CCMU: Data and Sustainability Webinar

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Webinar Overview

Data and Sustainability: Quality Improvement Approaches for MRSS

- **Kayla Theriault, MPH and Kellie Randall, PhD**

CCMU Data

- **AHP**

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Data and Sustainability: Quality Improvement Approaches for MRSS

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Meet the Presenters

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Agenda

- Connecticut's Story and the Role of Data
- Developing the Right Metrics
- Using Metrics – CQI Activities
- Examples from CT Practice
  - Access
  - Quality
  - Outcomes

Mobile Response and Stabilization Services (MRSS)

- Mobile Response and Stabilization Services (MRSS) is a rapid response, home- and community-based crisis intervention model customized to meet the developmental needs of children, youth, young adults, and their families.
- MRSS is designed to:
  - Work with the youth- and family- serving systems with shared population responsibility such as schools, courts, child welfare, early intervention, and juvenile justice.
  - Engage informal supports within the care planning process.
  - Intercede before a crisis gets to the point where youth and families feel the need to turn to more restrictive and less desirable options.

Innovations Institute, University of Connecticut School of Social Work. (2022). Mobile Response & Stabilization Services National Best Practices. In Partnership with Child Health and Development Institute.

CT's Story and the Role of Data

Where We Were

- ~50% of calls did not receive a mobile response
- Limited hours & capacity
- Inconsistent performance
- Variability in call definition and response
- Increases in ED visits, flat MRSS volume

- **Data Challenges**

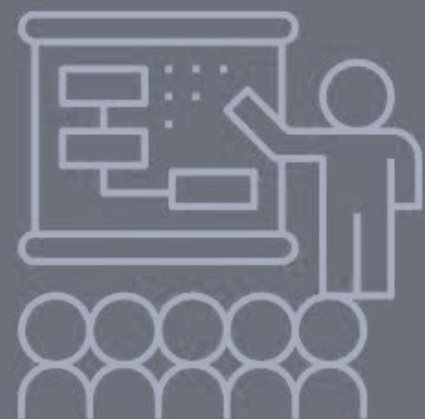
Re-Designing

- 6 service areas
- Longer hours
- Increased capacity
- Improved rates
- Centralized call center
- Establishment of the Performance Improvement Center

Performance Improvement Center

Data Analysis & Reporting

Standardized Training



Consultation & Technical Assistance

Successes

Dramatic improvements in service access, quality and outcomes since the re-design and creation of the Performance Improvement Center

- More children and families access mobile crisis services.
- Mobile Crisis Intervention Services are highly responsive.
- Children improve their behaviors and functioning.
- Mobile Crisis Intervention Services clinicians are well-trained.

Fidelity

Are you implementing the service as specified?

Quality

Are services delivered in a way that maximizes likelihood of positive outcomes?

Am I following the directions?

vs

Am I going in the right direction?

Key Quality Elements of MRSS

Ability to Gather Data

The existence or establishment of information technology (IT) infrastructure and an adequate data system that is accessible to both MRSS access point staff and MRSS providers

Guidelines for Clear and Consistent Data

Defined data elements, supported by a data dictionary, to promote consistency in data entry

Ability to Use Data

Data that can be extracted, analyzed, and reported (in a de-identified manner) to youth and families, advocates, schools, community members, providers, legislators, and public and private funders

Developing the Right Metrics

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MRSS Metrics

The act of measuring something changes how you do it:

- How will you know if you succeed?
- How will you demonstrate it?

MRSS Data is needed at multiple levels

Child & Family | **Program** | **System**

Provide information on the service and ***identify targets for Continuous Quality Improvement (CQI):***

- Access, Utilization, and Service Reach
- Service Quality and Provider Performance Measures
- Outcomes (individual/family and system-level)

All targets for CQI should be viewed from an ***equity*** lens

Tying it Back to MRSS Goals

Family/Youth-Level Goals

- Increase youth and family safety across settings
- Increase caretakers' abilities to support their children's behavioral health needs
- Keep families together in their homes and communities
- Intervene and stabilize the presenting behavioral health crisis (as defined by the youth and family) at home prior to escalation to acute crisis
- Reduce acuity of presenting symptoms such as anxiety, depression, suicidality, conduct problems, and other clinical concerns
- Maintain youth in the least restrictive setting appropriate for their clinical need
- Linkage to natural supports and clinically appropriate services

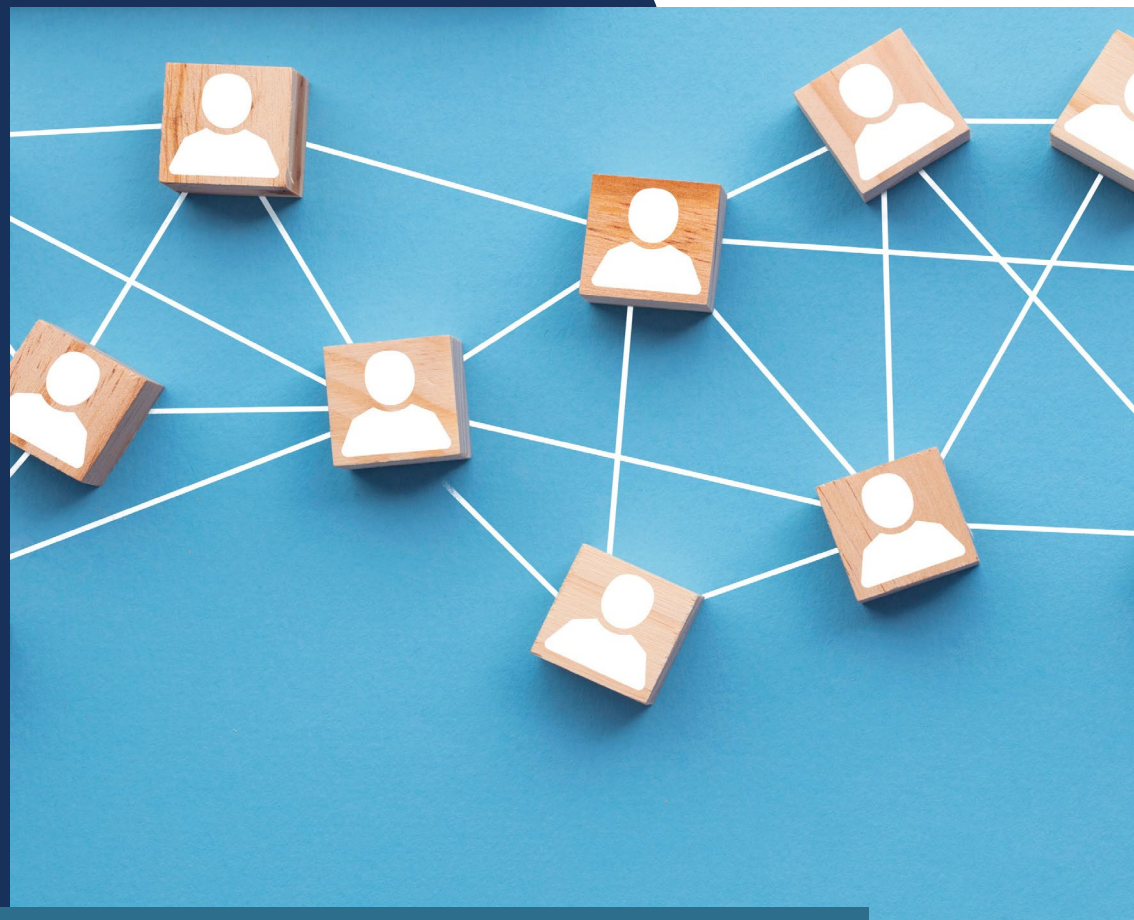
Tying it Back to MRSS Goals

System-Level Goals

- Increase community awareness of MRSS among key referrers and system stakeholders (e.g., families, schools, police)
- Provide a highly mobile, accessible, and rapid behavioral health stabilization response with follow-up services as appropriate
- Ensure early identification of and intervention for youth with behavioral health concerns
- Improve equity and reduce disparities in access, service quality, and outcomes
- Reduce utilization and associated costs of ED and inpatient hospitalizations
- Reduce residential service utilization, foster care placement, and other out-of-home placements
- Decrease the rates of suspensions, expulsions, arrests, and juvenile justice involvement for youth with emotional and behavioral health challenges
- Promote increased utilization of home, school, and community-based services

What are the Elements of High-Quality MRSS?

- High utilization
- High rate of face-to-face responses in the community
- Rapid response times
- Youth and family involvement in safety planning
- Follow-up and stabilization services
- Connection to services



Ultimate Goal: **Access to high-quality community-based care and diversion from ED, inpatient, residential, arrest, etc.**


Equity
Access
Who is using the service?
How often is the service used?
Are services reaching everyone who needs them?
Quality
Are services delivered in a way that maximizes the likelihood of improved outcomes?
Are all groups receiving high quality services?
Outcomes
Are families and children better off?
Are all groups benefitting from the service?

Data Collection – Unique MRSS Indicators

- Initial Call Data
- Volume and Service Reach Rates
- Youth & Family Characteristics
- Clinical Characteristics
- Clinical Outcomes
- Episode Characteristics
- Family and Stakeholder Engagement

Using Metrics – CQI Activities

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Reporting should...

Be Timely & Actionable: Near-real-time data collection and reporting

Compare utilization, performance, and outcome data between regions

Drive both **PDCA** and **PDSA** cycles

- Short-term/Monthly Dashboards for **PDCA**: Are there changes?
- Quarterly/Annual Reporting for **PDSA**: Did the changes have an impact?

The Role of Public-Facing Data

Transparency, a culture of openness, and a shared vision for providing a high-quality service across all providers

- Promotes provider collaboration and mutual support
  - Ability to troubleshoot common implementation challenges
  - Opportunities to learn from each other's successes

Sharing de-identified aggregate or provider-specific data with legislators, payors, families, and the public

- Promoting accountability to high-quality service delivery
- Demonstrating trends and the impact on meeting goals
- Using MRSS data in conjunction with other available data to identify system-wide trends – allows multiple sectors to collaborate on solutions

Regularly Reviewing Results for Performance Improvement

Quarterly review of results with providers

- Consultation and technical assistance
- Centered around best practices
- Co-create goals for performance improvement
- Focus on strengths

Plan-Do-Check-Act cycles

- Identify challenges
- Develop measurable action steps
- Implement rapid changes
- Evaluate progress

Using Data for System Development

Scenario	Potential Reason	System need
Statewide benchmarks consistently not being met with respect to length of stay or connection to care	Lack of availability/insufficient capacity of needed services	System may need expanded behavioral health services in other areas
Timely mobile response benchmarks are not being met	Staffing shortages	Providers and system need to collaborate to identify immediate strategies for optimization of existing resources and development of long-term workforce development plan
MRSS data shows increased youth homelessness, family housing instability	Gap in supports/services	Additional system partnerships

Provider – Initiated Performance Improvement

- CQI is not just the role of the state, county, or other contract-managing entity
- Providers should have the ability to extract and analyze their own data
- Providers should be empowered to set and monitor their own goals for performance improvement

Provider-Initiated Quality Improvement: Example

Agency:	
Fiscal Year:	**Quarter:** ☒ Q1 (July – September) ☐ Q2 (October to December) ☐ Q3 (January to March) ☐ Q4 (April to June)
Performance Goal 1:	To increase the number of collected Parent-completed Ohio's (outcome measure)
Rationale:	To be able to see how families are viewing the clinical intervention and noting progress made by client.

Planned Activities:	**Measurement Strategy:**
1) Clinicians will obtain the Parent Ohio scales at admission and discharge for families that participate in the mobile assessment or receive follow up services and meet the criteria of being open for more than 5 days. 2) Clinicians will complete the Worker Ohio at admission and Discharge and enter all the necessary data into our electronic health record within 24hours. 3) Managers will utilize reports in data system to ensure that collected data is entered into data system. 4) MRSS management will develop incentive plan to include the collection of Ohio's at admission and discharge.	1) Managers will ensure that all outcome measures have been collected and entered into data system before closing a case. 2) Supervision will include the discussion of collecting Ohio's. Strategies will be explored as to how to increase collection. 3) Each clinician will be responsible for collecting 10% of Ohio's at discharge.

Results for Quarter:	☐ Goal Achieved/Comments: ☒ Positive Progress Towards Goal/Comments: ☐ No Positive Progress/Comments: Revised from last quarter.
Optional - Narrative Update for the Goal:	**We continue to see an increase in collection of discharge parent Ohio's in comparison to the same quarter last year, although number collected is lower than last quarters collected Ohio's it is still an improvement. Reports from data system and internal reports from EHR continue to be used to monitor increased collection. On July 1st we began to use a staff member in our FSS role to enter date into data system for the clinicians this will hopefully help with accuracy and timeliness of data entry.**

Informing Training and Professional Development

Data can be regularly examined to identify training needs.

- What are the characteristics of the youth and families served?
- Are staff adequately prepared to work with these populations?
- What trainings may need to be added/enhanced?
    - Address specific clinical needs (e.g., substance use, eating disorders, problem sexual behavior)
    - Increase competencies in working with specific populations (e.g., youth who are LGBTQ+, who have intellectual or developmental disabilities, or who refuse to go to school).

Comparing data to expected prevalence rates can identify areas of under-identification when rates are lower than expected.

- E.g., low reported rates of substance use compared to national averages might mean MRSS staff need additional training on substance use screening, assessment, and intervention.

Using Data to Inform Practice

Findings

Questions

?

02

03

01

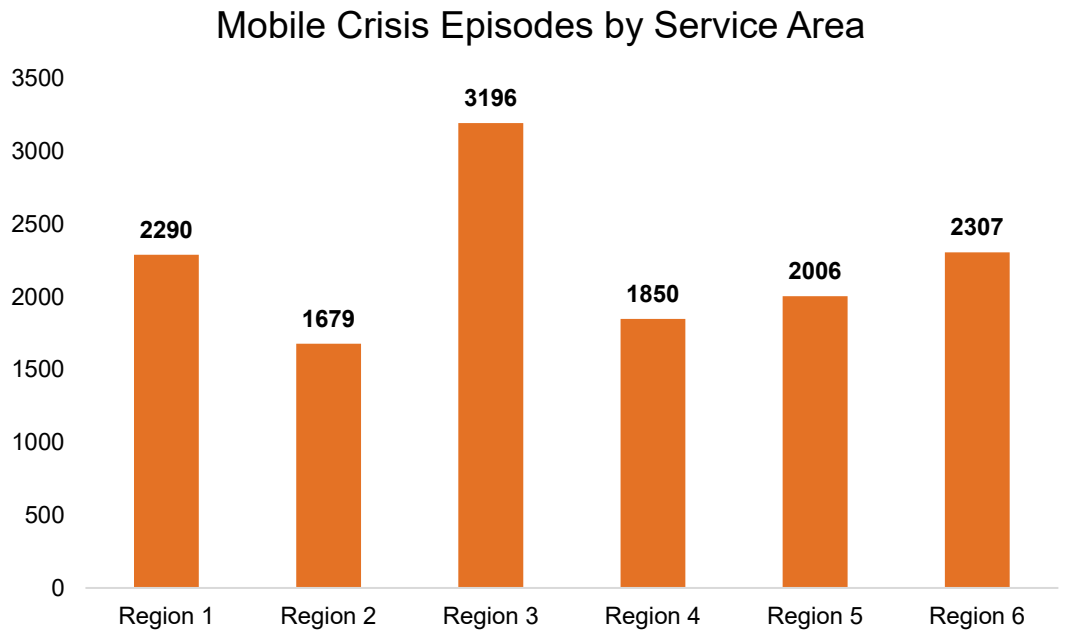
Observation

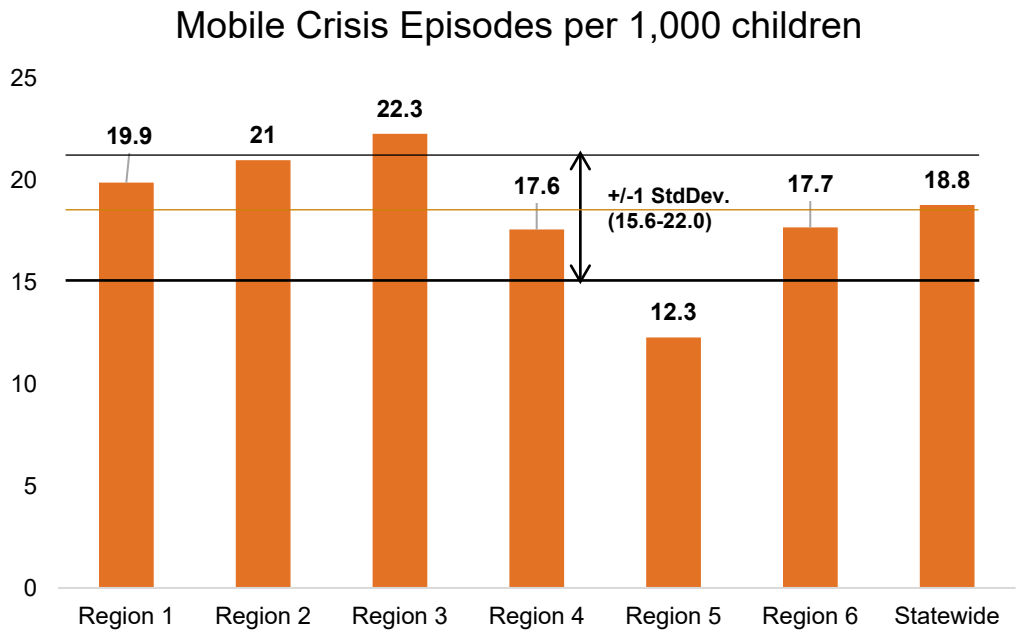
Call volume is trending lower than anticipated/desired

04

Actions

Is the Trend Statewide or Isolated to a Specific Region?





Data Elements Used: Number of Episodes, Region, Regional Child Population

Finding: Though there are other regions with lower volume, Region 5 is underserving based on their population – their service reach rate is more than one standard deviation below the statewide rate.

