Using Data to Manage State and Local-level Mental Health Crisis Services

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Robert Shaw, MA

Senior Research Associate

National Association of State Mental Health Program Directors Research Institute, Inc.

rshaw@nri-inc.org

703-738-8171

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Abstract:

Managing crisis services will require the collection and use of data to make decisions about how, when, and where crisis services are provided. Also, registries of available crisis services and other services in the psychiatric care continuum will help inform policymakers about access to behavioral health services and any barriers to such access. Operating crisis services will include the provision of services based more on past activities and determining specific strategies for implementation of activities. Managing crisis services is an iterative process that requires the constant collection of data or knowledge that can be used to assess all aspects of a provider's or a state's activities to continually adjust to achieve better services. Great efforts are expended to collect data that document the activities of providers, often also with the goal of demonstrating that funding has been well spent. States and their providers do not always operate in an environment where they have all the data they could use, and often the data they collect are not fully accurate or timely. Nevertheless, even suboptimal data are valuable and can provide insight albeit broad rather than minute. Management decisions can still be made, even with data limitations, and the direction taken can later shift if subsequent data indicate that a wrong turn has been taken. States and providers will do well to continually examine data and operational practices for ongoing quality improvement for the most effective crisis services possible.

Highlights:

- States and local providers interviewed are using data to manage the provision of crisis services.
- There are always more and better data that can be collected, however the lack of ideal data should be a reminder for caution but should not completely inhibit decision making. Using data to manage crisis services is an approach to solving problems and addressing needs

Recommendations for the post-COVID-19 future:

1. Data should be collected and used to understand the ways in which the COVID-19 pandemic has altered society, including where people live, how they are accustomed and comfortable interacting with the world, and their jobs and how that impacts crisis service utilization.
2. Crisis services should be managed in a way that adeptly meets needs both within and subsequent to the pandemic.
3. Technology can be used to enhance registries and locator tools to inform data collection

T he Substance Abuse and Mental Health Services Administration's (SAMHSA's) *Practice Guidelines: Core Elements for Responding to Mental Health Crises* suggests that crisis service systems include data-driven "quality-control and performance-improvement mechanisms that operate within an organization," that demonstrate what populations experience mental health crises. Data should be used for "identifying gaps, developing remedies, and monitoring the impact of these remedies." [*] . In the next few years, states will be implementing 988 suicide call lines. Because much of the work is still in the planning phases, it is not yet known how this will be integrated into existing crisis systems.

This current paper, *Using Data to Manage State and Local Level Mental Health Services*, explores the extent to which crisis services in states and local mental health agencies collect and use data to inform their crisis service systems. Systems can either be operated or managed. The distinctions between these types of services are as follows and further delineated below:

> Operated systems: The provision of services is based more on past activities and practices and less on data.

> Managed systems: Data are collected and used to make decisions about how, when, and where crisis services are provided.

Data are often collected with one specific purpose being a way to document activities at the local level and to inform leadership at the state level and at the state level to the executive and legislative branches of government. State governments have an interest in documenting that expenditures are spent according to legislation, executive priorities, effectively, and efficiently. However, this use of data lends itself more to oversight than management.

This paper will first discuss management models to understand how states could be managing their crisis service systems from the perspective of data systems. Next, it will look at the data collected by existing and proposed service registries and discuss how those data collection elements relate to management goals the states may have. Service registries are tools states use to connect individuals to services. This paper will provide an overview the types of service registries that currently exist and then review how some states are using data to manage their crisis service systems. The ambition, depth, functionality, and use of registries vary by state, so state level examples of the use of data to manage crisis services will be presented.[1] Crisis services are often managed at the local level, so this paper will also describe at how local crisis service providers in several states are using data to manage their systems.

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[*]Where specific state and local examples are described, program leaders within those regions whose services are included in this paper had the opportunity to review and provide edits to the description of their activities and the paper as a whole.

Management of Systems and the Relationship to Data

Management is the process of dealing with or controlling things or people. Harold Koontz, an influential management theorist, classified management models into six schools in 1961:

- **Management Process** - Management is a process of getting things done through people organized into groups.
- **Empirical** - Good management is based upon the experience of what did and did not work.
- **Human Behavior** – Good management is based on good relationships.
- **Social System** - Good management is based on establishing a cooperative environment.
- **Decision Theory** – Good management is based upon using a rational approach to making decisions.
- **Mathematical** – Good management is a logical process that is based on quantifiable variables.[1]

Each of these types of management depends on turning information into decisions and actions. A goal must be decided upon and relevant data should be collected that allows managers to determine success in attaining their goals. In this paper, highlights of data collection across the crisis service behavioral health continuum to inform these various aspects of management will be reviewed.

Service Registries

Crisis Service Registries are tools that provide information about where there are open services for people in crisis who are determined to need a particular type of service, whether in-patient or in the community. These registries, however, require operations and management to ensure their effectiveness.

A well regulated Service Registry, being necessary for the optimization of the use of mental health crisis service capacity, especially inpatient capacity, and the treatment of individuals with mental illness in the least restrictive setting, is an evolving practice that is being supported as a promising practice for ensuring timely access to a complete continuum of care, in line with recommendations noted in *Beyond Beds (The Vital Role of a Full Continuum of Psychiatric Care)*.[2] A service registry, however narrow or broad its focus, is a tool whose success is dependent on its usefulness. Usefulness can be defined in many ways, such as operating without glitches and downtime, providing timely information, and reducing the wait time for access to services.

In 2020, 24 states had operating or were building behavioral health service registries. There were also regional service registries. Arizona had at least two systems, one for the northern part of the state, based in Phoenix, that was very sophisticated and successful, and one in the southern part of the state, based in Tucson, that was paper-based, and has also been successful in guiding access issues.

The existing service registries have various degrees of success with success defined as being a useful tool that allows individuals in need of behavioral health services to be placed in an appropriate care setting with minimal wait times. Registries require front-end staff entering information about service availability in their own system, as well as end-users seeking information to access services in real time. Both user experiences are critical important determinant of a registry's usefulness. It is important to note that

registries are most often used by case managers, clinicians, emergency departments, and first responders trying to place an individual in need with an appropriate service. If a user can accurately see that the services being sought are not available, then the system is successful. If the service availability information is more often wrong or not current than current and accurate, the system is not successful.

Many registries do not have real-time information. Real-time information is ideal because system users can rely upon the information in the system to be accurate at the time of their placement search. Real-time information is not absolutely necessary for a system to be successful. If a system's information is not updated in real-time but the information in the system is current enough to be relied upon by users, then the system can be successful. Even when a system has real-time information, if vacancies are scarce the system will be unsuccessful because the lack of available services will overwhelm the end-user's experience and they will eventually not rely on the system to identify proper placements of individuals being served. Thus, registry information requires balance between sufficiency of information as well as availability and accessibility of services in the first place.

Based upon site visits to states and interviews with states about their service registries, Dr. David Morrissette created a typology for these systems (Figure 1):[3]

Figure 1. Typology or Registry Systems

• **Search Engines**: "Users visit the website to view information on crisis bed facilities, their locations, services, availability, and contact information."

• **Referral Systems**: "In addition to providing regularly updated information on bed availability, the websites support authorized users to submit HIPAA-compliant electronic referrals to secure a bed using preset forms and protocols."

•**Referrals Networks**: "The bed registry site provides regularly updated information on bed availability supports users to submit HIPAA-compliant electronic referrals to secure a bed and supports referrals for behavioral health crisis and outpatient services to and from service providers who are members of the referral network."

Search engines are the least sophisticated of the system types. They intend only to make it easier for a bed to be found and a patient to be placed in care. Users of search engines have to contact facilities showing a vacancy to fill that vacancy with a patient. In most cases, currently used search engines are generally focused on psychiatric inpatient and/or crisis beds. Accessing the rest of the continuum of services is not addressed. For example, one would have to look elsewhere to schedule an appointment for an outpatient service. Referral systems are more sophisticated versions of search engines. Referral systems not only identify vacancies but allow users to send documents necessary to initiate placements to fill vacancies. Referral Networks are the most sophisticated and comprehensive version. They not only allow identify vacancies but allow users to schedule outpatient services.

Morrissette's typology is very useful in understanding the intent of the various registry systems. Getting facilities to participate by keeping their vacancy information current is the biggest barrier to success. If

the information is sufficiently accurate and the system is easy enough to operate that users come to it first when trying to identify available services for individuals, then the system will be more successful.

State Level Crisis Service Registry Data Collection

Crisis Service Registry Data Collection
Forty-three states with existing, developing, or planned crisis service registries were asked by NRI to report what data they expected their service registries to collect. Data collected by service registries can be used to document activities and to manage systems. The extent to which a state collects accurate and timely data determines its ability to use data to make management decisions. Based on the types of data reported collected by the 23 states with existing and developing registries at the end of 2020, and reported to be collected by the 20 states developing new service registries states have some or all of the following goals:

- Making services easier to access;
- Making services more available;
- Improving outcomes for people accessing services; and
- Improving the operation of the registry and service provision system.

