher.

Children on Kauaʻi represent 4% of children who received behavioral health services through Managed Care, and the Kauaʻi population is about 5% of the state's total population, suggesting **that children on Kauaʻi are slightly under-represented among those receiving behavioral health services through Managed Care.** Children on Kauaʻi have higher rates of service use than children in general for several services, some notably higher, including Medication Management, which is three-and-a-half times higher, ED use, which is 78% higher, ABI, which is two-and-a-half times higher, Other Services (inpatient-related), which is 40% higher, and Individual Therapy, which is 35% higher. They have lower rates of use for Screening and Assessment and Family Therapy. **Regardless of Island or different rates of service use across Islands, the two services that children are most likely to receive through Managed Care are Screening and Assessment and Individual Therapy.**

Table 38: Managed Care Service Utilization: Disparities by Island

Type of Service	Type of Service Utilization: # (%) of Children Using Service	Service Utilization Rate*, by Island #(%)							Service Representation**, by Island						
		Hawai'i	Kaua'i	Lāna'i	Maui	Moloka'i	O'ahu	Unknown	Hawai'i	Kaua'i	Lāna'i	Maui	Moloka'i	O'ahu	Unknown
Screening and Assessment	**14033 (57.5%)**	4298 (67.0%)	421 (43.4%)	17 (30.9%)	868 (41.9%)	29 (23.6%)	8417 (57%)	*N<11*	30.6%	3%	0.1%	6.2%	0.2%	60%	*N<11*
Individual Therapy	**11901 (48.8%)**	3065 (47.8%)	639 (65.8%)	49 (89.1%)	1235 (59.7%)	94 (76.4%)	6866 (46.5%)	*N<11*	25.8%	5.4%	0.4%	10.4%	0.8%	57.7%	*N<11*
Group Therapy	**381 (1.6%)**	110 (1.7%)	*N<11*	*N<11*	57 (2.8%)	*N<11*	204 (1.4%)	*N<11*	28.9%	*N<11*	*N<11*	15%	*N<11*	53.5%	*N<11*
Family Therapy	**1429 (5.9%)**	525 (8.2%)	47 (4.8%)	*N<11*	183 (8.8%)	*N<11*	672 (4.5%)	*N<11*	36.7%	3.3%	*N<11*	12.8%	*N<11*	47%	*N<11*
Medication Management	**1232 (5%)**	179 (2.8%)	169 (17.4%)	*N<11*	142 (6.9%)	*N<11*	740 (5%)	*N<11*	14.5%	13.7%	*N<11*	11.5%	*N<11*	60.1%	*N<11*
Mobile Crisis Intervention	**199 (0.8%)**	50 (0.8%)	*N<11*	*N<11*	22 (1.1%)	*N<11*	122 (0.8%)	*N<11*	25.1%	*N<11*	*N<11*	11.1%	*N<11*	61.3%	*N<11*
Intensive In-Home Services	*<11 (N<11)*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Family Peer Support	*<11 (N<11)*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Case Management	**1903 (7.8%)**	*N<11*	*N<11*	*N<11*	347 (16.8%)	*N<11*	155 (10.5%)	*N<11*	*N<11*	*N<11*	*N<11*	18.2%	*N<11*	81.7%	*N<11*
Therapeutic Foster Care	**35 (0.1%)**	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	27 (0.2%)	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	77.1%	*N<11*
Inpatient Hospital Psychiatric Services	**989 (4.1%)**	170 (2.7%)	36 (3.7%)	*N<11*	105 (5.1%)	18 (14.6%)	663 (4.5%)	*N<11*	17.2%	3.6%	*N<11*	10.6%	1.8%	67%	*N<11*
Partial Hospitalization/ Day Treatment	**29 (0.1%)**	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	20 (0.1%)	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	69%	*N<11*
ED (behavioral health)	**1778 (7.3%)**	386 (6%)	126 (13%)	*N<11*	216 (10.4%)	26 (21.1%)	1025 (6.9%)	*N<11*	21.7%	7.1%	7.1%	12.1%	1.5%	57.6%	*N<11*
Telebehavioral Health	**24 (0.1%)**	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	15 (0.1%)	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	62.5	*N<11*
SUD Outpatient	**218 (0.9%)**	69 (1.1%)	*N<11*	*N<11*	28 (1.4%)	*N<11*	113 (0.8%)	*N<11*	31.7%	*N<11*	*N<11*	12.8%	*N<11*	51.8%	*N<11*
Adaptive Behavioral Intervention (youth with ID/DD)	**192 (0.8%)**	17 (0.3%)	20 (2.1%)	*N<11*	18 (0.9%)	*N<11*	137 (0.9%)	*N<11*	8.9%	10.4%	*N<11*	9.4%	*N<11*	71.4%	*N<11*
Transitional Services	**709 (2.9%)**	306 (4.8%)	45 (4.6%)	*N<11*	81 (3.9%)	*N<11*	280 (1.9%)	*N<11*	43.2%	6.3%	*N<11*	11.4%	*N<11*	39.5%	*N<11*
Other Services	**2317 (9.5%)**	690 (10.8%)	129 (13.3%)	*N<11*	198 (9.6%)	21 (17.1%)	1287 (8.7%)	*N<11*	29.8%	5.6%	*N<11*	8.5%	0.9%	55.5%	*N<11*
All Services	***24404 (100%)***	***6414 (100%)***	***971 (100%)***	***55 (100%)***	***2070 (100%)***	***123 (100%)***	***14771 (100%)***	*N<11*	***26.3%***	***4.0%***	***0.2%***	***8.5%***	***0.5%***	***60.5%***	*N<11*

*Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11. *Service utilization rate refers to the percentage of children on each Island who use a particular service out of all children on each Island who use services.**Service Representation reflects the Island composition of all children receiving each service type.*

Managed Care Expenditure Disparities Based on Island

The table below shows expenditures, in total and by service type, based on Island. It also compares the percentage of dollars received to representation among service users.

Behavioral health expenditures for children on Oʻahu constitute 77% of total child behavioral health spending in Managed Care, which is disproportionately high compared to the representation of Oʻahu children among behavioral health recipients at 61%. Children on Oʻahu have disproportionately higher expenditures, compared to their representation among those using services, for every type of service, except Therapeutic Foster Care, where their expenditures are disproportionately low. Children on Oʻahu are 77% of those using Therapeutic Foster Care, but their expenditures account for only 22% of total expense for this service. The services with the top three highest expenditures for Oʻahu children were: Other Services (inpatient-related claims) at $73.9m, or 74% of total expenditures for this service across Islands, yet Oʻahu children accounted for only 56% of those using this service; Individual Therapy at $32.8m, or 88% of total expense for this service across Islands, yet Oʻahu children accounted for only 58% of those using this service; and ED at $9.5m, or 65% of total ED expense across Islands, yet Oʻahu children accounted for only 58% of those using ED.

Children on the Island of Hawaiʻi represent 26% of behavioral health recipients but their expenditures constitute only 14% of total child behavioral health care expense in Managed Care, suggesting their expenditures are disproportionately low. Their expenditures are disproportionately low for every type of service compared to their representation among those using the services. For example, looking at the services with the top three highest expenditures, children on the Island of Hawaiʻi represented 30% of children using Other Services (inpatient-related), but their expense of $16.2m accounted for only 16% of total expense for this service across Islands. They represented 26% of children using Individual Therapy, but their $3.1m expense for this service accounted for only 8% of total across-Island expense for this service. Children on the Island of Hawaiʻi represented 22% of all children using ED, but their $2m expense for this service accounted for only 14% of total across-Island expense for ED.

Disproportionately low spending is seen for children on Maui (including Molokaʻi and Lānaʻi) and Kauaʻi, but not nearly to the same extent as for children on the Island of Hawaiʻi. For example, children on Maui represent 9% of child behavioral health care recipients but slightly less than 7% of expenditures. Children on Kauaʻi represent 4% of behavioral health care recipients but 3% of expenditures.

Looking at the services with the top three highest expenditures, children on Maui represent about 9% of those using Other Services at $6.8m but account for 7% of Other Services expenditures across Islands; they represent 12% of those using Individual Therapy at $0.9m, but account for only 2% of total expense for this service across Islands. On the other hand, children on Maui represent about 14% of all children using ED, but their ED expenditures of $2.3m account for 17% of total ED expenditures across Islands.

Children on Kauaʻi represent 6% of all children using Other Services (inpatient-related), but their expenditures of $3.3m account for only 3% of total expense for this service across Islands. Children

on Kauaʻi represent 7% of those using ED, but their ED expenditures of $0.6m represent only 4% of total ED expense across Islands. Kauaʻi children represent 5% of all children using Individual Therapy, but their expenditures for this service of $0.3m account for only 0.7% of total Individual Therapy expense across Islands.

Table 39: Managed Care Service Expenditures: Disparities by Island

Type of Service	Service Expenditures for all Children	Service Expenditures and Representation													
		Hawaiʻi		Kauaʻi		Lānaʻi		Maui		Molokaʻi		Oʻahu		Unknown	
		Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service
Screening and Assessment (incl. psych eval & psychosexual assessment)	$4,811,148	$424,375 (8.8%)	30.6%	$40,364 (0.8%)	3%	$7,678 (0.2%)	0.1%	$217,491 (4.5%)	6.2%	$3,580 (0.1%)	0.2%	$4,117,454 (85.6%)	60%	$204 (0%)	N<11
Individual Therapy	$37,079,803	$3,121,171 (8.4%)	25.8%	$259,777 (0.7%)	5.4%	$38,815 (0.1%)	0.4%	$833,984 (2.2%)	10.4%	$50,827 (0.1%)	0.8%	$32,774,197 (88.4%)	57.7%	$1,031 (0%)	N<11
Group Therapy	$4,336,910	$52,262 (0%)	28.9%	$838 (0%)	N<11	$15 (0%)	N<11	$90,496 (2.1%)	15%	$211 (0%)	N<11	$4,193,088 (96.7%)	53.5%	N<11	N<11
Family Therapy	$2,317,060	$394,376 (0.7%)	36.7%	$17,575 (0.8%)	3.3%	$0 (0%)	N<11	$83,227 (3.6%)	12.8%	$1,477 (0.1%)	N<11	$1,820,406 (78.6%)	47%	N<11	N<11
Medication Management	$306,210	$28,554 (1.7%)	14.5%	$31,172 (10.2%)	13.7%	$0 (0%)	N<11	$21,891 (7.1%)	11.5%	$924 (0.3%)	N<11	$223,669 (73%)	60.1%	N<11	N<11
Mobile Crisis Intervention	$93,882	$11,460 (12.2%)	25.1%	$460 (0.4%)	N<11	$357 (0.4%)	N<11	$9,368 (10%)	11.1%	$0 (0%)	N<11	$72,292 (77%)	61.3%	N<11	N<11
Intensive In-Home Services	$241	$241 (100%)	N<11	$0 (0%)	N<11	$0 (0%)	N<11	$0 (0%)	N<11	$0 (0%)	N<11	$0 (0%)	N<11	N<11	N<11
Family Peer Support	$1,706	$59 (3.4%)	N<11	$0 (0%)	N<11	$0 (0%)	N<11	$0 (0%)	N<11	$0 (0%)	N<11	$1,647 (96.6%)	N<11	N<11	N<11
Case Management	$154,349	$0 (0%)	N<11	$0 (0%)	N<11	$0 (0%)	N<11	$29,997 (19.4%)	18.2%	$0 (0%)	N<11	$124,372 (80.6%)	81.7%	N<11	N<11
Therapeutic Foster Care	$267,396	$13,979 (5.2%)	N<11	$0 (0%)	N<11	$0 (0%)	N<11	$180,566 (67.5%)	N<11	$0 (0%)	N<11	$72,851 (27.2%)	77.1%	N<11	N<11
Inpatient Hospitalization	$335,829	$48,024 (14.3%)	17.2%	$8,983 (2.7%)	3.6%	$8,983 (2.7%)	3.6%	$34,572 (10.3%)	10.6%	$4,930 (1.5%)	1.8%	$239,320 (71.3%)	67%	N<11	N<11

Table 39, continued: Managed Care Service Expenditures: Disparities by Island

Type of Service	Service Expenditures for all Children	Service Expenditures and Representation															
		Hawai'i		Kaua'i		Lāna'i		Maui		Moloka'i		O'ahu		Unknown	
		Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service
Partial Hospitalization/ Day Treatment	$201,088	$54,344 (27%)	*N<11*	$0 (0%)	*N<11*	$0 (0%)	*N<11*	$56,100 (27.9%)	*N<11*	$0 (0%)	*N<11*	$90,644 (45.1%)	69%	*N<11*	*N<11*
ED (for behavioral health)	$14,702,134	$2,042,758 (13.9%)	21.7%	$577,221 (3.9%)	*7.1%*	$16,883 (0.1%)	*N<11*	$2,253,606 (15.3%)	12.1%	$298,951 (2%)	1.5%	$9,512,716 (64.7%)	57.6%	*N<11*	*N<11*
Telebehavioral Health	$1,679	$440 (26.2%)	*N<11*	$74 (4.4%)	*N<11*	$0 (0%)	*N<11*	$38 (2.3%)	*N<11*	$0 (0%)	*N<11*	$1,128 (67.2%)	62.5%	*N<11*	*N<11*
SUD Outpatient	$1,538	$330 (21.4%)	31.7%	$21 (1.4%)	*N<11*	$0 (0%)	*N<11*	$285 (18.5%)	12.8%	$18 (1.2%)	*N<11*	$884 (57.5%)	51.8%	*N<11*	*N<11*
Adaptive Behavioral Intervention (youth with ID/DD)	$1,490,877	$107,308 (7.2%)	8.9%	$62,311 (4.2%)	10.4%	$0 (0%)	*N<11*	$238,136 (16%)	9.4%	$0 (0%)	*N<11*	$1,083,122 (72.7%)	71.4%	*N<11*	*N<11*
Transitional Services	$141,334	$9,652 (6.8%)	43.2%	$1,617 (1.1%)	6.3%	$0 (0%)	*N<11*	$1,516 (1.1%)	11.4%	$0 (0%)	*N<11*	$128,548 (91%)	39.5%	*N<11*	*N<11*
Other Services	$100,203,316	$16,191,997 (16.2%)	29.8%	$3,296,294 (3.3%)	5.6%	$157 (0%)	*N<11*	$6,344,728 (6.3%)	8.5%	$434,658 (0.4%)	0.9%	$73,935,483 (73.8%)	55.5%	*N<11*	*N<11*
All Services	**$166,446,499**	**$22,501,328 (13.5%)**	**26.3%**	**$4,296,653 (2.6%)**	**4%**	**$63,903 (0%)**	**0.2%**	**$10,395,982 (6.2%)**	**8.5%**	**$795,576 (0.5%)**	**0.5%**	**$128,391,821 (77.1%)**	**60.5%**	**$1,236 (0%)**	*N<11*

Table 40 shows average expenditures per child served, in total and by type of service, based on Island.

More is spent on average for children on O‘ahu than on other children for virtually every type of service, except ED and ABI. Across services, 27% more is spent on average for children on O‘ahu. For certain services, the disproportionately higher spending for O‘ahu children is notable. For example, four times more is spent on average on O‘ahu children for Individual Therapy than is spent on the next highest group of children, which is those on the Island of Hawai‘i, whose average Individual Therapy expense was $1,018 compared to that of O‘ahu children at $4,773. Similarly, average expenditures for Group Therapy for O‘ahu children, at $20,554, are 81% higher than for children in general. Average expenditures for Family Therapy are 67% higher. Average expenditures for Other Services (inpatient-related) are 33% higher.

The only two services where children on O‘ahu had lower average expenditures than some other Island children were ED and ABI. The average ED expenditure for O‘ahu children was $9,281, compared to $11,498 for children on Moloka‘i and $10,433 for children on Maui. The average expenditure for children on O‘ahu for ABI was $7,906, compared to $13,230 for children on Maui.

Table 40: Managed Care Services: Average Expenditures per Child Served, by Island

Type of Service	Average Expenditure Per Child							
	All	Hawai'i	Kaua'i	Lāna'i	Maui	Moloka'i	O'ahu	Unknown
Screening and Assessment (including psych evaluations and psychosexual assessment)	**$343**	$99	$96	$452	$251	$123	$489	***N<11***
Individual Therapy	**$3,116**	$1,018	$407	$792	$675	$541	$4,773	***N<11***
Group Therapy	**$11,383**	$475	***N<11***	***N<11***	$1,588	***N<11***	$20,554	***N<11***
Family Therapy	**$1,621**	$751	$374	***N<11***	$455	***N<11***	$2,709	***N<11***
Medication Management	**$249**	$160	$184	***N<11***	$154	***N<11***	$302	***N<11***
Mobile Crisis Intervention	**$472**	$229	***N<11***	***N<11***	$426	***N<11***	$593	***N<11***
Intensive In-Home Services	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Family Peer Support	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Case Management	**$81**	***N<11***	***N<11***	***N<11***	$86	***N<11***	$80	***N<11***
Therapeutic Foster Care	**$7,640**	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	$2,698.18	***N<11***
Inpatient Hospital Psychiatric Services	**$340**	$282	$250	***N<11***	$329.26	$273.87	$360.97	***N<11***
Partial Hospitalization/Day Treatment	**$6,934**	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	$4,532.20	***N<11***
ED (for behavioral health)	**$8,269**	$5,292	$4,581	***N<11***	$10,433	$11,498	$9,281	***N<11***
Telebehavioral Health	**$70**	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	$75.22	***N<11***
SUD Outpatient	**$7**	$5	***N<11***	***N<11***	$10.16	***N<11***	$8	***N<11***
Adaptive Behavioral Intervention	**$7,765**	$6,312	$3,116	***N<11***	$13,229.76	***N<11***	$7,906	***N<11***
Transitional Services	**$199**	$32	$36	***N<11***	$19	***N<11***	$459.10	***N<11***
Other Services	**$43,247**	$23,467	$25,553	***N<11***	$32,044	$20,698	$57,448	***N<11***
Overall Average Expenditure	**$6,820**	$3,508	$4,425	$1,162	$5,022	$6,468	$8,692	***N<11***

Note: Cell counts of less than 11 were not available; any percentages based on these counts are reported as N<11.

Fee-for-Service Utilization and Expenditures

The table below shows Fee-for-Service (FFS) utilization and expenditures, which Med-QUEST indicated include primarily services provided by the Department of Education and DOH that have been specifically left out of managed care. Of the $3.3m spent on FFS behavioral health use for 638 children in FFS, **$1.4m, or nearly 43%, was spent on Wraparound for 12% of children in this FFS population**. The mean expense for children receiving Wraparound through FFS was $18,082, which is somewhat higher than is seen nationally; however, as discussed below, 94% of those receiving Wraparound through FFS have diagnoses of ASD and these children may be staying longer in Wraparound. National samples have shown that the average length of stay in Wraparound is about 12 months at an average cost for Wraparound of $900-1,000 per month, which would yield an average expense of $10,800-$12,000 per child.[16]

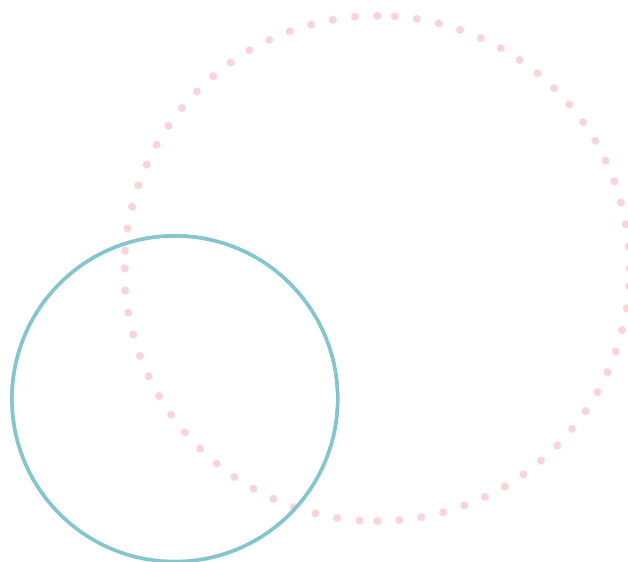
TSS received the next highest amount of total FFS expenditures, at $1.3m or 37% of total expense. The mean expenditure for TSS was $24,478 per child. Given this relatively high mean expense, it would be helpful to know what is included in TSS. The overall mean expense for children in FFS who received behavioral health services was $5,248, driven largely by the mean expenditures for TSS and Wraparound.

Children in the FFS population were most likely to receive Mobile Crisis Intervention, received by 42% of children in FFS, Targeted Case Management, received by 42% of children, and Other Services, received by 38% of children. However, both total and mean expenditures for these services were relatively low.

[16] See, for example, Substance Abuse and Mental Health Services Administration. (2019). Intensive Care Coordination for Children and Youth with Complex Mental and Substance Use Disorders: State and Community Profiles. SAMHSA Publication No. PEP19-04-01-001. Rockville, MD: SAMHSA.

Table 41: Med-QUEST. Fee for Service Utilization and Expenditures by Type of Service and in Total

Type of Service	Number of Children	% of All Children	Total Expenditure	% of All Expenditure	Average Expenditure
Screening and Assessment (including psych evaluations and psychosexual assessment)	***N<11***	***N<11***	$104	0%	***N<11***
Individual Therapy	***N<11***	***N<11***	$56	0%	***N<11***
Respite	15	2.4%	$49,121	1.5%	$3,275
Mobile Crisis Intervention	270	42.3%	$125,153	3.7%	$464
Intensive In-Home Services	***N<11***	***N<11***	$323	0%	***N<11***
Family Peer Support	***N<11***	***N<11***	$2,992	0.1%	***N<11***
Wraparound	79	12.4%	$1,428,490	42.7%	$18,082
Targeted Case Management	267	41.8%	$64,680	1.9%	$242
Therapeutic Foster Care	45	7.1%	$153,856	4.6%	$3,419
Inpatient Hospital Psychiatric Services	***N<11***	***N<11***	$865	0%	***N<11***
ED (for behavioral health)	***N<11***	***N<11***	$558	0%	***N<11***
Transitional Support Services	51	8%	$1,248,380	37.3%	$24,478
Other Services (Unspecified)	243	38.1%	$273,343	8.2%	$1,125
All Services	***638***	***100%***	***$3,347,922***	***100%***	***$5,248***



Fee-for Service Utilization and Expenditures Based on Diagnosis

Representation of FFS Diagnoses Among Children Receiving Behavioral Health Services

The table below shows the breakdown of the diagnoses that children received who used behavioral health care through FFS, by type of service and across services. **Across services, the top three diagnoses children received in the FFS population were: Adjustment Disorder (27%), ASD (25%), and Intellectual Disability (19%). Together, these three diagnoses represented 71% of all diagnoses that children received.**

No children receiving services through FFS had diagnoses of Anxiety, Obsessive Compulsive Disorder, ADHD, or Disruptive Impulse Control and Conduct Disorders. Children with Adjustment Disorders were the largest cohort to receive Mobile Crisis Intervention (60%), Other Services (inpatient-related; 50%), and Therapeutic Foster Care (40%). Children with ASD were the largest cohort to receive Wraparound (94%), Respite (87%), and TSS (84%).

Fee-for-Service Expenditures by Diagnosis

Table 42 below shows FFS expenditures broken down by diagnosis, across services and by type of service. The diagnosis that consumed the largest share of total FFS expenditures was ASD, which represented 75% of total expenditures or $2.5m out of total FFS expenditures of $3.3m. This disproportionately high share of total expense was driven almost entirely by Wraparound at $1.3m and TSS at $1.1m. Across services, children with ASD were the only diagnostic group whose average expense was higher than that of children in general and appreciably higher. Children in general in FFS had an average expenditure of $5,065, whereas the average expenditure for children with ASD was three times higher at $15,294.

FFS Rates of Service Utilization for Child Behavioral Health Services Based on Diagnosis

Table 43 shows the rates of FFS utilization by diagnosis and Table 44 shows the FFS expenditures by diagnosis. Twelve percent (12%) of all children in FFS used Wraparound; however, 45% of children with ASD used Wraparound. Similarly, children with ASD had a higher rate of Transitional Support Services use at 26%, compared to all children at 8%, a higher rate of Respite use at 8%, compared to all children at 2%, and a higher rate of Targeted Case Management use at 75%, compared to all children at 40%. Children with Intellectual Disability had the highest rate of use for TCM, with 94% of these children using TCM.

Several diagnostic groups used Other Services (inpatient-related) at appreciably higher rates than children in general. Thirty-seven percent (37%) of all children received Other Services, but 70% of children with Depressive Disorders, 69% of children with Bipolar Disorders, 68% of those with Adjustment Disorder, and 65% of those with Schizophrenia and Other Psychotic Disorders received Other Services. Similarly, several diagnostic groups used Mobile Crisis Intervention at higher rates than children in general. Forty-one percent (41%) of all children used MCI, but 90% of children with Adjustment Disorder, 79% of those with Depressive Disorders, 50% of those with Bipolar Disorder, and 45% of those with Schizophrenia and Other Psychotic Disorders used MCI. Seven percent (7%) of all children in FFS used Therapeutic Foster Care, but 18% of children with Depressive Disorders and 10% of those with Adjustment Disorder received this service.

Table 42: Breakdown of Diagnoses Received by Children in FFS Receiving Behavioral Health Care

Type of Service	Schizophrenia Spectrum & Other Psychotic Disorders	Bipolar and Related Disorders	Anxiety Disorders	Obsessive-Compulsive and Related Disorders	Post-Traumatic Stress Disorder	Adjustment Disorder	Attention-Deficit/ Hyperactivity Disorder	Disruptive, Impulse-Control, and Conduct Disorders	Intellectual Disability	Autism Spectrum Disorder	Depressive Disorders	Substance Use Disorders	Other Infrequent Diagnoses	Other
Screening and Assessment	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Individual Therapy	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Respite	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	86.7%	0%	0%	N<11	N<11
Mobile Crisis Intervention	10.4%	4.8%	N<11	N<11	N<11	59.6%	N<11	N<11	N<11	N<11	22.2%	N<11	N<11	N<11
Intensive In-Home Services	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Family Peer Support	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Wraparound	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	93.7%	N<11	N<11	N<11	N<11
Targeted Case Management	4.1%	N<11	N<11	N<11	N<11	N<11	N<11	N<11	44.2%	46.1%	N<11	N<11	N<11	N<11
Therapeutic Foster Care	N<11	N<11	N<11	N<11	N<11	40%	N<11	N<11	N<11	N<11	31.1%	N<11	N<11	N<11
Inpatient Hospital Psychiatric Services	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
ED (for behavioral health)	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Transitional Support Services	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	84.3%	N<11	N<11	N<11	N<11
Other Services (unspecified)	16.5%	7.4%	N<11	N<11	N<11	49.8%	N<11	N<11	N<11	N<11	21.8%	N<11	N<11	N<11
All Services	**9.4%**	**3.9%**	N<11	N<11	**1.7%**	**26.9%**	N<11	N<11	**18.9%**	**25%**	**11.5%**	**2.7%**	N<11	N<11

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.