Possible Actions?

Observation

Call volume is trending lower than anticipated/ desired

Question

Is the trend statewide, or isolated to a specific region?

Finding

A certain region is seeing low utilization of MRSS relative to their population

Actions

Work with the region to identify potential underserved groups and create an outreach strategy.

Think beyond awareness. Are there cultural or historical factors at play? Institutional biases? Messaging is key to begin addressing these issues.

Build relationships with local schools and hospitals not only to encourage them to use MRSS, but to get more context on the community.

Examples from CT Practice

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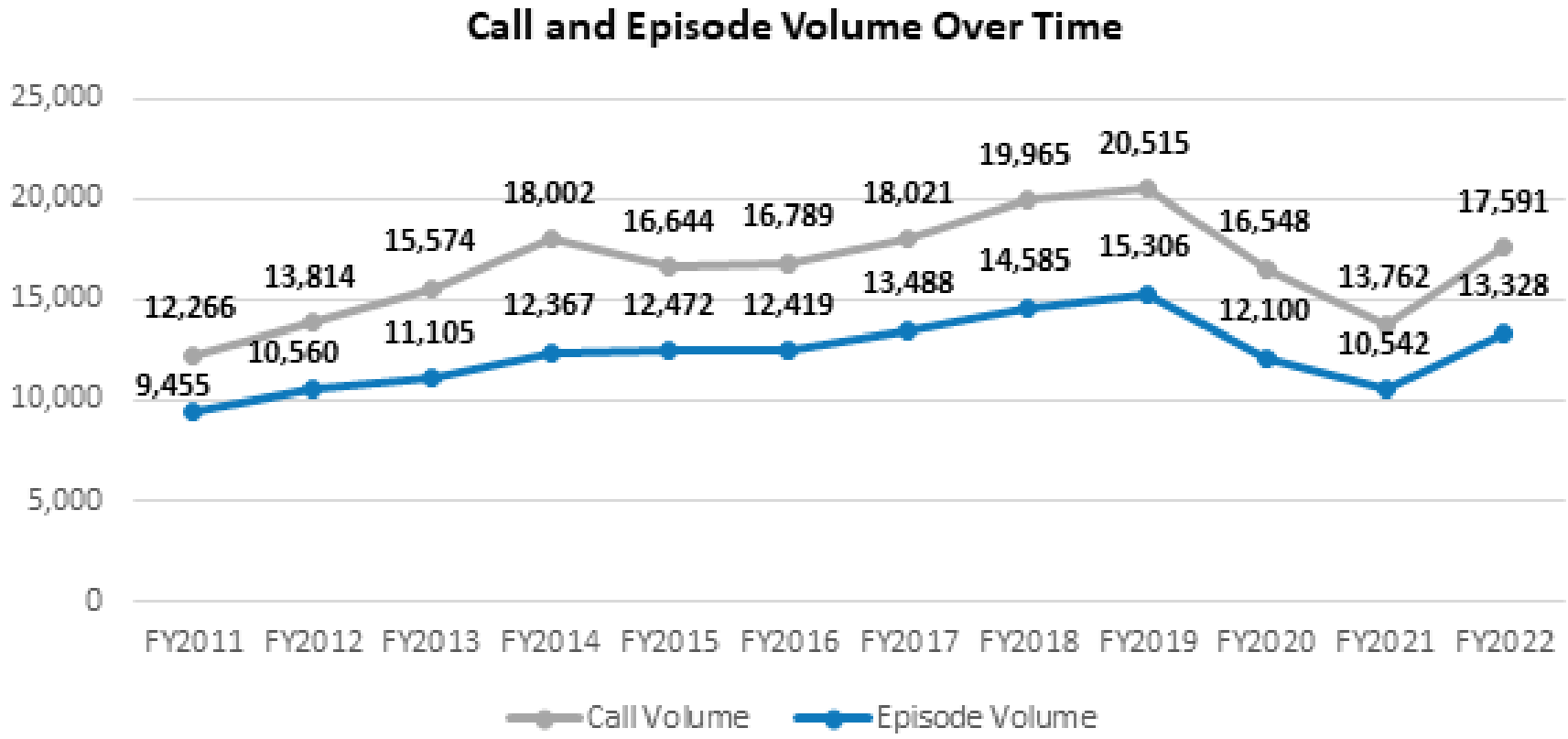
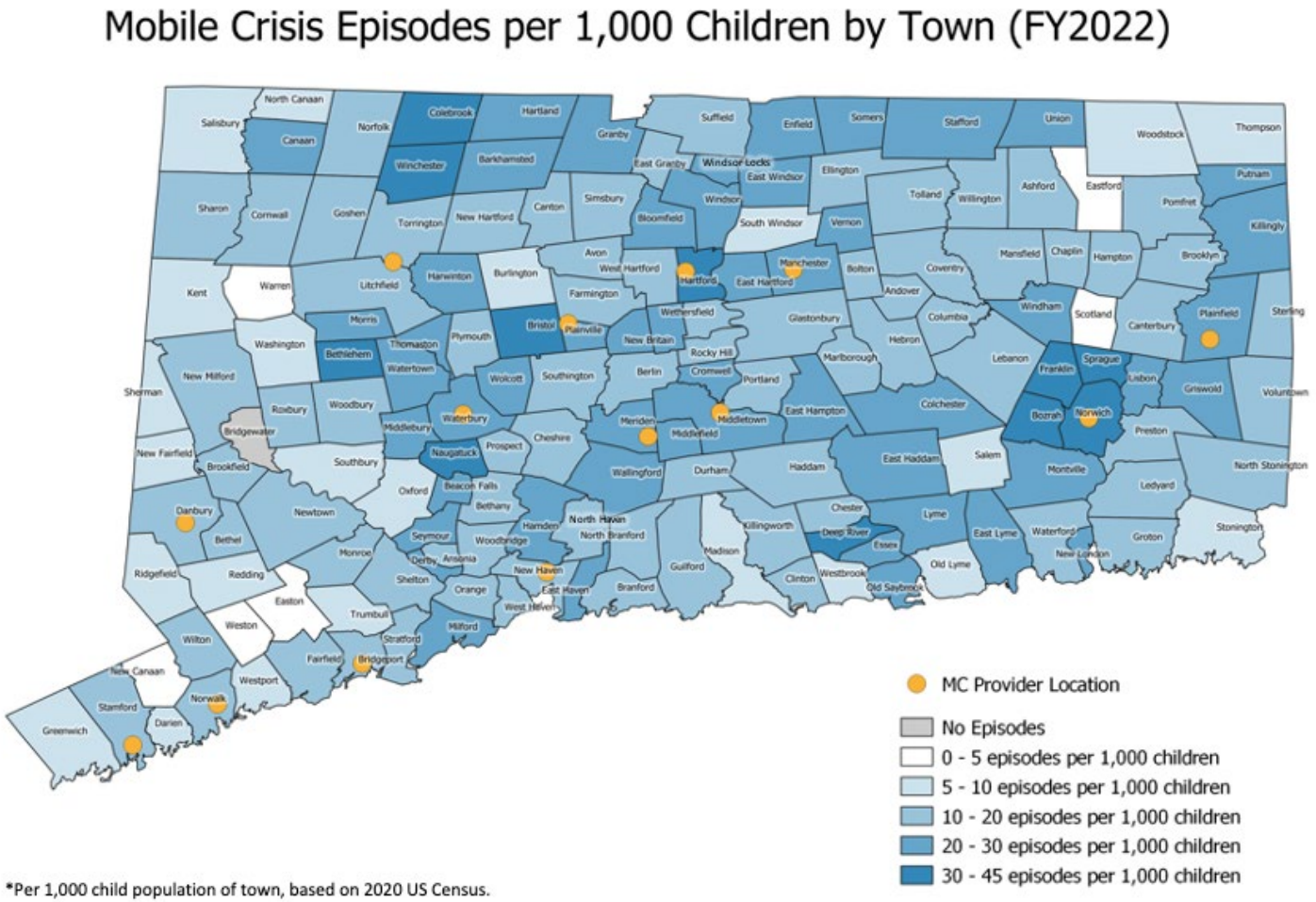
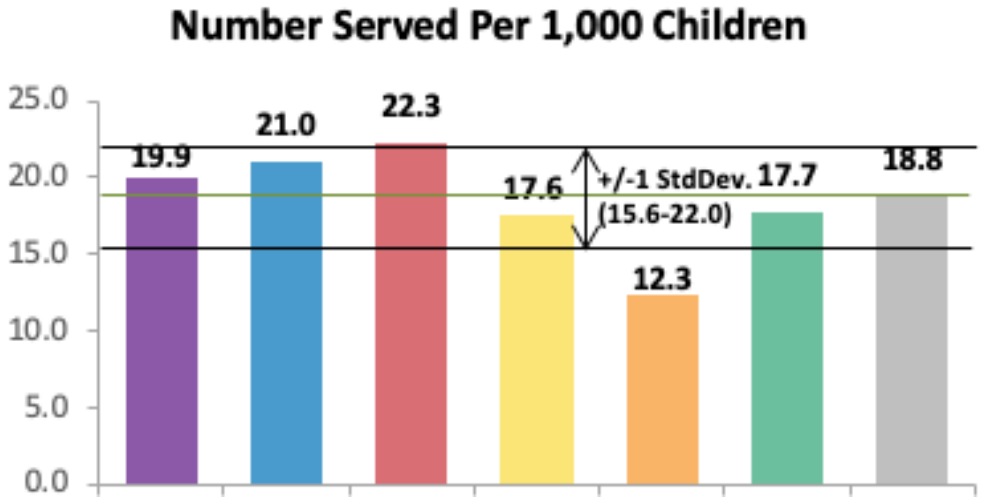
Access: How Many Youth is Mobile Crisis Serving?



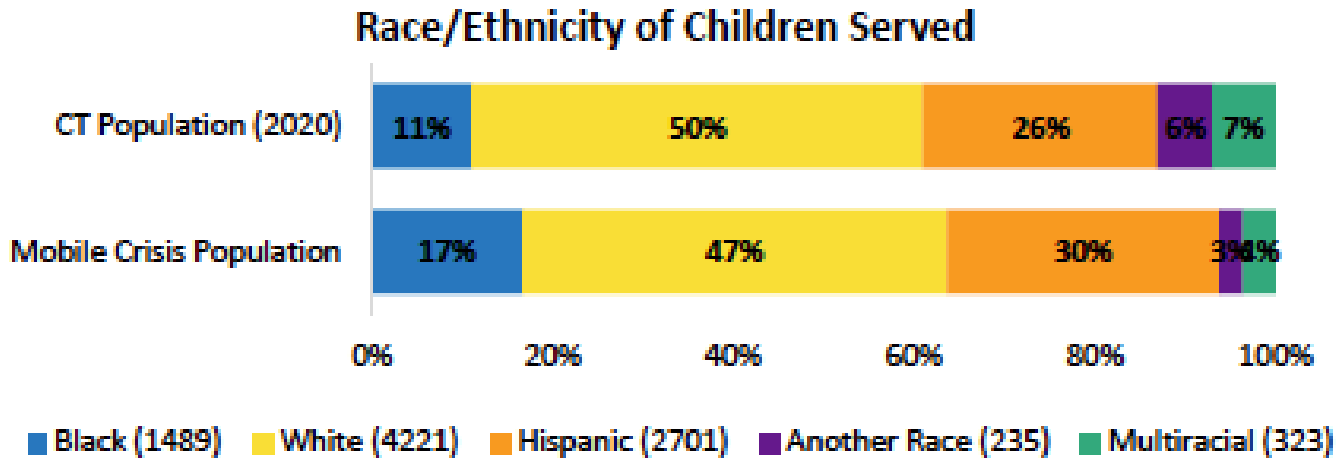
Access: Are there regional differences in volume?

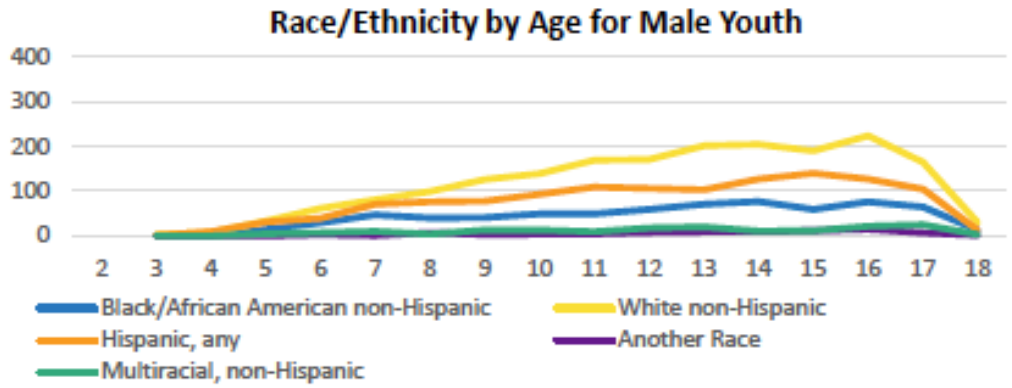


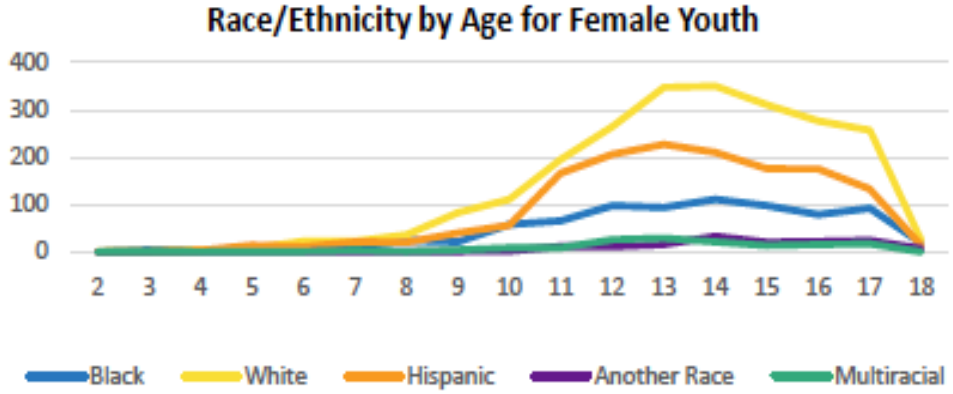
*Per 1,000 child population of town, based on 2020 US Census.



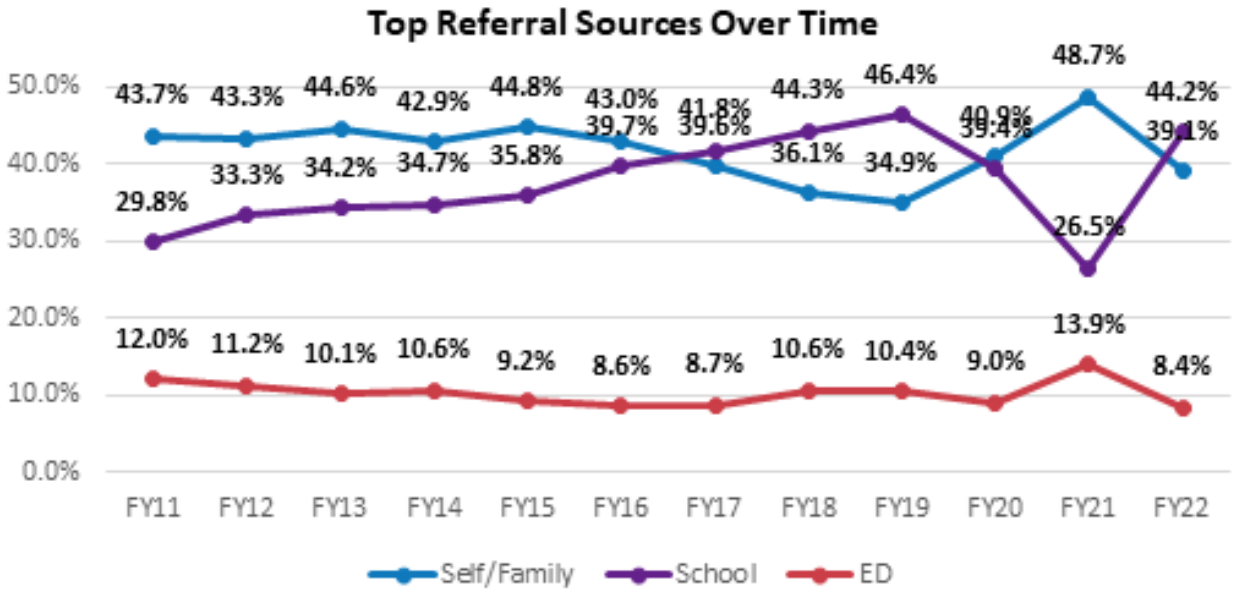
Access and Equity: Who is using Mobile Crisis?

