



Innovative Uses of Technology to Enhance Access to Services within the Crisis Continuum

NATIONAL ASSOCIATION OF STATE MENTAL
HEALTH PROGRAM DIRECTORS

ANNUAL MEETING

JULY 29, 2023

GAYLORD NATIONAL HARBOR



Disclaimer

This from the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services (HHS). The views, policies and opinions expressed are those of the authors and do not necessarily reflect those of SAMHSA or HHS.

Agenda

- Welcome and Introductions
- Overview of the Technical Assistance Coalition Paper, *Innovative Uses of Technology to Enhance Access to Services within the Crisis Continuum*
- Use of Innovation and Technology in the Provision of Tennessee's Crisis Services
 - Marie Williams, L.C.S.W.; Commissioner, Tennessee Department of Mental Health and Substance Abuse Services
 - Jennifer Armstrong, L.P.C.-M.H.S.P.; Director of Crisis Services and Suicide Prevention
- Innovative Uses of Technology in Crisis Response in Oklahoma: Services within Reach
 - Carrie Slatton-Hodges; Commissioner, Oklahoma Department of Mental Health and Substance Abuse Services
- Time for Questions

Kristin Neylon, MA

- Associate Director of Federal Programs at NRI
- Kristin.Neylon@nri-inc.org

Mihran Kazandjian, MA

- Associate Director of Research and Development
- Mihran.Kazandjian@nri-inc.org



Review of Technical Assistance Coalition Paper:
*Innovative Uses of Technology to Enhance
Access to Services within the Crisis Continuum*

2023 TAC Report: *Innovative Uses of Technology to Enhance Access to Services within the Crisis Continuum*

- Paper focuses on the potential technological innovations have in making behavioral health crisis services more accessible and equitable across the U.S.
- Includes the following sections:
 - Case studies on the innovative uses of technology in Colorado, Connecticut, Tennessee, and Oklahoma.
 - Uses of technology to connect individuals to crisis care and improve outcomes (through social media, service registries, data analytics/visualizations, and the use and implications of telehealth).
 - Improving services through data connections and information sharing.
 - The use of artificial intelligence in crisis services (including early detection, service delivery, and considerations for its use).
 - Characteristics of an organization primed to succeed using technology to support crisis services (including workforce and human characteristics and privacy considerations)
- Paper currently being reviewed by SAMHSA; will be posted to www.nasmhpd.org on approval.

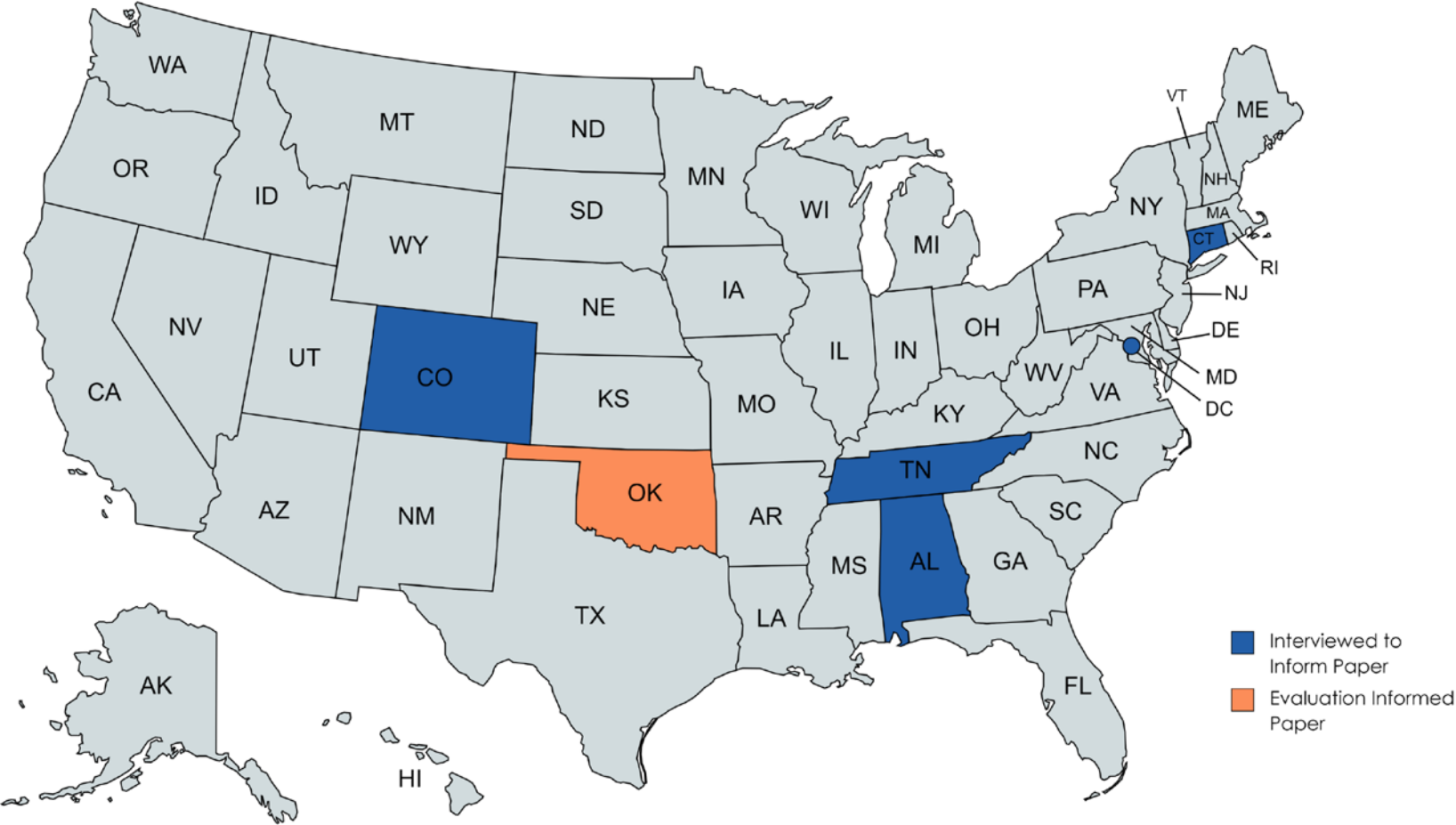
Report Highlights & Recommendations

- Highlights:
 - Technology can facilitate interactions between the crisis system, law enforcement, emergency medical services, emergency departments, and other social service agencies to improve outcomes for individuals experiencing a crisis.
 - SMHAs and local providers are leveraging technology to facilitate access to crisis services, increase engagement, strengthen stakeholder relationships, and save valuable resources.
 - Artificial intelligence is rapidly expanding, and there are possible roles for AI in improving the crisis continuum.
- Recommendations for Policymakers and Service Providers:
 - Ensure organizations are informed and intentional in adopting new technology.
 - Identify and empower champions in the organization to see through the uptake process and engage stakeholders.
 - Policymakers and providers need to understand how to evaluate a technology before adopting it.