As states are developing service registries, NRI gathered information on their effectiveness is measured. Several metrics were identified including service accessibility, service availability; improved outcomes for individuals served, and improved operations of the registry itself. Below are results of the information gathered from the forty-three states with existing or planned registries in terms of the percentage of states using particular metrics. Among the forty-three states with existing, developing, or planned registries, the following responses were provided (percentages are based on 43 states reporting:

Service accessibility will be measured by:

- Referral wait times (the time a caller waits to be referred to any type of treatment) (35%)
- Connection to treatment (19%)
- Denials of service (13%)
- Discharge wait time (the time a patient waits to be discharged from care) (2%)

Service availability will be measured by:

- The volume of service usage (47%)
- The geography of need (7%)

Improving outcomes for people in need of access to services will be measured by:

- Diversion from either hospitals or criminal justice (33%)
- Better treatment outcomes (14%)
- Contact with law enforcement (2%)

Improving the operation of the registry and the service provision system will be measured by:

- Provider compliance with service vacancy updates (14%)
- Training on the registry system or training of providers on the provision of services (14%)
- User satisfaction and the public perception of the system (7%)
- The performance of the registry system as a web tool (2%)

Mental Health Block Grant Reporting on Crisis Services

In 2020, Congress added a new 5% set-aside to the Mental Health Block Grant to assist states in establishing a comprehensive behavioral health services continuum (and Congress appropriated an additional $42.25 million to the MHBG to fund this set-aside). SAMHSA's guidance to states accompanying the new funds, emphasized the CrisisNow model of a comprehensive crisis continuum described in the 2020 National Guidelines report released by SAMHSA and the National Association of State Mental Health Program Directors (NASMHPD). [4]

In 2021, states as part of their submission to SAMHSA about the use of the new Crisis set-aside were asked to report what elements of a crisis service system they were planning on implementing broken out by prevention and early intervention, intervention, stabilization, and post-crisis interventions and supports.

Thirty-eight states responded to a SAMHSA request to report on the implementation of a crisis service system. Of these states, 55% had reached program sustainability for providing someone to talk to, while 45% were in the process of implementing this service. Of these states, 26% had reached program sustainability for providing someone to respond to a crisis, while 71% were in the process of implementing this service. Of these states, 21% had reached program sustainability for providing someone in crisis a place to go for treatment, while 74% were in the process of implementing this service.[5]

States were asked to report which of the listed crisis prevention and early intervention, crisis intervention and stabilization, and post-crisis intervention and support programs they were or would including as part of their crisis service system.

Elements within Mental Health Crisis Service Systems

In the NRI's 2020 State Profiles data collection, states were asked to report on the types of crisis intervention services provided by the SMHA and the number of persons receiving these services during the fiscal year 2019. This information was augmented by data collected by NASMHPD in 2021 on crisis services provided by the states. The number of persons receiving a service within a year is not a measure with any depth. It is not clear from the data how much of the states are covered by the particular crisis services asked about. In many states, crisis services are organized locally and the state may not have a great role in their provision. What is clear is that only a small number of states with particular crisis services had easy or ready access to this service data. It is difficult to make evidence-based decisions without evidence. Management without information is difficult.

Crisis Prevention and Early Intervention

Suicide prevention was reported to be an element in the crisis service systems, planned or operational, in 90% of states. With the implementation of 988 hotlines, this is likely to change to all states. Safety Planning, a tool that results in a list of warning signs, coping strategies, and resources a person in crisis can use when experiencing future crises, is a system element in 80% of states.

Data reported by states via NRI's State Profiles for 2020 and data collected by NASMHPD in 2021 show that at least 78% percent of states currently have 24-hour crisis hotlines, with one state not reporting. NRI Profiles data show that the rate of use of crisis lines ranged from 82 to 2,684 per 100,000 of the population with an average of 789.

As planning continues with the build out of a 988 response, "988 systems" will need to connect suicidal people in crisis with appropriate services. States with successful referral systems will be well placed to provide 988 system operators with information that will allow them to connect callers with appropriate services at all levels of intensity. Not all callers will require mobile crisis intervention, yet a search engine that only reports psychiatric bed vacancies will be inadequate for the needs of a 988 system.

Crisis Intervention/Stabilization

Crisis Intervention Team (CIT)/Law Enforcement was reported to be an element in the crisis service systems, planned or operational, in 94% of states via NRI's State Profiles for 2020. CIT provides law enforcement with training that allows officers to more effectively interact with individuals experiencing a behavioral health crisis and thereby reduces stigma and helps divert people from jails to treatment.[6]

Mobile Crisis Outreach, which is community-based mobile interventions for people experiencing a mental health crisis,[7] was reported to be in an element in 92% of states. Data reported by states via NRI's State Profiles for 2020 and data collected by NASMHPD in 2021 show that at least 73% percent of states currently have mobile crisis programs with six states unknown. Profiles data show that the rate of use in FY 2019 ranged from 9 to 1,317 per 100,000 of the population with an average of 394.

Crisis Residential/Respite services, always available, no-wrong-door facilities that access and treat people experiencing a mental health crisis,[8] were reported to be an element in 88% of states. Profiles data and data collected by NASMHPD in 2021 show that at least 57% percent of states currently have less than 24-hour crisis stabilization units, with five state unknown, and at least 69% have more than 24-hour crisis residential units, with seven states unknown. An expansion of crisis stabilization and crisis residential programs should occur in the next couple of years. Profiles data show that the use of less than 24-hour units ranged from 1 to 1,070 per 100,000 of the population with an average of 270. Profiles data show that the use of more than 24-hour units ranged from 2 to 197 per 100,000 of the population with an average of 67.

Hospital Emergency Departments and Urgent Care were reported via NRI's State Profiles for 2020 to be an element in 86% of states. In areas following the Crisis Now model of mobile crisis teams transporting people to crisis stabilization facilities, thereby diverting away from hospital emergency departments, there would be a limited role for hospitals in addressing mental health crises.[9]

The Living Room Model (Assessment/Triage), 24-hour community crisis centers that offer people in crisis a calm and welcoming space where they receive treatment, support, rest, relaxation, and referrals to other services,[10] was an element in 47% of states.

Of the states responding to the NRI survey, 27%, reported including Open Dialogue as an element in their service array. Open Dialogue is a practice developed in Finland that takes a social perspective to helping people with mental illness by including family members, friends, and co-workers in the treatment and wellness discussions.[11]

Post Crisis Intervention/Support
Connection to care coordination, follow-up clinical care, follow-up outreach, and follow-up support were reported to be elements in the crisis service systems planned or operational in 86% of states. Care coordination refers to the coordination of care across behavioral health and general healthcare.[12]

Peer Support/Peer Bridgers are reported to be elements in 84% of states. Peer Support is the process of giving and receiving support, knowledge, assistance, and skills between people with unique lived experience with mental health conditions.[13]

Peer Bridgers are peer support specialists who assist individuals hospitalized for a psychiatric illness return to their community.[14] Recovery community coaches/peer recovery coaches will elements in 69% of states.

Family-to-Family Engagement and Follow-up crisis engagement with families and the community are elements in 67% of states. Recovery-oriented community organizations are elements in 59% of states.

Using 911 Call Information for Service Prediction
Implementing 988 suicide hotlines means that states will have the opportunity, if 988 systems collect and share data, to use data to manage their crisis service systems in ways that were previously unavailable. A lot depends on how the 988 hotlines are implemented and how data elements are conceived and implemented.

For at least a decade, researchers have been using 911 call data to attempt to predict hotspots using spatial analysis to better inform policymakers.[15,16,17] Researchers have also used 911 data to attempt to predict frequent users of emergency medical services.[18] Successful data analysis is based upon accurate data. 911 call centers are typically organized locally and often have used different technologies and methodologies, which hampers the collection and analysis of 911 call data.

Beginning in 2003, the United States Department of Transportation, National Highway Traffic Safety Administration (NHTSA) has worked to define and help states implement Next Generation 911 (NG911) services that allow for the interoperability of data and call center hardware and software.[19] As of 2019, 33 states have adopted a statewide NG911 plan that includes data uniformity and automated data handling.[20] The National Emergency Number Association (NENA) has standards related to answering and routing calls that include the number of answered calls, attempted calls, disconnected calls, diverted calls, abandoned calls, misrouted calls, call duration, and call hold time.[21]

Call centers for 911 are not necessarily service providers, rather they are trained to respond to a variety of emergencies and route the calls to the appropriate first responders,[22] whereas hotline call center staff should be clinicians who are an integral part of the clinical response to a call.[23]

The National Suicide Prevention Lifeline, collects information on hours of operation, speed of answer, contact handling time, on-hold time, cost per call, service level, etc.[24] These metrics are related to the availability and accessibility of hotline services rather than the location of the person in crisis, type of crisis, demographic information on the callers, percent seen by a mobile crisis team, percent forwarded to crisis respite or residential facilities.

A comparison of 911 call centers and suicide hotline data analytics to those of a commercial business such as Domino's Pizza may be instructive. Domino's considers itself to be a technology company that delivers pizza. Domino's tracks customer data across its franchises to determine buying patterns, including location.[25] Domino's has a financial incentive to optimize its resources in pursuit of increased sales. Ideally, a behavioral health crisis service system would reduce the need for its services by reducing the incidence of crises among the population it serves. They are similar in that location, type of service/pizza sold, use of materials, use of staffing, frequency of use, customer satisfaction, etc. are metrics that should be tracked and analyzed to optimize performance and efficiency. These data can answer questions such as where to place service locations, appropriate staffing levels based on historic usage data, and types of services to be provided.

