Uvalde Region Mental Health Needs Assessment

December 20, 2022

Mental Health & Developmental Disabilities Centers
Hill Country

Meadows Mental Health Policy Institute

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CITY OF UVALDE *Uvalde, Texas*

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County of Uvalde
Uvalde, Texas

December 19, 2022

To Whom it May Concern,

The City and County of Uvalde wish to thank the Governor, Lieutenant Governor, Speaker of the House of Representatives and the chairs of the Senate Finance and House Appropriations Committees for the funding provided to HHSC for a mental health needs assessment for the Uvalde Region.

We have worked with Hill Country MHDD Centers and the Meadows Mental Health Policy Institute throughout the assessment process. The final report includes key findings and actionable recommendations that will address the regional needs for mental health services in our communities.

Both the City and County elected officials support the recommendations in this report and look forward to working with Texas leadership on next steps.

Sincerely,

Don McLaughlin, Jr., Mayor	William R. Mitchell
City of Uvalde	Uvalde County Judge
101 E. Main St.	#3 Courthouse Square
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Executive Summary

Executive Summary

The Uvalde community was changed forever on May 24, 2022.

The scope of this assessment is focused on what the Uvalde community and the surrounding region need, following the mass violence event, to appropriately treat mental health conditions in a continuum of care. Every community has mental health needs, but these needs change after such a tragedy, and the anticipated changes must be quantified and addressed. An assessment is an important initial step towards ensuring the Uvalde community and region has the tools, resources, and support it will need serve the people this tragedy impacted.

Mental illnesses are treatable health conditions.

While some specific mental illnesses increase the risk of violence,
mental illnesses on their own do not cause violence,
and violence itself is not a mental illness.

The Uvalde region is at a critical juncture in mental health care for its residents. Because of the leadership of its elected officials, there is a unique opportunity in which the community can take major steps to transform the region's mental health system. The recent tragedy and its impact on the health system, and on the mental health of residents, adds to the urgency of creating positive change from the tragedy. To do so will require a commitment to treating mental illness like a physical illness and designing a system that accounts for the unique needs of rural Texas. Existing resources can be reshaped as appropriate, but there is a clear need to expand mental health capacity and resources in the Uvalde region.

This report is designed to provide a framework for local leaders, the Governor, and the Texas Legislature to take concrete steps to begin this transformation. The Meadows Mental Health Policy Institute (Meadows Institute) strongly believes that the best mental health care is provided in an integrated health care system and that, as with all illnesses, the earlier mental illnesses can be identified and treated, the better. The report that follows is based on these principles.

Findings and Actionable Recommendations

In the following sections, the Meadows Institute presents key findings and recommendations for short- and long-term systemic change in an integrated approach to mental health care in the Uvalde region. In the aggregate, these recommendations point the way to a comprehensive system of care that will address the mental health needs today and for generations to come.

The Meadows Institute included estimated costs for each recommendation. These are overall costs of the program and do not include estimates on revenue that could potentially be generated through billing Medicaid or other insurance.

1. Build a Regional Behavioral Health Campus in Uvalde, Supported by Additional Specialty Resources in San Antonio.
Finding 1. In projecting the need for inpatient bed capacity for the Uvalde region,[1] the Meadows Institute considered historical psychiatric bed use, the tragedy, and additional considerations related to the ability of the region's workforce to fully meet those needs locally. The Meadows Institute estimates the number of overall inpatient beds needed for the region in 2023 is 34 beds for adults and 16 beds for children and youth. It is beyond the capacity of any rural community to operate a facility of this size, given workforce demands and the complexity of some cases that require a full continuum of health supports beyond just the facility (e.g., specialty medical care for geriatric and other complex medical cases, special facilities for people presenting with severe risks of violence towards themselves or others). Accordingly, the Meadows Institute recommends that a dual approach be taken, where the maximum number of beds be operated within the 32-county Uvalde region and more specialized capacity be offered in the nearest major metropolitan area (San Antonio). This is a best practice model similar to how other severe health conditions, such as heart disease and cancer, are handled in rural communities (i.e., routine cases are managed locally, and complex cases are referred to major metropolitan areas with the full array of health resources available). The Meadows Institute recommends two 16 bed facilities based locally (32 total beds), a new outpatient clinic, and the purchase of an additional 19 beds in San Antonio in 2025 with growth to 26 beds by 2050. Until the behavioral health campus is operational, 50 beds dedicated to the Uvalde region must be purchased in San Antonio.

