MOBILE RESPONSE FOR CHILDREN, YOUTH, AND FAMILIES:

Best Practice Data Elements and Quality Improvement Approaches

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About CHDI

CHDI is a non-profit providing a bridge to better and more equitable behavioral health and well-being for children, youth, and families. We collaborate with policymakers, providers, educators, and partners to transform child-serving systems, disseminate evidence-based and best practices, and advance policy solutions that result in better outcomes for children in Connecticut and beyond. Our areas of expertise include system development and integration, evidence-based and best practice dissemination, comprehensive school mental health, quality improvement and measurement-based care, trauma-informed systems, and best practice model development.

CHDI is helping states and communities develop high-quality, responsive behavioral health crisis service systems in partnership with the Innovations Institute at the UConn School of Social Work. Through this partnership, the Mobile Response and Stabilization Services (MRSS) Quality Learning Collaborative developed a best practices document for MRSS and supported the development of this data and quality improvement best practices guide.

In addition to our national work with the Innovations Institute, CHDI has served for over a decade as Connecticut's Mobile Crisis Performance Improvement Center. Working in partnership with the Connecticut Department of Children and Families, the United Way of Connecticut, and mobile crisis providers across the state, Connecticut has established a nationally recognized youth mobile response system. Learn more at www.chdi.org.

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Overview

Mobile Response and Stabilization Services (MRSS) requires: "someone to contact" – a single access point with capacity to answer and triage requests for services; "someone to respond" – mobile response teams to provide face-to-face intervention, de-escalation, assessment of needs, safety planning and initial short-term stabilization for up to 72 hours; and a "system to support" – stabilization services and connections to additional services and resources for up to six to eight weeks. Each phase, and the model as a whole, has associated goals, standards, metrics, and expected outcomes. It is essential to have the infrastructure necessary to support high-quality MRSS implementation. States should identify a lead quality entity (e.g., a primary state agency funding and overseeing MRSS or a contracted intermediary organization) responsible for data analysis and continuous quality improvement (CQI) activities.

States that invest in the infrastructure necessary to support CQI activities are best able to implement high-quality MRSS (e.g., high utilization, mobility rates, accountability, and rapid response times). They can closely monitor and improve MRSS model adherence, provider performance, and youth and family outcomes, allowing MRSS to fully realize its role as a cornerstone service in the broad system of children's behavioral health supports and services, and particularly in the crisis continuum of care. Systems that do not have a sharp focus on quality and related infrastructure are at risk of losing the confidence of the community and undercutting MRSS's value to children, youth, families, and the system at large. Community referrers (e.g., families, schools, emergency departments (EDs), police) may fall back on standard practices that result in undesirable care experiences and outcomes including youth not receiving necessary care, high rates of ED admissions and boarding, inpatient hospitalizations, arrests and incarceration, and foster care placement disruptions.

Best practice MRSS design includes infrastructure elements such as a single statewide MRSS access point with a dedicated phone number, web-based data management system, and a lead quality entity to oversee quality related activities. This paper provides guidance on developing infrastructure to collect, analyze, and report data and other information to support high-quality MRSS. In doing so, some assumptions are made about a state's existing capacity to support quality, including:

- 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
- Defined data elements, supported by a data dictionary, to promote consistency in data entry
- 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
- A single statewide access point, with sufficient technology and trained staff to triage requests for MRSS, collect MRSS and access point-specific data (e.g., answer rates and wait times), and provide warm transfers to local MRSS

MRSS Values, Principles, and Goals Drive the Design of a Quality Initiative

As a cornerstone of the children's behavioral health system of care, MRSS is grounded in system of care values and principles. Selected MRSS goals may vary depending on the unique strengths, needs, and circumstances of the state or community. For example, states in which MRSS was implemented in response to class action lawsuits or new legislation may have specific MRSS goals, target populations, and service delivery approaches. Other states may implement MRSS that is accessible to all children and youth regardless of payor (e.g., Medicaid, commercial insurance, state and federal grant funding, uninsured) and across systems (e.g., behavioral health, child welfare, juvenile justice, education, developmental disabilities). Goals may change over time in response to emerging needs, changing circumstances, or as a function of the natural maturation of the MRSS system.

Most MRSS initiatives share common goals that fit into the broad categories of access, quality, and outcomes. Best practice also includes identifying and addressing issues of equity and disparities in each of these categories (see Figure 1). The selected MRSS goals inform what data elements are collected, analyzed, and reported, as well as CQI activities, training content, and required clinical competencies. MRSS goals commonly exist at both the family/youth and systems levels. Examples include:

Figure 1. Access, Quality, Outcomes, & Equity in MRSS

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

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

Practice standards often articulate values, principles, goals, foundational MRSS system elements, expected outcomes, and CQI processes.

Access as the Starting Point for Data Collection

Many states desire high utilization of MRSS, in part, because the alternative care experiences and outcomes are undesirable and potentially cause harm (e.g., no care provided, suicidality, trauma, continued declines in functioning, high rates of ED utilization, juvenile arrest and incarceration, child protective service referrals, or removal from the home). The philosophy and practice of responding to crises with the crisis being defined by the caregiver and/or youth, lowers the threshold for accessing care and increases opportunities for youth and families to avoid undesirable care experiences. Systems that employ a “no wrong door” approach that is blind to payor- and system-involvement have comparatively high utilization rates.