Table 43: Rates of Fee for Service Utilization by Diagnosis

Type of Service	Total Service Utilization: # (%) of Children Using Service	# (%) Served													
		Schizophrenia Spectrum & Other Psychotic Disorders	Bipolar and Related Disorders	Anxiety Disorders	Obsessive-Compulsive and Related Disorders	Post-Traumatic Stress Disorder	Adjustment Disorder	Attention-Deficit/ Hyperactivity Disorder	Disruptive, Impulse-Control, and Conduct Disorders	Intellectual Disability	Autism Spectrum Disorder	Depressive Disorders	Substance Use Disorders	Other Infrequent Diagnoses	Other
Screening and Assessment	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Individual Therapy	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Respite	15 (2.3%)	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	13 (7.9%)	***N<11***	***N<11***	***N<11***	***N<11***
Mobile Crisis Intervention	270 (40.38%)	28 (45.2%)	13 (50.0%)	***N<11***	***N<11***	***N<11***	161 (90.4%)	***N<11***	***N<11***	28 (45.2%)	***N<11***	60 (78.9%)	***N<11***	***N<11***	***N<11***
Intensive In-Home Services	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Family Peer Support	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Wraparound	79 (12.0%)	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	74 (44.8%)	***N<11***	***N<11***	***N<11***	***N<11***
Targeted Case Management	267 (40.4%)	11 (17.7%)	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	118 (94.4%)	123 (74.5%)	***N<11***	***N<11***	***N<11***	***N<11***
Therapeutic Foster Care	45 (6.8%)	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	18 (10.1%)	***N<11***	***N<11***	***N<11***	***N<11***	14 (18.4%)	***N<11***	***N<11***	***N<11***
Inpatient Hospital Psychiatric Services	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
ED (for BH)	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Transitional Support Services	51 (7.7%)	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	43 (26.1%)	***N<11***	***N<11***	***N<11***	***N<11***
Other (unspecified)	243 (36.8%)	40 (64.5%)	18 (69.2%)	***N<11***	***N<11***	***N<11***	121 (68%)	***N<11***	***N<11***	***N<11***	***N<11***	53 (69.7%)	***N<11***	***N<11***	***N<11***
All Services	**661 (100%)**	**62 (100%)**	**26 (100%)**	***N<11***	***N<11***	**11 (100%)**	**178 (100%)**	***N<11***	***N<11***	**125 (100%)**	**165 (100%)**	**76 (100%)**	**18 (100%)**	***N<11***	***N<11***

Table 44: Fee for Service Expenditures by Diagnosis

Type of Service	Service Expenditures for All Children	Expenditure for Children with Diagnosis (% of Expenditure for All Children)													
		Schizophrenia Spectrum & Other Psychotic Disorders	Bipolar and Related Disorders	Anxiety Disorders	Obsessive-Compulsive and Related Disorders	Post-Traumatic Stress Disorder	Adjustment Disorder	Attention-Deficit/ Hyperactivity Disorder	Disruptive, Impulse-Control, and Conduct Disorders	Intellectual Disability	Autism Spectrum Disorder	Depressive Disorders	Substance Use Disorders	Other Infrequent Diagnoses	Other
Screening and Assessment	$104	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	$104 (100%)	N<11	N<11
Individual Therapy	$56	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	$56 (100%)	N<11	N<11	N<11
Respite	$49,121	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	$5,877 (12%)	$43,244 (88%)	N<11	N<11	N<11	N<11
Mobile Crisis Intervention	$125,153	$12,100 (9.7%)	$5,280 (4.2%)	N<11	N<11	$3,905 (3.1%)	$69,685 (55.7%)	$605 (0.5%)	N<11	N<11	N<11	$32,395 (25.9%)	$578 (0.5%)	$303 (0.2%)	$303 (0.2%)
Intensive In-home Services	$323	$323 (100%)	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Family Peer Support	$2,992	$1,306 (43.7%)	N<11	N<11	N<11	N<11	$1,595 (53.3%)	N<11	N<11	N<11	N<11	$91 (3%)	N<11	N<11	N<11
Wraparound	$1,428,490	$31,782 (2.2%)	N<11	N<11	N<11	N<11	N<11	N<11	N<11	$93,546 (6.5%)	$1,303,161 (91.2%)	N<11	N<11	N<11	N<11
Targeted Case Management	$64,680	$2,145 (3.3%)	$195 (0.3%)	N<11	N<11	$10 (0%)	$78 (0.1%)	N<11	$351 (0.5%)	$14,734 (22.8%)	$45,510 (70.4%)	$1,277 (2%)	$380 (0.6%)	N<11	N<11
Therapeutic Foster Care	$153,856	$67,821 (44.1%)	$7,837 (5.1%)	N<11	N<11	$635 (0.4%)	$51,292 (33.3%)	N<11	N<11	N<11	N<11	$26,270 (17.1%)	N<11	N<11	N<11
Inpatient Hospitalization	$865	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	$865 (100%)	N<11	N<11
ED (for BH)	$558	$147 (26.4%)	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	$116 (20.8%)	$295 (52.8%)	N<11	N<11
Transitional Support Services	$1,248,380	$44,617 (3.6%)	N<11	N<11	N<11	N<11	$1,059 (0.1%)	N<11	N<11	$71,191 (5.7%)	$1,131,512 (90.6%)	N<11	N<11	N<11	N<11
Other (unspecified)	$273,343	$81,790 (29.9%)	$43,922 (16.1%)	N<11	N<11	$4,597 (1.7%)	$95,386 (34.9%)	N<11	N<11	N<11	N<11	$47,365 (17.3%)	$284 (0.1%)	N<11	N<11
All Services	$3,347,922	$242,032 (7.2%)	$57,234 (1.7%)	N<11	N<11	$9,147 (0.3%)	$219,095 (6.5%)	$605 (0%)	$351 (0%)	$185,349 (5.5%)	$2,523,428 (75.4%)	$107,571 (3.2%)	$2,506 (0.1%)	$303 (0%)	$303 (0%)

Table 45: Fee for Service: Average Expenditures per Child Served, by Diagnosis

Type of Service	Average Expenditure Per Child Using Service														
	All Children	Schizophrenia Spectrum & Other Psychotic Disorders	Bipolar and Related Disorders	Anxiety Disorders	Obsessive-Compulsive and Related Disorders	Post-Traumatic Stress Disorder	Adjustment Disorder	Attention-Deficit/ Hyperactivity Disorder	Disruptive, Impulse-Control, and Conduct Disorders	Intellectual Disability	Autism Spectrum Disorder	Depressive Disorders	Substance Use Disorders	Other Infrequent Diagnoses	Other
Screening and Assessment	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Individual Therapy	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Respite	$3,275	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	$3,326	N<11	N<11	N<11	N<11
Mobile Crisis Intervention	$464	$432	$406	N<11	N<11	N<11	$433	N<11	N<11	N<11	N<11	$540	$540	N<11	N<11
Intensive In-Home Services	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Family Peer Support	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Wraparound	$18,082	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	$17,610	N<11	N<11	N<11	N<11
Targeted Case Management	$242	$195	N<11	N<11	N<11	N<11	N<11	N<11	N<11	$125	$370	N<11	N<11	N<11	N<11
Therapeutic Foster Care	$3,419	N<11	N<11	N<11	N<11	N<11	$2,850	N<11	N<11	N<11	N<11	$1,876	$1,876	N<11	N<11
Inpatient Hospital Psychiatric Services	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
ED (for behavioral health)	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Transitional Support Services	$24,478	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	$26,314	N<11	$26,314	N<11	N<11
Other Services (unspecified)	$1,125	$2,044.74	$2,440	N<11	N<11	N<11	$788	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
All Services	**$5,065**	**$3,904**	**$2,201**	N<11	N<11	**$832**	**$1,231**	N<11	N<11	**$1,483**	***$15,294***	**$1,415**	**$139**	N<11	N<11

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.

Disparities and Disproportionality in Fee-for-Service Utilization and Expenditures

Fee-for-Service Utilization Disparities Based on Sex

The table below shows FFS utilization based on sex. **Boys make up two-thirds (66%) of the FFS population using behavioral health services.** However, girls have higher rates of use for several key services, including Other Services, accessed by 49% of girls using services, compared to 33% of boys; Mobile Crisis Intervention, accessed by 55% of girls using services compared to 36% of boys; and Therapeutic Foster Care, accessed by 8% of girls using services compared to 7% of boys. Boys have higher rates of use for Wraparound, accessed by 15% of boys compared to 7% of girls, and Targeted Case Management, accessed by 46% of boys compared to 34% of girls.

Table 46: Fee for Service Utilization: Disparities Based on Sex

Type of Service	Total Service Utilization: # (%) of Children Using Service	Service Utilization Rate*, by Sex		Service Representation**, by Sex	
		# (%) of Males Served	# (%) of Females Served	Male	Female
Screening and Assessment (including psych evaluations and psychosexual assessment)	N<11	N<11	N<11	N<11	N<11
Individual Therapy	N<11	N<11	N<11	N<11	N<11
Respite	15 (2.4%)	N<11	N<11	N<11	N<11
Mobile Crisis Intervention	270 (42.3%)	150 (35.9%)	120 (54.5%)	55.6%	44.4%
Intensive In-Home Services	N<11	N<11	N<11	N<11	N<11
Family Peer Support	N<11	N<11	N<11	N<11	N<11
Wraparound	79 (12.4%)	63 (15.1%)	16 (7.3%)	79.7%	20.3%
Targeted Case Management	267 (41.8%)	193 (46.2%)	74 (33.6%)	72.3%	27.7%
Therapeutic Foster Care	45 (7.1%)	27 (6.5%)	18 (8.2%)	60%	40%
Inpatient Hospital Psychiatric Services	N<11	N<11	N<11	N<11	N<11
ED (for behavioral health)	N<11	N<11	N<11	N<11	N<11
Transitional Services	51 (8%)	36 (8.6%)	15 (6.8%)	70.6%	29.4%
Other Services (unspecified)	243 (38.1%)	136 (32.5%)	107 (48.6%)	56%	44%
All Services	638 (100%)	418 (100%)	220 (100%)	65.5%	34.5%

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N/A.
**Service utilization rate refers to the percentage of children in each sex cohort who use a particular service out of all children in that sex cohort who use services.*
***Service Representation reflects the sex composition of all children receiving each service type.*

Fee-for-Service Expenditure Disparities Based on Sex

The table below shows expenditures by service type and in total based on sex. **Boys use nearly three-quarters of FFS dollars (73.8%), although they represent only 66% of recipients. Girls are nearly 35% of service recipients but receive only 26% of FFS dollars.** Boys have disproportionately higher expenditures relative to their representation among recipients for Other Services, Targeted Case Management, and Therapeutic Foster Care.

Table 47: Fee for Service Expenditures: Disparities Based on Sex

Type of Service	Service Expenditures for All Children	Service Expenditures and Representation for Boys		Service Expenditures and Representation for Girls	
		Expenditure for Boys (% of Expenditure for All Children)	% of Children Receiving Service	Expenditure for Girls (% of Expenditure for All Children)	% of Children Receiving Service
Screening and Assessment (including psych evaluations and psychosexual assessment)	$104	$104 (100%)	*N<11*	$0 (0%)	*N<11*
Individual Therapy	$56	$56 (100%)	*N<11*	$0 (0%)	*N<11*
Respite	$49,121	$23,795 (48.4%)	*N<11*	$25,326 (51.6%)	*N<11*
Mobile Crisis Intervention	$125,153	$68,723 (54.9%)	55.6%	$56,430 (45.1%)	44.4%
Intensive In-Home Services	$323	$323 (100%)	*N<11*	$0 (0%)	*N<11*
Family Peer Support	$2,992	$2,279 (76.1%)	*N<11*	$714 (23.9%)	*N<11*
Wraparound	$1,428,490	$1,126,548 (78.9%)	79.7%	$301,942 (21.1%)	20.3%
Targeted Case Management	$64,680	$48,586 (75.1%)	72.3%	$16,095 (24.9%)	27.7%
Therapeutic Foster Care	$153,856	$117,631 (76.5%)	60%	$36,225 (23.5%)	40%
Inpatient Hospital Psychiatric Services	$865	$707 (81.7%)	*N<11*	$158 (18.3%)	*N<11*
ED (for behavioral health)	$558	$484 (86.8%)	*N<11*	$74 (13.2%)	*N<11*
Transitional Services	$1,248,380	$902,247 (72.3%)	70.6%	$346,133 (27.7%)	29.4%
Other Services (unspecified)	$273,343	$180,253 (65.9%)	56%	$93,089 (34.1%)	44%
All Services	**$3,347,922**	**$2,471,736 (73.8%)**	**65.5%**	**$876,186 (26.2%)**	**34.5%**

Note: Cell counts of less than 11 were not available; any percentages based on these counts are reported N<11.

Table 48 below shows average FFS expenditures per child served by type of service and in total. Across all services, the average expenditure for boys at $5,913 is 48% higher than that of girls at $3,983. Appreciable differences are seen with respect to:

- Other Services, where the average expenditure for boys at $1,325 is 52% higher than that of girls at $870;
- Therapeutic Foster Care, where the average expense for boys at $4,357 is over twice that of girls at $2,013;
- Targeted Case Management, where the average expense for boys at $252 is 16% higher than for girls at $217; and
- Transitional Support Services, where boys' average expense at $25,062 is 8% higher than for girls at $23,076.

There are only two services where girls have a higher average expenditure than that of boys: Wraparound, where the average expense for girls at $18,871 is 6% higher than that of boys at $17,882, and Mobile Crisis Intervention, where the average expenditure for girls at $470 is 3% higher than that of boys at $458.

Table 48: Fee for Service: Average Expenditures per Child Served Based on Sex

Type of Service	Average Expenditure Per Child Using Service	Average Expenditure Per Boy Using Service	Average Expenditure Per Girl Using Service
Screening and Assessment (including psych evaluations and psychosexual assessment)	N<11	N<11	N<11
Individual Therapy	N<11	N<11	N<11
Respite	$3,275	N<11	N<11
Mobile Crisis Intervention	$464	$458	$470
Intensive In-Home Services	N<11	N<11	N<11
Family Peer Support	N<11	N<11	N<11
Wraparound	$18,082	$17,882	$18,871
Targeted Case Management	$242	$252	$217
Therapeutic Foster Care	$3,419	$4,357	$2,013
Inpatient Hospital Psychiatric Services	N<11	N<11	N<11
ED (for behavioral health)	N<11	N<11	N<11
Transitional Services	$24,478	$25,062	$23,076
Other Services (unspecified)	$1,125	$1,325	$870
All Services	**$5,248**	**$5,913**	**$3,983**

Note: Cell counts of less than 11 were not available; any percentages based on these counts are reported N<11.

Fee-for-Service Utilization Disparities Based on Age

The table below shows FFS utilization based on age. It shows both the breakdown of age cohorts in the FFS population that received behavioral health care, as well as their rates of service use.

Young adults, ages 21-25, comprised the largest age cohort receiving FFS behavioral health services, constituting 45% of those receiving services. They were the largest cohort to receive Other Services (inpatient-related) at 63%, Therapeutic Foster Care at 76%, Mobile Crisis Intervention (MCI) at 61%, and Wraparound at 46%. The next largest age cohort was 0–5-year-olds, who comprised 19% of all children using services, and they were the largest group to use Targeted Case Management at 45%. Youth, ages 19-20, constituted 16% of those using services, and those, ages 13-18, comprised 15%. Children, ages 6-12, comprised only 5% of those using FFS services. If FFS services are primarily provided through DOE, there may be opportunity to intervene earlier with young school-age children.

Young adults, ages 21-25, and those, ages 19-20, had the highest and basically equivalent rates of use for Other Services (inpatient-related), which 54% of each of these age cohorts used. Young adults, ages 21-25, also had the highest rate of use of Therapeutic Foster Care, used by 12% of this age group, and those, ages 19-20, had the highest rate of use of Mobile Crisis Intervention, used by 62% of this age group. Both young adults, 21-25, and those 19-20, had lower rates of use than the average rate across age groups for Targeted Case Management and Transitional Support Services.

Youth, ages 13-18, had higher rates of use than children in general for Wraparound, which 23% of these youth used, compared to 12% of children in general, and slightly higher rates of use for MCI, which 44% of these youth used, compared to 42% of the FFS population. These youth had somewhat lower rates of use for Other Services (inpatient-related), 35% compared to 38% across age groups.

Children, ages 6-12, had higher rates of use for TSS, used by 48% of this age group compared to 8% across age cohorts, Targeted Case Management, used by 74% of 6–12-year-olds compared to 42% across age cohorts, and Wraparound, used by 48% of 6–12-year-olds compared to 12% across age groups. They had significantly lower use of Other Services (inpatient-related), with their numbers too low to calculate compared to 38% across age groups who used this service. The only FFS service used by 0–5-year-olds where the numbers of children were large enough to calculate was Targeted Case Management, which 98% of this age group used (compared to 42% across age groups).

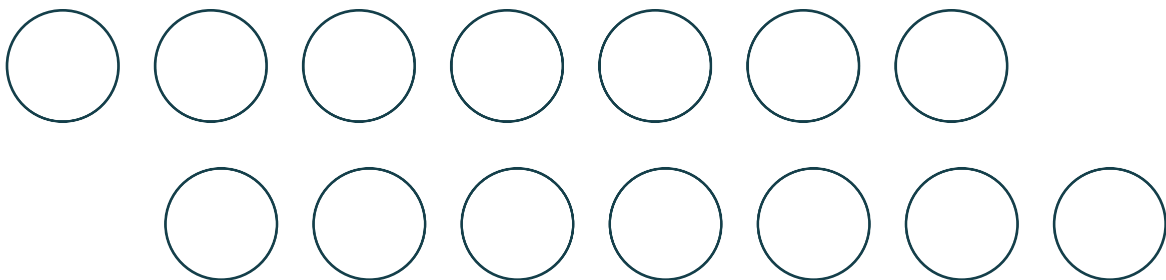


Table 49: Fee for Service Utilization: Disparities by Age

Type of Service	Total Service Utilization: # (%) of Children Using Service	Service Utilization Rate*, by Age					Service Representation**, by Age				
		# (%) of Ages 0-5 Served	# (%) of Ages 6-12 Served	# (%) of Ages 13-18 Served	# (%) of Ages 19-20 Served	# (%) of Ages 21-25 Served	0-5	6-12	13-18	19-20	21-25
Screening and Assessment	N<11	N<11	N<11	(0%)	N<11	(0%)	N<11	N<11	N<11	N<11	N<11
Individual Therapy	N<11	N<11	N<11	N<11	(0%)	N<11	N<11	N<11	N<11	N<11	N<11
Respite	15 (2.4%)	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Mobile Crisis Intervention	270 (42.3%)	N<11	N<11	42 (43.8%)	63 (62.4%)	165 (57.7%)	N<11	N<11	15.6%	23.3%	61.1%
Intensive In-Home Services	N<11	N<11	N<11	(0%)	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Family Peer Support	N<11	N<11	N<11	(0%)	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Wraparound	79 (12.4%)	N<11	15 (48.4%)	22 (22.9%)	N<11	37 (12.9%)	N<11	19%	27.8%	N<11	46.8%
Targeted Case Management	267 (41.8%)	121 (97.6%)	23 (74.2%)	41 (42.7%)	17 (16.8%)	65 (22.7%)	45.3%	8.6%	15.4%	6.4%	24.3%
Therapeutic Foster Care	45 (7.1%)	N<11	N<11	N<11	N<11	34 (11.9%)	N<11	N<11	N<11	N<11	75.6%
Inpatient Hospital Psychiatric Services	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
ED (for behavioral health)	N<11	N<11	N<11	(0%)	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Transitional Support Services	51 (8%)	N<11	15 (48.4%)	N<11	N<11	16 (5.6%)	N<11	29.4%	N<11	N<11	31.4%
Other Services (unspecified)	243 (38.1%)	N<11	N<11	34 (35.4%)	55 (54.5%)	154 (53.8%)	N<11	N<11	14%	22.6%	63.4%
All Services	638 (100%)	124 (100%)	31 (100%)	96 (100%)	101 (100%)	286 (100%)	19.4%	4.9%	15%	15.8%	44.8%

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.
**Service utilization rate refers to the percentage of children in each age cohort who use a particular service out of all children in that age cohort who use services.*
***Service Representation reflects the age composition of all children receiving each service type.*

Fee-for-Service (FFS) Expenditure Disparities Based on Age

Table 50 below shows FFS expenditures broken down by age group. **Young adults, ages 21-25, used 68% of total FFS expenditures, $2.3m out of a total for all age cohorts of $3.3m, although they represent only 45% of total service recipients.** Their disproportionately higher expenditures were driven largely by use of Wraparound and TSS, which, together, represent 83% of expenditures for this age group.

Youth, ages 13-18, used the next largest share of FFS expenditures - $305,362 or 13% of total expense across age groups. However, their 13% share of expenditures is somewhat disproportionately low compared to their 15% representation among service recipients.

Young adults, 19-20, who represented the third largest share of expenditures at $.3m or 9% of total expenditures across age groups, also had disproportionately lower expenditures compared to their 16% representation among service recipients.

Children, ages 6-12, used 8% of total expenditures, which was disproportionately higher than their 5% representation among service recipients. Very few FFS dollars were spent on the 0-5 population - $45,126, or about 1% of total expenditures across age groups.

Table 51 shows average FFS expenditures per child served by age cohort. **Although they represented only 5% of all children using FFS services, children, ages 6-12, had the highest average expense across services at $8,383, compared to $5,248 across age cohorts.** They were followed closely by the 21–25-year-old cohort with an average expenditure of $8,007. All other age groups had lower average expenditures than children in general.

Table 50: Fee for Service Expenditures: Disparities by Age

Type of Service	Service Expenditures for All Children	Service Expenditures and Representation									
		Children Ages 0-5		Children Ages 6-12		Children Ages 13-18		Children Ages 19-20		Children Ages 21-25	
		Expenditure (% of Expenditure for All Children)	% of Children Receiving Service	Expenditure (% of Expenditure for All Children)	% of Children Receiving Service	Expenditure (% of Expenditure for All Children)	% of Children Receiving Service	Expenditure (% of Expenditure for All Children)	% of Children Receiving Service	Expenditure (% of Expenditure for All Children)	% of Children Receiving Service
Screening and Assessment	$104	$0 (0%)	N<11	$0 (0%)	N<11	$0 (0%)	N<11	$104 (100%)	N<11	$0 (0%)	N<11
Individual Therapy	$56	$0 (0%)	N<11	$0 (0%)	N<11	$56 (100%)	N<11	$0 (0%)	N<11	$0 (0%)	N<11
Respite	$49,121	$18,350 (37.4%)	N<11	$9,835 (20%)	N<11	$4,760 (9.7%)	N<11	$314 (0.6%)	N<11	$15,862 (32.3%)	N<11
Mobile Crisis Intervention	$125,153	$0 (0%)	N<11	$0 (0%)	N<11	$17,353 (13.9%)	15.6	$28,298 (22.6%)	23.3%	$79,503 (63.5%)	61.1%
Intensive In-Home Services	$323	$0 (0%)	N<11	$0 (0%)	N<11	$0 (0%)	N<11	$162 (50%)	N<11	$162 (50%)	N<11
Family Peer Support	$2,992	$0 (0%)	N<11	$0 (0%)	N<11	$0 (0%)	N<11	$334 (11.2%)	N<11	$2,658 (88.8%)	N<11
Wraparound	$1,428,490	$0 (0%)	N<11	$140,384 (9.8%)	19%	$328,283 (23%)	27.8%	$33,685 (2.4%)	N<11	$926,138 (64.8%)	46.8%
Targeted Case Management	$64,680	$13,587 (21%)	45.3%	$8,064 (12.5%)	8.6%	$14,525 (22.5%)	15.4%	$5,108 (7.9%)	6.4%	$23,397 (36.2%)	24.3%
Therapeutic Foster Care	$153,856	$0 (0%)	N<11	$0 (0%)	N<11	$2,330 (1.5%)	N<11	$25,204 (16.4%)	N<11	$126,322 (82.1%)	75.6%
Inpatient Hospitalization	$865	$0 (0%)	N<11	$0 (0%)	N<11	$138 (15.9%)	N<11	$384 (44.4%)	N<11	$343 (39.6%)	N<11
ED (Behavioral Health)	$558	$0 (0%)	N<11	$0 (0%)	N<11	$0 (0%)	N<11	$190 (34%)	N<11	$368 (66%)	N<11
Transitional Support Services	$1,248,380	$13,189 (1.1%)	N<11	$101,596 (8.1%)	29.4%	$52,091 (4.2%)	N<11	$154,839 (12.4%)	N<11	$926,664 (74.2%)	31.4%
Other (Unspecified)	$273,343	$0 (0%)	N<11	$0 (0%)	N<11	$27,986 (10.2%)	14%	$56,741 (20.8%)	22.6%	$188,617 (69%)	63.4%
All Services	**$3,347,922**	**$45,126 (1.3%)**	**19.4%**	**$259,880 (7.8%)**	**4.9%**	**$447,521 (13.4%)**	**15%**	**$305,362 (9.1%)**	**15.8%**	**$2,290,033 (68.4%)**	**44.8%**

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.