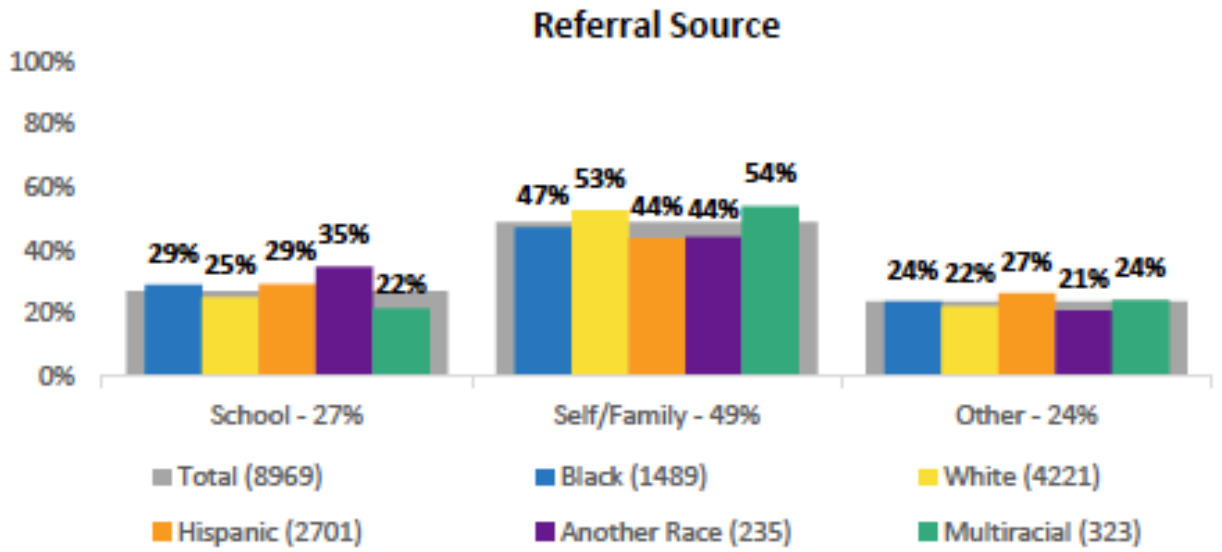




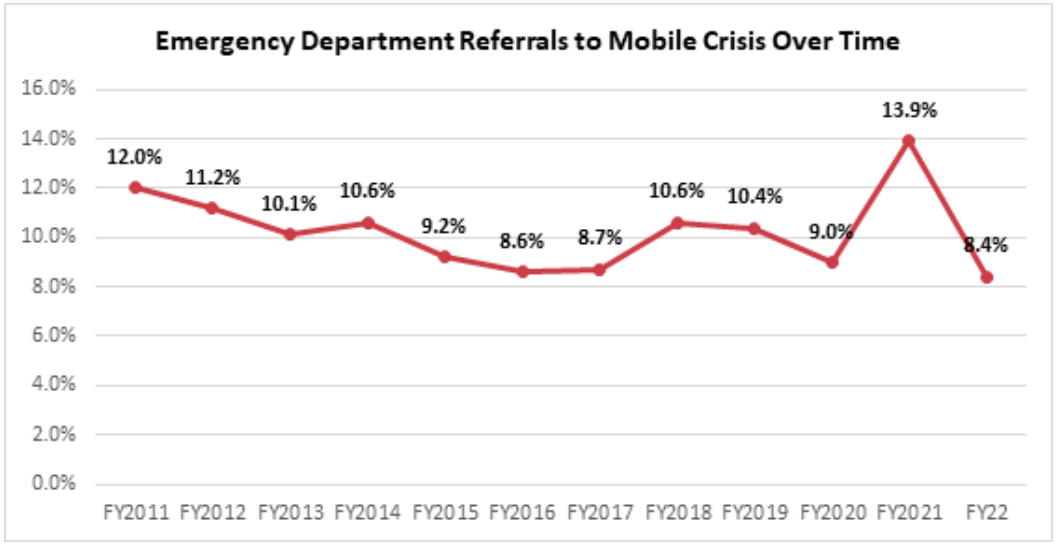


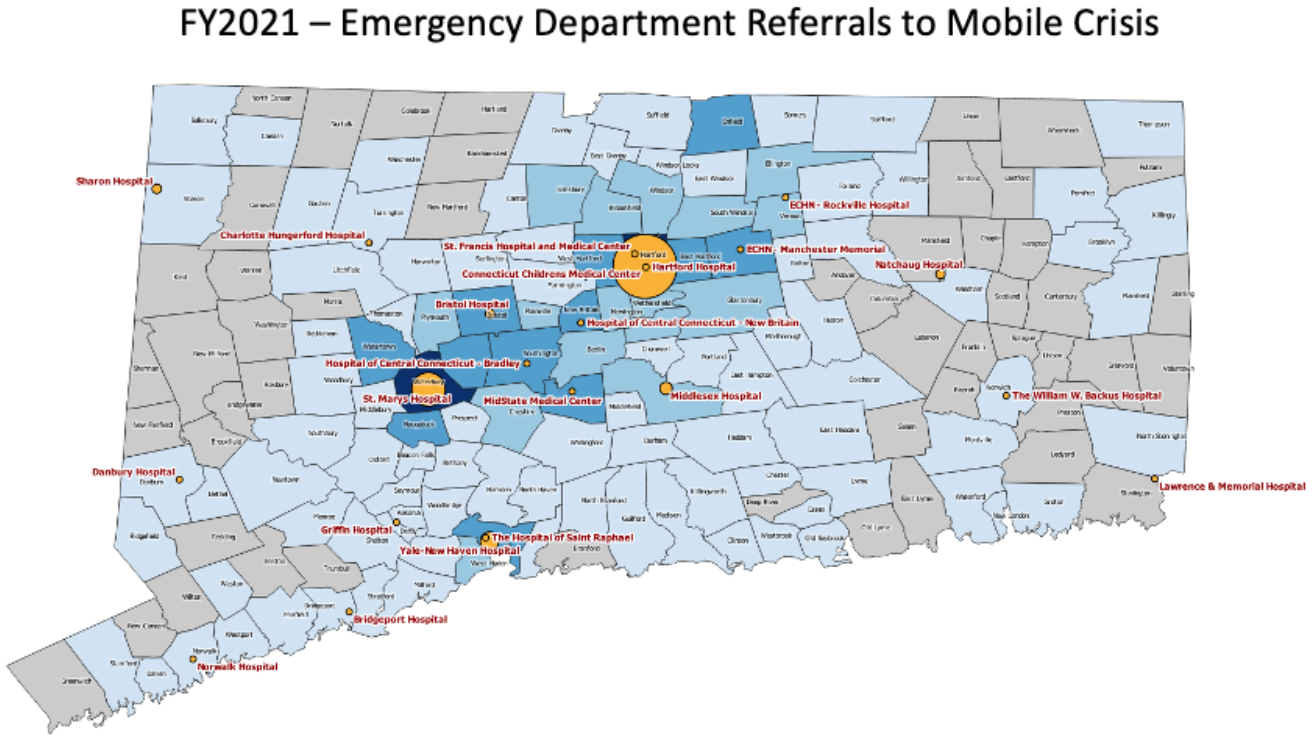
Access and Equity: Who is referring youth to Mobile Crisis?





Example: ED Referrals



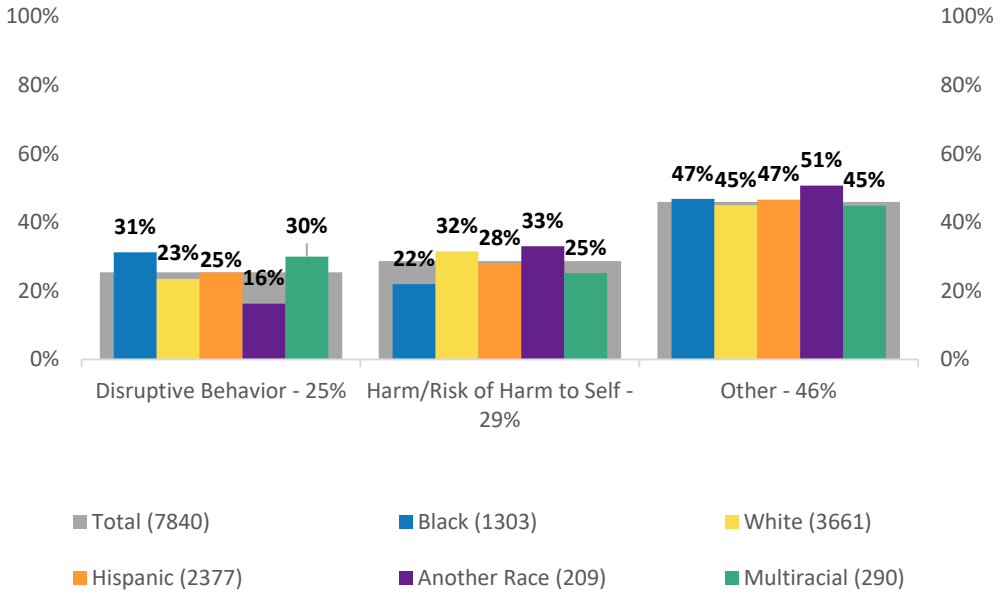


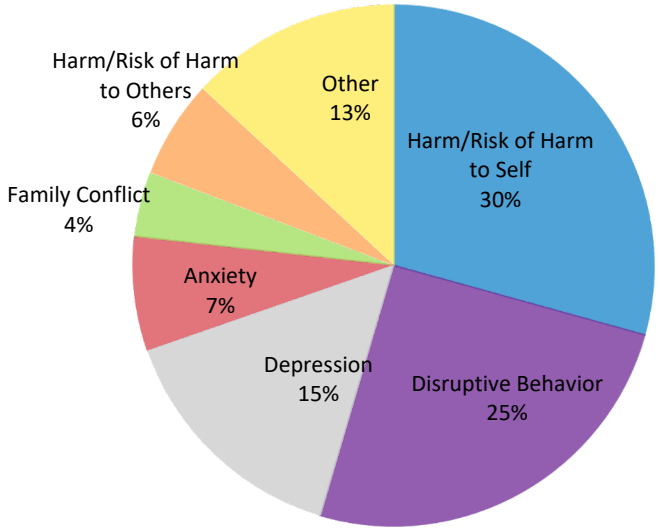
Without ED referral data directly from schools and EDs, how can we compare school utilization of Mobile Crisis to school utilization of EDs?

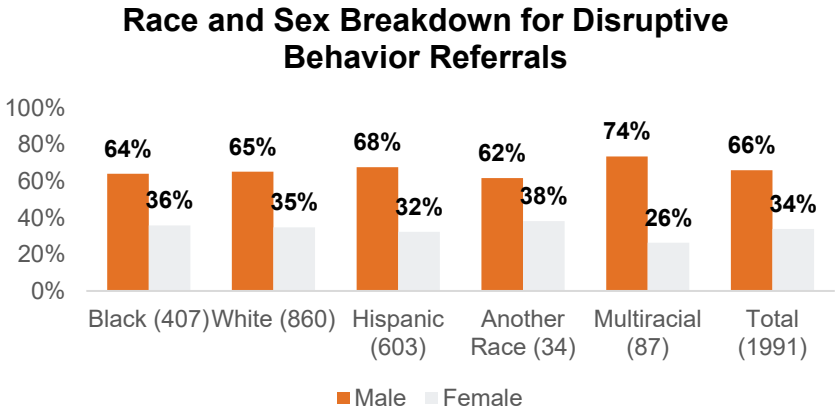
New Data Elements:

- When ED calls MCIS, did a school send to the ED?
- If so, what school?

Access and Equity: Why are youth being referred to Mobile Crisis?







There are proportional differences among racial and ethnic groups across common presenting problems. For instance, 31% of Black children and 30% of Multiracial children present with disruptive behavior, compared with 23% of White children and 16% of children of another race.

Across racial/ethnic groups, the majority of disruptive behavior referrals were for males.

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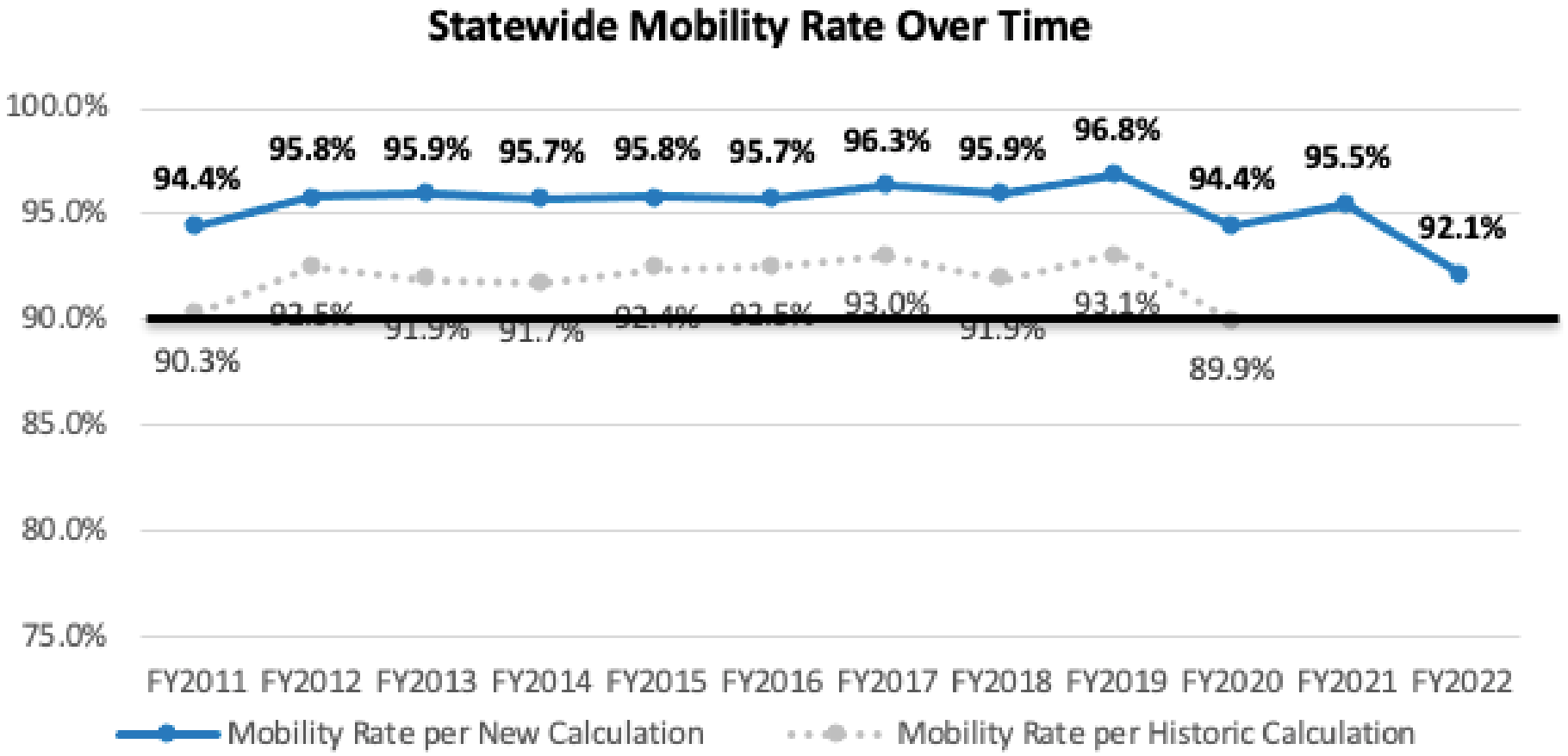
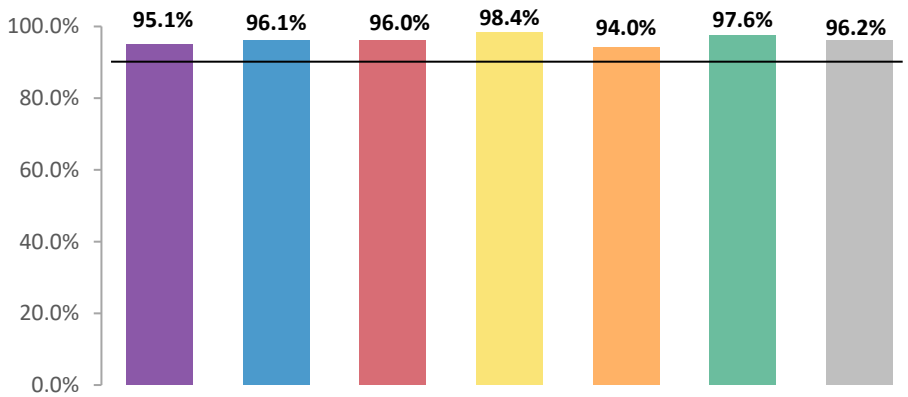
Quality: Are youth and families receiving face-to-face responses?