Use of Data to Manage State and Regional Crisis Service Systems

Interviews were conducted with six state mental health authorities (SMHAs) and four regional providers of mental health crisis services. The states were selected based upon information that was gathered about them through previous interviews conducted with them for previous papers on crisis services and service registries. The regional crisis service systems were selected based on suggestions made by the states interviewed and, in the case of Grand Lake in Oklahoma, based upon an interview about the coordination and cooperation established between the mental health system and law enforcement.

These examples are presented in alphabetical order, by state, and not hierarchically. States differ in how they organize the provision of public mental health services, they have unique geographies, political histories, funding structures, and goals beyond optimizing the provision of services to people in need. Nonetheless, the following case studies are illustrative how crisis services data and registries are coming together as a crisis continuum of services is realized in particular regions.

Colorado Office of Behavioral Health

Colorado's crisis service continuum is split between Rocky Mountain Crisis Partners, which is the crisis hotline and text provider, and four Administrative Service Organizations (ASOs) that are responsible for seven regions. Colorado Office of Behavioral Health (OBH) directly manages the provision of crisis services at the state level, including the statewide crisis hotline, which has been contracted out to Rocky Mountain Crisis Partners. The OBH also manages the ASO contracts. The ASOs manage the provision of services and the contracts with the service providers in the seven regions. Colorado Crisis Services began

operating in 2014. Previously, and currently, the state's Community Mental Health Centers (CMHCs) provide emergency services. The services provided by the CMHCs significantly overlap the services provided through Colorado Crisis Services. The CMHCs are not all the same, often because of regional differences in funding and staffing. Colorado has one large urban and suburban area stretching from Fort Collins in the north, through Denver and its suburbs, and south to Colorado Springs. Every part of the system is expected to work seamlessly with every other part. Services are intended to be boundary-less in the sense that the closest, available mobile crisis team is supposed to take a call, even if the service location is outside of their region.

The state uses a broad definition of a mental health crisis, one defined by the caller. However, there is a narrower crisis definition used by the providers (a non-life-threatening situation in which a person experiences an intensive behavioral, emotional, or psychiatric response triggered by a precipitating event. The person may be at risk of harm to self or others, disoriented or out of touch with reality, functionally compromised, or otherwise agitated and unable to be calmed. If this crisis is left untreated, it could result in a behavioral health emergency). Individuals who believe they are in crisis are encouraged to call for help. The provider then assesses the situation and responds appropriately, to serve individuals in the least restrictive setting possible.

The SMHA data and analytical focus are often on collecting and summarizing information to provide to the legislature and less on using this data for managing the performance of providers. This is partly a result of the indirect contractual relationship with providers.

The SMHA has been collecting crisis system data at an aggregate level to look at trends and changes. They track call center service utilization by client demographics, call abandonment rates, call response times, time on call, etc. Since the ASOs have a contractual relationship with the providers, the performance of the providers is managed by the ASOs and not at the state-level. The state does set some of the terms of the ASOs contracts with providers and uses data to amend contracts to improve service provision. The SMHA does not have an existing crisis service registry though they are developing one that will collect client-level data. With client-level data, they will have a greater ability to measure performance.

The crisis line is currently and has previously been monitored through performance metrics such as incoming volume, abandonment rate, and activity duration. Currently, there is an expectation that at least 80% of calls are answered within the first minute and the abandonment rate remains 10% or lower. When, due to COVID-19 pandemic-related issues such as staff turnover and switching to working from home, the performance began to lag, the SMHA increased the resources available to the crisis line contractor.

The SMHA tracks the utilization of mobile crisis services by client demographics, frequency of use by individuals, and location of where the services were provided, and analyzes for trends. One of their goals is for mobile services to reach clients where they are and not serve people in places where there are already available mental health services, such as at schools.

Colorado tracks the performance of less than 24-hour crisis walk-in centers and the more than 24-hour crisis residential facilities, including looking at length of stay and tying length of stay to diagnoses. They have also looked at the availability to accept law enforcement drop-offs and whether the centers are pre-screening individuals to rule them wrongly out of services. It is expected that walk-in centers be able to receive and process anyone.

The SMHA has used data to update its follow-up requirements to keep people served at an outpatient level with more wraparound services. The requirement changed from follow-up with individuals at one- and five-days post-discharge to one, three, and ten days post-discharge. They are tracking the success of this update, but it was too early at the time of the interview to determine its success.

For states just starting to build crisis data systems, Colorado suggests that robust relationships are between all community partners, including setting performance and outcome standards. Without defining performance expectations and defining success, a program cannot determine success just through aggregate data reporting. It is also important to clearly define the data you are expecting your providers to collect otherwise they may default to lumping much of their data into the "Other" category.

Colorado – Signal Behavioral Health

Signal Behavioral Health Network (Signal) is contracted by the state of Colorado to provide crisis services in three regions covering the Boulder-Denver metro area along with outlying areas that are either in the mountains or on the plains. Their region's mental health crisis care continuum includes a statewide call center, managed by an entity independent of Signal Behavioral Health, mobile crisis teams, crisis stabilization units, and in-home and facility-based crisis respite services. In the past year, crisis services for children and youth have begun to get more attention with consideration for how to better serve the unique needs of this population.

The call center is responsible for dispatching mobile crisis teams and they provide telephonic crisis and peer support to callers across the state of Colorado. The agency contracted to administer the call center also operates the national suicide prevention hotline in Colorado. Signal manages but does not operate the providers of crisis services, including the mobile crisis teams, the walk-in center, crisis stabilization units, and the respite service providers. Of the calls received for their regions by the statewide call center, only about one percent result in the dispatch of a mobile crisis team or a referral to a walk-in center. There are between 500 and 600 calls per month statewide to the call center.

As the contracted administrator of the crisis services in Denver region, Signal Behavioral Health operates as a representative of the state, and is responsible for crisis services statewide. Signal collects data from the providers that document their activities, such as the number of people served, types of episodes, etc. That data is forwarded to the SMHA.

Signal uses data to look at service trends by provider, such as changes in use patterns. For example, when children started to go back to school following the outbreak of the COVID-19 pandemic, the call center experienced an influx of calls from and related to adolescents. Signal is required by contract to

develop performance plans for the providers in their region and seeks to understand what providers are doing and experiencing to help the provider better manage their activities, such as suggesting staffing or programmatic changes. Signal receives episodic and aggregate data from their providers but not claims data. When collecting data from their various providers, Signal is at the mercy of the providers' data systems, which vary in what and how data are collected.

Signal is not in a position to manage the overall mental health service system in their regions since those operate largely independently from the contracts that Signal oversees. It is often the case that the providers Signal oversees are also providers of non-crisis mental health services but it often happens that a person in crisis receives services from providers who are not their normal service providers and therefore may have access to little information about the individual whose crisis they are trying to resolve.

To reduce the use of 911, emergency rooms, and law enforcement when addressing individuals in crisis, Signal contracts with a private ambulance company to transport the small number of individuals seen by mobile crisis teams who need higher intensity services. Without the ambulance, the mobile crisis team would have to involve either law enforcement or emergency rooms, dispatched by 911 to transport the individual to facility-based care such as a crisis stabilization unit, respite facility, psychiatric inpatient care, or withdrawal management.

The crisis stabilization facilities in the regions that Signal manages do not operate as walk-in centers, as these are currently distinctly separate services in Colorado. Some of the facilities require medical screens and often not the same medical screen by all facilities before they admit individuals. The requirement for medical screening, which can include glucose, COVID-19, and pregnancy testing, has been adopted by facilities out of an abundance of caution. The caution is in part a result of the architecture of the facilities, which do not have sally ports for Law Enforcement to drop off individuals. The facilities try to avoid what otherwise would be a mix of all ages, from children to adults, and levels of intensity of behavioral needs.

Delaware Division of Substance Abuse and Mental Health

Delaware's adult crisis service system within the Division of Substance Abuse and Mental Health, includes crisis call centers, mobile crisis teams, 23-hour receiving centers, and two crisis respite centers (for supports over 24 hours in duration), was established more than forty years ago. The system is operated and staffed by state employees and is connected to their electronic bidirectional referral system, Delaware Treatment & Referral Network (DTRN), powered by OpenBeds. There is a separate, parallel crisis service system that services youth because, in Delaware, youth in need of mental health services are served by a separate state agency.

Adult crisis services are divided regionally into two crisis service teams. The call center staff are integrated with the mobile crisis teams, meaning that the crisis team members who respond to calls at the call center are also the ones who would travel to any person in crisis, if that is deemed necessary.

That means that a person in crisis who receives mobile crisis services will be visited by the person who took their call. Crisis services are staffed by trained mental health professionals and peers.

Delaware uses a broad, person-centered definition of a mental health crisis. An individual is in crisis if that individual feels that they are in crisis. Whether or not a caller is visited in person is dependent on the presented level of dangerousness. If the crisis is not dangerous, a mobile response would depend on whether the situation warrants such a response and the availability of the team members to travel. The crisis teams use OpenBeds to arrange appointments for people in crisis. The crisis teams can also connect callers with the mental health professionals who are most familiar with the person, assuming that they are available, and the caller is previously connected to care.

Delaware currently collects call center data through paper-based call logs. The information in the logs is aggregated into a spreadsheet then reported to the Division's headquarters that use that information to track whether the call centers are meeting their goals. The state is in the process of digitizing this data collection. Using a centralized database, the state can look up whether those individuals are already in care and whether or not they are attending their appointments.