Access point best practices to support high MRSS access and utilization operate on the understanding that youth and family crises may “look different” than adult crises and include:

- A single access number and state or regional call centers staffed by individuals with child and adolescent behavioral health expertise and experience
- Developmentally appropriate, brief screening, and intervention capabilities
- Recommendation for a mobile response as the standard, rather than the exception, to the rule
- Serving as the response time “start clock” to promote consistency and rapid response across regions and providers

Access point practices, including data collection, that are implemented in accordance with model goals and standards and supported by necessary technology and software (e.g., a cloud-based VoIP with ACD software "telephony" system and a web-based data management system), can serve as the basis for a high-quality MRSS system.

Not all contacts result in opening an MRSS episode of care. Initial contacts to an MRSS call center may be triaged as information and referral only (not a behavioral health concern requiring MRSS response), 911 response (for medical concerns, situations involving imminent risk of harm to self or others, or other high-risk events), or MRSS mobile response. For contacts that result in an MRSS connection, states should consider tracking data at the individual family and episode level to carefully monitor initial and ongoing response characteristics and to identify youth and families with more than one episode of care to ensure MRSS is best meeting their needs should they access the service in the future.

The implementation of federal 988 legislation may create opportunities for states to receive all MRSS referrals through a single access point, standardize initial contact disposition decisions, and ensure consistency in initial data collection practices. When 988 is used as the MRSS access point, specific attention is necessary to ensure alignment with best practices of youth-focused MRSS (e.g., youth and families in crisis are best served face-to-face in their homes and local communities; crisis is defined by the family) and goals, including mobile response being rapidly and standardly deployed prior to escalation requiring an emergency intervention.

Data Collection and Application

MRSS possesses features that differ from other behavioral health services, requiring unique data elements, categories, and indicators that allow systems to monitor and improve MRSS quality and outcomes. In general, provider electronic health records and Medicaid claims databases do not include data elements specific to MRSS implementation and are, therefore, insufficient to support a robust MRSS CQI approach that is consistent with best practice approaches.

Table 1. Overview of MRSS Data Categories and Elements

CATEGORY	DATA ELEMENTS
Initial Call Data	Time and Dates of Calls
	Response time “start clock”
	Initial call disposition and mobility recommendation
	Referral source
Volume and Service Reach Rates	Call and episode volume
	Episodes per 1,000 in child population
Youth & Family Characteristics	Demographic Characteristics
	Health Insurance Status
	Strengths and sources of support
	Social drivers of health (SDOH)
	Family experience with other systems
Clinical Characteristics	Clinical diagnosis
	Primary presenting concerns
	Trauma exposure
	Alcohol and other substance use
Clinical Outcomes	Scores on validated assessments measures
Episode Characteristics	Format and number of sessions
	Duration of MRSS intervention/length of service
	Episode end characteristics
	Diversion from alternative settings and placements
Family and Stakeholder Engagement	Satisfaction
	MRSS care experiences and effectiveness

A web-based data management system that can be accessed by the call center and providers is strongly recommended. This allows access point staff to enter pertinent information related to requests for mobile responses that can then be accessed by providers in real-time to expedite rapid mobile responses. The shared system also allows for data to be captured from the time a call for help is first made through the eventual end of the MRSS episode of care, with the access point staff and the providers sharing responsibility for data entry. The lead quality entity can then extract de-identified data from the data management system for analysis and quality improvement purposes.

When there are multiple contracted MRSS providers, unique provider identifiers are necessary to disaggregate data and track the performance of each provider relative to established benchmarks and standards. Unique youth and/or family level identifiers allows systems to link multiple episodes of MRSS care across time and/or link youth and family level data across systems, while prioritizing and respecting all applicable data confidentiality and Health Insurance Portability and Accountability Act of 1996 (HIPAA) related laws and best practices.

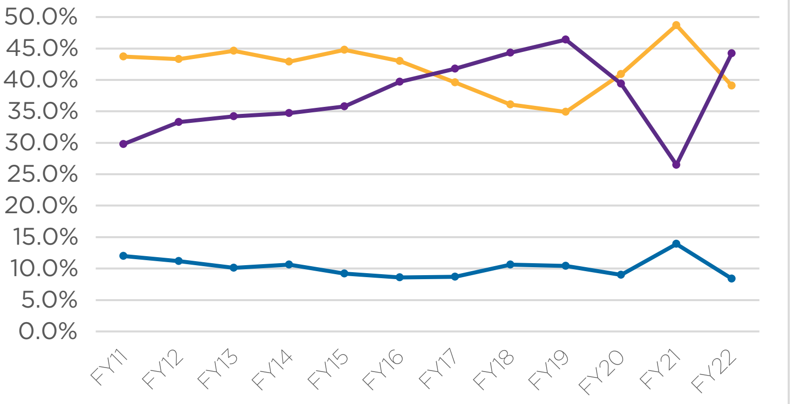
Initial Call Data

Times and dates of calls. Capturing the time, day, and month of calls is useful for multiple reasons. Providers find this set of metrics particularly helpful in determining optimal staffing for a 24/7/365 system. When paired with other available data (such as referrals from schools or EDs) providers can further predict how external factors may impact operations.