States Interviewed or Researched for the Report


2023 TAC Report - Methodology


- Online literature review to identify technological innovations and opportunities for their application in crisis service delivery.
- Emailed each SMHA asking about innovative uses of technology. Conducted follow-up interviews with five states (AL, CO, CT, DC, and TN), and relied on a prior evaluation of OK.





CONNECTICUT'S BEHAVIORAL HEALTH SERVICES REGISTRIES


At-a-Glance

TECHNOLOGY
Mental Health and Substance Use Service Registries 

INTENDED USE
 Identify available mental health and substance use services for adults across the state

PRIMARY USERS
Individuals and their families in need of behavioral health services; Connecticut's Access Line, 988 Call Centers, & Mobile Crisis Teams 

REALIZED BENEFITS
 Increased access to and awareness of available behavioral health programs across the state.

COST INFORMATION


- \$150,000 from SAMHSA TTI Funding
- \$7,600 annual hosting fee

Source: Interview with NRI and staff from the Connecticut Department of Mental Health and Addiction Services on February 9, 2023.

GRAND RESPONSE ACCESS NETWORK ON-DEMAND MODEL IN OKLAHOMA

At-a-Glance

TECHNOLOGY
iPads provided to individuals and law enforcement officers equipped with myCare Patient app. 

INTENDED USE
 Virtually connect individuals in crisis & law enforcement officers to trained behavioral health clinicians.

PRIMARY USERS
Individuals experiencing a behavioral health crisis and law enforcement officers in the field. 


REALIZED BENEFITS



- 93.1% decrease in hospitalizations for adult GRAND clients at any OK psychiatric hospital.
- \$62 million savings to the mental health system over five years.
- \$718,000 savings to Law Enforcement


Source: Branson, J., & Washington, L. (2022). An evaluation of the Grand Response Access Network on Demand Model (GRAND Model): Evidence of Effective Outcomes. National Association of State Mental Health Program Directors Research Institute. www.nri-inc.org


UTE PASS REGIONAL HEALTH SERVICE DISTRICT COMMUNITY PARAMEDICINE


At-a-Glance

TECHNOLOGY
Satellite and cellular connected telehealth through paramedicine to provide comprehensive care. 

INTENDED USE
 Enhance service delivery by Community Paramedics, and divert from higher levels of care..

PRIMARY USERS
Individuals experiencing a crisis are connected to appropriate services through satellite and cellular-connected telehealth. 

REALIZED BENEFITS
 \$4 million annual downstream cost savings by diverting from EDs to evidence-based levels of care, and high levels of client satisfaction.


COST INFORMATION



- \$584,169 - EMS cost-per-unit (readiness cost)
- \$134,055 - PACT cost-per-unit (readiness cost)


Source: Interview with NRI and staff from the Ute Pass Regional Health Services District, February 21, 2023.


MCNABB CENTER'S CRISIS SERVICES DESKTOP APPLICATION IN TENNESSEE

At-a-Glance

TECHNOLOGY
Desktop interface, or application, for crisis services data entry. 

INTENDED USE
 Streamline data reporting from Crisis Services Clinicians and simplify report development.

PRIMARY USERS
Crisis Clinicians use the application to enter data, while McNabb Center management uses the interface to create reports. 

REALIZED BENEFITS


- Up to 312 hours per year of staff time for data entry.
- Simplifies data reporting to stakeholders, including McNabb Center leadership and the state mental health authority.

Source: Interview with NRI and staff from the McNabb Center for Mental Health Staff on February 14, 2023.

Brief Case Study Overview

A Few Words on Artificial Intelligence...

- Artificial Intelligence possibilities:
 - Triage and risk assessment
 - Chatbots for 24/7 crisis support
 - Increase workforce productivity and satisfaction
 - Create context-relevant care available everywhere

A Few Words on Artificial Intelligence, Cont'd...

- Artificial Intelligence hard realities:
 - Client data security
 - Improper suggestions for care
 - Subtle preservation of human biases and prejudice
 - Further technogenic alienation

State Behavioral Health Commissioners (According to AI)



Generated by Stable Diffusion with the prompt: "a behavioral health commissioner"

Use of Innovation and Technology in the Provision of Tennessee's Crisis Services

Marie Williams, LCSW

- Commissioner
- Marie.Williams@tn.gov

Jennifer Armstrong, LPC-MHSP

- Director of Crisis Services and Suicide Prevention
- Jennifer.Armstrong@tn.gov



TN Crisis Services History

Crisis response teams were established in 1991

Contract with 12 providers across the state to deliver mobile crisis services 24/7/365.

Statewide hotline number routes caller to nearest provider based on area code and defaults to one provider if does not route due to unknown area code.

TDMHSAS is also proud to support the TN 988 Infrastructure in managing calls, chats and texts presenting in TN.