Delaware uses a data dashboard to track the operations of its crisis service system. Included in their dashboard is the ratio of calls into the crisis service system versus calls out, such as calls to providers, the hospital diversion rate, and the types of services provided, including case management, counseling, medication checks/medication monitoring, psychiatric evaluations, screening, transportation, and wellbeing checks. Targets have been set for the measures and the SMHA tracks how well their system achieves those goals. Currently, Delaware has been meeting their goals. Of all the items tracked, Delaware considers response time the most important measure.

At the call center/mobile crisis team level, the state tracks incoming and outgoing calls, including the number of such calls, the response times, and the interval between the initial call and the arrival of a mobile team. Outgoing calls are calls made by the crisis team staff including to the police or the service provider who typically cares for the individual in crisis. The SMHA tracks the number of responses, the resolution of the crisis, the number of types of responses, calls by senior citizens age 62 years and older, detentions/no detention, and voluntary admission/no admission.

Crisis team members must have mental health screener certification, which requires a 40-hour training course to complete a 24-hour detention, meaning that the team members will have detained someone for no more than 24 hours. The state does not have specific hiring goals that address cultural competency and diversity, but they do convene culturally diverse hiring panels. Spanish is the predominant second language in Delaware and, as of this writing, there are no crisis team members who are fluent in Spanish. Workforce recruitment challenges are not unique to but exist in Delaware, especially challenges hiring staff who are fluent in languages other than English. To bridge language gaps, crisis team members use the computerized Language Line service.

The Delaware Division of Substance Abuse and Mental Health also have a partnership with the Delaware State Police. As a result of this partnership, several police stations furthest from a call center are staffed with a mental health professional, who goes out on calls during the evening shifts. The pilot locations will soon launch a pre-arrest diversion program, collaboration between the SMHA, the State Police, and the Delaware Department of Justice. This pilot program was more a result of an interest in collaboration between the State Police and SMHA and the amenability of the particular police station than a result of using data to determine unmet need.

Currently, two 23-hour crisis stabilization centers are contracted but not operated by the state. Delaware is currently renewing the contract. The new contract will add a third such center to one of the three total counties, which currently does not have such a center. The success of these centers is, in part, determined by looking at the number of people admitted to a crisis stabilization center who do not end up requiring hospitalization.

There are two, greater than 24-hour crisis respite centers each with three to four beds. These beds are largely used by people who were previously at one of the two 23-hour centers. As with the 23-hour centers, Delaware look at the number of people admitted who do not end up requiring hospitalization to determine their success.

In addition to the previously mentioned crisis services and the separate and parallel youth crisis service system, there is also Lifeline, the suicide prevention hotline.

Crisis services in Delaware are not currently billed but are provided regardless of insurance or ability to pay. They can track how much the services are costing the state and what the cost per client is.

Figure 2: Utilization by Type of Service
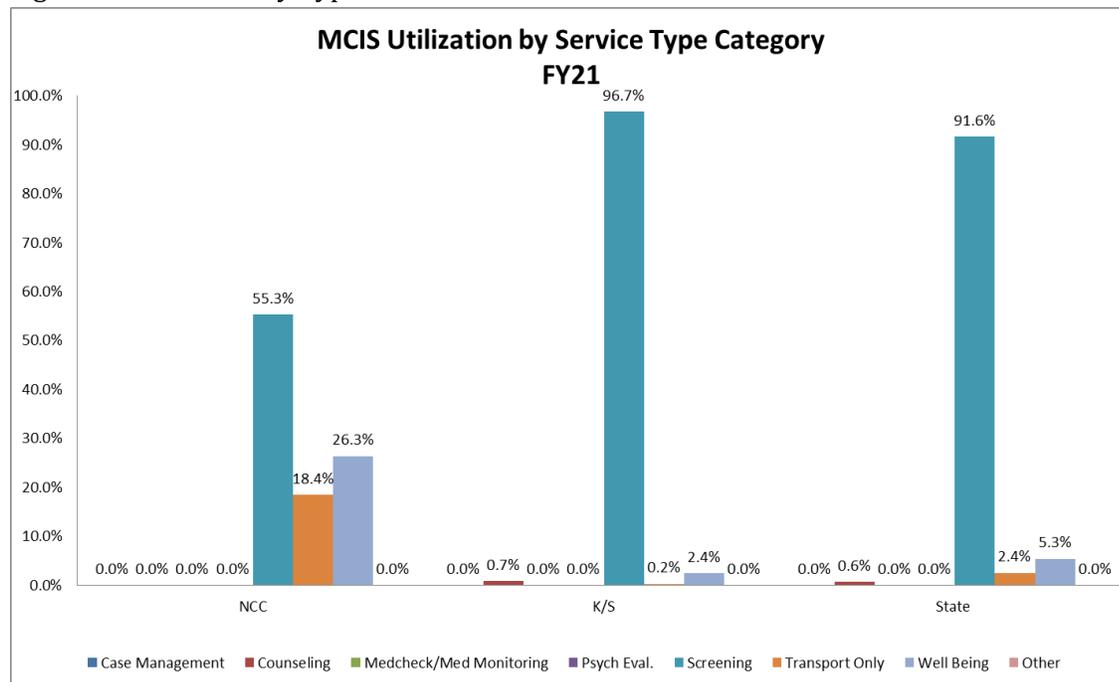
For states just starting to build a crisis data system, Delaware, whose system has been in place for more than forty years suggests that states should track response time, the total volume of calls, and the ratio of mobile crisis responses to the total number of calls.

Georgia Department of Behavioral Health and Developmental Disabilities helped develop the Crisis Now model of mental health crisis services and has continually worked on this endeavor for many years. Accordingly, they use a broad definition of a mental health crisis, meaning they allow the individual to define their crisis. The state runs a central crisis call center that coordinates access to care for all individuals, not just those in crisis. The call center is connected to a service registry which allows for individuals to be connected to treatment at a variety of levels, including mobile crisis services, but also for non-crisis services. In addition to mobile crisis teams, the call center can connect individuals with their Assertive Community Treatment (ACT) team, assuming they are receiving ACT services, and even dispatch ACT team staff to the individual in crisis. The crisis call line is available 24 hours a day, seven days a week. Additionally, there is a peer-run warm line that is available from 8:00 a.m. to 8:00 p.m. The goals of the system are to connect people to treatment in such a way that the incidence of crises is minimized and the individuals are served in the most helpful way possible.

To achieve their goals, Georgia's SMHA has a robust service registry that not only connects people to treatment at all levels, from community services to inpatient services, but the registry also helps Georgia collect data at a state level to manage its crisis service system.

The SMHA receives daily, weekly, and monthly reports that help them actively manage their system. For example, they receive daily reports of the volume of calls, weekly reports on items such as the call abandonment rate, the average speed to answer, which is broken out by types of callers. Since their call center is used for non-crisis purposes and not just to respond to crises, they have known callers, such as clinicians, who use the system to place individuals in care at a variety of levels of intensity. Monthly, they get reports on the average speed to answer a call, the abandonment rate, and the hold-time. The hold time or time a caller is placed on hold is an important metric for them because their goal is to be as responsive as possible.

These data reports are used by Georgia to manage their system. For example, when they found that they had a high hold time, they used their data to figure out what factors were causing callers to be put in on hold and then made changes to their system to improve their efficiency and the caller experience. They implemented a voice recorder that would break into the hold music and provide information to callers. To address hold times on calls, they changed the way that the staff handed calls off to clinicians, so the staff remains with the caller as they are waiting to hand them off to a clinician. Additional staff was required to better handle the volume of calls more rapidly. The system is experiencing a staffing shortage. To inform their staffing decisions, Georgia has analyzed when their call centers are the busiest (Mondays) and least busy (Sundays except for Mother's Day).

To manage their mobile crisis teams, Georgia looks at the response times, specifically whether teams respond to calls in a reasonable time, crisis response cancellation rates, linkages to treatment, referrals types, service denial types, and repeat crisis interactions with the same individuals. Their goal is a diversion to less intensive levels of treatment for 85% of mobile crisis responses. They also look at the staffing of the mobile crisis teams, including whether not unfilled positions are open for longer than 12 weeks. The data they collect has helped provide them with an understanding of service trends, such as areas with high incidence rates, trends for service requests by time of day and day of the week. They use the data and their analyses to work with their providers to better inform staffing decisions.

In most cases, Georgia's less than 24 hour and greater than 24 crisis facilities are the same facilities. To manage this level of care, they collect a lot of data and use a variety of regular and ad hoc reports. Their goal is for their facilities to improve how they serve their communities. They look at care denial rates, occupancy rates, diversion to lower levels of care, and length of stay, among other measures. Before they propose opening a new facility, they seek to make sure that their existing facilities are used most effectively.

Overall, Georgia uses their data to create forecasting models to identify what parts of its system should change to better meet the needs of its constituents. Their robust service registry allows them to understand service usage at all levels of care provision, including their capacity and the utilization of that capacity.

For states starting out in creating a more robust crisis service system, Georgia recommends that they focus on knowing what problems they are trying to fix. For Georgia, the most fundamental issue for them was to optimize the use of their existing services. The overall integration of their services in a service registry that can connect people to treatment and tracks the use of treatment service capacity allows them to continually work to improve their system and not just address possibly momentary crises. To create the analyses used to inform the management of the system, they have found it very beneficial to have data analysts. Their data can inform decision making. Making changes necessitates analyzing the consequences as part of a continuous process of improvement.