Response time "start clock." The time a caller is warm transferred to a MRSS provider starts the response time calculation. By using a shared web-based call management database, response times can be calculated by subtracting the time providers arrive on-site for a mobile response from the time of the warm transfer.

Initial disposition and mobility recommendation. Initial contacts to an MRSS access point may be triaged as informational, emergency response, or requiring an MRSS mobile response. Mobile response recommendations can be further differentiated between immediate or non-immediate/deferred responses, with the latter being reserved for instances in which the caller specifically requests a response outside the initial response time parameters (typically 45-60 minutes). By using a shared web-based call management system, the mobility rate can be calculated by determining the percentage of times providers complete a mobile response when recommended by the call center.

Figure 2. Top Referral Sources Over Time



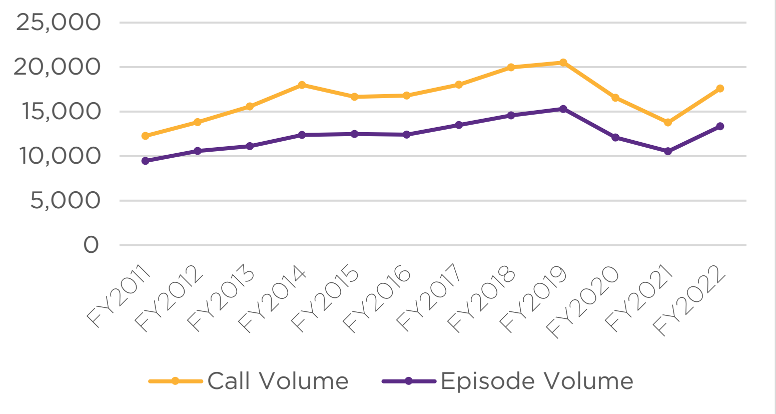
Data in this and subsequent figures is from Connecticut's Mobile Crisis Intervention Services program. All reports can be found at: https://www.chdi..org/mobile-crisis

Referral source. States may also be interested in understanding specific MRSS referral and utilization patterns. Referrers to MRSS are likely to vary depending on the goals, target populations, existing community resources, and circumstances surrounding each MRSS program. Common referrers to MRSS include caregivers/family members, youth, schools, EDs, police, and pediatricians. It may be helpful to collect data on a secondary referral source. For example, when parents or caregivers call MRSS, it is beneficial to know how they heard about the service, which may allow systems to identify gaps and plan targeted outreach efforts to reach families more effectively. In another example, knowing which schools refer youth to EDs who were subsequently discharged with MRSS support allows MRSS providers to offer targeted outreach to schools that make higher-than-average referrals to EDs, inform them of MRSS, and disrupt the pathways that lead unnecessarily to ED utilization. In Connecticut, the percentage of MRSS referrals from schools increased after concerted outreach efforts and the establishment of Memorandums of Understandings (MOUs) between school districts and their local MRSS teams, which eventually led to schools becoming the top referral source (See Figure 2). This was a state priority, in part, because of the high numbers of children referred to EDs by schools who could have been effectively served by MRSS. This trend sharply reversed in the spring of 2020 and throughout the 2020-2021 academic year, when schools switched to remote or hybrid learning in response to the COVID-19 pandemic. Schools once again became the highest referral source when in-person instruction resumed in the fall of 2021.

Volume and Service Reach Rates

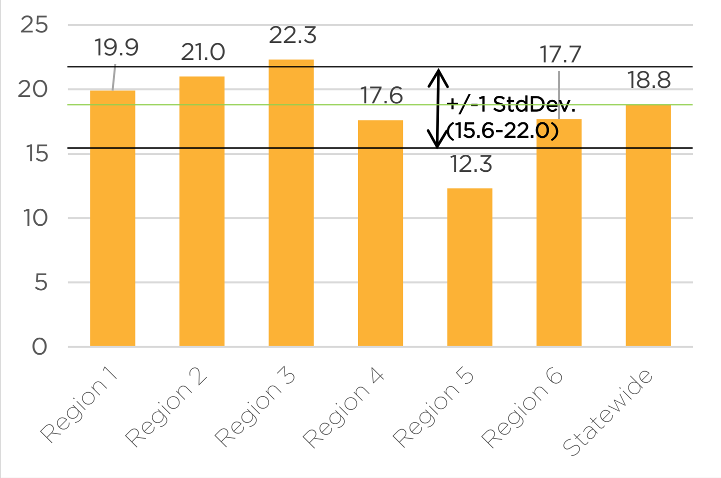
Call and episode volume. It is important for MRSS systems to track call and episode volume over time. Calls include all calls received by the MRSS call center, whereas episodes are only those calls that result in an MRSS response. Figure 3 shows Connecticut's MRSS call and episode volume over several years, with both showing a steady increase until SFY 2020 - the start of the COVID-19 pandemic.

Figure 3. Call and Episode Volume Over Time



Episode volume can be especially important at the outset of a new MRSS program when states make a large initial investment to establish foundational staffing levels. MRSS frequently emphasizes high volume because the alternatives to MRSS include costly, restrictive, and sometimes clinically inappropriate or unnecessary interventions (e.g., child welfare investigation, removal from the home, exclusionary discipline, juvenile arrest, ED visit, or inpatient hospitalization). When looked at in combination with referral source, episode volume can help determine where most calls originate and where more outreach may be needed.