[1] Uvalde region, as defined by HHSC, includes the following 32 counties: Atascosa County, Bandera County, Blanco County, Comal County, Dimmit County, Edwards County, Frio County, Gillespie County, Hays County, Jim Hogg County, Karnes County, Kendall County, Kerr County, Kimble County, Kinney County, La Salle County, Llano County, Mason County, Maverick County, McMullen County, Medina County, Menard County, Real County, Schleicher County, Starr County, Sutton County, Uvalde County, Val Verde County, Webb County, Wilson County, Zapata County, and Zavala County.

1. Build a Regional Behavioral Health Campus in Uvalde, Supported by Additional Specialty Resources in San Antonio.	
Recommendation 1a – In Region Solution: Create a behavioral health campus located at the front of the property the City of Uvalde donated (directly off Highway 90 on King Fisher Lane, adjacent to the Uvalde County Fairplex). The campus should include an outpatient clinic; a 16-bed extended observation, crisis respite and / or crisis residential facility for adults; and a 16-bed extended observation and respite facility for children and youth. The local mental health authority (LMHA), Hill Country Mental Health & Developmental Disabilities (Hill Country MHDD) will operate all facilities. It is anticipated the design / build phase will require 18 months.	**Estimated Cost:** $30 million construction; $3.6 million furnishings and equipment; and $10 million in annual operations.
Recommendation 1b – Out of Region Solution: It will also be necessary to purchase beds in San Antonio to meet the needs of high-acuity patients who cannot be stabilized or who do not demonstrate improvement in symptoms in the local facility. These beds can be purchased from inpatient psychiatric facilities at an estimated cost of $750 per day. To meet the estimated need, this would require the purchase of 19 beds in 2025. However, for the coming biennium, until the two new facilities are operational, the full number of 50 beds will need to be purchased in San Antonio.	**Estimated Cost prior to the new facilities:** $13.7 million per year. **Estimated Cost after local beds are operational:** $5.2 million per year, beginning in 2025.[2]

[2] Please note the transportation costs associated with transfer of people to outside facilities are not included in these estimates.

2. Expand Workforce Capacity	
Finding 2. Workforce development is critical to addressing the outpatient and facility-based recommendations in this assessment. The workforce must be appropriately trained,[3] paid, and have access to affordable housing in the region to maintain high quality mental health services.	
Recommendation 2a. Maintain new positions and increased salaries for the Hill Country MHDD staff in Uvalde County.	**Estimated Cost:** $2.5 million per year.
Recommendation 2b. Southwest Texas Junior College should add a behavioral health certification as part of their existing patient care technician program. The behavioral health certification program would provide additional training to students and prepare them to work in mental health facilities.	**Estimated Cost:** $500,000 for development and one year of operations. $250,000 per year thereafter.
Recommendation 2c. Local leaders in Uvalde should explore affordable housing options to support workforce efforts.	**Estimated Cost:** A cost estimate can be developed once more information is available.
Recommendation 2d. Leverage the skills and expertise of peers, family partners, and community health workers trained in mental health support and resource facilitation. Ensure funding for the cost to train peer specialists is readily available.	**Estimated Cost:** $20,000 per year.

[3] Training recommendations and cost are provided in the Increase Mental Health Literacy and Community Capacity section.

<table>
<tr><th colspan="2">3. Increase Mental Health Literacy and Community Capacity</th></tr>
<tr><td colspan="2">Finding 3a. Training in trauma and grief, along with general mental health education, is needed across the region for the general public, primary care providers (PCPs), hospital staff, behavioral health providers, school personnel, faith leaders, and first responders to provide a continuum of trauma- and grief-informed mental health care.</td></tr>
<tr><td>Recommendation 3a. Fund the seven prioritized, best practice trauma, grief, and mental health trainings (see page 100 for the full list) for up to 100 people per year for two years, while providing ongoing consultation from trauma and grief experts. These trainings represent a tiered approach to providing mental health care, whereby youth and adults receive the “right form of support at the right time.”</td><td>Estimated Cost: $361,640 per year.</td></tr>
<tr><td colspan="2">Finding 3b. The assessment made clear that community leaders are committed to improving mental health services for Uvalde County residents. Nonetheless, there are limited community collaborations currently underway, and there is no broad-based planning group that includes providers, hospitals, academic institutions, schools, law enforcement, community members with lived experience, courts and elected political leadership. Community collaboration is critical to sustainable change.</td></tr>
<tr><td>Recommendation 3b. The Uvalde community should establish a broad-based planning group, with dedicated staff funded to support the effort. The group should include executive leadership from the major health care organizations, academic institutions, schools, law enforcement, courts, and elected political leadership, along with community members with lived experience, to prioritize and strategize on their future mental health system.