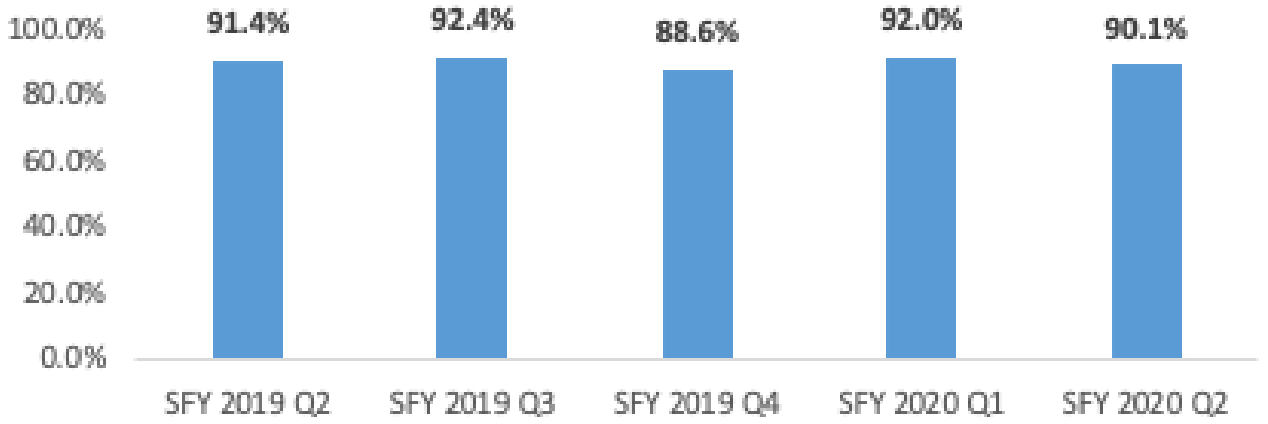


Quality: Mobility- Example Reports

Monthly: Mobility Rate by Region



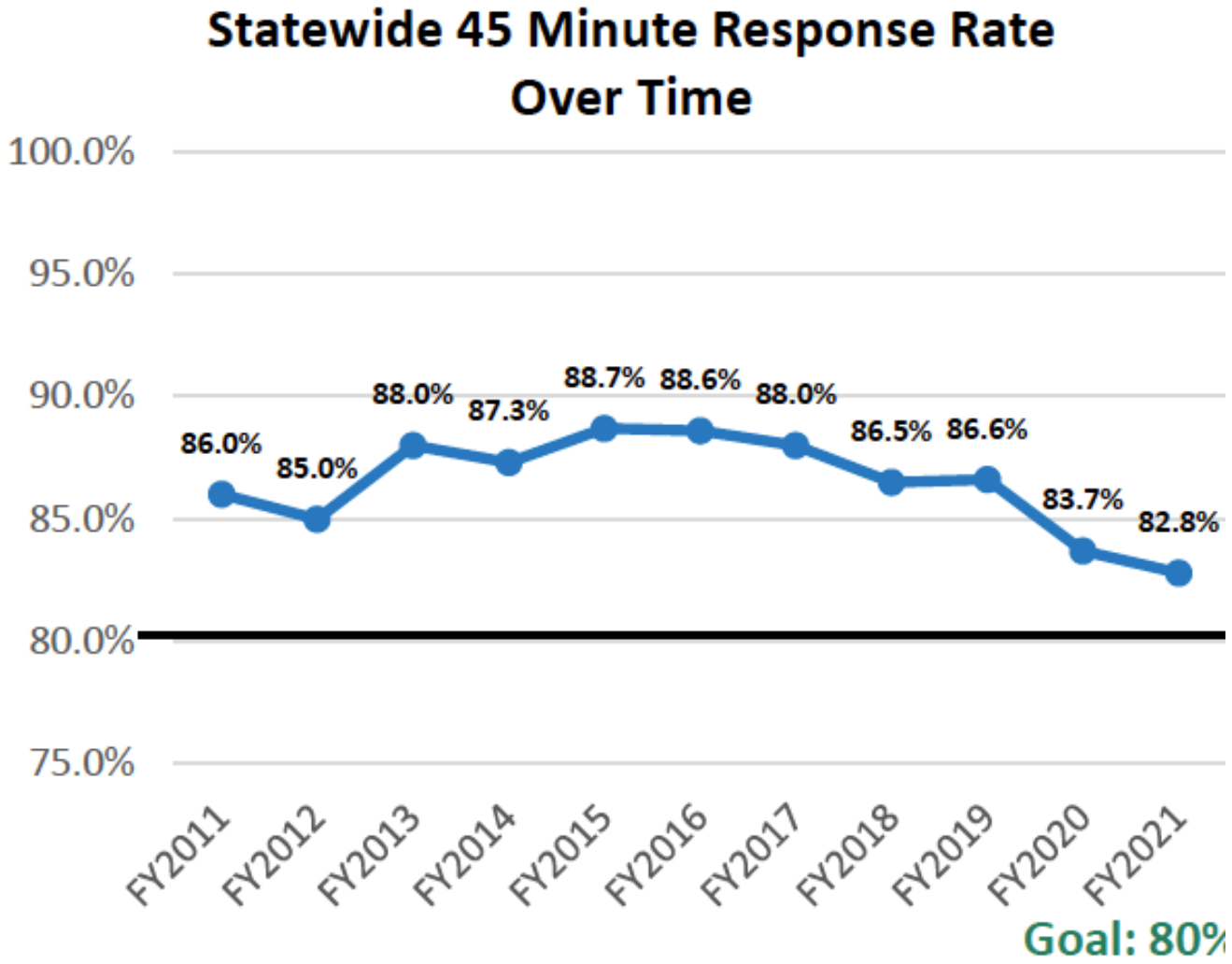
Quarterly: Mobility Rate for Individual Provider Over Time



How we use the data:

- Monitored on a monthly basis, show across all regions and providers
- On a quarterly level, a close look at an individual provider's trend over time to understand the story the data is telling and identify any needed actions
- Let providers tell the story behind the data

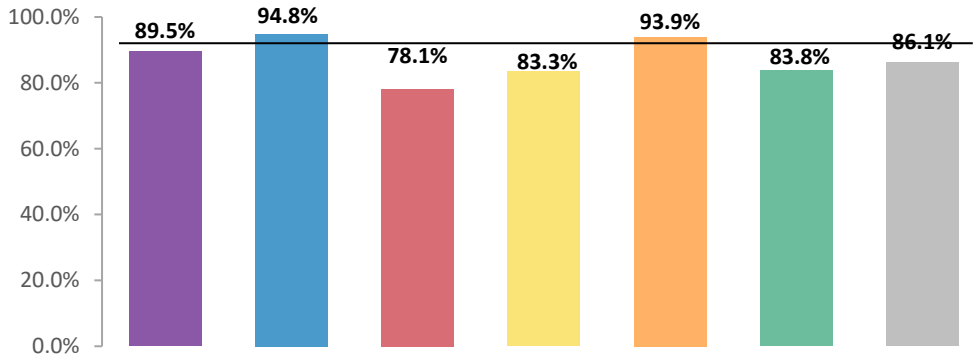
Quality: Are youth and families receiving timely responses?



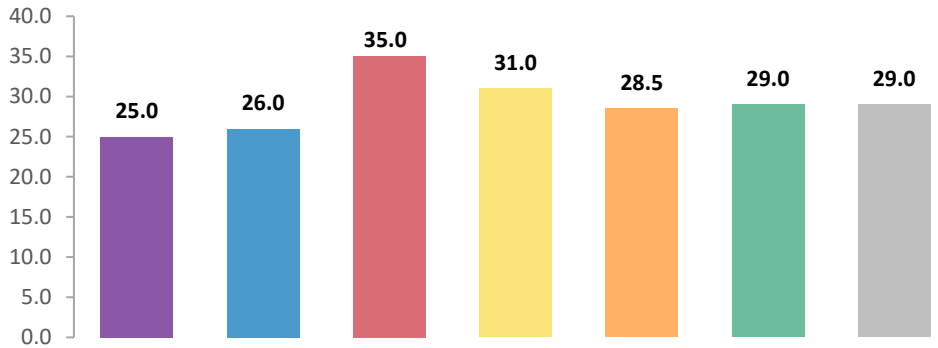
Quality: Mobility- Example Reports

Monthly

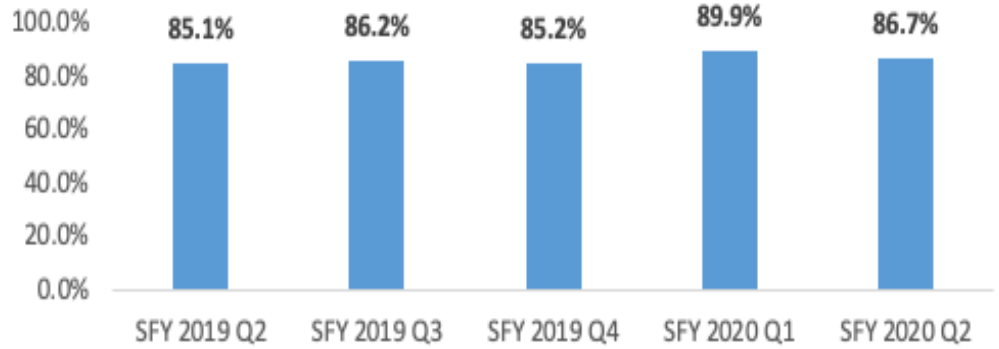
Mobile Episodes with a Response Time Under 45 Minutes, by Service Area



Median Mobile Response Time in Minutes, by Service Area



Quarterly: Responses under 45 Minutes for Individual Provider Over Time

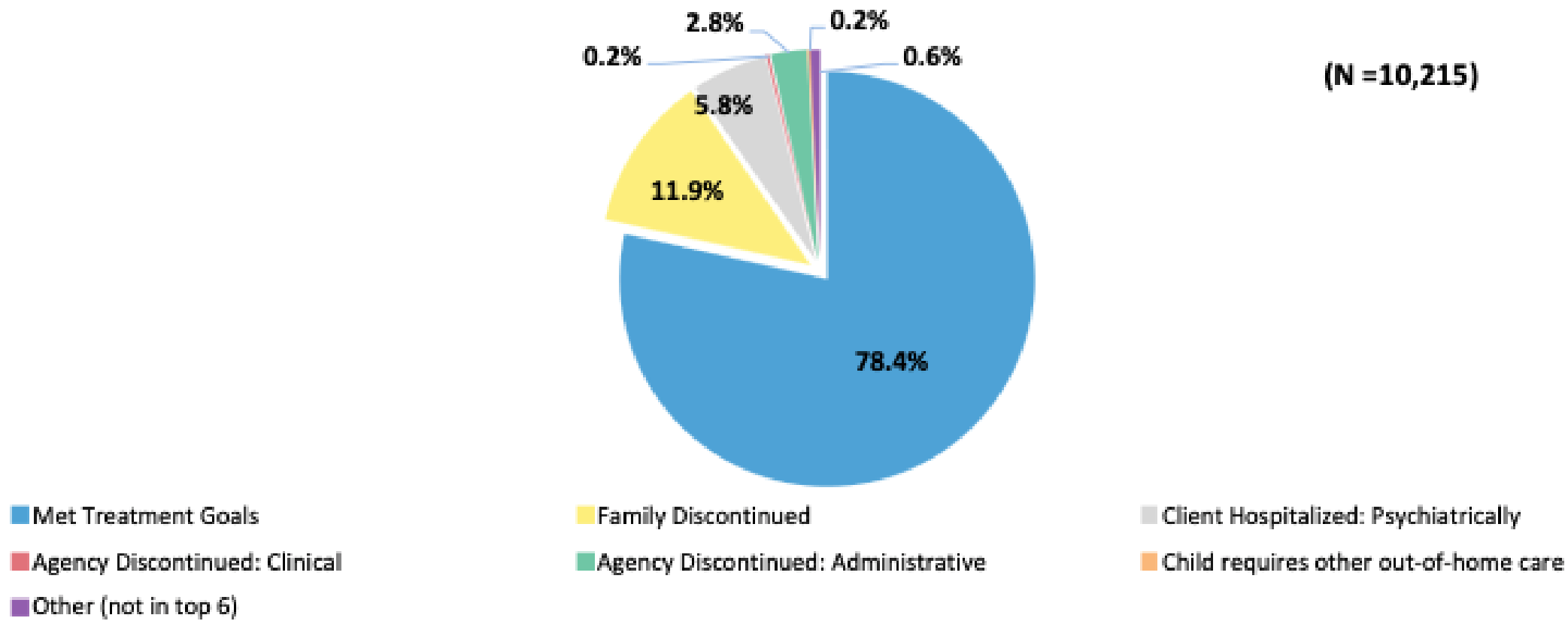


How we use the data:

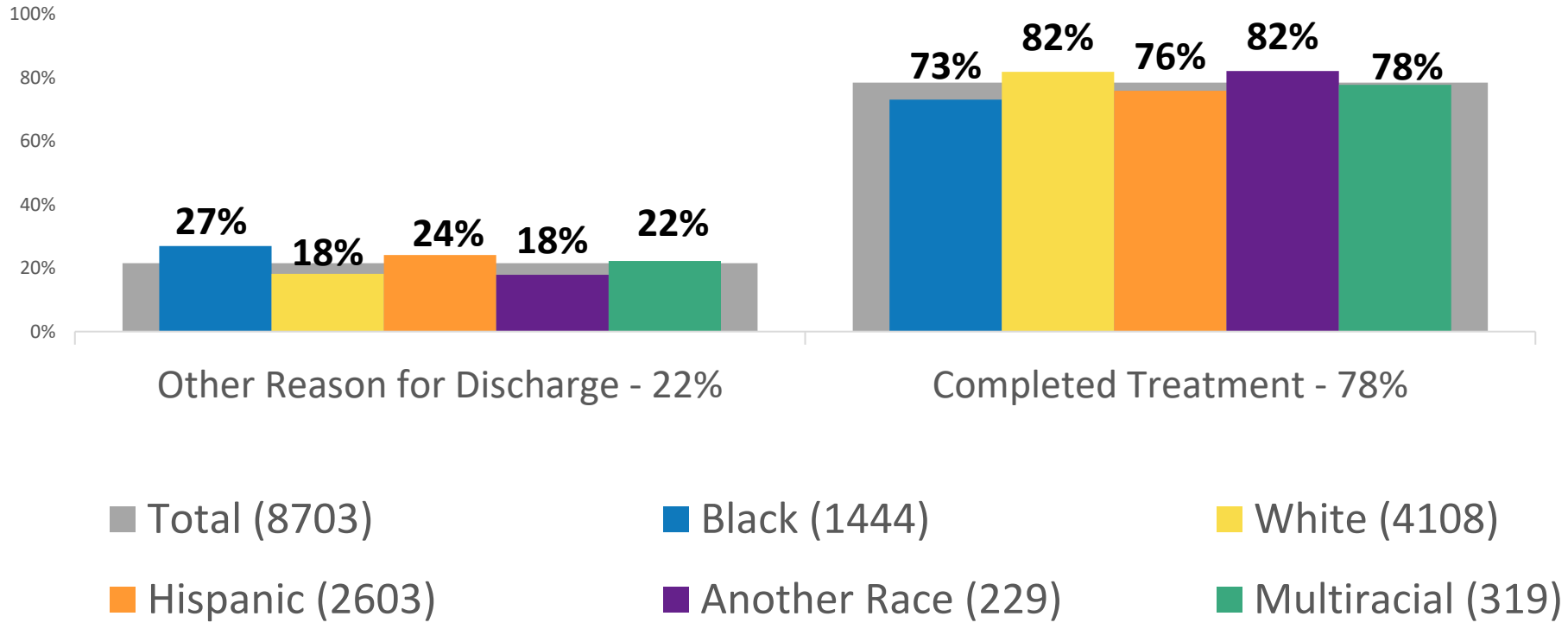
- Monitored on a monthly basis for % meeting benchmark and median response time
- On a quarterly level, a close look at an individual provider's trend over time to understand the story the data is telling and identify any needed actions

Outcomes: Why are youth discharged from Mobile Crisis?

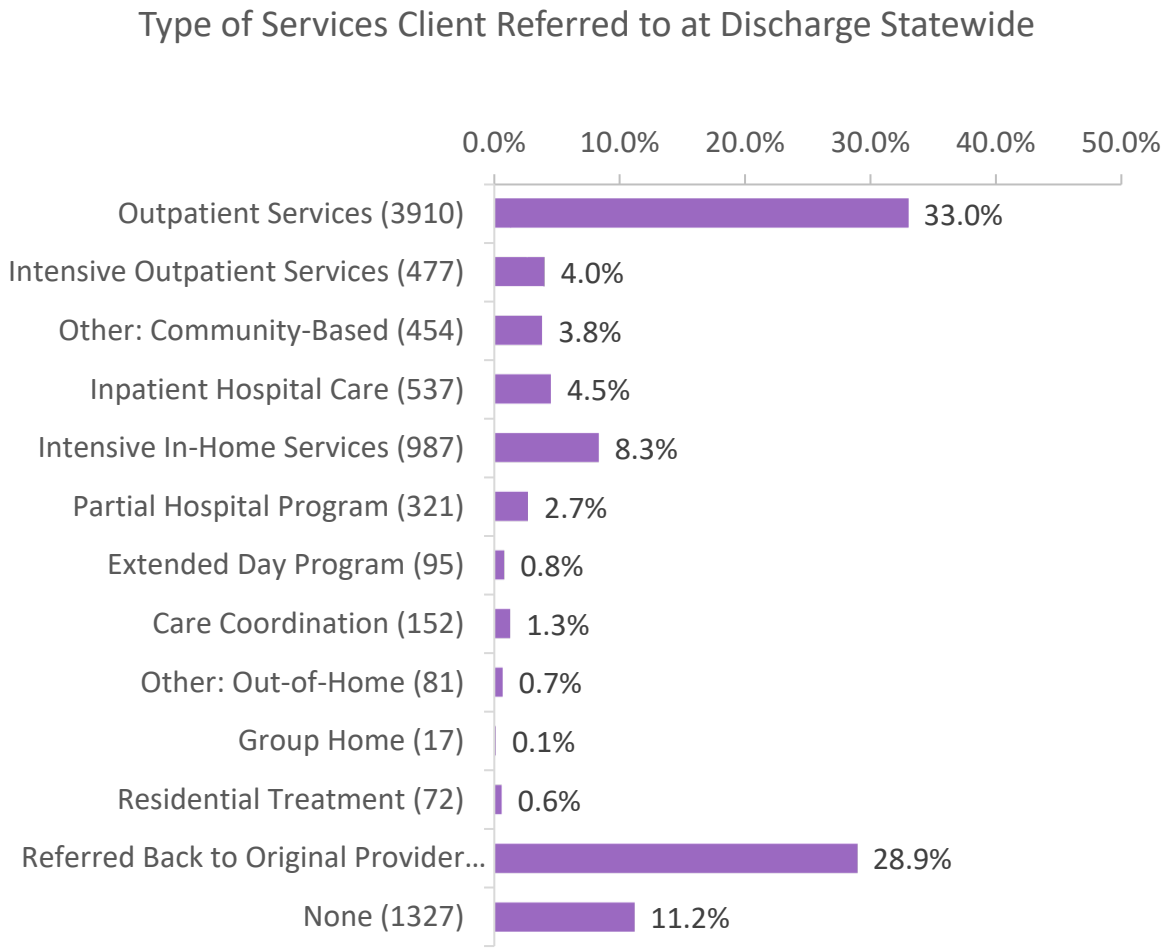
Figure 73. Top Six Reasons for Client Discharge Statewide



Outcomes and Equity: Why are youth discharged from Mobile Crisis?