Figure 4. Number Served per 1,000 Children



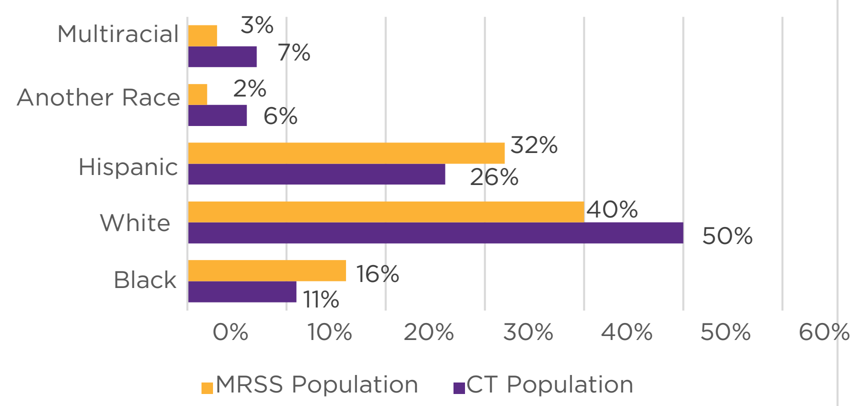
Episodes per 1,000 in child population. MRSS systems are likely to have multiple contracted providers covering pre-determined geographic areas with differing population sizes and characteristics. Total calls or MRSS episodes are one important indicator, but states may also wish to standardize total MRSS episodes of care by adjusting for population size. Figure 4 provides an example of this data element. Adjusting for relative population size, it is clear that Region 3 has a “service reach rate” that is over one standard deviation above the statewide average, while Region 5 has a “service reach rate” that is more than one standard deviation below the statewide average. This data allows states and communities to monitor relative levels of utilization across areas. Options include:

- Total episodes statewide divided by the total child population
- Total episodes for each regional hub, managed care organization (MCO), or provider site, divided by total number of children in that hub’s/MCO’s/provider’s catchment area

Youth and Family Characteristics

It is critical to collect demographic information on children, youth, and families. While such data is informative on multiple levels, collecting data specific to race, ethnicity, gender, and other key demographics helps ensure that historically underserved and vulnerable populations have access to MRSS and that disparities in access, quality, satisfaction, and outcomes between groups are identified and addressed.

Figure 5. Race and Ethnicity of Children Served, Compared to State



Demographic characteristics. Examples include, but are not limited to sex/sex assigned at birth, sexual orientation, gender identity, age, race, ethnicity, and primary language. MRSS demographics can be compared to overall state or regional demographics to examine if group are over- or under-represented. In Figure 5. Black and Hispanic youth of any race are over-represented relative to the state population. Of note, while the aim is for youth to be served as they are represented in the overall population, MRSS is often a preventative service with goals (among others) of reducing the number of children in foster and congregate care and the number involved with the juvenile justice system, where children of color and children of Hispanic origin are also over-represented. For comparisons on relative under- or over-representation, the appropriate reference group must be selected. In addition, data on socio-demographic characteristics should align with all applicable state and federal reporting laws, regulations, policies, and requirements.

Health insurance status. While some states implement MRSS through their Medicaid program only, the best practice is to make MRSS available to all children and families regardless of insurance status or type. Collecting insurance data (e.g., Medicaid, private/commercial insurance, uninsured) may allow system stakeholders to advocate for better coverage and rates or may ensure that MRSS data can later be linked with data in other payor systems for the purposes of program evaluation.

Strengths and sources of support. Collection and consideration of protective factors for both the child and family can be vital elements of successful treatment and helpful in identifying trends in the use and success of MRSS. Examples include strong relationships with friends and families, and involvement in spiritual or community groups or activities.

Social drivers of health (SDOH). SDOH are conditions that affect health, functioning, and quality-of-life and significantly impact health related outcomes.[1] The impact of SDOH on behavioral health functioning are well-documented, and state systems and early intervention programs such as MRSS can have an impact in these areas. SDOH are categorized into five domains:

- Economic stability (e.g., employment, income sources, housing status, food insecurity)
- Neighborhood and built environment (e.g., housing quality, environmental conditions)
- Education (e.g., language and literacy, enrollment in educational institutions)
- Social and community context (e.g., discrimination, racism, and social cohesion)
- Health and health care (e.g., access to care, health literacy)

Family experience with other systems. Many youth served by MRSS are involved in other child-serving systems such as child welfare and juvenile justice, and many receive additional services within systems, such as supports for special education or intellectual and developmental disabilities. Collecting this information may open opportunities for states to coordinate care more effectively, or even blend and braid funds across child-serving state agencies and payors. Doing so may require interagency agreements to ensure privacy and confidentiality and ensure compliance with HIPAA and the Family Educational Rights and Privacy Act (FERPA) when identifiable data is shared between systems. Additionally, it is important to recognize families may have had adverse experiences with one or more systems. For example, youth with behavioral health conditions are at significantly higher risk of exclusionary discipline in schools (e.g., suspension, expulsion, school arrest). MRSS can serve as an alternative response for youth who exhibit behavioral or mood disruptions at school or in the community, which may be reactions to trauma or other challenging experiences. Consideration of a family's current and past experiences with systems is relevant to working with the individual and for identifying opportunities for cross-system coordination.