Table 51: Fee for Service: Average Expenditures per Child Served, by Age

Type of Service	Average Expenditure Per Child Using Service	Average Expenditure Per Child Age 0-5 Using Service	Average Expenditure Per Child Age 6-12 Using Service	Average Expenditure Per Child Age 13-18 Using Service	Average Expenditure Per Child Age 19-20 Using Service	Average Expenditure Per Child Age 21-25 Using Service
Screening and Assessment (including psych evaluations and psychosexual assessment)	N<11	N<11	N<11	N<11	N<11	N<11
Individual Therapy	N<11	N<11	N<11	N<11	N<11	N<11
Respite	$3,275	N<11	N<11	N<11	N<11	N<11
Mobile Crisis Intervention	$464	N<11	N<11	$413	$449	$482
Intensive in-Home Services	N<11	N<11	N<11	N<11	N<11	N<11
Family Peer Support	N<11	N<11	N<11	N<11	N<11	N<11
Wraparound	$18,082	N<11	$9,359	$14,922	N<11	$25,031
Targeted Case Management	$242	$112	$351	$354	$300	$360
Therapeutic Foster Care	$3,419	N<11	N<11	N<11	N<11	$3,715
Inpatient Hospital Psychiatric Services	N<11	N<11	N<11	N<11	N<11	N<11
ED (for behavioral health)	N<11	N<11	N<11	N<11	N<11	N<11
Transitional Support Services	$24,478	N<11	$6,773	N<11	N<11	$57,917
Other Services (Unspecified)	$1,125	N<11	N<11	$823	$1,032	$1,225
Overall Average Expenditure	$5,248	$364	$8,383	$4,662	$3,023	$8,007

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.

Fee-for-Service Utilization Disparities Based on Race/Ethnicity

The table below shows FFS utilization based on race/ethnicity by type of service and in total. It shows both the breakdown of race/ethnicity groups among all children using services, and it shows the rate of service use by each racial/ethnic cohort. (As noted earlier, Med-QUEST did not provide data on the Hispanic/Latino population, and it is unclear which children are included in the Other category.)

Based on the racial/ethnic data provided, **Native Hawaiian/Pacific Islander children represent the largest racial/ethnic cohort receiving FFS services, and their 29% representation among service recipients appears to be an overrepresentation compared to their 11% representation in the state child population. White children also are overrepresented,** comprising 19% of service recipients but 14% of the state child population. **American Indian/Alaskan Native children and Black/African American children also appear to be overrepresented among service recipients.** American Indian/Alaskan Native children represent 3% of service recipients but only 0.1% of the state population. Black/African American children represent 4% of service recipients but only 2% of the state population.

In contrast, **Asian children are underrepresented among service recipients.** Asian children are 18% of service recipients but are 24% of the state child population. Similar underrepresentation of Asian children was found in the Managed Care utilization discussed earlier.

Black/African American children have the highest rates of use for Other Services (inpatient-related) and Mobile Crisis Intervention (MCI), with 61% of these children using Other Services compared to 38% of children in general, and 61% using MCI compared to 42% of children in general. The numbers of Black/African American children who use all other service types are too low to calculate.

Asian children have the highest rate of use for Targeted Case Management, with 47% of these children using TCM compared to 42% of children in general. Asian children have lower or comparable rates of use for all other service types. Native Hawaiian/Pacific Islander children have a higher rate of MCI use than children in general, with 47% of Native Hawaiian/Pacific Islander children using MCI compared to 42% of children in general. Their rates of use for all other service types are lower than those of children in general.

White children have higher rates of use than children in general for every service type except TCM. Their disproportionately higher rates of use are as follows:

- 50% of White children use MCI compared to 42% of children in general
- 49% use Other Services (inpatient-related) compared to 38% of children in general
- 14% use Wraparound compared to 12% of children in general
- 10% use TSS compared to 8% of children in general
- 9% use Therapeutic Foster Care compared to 7% of children in general

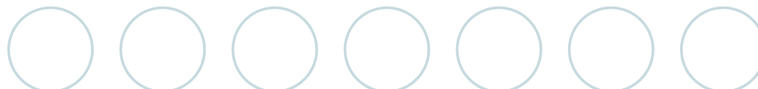


Table 52: Fee for Service Utilization: Disparities by Race/Ethnicity

Type of Service	Total Service Utilization # (%) of Children Using Service	*Service Utilization Rate, by Race # (%) Served						**Service Representation, by Race (%)						
		American Indian / Alaskan Native	Black / African-American	Asian	Native Hawaiian / Pacific Islander	White	Other	American Indian / Alaskan Native	Black / African-American	Asian	Native Hawaiian / Pacific Islander	White	Hispanic / Latino	Other
Screening and Assessment	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Individual Therapy	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Respite	15 (2.4%)	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Mobile Crisis Intervention	270 (42.3%)	N<11	17 (60.7%)	35 (29.9%)	84 (46.2%)	59 (50%)	52 (30.2%)	N<11	6.3	13.0	31.1	21.9	N<11	19.3
Intensive In-Home Services	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Family Peer Support	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Wraparound	79 (12.4%)	N<11	N<11	15 (12.8%)	14 (7.7%)	16 (13.6%)	N<11	N<11	N<11	19	17.7	20.3	N<11	N<11
Targeted Case Management	267 (41.8%)	N<11	N<11	55 (47.0%)	60 (33%)	32 (27.1%)	100 (58.1%)	N<11	N<11	20.6	22.5	12.0	N<11	37.5
Therapeutic Foster Care	45 (7.1%)	N<11	N<11	N<11	N<11	11 (9.3%)	N<11	N<11	N<11	N<11	N<11	24.4	N<11	N<11
Inpatient Hospitalization	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
ED (behavioral health)	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Transitional Support Services	51 (8.0%)	N<11	N<11	N<11	N<11	12 (10.2%)	N<11	N<11	N<11	N<11	N<11	23.5	N<11	N<11
Other Unspecified	243 (38.1%)	11 (52.4%)	17 (60.7%)	27 (23.1%)	69 (37.9%)	58 (49.2%)	45 (26.2%)	4.5	7.0	11.1	28.4	23.9	N<11	18.5
All Services	**638 (100%)**	**21 (100%)**	**28 (100%)**	**117 (100%)**	**182 (100%)**	**118 (100%)**	**172 (100%)**	**3.3**	**4.4**	**18.3**	**28.5**	**18.5**	**N<11**	**27.0**
Racial/Ethnic Breakdown of Hawai'i Child Population***								0.1%	1.9%	23.6%	11%	14.1%	18.6%	30.7%^

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.
**Service utilization rate refers to the percentage of children in each racial/ethnic cohort who use a particular service out of all children in that racial/ethnic cohort who use services. No counts of children who are Hispanic/Latino were greater than 11 so they are not represented in this part of the table. **Service Representation reflects the racial/ethnic composition of all children receiving each service type.*
****US Census Bureau. Population Division. 2019. "Annual Estimates of the Resident Population by Sex, Age, Race, and Hispanic Origin for the United States and States" ^Multi-racial*

Fee-for-Service Expenditure Disparities Based on Race/Ethnicity

Table 53 shows FFS expenditures based on race/ethnicity by service type and across services. **Asian children utilize the largest share of total expenditures at 39%, or $1.3m out of a total of $3.3m. This share is disproportionately high compared to their 18% representation among children using services** and is driven primarily by expenditures for Wraparound and TSS, which, together, represent 87% of dollars used by Asian children. **White children also use a disproportionately high share of total expenditures** at 24% ($0.8m), compared to their 19% representation among service recipients, which also is driven primarily by expenditures for Wraparound and Transitional Support Services (TSS), which, together represent 78% of expenditures for this cohort.

In contrast to Asian and White children, **American Indian/Alaskan Native, Black/African American, and Native Hawaiian/Pacific Islander children all use disproportionately lower expenditures compared to their representation among service recipients.** American Indian/Alaskan Native children use 2% of dollars but are 3% of service recipients. Black/African American children use 2% of dollars but are 4% of service recipients, and Native Hawaiian/Pacific Islander children use 21% of dollars but are 29% of service recipients.

Table 54 shows average FFS expenditures per child served by type of service and across services. **Asian children have an average expenditure across services that is over twice that of children in general ($11,035 versus $5,248), driven primarily by Wraparound expenditures. White children also have average expenditures higher than children in general, about 32% higher, driven mainly by TSS expenditures.** All other racial/ethnic cohorts have average expenditures that are less than the average for children in general.

Table 53: Fee for Service Expenditures: Disparities by Race

Type of Service	Service Expenditures and Representation														
	Service Expenditures for All Children	American Indian/ Alaskan Native		Black/African American		Asian		Native Hawaiian Pacific Islander		White		Hispanic/Latino		Other	
		Expenditure (% Expenditure All Children)	% Received Service	Expenditure (% Expenditure All Children)	% Received Service	Expenditure (% Expenditure All Children)	% Received Service	Expenditure (% Expenditure All Children)	% Received Service	Expenditure (% Expenditure All Children)	% Received Service	Expenditure (% Expenditure All Children)	% Received Service	Expenditure (% Expenditure All Children)	% Received Service
Screening and Assessment	$104	N<11	N<11	N<11	N<11	N<11	N<11	$104 (100%)	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Individual Therapy	$56	N<11	N<11	N<11	N<11	N<11	N<11	$56 (100%)	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Respite	$49,121	N<11	N<11	$2,348 (4.8%)	N<11	$16,444 (33.5%)	N<11	$9,628 (19.6%)	N<11	$7,194 (0.9%)	50%	N<11	N<11	$13,508 (27.5%)	N<11
Mobile Crisis Intervention	$125,153	$3,795 (3.0%)	N<11	$5,885 (4.7%)	6.3%	$20,570 (16.4%)	13.0%	$38,638 (30.9%)	31.1%	$27,500 (3%)	50%	N<11	N<11	$28,765 (23.0%)	19.3%
Intensive In-Home Services	$323	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Family Peer Support	$2,992	N<11	N<11	$592 (19.8%)	N<11	$182 (6.1%)	N<11	$1,200 (40.1%)	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Wraparound	$1,428,490	$1,519 (0.1%)	N<11	$16,902 (1.2%)	N<11	$690,004 (48.3%)	19.0%	$261,186 (18.3%)	17.7%	$240,479 (29%)	14%	N<11	N<11	$218,400 (15.3%)	N<11
Targeted Case Management	$64,680	$2,016 (3.1%)	N<11	$2,502 (3.9%)	N<11	$19,241 (29.7%)	20.6%	$16,680 (25.8%)	22.5%	$8,962 (1%)	27%	N<11	N<11	$15,279 (23.6%)	37.5%
Therapeutic Foster Care	$153,856	$21,433 (13.9%)	N<11	$2,753 (1.8%)	N<11	$13,847 (9.0%)	20.6%	$38,160 (24.8%)	22.5%	$45,568 (6%)	9%	N<11	N<11	$32,094 (20.9%)	N<11
Inpatient Hospitalization	$865	N<11	N<11	N<11	N<11	N<11	N<11	$453 (52.3%)	N<11	N<11	N<11	N<11	N<11	$296 (34.2%)	N<11
ED (behavioral health)	$558	N<11	N<11	N<11	N<11	N<11	N<11	$190 (34.0%)	N<11	N<11	N<11	N<11	N<11	$221 (39.6%)	N<11
Transitional Support Services	$1,248,380	N<11	N<11	$14,877 (1.2%)	N<11	$491,156 (39.3%)	N<11	$288,894 (23.1%)	N<11	$402,587 (49%)	10%	N<11	N<11	$50,866 (4.1%)	N<11
Other (unspecified)	$273,343	$31,813 (11.6%)	4.5%	$13,636 (5.0%)	7.0%	$39,731 (14.5%)	11.1%	$59,414 (21.7%)	28.4%	$81,790 (10%)	49%	N<11	N<11	$46,960 (17.2%)	18.5%
All Services	**$3,347,922**	**$60,576 (1.8%)**	**3.3%**	**$59,496 (1.8%)**	**4.4%**	**$1,291,175 (38.6%)**	**18.3%**	**$714,602 (21.3%)**	**28.5%**	**$815,685 (24%)**	**18.5%**	**N<11**	**N<11**	**$406,388 (12.1%)**	**27.0%**

Table 54: Fee for Service: Average Expenditures per Child Served, by Race

	Average Expenditure Per Child Using Service							
Type of Service	**All Children**	**American Indian/ Alaskan Native**	**Black/African American**	**Asian**	**Native Hawaiian Pacific Islander**	**White**	**Hispanic/ Latino**	**Other**
Screening and Assessment	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Individual Therapy	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Respite	$3,275	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Mobile Crisis Intervention	$464	***N<11***	$346	$588	$460	$466	***N<11***	$553
Intensive In-Home Services	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Family Peer Support	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Wraparound	$18,082	***N<11***	***N<11***	$46,000	$18,656	$15,030	***N<11***	***N<11***
Targeted Case Management	$242	***N<11***	***N<11***	$350	$278	$280	***N<11***	$153
Therapeutic Foster Care	$3,419	***N<11***	***N<11***	***N<11***	***N<11***	$4,143	***N<11***	***N<11***
Inpatient Hospitalization	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
ED (behavioral health)	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Transitional Support Services	$24,478	***N<11***	***N<11***	***N<11***	***N<11***	$33,549	***N<11***	***N<11***
Other (unspecified)	$1,125	$2,892	$802	$1,472	$861	$1,410	***N<11***	$1,044
Overall Average Expenditure	$5,248	$2,885	**$2,125**	**$11,035**	**$3,926**	**$6,913**	***N<11***	**$2,363**

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.

Fee-for-Service Utilization Disparities Based on Island

Table 55 shows utilization by service type, and in total, based on Island of residence and displays both rate of service use and breakdown by island of those using services. As noted earlier, to determine whether children are under- or over-represented among those receiving services based on the Island where they reside, one needs to compare utilization of services based on Island residence to the Medicaid-enrolled child population on each of the Islands. If those data are not available, comparison can be made to the relative size of the Island child populations. If those data are not available, then comparison can be made to the relative size of the Island populations in general, which is the approach used for this analysis because child population data were not available.

Children on O'ahu constitute the largest group of FFS service recipients, comprising 66% of all children receiving services. However, they still appear somewhat underrepresented given that O'ahu represents about 70% of the state population. Children on O'ahu have higher rates of service use than children in general for Wraparound and TCM and lower rates of use for MCI, Therapeutic Foster Care, and Other Services.

Children on the Island of Hawai'i are the next largest group of children using services, comprising 21% of service recipients, which appears to be an overrepresentation given that the Island of Hawai'i represents 14% of the state population. Children on the Island of Hawai'i have higher rates of service use than children in general for MCI, TSS, and Other Services (inpatient-related), and lower rates of use for Wraparound, TCM, and Therapeutic Foster Care.

Children on Maui (including Lāna'i and Moloka'i) represent 9% of those using services, which is an underrepresentation given that Maui represents about 11% of the state population. Children on Maui have higher rates of service use than children in general for MCI and Other Services (inpatient-related) and lower rates of use for Respite, Wraparound, TCM, Therapeutic Foster Care, and TSS.

Children on Kaua'i appear to use services in proportion to their representation in the state population. They represent 5% of service recipients and 5% of the state population. Children on Kaua'i have lower rates of service use than children in general for Respite, MCI, Wraparound, Therapeutic Foster Care, TSS, and Other Services (inpatient-related). The only service for which their rates of use are comparable to that of other children is TCM.

Table 55: Fee for Service Utilization: Disparities by Island

Type of Service	Total Service Utilization: # (%) of Children Using Service	*Service Utilization Rate, by Island (#/%)							**Service Representation, by Island						
		Hawai'i	Kaua'i	Lāna'i	Maui	Moloka'i	O'ahu	Unknown	Hawai'i	Kaua'i	Lāna'i	Maui	Moloka'i	O'ahu	Unknown
Screening and Assessment	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Individual Therapy	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Respite	15 (2.3%)	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Mobile Crisis Intervention	270 (42.1%)	92 (69.7%)	11 (35.5%)	*N<11*	44 (75.9%)	*N<11*	122 (29.0%)	*N<11*	34.1%	4.1%	*N<11*	16.3%	*N<11*	45.2%	*N<11*
Intensive In-Home Services	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Family Peer Support	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Wraparound	79 (12.3%)	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	69 (16.4%)	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	87.3%	*N<11*
Targeted Case Management	267 (41.7%)	24 (18.2%)	13 (41.9%)	*N<11*	*N<11*	*N<11*	226 (53.8%)	*N<11*	9.0%	4.9%	*N<11*	*N<11*	*N<11*	84.6%	*N<11*
Therapeutic Foster Care	45 (7.0%)	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	26 (6.2%)	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	57.8%	*N<11*
Inpatient Hospital Psychiatric Services	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
ED (for behavioral health)	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Transitional Support Services	51 (8.0%)	12 (9.1%)	*N<11*	*N<11*	*N<11*	*N<11*	33 (7.9%)	*N<11*	23.5%	*N<11*	*N<11*	*N<11*	*N<11*	64.7%	*N<11*
Other (unspecified)	243 (37.9%)	83 (62.9%)	*N<11*	*N<11*	38 (65.5%)	*N<11*	119 (28.3%)	*N<11*	34.2%	*N<11*	*N<11*	15.6%	*N<11*	49.0%	*N<11*
All Services	**641 (100%)**	**132 (100%)**	**31 (100%)**	*N<11*	**58 (100%)**	*N<11*	**420 (100%)**	*N<11*	**20.6%**	**4.8%**	*N<11*	**9.0%**	*N<11*	**65.5%**	*N<11*

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.
**Service utilization rate refers to the percentage of children on a given Island who use a particular service out of all children on that Island who use services.*
***Service Representation reflects the Island composition of all children receiving each service type.*

Fee-for-Service Expenditure Disparities Based on Island

Table 56 shows FFS expenditures by type of service and across services broken down by Island. **Out of a total of $3.3m FFS expenditures, children on O‘ahu used $2.4m or 73% of total expenditures, which seems to be disproportionately high given their 66% representation among service users. Their expenditures are driven primarily by use of Wraparound and TSS, which, together, represent 83% of all dollars used by children on O‘ahu.**

Children on the Island of Hawai‘i represent 11% of total expenditures, which seems disproportionately low given their 21% representation among service recipients. Children on Maui also represent about 11% of total expenditures ($365,716); however, their expenditures seem slightly high given their 9% representation among service recipients. Their expenditures are driven primarily by Wraparound and TSS, which, together, represent 77% of all FFS dollars used by children on Maui. Children on Kaua‘i used 5% of total expenditures, comparable to their 5% representation among service recipients.

Table 56: Fee for Service Expenditures: Disparities by Island

Type of Service	Service Expenditures for All Children	Service Expenditures and Representation													
		Hawai'i		Kaua'i		Lāna'i		Maui		Moloka'i		O'ahu		Unknown	
		Expenditure (% Expenditure All Children)	% Received Service	Expenditure (% Expenditure All Children)	% Received Service	Expenditure (% Expenditure All Children)	% Received Service	Expenditure (% Expenditure All Children)	% Received Service	Expenditure (% Expenditure All Children)	% Received Service	Expenditure (% Expenditure All Children)	% Received Service	Expenditure (% Expenditure All Children)	% Received Service
Screening and Assessment	$104	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	$104 (100%)	N<11	N<11	N<11
Individual Therapy	$56	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	$56 (100%)	N<11	N<11	N<11
Respite	$49,121	$9,593 (19.5%)	N<11	N<11	N<11	$16,444 (33.5%)	N<11	N<11	N<11	N<11	N<11	$39,529 (80.5%)	N<11	N<11	N<11
Mobile Crisis Intervention	$125,153	$42,543 (34.0%)	34.1	$4,125 (3.3%)	4.1	N<11	N<11	$24,723 (19.8%)	16.3	$440 (0.4%)	N<11	$53,323 (42.6%)	45.2	N<11	N<11
Intensive In-Home Services	$323	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	$323 (100%)	N<11	N<11	N<11
Family Peer Support	$2,992	$668 (22.3%)	N<11	N<11	N<11	N<11	N<11	N<11	N<11	$775 (25.9%)	N<11	$1,549 (51.8%)	N<11	N<11	N<11
Wraparound	$1,428,490	N<11	N<11	$124,617 (8.7%)	N<11	N<11	N<11	$137,484 (9.6%)	N<11	N<11	N<11	$1,161,707 (81.3%)	87.3	$4,683 (0.3%)	N<11
Targeted Case Management	$64,680	$5,890 (9.1%)	9.0	$1,063 (1.6%)	4.9	$234 (0.4%)	N<11	$312 (0.5%)	N<11	N<11	N<11	$57,181 (88.4%)	84.6	N<11	N<11
Therapeutic Foster Care	$153,856	$25,635 (16.7%)	N<11	$2,753 (1.8%)	N<11	$13,847 (9.0%)	N<11	$18,638 (12.1%)	N<11	$424 (0.3%)	N<11	$109,159 (70.9%)	57.8	N<11	N<11
Inpatient Hospitalization	$865	$0 (0%)	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	$865 (100%)	N<11	N<11	N<11
ED (BH)	$558	$116 (20.8%)	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	$368 (66.0%)	N<11	$74 (13.2%)	N<11
Transitional Support Services	$1,248,380	$222,509 (17.8%)	23.5	$25,081 (2.0%)	N<11	N<11	N<11	$147,603 (11.8%)	N<11	N<11	N<11	$849,127 (68.0%)	64.7	$4,060 (0.3%)	N<11
Other (unspecified)	$273,343	$75,784 (27.7%)	34.2	$2,734 (1.0%)	N<11	N<11	N<11	$36,956 (13.5%)	15.6	$1,256 (0.5%)	N<11	$156,614 (57.3%)	49.0	N<11	N<11
All Services	**$3,347,922**	**$382,737 (11.4%)**	**20.6**	**$157,620 (4.7%)**	**4.8**	**$234 (0%)**	**N<11**	**$365,716 (10.9%)**	**9.0**	**$2,894 (0.1%)**	**N<11**	**$2,429,905 (72.6%)**	**65.5**	**$8,816 (0.3%)**	**N<11**

Table 57 shows average expenditures per child served by type of service and across services, broken down by Island. **Children on Maui have the highest average expenditure per child served** at $6,305, which is 21% higher than that of children in general at $5,223. Children on O'ahu have slightly higher average expenditures than children in general - $5,785 compared to $5,223 – and children on Kaua'i have slightly lower average expenditures – $5,085 versus $5,223. **Children on the Island of Hawai'i, however, have average expenditures that are 44% lower than that of children in general - $2,900 versus $5,223.**

Table 57: Fee for Service: Average Expenditures per Child Served, by Island

	Average Expenditure Per Child Using Service							
Type of Service	**All**	**Hawai'i**	**Kaua'i**	**Lāna'i**	**Maui**	**Moloka'i**	**O'ahu**	**Unknown**
Screening and Assessment	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Individual Therapy	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Respite	**$3,275**	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Mobile Crisis Intervention	**$464**	$462	$375	N<11	$562	N<11	$437	N<11
Intensive In-Home Services	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Family Peer Support	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Wraparound	**$18,082**	N<11	N<11	N<11	N<11	N<11	$16,836	N<11
Targeted Case	**$242**	$245	$82	N<11	N<11	N<11	$253	N<11
Management	**$3,419**	N<11	N<11	N<11	N<11	N<11	$4,198	N<11
Therapeutic Foster Care	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Inpatient Hospital Psychiatric Services	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
ED (behavioral health)	**$24,478**	$18,542	N<11	N<11	N<11	N<11	$25,731	N<11
Transitional Support Services	**$1,125**	$913	N<11	N<11	$973	N<11	$1,316	N<11
Other (unspecified)	**$5,223**	**$2,900**	**$5,085**	N<11	**$6,305**	N<11	**$5,786**	N<11

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.

Med-QUEST-Submitted CAMHD Utilization and Expenditures

As noted earlier, the CAMHD data submitted by Med-QUEST differed from the Medicaid data submitted by CAMHD, apparently because CAMHD included several services, such as Care Coordination, that are not captured in the Med-QUEST claims data. Also, the CAMHD-provided data include General Revenue used by CAMHD to augment Medicaid rates, as well as a small number of non-Medicaid eligible youth. In addition, of the services included in both the Med-Quest and CAMHD submissions, there were differences in the number of youth reported as receiving services and, thus, differences in expenditures. At present, we are not able to explain fully the discrepancies between the two data sets. That said, it is possible that CAMHD and MQD used a different set of parameters for data extraction procedures. Both agencies are working to reconcile their data for future collaborations. The table below shows the differences between the Med-QUEST CAMHD and CAMHD Medicaid data submissions for the services included in both submissions.

Table 58: Services Included in Both Med-QUEST CAMHD and CAMHD Data Submissions: Differences in Utilization and Expenditures

Type of Service	# of Children Served		Expenditure per Service Type		Average Expenditure per Child	
	Med-QUEST -CAMHD	CAMHD	Med-QUEST -CAMHD	CAMHD	Med-QUEST -CAMHD	CAMHD
Intensive In-Home Services*	811	873	$3.3m	$5.1m	$4,053	$5,866
Therapeutic Foster Care	175	114	$2.8m	$4.1m	$15,855	$36,666
Multisystemic Therapy	76	179	$120,329	$2.9m	$1,583	$15,964
Inpatient Hospital Psychiatric Services	68	68	$1.3m	$3.0	$20,347	$44,447
Therapeutic Respite Home	34	25	$36,907	$33,163	$1,086	$1,327

**The MedQuest data labeled this as Intensive Independent Living Skills (IILS). However, CAMHD indicated that the same billing codes are used for IILS and Intensive In-Home Services (IIH) and advised that the utilization and expenditure data were far more consistent with IIH than with IILS so the service has been re-labeled as IIH.*

Table 59 shows the Med-QUEST CAMHD utilization and expenditure data. In the Med-Quest CAMHD data, most children – nearly 83% – received Intensive In-Home Services, which was the largest expenditure item at $3.3m or 43% of total expense. In contrast, in the data that CAMHD submitted, only 44% of children received this service at a total expenditure of $5.1m or 17% of total expense. As noted earlier, the difference in total expenditure between data submitted by CAMHD ($5.1m) compared to the Med-Quest CAMHD data ($3.3m) may be explained by the fact that CAMHD supplements the MedQuest rate using General Revenue. Additionally, the CAMHD data may include a small number of non-Medicaid eligible youth.