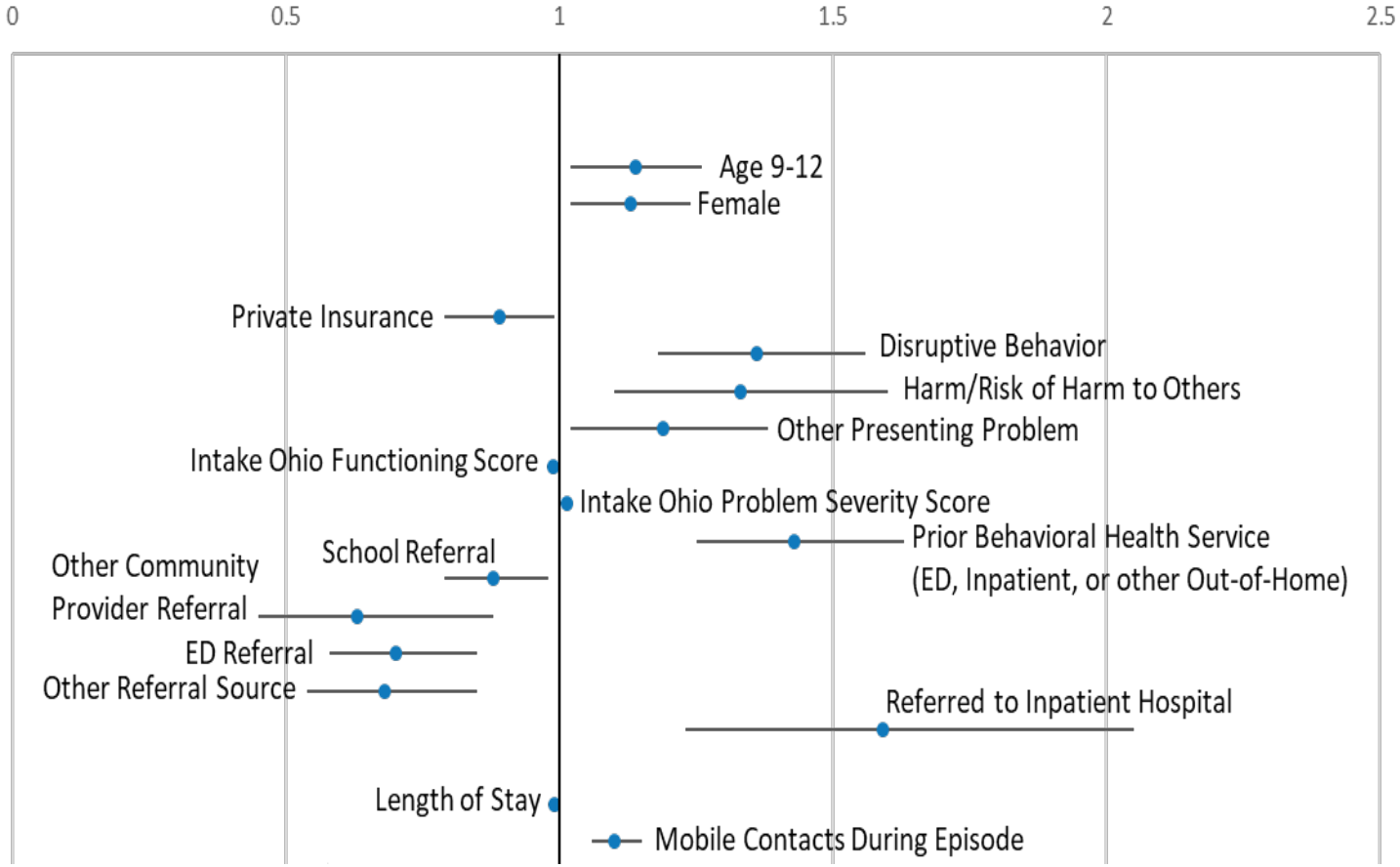
Outcomes: What referrals are made by Mobile Crisis?



What We Are Looking at Next:

- Linking to the outpatient episode, to examine patterns in:
  - Who is referred?
  - Who is connected to care?
  - How long does it take?
  - Outcomes in outpatient?

Outcomes: Who returns to Mobile Crisis?



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Factors associated with repeated use of a mobile response service for children: An observational retrospective cohort study

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ABSTRACT

Introduction: Children visit emergency departments (EDs) for behavioral health reasons, but EDs are not ideal treatment settings. One alternative service is Mobile Crisis Intervention Services (MCIS), which provides children in crisis with a response in the community from a clinician. Research on MCIS is relatively limited; as such, it is important to look at how the service is being used. Roughly one-third of children who use Mobile Crisis will have a subsequent episode. Exploring repeated use of the service is important to understanding how MCIS is being used by children and families.

Research Questions: 1. Are certain sociodemographic groups more or less likely to return to MCIS? 2. Are there clinical characteristics such as presenting problem, acuity, and service history that are associated with the number of MCIS episodes? 3. How are the characteristics of the initial MCIS episode, and the services provided during that episode, related to the subsequent number of episodes?

Outcomes: Return on Investment for Mobile Crisis Diversion from Inpatient Hospitalization

Total Cost of CT Mobile (FY18) = $14.126 M

Average cost per Episode of Care = **$978**

Cost of Alternative (Inpatient Hospitalization)

Medicaid avg. per inpatient Episode of Care = **$12,150**

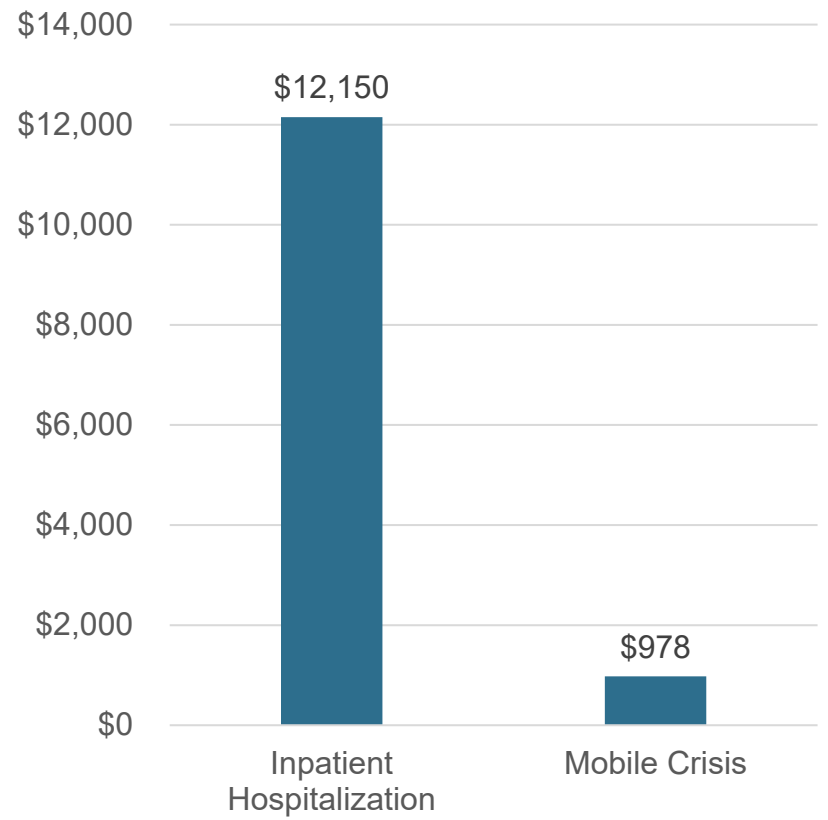
Averted Hospitalizations

666 inpatient diversions in FY18, 483 for youth enrolled in Medicaid

Averted Costs to Medicaid = $5,396,076

That represents 38% of total Mobile Crisis program costs and 4.3X Medicaid FFS expenditures

*Accounts for averted costs for Medicaid only, with additional costs averted for commercial payers



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References

Vanderploeg, J.J., Randall, K.G., Becker, S., & Theriault. K. (2023). Mobile Response for Children, Youth, and Families: Best Practice Data Elements and Quality Improvement Approaches. Child Health and Development Institute of Connecticut. In partnership with the Innovations Institute at the University of Connecticut School of Social Work.

Innovations Institute, University of Connecticut School of Social Work. (2022). Mobile Response & Stabilization Services National Best Practices. In Partnership with Child Health and Development Institute

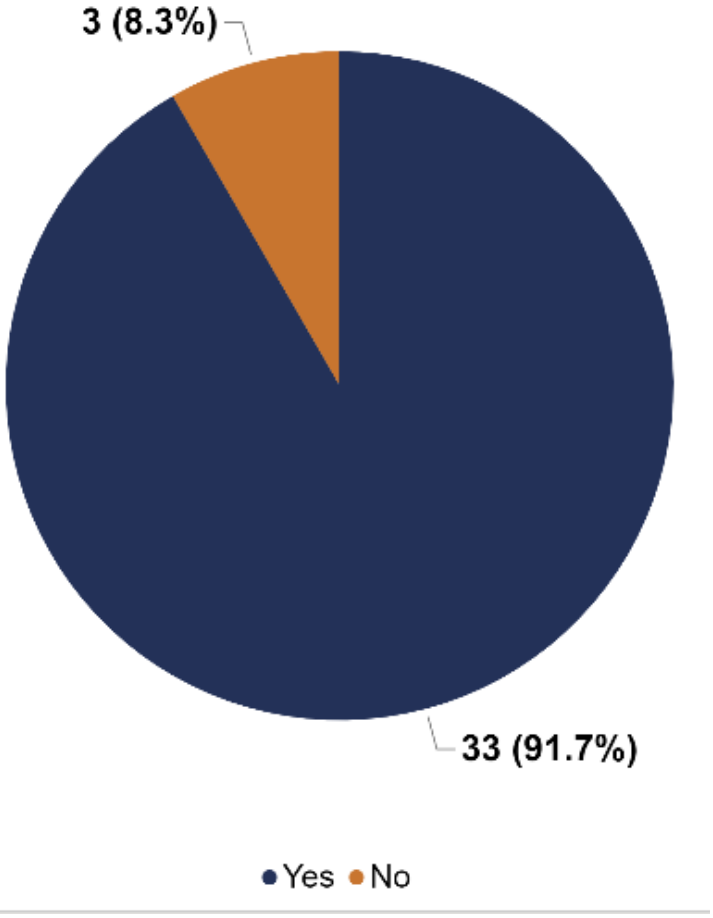
Connecticut Mobile Crisis Reports

Theriault, K. M., Randall, K. G., Vanderploeg, J. J., & Marshall, T. M. (2022). Factors associated with repeated use of a mobile response service for children: An observational retrospective cohort study. Children and Youth Services Review, 140, 106570.

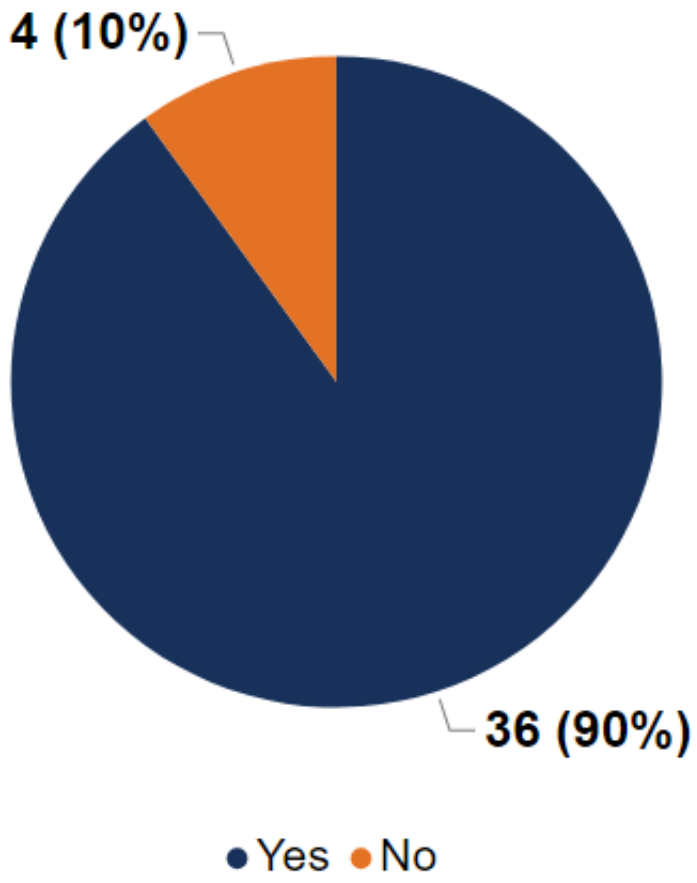
CCMU Data

CCMU Service Delivery

Grantees Delivering Services



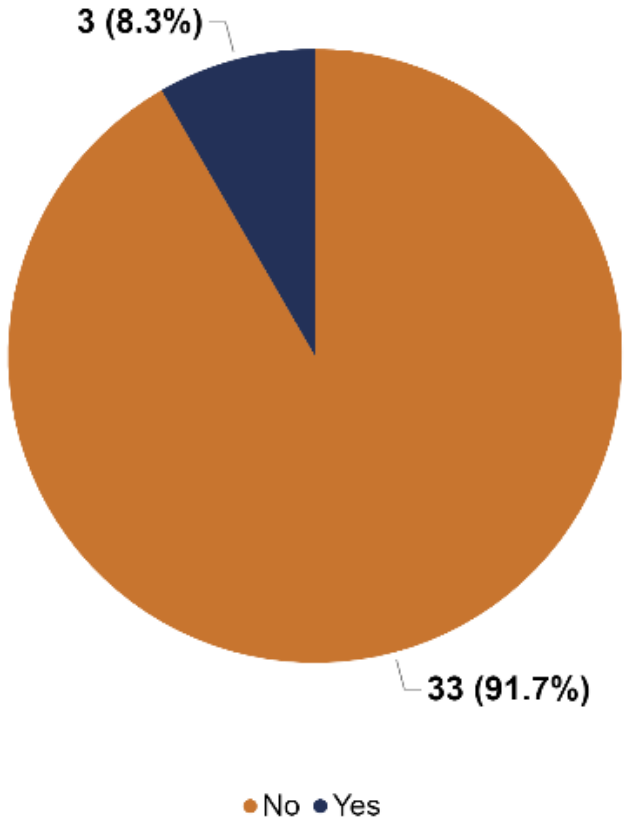
Serving Entire County



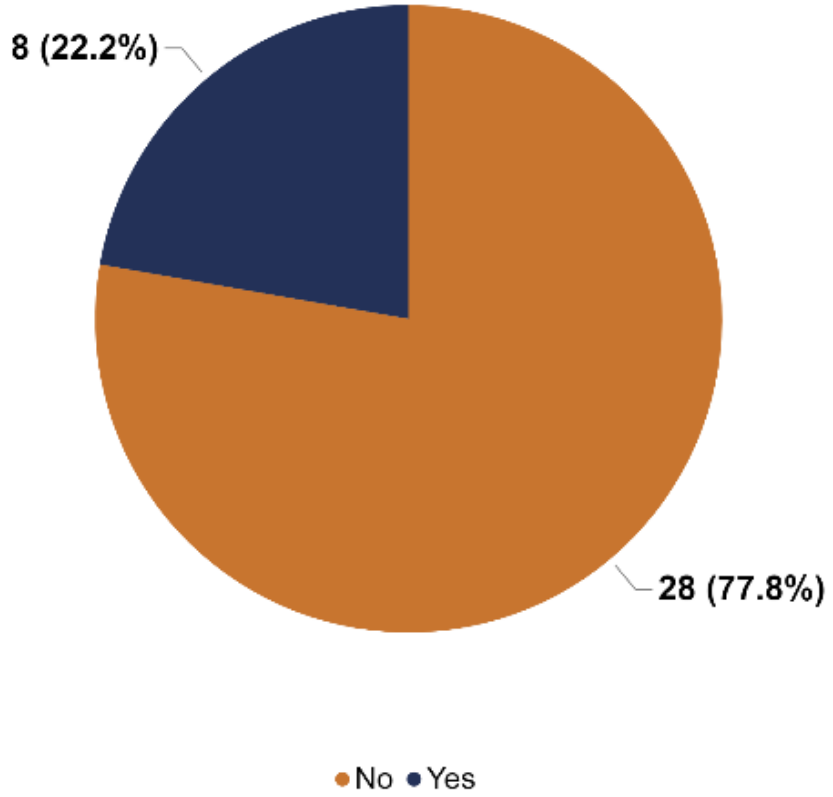
- **36 of 40** implementation grantees are delivering services via mobile crisis teams.
- **33 of the 36** active grantees serve the entire county