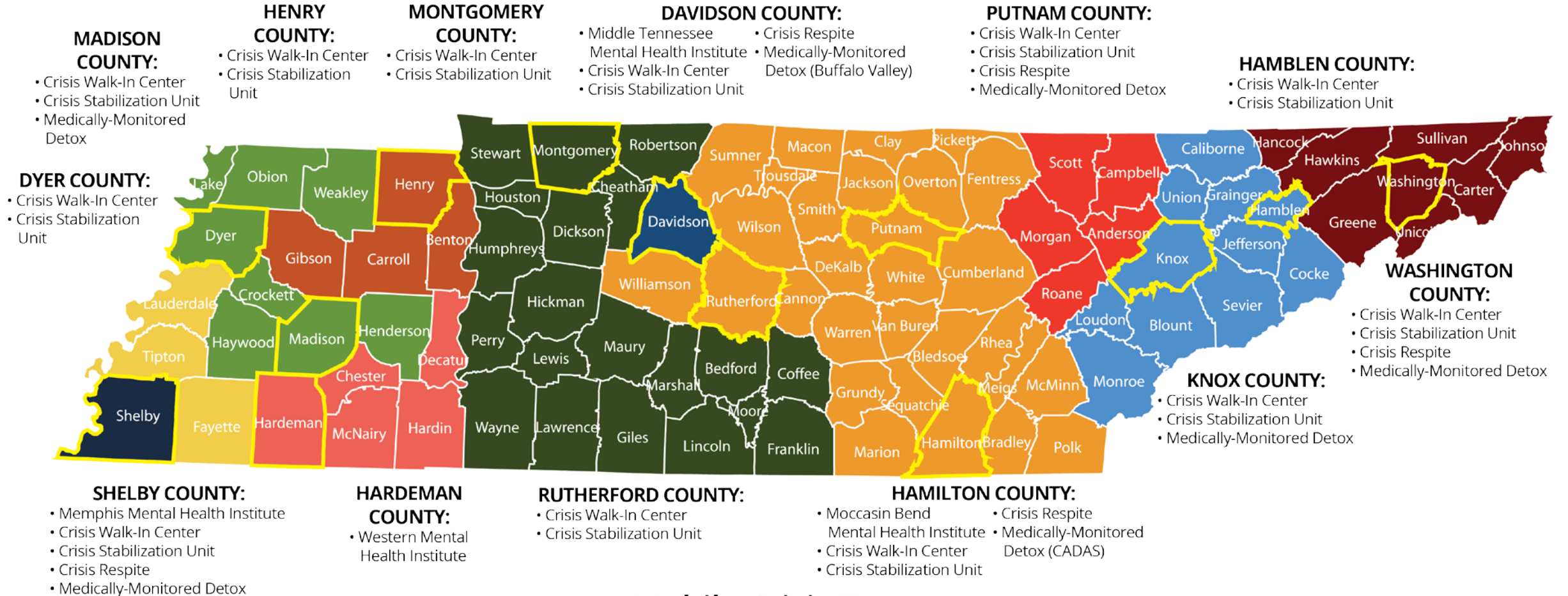
Respite services were established in 1992 to allow a community-based option that offers a temporary reprieve from an environmental stressor.

Crisis Stabilization Units and Walk-in Centers were added in 2008.

Contract with 7 providers to provide 8 CSUs and Walkin Centers to operate 24/7/365; 3 additional contracts executed and 4th in progress allowing for a 4 site expansion.

CRISIS SERVICES IN TENNESSEE

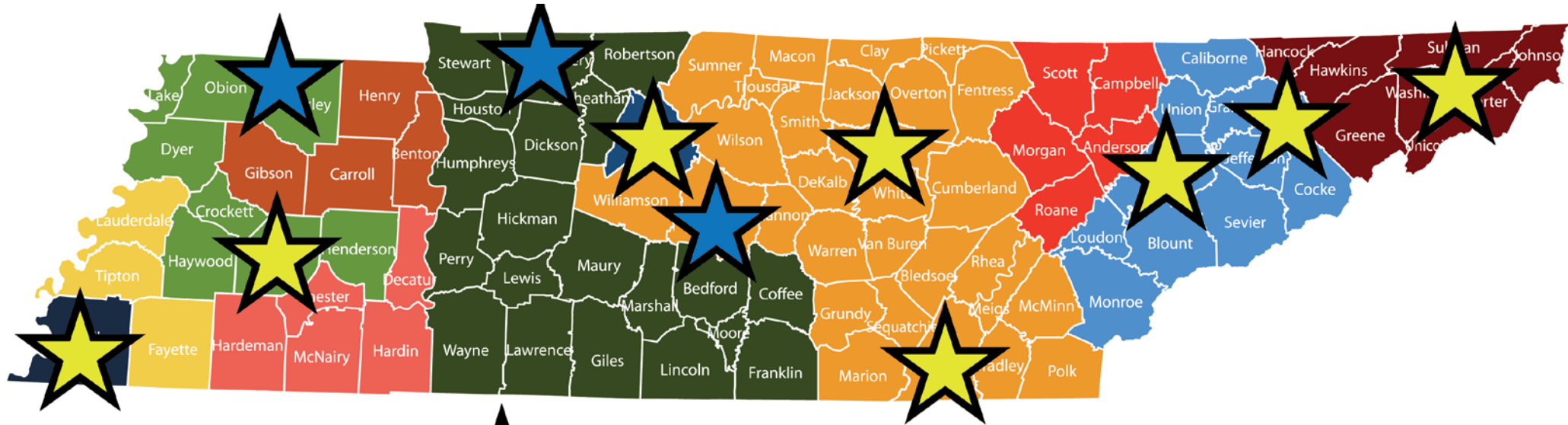
Call or Text 988 Suicide and Crisis Lifeline





Mobile Crisis Teams

- Alliance Healthcare Services
- Professional Care Services
- Pathways Behavioral Health Services
- Quinco Mental Health
- Carey Counseling Center
- Centerstone
- Mental Health Cooperative
- Volunteer Behavioral Health
- Ridgeview Behavioral Health Services
- McNabb Center
- Frontier Health