The next service children were likely to receive in the Med-QUEST CAMHD data and next largest expenditure item was Therapeutic Foster Care, received by 18% of children at a total expenditure of $2.8m, or 37% of total expense, and a mean expense of $15,855. In the data submitted by CAMHD, only 6% of children received this service, with total expenditures of $4.1m, which represented 14% of

total expense, and a mean expenditure of $36,666, over twice as high as the Med-QUEST-reported mean expense).

The third most expensive service in the Med-QUEST CAMHD data was Inpatient Hospital Psychiatric Services, received by 7% of children, with a total expenditure of $1.3m, or 18% of total expense, and a mean expenditure of $19,540. In the data submitted by CAMHD, 3% of children received Inpatient Hospital Psychiatric Services at a total expenditure of $3m, or 10% of total expense, and a mean expenditure of $44,447 (over twice as high as the Med-QUEST-reported mean expense).

It would be advisable for stakeholders to explore more fully why these differences exist in the Med-QUEST-submitted CAMHD data and the CAMHD-submitted data.

Table 59: Med-QUEST. CAMHD Service Utilization and Expenditures by Type of Service and in Total

Type of Service	Number of Children	% of All Children	Total Expenditure	% of All Expenditures	Average Expenditure
Intensive In-Home Services[17]	811	82.8%	$3,287,096	43.4%	$4,053
Respite	34	3.5%	$36,907	0.5%	$1,086
Multisystemic Therapy	76	7.8%	$120,329	1.6%	$1,583
Therapeutic Foster Care	175	17.9%	$2,774,633	36.6%	$15,855
Inpatient Hospital Psychiatric Services	68	6.9%	$1,328,750	17.5%	$19,540
Partial Hospitalization/ Day Treatment	*N<11*	*N<11*	$26,000	0.3%	*N<11*
All Services	**979**	**100%**	**$7,573,715**	**100%**	**$7,736**

[17] In the data provided by MedQuest this service was labeled as Intensive Independent Living Skills. However, in the data provided by CAMHD the same billing codes were used for both Intensive Independent Living Skills and Intensive In-Home Services. When comparing across data sources, it is clear that the expenditure and utilization data labeled as Intensive Independent Living Skills in the MedQuest data were comparable to the Intensive Independent In-Home Services expenditures and utilization in the CAMHD data. Thus, for consistency in labeling, the Intensive Independent Living Skills label has been changed to Intensive In-Home Services throughout the report.

Med-Quest-Submitted CAMHD Utilization and Expenditures Based on Diagnosis

Table 60 shows the breakdown of diagnoses received by children using CAMHD behavioral health services from the CAMHD data submitted by Med-QUEST. **Children with a diagnosis of Disruptive, Impulse Control and Conduct Disorders comprised the largest diagnosis cohort at 21%** and the largest group using Intensive In-Home Services, MST, and Therapeutic Foster Care. Children with ADHD and those with a diagnosis of Depressive Disorders were the next largest cohorts, each representing 16% of children with diagnoses. Very few youth received a diagnosis of SUD (2%), or Schizophrenia (0.9%), or Bipolar Disorder (2%). About 12% of children received a diagnosis of Adjustment Disorder, 10% received a diagnosis of PTSD, and 5% a diagnosis of Anxiety. About 14% of children received a diagnosis of Other. These findings are similar to the diagnoses findings from the data submitted directly by CAMHD.

Table 61 shows expenditures by type of service and across services broken down by diagnosis. **Children with a diagnosis of Disruptive/Impulse Control/Conduct Disorders used the largest share of expenditures at 21%, roughly equivalent to their 20% representation among service recipients. In contrast, children with PTSD used the second largest share of expenditures at 16%, which seems disproportionately high given their 10% representation among service recipients.** Children with diagnoses of ADHD and those with Depressive Disorders each used 14% of total expenditures, a slightly lower share than their 16% representation among service recipients. Children with a diagnosis of Other also used 14% of total dollars, consistent with their 14% representation among service recipients. Children with Adjustment Disorders received 11% of total expenditures and represented 12% of service recipients. All other diagnoses received less than 5% of expenditures. **Regardless of diagnosis, the vast majority of CAMHD dollars reported by Med-QUEST – 98% - was spent on three services: Intensive In-Home Services, Therapeutic Foster Care, and Inpatient Hospital Psychiatric Services.** (In contrast, the CAMHD-reported data, which included a broader array of Medicaid services, indicated that the majority (62%) of dollars was spent on IIH, Care Coordination, and Therapeutic Foster Care. Neither IIH nor Care Coordination were included in the Med-QUEST CAMHD data.)

Table 60: Med-QUEST Submitted CAMHD Service Representation by Diagnosis

Type of Service	Schizophrenia Spectrum and Other Psychotic Disorders	Bipolar and Related Disorders	Anxiety Disorders	Obsessive-Compulsive and Related Disorders	Posttraumatic Stress Disorder	Adjustment Disorder	Attention-Deficit/ Hyperactivity Disorder	Disruptive, Impulse-Control, and Conduct Disorders	Intellectual Disability	Autism Spectrum Disorders	Depressive Disorders	Substance Use Disorders	Other Infrequent Diagnoses	Other
Intensive In-Home Services	1.4%	1.8%	7.3%	***N<11***	10.9%	16.6%	23.2%	26.9%	***N<11***	1.4%	20.6%	2.1%	***N<11***	17.3%
Respite	0%	0%	0%	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	0%	***N<11***	***N<11***
Multisystemic Therapy	0%	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	38.2%	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	26.3%
Therapeutic Foster Care	***N<11***	***N<11***	***N<11***	***N<11***	24.0%	15.4%	14.3%	32.6%	***N<11***	***N<11***	18.9%	***N<11***	***N<11***	16.0%
Inpatient Hospital Psychiatric Services	***N<11***	***N<11***	***N<11***	***N<11***	17.6%	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	39.7%	***N<11***	***N<11***	***N<11***
Partial Hospitalization/ Day Treatment	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
All Services	**0.9%**	**1.6%**	**4.9%**	***N<11***	**9.7%**	**12.3%**	**16.4%**	**21.1%**	**N/A**	**0.9%**	**16.3%**	**2.3%**	***N<11***	**13.5%**

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.

Table 61: Med-QUEST Submitted CAMHD Service Expenditures by Diagnosis

Type of Service	Service Expenditures for All Children	Expenditure for Children with Diagnosis (% of expenditures for All Children)						
		Schizophrenia Spectrum and Other Psychotic Disorders	Bipolar and Related Disorders	Anxiety Disorders	Obsessive-Compulsive and Related Disorders	Posttraumatic Stress Disorder	Adjustment Disorder	Attention-Deficit/ Hyperactivity Disorder
Intensive In-Home Services	**$3,287,096**	$41,300 (1.3%)	$36,329 (1.1%)	$179,894 (5.5%)	***N<11***	$269,633 (8.2%)	$411,672 (12.5%)	$672,859 (20.5%)
Respite	**$36,907**	***N<11***	***N<11***	***N<11***	***N<11***	$7,561 (20.5%)	$2,947 (8.0%)	$8,330 (22.6%)
Multisystemic Therapy	**$120,329**	***N<11***	$1,759 (1.5%)	$1,231 (1.0%)	***N<11***	$1,671 (1.4%)	$7,015 (5.8%)	$9,698 (8.1%)
Therapeutic Foster Care	**$2,774,633**	$236 (0%)	$114,845 (4.1%)	$112,712 (4.1%)	***N<11***	$643,557 (23.2%)	$240,563 (8.7%)	$185,683 (6.7%)
Inpatient Hospitalization	**$1,328,750**	$1,875 (0.1%)	$66,250 (5.0%)	$19,375 (1.5%)	***N<11***	$277,500 (20.9%)	$146,250 (11.0%)	$160,625 (12.1%)
Partial Hospitalization/ Day Treatment	**$26,000**	***N<11***	$5,750 (22.1%)	***N<11***	***N<11***	$8,500 (32.7%)	***N<11***	$6,500 (25.0%)
All Services	**$7,573,715**	$43,411 (0.6%)	$224,933 (3.0%)	$313,212 (4.1%)	***N<11***	$1,208,422 (16.0%)	$808,447 (10.7%)	$1,043,694 (13.8%)

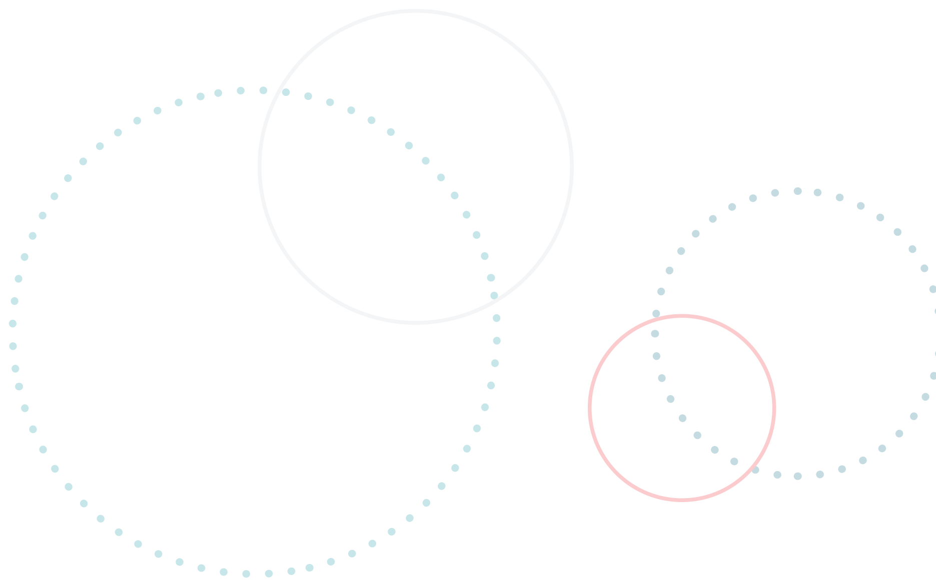


Table 61: Med-QUEST Submitted CAMHD Service Expenditures by Diagnosis, continued

Type of Service	Expenditure for Children with Diagnosis (% of expenditures for All Children)						
	Disruptive, Impulse-Control, and Conduct Disorders	Intellectual Disability	Autism Spectrum Disorders	Depressive Disorders	Substance Use Disorders	Other Infrequent Diagnoses	Other
Intensive In-Home Services	$661,048 (20.1%)	$38,327 (1.2%)	$14,204 (0.4%)	$472,258 (14.4%)	$30,440 (0.9%)	$17,080 (0.5%)	$442,053 (13.4%)
Respite	$7,689 (20.8%)	$3,332 (9.0%)	*N<11*	$641 (1.7%)	*N<11*	$769 (2.1%)	$5,639 (15.3%)
Multisystemic Therapy	$52,248 (43.4%)	*N<11*	*N<11*	$12,204 (10.1%)	$8,488 (7.1%)	*N<11*	$26,014 (21.6%)
Therapeutic Foster Care	$697,015 (25.1%)	*N<11*	$128 (0%)	$224,962 (8.1%)	$55,641 (2.0%)	$1,417 (0.1%)	$497,873 (17.9%)
Inpatient Hospital Psychiatric Services	$119,375 (9.0%)	*N<11*	$1,250 (0.1%)	$398,125 (30.0%)	$20,625 (1.6%)	*N<11*	$117,500 (8.8%)
Partial Hospitalization/Day Treatment	$1,500 (5.8%)	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	$3,750 (14.4%)
All Services	$1,538,875 (20.3%)	$41,659 (0.6%)	$15,582 (0.2%)	$1,108,190 (14.6%)	$115,194 (1.5%)	$19,266 (0.3%)	$1,092,829 (14.4%)

Table 62 shows average expenditures per child served by type of service and across services, broken down by diagnosis. **Children with Bipolar Disorders had the highest average expenditure across services at $10,711, 84% higher than children in general at $5,808.** Because of missing data, it is not possible to ascertain what service use may be driving this higher average expense. Children with a diagnosis of PTSD had the next highest average expenditure at $9,591, which appears to be driven primarily by a higher average expenditure for Inpatient Hospital Psychiatric Services. Children with a diagnosis of Other also had higher than average expenditures compared to children in general - $6,209 compared to $5,808 – which appears to be driven primarily by higher-than-average expenditures for Therapeutic Foster Care. All other diagnostic groups had lower average expenditures than children in general. These findings are generally consistent with the data provided directly by CAMHD, although both total expenditures and mean expenditures are higher in the CAMHD data than in the Med-QUEST submitted data, probably due to the additional services included in the CAMHD data.

Table 62: Med-QUEST Submitted CAMHD Average Expenditures per Child Served, by Diagnosis

	Average Expenditure per Child Served, by Diagnosis											
Type of Service	**All**	**Schizophrenia Spectrum and Other Psychotic Disorders**	**Bipolar and Related Disorders**	**Anxiety Disorders**	**Posttraumatic Stress Disorder**	**Adjustment Disorder**	**Attention-Deficit/ Hyperactivity Disorder**	**Disruptive, Impulse-Control, and Conduct Disorders**	**Autism Spectrum Disorders**	**Depressive Disorders**	**Substance Use Disorders**	**Other Disorders**
Intensive In-Home Services	**$4,053**	$3,755	$2,422	$3,049	$3,064	$3,049	$3,579	$3,032	$1,291	$2,828	$1,791	$3,158
Respite	**$1,086**	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Multisystemic Therapy	**$1,583**	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	$1,801.66	***N<11***	***N<11***	***N<11***	$1,301
Therapeutic Foster Care	**$15,855**	***N<11***	***N<11***	***N<11***	$15,323	$8,910	$7,427	$12,228	***N<11***	$6,817	***N<11***	$17,781
Inpatient Hospital Psychiatric Services	**$19,540**	***N<11***	***N<11***	***N<11***	$23,125	***N<11***	***N<11***	***N<11***	***N<11***	$14,745	***N<11***	***N<11***
Partial Hospitalization/ Day Treatment	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Overall Average Expenditure	**$5,808**	**$3,618**	**$10,711**	**$4,894**	**$9,590.65**	**$5,021**	**$4,877**	**$5,596**	**$1,299**	**$5,203**	**$3,840**	**$6,209**

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11. All data for Obsessive-Compulsive and Related Disorders, Intellectual Disability, and Other Infrequent Disorders are N<11 for this reason and not reflected above.

Disparities and Disproportionality in Med-QUEST-Submitted CAMHD Utilization and Expenditures

Med-QUEST-Submitted CAMHD Utilization Disparities Based on Sex

Table 63 shows utilization by service type, and in total, based on sex, and displays both rate of service use and breakdown by sex of those using services for the CAMHD services reported by Med-QUEST. **Boys are overrepresented among service recipients,** at 59%, compared to girls at 41%. Similar overrepresentation of boys is seen in the data submitted by CAMHD as well.

The one service where girls have higher representation than boys is inpatient hospital psychiatric services, which also was reported in the data submitted by CAMHD. While boys are overrepresented among service recipients in general, **girls have higher rates of service use for every service type reported by Med-QUEST except MST.** For example, 9% of girls using services received inpatient hospital psychiatric services, compared to 5.5% of boys. Nineteen percent (19%) of girls using services received Therapeutic Foster Care, compared to 17% of boys, and nearly 84% of girls using services received Intensive In-Home Services, compared to 82% of boys. Boys had higher rates of MST service use at 9%, compared to girls at about 6%. These findings are consistent with the data reported by CAMHD as well.

Table 63: Med-QUEST-Submitted CAMHD Service Utilization: Disparities Based on Sex

Type of Service	Total Service Utilization Rate: % of Children Using Service	*Service Utilization Rate, by Sex		**Service Representation, by Sex	
		% of Boys Served	% of Girls Served	Boy	Girl
Intensive In-Home Services	82.8%	82.4%	83.5%	58.7%	41.3%
Therapeutic Foster Care	17.9%	17.1%	19.0%	56.6%	43.4%
Multisystemic Therapy	7.8%	9.2%	5.7%	69.7%	30.3%
Inpatient Hospital Psychiatric Services	6.9%	5.5%	9.0%	47.1%	52.9%
Respite	3.5%	4.2%	***N<11***	70.6%	***N<11***
Partial Hospitalization/Day Treatment	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
All Services	**100%**	**100%**	**100%**	**59.0%**	**41.0%**

*Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11. *Service utilization rate refers to the percentage of children by sex who use a particular service out of all children in that sex cohort who use services. **Service Representation reflects the sex composition of all children receiving each service type.*

Med-QUEST-Submitted CAMHD Expenditure Disparities Based on Sex

Table 64 shows, for the CAMHD data submitted by Med-QUEST, total expenditures by service type based on sex. The table shows the percentage of dollars that go to boys versus girls compared to their representation among those using services. **Consistent with their overrepresentation among those using services, boys used a larger share of total expenditures compared to girls.** However, in comparison to their 59% share of those using services, boys used a relatively lower proportion of expenditures at 56.7%. Girls represented 41% of those using services but consumed 43% of total expense. This disproportionality is driven primarily by girls' disproportionally higher expense for Inpatient Hospital Psychiatric Services. Girls represented 53% of those using Inpatient Hospital Psychiatric Services but used 55% of dollars for this service.

Table 64: Med-QUEST-Submitted CAMHD Service Expenditures: Disparities by Sex

Type of Service	Service Expenditures for All Children	Service Expenditures and Representation for Boys		Service Expenditures and Representation for Girls	
		Expenditure for Boys (% of Expenditure for All Children)	% of Children Receiving Service	Expenditure for Girls (% of Expenditure for All Children)	% of Children Receiving Service
Intensive In-Home Service	$3,287,096	$1,990,926 (60.6%)	58.7%	$1,296,170 (39.4%)	41.3%
Therapeutic Foster Care	$2,774,633	$1,583,695 (57.1%)	56.6%	$1,190,937 (42.9%)	43.4%
Inpatient Hospital Psychiatric Services	$1,328,750	$596,250 (44.9%)	47.1%	$732,500 (55.1%)	52.9%
Multisystemic Therapy	$120,329	$86,839 (72.2%)	69.7%	$33,491 (27.8%)	30.3%
Respite	$36,907	$24,989 (67.7%)	70.6%	$11,918 (32.3%)	*N<11*
Partial Hospitalization/Day Treatment	$26,000	$10,250 (39.4%)	*N<11*	$15,750 (60.6%)	*N<11*
All Services	**$7,573,715**	**$4,292,949 (56.7%)**	**59.0%**	**$3,280,766 (43.3%)**	**41.0%**

Table 65 shows average expenditures by type of service based on sex for the CAMHD data submitted by Med-QUEST. Across service types, **girls had a 10% higher average expenditure than boys** - $8,181 for girls versus $7,427 for boys. This **higher average expense was driven by girls' higher average expenditure for Inpatient Hospital Psychiatric Services** at $20,347, compared to that of boys at $18,633. (Note that this is different from that found in the data submitted by CAMHD, where boys had a higher average expenditure for Inpatient Hospital Psychiatric Services at $33,580, compared to girls at $26,316.)

Table 65: Med-QUEST-Submitted CAMHD Services: Average Expenditures per Child Served, by Sex

Type of Service	Average Expenditure Per Child Using Service	Average Expenditure Per Boy Child Using Service	Average Expenditure Per Girl Child Using Service
Inpatient Hospital Psychiatric Services	$19,540	$18,633	$20,347
Therapeutic Foster Care	$15,855	$15,997	$15,670
Intensive In-Home Services	$4,053	$4,183	$3,869
Multisystemic Therapy	$1,583	$1,638	$1,456
Respite	$1,086	$1,041	***N<11***
Partial Hospitalization/Day Treatment	***N<11***	***N<11***	***N<11***
Overall Average Expenditure	**$7,736**	**$7,427**	**$8,181**

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N/A.

Med-QUEST-Submitted CAMHD Utilization Disparities Based on Age

The table below shows utilization by service type, and in total, based on age, and displays both rate of service use and breakdown by age of those using services for the CAMHD services reported by Med-QUEST. **Youth, ages 13-18, represent the largest age cohort using CAMHD services in the data submitted by Med-QUEST. They represent 54% of all children using CAMHD behavioral health services, which seems disproportionately high given their representation in the state population of about 34%.** They have the highest rate of use for MST, Therapeutic Foster Care, and Inpatient Hospital Psychiatric Services.

Children, ages 6-12, represent 40% of children receiving CAMHD services, which is an overrepresentation compared to their 34.6% representation in the state population. Young children, 0-5, comprise 6% of those using services, which is an underrepresentation compared to their 31.5% representation in the state population. These findings are similar to those found in the data submitted directly by CAMHD, for the most part.

Table 66: Med-QUEST Submitted CAMHD Service Utilization: Disparities by Age

Type of Service	Total Service Utilization: % of Children Using Service	*Service Utilization Rate, by Sex					**Service Representation, by Age				
		% of Ages 0-5 Served	% of Ages 6-12 Served	% of Ages 13-18 Served	% of Ages 19-20 Served	% of Ages 21-25 Served	Ages 0-5	Ages 6-12	Ages 13-18	Ages 19-20	Ages 21-25
Intensive In-Home Services	83.3%	96.7%	91.0%	75.2%	N<11	N<11	7.2%	43.6%	48.7%	N<11	N<11
Respite	3.5%	N<11	4.6%	N<11	N<11	N<11	N<11	52.9%	N<11	N<11	N<11
Multisystemic Therapy	7.8%	N<11	N<11	12.6%	N<11	N<11	N<11	N<11	86.8%	N<11	N<11
Therapeutic Foster Care	18.0%	N<11	10.0%	25.0%	N<11	N<11	N<11	22.3%	74.9%	N<11	N<11
Inpatient Hospitalization	7.0%	N<11	5.4%	9.0%	N<11	N<11	N<11	30.9%	69.1%	N<11	N<11
Partial Hospitalization/ Day Treatment	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
All Services	**100%**	100%	100%	100%	N<11	N<11	**6.2%**	**39.9%**	**53.9%**	N<11	N<11

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.
**Service utilization rate refers to the percentage of children in a given age cohort who use a particular service out of all children in that age cohort using services.*
***Service Representation reflects the age composition of all children receiving each service type.*

Table 67 shows CAMHD expenditures in the data submitted by Med-QUEST, broken down by age cohort. **Youth, ages 13-18, represent the largest share of total expenditures at 68%. While they are the largest age cohort receiving CAMHD services, their share of total expenditures still appears to be disproportionately high, given their 54% representation among service recipients.** In contrast, the share of dollars received by 6-12 year olds and 0-5 year olds appears to be disproportionately low. Children, ages 6-12, receive 28% of total dollars but are 40% of those receiving services. Young children, 0-5, receive 3% of total dollars but are 6% of those receiving services. Expenditures for youth, 13-18, are driven primarily by use of TFC and IIH, which, together, comprise 79% of all expenditures for this age group. These findings are consistent with the findings from the data submitted directly by CAMHD.

Table 67: Med-QUEST-Submitted CAMHD Service Expenditures: Disparities by Age

Type of Service	Service Expenditures for All Children	Service Expenditures and Representation									
		Ages 0-5		Ages 6-12		Ages 13-18		Ages 19-20		Ages 21-25	
		Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service
Intensive In-Home Services	$3,287,096	$221,684 (6.7%)	7.2%	$1,524,987 (46.4%)	43.6%	$1,526,905 (46.5%)	48.7%	$13,520 (0.4%)	N<11	N<11	N<11
Respite	$36,907	$11,405 (30.9%)	N<11	$20,888 (56.6%)	N<11	$4,613 (12.5%)	N<11	N<11	N<11	N<11	N<11
Multisystemic Therapy	$120,329	N<11	N<11	$15,305 (12.7%)	N<11	$105,024 (87.3%)	86.8%	N<11	N<11	N<11	N<11
Therapeutic Foster Care	$2,774,633	$28,706 (1.0%)	N<11	$223,569 (8.1%)	22.3%	$2,494,730 (89.9%)	74.9%	$27,628 (1.0%)	N<11	N<11	N<11
Inpatient Hospitalization	$1,328,750	N<11	N<11	$360,000 (27.1%)	30.9%	$968,750 (72.9%)	69.1%	N<11	N<11	N<11	N<11
Partial Hospitalization/Day Treatment	$26,000	N<11	N<11	$6,500 (25.0%)	N<11	$19,500 (75.0%)	N<11	N<11	N<11	N<11	N<11
All Services	**$7,573,715**	**$261,795 (3%)**	**6.2%**	**$2,151,250 (28.4%)**	**39.9%**	**$5,119,523 (67.6%)**	**53.9%**	**$41,148 (0.5%)**	**0%**	N<11	N<11

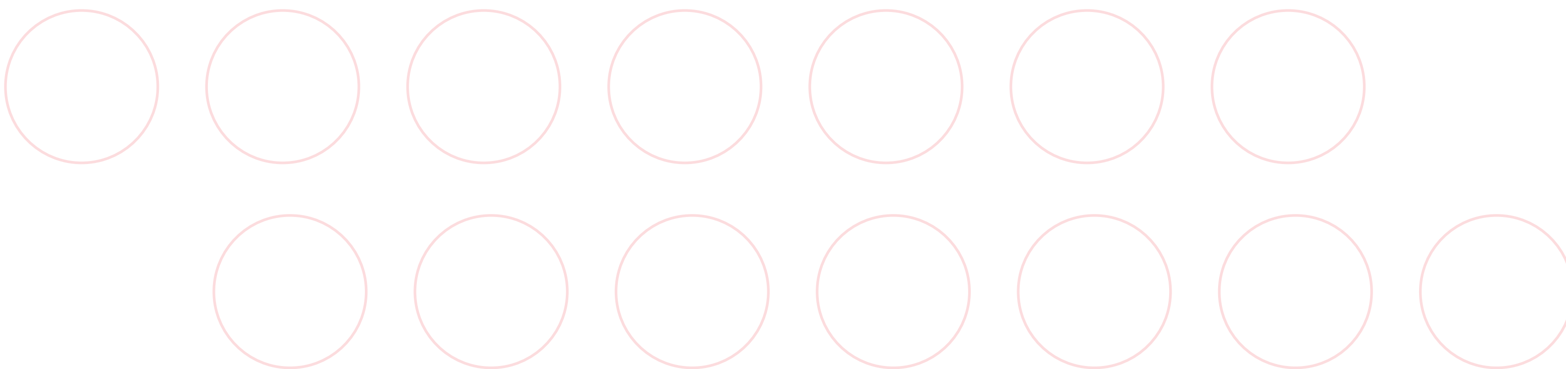
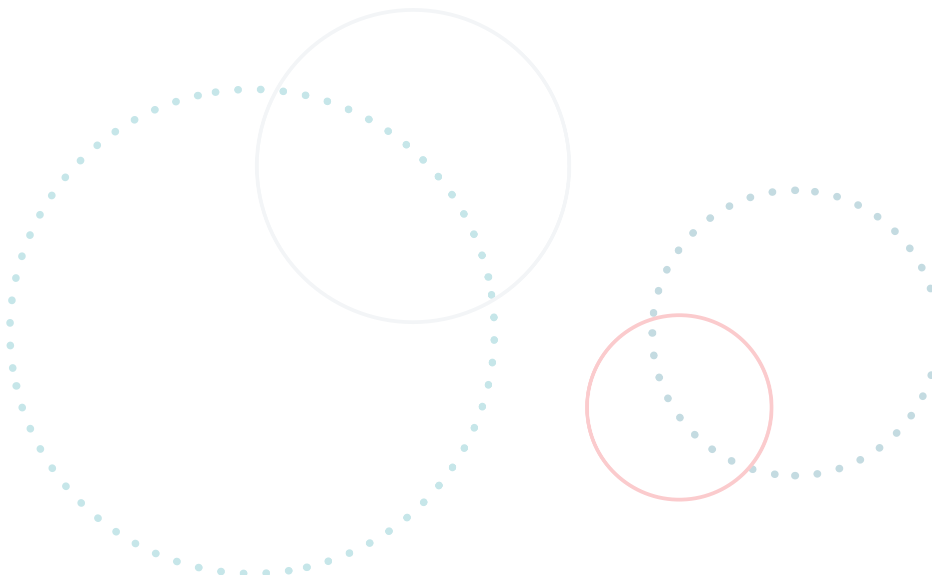


Table 68 shows average expenditures by type of service and across services, broken down by age group. **Youth, ages 13-18, have the highest average expenditure across services at $9,751, which is 25% higher than for children in general at $7,776.** The higher overall average expenditure for youth, ages 13-18, is driven by a higher average expenditure for Therapeutic Foster Care and, to a lesser extent, for Inpatient Hospital Psychiatric Services. Average expenditures for the 0-5 and 6-12 year old cohorts are 44% and 29% lower, respectively, than the average across age cohorts.