To support the functioning of the planning group, it is imperative that new positions be established; a minimum of two positions (two full-time equivalents) are needed to assume responsibilities for providing oversight of the group and the overall coordination of the work, including staff support and managing specific tasks to support the implementation of policies for continuing system improvements in Uvalde County.</td><td>Estimated Cost: $300,000 per year.</td></tr>
</table>

4. Strengthen Mental Health Outpatient Treatment Capacity	
Finding 4. The mental and physical health impacts of the Robb Elementary tragedy are significant and will require increased access to evidence-based treatment for the survivors[4] of the tragedy and the surrounding community, including telehealth services. As is the case across Texas, the Uvalde region faces a shortage of specialty behavioral health providers; however, this shortage is even more prominent due to its rural setting. Telehealth is paramount to ensuring treatment access for the region.	
Recommendation 4a. The Uvalde region should continue to strengthen efforts to integrate mental health treatment in primary care through the Child Psychiatry Access Network (CPAN).	**Estimated Cost:** No additional costs anticipated. CPAN is funded through current state legislative appropriations.
Recommendation 4b. The health-related institutions (HRIs) responsible for the Uvalde region should prioritize outreach to all school districts in the region to recruit participation in the Texas Child Health Access Through Telemedicine (TCHATT).	**Estimated Cost:** No additional costs anticipated. HRI costs are funded through current state legislative appropriations.
Recommendation 4c. Create mental health resource centers for students and staff at the Southwest Texas Junior College (SWTCJ) and Sul Ross State University campuses. These centers could offer mental health counseling by state university graduate counseling students under the supervision of a licensed professional counselor. This opportunity would: (1) give students and staff access to mental health counseling; and (2) provide training opportunities in local communities. The centers could also provide peer support, professional mentoring, and access to a food pantry.	**Estimated Cost:** $600,000 annually per resource center.
Recommendation 4d. To preserve anonymity, fund an out of region telehealth vendor for residents of Uvalde County, allowing access to telehealth therapy providers who do not live in the region.	**Estimated Cost:** $100,000 per year for 100 people.

[4] Please note the Meadows Institute define survivors to include both the literal survivors of the tragedy as well as all who were affected by the tragedy (i.e., parents, care givers, citizens, first responders, providers).

5. Improve Mental Health Crisis Capacity	
Finding 5. There is a need for increased capacity in regional crisis response for children and youth.	
Recommendation 5a. Fund a Youth Mobile Crisis Team[5] specialized in working with youth and caregivers to deescalate crises, provide limited in-home supports, and link the young person and family to appropriate ongoing services. Such teams, in multiple states, have been shown to reduce emergency department (ED) use, psychiatric hospitalization, and out-of-home placement. A Youth Mobile Crisis Team provides a 30-to-90-day bridge to engage in ongoing care.	**Estimated Cost:** $1.1 million per team per year. $275,000 in additional startup costs per team.
Recommendation 5b. Fund the Handle with Care Program to employ a system of communication between law enforcement, schools, and mental health professionals to provide best-practice, trauma- and grief-informed care and mitigate negative effects of potentially traumatic events on youth. This program is grounded in the fact that trauma- and grief-informed care is most successful if we can meet children where they are – in their schools and community – and provide timely and effective behavioral health interventions in the immediate aftermath of a traumatic event. The program enables law enforcement to easily notify schools if an officer encounters a child or youth at a traumatic scene, so schools can refer the student for timely intervention if necessary.	**Estimated Cost:** $85,000 annual cost per school district.

[5] These are also known as Pediatric Crisis Stabilization and Response Teams (PCSRTs).