Clinical Characteristics

States implementing MRSS need to understand the clinical profile of children, youth, and families being served. This information can be valuable for identifying trends, informing training and professional development needs, and informing the delivery of targeted, evidence-based interventions for specific clinical conditions and presenting concerns. Some states require that data be collected using one or more validated screening and assessment measures. Commonly used screening and assessment tools include suicide risk assessment (such as the Columbia-Suicide Severity Rating Scale[2]), youth and caregiver's perception of functioning and problem severity (such as the Ohio Scales for Youth[3]), as well as substance use or trauma screening.

Clinical diagnosis. While having an established diagnosis is typically not required to access MRSS, a diagnosis based on DSM 5 or ICD 11 criteria is often required for commercial or public insurance reimbursement, particularly for services beyond the initial mobile response. In addition to reimbursement concerns, diagnoses (and other data points) may inform areas for further program and system improvement efforts. As one example, it may prove helpful to examine whether youth with similar presenting concerns, trauma histories and other factors have similar diagnostic profiles. Noted differences between groups—such as between genders, races, or ethnicities—may warrant further attention, particularly when they may dictate the type, intensity, or specialized focus of referred services.

Common diagnostic clusters among youth served by MRSS include depression, conduct, adjustment, anxiety, trauma, and attention/hyperactivity Disorder. In addition to meeting formal diagnostic criteria in the DSM-5 or the ICD-11, it may also be helpful, particularly for MRSS funded by Substance Abuse and Mental Health Services Administration (SAMHSA) grant programs, to report the percentage of youth that meet SAMHSA criteria for Serious Emotional Disturbance (SED).[a]

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[a] As defined by the Substance Abuse and Mental Health Services Administration (SAMHSA), criteria for SED include presence of a diagnosable mental, behavioral, or emotional disorder in a person under the age of 18 that causes substantial impairment in one or more functional domains.

Primary presenting concerns. Common primary presenting problems include harm or risk of harm to self, disruptive behavior, trauma reactions, depression, anxiety, family conflict, and harm or risk of harm to others. Because MRSS tends to be a brief service focused on stabilization and linkage, detailed data on presenting problems may be more reliable and useful than clinical diagnosis.

Trauma exposure. The harmful impact of trauma and adverse childhood experiences (ACEs) on a range of academic, health, and developmental outcomes is well-established. Many youth served by MRSS have experienced one or more traumatic incidents (e.g., disrupted attachment/multiple placements, witnessing violence, being a victim of violence, sexual victimization) and some may exhibit acute or ongoing traumatic stress reactions. A reliable and valid measure of trauma exposure and reactions is recommended. Valid tools include but are not limited to the Child Trauma Screen[4] and the Traumatic Stress Screen for Children and Adolescents (TSSCA).[5]

Alcohol and other substance use. Collecting data on alcohol and other substance use is appropriate for MRSS given the high rates of co-occurrence of mental health and substance use conditions. Validated tools include but are not limited to the CRAFFT[6] and the Alcohol Use Disorder Identification Test (AUDIT)[7].

Clinical Outcomes

MRSS systems should identify one or more validated outcome measures appropriate to their system's goals and target population. To facilitate reliable measurement of change over time the measure should be completed minimally at intake and discharge and by multiple informants. Completion of the discharge measure for MRSS episodes of care can be particularly challenging; MRSS provides brief stabilization-oriented services with often unpredictable end dates due to factors such as a service opening in an appropriate level of care, or families discontinuing service without notice when they feel their reasons for accessing MRSS have been resolved. For those reasons, clinician-completed versions of outcome measures can have the highest completion rates at discharge. Changes on the outcome measure from intake to discharge can be analyzed for the presence of statistically significant change, clinically meaningful change, reliable change[b], or other statistical approaches appropriate to the selected measure(s).

Episode Characteristics

Format and number of sessions. MRSS emphasizes home and community-based face-to-face responses for both the initial mobile response and subsequent stabilization services. Monitoring the format (e.g., face-to-face, phone, telehealth) and location (in community vs. office-based) of sessions helps to ensure MRSS does not begin to drift toward becoming a phone-based or office-based service, with the latter being potentially indistinguishable from traditional outpatient services.

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[b] *Reliable change uses the properties of an assessment measure to determine a specific value that, when an individual's change score meet or exceed the value, the change is considered reliable and not simply due to chance.*

Duration of MRSS intervention/length of service. Episode start dates, end dates, and associated time parameters can be used to determine length of service and to monitor trends over time. States may have desired minimum or maximum lengths of services, with a maximum of 72 hours for the initial response and stabilization period, and follow-up stabilization services provided for six to eight weeks. In some MRSS models, longer lengths of service can be desirable if primary goals include providing comprehensive stabilization interventions to reduce the likelihood of future crises prior to transitioning to the appropriate next service (e.g., outpatient services, intensive in-home services, etc.). In other circumstances, shorter MRSS lengths of service can be desirable if, for example, a goal is to ensure that youth are connected as quickly as possible to clinically appropriate services and supports. As with most metrics, it can be helpful to interpret findings in the context of other variables. For example, remaining within the targeted lengths of service may be challenging when states have gaps in other services in the continuum of care and/or if other existing services have long waitlists. By contrast, during high volume times of the year or during times of rapid system growth, the ability to provide rapid responses for newly referred youth may be challenging if most youth receive services up to the maximum time allotted.