Table 68: CAMHD Services: Average Expenditures per Child Served, by Age

Type of Service	Average Expenditure Per Child Using Service					
	All	Ages 0-5	Ages 6-12	Ages 13-18	Ages 19-20	Ages 21-25
Intensive In-Home Services	$4,053	$3,822	$4,308	$3,866	*N<11*	*N<11*
Respite	$1,086	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Multisystemic Therapy	$1,583	*N<11*	*N<11*	$1,591	*N<11*	*N<11*
Therapeutic Foster Care	$15,855	*N<11*	$5,733	$19,044	*N<11*	*N<11*
Inpatient Hospital Psychiatric Services	$19,540	*N<11*	$17,143	$20,612	*N<11*	*N<11*
Partial Hospitalization/ Day Treatment	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*	*N<11*
Overall Average Expenditure	**$7,776**	**$4,363**	**$5,530**	**$9,751**	*N<11*	*N<11*

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.



Med-QUEST-Submitted CAMHD Utilization Disparities Based on Race/Ethnicity

The table below shows utilization by service type, and in total, based on race/ethnicity, and displays both rate of service use and breakdown by race/ethnicity of those using services for the CAMHD services reported by Med-QUEST.

Native Hawaiian/Pacific Islander children constitute the largest racial/ethnic cohort of children using services, representing 48% of service recipients, which seems **disproportionately high given their 11% representation in the state population.** In the data submitted directly by CAMHD, Native Hawaiian/Pacific Islander children also were the largest cohort receiving services, and their representation also was found to be disproportionately high.

White children are the second largest cohort receiving CAMHD services submitted by Med-QUEST, representing 22% of service recipients, which also is **an overrepresentation compared to their 14% representation in the state population.** Overrepresentation of White children also was seen in the data submitted directly by CAMHD.

In the CAMHD data submitted by Med-QUEST, **Asian children comprise 11% of those using services, an underrepresentation, given their 24% representation in the state population.** These are similar to findings in the data submitted directly by CAMHD.

In the data submitted by Med-QUEST, Black/African American children represent 2% of service recipients, comparable to their 2% representation in the state population. In the data submitted directly by CAMHD, Black/African American children were found to be somewhat overrepresented among service recipients, constituting 5% of service recipients.

Both sets of CAMHD data indicate overrepresentation of **American Indian/Alaskan Native children**, who represent 0.1% of children in the state but are 2% of those receiving services.

White children have the highest rates of use for every type of service, except IIH, where Black/African American children have the highest utilization rate. White children have the highest utilization rates for Respite, MST, Therapeutic Foster Care, and Inpatient Hospital Psychiatric Services. There was no service for which other racial/ethnic cohorts had the highest utilization rates.

With the exception of Black/African American youth having the highest utilization rate for IIL, the data submitted directly by CAMHD produce different findings from the data submitted by Med-QUEST. This is partly due to the Med-QUEST data not including Hispanic/Latino children. For example, the data submitted by CAMHD indicate that Hispanic/Latino children had the highest utilization rate for MST, not White children. The differences also are due to the inclusion in the data submitted by CAMHD of more service types than submitted by Med-QUEST.

Table 70 shows expenditures by type of service and across services, broken down by race/ethnicity. **Native Hawaiian/Pacific Islander children used the largest share of total expenditures at 45% ($3.4m out of a total spent of $7.6m).** White children had the second largest share of expenditures at 27% ($2m). Together, **Native Hawaiian/Pacific Islander** and White children utilized 72% of total dollars. Native Hawaiian/Pacific Islander children's share of dollars, while large, is still **disproportionately low given their 48% representation among service recipients.** In contrast, **White children had disproportionately high expenditures** given their 22% representation among service recipients. All other racial/ethnic groups had disproportionally low expenditures compared to their representation among service recipients. Regardless of racial/ethnic group, the majority of dollars were spent on IIH and TFC. The expenditure data submitted directly by CAMHD yield different findings from these, no doubt because CAMHD included a broader range of service types and data on the Hispanic/Latino population.

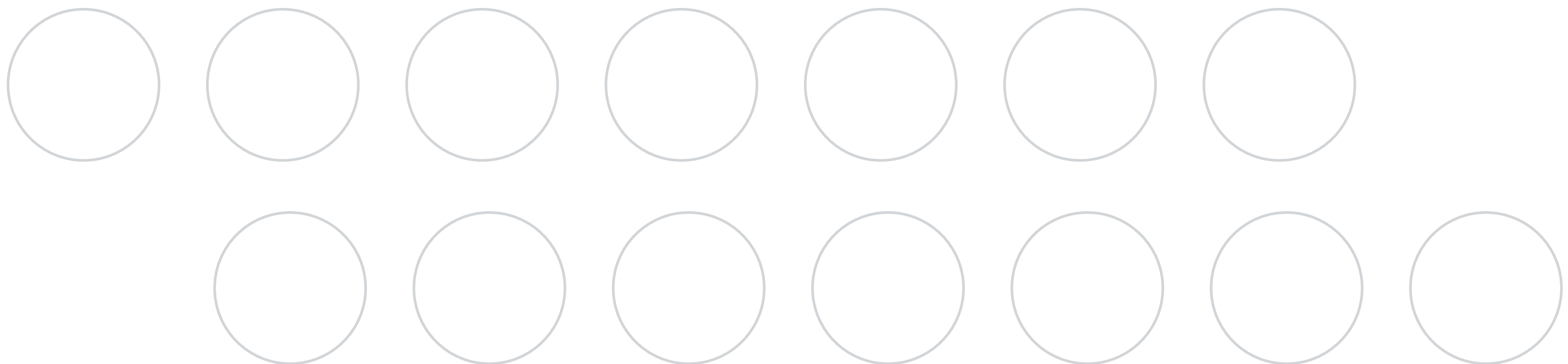


Table 69: CAMHD Service Utilization: Disparities by Race/Ethnicity

Type of Service	Total Service Utilization: % of Children Using Service	*Service Utilization, by Race/Ethnicity % children served						**Service Representation, by Race/Ethnicity						
		American Indian/ Alaskan Native	Black/ African American	Asian	Native Hawaiian/Pacific Islander	White	Other	American Indian/ Alaskan Native	Black/ African American	Asian	Native Hawaiian/ Pacific Islander	White	Hispanic/ Latino	Other
Intensive Independent Living Skills	82.8%	75.0%	94.1%	90.8%	82.3%	81.5%	80.3%	1.5%	2.0%	12.2%	48.1%	21.7%	***N<11***	14.5%
Respite	3.5%	***N<11***	***N<11***	***N<11***	***N<11***	5.1%	0%	***N<11***	***N<11***	***N<11***	***N<11***	32.4%	***N<11***	***N<11***
Multisystemic Therapy	7.8%	***N<11***	***N<11***	***N<11***	8.2%	8.8%	0%	***N<11***	***N<11***	***N<11***	51.3%	25.0%	***N<11***	***N<11***
Therapeutic Foster Care	17.9%	***N<11***	***N<11***	11.0%	14.3%	19.9%	16.3%	***N<11***	***N<11***	6.9%	38.9%	24.6%	***N<11***	13.7%
Inpatient Hospital Psychiatric Services	6.9%	***N<11***	***N<11***	***N<11***	3.6%	9.3%	***N<11***	***N<11***	***N<11***	***N<11***	25.0%	29.4%	***N<11***	***N<11***
Partial Hospitalization/ Day Treatment	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
All Services	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**1.6%**	**1.7%**	**11.1%**	**48.4%**	**22.1%**	***N<11***	**15.0%**
Racial/Ethnic Breakdown of Hawaiʻi Child Population***								**0.1%**	**1.9%**	**23.6%**	**11%**	**14.1%**	**18.6%**	**30.7% (multi racial)**

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11. Data were not available by Hispanic/ Latino ethnicity so are not included in this table.
**Service utilization rate refers to the percentage of children in a given racial/ethnic cohort who use a particular service out of all children in that cohort who use services.*
***Service Representation reflects the racial/ethnic composition of all children receiving each service type.*
****US Census Bureau. Population Division. 2019. "Annual Estimates of the Resident Population by Sex, Age, Race, and Hispanic Origin for the United States and States*

Table 70: Med-QUEST-Submitted CAMHD Service Expenditures: Disparities by Race*

Type of Service	Service Expenditures for All Children	Service Expenditures and Representation											
		American Indian/ Alaskan Native		Black/African American		Asian		Native Hawaiian/ Pacific Islander		White		Other	
		Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service
Intensive In-Home Services	$3,287,096	$38,126 (1.2%)	1.5%	$65,480 (2.0%)	2.0%	$393,871 (12.0%)	12.2%	$1,617,165 (49.2%)	48.1%	$673,435 (20.5%)	21.7%	$499,020 (15.2%)	14.5%
Respite	$36,907	***N<11***	***N<11***	$384 (1.0%)	***N<11***	$16,531 (44.8%)	***N<11***	$11,662 (31.6%)	***N<11***	$7,048 (19.1%)	32.4%	$1,282 (3.5%)	***N<11***
Multisystemic Therapy	$120,329	$6,905 (5.7%)	***N<11***	$462 (0.4%)	***N<11***	$8,796 (7.3%)	***N<11***	$64,475 (53.6%)	51.3%	$34,041 (28.3%)	25.0%	$5,651 (4.7%)	***N<11***
Therapeutic Foster Care	$2,774,633	$19,120 (0.7%)	***N<11***	$12,046 (0.4%)	***N<11***	$234,422 (8.4%)	***N<11***	$1,045,961 (37.7%)	38.9%	$917,224 (33.1%)	24.6%	$545,860 (19.7%)	***N<11***
Inpatient Hospital Psychiatric Services	$1,328,750	$3,750 (0.3%)	***N<11***	$18,125 (1.4%)	***N<11***	$152,500 (11.5%)	***N<11***	$645,000 (48.5%)	25.0%	$397,500 (29.9%)	29.4%	$111,875 (8.4%)	***N<11***
Partial Hospitalization/Day Treatment	$26,000	***N<11***	***N<11***	***N<11***	***N<11***	$19,500 (75.0%)	***N<11***	$16,000 (61.5%)	***N<11***	$10,000 (38.5%)	***N<11***	***N<11***	***N<11***
All Services	**$7,573,715**	**$67,901 (0.9%)**	**1.6%**	**$96,497 (1.3%)**	**1.7%**	**$806,120 (10.6%)**	**11.1%**	**$3,400,261 (44.9%)**	**48.4%**	**$2,039,247 (26.9%)**	**22.1%**	**$1,163,688 (15.4%)**	**15.0%**

**Data were not available by Hispanic/Latino ethnicity and are not included in this table.*

Table 71 shows average expenditures per child served by service type and across services, broken down by race/ethnicity. **White children have the highest average expenditure per child served across services at $9,441, which is 63% higher than the average for children in general at $5,808.** The higher average expense for White children appears to be driven by TFC and Inpatient Hospital Psychiatric Services. Children with a diagnosis of Other had the second highest average expenditure across services at $7,916, which is 36% higher than that of children in general. Their higher average expenditure seems to be driven primarily by TFC. Asian children also had a higher average expenditure at $7,396, which is 27% higher than the average expense of children in general. The higher average expenditure for Asian children seems to be driven primarily by TFC, where their average expense of $19,535 was 24% higher than that of children in general. Native Hawaiian/Pacific Islander children also had a higher average expenditure across services than that of children in general at $7,174, which is 24% higher. Their higher average expense seems to be driven primarily by Inpatient Hospital Psychiatric Services, where their average expense of $37,941 was 94% higher than that of children in general. Higher average expenditures for a given service type typically reflect longer lengths of stay in that service (rather than use of a more expensive program of the same service type).

Particularly with respect to Inpatient Hospital Psychiatric Services, there may be opportunity to reduce length of stay for Native Hawaiian/Pacific Islander children through use of home- and community-based alternatives, mobile response and stabilization, and Intensive Care Coordination using Wraparound. American Indian/Alaskan Native children had average expenditures that were 27% lower than that of children in general. Black/African American children had average expenditures that were 2% lower.

The data provided directly by CAMHD showing average expenditures per child served yield different findings from those of the CAMHD data submitted by Med-QUEST. As noted earlier, CAMHD included a broader range of services and data on the Hispanic/Latino population, which produces different results. **It would be advisable for stakeholders to explore the two data sets more closely to resolve differences.**

Table 71: Med-QUEST-Submitted CAMHD Services: Average Expenditures per Child Served, by Race/Ethnicity

Type of Service	Average Expenditure Per Child Using Service							
	All	American Indian/Alaskan Native	Black/ African American	Asian	Native Hawaiian/Pacific Islander	White	Hispanic/ Latino	Other
Intensive In-Home Services	$4,053	$3,177	$4,093	$3,978	$4,147	$3,826	N<11	$4,229
Respite	$1,086	N<11	N<11	N<11	N<11	$641	N<11	N<11
Multisystemic Therapy	$1,583	N<11	N<11	N<11	$1,653	$1,792	N<11	N<11
Therapeutic Foster Care	$15,855	N<11	N<11	$19,535	$15,382	$21,331	N<11	$22,744
Inpatient Hospitalization	$19,540	N<11	N<11	N<11	$37,941	$19,875	N<11	N<11
Partial Hospitalization/ Day Treatment	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
Overall Average Expenditure	**$5,808**	**$4,244**	**$5,676**	**$7,396**	**$7,174**	**$9,441**	N<11	**$7,916**

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.

Med-QUEST-Submitted CAMHD Utilization Disparities and Disproportionality Based on Island

Table 72 shows utilization by service type, and in total, based on Island of residence, and displays both rate of service use and breakdown by Island of those using services for the CAMHD services reported by Med-QUEST. **Children on the Island of Oʻahu constitute the largest group of children, representing 52% of children using services; however, this appears to be an underrepresentation, given that Oʻahu represents about 70% of the state population.** The data provided directly by CAMHD produced the same finding. Children on Oʻahu have the highest rate of use for Intensive In-Home Services.

Children on the Island of Hawaiʻi are the next largest cohort, representing 32% of service recipients, which is an overrepresentation, given that the Island of Hawaiʻi represents about 14% of the state population. The data submitted directly by CAMHD also suggested similar overrepresentation. Children on the Island of Hawaiʻi have the highest rates of use for Respite and Therapeutic Foster Care. Children on Kauaʻi represent 8% of service recipients, which is an overrepresentation compared to Kauaʻi's 5% share of the state population. The data submitted directly by CAMHD also suggested similar overrepresentation. **Children on Maui also represent about 8% of service recipients, but they are underrepresented given that Maui represents 11% of the state population.** The data submitted directly by CAMHD also suggested similar underrepresentation. Children on Maui have the highest rate of service use for MST, a rate that

is 94% higher than for children in general, and they have the highest rate of Inpatient Hospital Psychiatric Services, a rate that is twice that of children in general.

Both the Med-QUEST-submitted CAMHD data and the data submitted directly by CAMHD indicate that O'ahu children and children on the Island of Hawai'i, together, comprise over 80% of all children using services.

Table 72: Med-QUEST-Submitted CAMHD Service Utilization: Disparities by Island

Type of Service	Total Service Utilization: % of Children Using Service	*Service Utilization Rate, by Island							*Service Representation, by Island						
		% of Hawaiʻi Served	% of Kauaʻi Served	% of Lānaʻi Served	% of Maui Served	% of Molokaʻi Served	% of Oʻahu Served	% of Unknown Served	Hawaiʻi	Kauaʻi	Lānaʻi	Maui	Molokaʻi	Oʻahu	Unknown
Intensive In-Home Services	82.6%	79.5%	74.4%	N<11	67.6%	N<11	88.2%	N<11	31.1%	7.5%	N<11	6.2%	N<11	55.4%	N<11
Respite	3.5%	8.5%	N<11	N<11	N<11	N<11	N<11	N<11	79.4%	N<11	N<11	N<11	N<11	N<11	N<11
Multisystemic Therapy	7.7%	5.0%	13.4%	N<11	14.9%	N<11	6.9%	N<11	21.1%	14.5%	N<11	14.5%	N<11	46.1%	N<11
Therapeutic Foster Care	17.8%	23.3%	19.5%	N<11	16.2%	N<11	14.9%	N<11	42.3%	9.1%	N<11	6.9%	N<11	43.4%	N<11
Inpatient Hospital Psychiatric Services	6.9%	6.3%	N<11	N<11	16.2%	N<11	5.9%	N<11	29.4%	N<11	N<11	17.6%	N<11	44.1%	N<11
Partial Hospitalization/ Day Treatment	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11	N<11
All Services	**100%**	**100%**	**100%**	N<11	**100%**	N<11	**100%**	N<11	**32.3%**	**8.4%**	N<11	**7.5%**	N<11	**51.8%**	N<11

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.
**Service utilization rate refers to the percentage of children on a given Island who use a particular service out of all children on that Island who use services.*
***Service Representation reflects the Island breakdown of all children receiving each service type.*

Med-QUEST-Submitted CAMHD Expenditure Disparities and Disproportionality Based on Island

Table 73 shows CAMHD expenditures submitted by Med-QUEST by type of service and across services, broken down by Island. **Children on Oʻahu represent the largest share of total expenditures at 52%, comparable to their 52% representation among service recipients.** Their expenditures are driven primarily by Intensive In-Home Services and Therapeutic Foster Care. Children on the Island of Hawaiʻi represent the next largest share of expenditures at 31%, roughly comparable to their 32% representation among service recipients. Their expenditures are also driven by Intensive In-Home Services and Therapeutic Foster Care. **Together, children on Oʻahu and on the Island of Hawaiʻi use 83% of total dollars. The data submitted directly by CAMHD produced the same finding.**

Children on Maui (including Molokaʻi and Lānaʻi) represent 10% of total expenditures, slightly higher than their 8% representation among service recipients. Their expenditures are driven by Inpatient Hospital Psychiatric Services. Children on Kauaʻi represent 7% of total dollars, slightly less than their 8% representation among service recipients. Their expenditures are driven by Therapeutic Foster Care and Inpatient Hospital Psychiatric Services.

Table 74 shows average expenditures per child served by type of service and across services, broken down by Island. **Children on Maui have the highest average expenditure across services at $9,371, which is 21% higher than the average for children in general of $7,713. Their higher average expenditure is driven by use of Inpatient Hospital Psychiatric Services, where their average expenditure of $27,344 is 40% higher than that of children in general at $19,540.** All other Island children have average expenditures that are comparable to or less than that of children in general. These findings are not consistent with the data submitted directly by CAMHD, which included a broader array of service types.

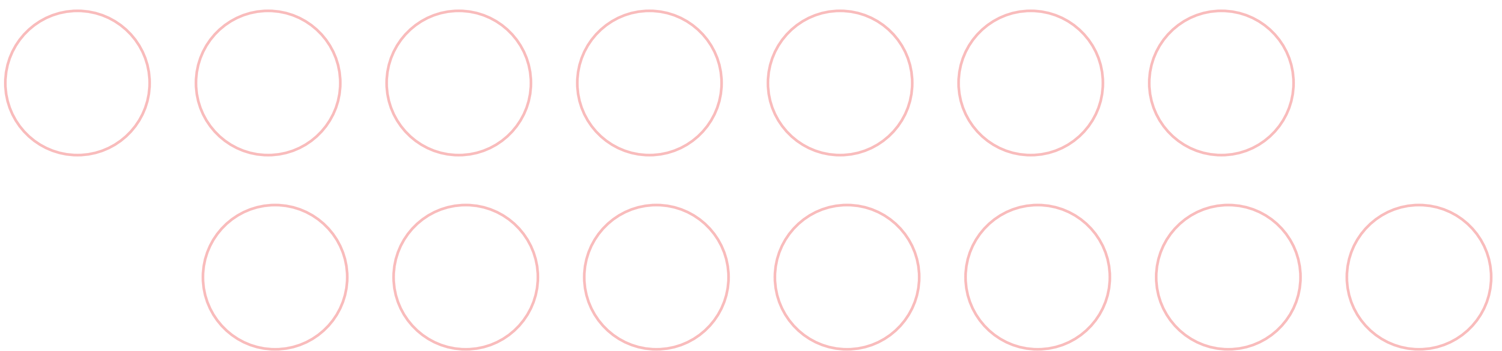


Table 73: Med-QUEST-Submitted CAMHD Service Expenditures, by Island

Type of Service	Service Expenditures for All Children	Service Expenditures and Representation by Island													
		Hawaiʻi		Kauaʻi		Lānaʻi		Maui		Molokaʻi		Oʻahu		Unknown	
		Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service	Expenditure (% of Expenditure for All Children)	% Received Service
Intensive In-Home Services	**$3,287,096**	$1,059,289 (32.2%)	31.1%	$103,681 (3.2%)	7.5%	*N<11*	*N<11*	$191,479 (5.8%)	6.2%	$560 (0%)	*N<11*	$1,932,087 (58.8%)	55.4%	*N<11*	*N<11*
Respite	**$36,907**	$32,935 (89.2%)	79.4%	$2,819 (7.6%)	*N<11*	*N<11*	*N<11*	$256 (0.7%)	*N<11*	$0 (0%)	*N<11*	$897 (2.4%)	*N<11*	*N<11*	*N<11*
Multisystemic Therapy	**$120,329**	$26,102 (21.7%)	21.1%	$15,899 (13.2%)	14.5%	*N<11*	*N<11*	$14,865 (12.4%)	14.5%	$5,519 (4.6%)	*N<11*	$57,944 (48.2%)	46.1%	*N<11*	*N<11*
Therapeutic Foster Care	**$2,774,633**	$907,028 (32.7%)	42.3%	$288,625 (10.4%)	9.1%	*N<11*	*N<11*	$158,719 (5.7%)	6.9%	$85,483 (3.1%)	*N<11*	$1,334,778 (48.1%)	43.4%	*N<11*	*N<11*
Inpatient Hospital Psychiatric Services	**$1,328,750**	$283,125 (21.3%)	29.4%	$146,875 (11.1%)	*N<11*	*N<11*	*N<11*	$328,125 (24.7%)	17.6%	$0 (0%)	*N<11*	$570,625 (42.9%)	44.1%	*N<11*	*N<11*
Partial Hospitalization/Day Treatment	**$26,000**	*N<11*	*N<11*	$0 (0%)	*N<11*	*N<11*	*N<11*	$0 (0%)	*N<11*	$0 (0%)	*N<11*	$26,000 (100%)	*N<11*	*N<11*	*N<11*
All Services	**$7,573,715**	**$2,308,478 (30.5%)**	**32.3%**	**$557,899 (7.4%)**	**8.4%**	*N<11*	*N<11*	**$693,445 (9.2%)**	**7.5%**	**$91,562 (1.2%)**	*N<11*	**$3,922,331 (51.8%)**	**51.8%**	*N<11*	*N<11*

Table 74: Med-QUEST-Submitted CAMHD Services: Average Expenditures per Child Served, by Island

Type of Service	Average Expenditure Per Child Using Service							
	All Children	Hawaiʻi	Kauaʻi	Lānaʻi	Maui	Molokaʻi	Oʻahu	Unknown
Intensive In-Home Services	**$4,053**	$4,204	$1,700	***N<11***	$3,830	***N<11***	$4,303	***N<11***
Respite	**$1,086**	$1,220	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
Multisystemic Therapy	**$1,583**	$1,631	$1,445	***N<11***	$1,351	***N<11***	$1,656	***N<11***
Therapeutic Foster Care	**$15,855**	$12,257	$18,039	***N<11***	$13,227	***N<11***	$17,563	***N<11***
Inpatient Hospitalization	**$19,540**	$14,156	***N<11***	***N<11***	$27,344	***N<11***	$19,021	***N<11***
Partial Hospitalization/Day Treatment	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***	***N<11***
All Services	**$7,713**	$7,282	$6,804	***N<11***	$9,371	***N<11***	$7,706	***N<11***

Note: Cell counts of less than 11 were not available; any percentages based on these counts could not be computed and are reported as N<11.