<table>
<tr><th colspan="2">6. Develop Mental Health Intensive Outpatient Treatment Capacity</th></tr>
<tr><td colspan="2">Finding 6a. Currently, there are limited intensive outpatient services available to residents in the Uvalde region and few of the specialized intensive evidence-based treatments that can prevent hospitalization and support long-term recovery for youth and adults with severe needs. These services include Assertive Community Treatment (ACT) and Coordinated Specialty Care (CSC). Of the 149 people that Hill Country MHDD reported were appropriate to receive ACT services only 65 received the service, 84 fewer adults than recommended in FY 2021. While these programs require additional supports to operate in rural areas, they are available in other rural parts of Texas and other states. It is both more efficient and effective to maximize these outpatient resources than to increase inpatient bed capacity.</td></tr>
<tr><td>Recommendation 6a. Hill Country MHDD should ramp up to four regional Rural ACT teams to serve their entire 19-county region. Meeting the need in Uvalde, specifically, requires 50% capacity of one team; half of a Rural ACT team’s time has the capacity to serve up to 25 people in Uvalde. The first team developed should prioritize Uvalde County. Due to workforce shortages, these Rural ACT teams should also receive specialized training in the Risk Needs Responsivity (RNR), enabling them to effectively treat the unique needs of people with moderate to high criminogenic risk.

For people experiencing a first episode of psychosis, Hill Country MHDD should utilize a specialized, coordinated, multiple-entity approach to build and implement a regional CSC program in Uvalde County. Prevalence data for Uvalde County indicates that up to six transition-age youth (18-24) will experience first episode psychosis (FEP) each year. CSC is the gold standard treatment for FEP but is not currently offered by Hill Country MHDD. Therefore, a minimum of 10% capacity of one team covering the entire Hill Country MHDD region (100-person capacity) should be dedicated to Uvalde.</td><td>Estimated Cost for ACT: $1 million per Rural ACT team per year, in addition to the following:
– Startup costs per team: $500,000.
– Development year training, technical assistance, and baseline and year 1 fidelity reviews: $95,000.
– Bi-annual fidelity review per team: $60,000.
(Training and technical assistance scalable with multiple teams.)

Estimated Cost for CSC: $475,000 per CSC team per year.</td></tr>
</table>

6. Develop Mental Health Intensive Outpatient Treatment Capacity	
Finding 6b. For youth with the highest intensity of need and at most risk of out of home placement, Uvalde County stakeholders should support Hill Country MHDD as they utilize newly allocated funding to implement Multisystemic Therapy (MST), an intensive, family- and community-based intervention with proven effectiveness for serious juvenile offenders. Uvalde County does not currently have MST; however, Hill Country MHDD has been identified as an awardee to establish one team with coverage extending into Uvalde County.	
Recommendation 6b. Uvalde County stakeholders should actively communicate the availability of this team to child and youth serving systems, so this resource is made available at the point in a youth's experience where it can be most effective at preventing out-of-home placement. This will require stakeholders to coordinate and develop referral processes in advance of program implementation, as well as continued communication to refine referral processes and program decisions.	**Estimated Cost:** The program is currently funded by the state but will require ongoing appropriations.

7. Enhance Data Capacity and Monitor Changes	
Finding 7. Gaining a comprehensive understanding of the change in behavioral health service utilization and severity in the community in the months following the tragedy is challenging. Understanding the impact of this tragedy over time requires data.	
Recommendation 7a. Develop and implement a data collection strategy that includes tracking existing metrics, creating new metrics, and a revised epidemiological study every two years.	**Estimated Cost Year 1:** $300,000 for planning work with the community to develop protocol and scope of work. **Estimated Cost Year 2:** $500,000 - $2 million per study, depending on design launch data collection of Year 1 plan.
Recommendation 7b. Hill Country MHDD should undertake a regional mental health needs assessment to monitor the progress of implemented changes.	**Estimated Cost:** $150,000 per assessment.

8. Build Integrated Treatment Capacity	
Finding 8. The Uvalde region should continue to build integrated care models in primary care settings to address workforce challenges and provide early interventions and treatment.	
Recommendation 8a. Identify primary care health systems committed to the implementation of measurement-based care (MBC) and the Collaborative Care Model (CoCM) or Primary Care Behavioral Health (PCBH) model. Conduct a brief scan of each system to: (1) understand readiness to implement priority reforms (universal screening, measurement-based care, billing reform); and (2) develop a realistic and achievable multi-year plan to implement MBC system-wide for mental health and substance use disorders (SUD). CoCM and PCBH are of increased importance in this region given that research has shown that, compared to non-Hispanics or Latinos, people in the Hispanic or Latino population believe PCPs should treat child mental health problems, and that these parents are more willing to allow their child to receive medications or visit a therapist if recommended by a PCP.[6]	**Estimated Cost:** $75,000 for startup incentive funding and $250,000 for technical assistance per health system. CoCM and PCBH can be billed to Medicaid and other insurance sources.
Recommendation 8b. Over a three-to-five-year period, identified health system(s) should implement universal screening for depression (and other mental health and SUD) system-wide. They should also implement use of MBC for all patients treated for a behavioral health disorder in the primary care setting. Lastly, reengineer workflows and billing systems to take advantage of CoCM payment codes for primary care-based depression treatment.	**Estimated Cost:** No additional costs anticipated beyond 8a.