CCMU Service Delivery

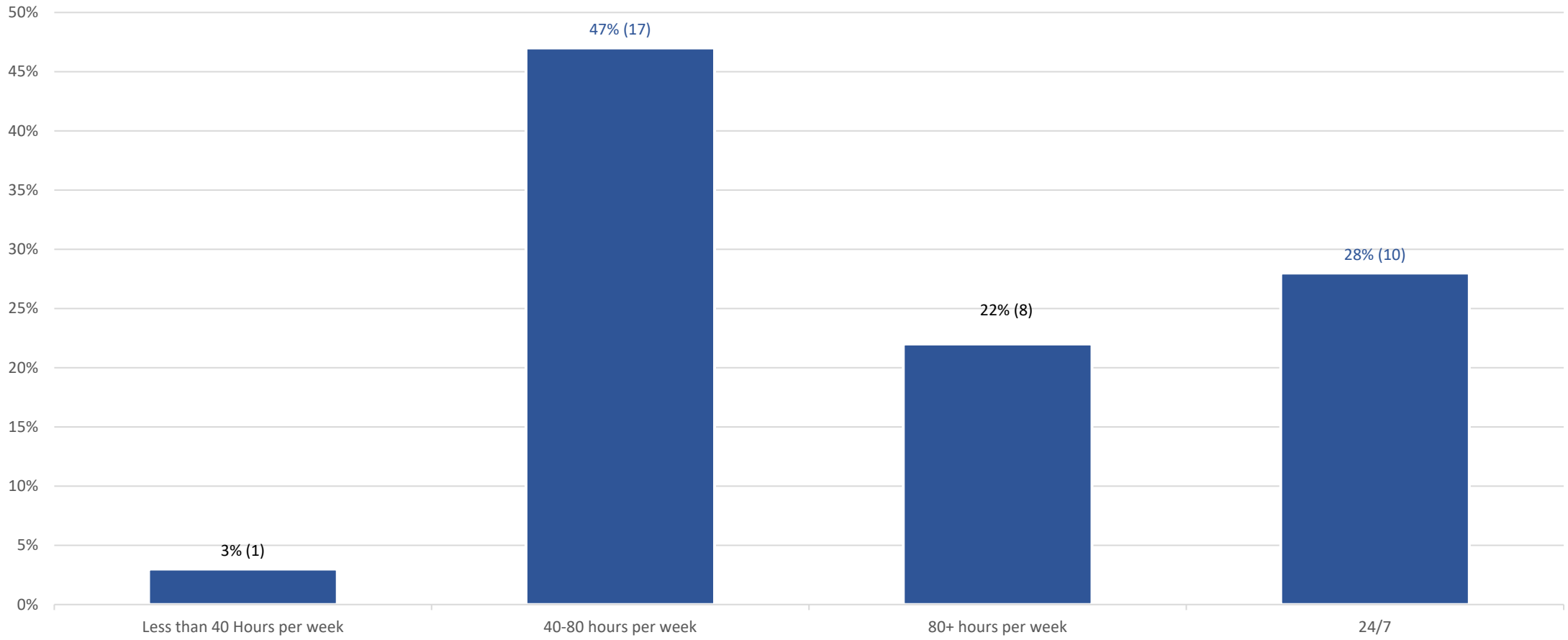
New Teams Added



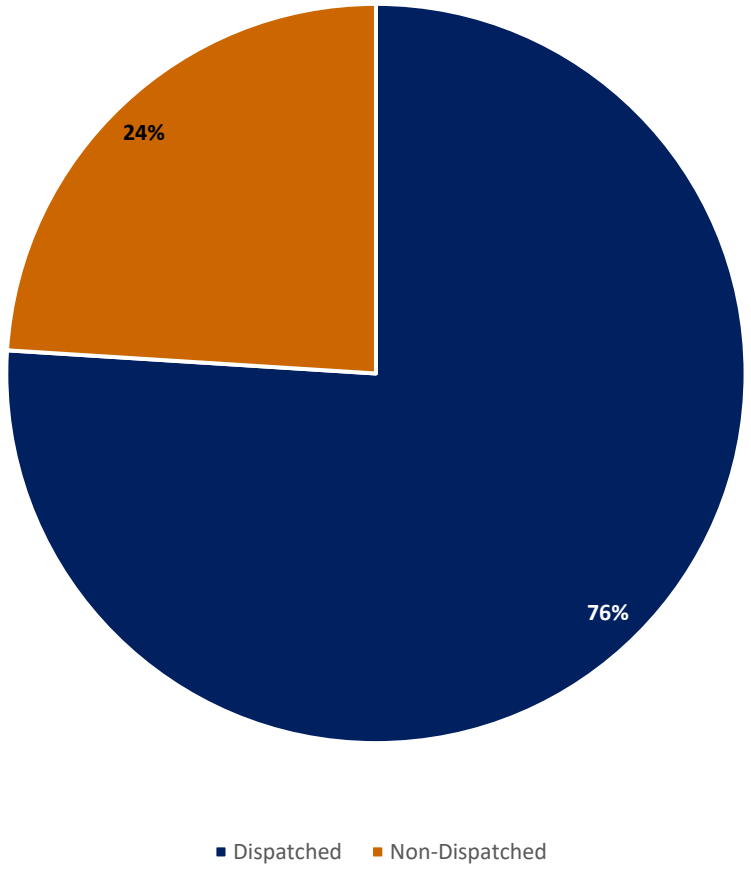
Serve New Zip Codes



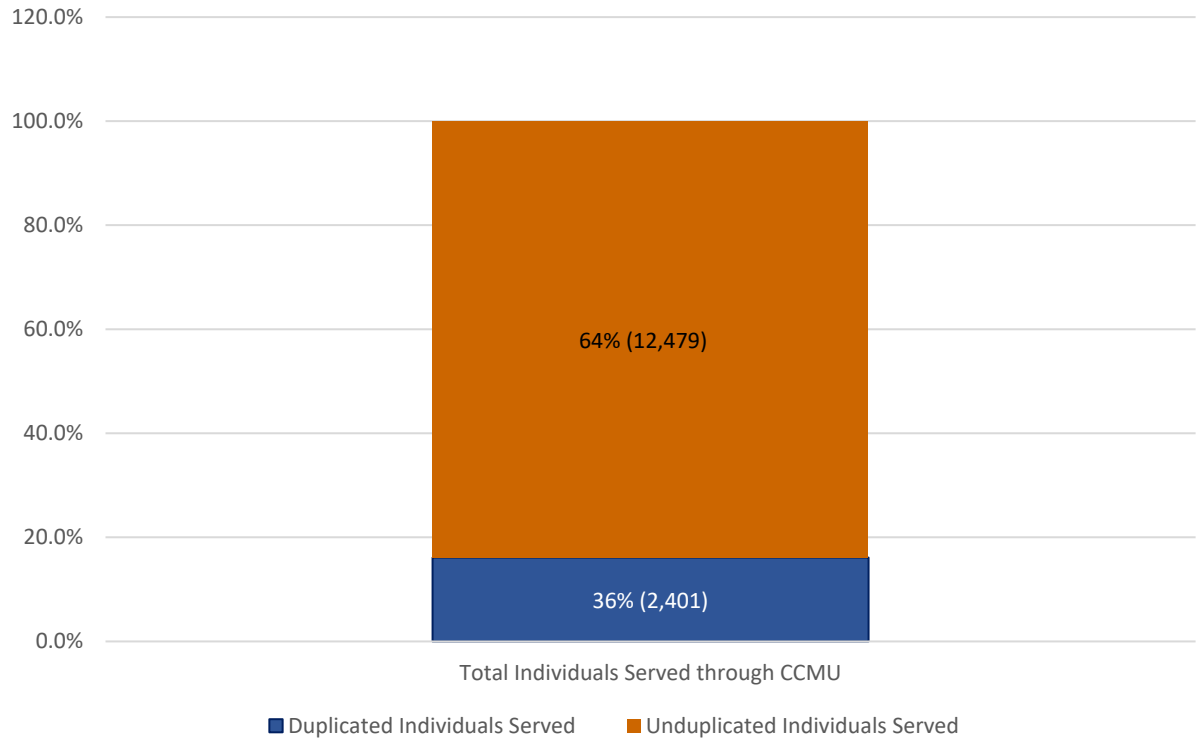
CCMU Hours of Operation



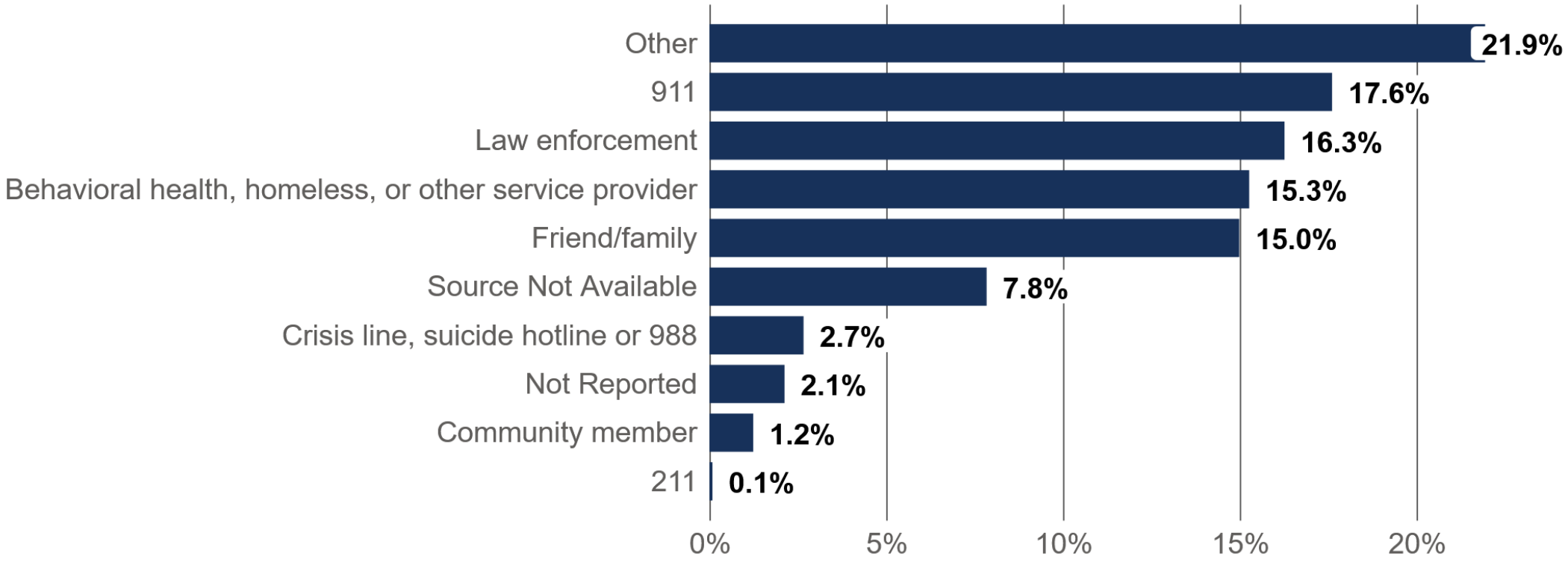
Service Requests



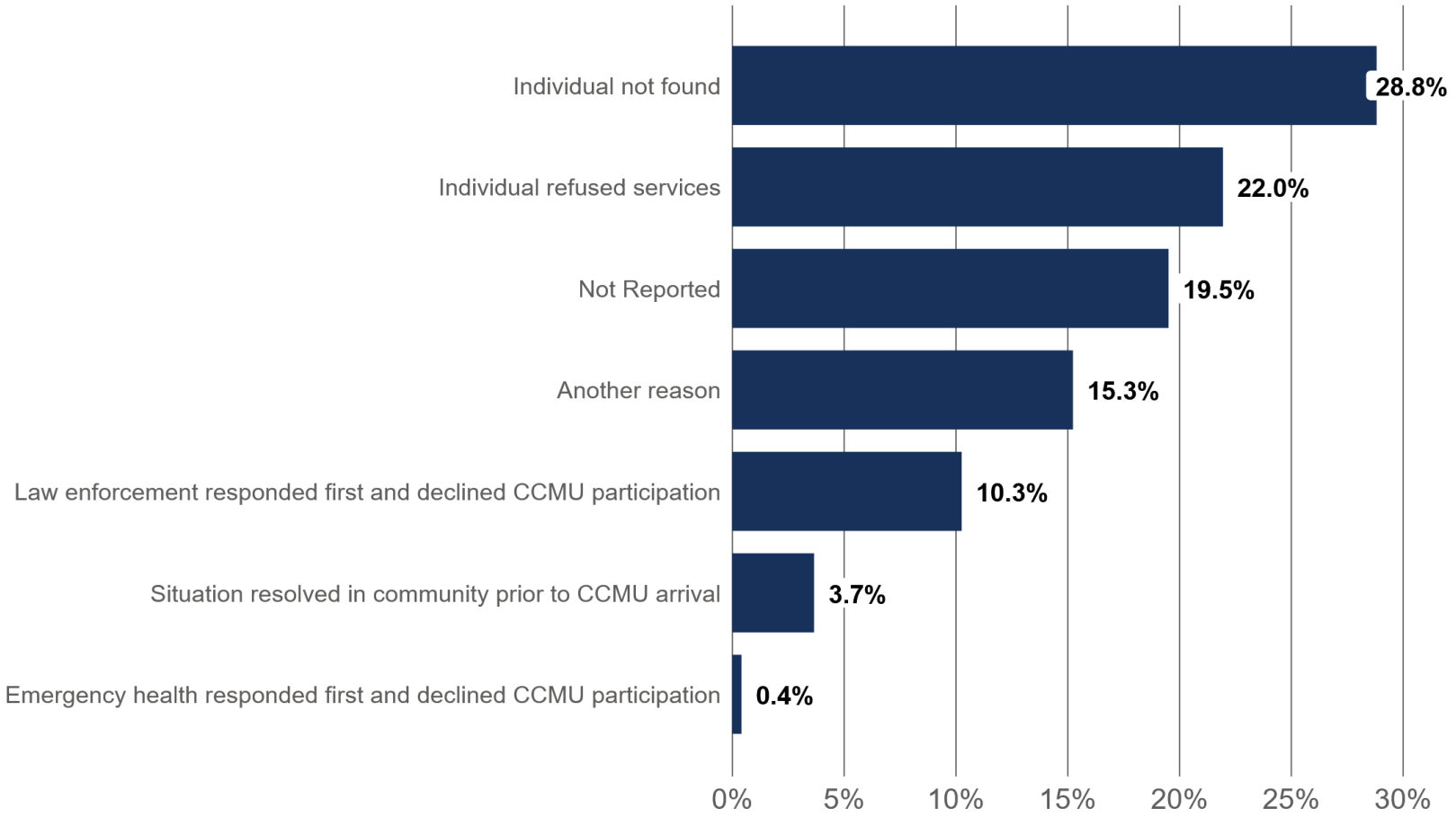
Total Individuals Served via CCMU Dispatch



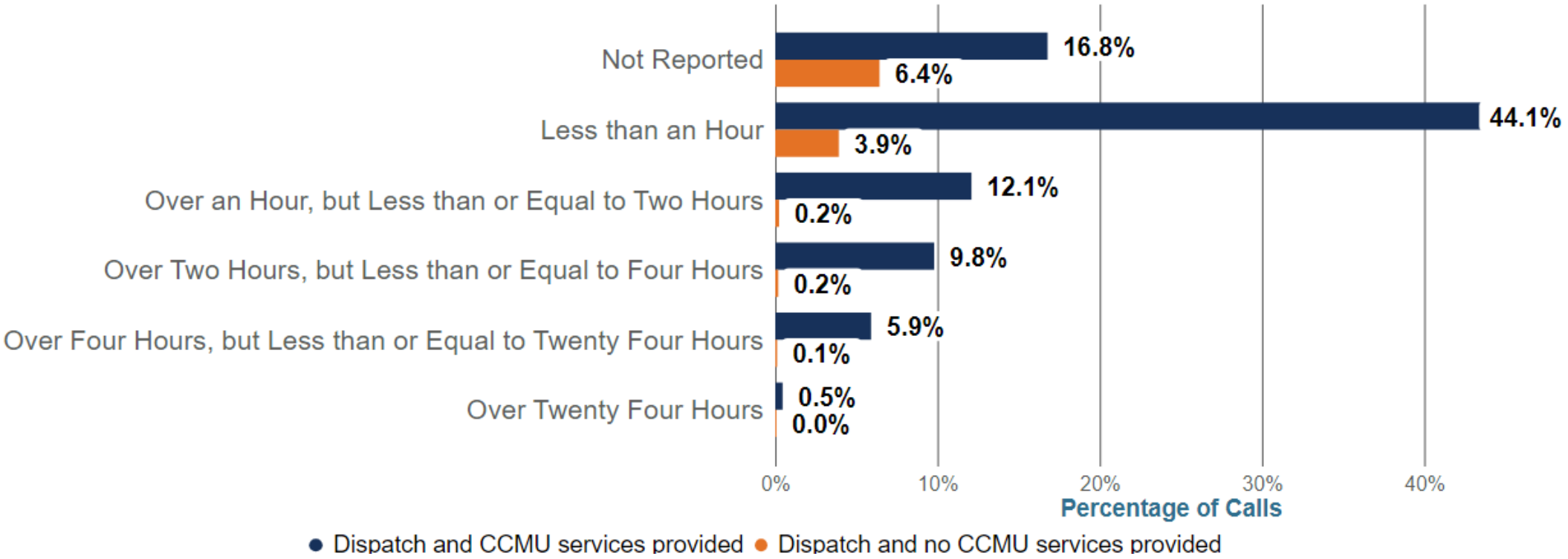
Dispatched Calls by Referral Source



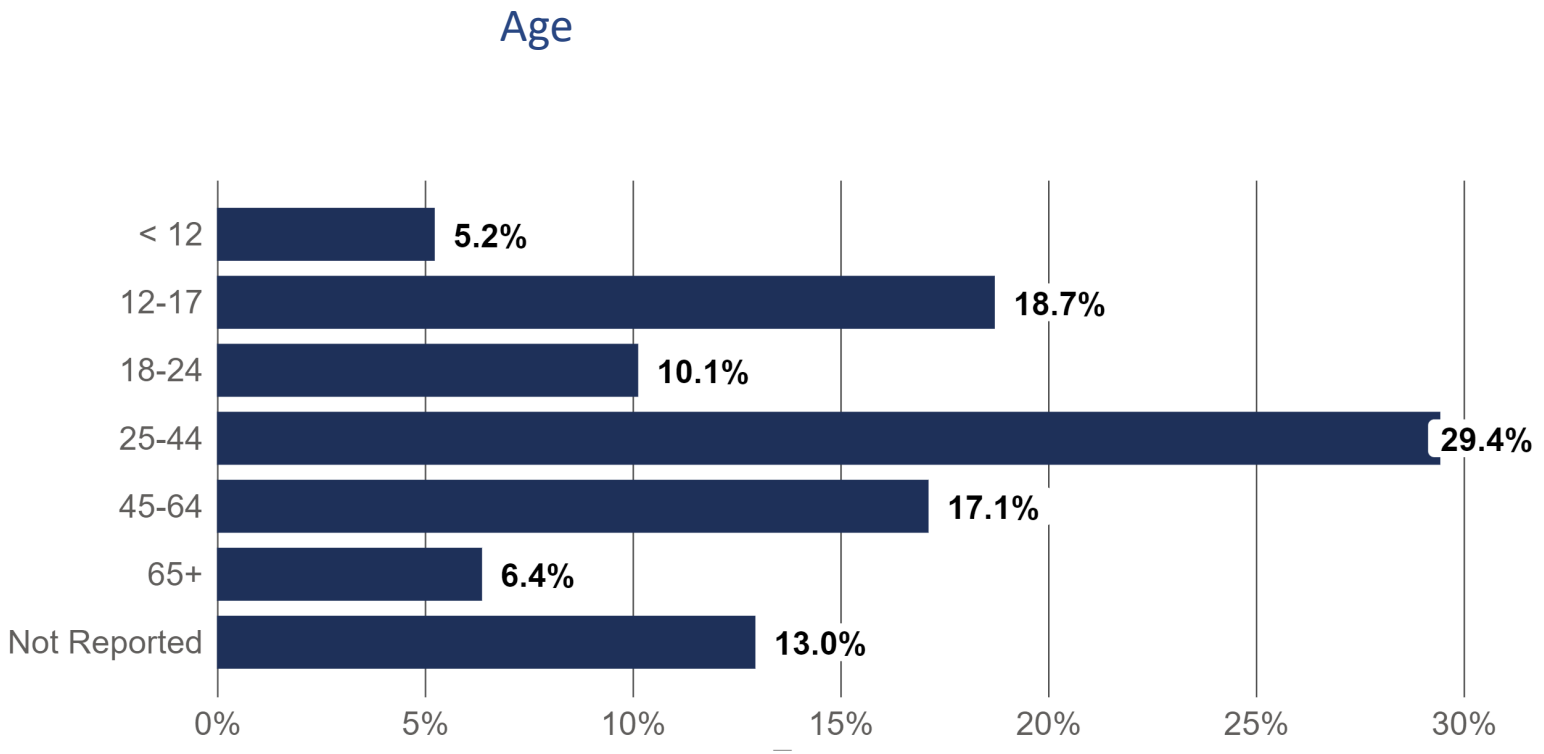
Reason Dispatch did not Result in Services