Alcohol and Drug Abuse Division (ADAD)

ADAD Child/Adolescent/Young Adult Substance Use Treatment Utilization and Expenditures

ADAD provided SFY 2019 data on substance use treatment utilization and expenditures for children, adolescents, and young adults (ages 0-26) paid for by state general revenue and/or federal block grant or other federal discretionary grant funding. ADAD notes that it is the primary and often sole source of public funding for SUD treatment. (Note that the CAMHD and Med-QUEST sections of this report discuss substance use treatment services paid for by Medicaid. The Medicaid data suggest that Medicaid is not being used as a significant source of funding for SUD treatment services.)

The table below shows the number of youth served by ADAD providers and expenditures by type of service and across services. The data indicate that 7,524 youth (ages 0-26) received services, which is a duplicated count since youth may have received more than one type of service. A total of $7.9m was spent, for an average expenditure of $1,056 per youth served.

The three services that youth were most likely to receive were care coordination (33% of youth), outpatient treatment (25% of youth), and **pre-treatment services** (e.g., screening, assessment; 24% of youth). Two-thirds of total dollars (68%) were spent on outpatient treatment, followed by 19% on care coordination. Together, **outpatient treatment and care coordination accounted for 87% of total SUD dollars spent.** Average expenditures per youth served were $2,886 for outpatient treatment and $596 for care coordination.

Average expenditures per youth served, in general, may be low. For example, the National Center for Drug Abuse Statistics (NCDAS) reports that the average cost of an episode of care in Intensive Outpatient (IOP) is $4,939, compared to $576 reported by ADAD. However, the NCDAS also identifies Hawaiʻi as the third least expensive state for substance use treatment services, and there is a wide range of costs across programs and states.[xv] Stakeholders may want to look more closely at the intensity of spending for SUD treatment. However, it also should be noted that **state substance abuse agencies have limited dollars to meet the demand, much less the need, for SUD treatment.** Federal Substance Abuse Prevention and Treatment Block Grant (SABG) dollars are relatively small, and SABG includes requirements that no less than 20% of the funds be used for primary prevention strategies. The SABG prioritizes certain populations, such as pregnant women and women with dependent children and those with intravenous drug use.[xvi] The size of SABG dollars for adolescent substance use treatment is especially small, and state general revenue has many competing demands.

Increasingly, states are looking to maximize Medicaid to help finance SUD treatment. **The Hawaiʻi Medicaid data provided by Med-QUEST and CAMHD indicate that few youth receive SUD treatment paid for by Medicaid.** Very limited SUD treatment appears to be provided through Med-QUEST MCOs, and CAMHD focuses on youth with significant behavioral health challenges, including those with co-occurring mental health and SUD challenges, and does not use its Medicaid funding for primary SUD treatment.

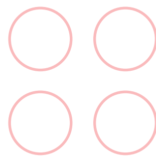
Only 218 (less than 1%) of the 24,000 youth served through Medicaid managed care received SUD outpatient treatment. The 6% of youth with SUD diagnoses served through Medicaid Managed Care had relatively high rates of inpatient hospital and ED use.

Providing a broader range of SUD treatment services in Medicaid, particularly through Managed Care, **could help to improve access and reduce the average cost of** care by creating alternatives to the use of ED and hospital for SUD treatment. Prevalence estimates indicate that 6.3% of adolescents between the ages of 12-17 and 24.4% of young adults between the ages of 18-25 can be classified as having an SUD,[xxvi] suggesting that some 33,000 youth and young adults, ages 12-25, in Hawaiʻi have a need for SUD treatment.[xxvii] Public systems cannot be expected to meet the extent of this need. However, **it will be difficult to expand SUD treatment to any appreciable degree by relying predominantly on federal discretionary funding, block grants and general revenue. A larger role would need to be played by Medicaid.**

Table 75: ADAD SFY 2019 Adolescent Substance Use Service Utilization* and Expenditures**

Type of Service	Number of Youth	% All Youth	Total Expenditures	% All Expenditures	Average Expenditure
Intensive Outpatient Treatment	239	3%	$137,728	1.7%	$576
Outpatient Treatment	1,883	25%	$5,435,068	68.4%	$2,886
Care Coordination	2,495	33%	$1,486,032	18.7%	$596
Pre-Treatment	1,807	24%	$359,521	4.5%	$199
Continuing Care	520	7%	$75,314	0.9%	$145
Therapeutic Living Pregnant and Parenting Women and Dependent Children (PPWC) -Long Term	84***	1%	$168,131	2.1%	$2,002
Clean and Sober Housing	146	2.0%	$126,765	1.6%	$868
Recovery Home	***N<11***	***N<11***	$16,721	***N<11***	***N<11***
Residential PPWC Treatment - Long-Term	57	0.8%	$142,748	1.8%	$2,504
Day Treatment -Long Term	76	1%	***N<11***	***N<11***	***N<11***
Day Treatment -Short Term	11	0.1%	***N<11***	***N<11***	***N<11***
Therapeutic Living -Long Term	25	0.3%	***N<11***	***N<11***	***N<11***
Residential Social Detox	35	0.5%	***N<11***	***N<11***	***N<11***
Residential -Long Term	140	2%	***N<11***	***N<11***	***N<11***
All Services	**7,524********	**100%**	**$7,948,028**	**100%**	**$1,056**

**Service utilization data are from the ADAD report on "# of ADAD Clients Served by Age Group." (Adults over age 26 were excluded from the count in this table.)*
***Expenditure data are from ADAD WITS file.*
****Count does not include adults over age 26.*
*****Is a duplicated count because youth may use more than one service type*



ADAD Child/Adolescent/Young Adult Substance Use Treatment Expenditures by Sex

The table below shows expenditure data by type of service and across services, broken down by sex. (Note. Utilization data by sex were not available.)

Girls had slightly higher total expenditures than boys. Girls used 51% of total expenditures ($4m), compared to 49% ($3.9m) used by boys. Girls had higher expenditures than boys for outpatient, pre-treatment, continuing care, and clean and sober housing. Boys had higher expenditures for IOP, Care Coordination, Therapeutic Living PPWC-Long-Term, and Residential PPWC Treatment-Long-Term. (Note that the higher expenditures for boys for the PPWC programs suggest these are expenses associated with dependent male children.) Regardless of sex, over two-thirds of expenditures were for Outpatient and Care Coordination, as noted earlier.

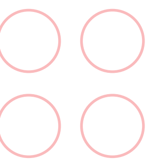


Table 76: ADAD SFY 2019 Adolescent Substance Use Service Expenditures by Sex

Type of Service	All Children		Girls		Boys		Unknown Sex	
	Total Expenditure	% All Expenditures	Expenditure	% All Expenditures	Expenditure	% All Expenditures	Total Expenditure	% All Expenditures
Intensive Outpatient Treatment	$137,728	1.7%	$62,733	1.6%	$74,995	1.9%	$0	0%
Outpatient Treatment	$5,432,573	68.5%	$2,834,907	70.5%	$2,597,666	66.6%	$0	0%
Care Coordination	$1,485,825	18.7%	$679,579	16.9%	$805,947	20.7%	$300	2.8%
Pre-Treatment	$359,197	4.5%	$188,952	4.7%	$170,158	4.4%	$87	0.8%
Continuing Care	$75,313	0.9%	$48,421	1.2%	$26,893	0.7%	$0	0%
Therapeutic Living PPPWC - Long-Term	$164,966	2.1%	$71,195	1.8%	$93,771	2.4%	$0	0%
Clean and Sober Housing	$123,070	1.6%	$70,980	1.8%	$52,090	1.3%	$0	0%
Recovery Home	$10,178	0.1%	$0	0%	$0	0%	$10,178	96.3%
Residential PPWC Treatment - Long-Term	$142,748	1.8%	$62,310	1.6%	$80,438	2.1%	$0	0%
All Services	**$7,931,599**	**100%**	**$4,019,077**	**50.7%**	**$3,901,957**	**49.2%**	**$10,565**	**0.1%**

ADAD Child/Adolescent/Young Adult Substance Use Treatment Expenditures by Age

Table 77 shows SUD treatment utilization by service type and across services, broken down by age cohort. The table shows rates of service use (i.e., the percentage of a given age group using a particular service out of all youth in that age group using services). The table also shows the representation of each age cohort among all youth using a service (i.e., the percentage of a given age group using a service out of all children using the service). (Note that expenditure data were not available by age.)

Youth, ages 12-18, make up the largest age cohort using SUD treatment, representing 70% of all youth (ages 0-26) using services. The three services they are most likely to use are care coordination (35% of youth), outpatient treatment (31%), and pre-treatment services (25%). They have much lower rates of use for all other service types. For example, only 1% of 12–18-year-olds received IOP, 8% received continuing care, and no youth in this cohort received residential treatment.

The next largest age group receiving services is young adults, ages 18-26, who represent 27% of those receiving services. They have lower rates of service use than youth in general for outpatient treatment, care coordination, and continuing care. They had higher rates of use for IOP, day treatment, and all residential treatment.

Young children, under age 12, represent only 3% of those using services. As would be expected, they have very low to no rates of use for most services, except for residential programs serving pregnant and parenting women with dependent children.

ADAD Child/Adolescent/Young Adult Substance Use Treatment Expenditures by Race/Ethnicity

Table 78 below shows expenditure data by type of service and across services, broken down by race/ethnicity. ADAD provided multiple racial/ethnic categories, which this report has collapsed into the smaller number of US Census categories to be consistent across agencies. (Note: Utilization data by race/ethnicity were not available.)

Native Hawaiian/Pacific Islander youth use 76% of total substance use treatment dollars: $6 million out of a total across all youth of $7.9 million. Nearly 70% of the dollars used for these youth are for outpatient treatment. White youth represent the next largest share of total expenditures, at 8% or $600,000. While the majority of dollars used by White children are for outpatient treatment, they use larger shares of total dollars than youth in general for all residential services, including clean and sober housing, therapeutic living PPWC-long term, and residential PPWC treatment-long-term.

Six percent (6%) of total expenditures, or $400,000, are used by children who are Asian. They use a larger share than children in general of IOP dollars, although, like all racial/ethnic groups, the largest share of dollars used by Asian youth is for outpatient treatment. Black or African American youth represent 2% of total expenditures ($100,000). Less than 1% (0.7%) of total dollars, about $56,000, are used by American Indian/Alaskan Native Youth. No reportable data were available for the youth who identified as Hispanic/Latino.

Without utilization data, it is difficult to determine whether certain racial/ethnic groups are over-or under-represented in substance use treatment. However, the expenditure data suggest that Native Hawaiian/Pacific Islander youth are indeed overrepresented compared to their representation in the state child population.

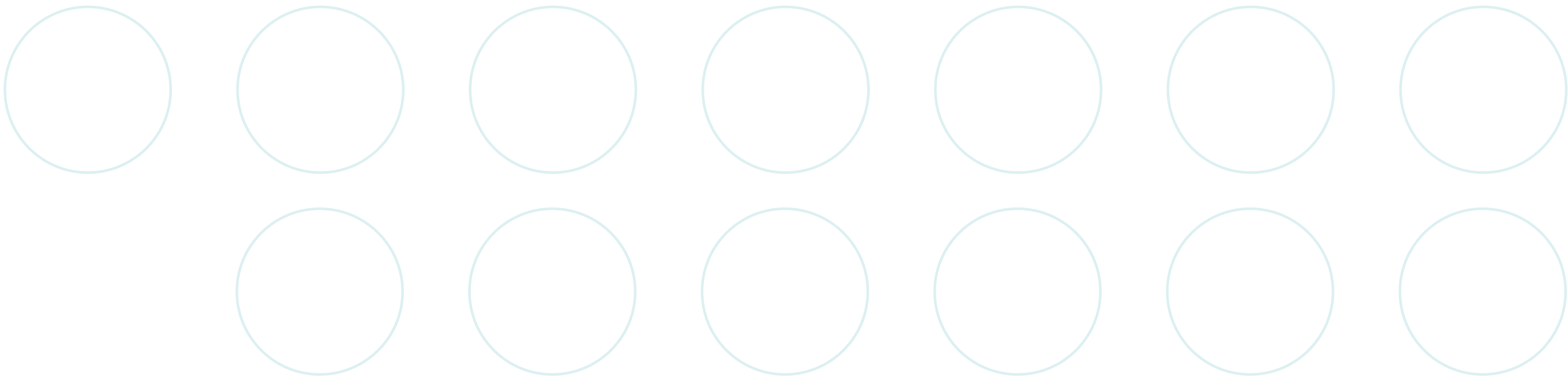


Table 77: ADAD SFY 2019 Substance Use Treatment Utilization, by Age Cohort

Type of service	Total # (%) of All Youth	18-26 Year Old Cohort			12-17 Year Old Cohort			Under 12 Year Old Cohort		
		# Served	Service Utilization Rate*	Service Representation **	# Served	Service Utilization Rate*	Service Representa-tion **	# Served	Service Utilization Rate*	Service Representa-tion **
Intensive Outpatient Treatment	239 (3%)	183	9%	77%	56	1%	23%	0	0	0
Outpatient Treatment	1,883 (25%)	218	11%	12%	1,660	31%	88%	*N<11*	2%	0.2%
Care Coordination	2,495 (33%)	625	31%	25%	1,827	35%	73%	43	20%	2%
Pre-Treatment	1,807 (24%)	481	24%	27%	1,326	25%	73%	*N<11*	3%	0.3%
Continuing Care	520 (7%)	109	5%	21%	411	8%	79%	0	0	0
Therapeutic Living PPPWC - Long-Term	84*** (1%)	28	1%	33%	0	0	0	56	27%	67%
Clean and Sober Housing	146 (2%)	78	4%	53%	0	0	0	68	32%	47%
Recovery Home	*N<11*									
Residential PPWC Treatment - Long-Term	57 (0.8%)	23	1%	40%	*N<11*	0.02%	2%	33	16%	58%
Day Treatment -Long Term	76 (1%)	76	4%	100%	0	0	0	0	0	0
Day Treatment -Short Term	11 (0.1%)	11	0.5%	100%	0	0	0	0	0	0
Therapeutic Living -Long Term	25 (0.3%)	25	1%	100%	0	0	0	0	0	0
Residential Social Detox	35 (0.5%)	35	2%	100%	0	0	0	0	0	0
Residential -Long Term	140 (2%)	140	7%	100%	0	0	0	0	0	0
All Services	**7,524**** (100%)**	**2,032**		**27%**	**5,281**		**70%**	**211**		**3%**

**Service utilization rate refers to the percentage of youth in each age cohort who use a particular service out of all youth in that age cohort who use services.*
***Service Representation reflects the age cohort composition of all youth receiving each service type.*
****Count does not include adults over age 26.*
*****Is a duplicated count because youth may use more than one service type*

Table 78: ADAD SFY 2019 Adolescent Substance Use Service Expenditures, by Race/Ethnicity

Type of Service	All Children		American Indian/ Alaskan Native		Black/African American		Asian		Native Hawaiian/ Pacific Islander		White		Other	
	Total Expenditure	% of All Expenditures	Expenditure	% of Total Expenditures	Expenditure	% of Total Expenditures	Expenditure	% of Total Expenditures	Expenditure	% of Total Expenditures	Expenditure	% of Total Expenditures	Expenditure	% of Total Expenditures
Care Coordination	$1,485,825	18.7	23,437	41.6	13,612	10.7	90,623	20.5	1,131,814	18.7	122,052	19.0	104,288	16.7
Clean and Sober Housing	$123,070	1.6	3,290	5.8			835	0.2	74,143	1.2	44,802	7.0	0	0
Continuing Care	$75,314	0.9	519	0.9	819	0.6	6,813	1.5	57,844	1.0	4,971	0.8	4,349	0.7
Intensive Outpatient Treatment	$137,728	1.7	144	0.3	96	0.1	13,536	3.1	104,438	1.7	9,279	1.4	10,235	1.6
Outpatient Treatment	$5,432,573	68.5	13,811	24.5	106,953	84.1	303,612	68.5	4,198,281	69.5	385,549	60.1	424,367	68.2
Pre-Treatment	$359,197	4.5	950	1.7	5,621	4.4	16,389	3.7	282,913	4.7	25,644	4.0	27,682	4.4
Therapeutic Living PPWC - Long-Term	$164,966	2.1	6,517	11.6			3,178	0.7	116,504	1.9	31,869	5.0	6,898	1.1
Recovery Home	$10,178	0.1									0	0	10,178	1.6
Residential PPWC Treatment - Long-Term	$142,748	1.8	7,710	13.7			7,950	1.8	75,212	1.2	17,194	2.7	34,682	5.6
All Services	**$7,931,599**	**100%**	**$56,378**	**0.7%**	**$127,101**	**2%**	**$442,935**	**6%**	**$6,041,149**	**76%**	**$641,359**	**8%**	**$622,678**	**8%**

Child Welfare Services Branch (CWS), Department Of Human Services

CWS-Supported Behavioral Health Service Utilization

The Child Welfare Services Branch (CWS) in the Social Services Division of the Hawai‘i State Department of Human Services provided SFY 2020 data on a subset of services funded by CWS and provided to children in foster care. The services included here are either mental health or substance use services or are services that include behavioral health components. CWS provides many other services to children and families that are not included here, because their primary focus is not children's behavioral health. During SFY 2020, statewide, a total of 2,676 children were in foster care at some point in time during the year. In contrast, over 5,000 children came to the attention of CWS in SFY 2020 via reports of potential abuse and/or neglect to the statewide hotline. The data CWS provided for this analysis thus understates the behavioral health utilization and expenditures by CWS, because the data only includes the services provided to the smaller number of children in foster care. CWS provides services to many families where the children are not in foster care, but instead are living with their families. In addition, most children involved with child welfare are Medicaid-eligible; Medicaid-funded behavioral health services provided to these children would be included in the CAMHD and Med-QUEST sections of this analysis.

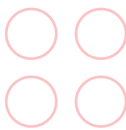


Table 79 below shows CWS-supported behavioral health services provided to children in foster care in total, by type of service, and broken down by regions. In the regional column title cells of the table, the number of children in foster care in total and by region is displayed. The table shows the percentage of children in each county who used services compared to their representation among children in foster care. These data allow for certain observations to be made about whether children by county appear to be under or overrepresented among service recipients compared to their representation among children in foster care. There are any number of reasons for under- or over-representation, including that a given service may only be contracted for on one Island. This study did not examine reasons affecting service use representation, but the data do allow for consideration of where under- or -over-representation appears to exist, which Hawai'i stakeholders can then examine as they feel is warranted.

Children in Honolulu County appear to be overrepresented in most services compared to their representation among children in foster care. They comprise 48% of children in foster care but 100% of those receiving Emergency Shelter, Assessment, and Counseling, and 100% of those receiving Substance Abuse Residential, Women with Infants and Toddlers. (Those two services only exist in Honolulu County.) They are 74% of those receiving Family Wrap Services (which only exists in Honolulu and Hawai'i counties,) 63% of those receiving Emergency Shelter and Community-Based Services, and 59% of those receiving Sexual Abuse Treatment. (Emergency Shelter and Community-Based Services and Sexual Abuse Treatment services are available statewide.)

Children on the Island of Hawai'i, who represent 31% of children in foster care, are overrepresented among children receiving Emergency Shelter and Community-Based Services (36%) and Transitional Family Home (Therapeutic Foster Care; 50%). They are underrepresented among those receiving Sexual Abuse Treatment and Family Wrap Services.

Children on Kaua'i, who are 7% of children in foster care, are overrepresented among children receiving Sexual Abuse Treatment at 11% and among those receiving Transitional Family Home (Therapeutic Foster Care) at 9%. Children on Maui, who are 14% of children in foster care, appear to be underrepresented among behavioral health recipients.

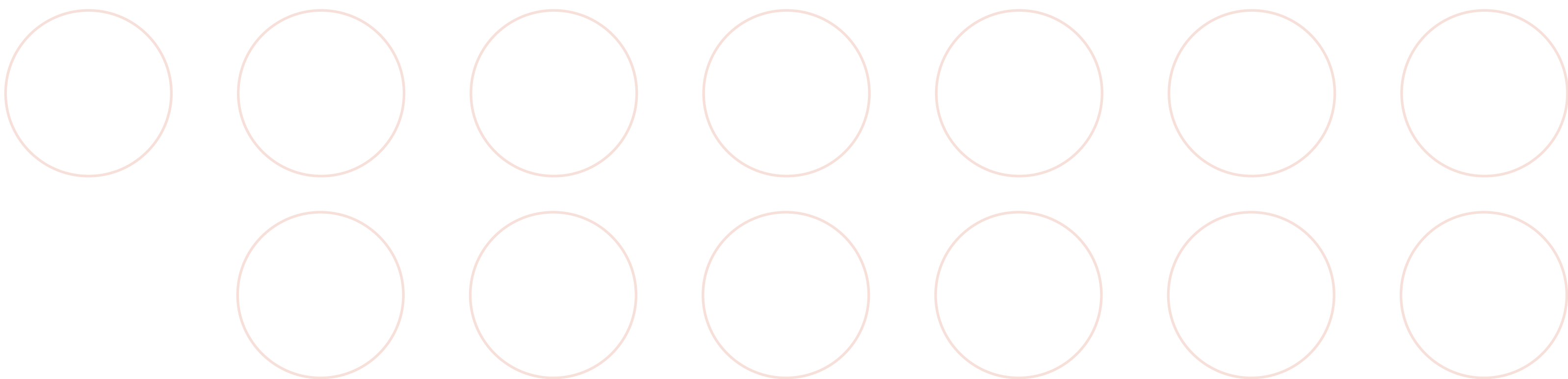
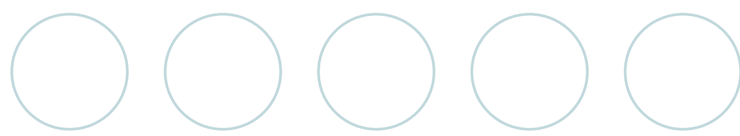


Table 79: CWS-Supported Behavioral Health Service Utilization, By Service Type and Compared to Representation Among Child Welfare Intakes

Type of Service	Total # of Children Across Regions Using Service Type	% Using Service Out of Children in Foster Care* (N= 2,676)	COUNTY: Honolulu N = 1,287 48% of children in foster care statewide		Hawai'i N = 836 31% of children in foster care statewide		Maui N = 373 14% of children in foster care statewide		Kaua'i N = 180 7% of children in foster care statewide		% contract providing mental health services to children
			# using service type	% using service^	# using service type	% using service^	# using service type	% using service^	# using service type	% using service^	
Crisis Response/ Case Mgt Victims of Human Trafficking<	75	3%									100%
Domestic and Dating Violence<	52	2%									55%
Psychological Evaluations, Mental Health Assessment Consultation<	163	6%									21%
Sexual Abuse Treatment	196	7%	115	59%	38	19%	21	11%	22	11%	58%
Multi-Disciplinary Teams & Psych Med Monitoring<	85	3%									33%
Substance Abuse Residential, Women with Infants & Toddlers~	14	1%	14	100%	0	0%	0	0%	0	0%	100%
Emergency Shelter, Assessment, Counseling~	114	4%	114	100%	0	0%	0	0%	0	0%	100%
Emergency Shelter and Community-Based Services	216	8%	135	63%	78	36%	0	0%	***N<11***	1%	100%
Family Wrap Services>	54	2%	40	74%	14	26%	0	0%	0	0%	50%
Transitional Family Home (Therapeutic Foster Care)	106	4%	41	39%	53	50%	***N<11***	2%	***N<11***	9%	100%

**This is the unduplicated number of children who were in foster care at any point during SFY 2020.*
The data was extracted from the State of Hawai'i. Department of Human Services, Social Services Division, Child Welfare Services' Child Protective Service System (computer database system).
^Out of all children using this service type.
~This service only exists in Honolulu County.
>This service only exists in Honolulu and Hawai'i Counties.
<Regional breakdown is unavailable.



CWS-Supported Behavioral Health Services Expenditures

The table below shows the amount spent by CWS on behavioral health services, in total and by service type, and displays funding sources for each service and in total. *(Note: Most children involved with child welfare are Medicaid-eligible[xvii] and often access behavioral health services through Med-QUEST and/or CAMHD. Medicaid-supported behavioral health expenditures are accounted for in the CAMHD and Med-QUEST data. The table below shows only CWS-supported funding for behavioral health services for children in foster care, so it understates the total amount of behavioral health services provided to children involved with CWS and the amount spent on those services.)*

CWS spent over $4 million on behavioral health services and services with behavioral health components for children in foster care. Nearly 80% of total funding was comprised of two funding sources – Hawai‘i State General Funds at 37.8% and federal Temporary Assistance to Needy Families (TANF) Transfer funds at 40.26%. The next most-utilized funding source was the federal Social Services Block Grant (SSBG; 11.33%) and then State Special Funds (6.51%), with a small amount of funding from federal Social Security Act Title IV-E (1.85%), federal Family Violence, Prevention, and Services Act (1.41%), and federal Social Security Act Title IV-B Part I (0.84%). The federal Social Security Act Title IV-E monies, unlike other child welfare funding, is entitlement funding (i.e., the annual amount is not capped, but earned and reimbursed, based on families' eligibility), and the state contribution draws down federal matching funds. However, the funds are limited to those children who are eligible. The federal Social Security Act Title IV-E eligibility (Title IV-E) requires that the family meet the federal Aid to Families with Dependent Children (AFDC) income standard from 1996. With inflation, fewer children and families every year qualify for Title IV-E funding, causing states, including Hawai‘i, to have a greater share of costs for children who do come into foster care. CWS uses State General Funds to support room and board costs for children in foster care who are served in CAMHD's Community-Based Residential Treatment program, Residential Crisis Stabilization program, and Transitional Family Home. Those expenditures are not reflected in the table below.

Kinship Navigator, CAPTA, Monthly Child Welfare Formula Grants, Children's Justice Act funds, Social Security Act Title IV-B Part 2, and Chafee funds (all federal funding sources) all had $0 expenditures for behavioral health services for children in foster care during the reporting period.