As robust and extensive as Georgia's data collection system is, there are still areas where they would like more information. Their system was not built overnight and is the result of additions and subtractions based upon their experience. They would like to have more information on how involuntary commitments, are made and the appropriateness of these commitments. They would also like to track recidivism more closely to determine what is driving recidivism rates and how they could change their system to improve these rates.

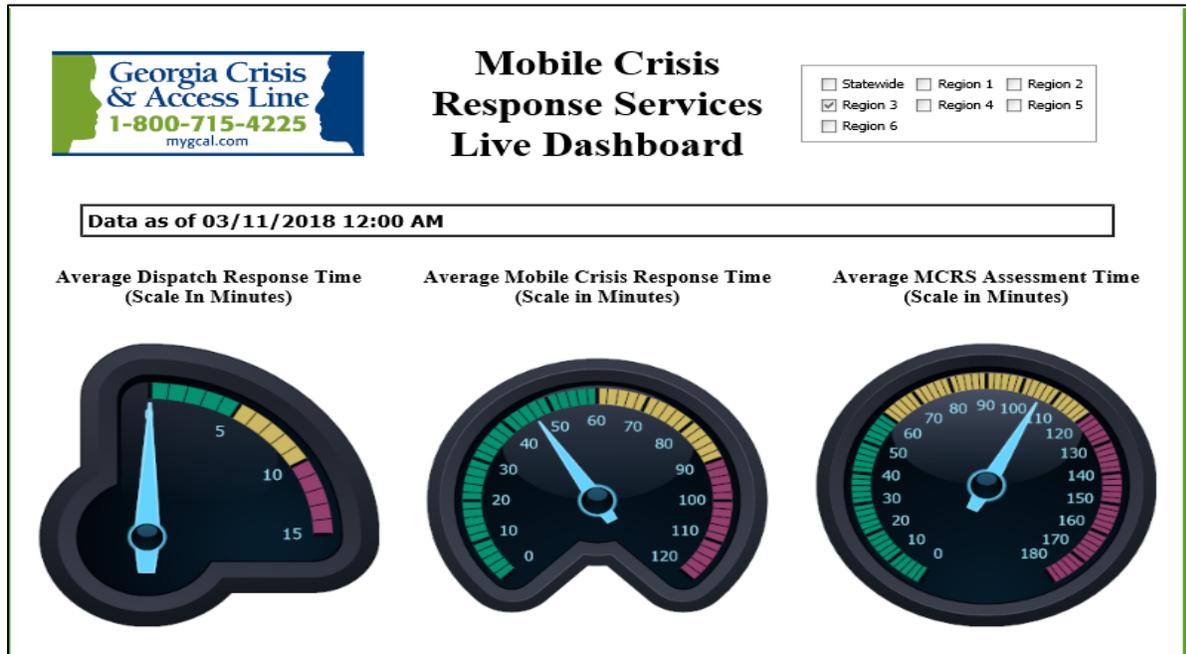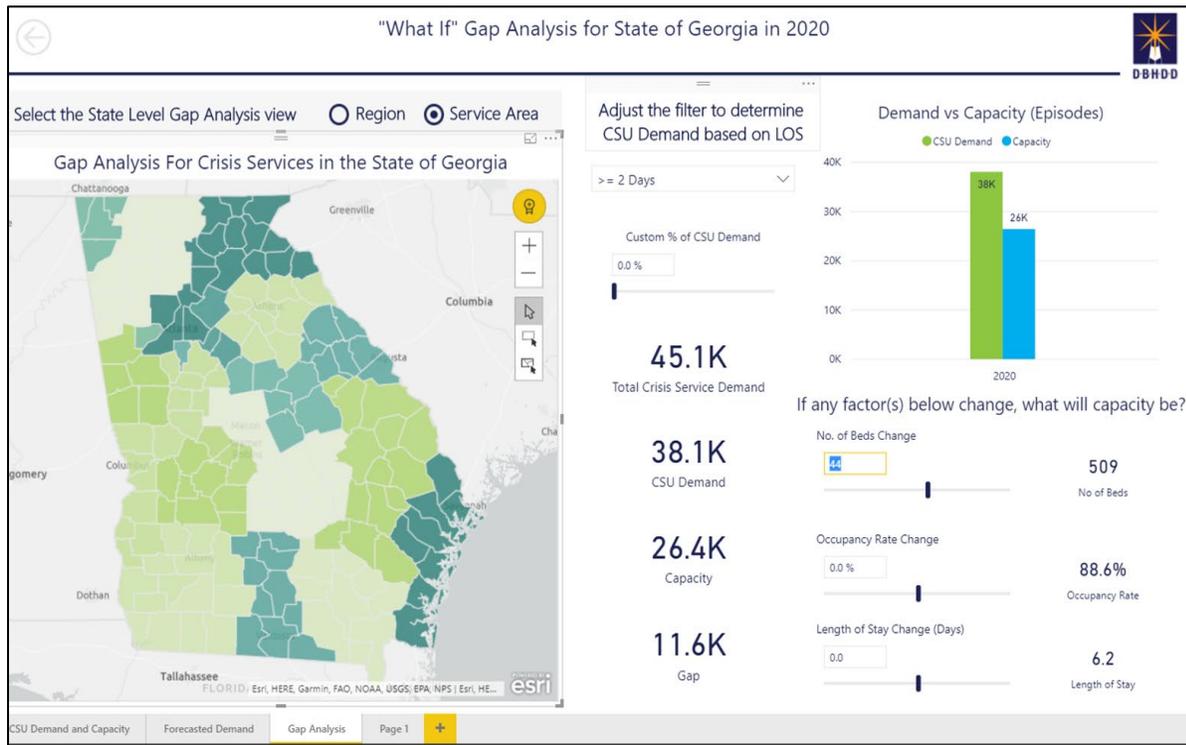Figure 3: Georgia Mobile Crisis Response Services Dashboard

Figure 4: Georgia: "What If" Gap Analysis for Crisis Services

Georgia –Southwest and East-Central Regions

NRI spoke with representatives of the Southwest and East-Central regions. Southwest serves a largely rural population while East-Central serves a mix of rural and urban populations. The regions are overseen by state personnel who work in coordination with the agency's central administration as equal partners.

Georgia's approach to management, including at the regional level, is that they focus on the goal of providing services at all levels of intensity to their constituents most efficiently and appropriately possible. They work with providers to understand their needs and concerns and help providers from the various parts of the crisis service continuum collaborate to better accomplish their goals. Providers are encouraged to share what is working and what is not work so that all can benefit from the experience.

The regions use data to look at trends and to solve glitches. There are regular meetings, temporarily interrupted due to the COVID-19 pandemic. These meetings are still occurring but have shifted from in-person to virtual meetings.

Though the call center is a statewide entity, rather than regional, the call center interacts with local providers. If that interaction is not running as smoothly as desired, for example, if there are long wait times, that information is relayed to the central administration for them to address with the call center.

The regional managers have monthly meetings with the mobile crisis teams to review their activities, such as response time and number of calls. They help the crisis teams better manage their activities by identifying cyclical trends or any other issues that have arisen either within the teams or in the interaction of the teams with other providers, such as hospitals. If a particular hospital is determined to be overcalling the mobile crisis team, which causes stress to that part of the system, they will work with the hospital to retrain them on the appropriate and intended use of crisis teams.

In Georgia, the less than 24-hour and more than 24-hour crisis respite facilities are generally the same facility. The regional managers meet with these facilities with the mobile crisis teams to foster a better understanding of the system and thereby improve the relationship between these different service providers. For example, in the past, there has been a misunderstanding by the centers that they were shouldering more of the burden of providing crisis services than they were. Using data, a regional manager was able to show that 90% of mobile crisis calls result in the individual staying in the community rather than coming to a respite center.

The mobile crisis providers, who are not state employers rather contractors, meet quarterly with law enforcement in their region, providing the Law Enforcement with continuing education credits to inform them about how the crisis system operates. They begin the meetings with a presentation that shows what is being done, where people are being served, what needs to be done, and how law enforcement fits into the crisis service continuum. These meetings have been temporarily suspended due to the pandemic.

The regional managers work to make sure that their stakeholders understand the workings of their system so that the stakeholders can use it as intended. However, the system is designed to be flexible

and its design is informed by information and experience. They are always open to change if that change better achieves the overall goal of the system. For example, it became apparent that there were differing, non-standardized understandings of the definition of autism. When that issue was identified, the state better defined that data element. The providers are encouraged to feel that they are partners with the state agency and with other providers. The state uses any feedback provided to them to make changes to their system.

Oklahoma – Grand Lake Mental Health Center

Grand Lake Mental Health Center (GLMHC) serves twelve counties in northeast and northcentral Oklahoma with a population of 480,000 and covering 10,000 square miles. The region is rural, but they have 22 clinics in the twelve counties.

Grand Lake is very good at collecting and using data. They believe everything they do should have an attached data point, and that their data should be used. As a result of their rethinking of the provision of all services, not just crisis services, they have reduced hospitalization by 80-98%, depending on how the reduction is estimated. The implementation of their reimagined service system was more than paid for by the cost savings that their new system realized. They have also saved time and money for local law enforcement by drastically reducing their travel and wait times as they bring people in crisis in for services. They have also reduced jailings by making it easier for law enforcement to transport people in crisis to treatment than to jail them.