Episode end characteristics. Reasons for ending care include mutually agreed upon discharges, families discontinuing services of their own accord, successful linkages to care, or youth entering higher levels of care. It is important to include to which services/programs children, youth, and families are referred and/or linked. MRSS can often be the entry point into the behavioral health system. Understanding which services are available once a crisis has been stabilized can promote connections to care and improve long-term outcomes. As with other metrics, this is an opportunity to pay special attention to how youth with various demographic or clinical backgrounds compare to one another with respect to reasons for discharge and services to which they are referred.

Diversion from alternative settings and placements. MRSS can divert youth with emotional challenges from EDs, inpatient hospitalizations, foster care, residential placements, arrest, detention, incarceration, and other intensive or restrictive settings. MRSS commonly has a primary goal of diverting youth from such settings whenever MRSS can offer a safe and effective alternative. Having a data element to determine when MRSS has been used as an alternative to these settings is an important measure for assessing system-level outcomes and potential cost savings.

Family and Stakeholder Engagement

Satisfaction. Youth, parent/caregiver, and referrer satisfaction with services is a common data element that can be collected at the end of an episode of care. These data can be collected by a clinician as part of the discharge process, or through a separate survey outreach after the end of the episode of care.

MRSS care experiences and effectiveness. Qualitative evaluation approaches such as key informant interviews and focus groups with family and community stakeholders can yield valuable information about how MRSS functions within the broader system. When done regularly, these data approaches can help stakeholders monitor the degree to which MRSS is meeting the needs of the community and identify opportunities for improvement.

Other Data Collection and Analysis Activities

There are additional areas of data collection that can be incorporated to support MRSS implementation. Many MRSS systems are interested in collecting data on whether and how the values and principles of MRSS, training content, and general competencies are being translated into real-world practice. To assess these factors, MRSS systems may incorporate specific data elements, conduct chart reviews, or use vignettes or real examples from experiences with children, youth, and families. Some MRSS systems use one or more of the data indicators described in this guidance document to craft incentives programs that reward providers financially when they reach a certain level of performance. Finally, as MRSS is being implemented in many states as part of a comprehensive continuum of crisis-oriented services, there may be opportunities to streamline and align MRSS data collection with similar efforts for 988, 23-hour urgent crisis care, short-term crisis stabilization units, Wraparound care coordination and other intermediate and intensive care coordination models, intensive in-home models, or other services. This would allow states to monitor how individuals are moving through the system and determine whether they are receiving necessary and appropriate follow-up care.

Performance Measures & Outcomes Evaluation

Key functions of data collection and reporting are to monitor performance and measure outcomes as part of the CQI process. Each of the data elements and categories presented above, and others, may be targets for CQI activities. The selected metrics will reflect the state's primary goals for MRSS and typically fit into the four broad categories: access, quality, outcomes, and considerations of equity, which is an overlay across all categories (see Figure 1). Ensuring the goals of the MRSS system are achieved requires performance measures with clear numerators and denominators that can be disaggregated at the provider and demographic level to inform the need for targeted CQI activities or presented in aggregate to evaluate overall system performance. Examples of key MRSS performance measures and outcomes follow.

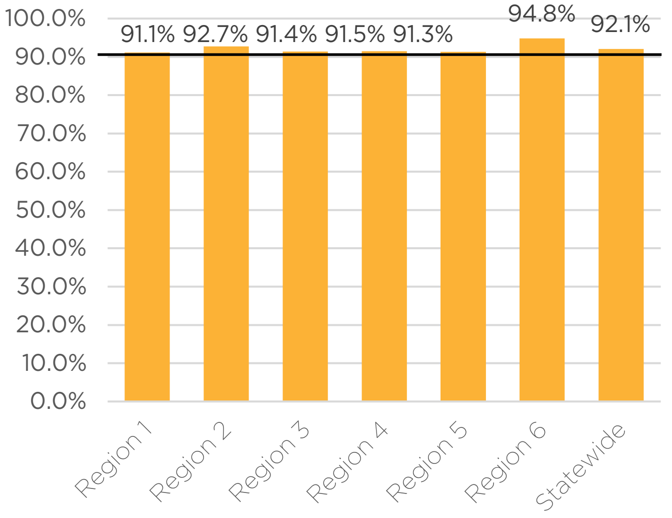
Provider Performance Measures

States must attend to provider performance metrics to support high-quality implementation. It is common for states to establish performance benchmarks for contracted or otherwise credentialed MRSS providers, and to engage the lead quality entity in measuring performance against these benchmarks. Lead quality entities then use these results to engage in CQI activities. Examples of provider performance measures are:

Episode volume. Episode volume, described above, can serve as a useful provider performance measure. States may contract with providers to provide a minimum number of episodes or may wish to establish a minimum requirement for standardized episode volume as a function of total population within the catchment area.