The table below shows that the largest expenditure of CWS behavioral health funding for children in foster care was spent on Emergency Shelter and Community-based Services (27.2%), which is CWS on-call shelters. The next largest category of spending was on Sexual Abuse Treatment (16.78%). Four service types had very similar amounts of spending: Emergency Shelter, Assessment, and Counseling – an O‘ahu-only on-call shelter for younger children and sibling groups (10.05%); Multi-Disciplinary Teams and Psychotropic Medication Monitoring (9.88%); Crisis Response/Case Management for Victims of Human Trafficking (9.36%); and Transitional Family Home (Therapeutic Foster Care; 9.01%). The categories with the lowest amount of spending were Substance Abuse Residential Treatment for Women with Infants and Toddlers (5.9%); Psychological Evaluations, Mental Health Assessments, and Consultation (4.39%); Domestic and Dating Violence – teen domestic violence services, which are available to the public (4.16%); and Family Wrap Services (3.27%).

The service with the highest average expenditure per child was Substance Abuse Residential Treatment for Women with Infants and Toddlers at $16,904, followed by Emergency Shelter and Community-Based Services at $5,053 average expenditure per child and Crisis Response/Case Mgt Victims Human Trafficking at $5,009 per child.

There are several services financed by CWS that, arguably, could be paid for by Medicaid for Medicaid-eligible youth. These include psychological evaluations/mental health assessments; Wraparound; and the therapeutic components of Transitional Family Homes. This analysis did not examine why Medicaid is not being used. There could be multiple reasons, including court-ordered evaluations that are not covered, inability to access Medicaid-covered services as quickly as needed, insufficient Medicaid reimbursement rates, lack of Medicaid providers, etc. This is an area that Hawai'i stakeholders may wish to look at in greater depth.

Table 80: CWS-Supported Behavioral Health Services Expenditures for Children in Foster Care and Funding Sources, in Total and by Service Type

Type of Service	$ Amount Spent (% of Total)								
	$ Amount of Contract Spent on Children's Mental Health Services and % of Total Spent Across Services	Avg. Spent per Child per Type ($)	State Gen. Funds	*State Spec. Funds (SCASF)	Federal SSBG	Federal TANF Trans.	Federal Family Viol. Prev. & Services Act	Federal IV-B Pt 1	Federal IV-E
Crisis Response/Case Mgt Victims Human Trafficking	375,699 (9.36%)	5,009	200,166 (13.2%)	141,920 (54.3%)	0 (0%)	0 (0%)	0 (0%)	33,613 (100%)	0 (0%)
Domestic & Dating Violence	166,801 (4.16%)	3,208	110,105 (7.3%)	0 (0%)	0 (0%)	0 (0%)	56,696 (100%)	0 (0%)	0 (0%)
Psych Eval, Mental Health Assessment, Consult	176,145 (4.39%)	1,081	122,632 (8.1%)	0 (0%)	46,279 (10.2%)	7,234 (0.4%)	0 (0%)	0 (0%)	0 (0%)
Sexual Abuse Treatment	673,248 (16.8%)	3,435	304,147 (20.1%)	73,114 (28.0%)	103,680 (22.8%)	192,305 (11.9%)	0 (0%)	0 (0%)	0 (0%)
Multi-Disciplinary Teams & Psych Med Monitoring<	396,341 (9.88%)	4,663	214,823 (14.2%)	0 (0%)	145,479 (32.0%)	36,038 (2.2%)	0 (0%)	0 (0%)	0 (0%)
Substance Abuse Residential, Women with Infants & Toddlers~	236,651 (5.9%)	16,904	93,977 (6.2%)	0 (0%)	142,674 (31.4%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Emergency Shelter, Assessment, & Counseling~	403,301 (10.05%)	3,538	83,592 (5.5%)	0 (0%)	0 (0%)	305,503 (18.9%)	0 (0%)	0 (0%)	14,206 (19.1%)
Emergency Shelter and Community-Based Services	1,091,421 (27.2%)	5,053	701 (0%)	0 (0%)	16,530 (3.6%)	1,074,190 (66.5%)	0 (0%)	0 (0%)	0 (0%)
Family Wrap Services>	131,242 (3.27%)	2,430	85,137 (5.6%)	46,105 (17.7%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Transitional Family Home (Therapeutic Foster Care)	361,652 (9.01%)	3,412	301,556 (19.9%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	60,096 (80.9%)
Totals	**4,012,501 (100%)**		**1,516,837**	**261,140**	**454,643**	**1,615,272**	**56,696**	**33,613**	**74,302**

**Special Funds is an account created by the Legislature comprised of marriage license fees and fees for certified copies of birth, marriage, and death certificates from the Department of Health, which can be used to fund CWS services. ~This service only exists in Honolulu County. >This service only exists in Honolulu and Hawaiʻi Counties*

Transitional Family Homes (Therapeutic Foster Care)

CWS was able to provide demographic data with respect to one service: Transitional Family Homes, which was provided to 106 children in SFY 2020 with a total expense of $361,652. CWS provided data on the use of this service by sex, age, race/ethnicity, and island. Please see tables 81-84. CWS also provided this demographic data for children in foster care, allowing a comparison between representation in foster care based on these demographics and representation among users of this service. This type of comparison can point to potential disparities in service use based on demographics.

Table 81: CWS Use of Transitional Family Homes by Sex

	# and % of Children in Foster Care (FY2019)	# and % of Children Using Transitional Family Homes (out of all children in Transitional Family Homes) (FY2020)	Amount Spent and % of Total Expenditures	Average Expenditure Per Child
All Children	2,790 (100%)	106 (100%)	$361,652 (100%)	$3,412
Male	1,385 (50%)	54 (51%)	$187,466 (52%)	$3,472
Female	1,405 (50%)	52 (49%)	$174,186 (48%)	$3,350

Disparities in Use of Transitional Family Homes Based on Age

The following table shows use of Transitional Family Homes by age cohorts. **The largest age cohort using Transitional Family Homes is 13-18 year olds, comprising 68% of all children using this service. This is an overrepresentation compared to their representation among children in foster care at 25%.** This age group also uses a corresponding higher share of expenditures for this service at 67%. Again, national data also suggest that this age group uses more services and as such a greater share of behavioral health expenditures than other age groups. The average expenditure for 0-5 year olds ($2,037), compared to that for all children ($3,412), suggests that very young children are staying in Transitional Family Homes for even shorter periods of time than children in general.

Table 82: CWS Use of Transitional Family Homes by Age

	# and % of Children in Foster Care (FY2019)	# and % of Children Using Transitional Family Homes (out of all children using Transitional Family Homes) (SFY2020)	Amount Spent and % of Total Expenditures	Average Expenditure Per Child
All Children	2,790 (100%)	106 (100%)	$361,652 (100%)	$3,412
0-5	1274 (46%)	***N<11***	$6,111 (2%)	$2,037
6-12	805 (29%)	31 (29%)	$114,779 (32%)	$3,703
13-18	711 (25%)	72 (68%)	$240,763 (67%)	$3,344

Disparities in Use of Transitional Family Homes Based on Race/Ethnicity

Table 83 below shows use of Transitional Family Homes by race/ethnicity. Native Hawaiian/Other Pacific Islander children are the largest racial/ethnic group using Transitional Family Homes, comprising 46% of children using this service, and this group uses 51% of all Transitional Family Home dollars. While the largest cohort, the representation of Native Hawaiian/Other Pacific Islander children among those using Transitional Family Homes at 46% can also be considered an **underrepresentation compared to their representation (61%) among children in foster care.**

The next largest cohort using Transitional Family Homes are children identified as being multiracial. These children comprise 29% of those using Transitional Family Homes. Compared to their representation among children in foster care at 11%, children who are multiracial appear to be overrepresented among Transitional Family Home recipients.

White children are the third largest cohort using Transitional Family Homes (15% of recipients), but they use only 8% of Transitional Family Homes dollars and have a relatively low average Transitional Family Home expenditure of $1,845, compared to the average for all children using Transitional Family Homes of $3,412. These data suggest that White children may be staying for shorter periods of time in Transitional Family Homes. Similarly, Asian children, the next largest cohort at 6% of Transitional Family Home recipients, use only 3% of Transitional Family Home dollars and have a low average expenditure of $1,660, suggesting that they, too, have shorter lengths of stay in Transitional Family Homes. In contrast, Hispanic/Latino children, while a small number with only two children receiving Transitional Family Homes, have average expenditures of $7,789, which are 128% higher than those of children in general who use Transitional Family Homes. With only two Hispanic/Latino children using Transitional Family Homes, the average expense could be skewed by the small number. **No American Indian/Alaskan Native children or Black/African American children received Transitional Family Home services.**

Table 83: CWS Use of Transitional Family Homes by Race/Ethnicity

	# and % of Children in Foster Care (FY2019)	# and % of Children Using Transitional Family Homes (out of all children using Transitional Family Homes) (FY2020)	Amount Spent and % of Total Expenditures	Average Expenditure Per Child
All Children	2,790 (100%)	106 (100%)	$361,652 (100%)	$3,412
Native Hawaiian/ Pacific Islander	1,688 (61%)	49 (46%)	$183,409 (51%)	$3,734
White	472 (17%)	16 (15%)	$29,515 (8%)	$1,845
Multiracial	295 (11%)	31 (29%)	$117,247 (32%)	$3,782
Asian	98 (4%)	6 (6%)	$9,960 (3%)	$1,660
Hispanic/Latino	88 (3%)	2 (2%)	$15,578 (4%)	$7,789
Black/African American	71 (3%)	0	0	0
American Indian/ Alaskan Native	28 (1%)	0	0	0
Unknown	50 (2%)	***N<11***	***N<11***	***N<11***

Disparities in Use of Transitional Family Homes Based on Island

The table below shows use of Transitional Family Homes by Island. **Children on the Island of Hawaiʻi represent half (50%) of all children using Transitional Family Homes, although they are only 31% of children in foster care.** There may be more Transitional Family Homes on Hawaiʻi Island per child than on other islands. Hawaiian children in foster care use 44% of Transitional Family Home dollars, and their average expenditure of $2,991 is lower than that of children in general at $3,412, suggesting they may be staying for shorter periods in Transitional Family Homes.

The next largest cohort using Transitional Family Homes are children in Honolulu County, representing 39% of Transitional Family Home recipients and 40% of Transitional Family Home dollars. However, children in Honolulu represent 48% of the foster care population, suggesting their 39% representation among Transitional Family Home recipients is an underrepresentation. Children on Kauaʻi are the next largest cohort at 9% of Transitional Family Home recipients, and they use 15% of Transitional Family Home dollars. Children on Kauaʻi are 7% of the foster care population, suggesting their 9% representation among Transitional Family Home recipients is a slight overrepresentation. In contrast, only two children on Maui used Transitional Family Homes, representing 2% of service recipients, compared to their representation among children in foster care of 14%, suggesting they are underrepresented among service recipients. Also, their average expenditure of $2,108 is 38% lower than that of children in general at $3,412, suggesting they may be staying for shorter periods in Transitional Family Homes.

Table 84: CWS Use of Transitional Family Homes by Island

	# and % of Children in Foster Care (FY2020)	# and % of Children Using Transitional Family Homes (out of all children using Transitional Family Homes)	Amount Spent and % of Total Expenditures	Average Expenditure Per Child
All Children	2,676 (100%)	106 (100%)	$361,652 (100%)	$3,412
Island of Hawai'i	836 (31%)	53 (50%)	$158,513 (44%)	$2,991
Honolulu	1,287 (48%)	41 (39%)	$145,663 (40%)	$3,553
Kaua'i	180 (7%)	***N<11***	$53,260 (15%)	$3,553
Maui	373 (14%)	***N<11***	$4,216 (1%)	$2,108

Number of Children in New CWS Investigations and Number of Children in Foster Care by County

Data referenced in the analysis of children in new CWS investigations and children in foster care may provide useful contextual information to Hawai'i stakeholders. The table below shows the number and percentage of children in new CWS investigations by county in Calendar Year 2020 and the number and percentage of children in foster care by county in SFY 2019. **The data suggests that children on the Island of Hawai'i may be removed from their homes into foster care at a higher rate than children on the other Islands.** (A direct comparison of these two sets of data must take into consideration the fact that the children who are in foster care came from many different years of investigations, not just from the investigations of one year. There may be more children in foster care in one region over another, not because more children are entering foster care from that region, but because children stay in foster care longer in that region.) This is perhaps not surprising since **the Island of Hawai'i has the highest child poverty rate** of all the Islands, and inadequate income, more than any other variable, is associated with removal in child welfare.[xxxvi]

These data may help to put into context the higher use of behavioral health services by children on the Island of Hawai'i relative to other children, which was found with respect to both CWS- and Medicaid-financed behavioral health services. **The data could be used to support Hawai'i stakeholders to develop or expand focused, cross-agency strategies that link families both to services and to concrete supports, including those that address social determinants of health such as housing, employment, food, child care, and transportation.**

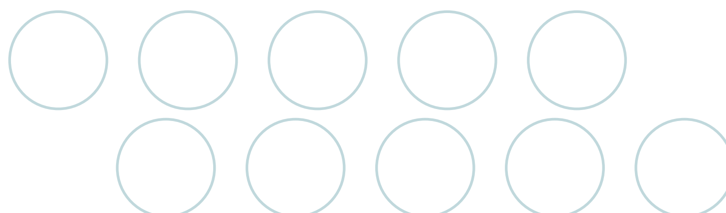


Table 85: Number and Percent of Children in New CWS Investigations and of Children in Foster Care by County

County	# of Children in New Investigations	% of Children in New Investigations	# of Children in Foster Care	% Children in Foster Care
Honolulu	3,050	62%	1,461	52%
Hawai'i	753	15%	818	29%
Maui	670	14%	370	13%
Kaua'i	426	9%	141	5%
Total	**4,899**	**100%**	**2,790**	**100%**

Source: A Statistical Report on Child Abuse and Neglect in Hawai'i. 2020. State of Hawai'i. Department of Human Services. Audit, Quality Control and Research Office, and 6/29/2022 Email communication from CWS. The numbers of children are unduplicated.

Judiciary

The Judiciary budget data for behavioral health services are not available by age, sex, race/ethnicity, or diagnosis.

Judiciary-Financed Child Behavioral Health Service Utilization

The table below shows the number of court-involved youth receiving behavioral health services in SFY2019 financed by the Judiciary using state general revenue. Judiciary staff noted that many court-involved youth receive behavioral health services through CAMHD. Thus, **the Judiciary data below do not reflect all behavioral health service use by court-involved youth** because youth receiving services through CAMHD are included in the CAMHD data. In addition, the data should not be interpreted as a reflection of the need for services. Utilization data reflect demand (i.e., the ability or desire to use services), not need. It is well-documented that youth involved with juvenile justice systems have high need for behavioral health services, with estimates that 40-70% of these youth need behavioral health services.[xviii] The Judiciary plays an important role in the identification of behavioral health challenges among youth and provision of early intervention services.

The Judiciary reported that **852 (66%) court-involved youth received behavioral health services financed by the Judiciary, out of 1,289 youth in total. Most youth who utilized services (642 youth or 73%) received substance use outpatient treatment.** The second largest cohort of youth (148 youth or 17% of those using services) received individual and family therapy. Five percent (5%) of youth using services (39 youth) received anger management treatment and 17 youth (2%) received mental health assessments. Another 3% of youth (24) received residential SUD treatment.

Table 86: Judiciary-Financed Behavioral Health Service Utilization by Court-Involved Youth

Type of service	# Youth Receiving Service Type	% of Youth Receiving Service Type Out of All Youth Receiving BH Services (n=852)	% of Youth Receiving Service Type Out of All Court-Involved Youth (#=1,289)
Mental health assessments	17	2%	1%
Anger management	39	5%	3%
SUD outpatient treatment services	624	73%	48%
Residential SUD treatment	24	3%	2%
Individual and family therapy	148	17%	11%
Total	**852**	**100%**	**66%**

Judiciary-Financed Child Behavioral Health Service Expenditures

The table below shows the amount of state general revenue spent by the Judiciary on behavioral health services, which totaled **$772,292, with an average expenditure of $906 per youth served.**

The largest expenditure ($277,706 or 36% of total expenditures) was for SUD outpatient treatment, which also is used by the largest number of youth. The **average amount spent of $445 per youth receiving this service is low compared to national data** indicating that the average cost of a three-month course of adolescent SUD outpatient treatment in 2016 was between **$1,517 and $3,217**.[xix]

The second largest expenditure ($239,571 or 31% of total expenditures) was on individual and family therapy, at an average expenditure of $1,619 per youth. This was also the second most used service by youth. In contrast, very few youth (3%) used residential SUD treatment, but, because of its relatively high cost, SUD residential treatment comprised nearly a quarter (24%) of all expenditures.

Table 87: Judiciary-Financed Youth Behavioral Health Expenditures

Type of Service	Expenditure Per Service Type	Percent of Total Expenditures	Average Expenditure Per Service Type
Mental health assessments	$23,675	3%	$1,393
Anger management	$46,580	6%	$1,194
SUD outpatient treatment	$277,706	36%	$445
Residential SUD treatment	$184,760	24%	$7,698
Individual and family therapy	$239,571	31%	$1,619
Total Expenditures All Services	**$772,292**	**100%**	**$906**

Court-involved youth may be Medicaid-eligible. Although there are prohibitions to using Medicaid for adjudicated youth in secure detention, and there are often other barriers (e.g., lack of coverage of certain services by the state Medicaid program, lack of Medicaid providers, insufficient Medicaid rates, lack of access to timely assessments, lack of coverage for court-ordered assessments, etc.), all the behavioral health services paid for by the Judiciary using state general revenue could be paid for by Medicaid. It would be worthwhile to explore whether Medicaid could finance some of the services now paid for by the Judiciary, thus expanding Judiciary's state dollars to capture federal Medicaid match. It may be especially worthwhile to examine coverage by Medicaid of adolescent SUD outpatient and SUD residential treatment. More states are taking advantage of flexibility provided by the federal Centers for Medicare & Medicaid Services (CMS) to cover SUD services as a key strategy to expand the availability and accessibility of these services.[18]

[18] For example, see: https://www.medicaid.gov/medicaid/section-1115-demonstrations/1115-substance-use-disorder-demonstrations/section-1115-demonstrations-substance-use-disorders-serious-mental-illness-and-serious-emotional-disturbance/index.html.

Department of Education

The Hawai'i Department of Education (DOE) analysis differs from other agencies' analyses contained in this report due to differences in the availability of behavioral health claims data. Also, while other agencies' data are from the 2019 or 2020 state fiscal years, the DoE data are from multiple years (dates noted below).

DOE provided several reports containing data on public school students, drawn, in part, from its Student Services Branch (SSB). The SSB "supports complex areas and schools with responsive leadership, guidance for the implementation of state and federal initiatives and programs such as opioids misuse prevention and response, professional development and evidence-based resources to address the physical health, behavioral, academic, social-emotional needs of all students."[19] The SSB develops and implements policies and programs to support crisis services, including those related to suicide; education for students in foster care; education for homeless students in accordance with the McKinney-Vento Act; Hawai'i's Multi-Tiered System of Support to identify and provide support to struggling learners; School-Based Behavioral Health Services (SBBH); and more.

The 2021-2022 budget for SBBH was $29,797,228 for personnel and $6,772,699 for programming. DOE personnel report that this amount has stayed consistent over the past several years, which has implications for recruitment and retention of staff.

In school year 2021-2022, SBBH provided:

- individual sessions, group sessions, in-class support, and crisis intervention to 4,654 students,
- walk-in services to 5,021 students, and
- tiered support services to 3,626 students.[20]

A January 2023 data report recorded 8,917 SBBH services provided statewide through December 31, 2022 (3744 on O'ahu; 2149 on the Big Island; 1233 on Maui, Moloka'i, and Lāna'i; and 1791 on Kaua'i). Given that O'ahu has at least five times the population of the other islands, one would expect substantially higher rates on that island; however, O'ahu constituted only about 40% of total visits.

SBBH uses the Behavior Intervention Monitoring Assessment System (BIMAS-2TM) to measure progress across five domains (conduct - anger management, bullying behaviors, substance abuse, and deviance; negative affect - anxiety, depression; cognitive/attention - focus, organization, planning, memory; social functioning – friendship, maintenance, communication; and academic functioning - performance, attendance, ability to follow directions). Ninety-four percent of students with pre/post BIMAS-2 scores showed improvement or maintained their status. Eighty percent of students saw significant improvements in negative affect, and fewer than 10% of students demonstrated regression in areas measured by BIMAS-2.[21]

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[19] Hawai'i DOE | Student Services Branch (Hawai'ipublicschools.org)

[20] Note: This unique students may be represented in more than one service type provided service count as per SBBH Overview & Data SY 21-22.pdf - Google Drive

[21] SBBH Overview & Data SY 21-22.pdf - Google Drive

Disparities Based on Race/Ethnicity, Disability, and Age

In school year 2021-2022, 171,600 students were enrolled in Hawai'i public schools. Table 88 below provides the racial and ethnic breakdown of the student population for the 2021-2022 school year.

Table 88: Race and Ethnicity of Students (21-22 SY)

Race/Ethnicity	Percentage of Students
Asian	15.5%
Black	2.7%
Filipino	23.5%
Hawaiian	22.6%
Hispanic	2.3%
Pacific Islander	11.2%
White	20.6%
"Other"	1.6%

[xx]

A review of the federal Department of Education's Office of Civil Rights (OCR)'s 2017-2018 school discipline report (Table 89 below) shows disparities in discipline by race or ethnicity. White, Asian, and Multiracial children are less likely to receive disciplinary action than other racial/ethnic groups, and Native Hawaiian/Pacific Islander children are particularly overrepresented among children experiencing disciplinary action, representing 29% of enrolled students but 47% of in-school suspensions, 51% of out-of-school suspensions, and 56% of referrals to law enforcement. Exclusionary discipline can negatively affect students, including increasing school drop-out rates and limiting student access to educational services.[xxi]

Table 89: 2017-2018 School Discipline by Race/Ethnicity

Race/Ethnicity	% Enrolled Student Population	% In-School Suspensions	% Out-of-School Suspensions	% Referrals to Law Enforcement
Native Hawaiian/ Pacific Islander	28.6%	47.1%	51.3%	56.2%
White	12.2%	10.8%	8.9%	9.6%
Asian	28.6%	12.6%	15.4%	15.1%
Black	1.7%	2.3%	1.7%	1.5%
Hispanic	14.2%	15.7%	12.7%	8.8%
Two or More Races	14.4%	10.9%	9.7%	8.2%
American Indian/ Alaska Native	0.2%	(none reported)	0.3%	0.7%

Disparities in school discipline also are evident for students with disabilities, as demonstrated in the percentage of students identified as "IDEA students" who received disciplinary action.[xxii] As Table 90 shows, students with disabilities are not quite 11% of enrolled students but are 22% of in-school suspensions, 23% of out-of-school suspensions, and 23% of referrals to law enforcement.

Table 90: IDEA Status of Students Receiving Disciplinary Actions (SY17-18)

% Enrolled Student Population	% In-School Suspensions	% Out-of-School Suspensions	% Referrals to Law Enforcement
10.5%	22.1%	23.3%	23.3%

As Table 91 below shows, Native Hawaiian/Pacific Islander children with disabilities are particularly overrepresented among students with disabilities experiencing disciplinary action.

Table 91: Race/Ethnicity of IDEA Students Receiving Disciplinary Actions (SY17)

	% of Total Enrolled Student Population	% IDEA-Enrolled	% IDEA In-School Suspensions	% IDEA Out-of-School Suspensions	% IDEA Referrals to Law Enforcement
Native Hawaiian/ Pacific Islander	28.6%	37.1%	47.7%	52.8%	64.7%
White	12.2%	12.6%	14.7%	10.6%	9.8%
Asian	28.6%	18.9%	7.6%	10%	6.4%
Black	1.7%	2%	1.6%	1.6%	0%
Hispanic	14.2%	16.2%	16.1%	15.4%	6.9%
Two or More Races	14.4%	12.8%	11.5%	9.4%	11.0%
American Indian/ Alaska Native	0.2%	0.4%	0.7%	0.3%	1.2%

The Spring 2023 Social Emotional Learning Assessment reported that students in grades 3-5 perceive their own social-emotional skills on par with students nationwide. However, survey respondents in grades six through 12 were less likely to report they managed “their emotions, thoughts, and behaviors in different situations” well; had lower social awareness (“how well students consider the perspective of others and empathize with them”); and a sense of belonging (“how much students feel they are valued members of the community”) than their peers nationwide. The Aspen Institute National Commission on Social, Emotional, and Academic Development[xxiii] reported that “[e]vidence confirms that supporting students’ social, emotional, and cognitive development relates positively to all of the traditional measures we care about: attendance, grades, test scores, graduation rates, success in college and careers, more engaged citizenship, and better overall well-being.”

Recommendation: Strengthen data collection and analysis. At present, DOE has published limited data on students’ use of behavioral health services. We recommend that DOE reports out the data they have begun collecting from its existing programs, including SBBH and IDEA. If possible, data on program use should be disaggregated by age, grade, sex, race/ethnicity, island of residence, and special education status. The data should include total counts of services provided and service counts by unique individuals by type of behavioral health service received to ascertain whether a subset of children and youth are overrepresented or underrepresented in service delivery.

Key Findings and Recommendations

Cross Agency Utilization and Expenditures

The table below summarizes expenditures and utilization across agencies, based on the data provided.

Table 92: Summary of Cross-Agency Utilization and Expenditures

Agency		Number of Children Served	Total Expenditure and % of Total	Average Expenditure per Child Served
Med-QUEST* Managed Care		24,327	$166,446,499 (79%)	$6,842
CAMHD**	As reported by Med-QUEST	(979)	($7,573,715)	($7,736)
	As reported by CAMHD	1,981	$29,315,765 (14%)	$14,798
Med-QUEST Fee-for-Service*		638	$3,347,922 (2%)	$5,248
Child Welfare Services***		N/A	$4,012,501 (2%)	N/A
ADAD****		7,524	$7,948,028 (4%)	$7,524
Judiciary		852	$772,292 (0.4%)	$906
Total		**N/A**	**$211,793,007***** (100%)**	**N/A**

**Med-QUEST includes children, youth, and young adults, ages 0-25*
***CAMHD includes children and youth, ages 0-20*
****CWS includes children and youth in foster care, ages 0-18*
*****ADAD includes children, youth, and young adults, ages 0-26, and includes some unknown amount of duplication*
******Uses CAMHD total as reported by CAMHD; excludes CAMHD total reported by Med-QUEST*
Note: A follow up data pull not included in the current report found a total of $10,613,157.68 paid by Med-Quest to CAMHD for the same fiscal year.