Grand Lake has been able to achieve these successes by creating a service system that can provide treatment to individuals, whether they are in crisis, whenever they want it and wherever they are.

The basis of Grand Lake's system is their crisis service centers which can individuals in voluntary services as well as those under an emergency detention order. Their goal is for there to be a crisis service center no more than 45 minutes from any individual in their 10,000 square mile region. While they have not yet met this goal, they are on the way to meeting it. Since many people in crisis are transported by law enforcement, they try to locate their crisis centers close to sheriff's offices, which reduces transport time for law enforcement. Grand Lakes tries to transport people voluntarily because they have found that if you eliminate a person's resistance, you can immediately start their recovery. More than 95% of the people they transport volunteer to be transported. Grand Lake also works very closely with law enforcement to encourage their willing participation in the Grand Lake's treatment delivery processes.

Individuals in crisis begin their treatment as they are being transported to a crisis center. This is possible because Grand Lake sponsored the development of the MyCare App, when loaded onto an iPad it puts the iPad into a single app Mode, making it, in their opinion, the "perfect Mental Health machine." This app connects an individual with a clinician the moment they encounter a peace officer and can be used as they are being transported as there is a GLMHC iPad in every law enforcement vehicle in the 12 counties they serve. A GLMHC iPad is given to individuals when they are discharged from the Urgent Care facilities for their future use, reducing crisis transports and instances of relapse. Grand Lake pays for the data fees and quality for a reduced rate as first responders. The distribution of the iPads with the

MyCare App began with the individuals who have the most need because they reasoned that the greatest benefit, and therefore cost savings, could be realized by better serving the individuals most frequently in need. The savings realized from this group funded the more widespread distribution of iPads to people less in need. Currently, more than 5,000 iPads have been distributed. They have found that it was easier to get buy-in from stakeholders once they were able to demonstrate their initial successes.

Individuals with IPads can access services, or arrange for appointments, whenever they want to, even if they are out of the region on vacation. Their no-show rate for appointments has declined. They have reduced hospitalization. There is no on-hold with the app. The app connects individuals with staff at the crisis centers. Since the crisis center staff are already at work, there are no extra personnel needed to staff the telehealth available with the app. If an individual in crisis does not already have an iPad with the app and is in crisis, they can contact a 24-hour crisis line and a mobile team can go out and meet the individual. After the COVID-19 pandemic began, Grand Lake was well prepared to provide contactless mental health treatment. For example, to reduce potential COVID-19 exposures they even delivered iPads to people at their home.

Grand Lake has been successful at achieving its goals of reducing hospitalizations and improving the cooperation of law enforcement because they have approached achieving their goals with an open mind and with data. Data serves the purpose of quantifying their situation and documenting the success or failure of the systemic changes they try. For example, they began with more than 1,100 inpatient hospitalizations per year. To reduce hospitalizations, they created new levels of care, the crisis service centers. They measured the inpatient hospitalizations and the use of the crisis centers. They found that, within five years, hospitalizations were reduced by 80-98%. The reduction of hospitalizations did not result in increased use of the crisis centers. The use of the crisis centers also decreased. They were also able to document the mileage and hours saved by law enforcement. Since the state was paying for the law enforcement's mileage used to transfer individuals to treatment, Grand Lake was also able to calculate those cost savings. There are likely other cost savings in addition that were not calculated, such as the time saved from long waits in emergency departments by law enforcement.

Grand Lake has not only used data to reduce hospitalizations but also has focused on improving the overall health of the individuals they serve... When clients are at the crisis centers, full laboratory studies are available to examine appropriate levels for psychotropics as appropriate, but also do examine medical issues. For example, providers are able to take basic lab tests to look at cholesterol levels and assess for urinary tract infections. When the COVID-19 pandemic began, they started tracking the impact of the pandemic on their clients.

Leadership at Grand Lake are invested in ever improving outcomes. For example, there has been discussion regarding examining data around suicides. Another consideration is in ensuring that they provide a comprehensive Mental Health System that treats people in the least restrictive environment, which in turn will prove to be the least expensive. By bringing technology and agencies providing services together, it is also hoped that people in need of mental health services will receive them, rather

than be routed to the criminal system. Mobile technology has been an innovation at Grand Lake that is helping services tip toward solutions.

Utah Division of Substance Abuse and Mental Health Treatment Services

The Division of Substance Abuse and Mental Health Treatment Services has been transitioning its crisis service continuum towards the Crisis Now model and is expanding the availability of crisis services in the areas served by their 13 local mental health authorities that contract with the state. Crisis services are mandated to be available statewide 24 hours a day, seven days a week. There is one crisis hotline and a warmline that cover the entire state. Mobile crisis teams are covering all of Utah's regions and the crisis walk-in facilities adhere to the Crisis Now model that includes policies of no refusal. Individuals decide whether or not they are in crisis and the system responds to their specific needs. Their goal is for services to be available statewide with response times of half an hour for law enforcement and one hour for the mobile teams in the more densely populated areas of the state and within two hours in the rural areas.

Utah uses the data collected by their system to track how people move through the continuum of crisis and what happens to them and how responsive the crisis system is to the needs of their users. Among the data elements they use to track the use of their system is the duration of calls to the crisis line, as well as the time it takes for a call to be answered.

Staffing the call center with only clinical staff has proven financially challenging, and impractical given general workforce challenges in recruiting and retaining clinicians across the state. Thus, leaders from Utah are considering other models that might be equally effective. For example, they were able to determine that clinicians tended to spend longer with users on the phone and engaged with callers as they might in therapy. Review or processes and practices indicated that for crisis call responders, it may be more prudent to identify the current, and future, services needs of that user. Call center staff will continue to be required to be appropriately trained, but they will not need to also be clinicians. The mobile crisis teams consist of a peer and a clinician in the denser populated areas and at least a peer and a case manager in the rural areas.

In monitoring the success of the different parts of their crisis service continuum, Utah is primarily concerned with referral rates. For example, how many mobile crisis team visits did calls to the crisis call center generate, and how many users were either stabilized as a result of the services provided on the call or if they were connected to community services. Their goal is to treat people in the least restrictive manner possible and preferably at home.

The state uses data to track where mobile crisis teams were referred by the call centers but were not available to make the call, either because of staffing or resource issues. In some cases, the team that is referred is not always the closest to the person in crisis.

When monitoring the work of the crisis receiving centers, Utah looks at the time it took for law enforcement to drop off a person in crisis because they do not want law enforcement to perceive their interactions with the centers to be burdensome. Utah tracks the rate of diversions from jails. They track

how long someone is at the center and if they are there for longer than 23 hours, why they remained, and then when they leave, they track whether they left, be it a hospital, detox facilities, residential treatment, or back home. Utah also collects data on what the perceived alternatives to the crisis centers are. Their goal is to help their system meet the needs of the people they serve by identifying service or resource gaps.

Utah is also interested in knowing what other states are doing to address crises in their communities so that they might adopt or adapt the successes of others to better Utah's system.

Utah recommends that any state just starting to build a crisis data system collect data on the number of calls made to crisis call lines broken out by the number of callers who remained in the community, including at home, as compared to the number who needed a higher level of care. Utah's goal is that 70% of callers remain in place.

While Utah uses data to manage its crisis service system, the state leaders in crisis services realize that not all data are useful. For example, they collect some data points that have few responses or data that do not appear to be accurate, for example, response time by mobile crisis teams to the destination. They continue to examine the reliability and accuracy of the data to engage in further refinements in data collection to help inform practice...

Washington

Washington's crisis service system is organized regionally. The regional Administrative Service Organizations (ASOs) are either based in a single county or are based in a cluster of counties that have joined together to provide services. The State Mental Health Authority contracts with the ASOs for crisis and non-Medicaid paid services. Medicaid services are purchased through Medicaid are provided by five large Managed Care Plans. The MCOs purchase crisis services through the ASOs for managed care enrollees.

Each region has a centralized call center; some regions also have warm lines. Multiple regions have crisis triage/stabilization facilities. These facilities are licensed to hold people for more than 24 hours but are also used for stays of less than 24 hours. Each facility has the capacity for police drop-offs. Typically police drop-offs are held for up to 12 hours for evaluation.

The regions also have mobile crisis teams. Until this year, there was no state-level definition of a mobile crisis team. In one region, a team might be defined as two individuals who can go out on calls, and the region would report having multiple teams for 24/7 response. In another region, a team would consist of the entire crisis responder staff and could be 20 or more individuals. The SMHA is developing a statewide definition for crisis teams for accurate capacity tracking.

Washington's system includes involuntary treatment for people in crisis. The regions have designated crisis responders who evaluate people for involuntary treatment. In rural areas, those people may also be a member of the mobile crisis team responding to a call. In those cases, the mobile crisis team members announce to the individual that they will be assessing them for involuntary treatment and everything that they said to them previously will not count as part of the determination but everything

said subsequently will be. The assessments are a quasi-legal procedure rather than a clinical intervention. These crisis responders have the authority to put people on five-day, involuntary holds. Later, individuals placed in involuntary treatment can be held for up to 90 days through hearings convened by local Superior Courts.