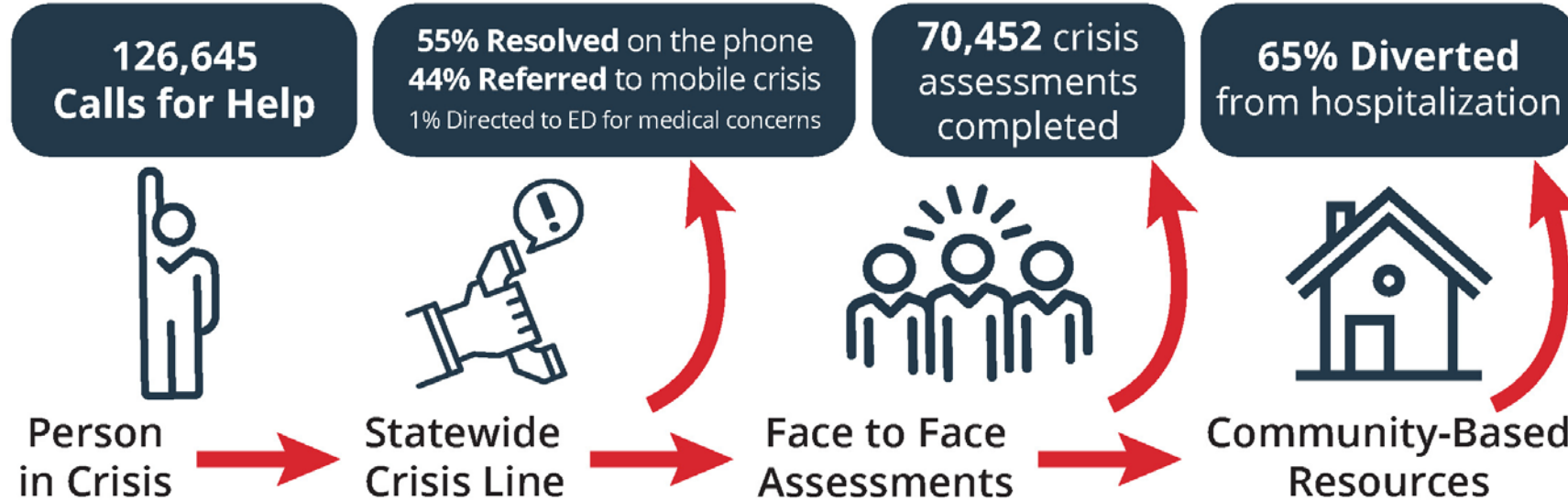
8 Crisis Stabilization Units, Adding 4 More



-  Current CSU Locations
-  Proposed CSU Locations

Tennessee's Mental Health Crisis Services Continuum

Connecting people to the right treatment, in the right place, at the right time.



On top of the above crisis call volume, **19,443 additional crisis calls** were handled through the National Suicide Prevention Lifeline which became 988 on 7/16/22.

TN Department of **Mental Health & Substance Abuse Services**

For individuals not meeting commitment criteria

Less Restrictive Environment:
Better Option for Patient and Lower Cost Intervention

Decreased Usage:
Inpatient Hospitalization, Jail, and Emergency Room

Less-Restrictive Alternatives:

- Crisis Respite Services
- Crisis Walk-In Services
- Crisis Stabilization Units
- Outpatient Community-Based Programs and Services

Data from state fiscal year 2022



Why are Crisis Data Important?

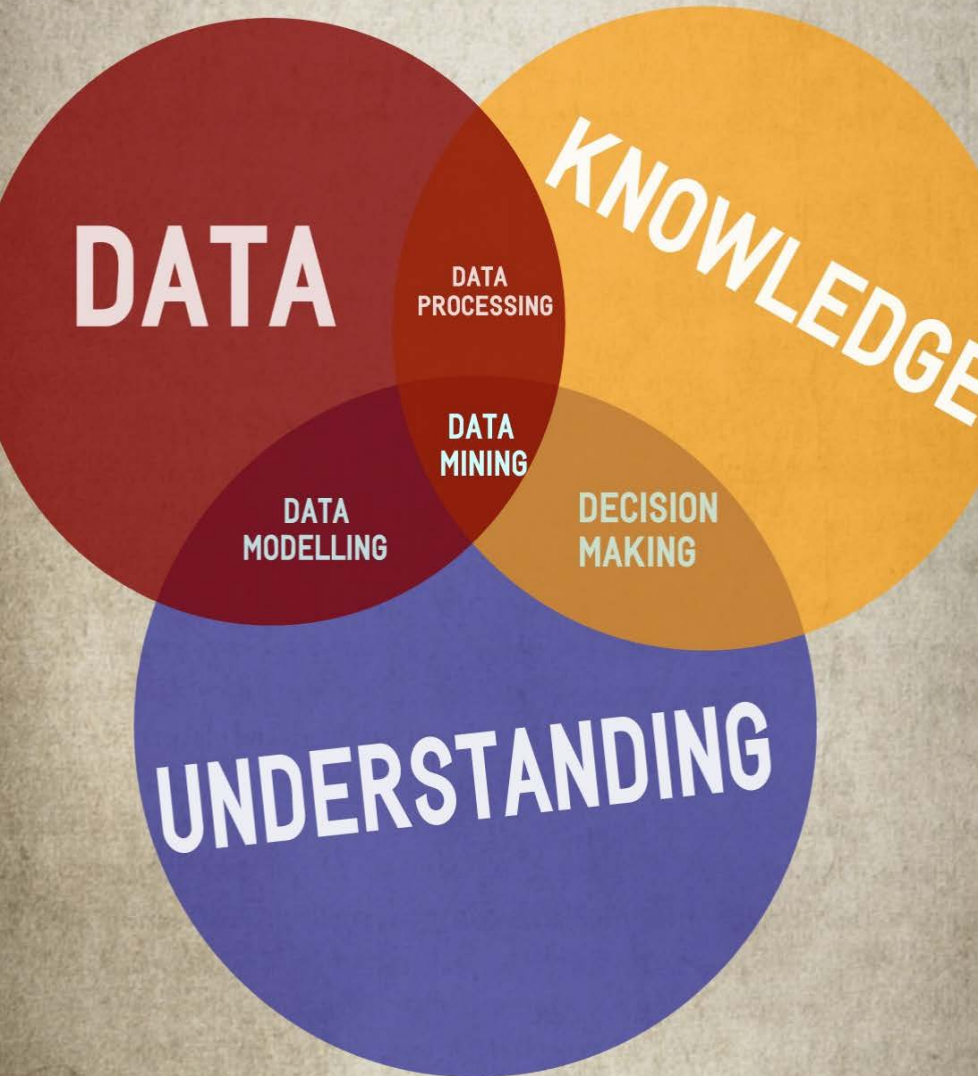
- Make informed decisions about programmatic changes
- Find solutions to problems
- Identify barriers to accessing needed patient care
- Determine return on investment
- Develop efficiencies for care providers

Improving Patient Care Starts with Data



Why Track Crisis Data?

- What problem(s) did the crisis management system solve:
 - Eliminated manual entry in multiple spreadsheets
 - Provided access to client-level information to allow tracking across systems
 - Provided information related to what is working vs. what is not working
 - Provided metrics for monitoring program effectiveness



What Are We Able to Track Now?