[6] Brown, J. D., Wissow, L. S., Zachary, C., & Cook, B. L. (2007). Receiving advice about child mental health from a primary care provider: African American and Hispanic parent attitudes. *Medical Care, 45*(11), 1076–1082. https://doi.org/10.1097/MLR.0b013e31812da7fd

9. Implement Pertinent Statewide Recommendations	
Finding 9a. As noted above, workforce development is critical to address the outpatient and facility-based recommendations in this assessment. The following are statewide recommendations that would have an impact on the Uvalde region.	
Recommendation 9a(i). Increase state funding to the Texas Loan Repayment Program for Mental Health Professionals to create additional access for the Uvalde region.	**Estimated Cost:** $1,035,938 per year to double the size of the current program.
Recommendation 9a(ii). The state of Texas should direct licensing agencies to waive out-of-state licensing prohibitions for all mental health and addiction license types, on an emergency basis, as was done for the regions affected by Hurricane Harvey in 2018 and for COVID-19 on a statewide basis. This should be done immediately, reviewed annually, and remain in place until a sufficient workforce is available in Texas. As across Texas, the Uvalde region faces a shortage of specialty behavioral health providers; however, this shortage is even more prominent due to its rural setting.	**Estimated Cost:** No additional costs anticipated.
Recommendation 9a(iii). Expand the peer support Medicaid benefit established through 85(R) H.B. 1486 to include certified family partners as a provider type and authorize Medicaid reimbursement for family support services provided to families of children and youth ages 20 and under.	**Estimated Cost:** No more than $1.5 million based on fiscal note from 85(R) H.B. 1486.
Recommendation 9a(iv). Review Medicaid rates paid to mental health providers and take action to allow for increased salaries.	**Estimated Cost:** A cost estimate can be developed once more information on the size of the rate increase and the applicable providers are determined.
Recommendation 9a(v). Authorize Medicaid reimbursement for services provided by licensed master social workers (LMSWs), licensed marriage and family therapist (LMFT) associates, and licensed professional counselor (LPC) associates. Currently, Medicaid does not reimburse for services provided by LMSWs, LMFT associates, or LPC associates. This limitation hinders rural providers' ability to hire additional mental health professionals and, therefore, develop a sustainable mental health workforce. Allowing services provided by these professionals to be reimbursed will allow rural providers to financially accept LMSW, LMFT associates, and LPC associates who are completing their training. Not only will LMSW, LMFT associates, and LPC associates provide services while working towards final	**Estimated Cost:** $1.5 million per year.

9. Implement Pertinent Statewide Recommendations	
licensure, but some professionals may decide to practice in rural areas once full licensure is obtained.	
Recommendation 9a(vi). Expand the Texas Health and Human Services Commission (HHSC) definition of qualified mental health professionals (QMHPs) to include people with an associate degree or a patient care technician certification that includes a behavioral health focus, and people with any bachelor's degree who complete the credentialing process. QMHPs can currently provide mental health targeted case management and mental health rehabilitative services, as authorized by HHSC. QMHPs thus serve a vital role in behavioral health systems of care, executing programs under the supervision of a licensed clinician. HHSC currently limits QMHPs to people with a bachelor's degree in certain mental health related fields or a license as a registered nurse.	**Estimated Cost:** None, other than administrative.
Finding 9b. As noted above, training in trauma and grief, along with general mental health education, is needed across the region for first responders to provide a continuum of trauma- and grief-informed mental health care.	
Recommendation 9b. Provide funding for the Texas Law Enforcement Peer Network (TLEPN) to operate statewide and ensure law enforcement officers across Texas, including those from the many law enforcement agencies that responded to the Uvalde tragedy, have access to peer training and peers, when and where they need them.	**Estimated Cost:** With an additional $600,000 in annual funding, TLEPN can add peer coordinators in four additional regions and ensure statewide access.