The SMHA has for decades collected a substantial amount of data on the involuntary treatments, which comes to them in a timely manner. The data include the date and time of the encounter, the outcomes of the investigations, and the legal criteria used for detention determinations. They track this by region, including looking at outliers related to the number of investigations and the outcomes. A separate dataset tracks the hearings, including how many people make it to court within 48 hours, how many cases are dismissed, how many are sent to less-restrictive alternatives, and how many are committed for 14 or 90 days.

Washington's crisis service system is undergoing change and expansion due to factors which include the Trueblood Decision, legislative action expanding crisis services, the future roll-out of 988 services, and the creation of a broad service registry to link people to care at all levels of intensity. The Trueblood lawsuit challenged the delays in competency evaluation and restoration services for people in jail. The court ordered the state to provide such evaluations within 14 days and competency restoration within seven days of court orders.[26]

To determine the cost of expanding the availability of crisis services, including expanding the number of crisis teams, the SMHA needed to create a standard definition of a crisis team, which they then costed out. In the new definition, a crisis team consists of 11 people, including a supervisor. The new definition allows for two people to be in the field, including one peer and one behavioral health professional) with service available year-round and 24 hours per day. They are also able to calculate per person service costs. Previously, the regions were reluctant to provide the state with information about their workforce because they were afraid that their workers would be recruited by other regions. The promise of expanding capacity allayed those fears. As a result of calculating the costs of providing crisis services, the SMHA determined that Medicaid billing will not cover the cost of providing crisis services. The legislature understands that the expansion of crisis services purchases availability and coverage rather than individual services.

In the past, they looked to the regions to monitor the success of the crisis services they provided. The regions had an incentive to provide effective services because they would be fiscally responsible for paying for any involuntary treatment. The state did track the number of crisis calls received by the regions but did not connect that data to outcomes data. In the future, the SMHA will be legislatively required to track the performance of the crisis service systems run by the ASOs.

With the future rollout of 988 services, the call centers will be able to connect with the service registry that is under development. The recently passed 988 bill provides for call center staff to be able to find out if individuals have Advance Directives or under current involuntary treatment orders.

Additional data that would help manage the crisis service system would include the disposition of calls to the crisis system, including the ability to link information that identifies callers with the involuntary

treatment investigations. It would also be helpful if the data collected in the future could allow for the assessing risk for each call. Data should constantly be analyzed to address the needs of their constituency, however; if data are not used then their collection should be discontinued.

Washington Olympic Health and Recovery Services (Thurston and Mason Counties)

Olympic Health and Recovery Services (OHRS) are a county-governed, publicly funded licensed Behavioral Health Agency (BHA) that provides crisis services to Thurston and Mason counties, Washington. Thurston has a population of 300,000 and has rural and urban areas while Mason is rural and has a population of about 65,000. Olympic Health and Recovery Services responds to about 400 crisis outreaches per month, 80% of which are in Thurston County, and conducts about 250 involuntary assessments per month (see the section above for a discussion of Washington's involuntary assessment activities.

They are not the sole crisis service provider in their region and the services are not always coordinated amongst the various providers. They have zero relationship with the regional National Suicide Prevention LifeLine (NSPL) call center located 100 miles away. Olympia, the state capitol, the county seat of Thurston County, operates their non-licensed crisis team using city funds in collaboration with OHRS, who co-locates a responder on their team 40 hours per week. The local ASO, contracts with Catholic Community Services to provide separate 24/7 youth mobile outreach services.

In Washington, most regions use a contracted call center. In this case, Olympic operates its own 24/7 call center. As in Delaware, clinical staff operate the call center and are part of the mobile crisis teams responding to those calls, when needed. Calls are triaged, however, if the call came from a hospital, they have to send out staff who can make involuntary commitment decisions, otherwise, normal staff can respond. Only 12% of the calls result in an involuntary commitment determination. Staff also reach out to individuals for up to 14 days after a mobile crisis visit.

While they do not operate crisis stabilization centers, they do provide stabilization services, but in the individual's home. The stabilization outreach program is peer staffed and responds to an average of 55 clients per month. They go to the individual's home, stay with them, talk with them, and try to connect the individual with resources to address their needs. Crisis stabilization outreach began in November 2020 and so, at the time of the interview, they did were not able to determine if the program was successful in diverting individuals from hospitals.

One of Olympic's largest problems is staffing. Washington's involuntary commitment rules require a high-level staff but recruiting and retaining higher-level staff is difficult. Since the vast majority of crisis calls do not result in involuntary commitment, Olympic added lower-level staff, including certified peers, who are fully capable of taking care of the lower-intensity calls.

Lack of information on the clients they serve is a problem that Olympic experiences. In 2020, as a result of a reorganization of Medicaid funding in Washington, Olympic no longer received information on Medicaid-funded clients, who are about 60% of the people they serve. Olympic does not have access to

the local emergency department information exchange and often does not have any information on the person they are responding to, including their medical history or family information. Many of the individuals they provide crisis services have crisis plans but they no longer have access to those plans. Though access to crisis plans is required by the state, no mechanism exists to make sure that the access happens. Since many of the crisis calls happen in the middle of the night, they are not able to contact the individual's normal providers to find out information about the individual's medical history.

Olympic collects their data to track and manage their operations. They are interested in knowing what the overall service needs in their communities are and how they are meeting that need and so collect response time, referral source, demographic information, law enforcement calls by law enforcement agency, etc. Each of the law enforcement entities in their region has different protocols and responds differently to crises so knowing which law enforcement entity their will encounter on a crisis call is important to know to resolve the situation most effectively. They use time of day to track trends and use that data to influence staffing decisions. They have used response time to referrals to expand the staffing of their crisis teams. During the COVID-19 pandemic, they experienced an increase in crisis calls. Increasing their crisis service staff did not result in a decrease in involuntary commitments, which, to them, means that even with the increase in service capacity; they are still not meeting the service needs of their community.

Figure 5: Olympic Health and Recovery Services Crisis Service Report Template

Metric Number	BH-ASO				
	Crisis System Metrics Report				
BH-ASO					
Contact Person					
Phone Number					
Email					
Reporting Period (quarter/year)					
Metric Number	Metric	Month 1	Month 2	Month 3	Quarter Total
Crisis Calls					
1a	Total number of calls to crisis line				0
1b	Total number of calls to crisis line answered				0
1c	Average answer time of calls to crisis line (seconds)				#DIV/0!
1d	Total number of calls to crisis line answered live within 30 seconds				0
1e	Percentage of calls to crisis line answered live within 30 seconds	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
1f	Total number of calls to crisis line abandoned				0
1g	Percentage of calls to crisis line abandoned	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Mobile Crisis Outreach Services					
2a	Total number of mobile crisis outreach services				0
2b	Percentage of EMERGENT mobile crisis outreach service requests/referrals that were responded to within two (2) hours				#DIV/0!
2c	Percentage of URGENT mobile crisis outreach service requests/referrals that were responded to within twenty-four (24) hours				#DIV/0!
Involuntary Treatment Act (ITA) Investigations					
3a	Total number of ITA investigations				0
3b	Total number of ITA investigations conducted via telehealth				0
3c	Total number of ITA investigations not meeting detention criteria, resulting in a referral to outpatient treatment				0
3d	Total number of ITA investigations not meeting detention criteria, resulting in a referral to voluntary inpatient treatment				0
3e	Total number of ITA investigations resulting in detention or revocation				0
3f	Total number of ITA investigations resulting in detentions or revocations filed as SUD				0
3g	Total number of ITA investigations resulting in detentions or revocations filed as MH				0