The collection of client-level data allows for enhanced data analysis that didn't previously exist. The data can now be cross-walked against the Behavioral Health Safety Net, state hospital admissions, and suicide death data.

Examples of current metrics captured:

- Volume of Crisis Calls, Mobile Crisis Assessments, 23-Hour Observation Admissions, Respite Admissions, and CSU Admissions
- Crisis Response Times
- Length-of-Stay Data
- Primary Presenting Problem
- Hospitalization Rates
- Alternatives Attempted Before Inpatient Referral
- Follow-Up Efforts

Mobile Crisis Assessment Data

Data includes call and face-to-face assessment volume data, presenting problems, dispositions of assessments, and follow-up efforts.

TDMHSAS CRISIS MANAGEMENT SYSTEM							
F2F ASSESSMENT STATISTICS							
Assessment Date: 7/1/2021 through 12/31/2021							
PROVIDER: [Crisis Provider]							
	2021 - 07 Jul	2021 - 08 Aug	2021 - 09 Sep	2021 - 10 Oct	2021 - 11 Nov	2021 - 12 Dec	TOTAL Assessments
[Crisis Provider]	552	520	442	491	424	462	2,891
Total	552	520	442	491	424	462	2,891

Crisis Response Time

Mobile Crisis required response time is 2 hours or less. Reports allow providers to see details of longer response times for quality assurance.

	2021 - 07 Jul	2021 - 08 Aug	2021 - 09 Sep	2021 - 10 Oct	2021 - 11 Nov	2021 - 12 Dec	Total
Not seen w/in 2 hours	2	1	3	0	3	1	10
Average Call End to F2F Arrival (hours):							1.03

Crisis Services Data

CSU, 23 Hour Observation, and Respite data includes admissions and length of stay (in days or hours, depending on the service).

		DAYS / LOS					Totals
		Aug 2021	Sep 2021	Oct 2021	Nov 2021	Dec 2021	
[CSU]	Days	112	208	206	193	212	931
	Admissions	44	79	79	85	68	355
	Average LOS	2.55	2.63	2.61	2.27	3.12	

CMS Reports

Multiple reports (samples above) can be displayed by month or provider for trends analysis. Detailed reports allow providers QA assistance in detecting outliers and data entry errors.