Background

The Uvalde community was changed forever on May 24, 2022.

This assessment is an important step in ensuring this Texas community and its region has the tools, resources, and support it will need to serve the people this tragedy impacted and eventually move forward.

State leaders directed state funding to several efforts following the Robb Elementary tragedy. In June 2022, the Governor, Lieutenant Governor, Speaker of the House of Representatives, and the chairs of Senate Finance and House Appropriations Committees signed a budget execution order for funding through HHSC for the Hill Country Mental Health & Developmental Disabilities (Hill Country MHDD) Center to evaluate mental health services in the Uvalde community[7] and prepare a needs assessment for submission to the Legislature. Hill Country MHDD is the local mental health authority (LMHA) that serves Uvalde County.

Hill Country MHDD engaged the Meadows Institute in July 2022 to conduct this needs assessment. The mission of the Meadows Institute is to provide independent, non-partisan, data-driven, and trusted policy and program guidance that creates systemic changes so all people can obtain effective, efficient behavioral health care when and where they need it.

A principal component of this work is assessing the need for a state-of-the-art psychiatric facility in the Uvalde region to address the lack of access to inpatient psychiatric treatment for a significant portion of the rural and frontier communities in and around Uvalde. Because inpatient care is a necessary but insufficient resource to provide all needed treatment, this needs assessment focuses on the development of a system with a variety of services, such as prevention and education, integrated care, and the most intensive crisis response needs.

Though access to effective and efficient behavioral health care is a challenge in communities across the nation, it is especially acute in rural counties like those included in this assessment. Moreover, it is a challenge whether or not a community has suffered a tragic event. Yet, we know from recent mass-trauma events, such as the Santa Fe High School tragedy in 2018 and Hurricane Harvey in 2017, that severe, community-level traumas leave a lasting mark on victims, families, school personnel, health workers, first responders, and the entire community that the service system will have to address beyond the immediate tragedy.

The Meadows Institute is honored to contribute to this important work in the Uvalde region and would like to thank the leadership at Hill Country MHDD for the opportunity to support the

[7] The Texas Health and Human Services Commission (HHSC) defined the 32 county mental health needs assessment region, basing it on the regions of three LMHAs. Hill Country MHDD serves Bandera, Blanco, Comal, Edwards, Gillespie, Hays, Kendall, Kerr, Kimble, Kinney, Llano, Mason, Medina, Menard, Real, Schleicher, Sutton, Uvalde, and Vel Verde counties. Border Region Behavioral Health Center serves Jim Hogg, Starr, Webb, and Zapata counties. Camino Real Community Services serves Atascosa, Dimmit, Frio, La Salle, Karnes, Maverick, McMullen, Wilson, and Zavala counties.

community and region in this specific way. The Meadows Institute would also like to thank members from the community and region who contributed their insights, support, and dedication to this assessment. The Meadows Institute is particularly thankful to the elected officials and other community leaders who partnered with us to identify both needs and ways to meet those needs, as this assessment can only contribute to recovery to the extent that it offers solutions that local leaders believe in and support.

At the request of HHSC, the recommendations developed within this analysis will be provided to HHSC, the 88th Texas Legislature, elected officials, and communities in the region. The Meadows Institute believes this assessment will help local, county, state and federal officials implement solutions that improve mental health services for all Texans in this part of the state, whether their needs are new or ongoing.

Scope of the Problem

Mass violence has shone a bright spotlight on mental health, but members of the public tend to have only a tenuous understanding of the relationship between mental illness and violence. While a subset of specific mental illnesses can increase the risk of violence if not treated, mental illness alone does not cause violence — people with mental illnesses are far more likely to be a victim of violence than a perpetrator of it. Likewise, violence is not a mental illness.