Figure 6: Olympic Health and Recovery Services Crisis Service Data Definitions

	Crisis Calls	
1a	**Total number of calls to crisis line.**	
	Definition: All Calls received by regional crisis line regardless of caller intention or if sufficient information is gathered to generate an H0030 encounter.	
1b	**Total number of calls to crisis line answered.**	
	Definition: Number of calls answered by a live person.	
1c	**Average answer time of calls to crisis line (seconds).**	
	Definition: Average answer speed for calls that are answered by a live person (1b). This does not include wait times for abandoned calls.	
1d	**Total number of calls to crisis line answered live within 30 seconds.**	
	Definition: Total number of calls answered by a live person (1b) <30 seconds	
1e	**Percentage of calls to crisis line answered live within 30 seconds.**	
	Definition: (Total calls answered by a live person <30 seconds) / (Total calls answered). (1d / 1b). Note: use two decimal places e.g. 98.75%	
1f	**Total number of calls to crisis line abandoned**	
	Definition: Number of calls that result in hang up after 30 seconds (including those who hang up during an automated attendant script)	
1g	**Percentage of calls to crisis line abandoned**	
	Definition: (Calls abandoned) / (Total number of calls to crisis line) (1f / 1a) Note: use two decimal places e.g. 4.75%	
	Mobile Crisis Outreach Services	
2a	**Total number of mobile crisis outreach services.**	
	Definition: Crisis services provided by eligible provider type (H2011-SERI) in response to a crisis outreach referral. Referrals can originate from any source, including but not limited to, crisis call lines, community members, health care professionals, law enforcement, family members, or by individuals in crisis (self-referral). This excludes Involuntary Treatment Investigations.	
2b	**Percentage of EMERGENT mobile crisis outreach service requests/referrals that were responded to within two (2) hours.**	
	Emergent Definition: Mobile Crisis Outreach Services provided for a person that, if not provided, would likely result in the need for crisis intervention, or hospital evaluation due to concerns of potential danger to self, others, property, or grave disability.	
	Definition: (EMERGENT requests/referrals responded to in two (2) hours or less) / (Total number of EMERGENT requests/referrals). Note: use two decimal places e.g. 98.75%	
2c	**Percentage of URGENT mobile crisis outreach service requests/referrals that were responded to within twenty-four (24) hours.**	
	Urgent Crisis Definition: Mobile Crisis Outreach Services to be provided to persons approaching a behavioral health crisis. If services are not received within 24 hours of the request, the persons situation is likely to deteriorate to the point that emergency care is necessary.	
	(URGENT requests/referrals responded to in twenty-four (24) hours or less) / (Total number of URGENT requests/referrals) Note: use two decimal places e.g. 98.75%	
	Involuntary Treatment Act (ITA) Investigations	
3a	**Total number of ITA investigations.**	
	Definition: All crisis encounters where a Designated Crisis Responder conducts an ITA investigation whether or not the outcome is a detention. All encounters coded as H2011HW.	
3b	**Total number of ITA investigations conducted via telehealth.**	
	Definition: The total number of ITA Investigation (3a) conducted via telehealth	
3c	**Total number of ITA investigations not meeting detention criteria, resulting in a referral to outpatient treatment.**	
	Definition: The total number of ITA Investigation (3a) not meeting detention criteria, resulting in a referral to outpatient treatment.	
3d	**Total number of ITA Investigations not meeting detention criteria, resulting in a referral to voluntary inpatient treatment**	
	Definition: The total number of ITA Investigation (3a) not meeting detention criteria, resulting in a referral to voluntary inpatient treatment.	
3e	**Total number of ITA investigations resulting in detention or revocation.**	
	Definition: The total number of ITA Investigation (3a) resulting in detention or revocation.	
3f	**Total number of ITA investigations resulting in detentions or revocations filed as SUD.**	
	Definition: The total number of ITA Investigation resulting in detention or revocation (3e), filed as SUD.	
3g	**Total number of ITA investigations resulting in detentions or revocations filed as MH.**	
	Definition: The total number of ITA Investigation resulting in detention or revocation (3e), filed as MH.	

Conclusion

Management is the process of dealing with or controlling things or people. Management decisions can be informed by evidence, necessity, feelings, whim, accident, and even changes in the political environment. Decisions can have intended and unintended consequences, improve things, make things worse, or have no impact. This paper argues that the most successful management decisions are a) intended to improve something, b) based upon evidence that informs the decision, c) part of a continuing management process of improvements, and d) undertaken with the understanding that actions have consequences that also should be studied and understood. Information used to inform decisions should be relevant to the management decisions they will be used for and collected as accurately as possible. Data about state mental health programs are often collected as documentation, reported by local providers to the SMHA and by SMHAs to the Federal Government, as part of the block grant reporting, to legislatures.

As this report shows, local providers and SMHAs are using data to manage the provision of mental health crisis services. The extent to which data are used, and the provision of services is managed, varies by state. Some local providers and SMHAs use an ad hoc approach while some use a continual improvement approach.[27] In some states, the SMHA has a very indirect relationship with service providers where the services providers are contracted by a local entity which, itself, has a direct relationship with the SMHA. In such a case, the SMHA manages the provision of services by documenting the fulfillment of the guidelines and procedures that the SMHA establishes and occasionally, often at the beginning of a new contract, alters. In some states, the local entities also have indirect relationships with service providers and the management of services is similar to that of SMHAs with indirect service provider relationships.

When a local agency or state manage and provide services directly, there are many opportunities to use data to inform management decisions. Grand Lake in Oklahoma, for example, directly operates services. Using a continual improvement approach, they have reimagined service provision, documented their successes and failures, and used data to further alter their activities. Similarly, Georgia's SMHA runs the state's crisis service system and has direct relationships with the service providers. Georgia also uses a continuous improvement approach to alter their activities. Any individual change that is made using a continuous quality improvement approach may or may not be a success, and may or may not have a large impact. Still, the accumulation of improvements over the years, even small improvements, can add up vast improvement and broad systemic change that can result in better services for the people who need them, when they need them.

References

[1] Koontz H: The Management Theory Jungle. *Academy of Management Journal* 1961; 4(3):174-188

[2] Pinals DA, Fuller DA: Beyond beds: The vital role of a full continuum of psychiatric care. Alexandria, VA, National Association of State Mental Health Program Directors, 2017.
https://www.nasmhpd.org/sites/default/files/TAC.Paper_.1Beyond_Beds.pdf

[3] Morrisette D: Improving Access to Behavioral Health Crisis Services with Electronic Bed Registries. Alexandria, VA, National Association of State Mental Health Program Directors, 2021.
https://www.nasmhpd.org/sites/default/files/Bed_Registry_Full_Report.pdf

[4] Crisis now. Alexandria, VA, National Association for State Mental Health Program Directors.
https://talk.crisisnow.com/

[5] Unpublished data from the Substance Abuse and Mental Health Services Administration, 2021.

[6] Crisis Intervention Team (CIT) programs: A best practice guide for transforming community responses to mental health crises. Salt Lake City, UT: Crisis Intervention Team International, 2019.
https://www.citinternational.org/bestpracticeguide#:~:text=Crisis%20Intervention%20Team%20(CIT)%20Programs%3A%20A%20Best%20Practice%20Guide,starting%20and%20sustaining%20their%20CIT

[7] National Guidelines for Behavioral Health Crisis Care, Best Practice Toolkit. Rockville, MD, Substance Abuse and Mental Health Services Administration, 2020. https://www.samhsa.gov/sites/default/files/national-guidelines-for-behavioral-health-crisis-care-02242020.pdf

[8] Ibid.

[9] Crisis now. Alexandria, VA, National Association for State Mental Health Program Directors.
https://talk.crisisnow.com/

[10] What is the Living Room model for people experiencing a mental health crisis? Washington, DC, SMI Adviser, 2021. https://smiadviser.org/knowledge_post_fp/what-is-the-living-room-model-for-people-experiencing-a-mental-health-crisis

[11] About the Open Dialogue Approach. Clinton, CA, Institute For Dialogic Practice, 2021.
http://www.dialogicpractice.net/open-dialogue/about-open-dialogue/

[12] McCabe O, Page A, Daniels A: Improving Health Care for Mental and Substance Use Conditions: A Framework for Bridging the Quality Chasm. *International Journal of Mental Health* 2007; 36(2):65-79

[13] What is a peer? Washington, DC, Mental Health America, 2021. https://www.mhanational.org/what-peer.

[14] What is the "peer bridger" model of peer support? Washington, DC, SMI Adviser. Retrieved 31 March 2021, https://smiadviser.org/knowledge_post/what-is-the-peer-bridger-model-of-peer-support.

[15] Cramer D, Brown AA, Hu G: Predicting 911 calls using spatial analysis. Software Engineering Research, Management and Applications 2012, 15-26

[16] Rosenheim L, Scott L: Spatial Statistics: Best Practices. Esri International User Conference, 2011 July.

[17] Chohlas-Wood A, Merali A, Reed W, et al: Mining 911 Calls in New York City: Temporal Patterns, Detection, and Forecasting. Artificial Intelligence for Cities, 2015.
https://warwick.ac.uk/fac/sci/dcs/people/theo_damoulas/pubs/aaai15_911damoulas.pdf

[18] Norman C, Mello M, Choi B: Identifying Frequent Users of an Urban Emergency Medical Service Using Descriptive Statistics and Regression Analyses. *The western journal of emergency medicine* 2016; 17(1): 39–45

[19] The National 911 Program: Next Generation 911 (NG911) Standards Identification and Review. Washington, DC, 911.gov. https://www.911.gov/pdf/National_911_Program_NG911_Standards_Identification_Analysis_2020.pdf

[20] National 911 Annual Report: 2019 Data. Washington, DC, 911.gov.
https://www.911.gov/pdf/National_911_Annual_Report_2019_Data.pdf

[21] NG9-1-1 Call Processing Metrics Standard. Washington, DC, National Emergency Number Association, Inc.
https://cdn.ymaws.com/www.nena.org/resource/resmgr/standards/nena-sta-019.1-2018_20180702.pdf

[22] Telecommunicators and training. Washington, DC, 911.gov.
https://www.911.gov/issue_telecommunicatorsandtraining.html

[23] National Guidelines for Behavioral Health Crisis Care, Best Practice Toolkit. Rockville, MD, Substance Abuse and Mental Health Services Administration, 2020. https://www.samhsa.gov/sites/default/files/national-guidelines-for-behavioral-health-crisis-care-02242020.pdf

[24] Crisis Call Center Metrics: Part 1: Service and Efficiency. New York, NY, National Suicide Prevention Lifeline. https://suicidepreventionlifeline.org/wp-content/uploads/2019/02/CallCenterMetrics_final.pdf

[25] Marr B: Big Data-Driven Decision-Making at Domino's Pizza. *Forbes,* 2016, April 6. https://www.forbes.com/sites/bernardmarr/2016/04/06/big-data-driven-decision-making-at-dominos-pizza/?sh=4207b3f52b8e

[26] Trueblood v Washington State Department of Social and Health Services, 101 F Supp 3d 1037 (9th Cir 2016)

[27] Continual improvement process. Wikipedia, 2019 April 19. https://en.wikipedia.org/wiki/Continual_improvement_process