Collecting Meaningful Data

Provider Interface – Phone Assessments

CONSUMER

Provider

First Name

Last Name

SSN Provider Patient ID

Date of Birth

Race

Ethnicity

Gender

CRISIS TELEPHONE ASSESSMENT

Call End Date

Call End Time : AM PM

Dispatch Date

Dispatch Time : AM PM

Disposition

Disposition, Other

NOTES

Collecting Meaningful Data Provider Interface – Face to Face Assessments

CRISIS FACE TO FACE ASSESSMENT

Assessment Type

Assessment Date

Arrival Time : AM PM

Transported by Law Enforcement Yes No

Primary Insurer

Payor Billed for Service

Annual Gross Household Income

Number of People in Household

Consumer Location at Assessment

Crisis Assessment via Televideo Yes No

Current Services Being Received

Declaration of MH Treatment

MOT Status

Durable POA/Conservator/Guardian

Residential Status

County of Residence

Employment Status

Number of arrests in last 30 days

Marital Status

Military Status

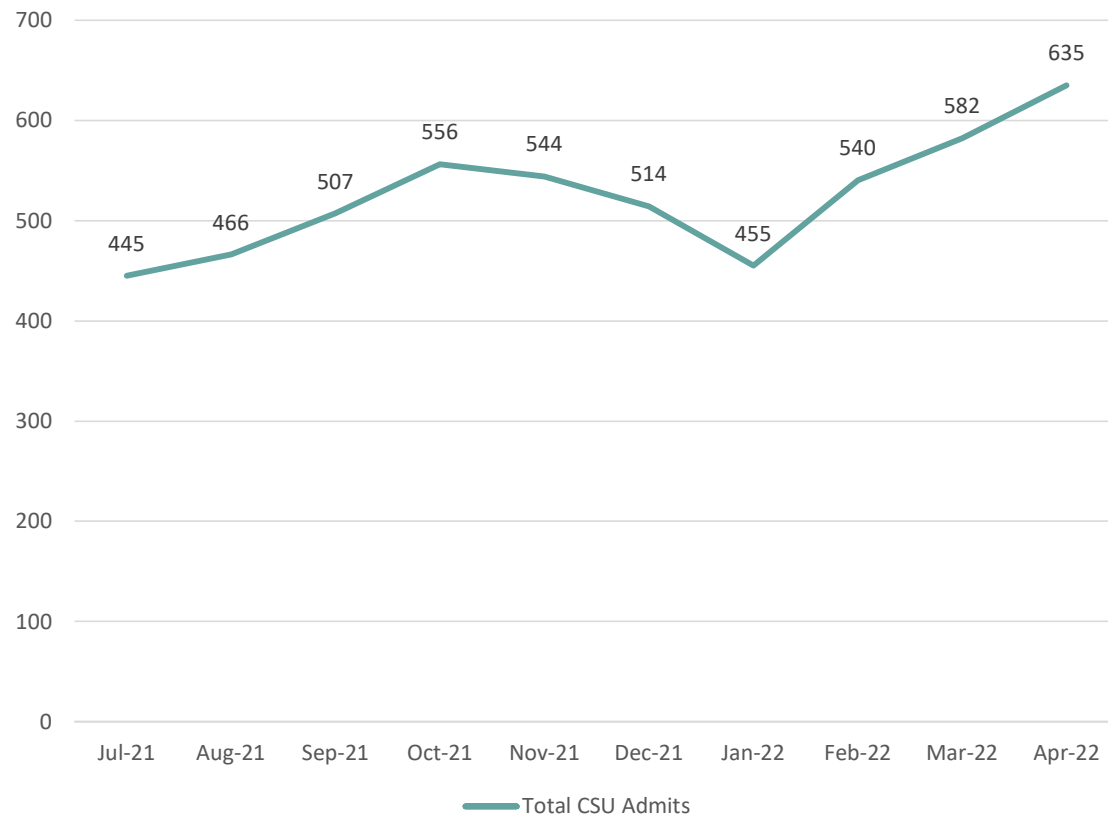
Attended school in last 3 months

Current or highest grade completed

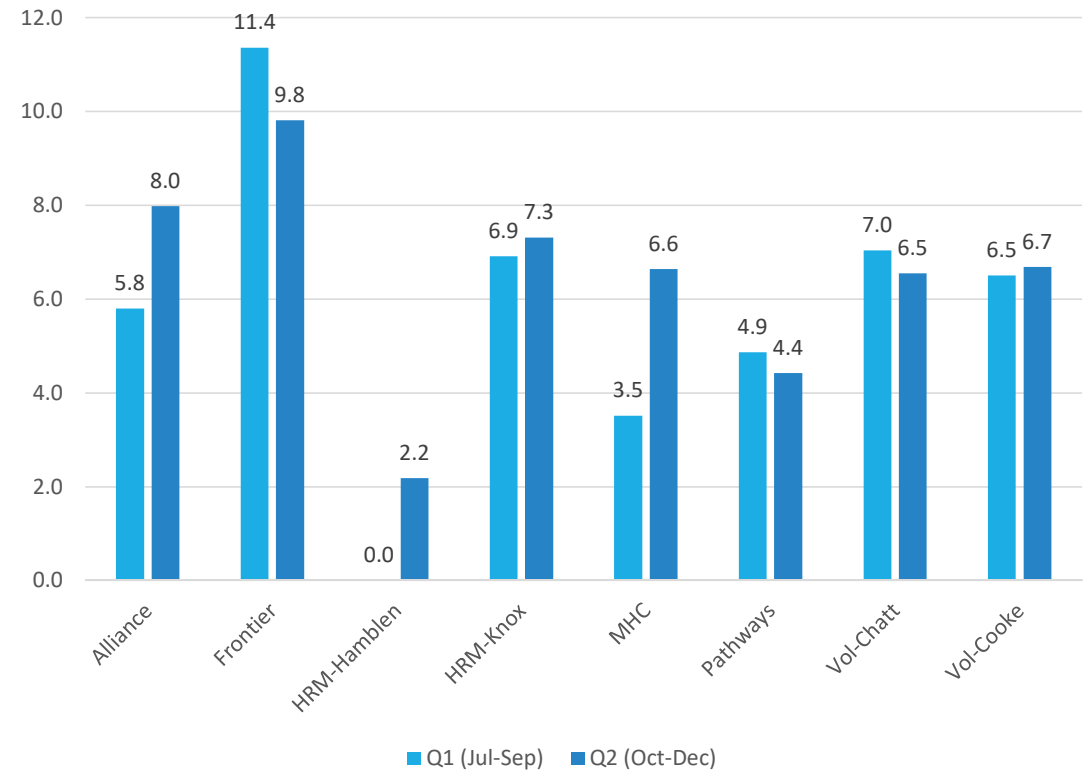
- ▶ Primary Problem
- ▶ Mental Health Needs
- ▶ Substance Abuse
- ▶ ALTERNATIVES TO HOSPITALIZATION
- ▶ HOSPITALIZATION
- ▶ ASSESSMENT COMPLETION / FOLLOW-UP

Data in Action – Visualizing Trends

Total Statewide CSU Admissions: Trends



CSU Average Daily Census: Quarterly Averages by Provider



How Easy is it to Use the Crisis Management System?

Providers can manually enter or upload assessment or services data into the system. Technical support is provided by TDMHSAS to ensure data accuracy.

Providers add all crisis call and assessment data weekly, while services data are added monthly.

Creates a Centralized Data Collection Process

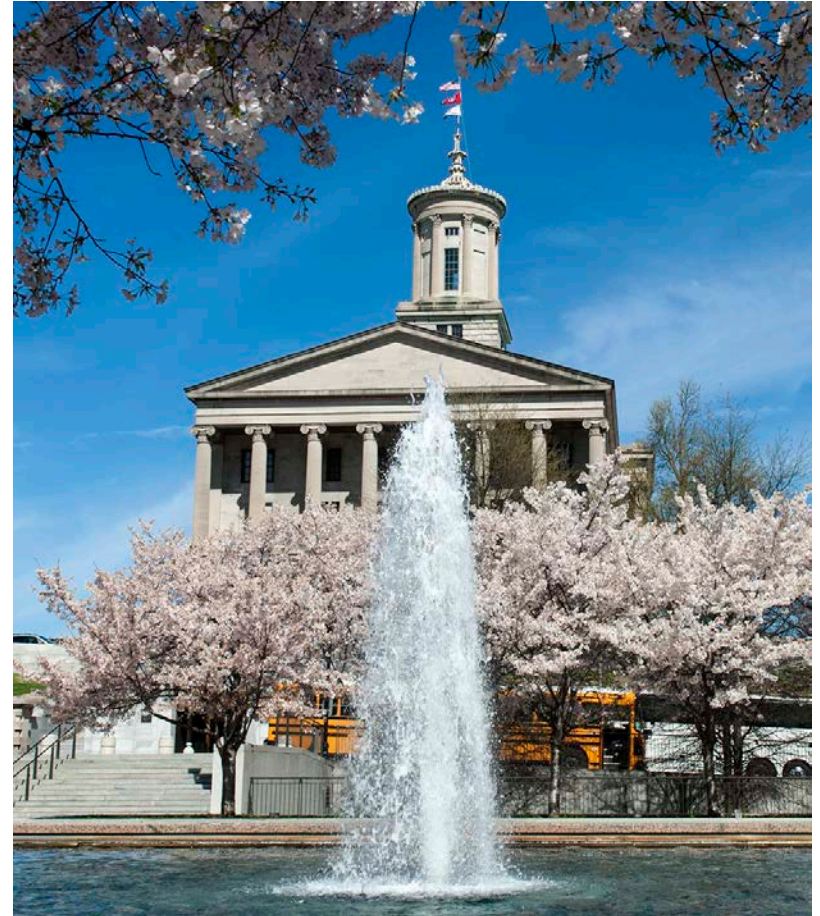
Although the data validation and training process could feel cumbersome, providers are able to access their reported data real-time for internal QA and analytics.