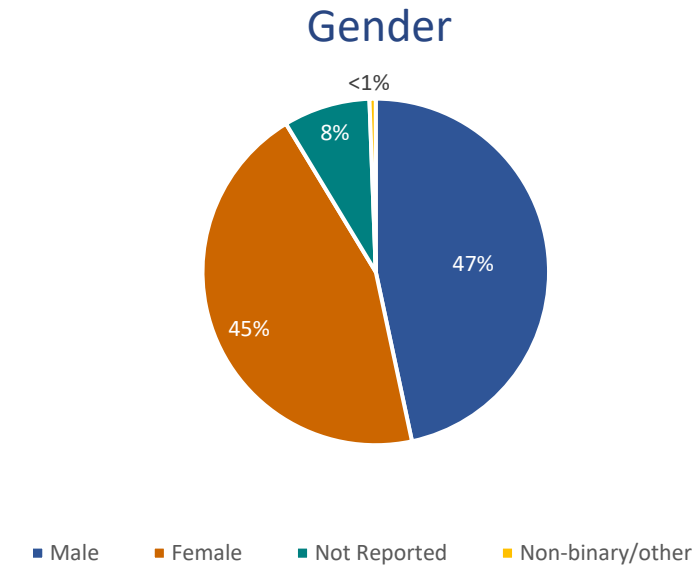


Dispatch Response Times

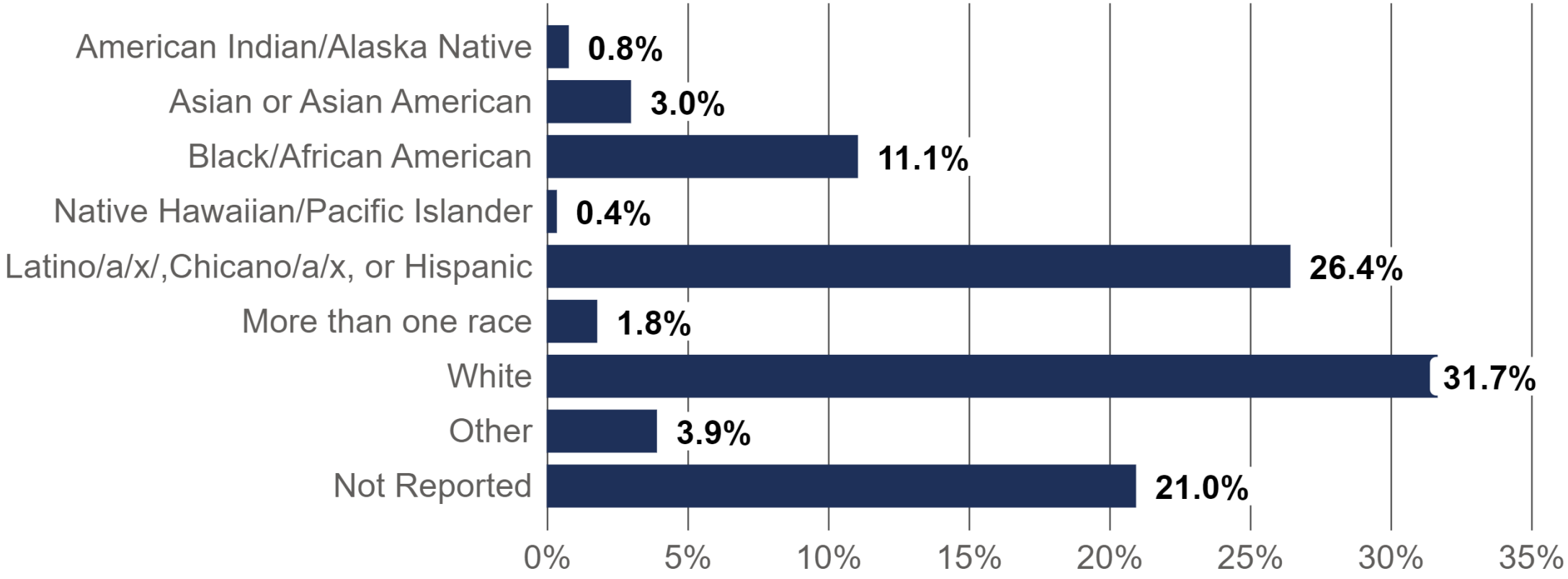


Demographics of People Served

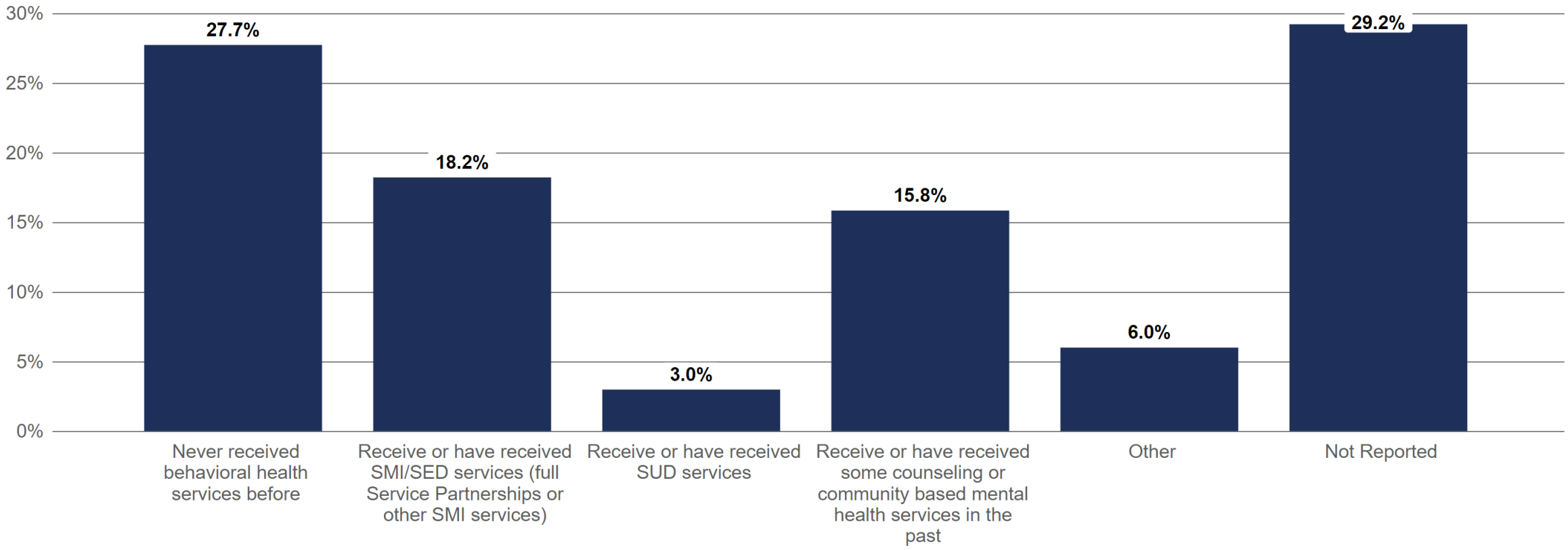




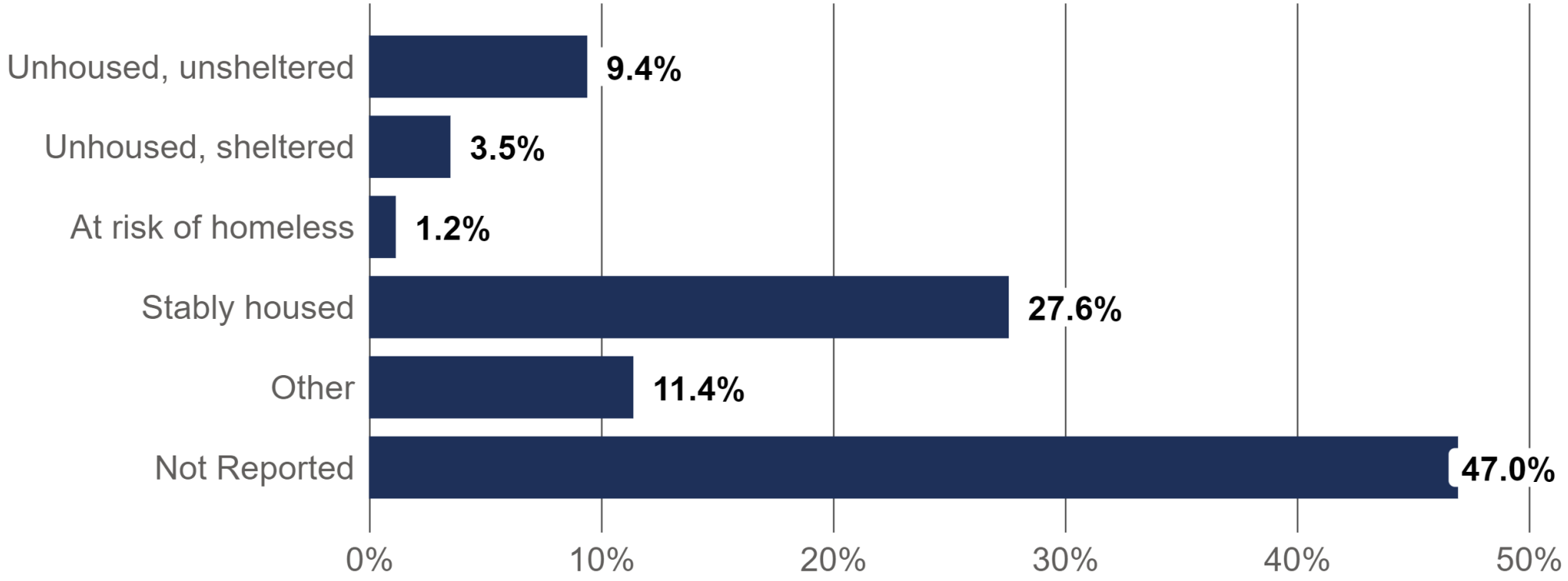
Race


American Indian/Alaska Native
0.8%
Asian or Asian American
3.0%
Black/African American
11.1%
Native Hawaiian/Pacific Islander
0.4%
Latino/a/x/,Chicano/a/x, or Hispanic
26.4%
More than one race
1.8%
White
31.7%
Other
3.9%
Not Reported
21.0%
0%
5%
10%
15%
20%
25%
30%
35%