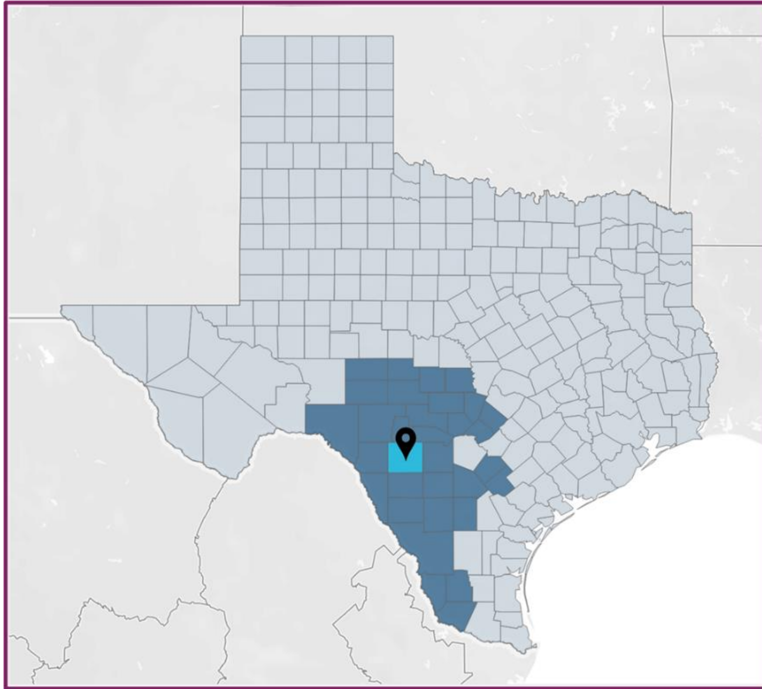
The focus of this assessment is not on violence or the connection of mental illness to the Uvalde tragedy. Rather, this assessment is focused on the burden of mental illness overall on the Uvalde community and the surrounding region. These needs existed before the tragedy and, as in every other community across America, large gaps existed in meeting them. Prior to the tragedy, the impact of the COVID-19 pandemic had exacerbated these needs, particularly among children and youth. Now, following the May 2022 mass violence event, additional needs add to that burden. Every community has mental health needs, but these needs change after such a tragedy, and the anticipated changes must be quantified and addressed.

The primary goal of this assessment is to determine the full array of treatment capacity necessary to treat the mental health needs of the Uvalde community and the broader region effectively and efficiently. A key part of this is assessing the need for a facility able to meet acute mental health needs within the region. However, as discussed, effective treatment of any illness requires more than immediate stabilization of severe symptoms within a single facility – it requires a continuum of care that proactively identifies needs in primary care, provides effective (and, as necessary, intensive) outpatient care in the community, offers stabilization of acute needs as close to home as possible, and connects effectively with major metropolitan areas nearby to treat needs whose severity or complexity exceeds the capacity of locally available care.

Effective treatment of any illness requires more than immediate stabilization of severe symptoms within a single facility.

Effective treatment requires a continuum of care that proactively identifies needs in primary care, provides effective (and, as necessary, intensive) outpatient care in the community, offers stabilization of acute needs as close to home as possible, and connects effectively with major metropolitan areas nearby to treat needs whose severity or complexity exceeds the capacity of locally available care.

It is also important to understand the geographical and population characteristics of the assessment area. The Uvalde community is a rural community, 90 miles west of San Antonio,



Map 1. Mental Health Needs Assessment Region

with a majority Hispanic or Latino population (see Appendix 5: Uvalde Prevalence Data for more information).[8]

Additionally, this community is part of a broader region of 32 counties[9] stretching from Llano County to a 200-mile stretch of the Texas / Mexico border between Del Rio and Laredo. It is a vast area with a much higher rate of poverty than the statewide average. Geography, poverty, and race and ethnic status all impact the types of services needed to appropriately treat mental health needs.

All of these characteristics shape an analysis of the current system as well as inform the design and recommendations for a future system based on treating mental health as we do physical health.

Finally, the assessment must also consider the capacity of the regional workforce to staff any services offered. Texas and the nation are facing unprecedented strains on the overall workforce, including in health care, in general, and in mental health, in particular.

Accordingly, in this assessment, the Meadows Institute partnered with health system and community leaders to assess both the capacity of the currently available workforce to meet additional needs as well as the ability to expand this capacity through new efforts to build the local workforce in partnership with regional institutions of higher education and expand its scope through telehealth and other technology.

[8] It is important to recognize the diversity of culture and life experiences within the Hispanic or Latino population, which, as defined by the U.S. Census Bureau, refers to a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race. After consulting with experts from the National Latino Behavioral Health Association, the Meadows Institute chose Hispanic or Latino.