All About Accountability and Outcomes

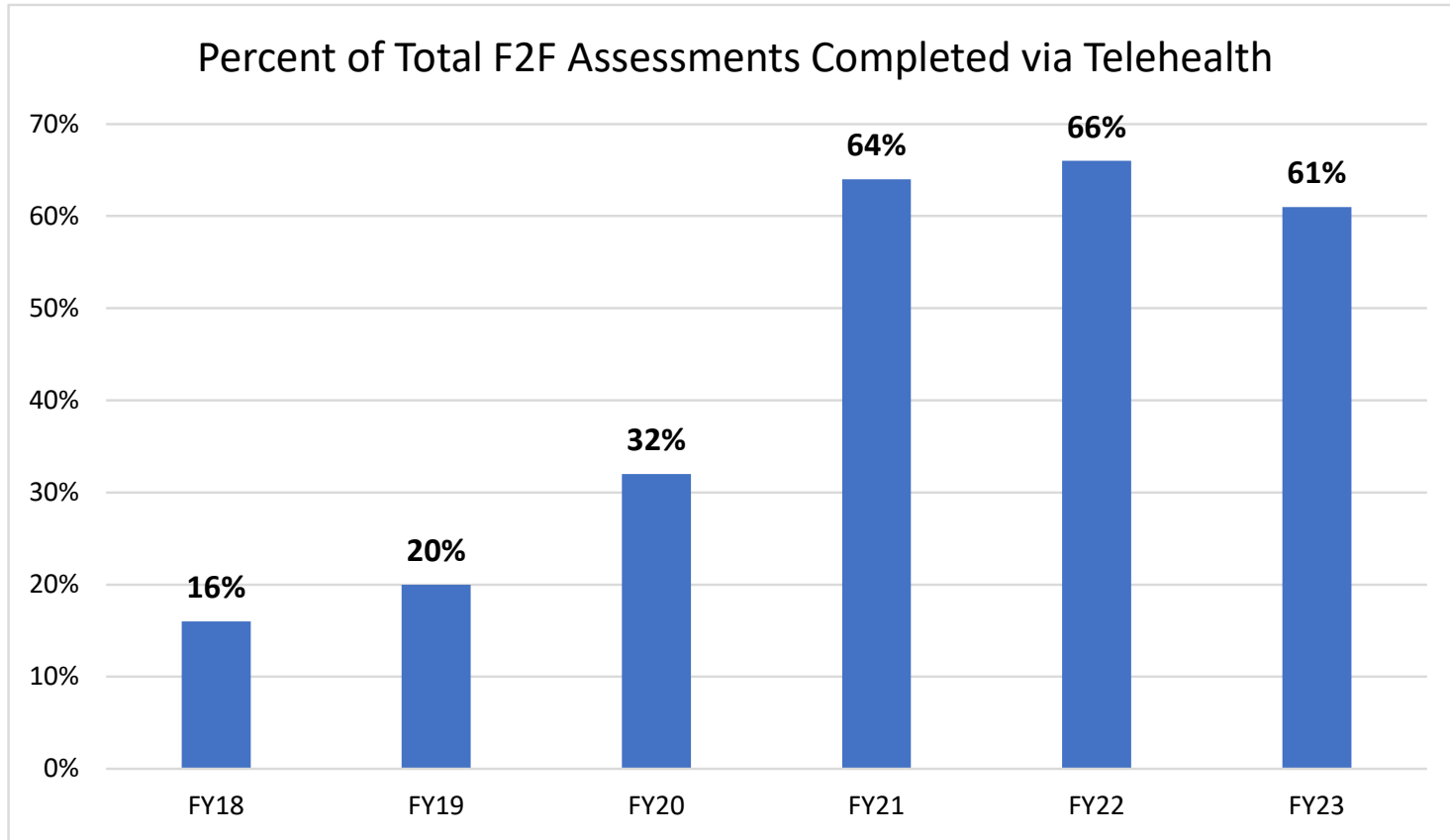
Have to show return on investment

Governor, State Legislature, Citizens

Working with Community Providers



Utilization of Telehealth



- **Focused effort to ensure all ER's and jails had equipment at onset of pandemic**
- **Currently, defer to the referral source as to mode of assessment: in-person or via telehealth**

Patient Bed Matching System- Go live Sept. 2022

STREAMLINE REFERRALS



Quickly match available beds to patients in need

SAVE TIME



Reduce staff time on the phone and managing faxes

IMPROVE CONNECTION



Exchange messages and complete referrals within the system

REAL-TIME TRACKING



Determine where a referral is in the process when delays occur

ASSET MANAGEMENT




Monitor and identify efficiencies to maximize limited staff and resources

FREE FREE FREE FREE FREE



Did we mention this is completely free?

Patient Bed Matching System

Start New Search or lookup a search by 

Identifier

Distance From Zip Code

Sex

Date of Birth or Age Age Group

Parameters

Level of Aggression Insured Request Crisis Assessment No Yes

Patient Bed Matching System

	FACILITY ⌵	CONTACT ⌵	STATUS ⌵	DISTANCE ⌵	AVAILABLE BEDS ⌵	LAST UPDATED ⌵
+ ☆ 🟢	Creekside Behavioral Health	(423) 830-8114	NOTIFICATION (1)	(unknown)	1 of 28 🗄	🕒 a year ago
+ ☆ 🟢	Crestwyn Behavioral Health Hospital	(901) 759-0273	NOTIFICATION (1)	(unknown)	40 of 40 🗄	🕒 a year ago
+ ☆ 🟢	Delta Specialty Hopsital	(901) 369-6021	NOTIFICATION (1)	(unknown)	43 of 99 🗄	🕒 6 days ago
+ ☆ 🟢	Lakeside Behavioral Health System	(901) 377-4733	NOTIFICATION (1)	(unknown)	13 of 200 🗄	🕒 a year ago
+ ☆ 🟢	Memphis Mental Health Institute 📄	(615) 555-1212	NOTIFICATION (1)	(unknown)	11 🗄	🕒 10 months ago

Patient Bed Matching System

Awaiting Admission Open Referral Requests Start Search Open Searches

Awaiting Admission

QUERY	REFERRING FACILITY	RECEIVING FACILITY	AGE	SEX	PARAMETERS	INSURED	DURATION	STATUS	ACTION
1777	Memphis Mental Health Institute	Creekside Behavioral Health	Adult	Female	Involuntary, Medium Aggression	Uninsured	an hour	PLACED	  

1

Memphis Mental Health Institute 

Questions?

Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has.