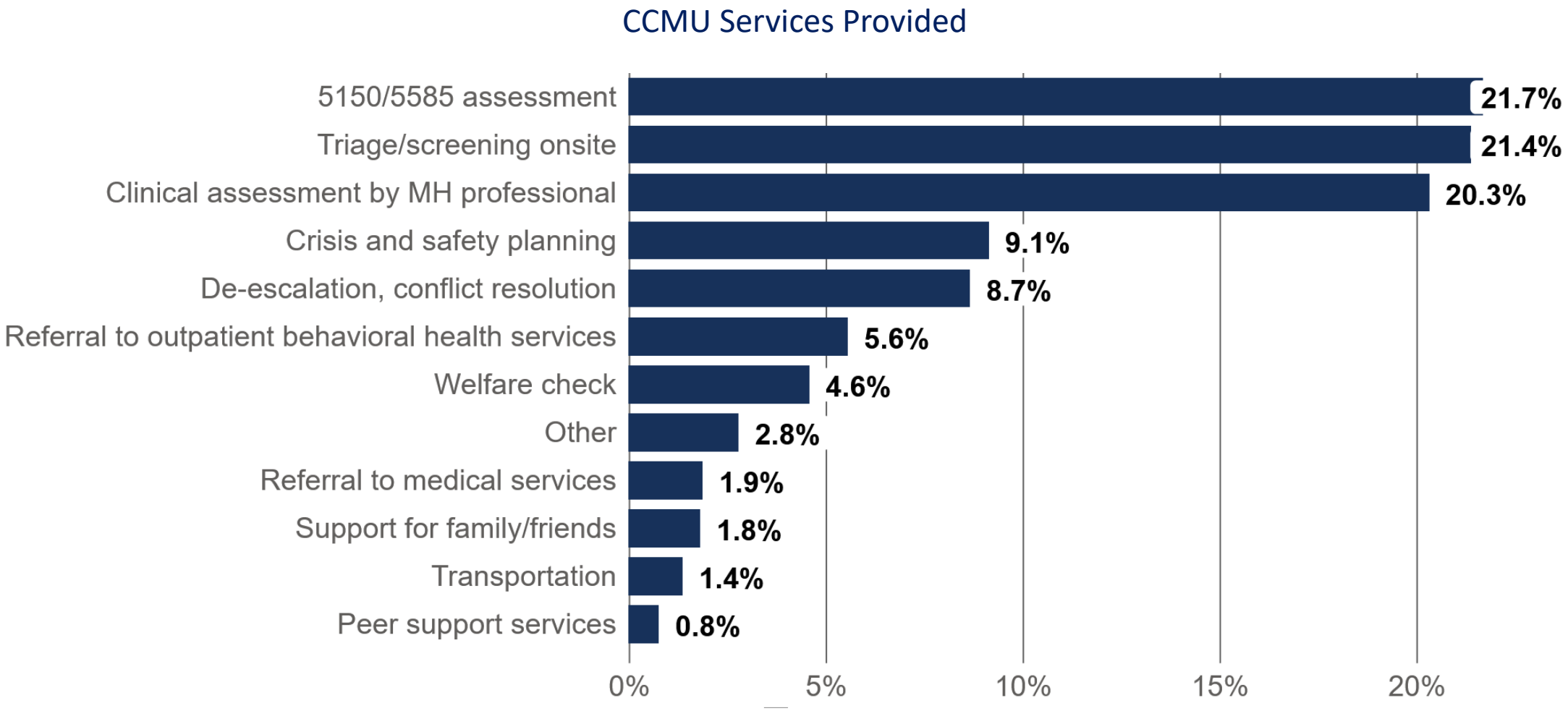
Previous Behavioral Health Experience



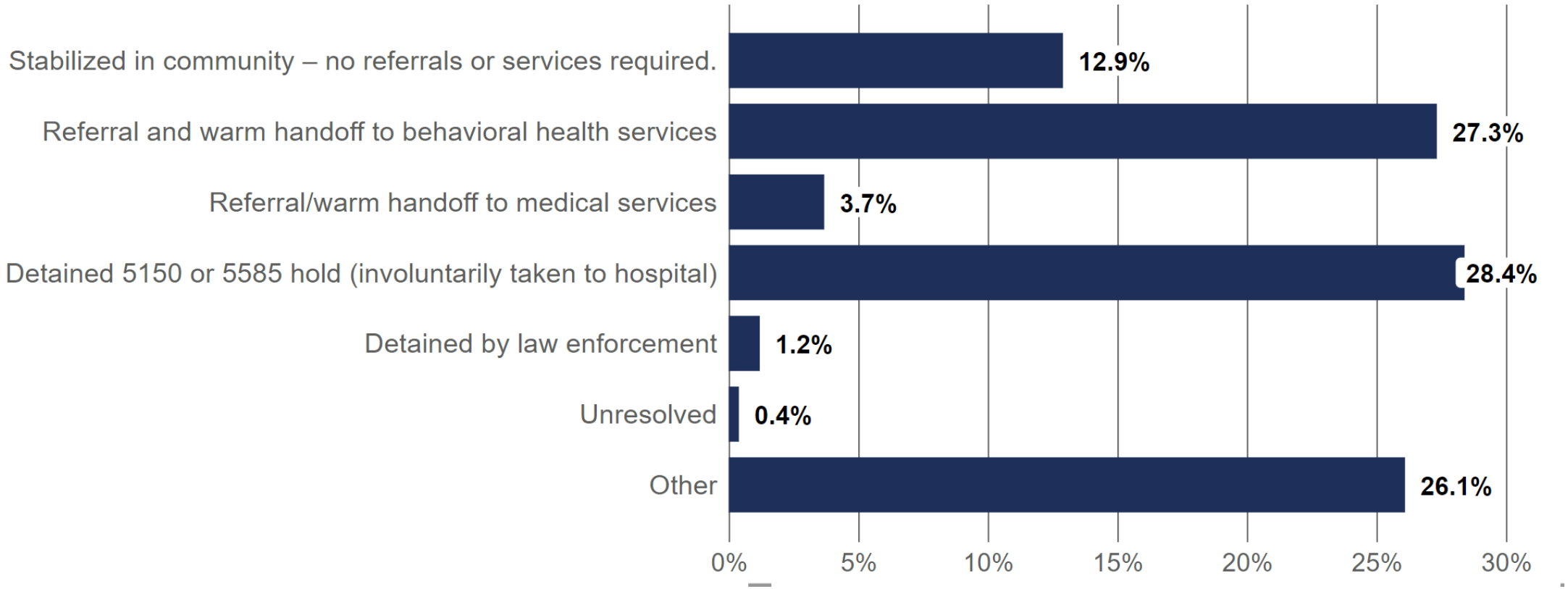
Housing Status



CCMU Services and Resolution

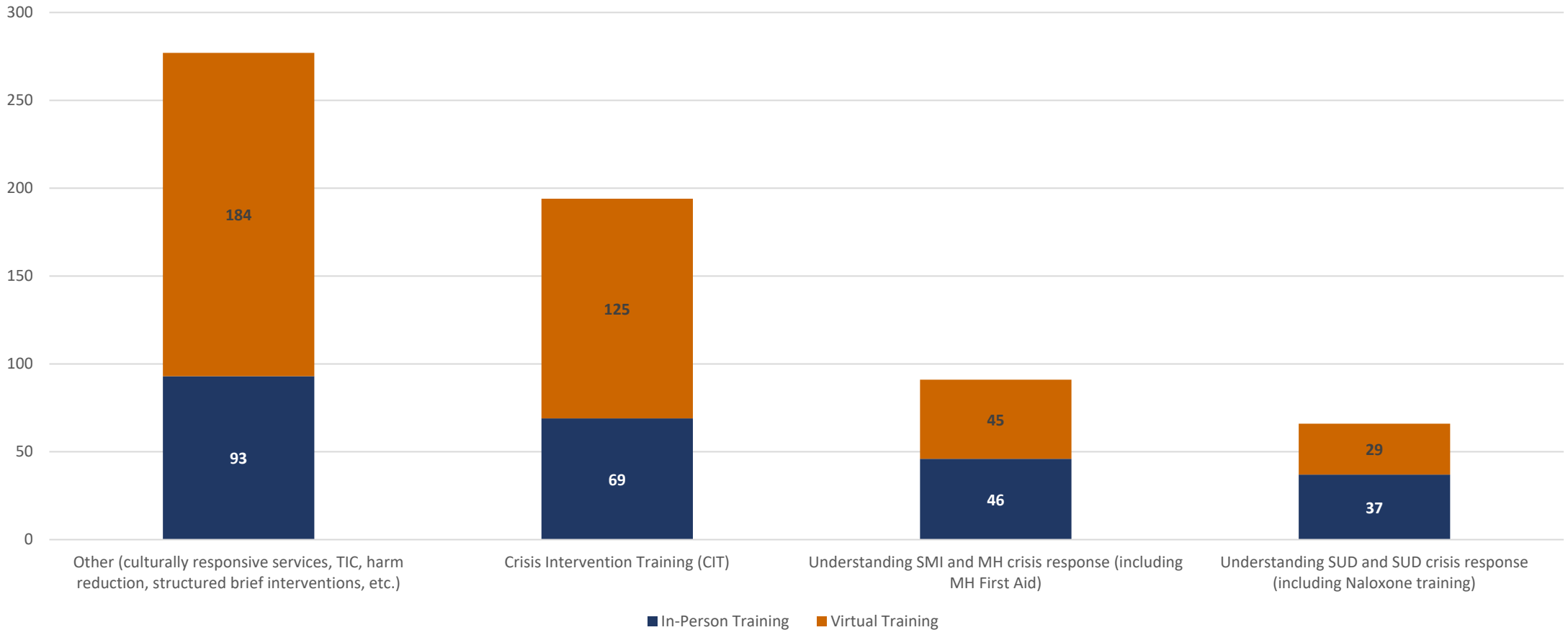


Service Episode Resolution

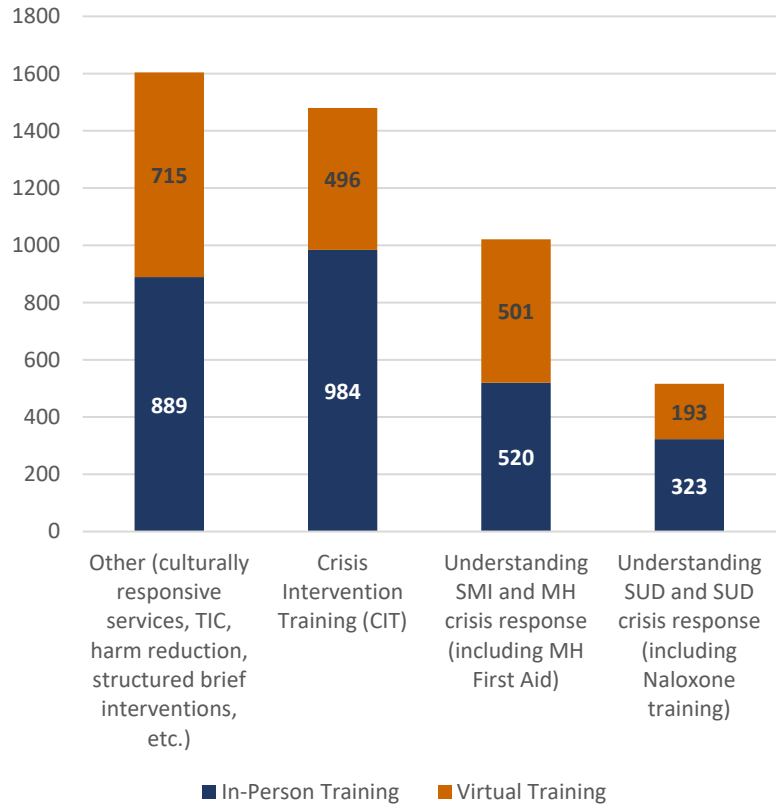


Training and Outreach Activities

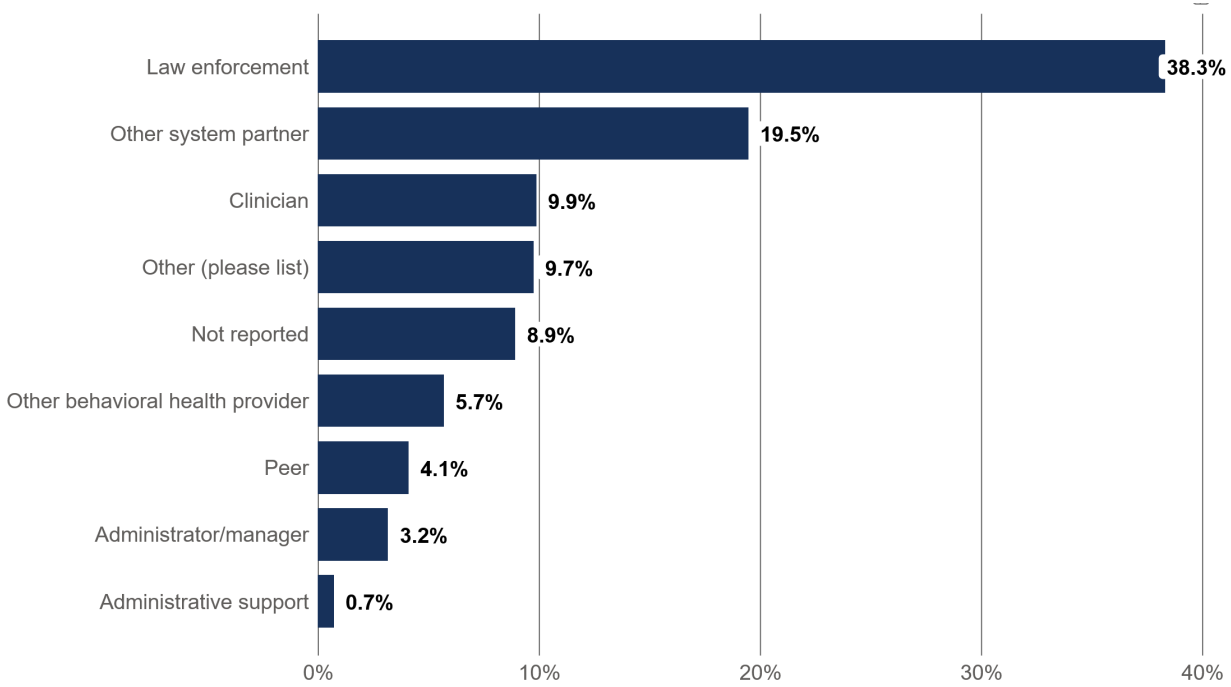
In-Person and Virtual Training Events Attended or Conducted



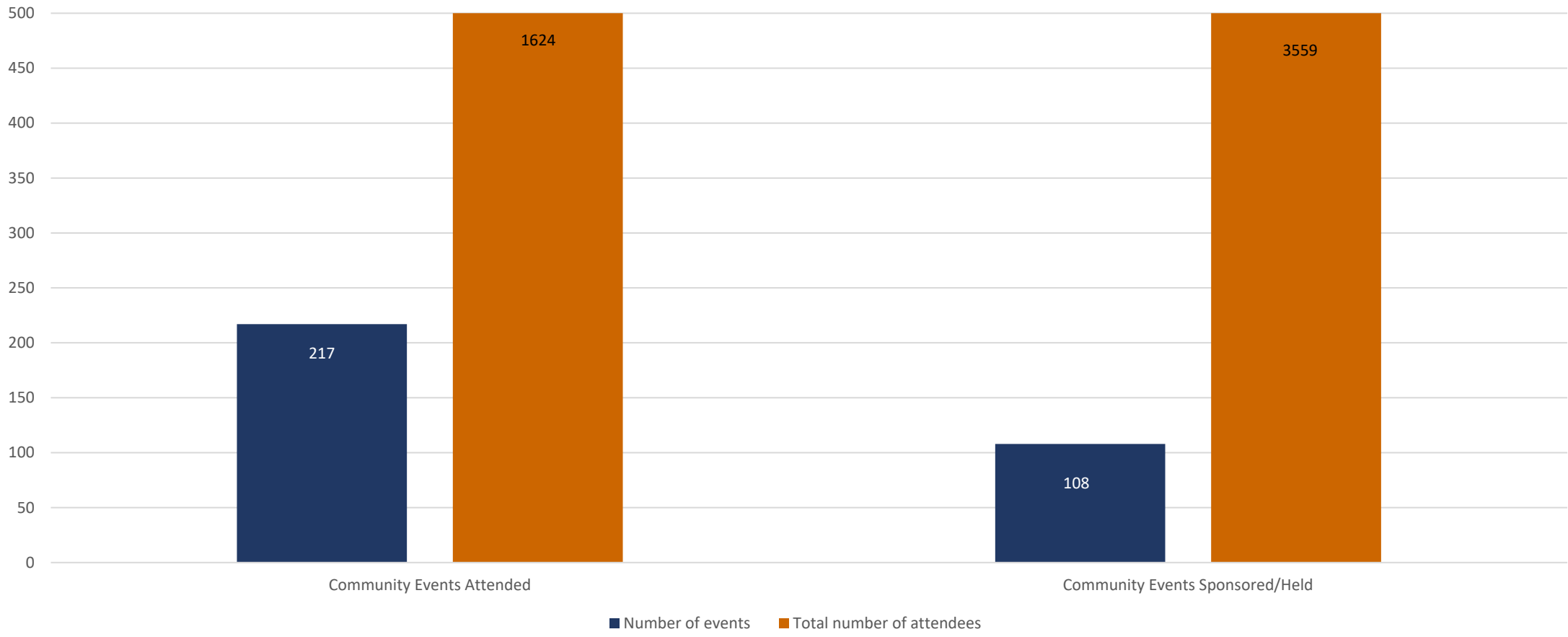
Number of Training Attendees



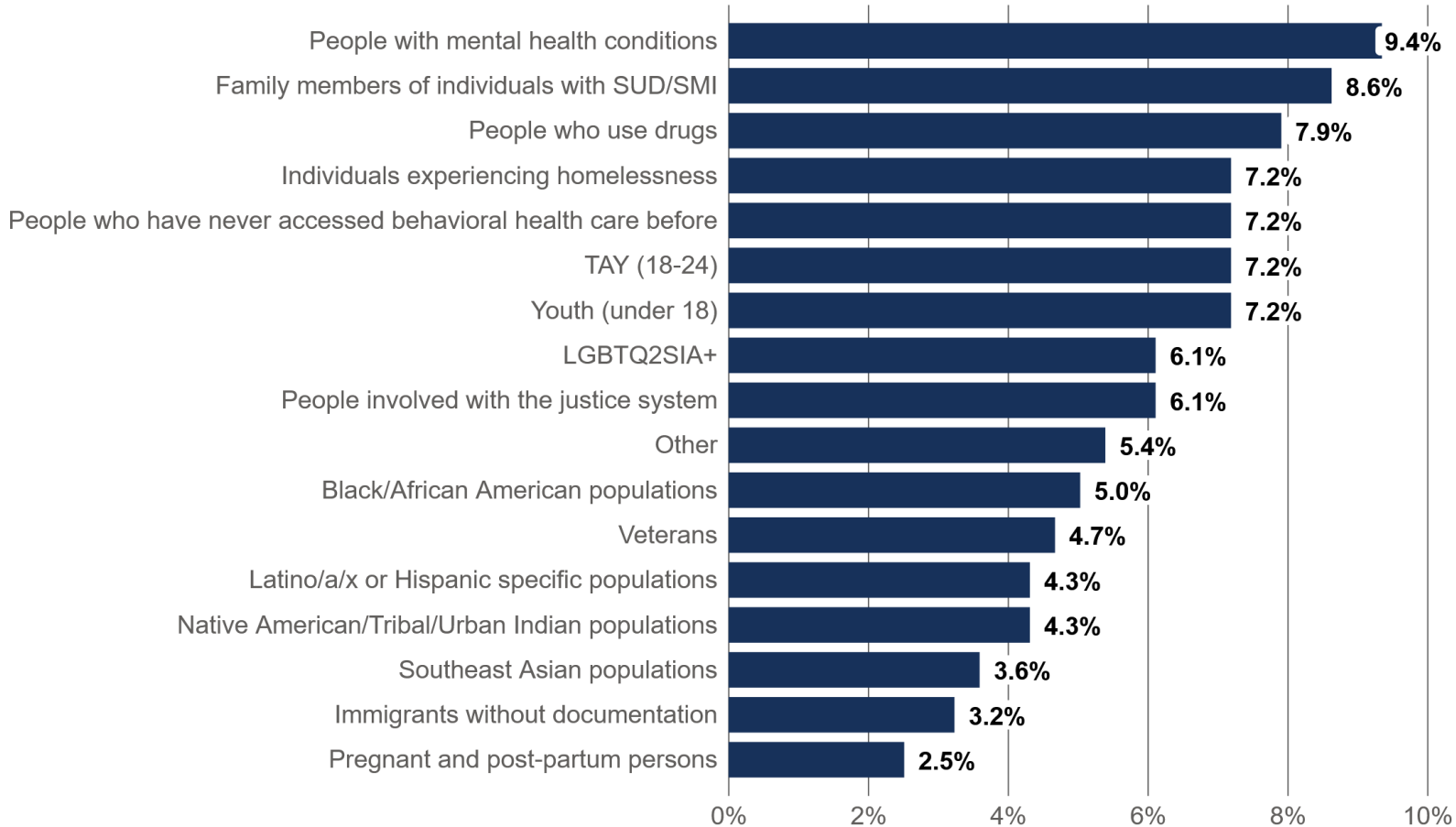
Training Participants by Role



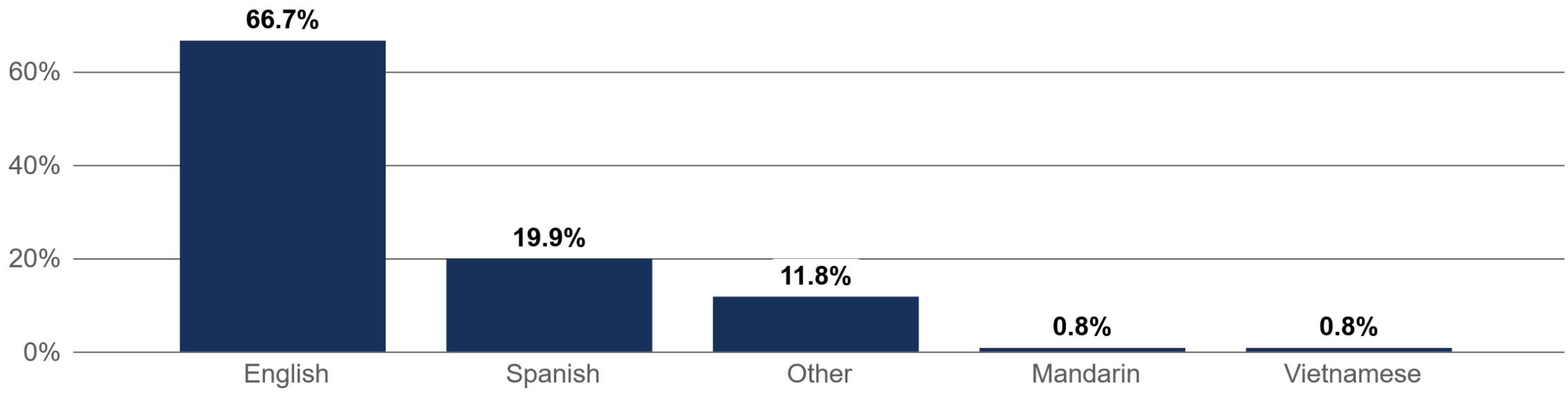
Number of Community Outreach Events and Attendees



Number of Grantees Targeting Outreach Audience



Number of Outreach Materials by Language



Questions?

DHCS
CALIFORNIA DEPARTMENT OF
HEALTH CARE SERVICES

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Thank You