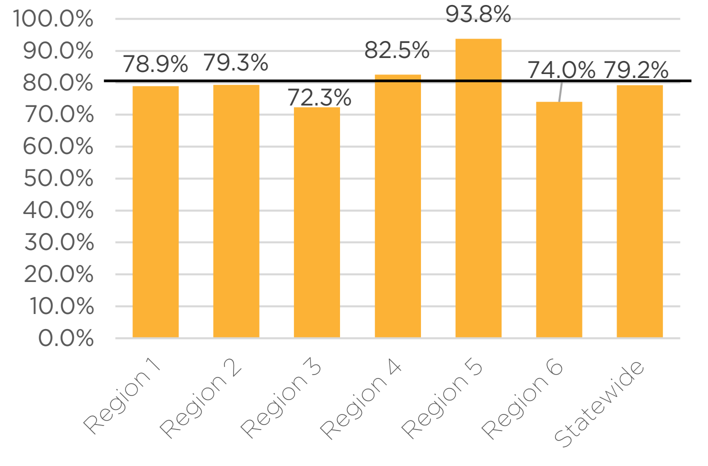
Mobility rate. MRSS programs that ascribe to the "crisis defined by family" philosophy recommend an immediate face-to-face mobile response for all MRSS referrals with the exception of callers requiring 911 intervention or who specifically request a delayed mobile response (typically within 24 hours). Establishing a mobility benchmark and holding providers accountable for reaching that benchmark has become a common approach to quality improvement for MRSS systems. Figure 6 shows an example of mobility rates across providers in relation to an established 90% mobility benchmark. In Connecticut, some providers initially struggled to achieve the established 90% mobility rate. Within 6 months, however, all providers improved their performance resulting in a statewide mobility rate above the 90% benchmark.

Figure 6. Mobility Rate



Response time. Depending on the characteristics of the state or region in which MRSS operates, states have established response benchmarks ranging typically from 45 to 60 minutes (with 60 minutes being a common approach). For instance, a state may establish a 60-minute response time, and providers are required to meet this benchmark at least 80% of the time for youth and families who require an immediate response. Figure 7 shows an example of a comparison of agency-level response times and performance relative to the established benchmark of 45 minutes. In Connecticut, some MRSS providers initially fell short of the established 45-minute response time benchmark. The state's lead quality entity worked closely with providers on the issue, and within the first year, most providers consistently met the benchmark resulting in a statewide average above the 80% response time benchmark.

Figure 7. Responses Under 45 Minutes



Other performance metrics. Additional measures can be established to meet the unique goals and challenges of an MRSS system. Examples include conducting outreach activities, increasing referrals from specific sources (e.g., schools, EDs), completing screening and outcome measurement tools, adhering to minimum or maximum lengths of stay, improving connect-to-care rates, improving caregiver or referrer satisfaction scores, monitoring training attendance rates, and demonstrating specific clinical competencies.

System Performance and Outcomes Evaluation

MRSS is a cornerstone service that should be present in any comprehensive continuum of children's behavioral health services with associated costs considered part of operating a high-quality children's behavioral health system.[8] [9] Nevertheless, a robust investment of state agency grants and Medicaid funds may necessitate an analysis of whether MRSS implementation is associated with reduced utilization and costs in the behavioral health system or in other areas. Value-based purchasing and alternative payment methods in health and behavioral health care are becoming more common across the country, and MRSS has the potential to contribute to cost savings.[10] Calculating averted costs or return on investment in MRSS is likely to require the ability to link and merge MRSS data with data from other services in the behavioral health continuum, and/or data from other child-serving systems such as child welfare, education, and juvenile justice. MRSS cost savings studies are rare in the literature and an important area for future research; however, examples of areas in which MRSS may help to reduce or avert costs have been referenced throughout this guidance document and include:

- ED visits
- Inpatient hospitalization, residential treatment, group home and other "deep end" placements
- Juvenile arrests, detention, and incarceration
- Child protection investigations, removals from the home, and foster care placement disruptions
- Chronic absenteeism and exclusionary discipline (e.g., suspension, expulsion, arrest)
- Fewer admissions at provider crisis centers (unless these function as respite centers and alternatives to the general medical ED, in which case they may be filling an important purpose in the crisis continuum of care)

Systems-level analysis can demonstrate the broader benefits of MRSS. A study of Connecticut's Mobile Crisis Intervention Services estimated a 22-25% reduction in behavioral health ED visits over an 18-month follow-up period among youth that used Mobile Crisis, relative to a propensity score matched comparison group of youth that initially presented to an ED for a behavioral health concern.[11] In addition, Connecticut's MRSS system asks EDs referring to the service to indicate whether the referral is for "routine ED follow-up" or "inpatient diversion." In SFY 2018, there were 483 episodes of MRSS coded as inpatient diversions among youth covered by Medicaid resulting in estimated averted inpatient hospitalization costs of approximately $5.4 million.