Making Better Use of Medicaid

Medicaid Managed Care

Findings:

- The majority (79%) of child behavioral health expenditures were paid by Medicaid Managed Care, and most children receiving behavioral health services from public child- and family-serving systems received services through Medicaid Managed Care.
- Nationally, an estimated 20% of children need behavioral health services; children served through Medicaid have a demonstrated need that is greater than the national average.[xxiv] Similar to national data, the Med-QUEST data show a penetration rate (i.e., the percentage of children accessing behavioral health care in Medicaid out of all children enrolled in Medicaid) of about 11%.
- The Med-QUEST data suggest that the average expenditure per child served in Managed Care is lower than would be expected, particularly given the higher costs of living[xxv] in Hawai'i. National analysis found that the average behavioral health expenditure for children, ages 0-18, using behavioral health care in Medicaid in 2011 was $5,517 ($6,428 when adjusted for inflation to 2019 dollars). Although the average Med-QUEST expenditure was $7,138 in 2019, this figure includes the 21–25-year-old cohort. If the average Med-QUEST expenditure were adjusted to include only the 0-20 age group, the average expenditure is estimated to be $5,600 per child, which is less than the national average using the inflation-adjusted figures.
- Most children in Managed Care who used behavioral health services received Screening and Assessment and Individual Therapy. Fewer than 10% of children received any other service type.
- Most Managed Care behavioral health dollars (60%) were spent on "Other Services" (identified by Med-QUEST as inpatient-related claims); Emergency Department (ED) use absorbed another 9% of total Managed Care expenditures.

Recommendations: Stakeholders are recommended to:

- Further analyze the Other Services category to understand precisely which claims are included for which children and youth. The data suggest there may be opportunity to reduce reliance on Hospital-Based Residential (Inpatient Psychiatric Hospitalization) and ED use through expanded use of Mobile Crisis Intervention, Intensive In-Home Services, and Family Peer Support, which now are provided to very few children through Managed Care.
- Examine whether the amount invested in Individual Therapy is producing desired quality and cost outcomes, given that it is provided to almost half of children who use behavioral health services through Managed Care. It may be advisable to look at what type of Individual Therapy children are receiving and whether it includes components of evidence-based practices or is largely more traditional, office-based therapy.
- Examine what is provided through Group Therapy since Group Therapy provided through Managed Care has a relatively high average expenditure of $11,383.

Substance Use Treatment and Medicaid

Findings:

- ADAD reported that the Medicaid claims from ADAD are below what would be expected due to a claims process in need of revision. The current state reflects an under-claiming of substance use disorder (SUD) services to Managed Care and an aligned over-spending of other SUD treatment funding dollars. ADAD anticipates this will be addressed through the implementation of a new technical system that is expected to provide more comprehensive data and support improved Medicaid claiming.
- The Medicaid data provided by both Med-QUEST and CAMHD indicate that few youth receive SUD treatment paid for by Medicaid. CAMHD focuses on youth with significant behavioral health challenges, including those with co-occurring mental health and SUD challenges and is not mandated to serve youth with a primary SUD treatment need. Of the 24,000 youth served through Medicaid Managed Care, only 218 (less than 1%) received SUD outpatient (OP) treatment.
- The Med-QUEST data also indicated that the 6% of youth with SUD diagnoses served through Managed Care had relatively high rates of inpatient hospital and ED use. Youth with a diagnosis of SUD had the highest rate of use for Other Services (inpatient-related claims) and the second highest rate of ED use, second to youth with a diagnosis of Depressive Disorders.
- The largest Judiciary behavioral health expenditure – 36% of total expenditures – was on SUD OP.

Recommendation:

Better access to SUD services through Managed Care may help to reduce use of inpatient hospital and ED use for this population and improve quality and cost outcomes. Prevalence estimates indicate that 6.3% of adolescents between the ages of 12-17 and 24.4% of young adults between the ages of 18-25 can be classified as having an SUD,[xxvi] suggesting that some 33,000 youth and young adults, ages 12-25, in Hawai‘i have a need for SUD treatment.[xxvii] Public systems cannot be expected to meet the extent of this need. However, it will be difficult to expand SUD treatment to any appreciable degree by relying predominantly on federal discretionary funding, block grants and general revenue. A larger role would need to be played by Medicaid, as is anticipated with the new systems being designed and implemented.

CAMHD and Medicaid

Findings:

- The data suggest that the penetration rate through CAMHD for children with serious emotional disorders or disturbance (SED) is low. The 1,981 children who received Medicaid-funded services through CAMHD represents about 0.6% of the Hawai‘i child population and about 1% of the Hawai‘i Medicaid child population. CAMHD is charged with serving children who meet clinical criteria for serious emotional or behavioral disturbance. Prevalence estimates for SED range from about 6-10%.[xxviii] Due to any number of reasons, such as capacity, funding, willingness to accept services and the like, it is not reasonable to expect CAMHD to meet the entire need for behavioral health care among children with serious behavioral health challenges in the Medicaid child population. Nonetheless, it does appear that CAMHD is reaching only a fraction of children with significant behavioral health challenges who need services.

- Federal Medicaid expenditures through CAMHD primarily support home- and community-based services (HCBS) and care coordination, which, together, account for 65% of total CAMHD Medicaid spending. Care coordination and intensive in-home services are the two services that children are most likely to receive through CAMHD Medicaid-supported dollars, received by 93% and 39% of children, respectively. A very small percentage of children receive any other home- and community-based service type supported by CAMHD Federal Medicaid dollars.
- There are several services that CAMHD funds using general revenue that could be covered by and reimbursed by Medicaid, including: Crisis Mobile Outreach; Functional Family Therapy; Residential Crisis Stabilization (minus room and board); Parent Partners (aka caregiver/family peer support); First Episode Psychosis; and Therapeutic Mentor.
- There are two services that CAMHD does not currently fund that could also be Medicaid-covered: Youth Peer Support and Adjunctive or Expressive Therapies (e.g., music, drama, art, equine, etc.).
- Of the services Medicaid is paying for, CAMHD is augmenting the Medicaid dollars with non-Medicaid general revenue. According to CAMHD, for most service types, CAMHD must supplement the Medicaid dollars because the Medicaid rates are too low to incentivize providers to offer the service and meet quality standards. While CAMHD deserves credit for using general revenue to encourage provision of these services, general revenue is limited and has competing demands, and without an updated rate review, the State might be foregoing Federal Medicaid match revenue that could ease some of the pressure on general revenue resources.

Recommendation: Stakeholders may want to consider:

- Recommending that CAMHD and Med-QUEST complete a planned rate review of the CAMHD Medicaid services that CAMHD now supplements with general revenue.
- Using Medicaid to pay for services that CAMHD is now financing with general revenue and federal SAMHSA block grant and discretionary funding. These services could include Crisis Mobile Outreach; Functional Family Therapy; Residential Crisis Stabilization (minus room and board); Parent Partner Support; Therapeutic Mentor; and OnTrack/First Episode Psychosis Services.
- Adding Youth Peer Support and Adjunctive or Expressive Therapies to Medicaid State Plan services. A growing number of states are incorporating youth peer support into their behavioral health systems for youth and young adults (typically, ages 14-25) and covering this service under Medicaid. While there is far more research on Adult Peer Support, a growing body of research and state experience finds that young people who have access to peer support are more satisfied with their services than young people who do not have access to peer support, are more satisfied with their participation in services and the appropriateness of the services received, and they report better outcomes in some areas of functioning. These findings are particularly salient given research also has found that existing services and systems often do not adequately attract, engage, or serve young people. Research has found that adjunctive therapies can help with engagement and symptom reduction, and some approaches, such as Hoʻoponopono, may be more culturally relevant than more traditional therapies, [xxx, xxxi, xxxii]

Out-of-Home Care Expenditures

Finding:
About 8% of children received Medicaid-supported out-of-home and restrictive services through CAMHD (i.e., Hospital-Based Residential, Community-Based Residential Treatment, and Out-of-State Residential Treatment), but these services accounted for 35.8% of total Medicaid-funded CAMHD services. Out-of-State Residential Treatment had the highest average Medicaid expenditure per child served ($41,887), followed by Hospital-Based Residential care ($28,979), and community-based residential care ($21,824). As noted above, Medicaid Managed Care is spending the majority of its dollars on hospital-related services. This is an expensive and restrictive service being provided to children who are not eligible for CAMHD behavioral health services.

Recommendation:
Stakeholders should consider expanding access to Medicaid-covered home- and community-based services by both CAMHD and Managed Care to help to reduce reliance on out-of-home services and associated expenditures.

Care Coordination and Case Management

Finding:
Care Coordination accounts for 19% of total Medicaid spending through CAMHD, or $2.4 million, and is provided to 93% of children receiving Medicaid-supported services through CAMHD. There is an average expenditure of $1,297 per child served for this service. Managed Care spent a total of $154,349 on Case Management for 1,903 children at an average expense of $81 per child served.

Recommendations:
Stakeholders may want to examine more closely the effectiveness of the intensive care coordination provided through CAMHD and case management being provided through Managed Care. Effective care coordination is a critical infrastructure component of a child behavioral health delivery system, and children with significant behavioral health challenges, as well as high-risk populations, require an intensity of care coordination that includes low ratios of care coordinators to children and families and a common, evidence-based practice model. The only intensive care coordination (ICC) approach for children with significant behavioral health challenges that is evidence-based is ICC using High Fidelity Wraparound. Research has shown that ICC/Wraparound can help to reduce use of out-of-home placements, improve outcomes, and is cost-effective.[xxxiii] Some states also are implementing both ICC/Wraparound and a moderate intensity care coordination model for at-risk populations that is based on Wraparound principles.

CWS, Judiciary and Medicaid

Findings:
- There are several services being provided and financed by CWS that, arguably, could be paid for by Medicaid for Medicaid-eligible youth. These include Psychological Evaluations/Mental Health Assessments; Wraparound; and the clinical components of Transitional Family Homes.
- Nearly 80% of total CWS behavioral health funding was comprised of two funding sources: general revenue (GR) and TANF Transition Funds.

Recommendations:

- CWS, Med-QUEST, and CAMHD should jointly plan how to maximize use of both Medicaid and Title IV-E to support prevention services, including mental health and SUD services, included, or planned for the future, in the State's FFPSA Prevention Plan. At the time of this report, Hawaiʻi had included Homebuilders®, Parents as Teachers (PAT), Healthy Families America-Child Welfare Adaptation, and Motivational Interviewing as the EBPs provided under its federally approved Title IV-E Prevention Plan.[22]
- It would be worthwhile to explore whether Medicaid could finance some of the behavioral health services now paid for by CWS and the Judiciary, thus expanding the capture of Federal Medicaid match. Although there are prohibitions to using Medicaid for adjudicated youth in secure detention and there are often other barriers in using Medicaid to cover such behavioral health services (i.e., lack of coverage of certain services by the state Medicaid program, lack of Medicaid providers, insufficient Medicaid rates, lack of access to timely assessments, lack of coverage for court-ordered assessments, etc.),some behavioral health services generally would be allowable under Medicaid and would enable Hawaiʻi to leverage federal funding.
- The CWS analysis only explored behavioral health utilization and expenditures for children in foster care. A future analysis could include behavioral health expenditures for all children involved with child welfare. This would provide additional information on spending necessary to support families to prevent foster care involvement. With passage of the Family First Prevention Services Act (FFPSA) in 2018, which allows use of Title IV-E funding for particular services that prevent placement of children in foster care, including mental health and substance use services, one would expect to see the Title IV-E share of funding increase in the future. This expectation is important because Title IV-E, unlike other child welfare funding, is entitlement funding (i.e., not capped), and the state contribution draws down federal matching funds.

Fee-for-Service (FFS) Medicaid

Finding:

Med-QUEST indicated that FFS Medicaid spending primarily includes services provided by the Department of Education and Department of Health that have been specifically left out of managed care. Children with Autism Spectrum Disorders (ASD) used 75% of FFS dollars, driven mainly by use of Wraparound and Transitional Support Services.

Recommendation:

Stakeholders may want to examine more closely why FFS spending is largely allocated to children with ASD.

Addressing Disparities and Disproportionality

Findings:

The data pointed to several disparities and disproportionalities based on sex, age, race/ethnicity, and/or Island of residence. Many of these challenges also are found on a national level and are not unique to Hawaiʻi.

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[22] See https://humanservices.Hawaiʻi.gov/wp-content/uploads/2021/10/Family-First-Hawaiʻi_FFPSA-Plan_Final-May21_PDF-2.pdf

- Boys access more Medicaid behavioral health services than girls – true of CAMHD, Managed Care, and FFS. Boys are also slightly overrepresented among recipients of Transitional Family Homes provided through CWS.
- Younger children (ages 0-5) are underrepresented in both CAMHD and Med-QUEST Managed Care relative to their representation in the Hawaiʻi child population. For example, an estimated 31.5% of children in Hawaiʻi are ages 0-5 years old, yet this age group are 5% of those using services through CAMHD.
- Youth, ages 13-18, are overrepresented in both CAMHD and Managed Care. The 13-18-year-old cohort also is the largest age group receiving CWS-funded Transitional Family Homes, comprising 68% of all children using this service. This is an overrepresentation compared to their representation among children in foster care at 25%. This age group also uses a corresponding higher share of expenditures for this service.
- Children identified as Native Hawaiian/Other Pacific Islander, White, or American Indian/Alaskan Native children are overrepresented in CAMHD, Managed Care, and FFS relative to their representation in the Hawaiʻi child population.[23]
- Children identified as Black/African American children are the only racial/ethnic group (besides Other) that have higher than average expenditures than children in general across services in Managed Care. Their average expenditure of $10,120 is 48% higher than the average for children in general at $6,842. This disproportionately higher average expense is driven largely by use of ED. Children identified as Black/African American had an average ED expense that was 118% higher than that of children in general ($18,049 versus $8,269). They also had a 17% higher average expense in their use of inpatient-related Other Services.
- Children identified as Hispanic/Latino, Multiracial, or Asian were underrepresented in CAMHD Medicaid expenditures. Children identified as Asian also were underrepresented in Managed Care and in FFS. (Note: Med-QUEST did not provide data on Hispanic/Latino or Multiracial children.)
- The data suggest significant overrepresentation of children from the Island of Hawaiʻi in CAMHD, Managed Care, and FFS expenditures. However, their average expenditures in Managed Care and in FFS are disproportionately low compared to the average among children in general.
- Children from Maui are underrepresented in CAMHD, Managed Care, and FFS.

Recommendations: It is recommended that stakeholders:

- Explore these differences more fully to determine whether focused quality improvement initiatives are warranted, in particular:
    - Reasons for the overrepresentation of children who are Native Hawaiian/Pacific Islander among service recipients;
    - Whether more focused outreach and culturally relevant approaches are warranted for children who are Asian, who are appreciably underrepresented among service recipients;
    - Whether more culturally relevant prevention and home- and community-based services are needed for children who are Black/African American, who have disproportionately

[23] Note: We have used Census categories for race and ethnicity breakdowns of data. The labels for these data are consistent with those used by the Census. We acknowledge that other terms, such as Latinx, may be more inclusive to some individuals or communities.

higher rates of use for most service types, including facility-based services, i.e., ED and Other Services (inpatient-related), and disproportionately high total and average expenditures, particularly for ED and Other Services (inpatient-related claims);
    - Determining which children are included in the Managed Care racial/ethnic category of Other and why they seem to have appreciably higher total expenditures; and
    - Whether Med-QUEST has data available on Hispanic/Latino children and how that data might affect findings in this analysis.
- Consider the importance of data not collected or reported and how improvements could be made in this area. These findings, as with the other findings in this analysis, reflect the data that were provided. This analysis, for example, does not include data regarding sexual orientation or sex identity or expression (SOGIE). Going forward, it will be important to collect data on SOGIE.[24]

Population-Focused Quality Improvement Initiatives Using Collaborative Financing

The data point to several populations for whom focused, cross-agency quality improvement (QI) initiatives might produce enhanced quality and cost outcomes. Stakeholders may want to consider undertaking collaborative, population-focused QI initiatives that address some or all of the populations highlighted below. Each of the findings below is followed by a related recommendation.

Sex-Related Findings and Recommendations

Finding:
In CAMHD Medicaid data, girls received inpatient psychiatric services at a rate that is 2.5 times greater than that of boys. The average expenditure for girls for Managed Care Other Services (inpatient-related) was $56,012, which is 68% higher than that of boys at $33,330. These higher expenditures suggest that girls in Managed Care may be staying longer in inpatient settings than boys. However, this is the opposite of what the CAMHD-submitted data suggest. In the CAMHD data, while girls have a higher rate of inpatient psychiatric use, they have 22% lower mean expenditures than boys, with the suggestion that boys served through CAMHD, rather than girls, may be staying longer in inpatient settings.

Finding:
In Managed Care, girls had a higher rate of ED use than boys, and the average expenditure for girls for ED use at $9,556 is 40% higher than that of boys at $6,835.

Recommendation:
Med-QUEST, CAMHD, and the Managed Care Organizations (MCOs) may want to examine utilization of inpatient psychiatric services and ED and lengths of stay and determine whether more aggressive use of home- and community-based services and mobile response could improve quality and cost outcomes.

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[24]See https://sogiecenter.org/offerings/data-collection/ for more information about best practices in SOGIE data collection in public systems.

Age-Related Findings and Recommendations

Finding:
Children ages 0–5-years old in Managed Care had disproportionately high expenditures for Individual Therapy compared to other age groups. Individual Therapy for children ages 0-5 represented 88% of the total dollars they used for behavioral health care ($11.7M out of $13.3M).

Recommendation:
Given the amount spent on Individual Therapy, it would be advisable to examine what very young children are receiving that is being claimed as Individual Therapy. Evidence-based outpatient practices for this population involve the family, but less than 1% of total Managed Care spending for this age group was for family therapy.

Finding:
Even though CAMHD, and not the MCOs, is responsible for providing more intensive behavioral health services to eligible children, relative to their representation among children using services, children ages 6–12 years old in Managed Care had disproportionately low expenditures for every service type. In contrast, the 6–12 years-old children receiving services through CAMHD Medicaid had higher average expenditures for every type of service than other age cohorts, with the most notable being the average expense for Inpatient Psychiatric Hospital Services, which were 69% higher than the average expense for 13-18 years-old youth. This differential suggests that children ages 6-12 are staying longer in Inpatient Psychiatric Hospital Services than older youth and/or possibly using more expensive hospital services. (It also is possible, because the number of children ages 6-12 using inpatient psychiatric services is relatively small (n=17), that their average expense is skewed by a small subset of these children with high outlier expense.)

Recommendation:
Med-QUEST, CAMHD, and the MCOs should examine why the 6-12-year-old age group has disproportionately high inpatient psychiatric hospital expenditures. They may want to consider a quality initiative to improve access and the range of home- and community-based services available for young children, particularly through Managed Care where earlier intervention could help to prevent later CAMHD involvement.

Finding:
Youth ages 13-18 in the CAMHD Medicaid population have the highest rates of service use for most service types, including out-of-home services. This age group uses more services in general and more expensive out-of-home services than other age cohorts. The largest share of Managed Care behavioral health dollars expended on children and youth is consumed by youth ages 13-18. The percentage of dollars used by this age group at 49% exceeds their 38% representation among those using services. It is driven by their disproportionately higher spending for Other Services (inpatient-related claims), which constitute 62% of all dollars used by this age group; their average expense of $64,798 for inpatient-related claims in Managed Care is 50% higher than that of children in general at $43,247. The only service for which they had disproportionately low use of dollars in Managed Care was Mobile Crisis Intervention.

Recommendation:
More effective use of Mobile Crisis Intervention with the 13-18-year-old age cohort could help to reduce reliance on ED and inpatient hospital psychiatric services. Provision of a broader array of home- and community-based services through Managed Care could help to reduce costs in both Managed Care and CAMHD. Coverage of youth peer support could benefit both systems.

Diagnosis-Related Findings and Recommendations

Finding:
Among CAMHD Medicaid service recipients, children with a diagnosis of Disruptive/Impulse Control/Conduct Disorder used the largest percentage of CAMHD Medicaid dollars. This was the most prevalent diagnosis among children served through CAMHD Medicaid financing.

Recommendation:
A quality improvement focus on serving children and youth with aggressive behaviors may be warranted, given the seeming prevalence of this population among those served by CAMHD and relative extent of resources used. With respect to young children, for example, conduct disorder may mask other issues such as learning problems or trauma, and it often manifests in early childhood settings like Head Start and preschool programs. There is significant potential for early intervention and partnerships between these settings, as well as primary care, and the mental health community. [xxxiv]

Race, Ethnicity and Geographical Findings and Recommendations

Finding:
Although their numbers are small (.1 percent of the population), children who are American Indian/ Alaskan Native had the highest rate of use for Inpatient Psychiatric Hospital Services in CAMHD Medicaid. In Medicaid Managed Care Services, children who are Native Hawaiian/Pacific Islander had the highest rate of children using Hospital-Based Residential (Inpatient Psychiatric Hospital) Services.

Recommendation:
CAMHD, Med-QUEST and the MCOs may want to consider how best to serve children and youth without necessitating inpatient hospitalization, including whether more culturally relevant approaches might improve quality and cost outcomes for youth.

Finding:
Certain populations seem to have relatively high use of out-of-home services and relatively low use of home- and community-based services. For example, White children used more Out-of-State Residential Treatment through CAMHD and had lower used of Intensive In-Home Services. Similarly, children on the Island of Maui had a relatively low rate of use for key home- and community-based services, such as intensive in-home services and Respite, and relatively higher rates of use for more restrictive services, such as Hospital-Based Residential (Inpatient Psychiatric Hospitalization) and Community-Based Residential Treatment.

Recommendation:
CAMHD may want to explore more closely whether there is a correlation between a population's relatively high rate of use for a restrictive service and low rate of use for key home- and community-based services.

Finding:
Children on the Island of Hawai'i are overrepresented among service recipients in CAMHD Medicaid, Managed Care, and in foster care. They have the highest overall mean expense for CAMHD Medicaid services. The CWS data indicate that children on the Island of Hawai'i are removed at a higher rate than children on the other Islands. Their representation among service users also is disproportionately high. For example, children on the Island of Hawai'i represent half (50%) of all children using Transitional Family Homes paid for by CWS, which is disproportionately high relative to their 31% representation in foster care.

Recommendation:
The Island of Hawai'i has the highest child poverty rate of all the Islands (18.8%).[xxxv] Inadequate income, more than any other variable, is associated with removal in child welfare. These data may help to put into context the higher use of behavioral health services by children on the Island of Hawai'i relative to other children, which was found with respect to both CWS- and Medicaid-financed behavioral health services. The data could be used to support Hawai'i stakeholders to develop or expand focused, cross-agency strategies that link at-risk children and families both to services and to concrete supports, including those that address their social determinants of health such as housing, child care, employment, food, and transportation. For example, *CWS, Med-QUEST, CAMHD, ADAD, and TANF could use collaborative financing focused on children and their families on the Island of Hawai'i who are at risk for foster care placement, who could benefit from coordinated behavioral health services and concrete supports.*

Quality Related to Specific Services

Findings: This analysis did not examine the quality of services provided. However, the following were observed:

- The average expenditure for SUD outpatient services provided through Managed Care is very low ($7 per youth served). There could be an issue with these data.
- The average expenditure for Other Services (inpatient-related claims) paid for through Managed Care is high ($43,247); stakeholders should examine more closely what is being provided through Other Services.
- Most children receive individual therapy through Managed Care, including children, ages 0-5. Stakeholders may want to examine more closely the quality of individual therapy, especially for young children, where interventions such as family therapy may be warranted.
- Group therapy provided through Managed Care has a relatively high average expenditure of $11,383. Stakeholders may want to examine the quality of group therapy and factors driving its relatively high cost.
- Over 90% of children served by CAMHD Medicaid dollars receive Care Coordination. While a much smaller number of children receive Case Management through managed care, the average expenditure for managed care Case Management is very low ($81 per child). Stakeholders may

want to examine more closely the quality of both Care Coordination and Case Management. (See notes above regarding Care Coordination and Case Management.)

Recommendations:
These data raise questions about certain services that stakeholders may want to explore further. Stakeholders may want to understand better the quality and associated outcomes of these services and whether the amount, intensity, and duration of the services aligns with expectations. As noted, stakeholders may want to examine more closely the quality and associated outcomes of group therapy, particularly in the absence of a particular evidenced-based or -informed model, as well as individual therapy for young children (where family therapy may be warranted). Some of these findings may represent an error with data rather than a concern with service access or provision.

Clarifying Data

Finding:
The CAMHD data submitted by Med-QUEST differed from the Medicaid data submitted by CAMHD, apparently because CAMHD included several services, such as care coordination, which are not captured in the Med-QUEST claims data. However, of the services included in both the Med-Quest and CAMHD submissions, there were differences in the number of youth reported as receiving services and, thus, differences in expenditures.

Recommendation:
It would be advisable for stakeholders to explore more fully why differences exist in the Med-QUEST-submitted CAMHD data and the CAMHD-submitted data.

Education and Behavioral Health

Finding:
The limited data suggest that there is a demand for behavioral health services in schools, but the funding has been stagnant and there are challenges with disciplinary action related to children with disabilities.

Recommendations:
- **Continue strengthening data collection and analysis.** At present, DoE has published limited data on students' use of behavioral health services. We recommend that DOE continue developing its data collection and analysis within its existing programs, including SBBH and IDEA. Data on program use should be collected and disaggregated by age, grade, sex, race, island of residence, and special education status. The data should include total counts of services provided and service counts by unique individuals to ascertain whether a subset of children and youth are overrepresented or underrepresented in service delivery.
- **Continue addressing disparities in school discipline.** An examination of federal OCR data shows racial and ethnic and disability disparities in exclusionary school discipline and referrals to law enforcement.
- **Identify opportunities to increase funding to support rising costs associated with staff recruitment and retention, particularly to align with increased demand for support.**

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