Marie Williams, LCSW

Marie.Williams@tn.gov

- Margaret Mead

Jennifer Armstrong, LPC-MHSP

Jennifer.Armstrong@tn.gov

Innovative uses of technology in
crisis response to better serve
individuals experiencing mental
health crisis

Presenter

Commissioner Carrie Slatton-Hodges

Services Within Reach



- Oklahoma has long been considered a national leader in “telepsychiatry.”
- Barriers due to geographic, economic or workforce limitations enabled a quicker uptake with the use of technology to deliver services, allowing physicians and behavioral health professionals to consult with each other more rapidly.
- Technology incorporated to help strengthen partnerships and establish connections to a variety of locations including hospital emergency rooms and criminal justice settings.
- As a result of this existing network, Oklahoma was well-prepared to implement additional telehealth measures during the pandemic and expand for long-term use.

CARES Act

- Funding to create pilot programming around use of iPads with law enforcement agencies providing direct access to Community Mental Health Center/Certified Community Behavioral Health Clinic to help with de-escalation of crisis and expedited initial assessment.
- Technology integration included direct care services for law enforcement officers
- Partnered with more than 80 city/county Health Departments statewide to helping rural residents immediately access behavioral healthcare through the integration of iPads in these settings



Technology Expansion

- Strengthened relationships with additional like partners such as
 - Firefighters,
 - Emergency Departments,
 - Schools,
 - Courtrooms,
 - and Jails
- Integrated iPads directly into client homes that have more intense needs to help with immediate access and crisis de-escalation.

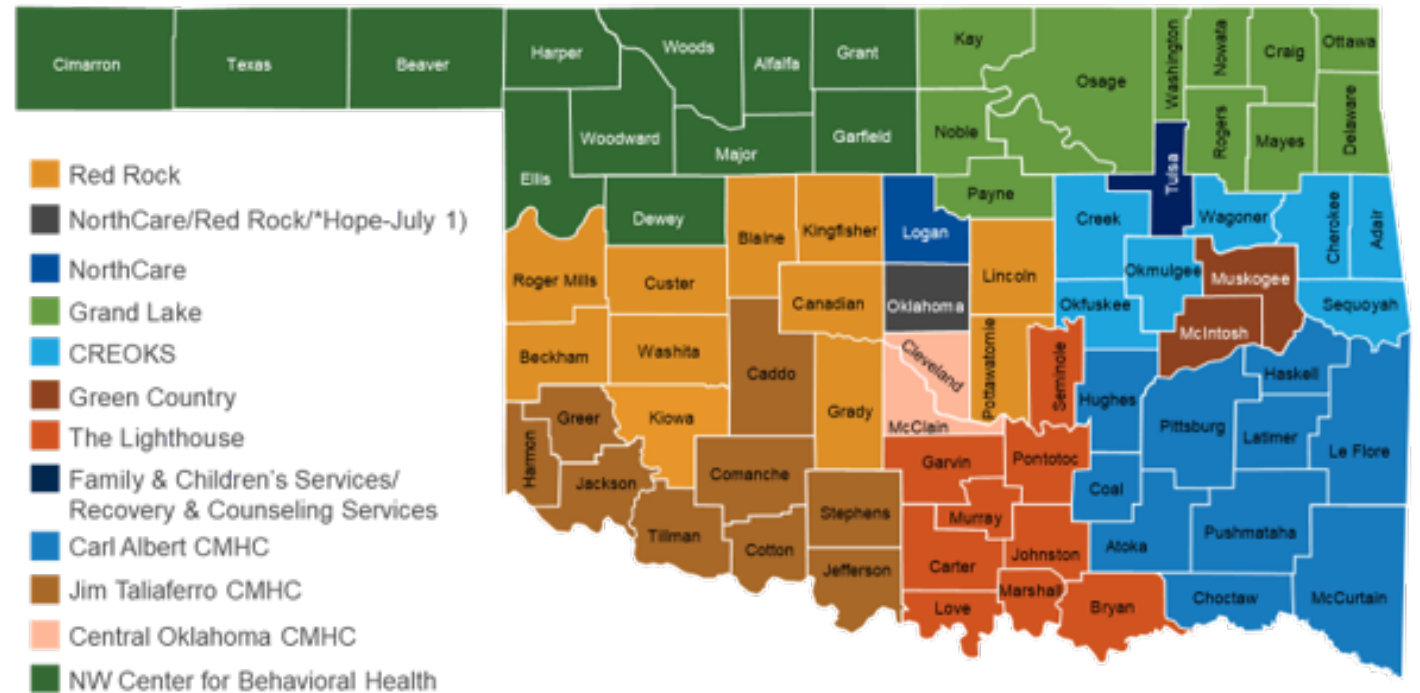


CCBHC Innovations



Statewide CCBHCs (Certified Community Behavioral Health Centers)

- Use of technology to reach more clients
- Expansion of creative approaches to crisis services such as various models of Urgent Recovery Clinics



Technology use Increase



More than 2,500 crisis calls answered each month

Approximately 600,000 minutes of services provided each month

Increased number of individuals served by 95%

Decreased number of adults hospitalized by 80%



Locals Championed Further Innovation

- Rural law enforcement **most** excited about integrated technology
- Outcomes impressed key legislative members on both House and Senate sides
- Legislative appropriations to provide funding for integrated iPads for all law enforcement officers **(2M)**
- Integrated technology by providing over **24,000** enabled devices across the state and include client, practitioner, and first responder devices
- Total Call Volume – **506,519**
 - Approximately **95,000** inbound crisis calls
- Average Call Duration is **27 mins**



Financing of Technology

1. Educate provider system on business case for the use of technology
2. CARES funds
3. Legislative ask
4. CCBHC

Questions?

For More Information:



odmhsas.org



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[@odmhsasinfo](https://twitter.com/odmhsasinfo)



OKLAHOMA
Mental Health &
Substance Abuse

SERVICES WITHIN REACH



Carrie Slatton-Hodges
ODMHSAS Commissioner

Questions?



Kristin Neylon, NRI: Kristin.Neylon@nri-inc.org

Mihran Kazandjian, NRI: Mihran.Kazandjian@nri-inc.org

Jennifer Armstrong, Tennessee: Jennifer.Armstrong@tn.gov

Marie Williams, Tennessee: Marie.Williams@tn.gov

Carrie Slatton-Hodges, Oklahoma: CHodges@odmhsas.org

Thank You!