Continuous Quality Improvement Activities

The foundational elements of an effective continuous quality improvement (CQI) program are having an identified lead quality entity, an appropriate data management system, and the capacity for data analysis and reporting. The lead quality entity partners with the providers of the service to promote a data-informed culture in which the providers integrate data into their routine program monitoring, supervision, and management activities. A lead quality entity takes responsibility for data analysis, rapid-cycle reporting, and CQI activities for MRSS. The lead quality entity can also oversee training activities, ensuring the data is used to identify opportunities to build the skills and competencies of the workforce. That entity should be skilled in working as an intermediary between state agencies, other funders, MRSS providers, and the communities being served. A CQI system should be designed to ensure accountability to pre-determined access and quality benchmarks and standards, with the lead quality entity providing the consultation and technical assistance needed to yield sustainable improvements in these areas. Benchmarks related to utilization, mobility rates, and response times are typically (and minimally) the focus of provider based CQI activities. Described below are some examples of CQI activities that can be conducted by a lead quality entity, and benefits of the activities.

Providing monthly, quarterly, and annual data reports to continually monitor and improve MRSS. These reports can provide aggregate and site-specific data, comparisons to established benchmarks, statewide averages, and trend information. The lead quality entity also responds to ad hoc data requests, ensuring data is used to inform decision-making in addition to regular reporting cycles.

Sharing de-identified, un-blinded, provider-specific data reports. Transparency, a culture of openness, and a shared vision for providing a high-quality service across all locations is an integral feature in a statewide or regional MRSS program. This culture promotes provider collaboration and mutual support to troubleshoot common implementation challenges and opportunities to learn from the practices of providers that are successful in achieving benchmarks. Sharing de-identified aggregate or provider-specific data with legislators, payors, families, and the public, has many benefits including:

- Promoting accountability to high-quality service delivery
- Demonstrating trends such as the impact of rapid growth on the ability for the MRSS network to meet all stated goals (including mobility and response time expectations)
- Using data, in conjunction with other available data (such as the number of youth admitted to or boarding in EDs) to identify concerning statewide trends, thus allowing opportunities for multiple sectors to implement strategies to address challenges

Regularly reviewing results for performance improvement. Reports and results should be provided to and reviewed with each provider site on at least a quarterly basis. Additionally, consultation and technical assistance should be provided to identify strengths, best practices, and areas for performance improvement, particularly with respect to benchmark achievement. Using Plan-Do-Check-Act cycles with providers allows for the opportunity to identify challenges, develop measurable action steps, implement rapid changes, and evaluate progress. On occasion, it may be necessary to inform the state when providers are consistently unable to make progress toward improving performance. In such instances, the state may collaborate with providers to understand barriers that may not be apparent to the lead quality entity, implement formal corrective action plans or terminate contracts/remove credentialing when sites consistently underperform relative to established expectations.

Informing training and professional development. In addition to reviewing data on performance metrics, data can be regularly examined to identify training needs. Data on the characteristics of children, youth, and families served should be used to ensure training curricula appropriately prepare MRSS staff to work with the populations they serve. Trainings might be added or enhanced to address specific clinical needs (e.g., substance use, eating disorders, problem sexual behavior) or 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). Further, comparing the results of the systems' data to expected prevalence rates can identify areas of under-identification when rates are lower than expected. For example, 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 for system development. MRSS data can also identify trends that may inform system development needs or another system response. For example, if statewide benchmarks are consistently not met with respect to length of service or connection to care, due to limited care options that allow youth to be safely discharged from MRSS, that may highlight a need for service system expansion. If staffing shortages result in timely mobile response benchmarks not being met, solutions may need to come from both providers and the system to implement immediate strategies to best use existing resources and to ensure there is a strategic workforce development plan. Additionally, the needs of those receiving MRSS services can alert system stakeholders to where additional services and supports are needed. For example, if MRSS data reveals a trend of increased youth homelessness or family housing instability, this could suggest additional system partnerships (e.g., housing authority, supportive housing programs, shelters) are needed.

Supporting provider-initiated performance improvement. With many data management systems, providers can extract and analyze their own data choosing whatever data elements are important to them to improve operations or for other quality improvement activities. To make use of this feature, the lead quality entity may lend support by teaching providers the basics of extracting, sorting, and filtering data, creating pivot tables and charts, and helping them to generate ideas for areas of focus.

Conclusion

MRSS is a cornerstone of the children's behavioral health service delivery system. Considerations of quality and equity should occur early in the design and implementation of the MRSS model, setting the stage to evaluate whether anticipated goals and outcomes are achieved at the youth and family, provider, and system levels. The ability to identify, monitor and improve outcomes is dependent on having the infrastructure to do so. Infrastructure includes having an identified lead quality entity to oversee most/all quality related activities, a data management system, and other technology to collect the data necessary to measure whether goals, established standards, and benchmarks (often articulated through practice standards) are achieved. Standard MRSS metrics, at a minimum, focus on access/utilization, mobility rates, and response times. However, collecting data such as basic demographics, clinical and other characteristics (e.g., insurance status, trauma exposure, system involvement and others) related to the youth who receive MRSS services allows for a more comprehensive ability to identify concerning trends and areas for targeted intervention. CQI activities, typically overseen by a lead quality entity, are essential to ensure that the provider network has timely performance-related data (inclusive of benchmark achievement); measurable strategies to improve performance; and the training, tools, and supports to provide high quality MRSS. Available data can also be used to inform legislators, state/federal agencies, families, and other stakeholders on issues such as funding, cost-savings, and access. Additionally, it allows stakeholders to assess how well MRSS is meeting stated aims including reducing ED and inpatient admissions when clinically appropriate, and other adverse experiences such as expulsions, arrests, and foster care disruptions.

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