[9] HHSC defined the 32 county mental health needs assessment region, basing it on the regions of three LMHAs. Hill Country MHDD serves Bandera, Blanco, Comal, Edwards, Gillespie, Hays, Kendall, Kerr, Kimble, Kinney, Llano, Mason, Medina, Menard, Real, Schleicher, Sutton, Uvalde, and Vel Verde counties. Border Region Behavioral Health Center serves Jim Hogg, Starr, Webb, and Zapata counties. Camino Real Community Services serves Atascosa, Dimmit, Frio, La Salle, Karnes, Maverick, McMullen, Wilson, and Zavala counties.

Project Approach

The Meadows Institute is a data-driven organization and a national leader in researching, developing, and implementing effective and efficient mental health and substance use disorder service delivery systems. Drawing from work in across Texas, the Meadows Institute has developed a thorough understanding of the available data, needs, resources, system gaps, and best practices in mental health service delivery. This was not a typical assessment, however. Given the timing of the work and the sensitivity needed to gather information and data, the Meadows Institute leaned heavily on the advice of local leaders on the best ways to engage the community, tailoring the project approach to meet the community's unique needs.

Establish a Shared Project Vision with Local Leaders

This work began by engaging local leaders at Hill Country MHDD to establish clear protocols for coordinating both the work and the priorities for the mental health needs assessment of Uvalde County and the 31 surrounding counties. These 32 counties comprise the local mental health authority regions of Hill Country MHDD (19 counties), Camino Real Community Services (nine counties), and Border Region Behavioral Health Center (four counties).

The Meadows Institute used the information gained from these early discussions to establish a project workplan. Once the project was formally launched, the team remained in communication with the Hill Country MHDD liaisons through regularly scheduled meetings to discuss challenges and opportunities throughout the project. In addition, the Meadows Institute met early and at key points of the project with Uvalde elected officials to receive input and guidance on the work.

The scope of work for this needs assessment, defined by HHSC, was reviewed with local leaders at Hill Country MHDD. HHSC's scope of work includes the following components, and the Meadows Institute address each in this report:

- Background
- Theoretical models
- Scope of the problem
- Victim impact
- Mental health impact on individuals and the surrounding 32 counties
- Data collection methods and trends in mental health data before and after the Mass Violence Incidence
- Historical and currently identified, addressed, and anticipated mental health needs, gaps and barriers in Uvalde and the surrounding region, including:
  - Emotional / Mental health
  - Physical / Medical
  - Financial and
  - Civil, including workforce

- Future mental health focus
- Meeting anticipated and unmet needs
- Summary and recommendations
- Actionable recommendations and findings

Obtain and Analyze Qualitative and Quantitative Data

Once the team established a clear and shared vision for the project, the data collection process began, starting with engaging identified stakeholders and key informants through surveys and group interviews. These stakeholders included service providers, judges (who play an essential gatekeeping role to care in many cases), and other regional leaders.

Through these efforts, the Meadows Institute was able to gain insight into how the current mental health system in Uvalde County and the surrounding counties functions, learn about challenges within the system, and gain feedback on opportunities to address those challenges. Given the nature of a mass violence incident and the timing of this assessment, the team attempted to be as respectful as possible with engagement efforts, especially given evidence that focusing too much on a traumatic event in the period following the incident can cause further psychological distress.[10]

To anchor these qualitative data, the Meadows Institute also carried out comprehensive quantitative analyses of mental health needs, treatment capacity, and demographic data. This included hospital data, socio-economic data, and information from relevant reports and organizational documents. The Meadows Institute team of clinical and operational experts reviewed and analyzed the collected data and established findings addressing mental health and co-morbid health conditions, including substance use disorder, prevalence, service capacity, and cost data.

The recommendations are based on the expert team's understanding of how mental health services are accessed, paid for, and overseen in Texas and more broadly. Given the historic workforce challenges facing health systems across Texas and the nation, the Meadows Institute also looked closely at the capacity of the regional workforce to meet the identified needs as well as the ability to expand this capacity through new efforts in partnership with regional institutions of higher education and through telehealth and other technology.

Develop and Report Recommendations

Recommendations are only helpful to the degree that they can be effectively implemented. Throughout the entire assessment process, the Meadows Institute vetted the findings and emerging potential actions with local leaders to identify solutions for overcoming identified

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[10] Kenardy, J. (2000). The current status of psychological debriefing. *BMJ (Clinical research ed.), 321*(7268), 1032–1033. https://doi.org/10.1136/bmj.321.7268.1032

barriers or challenges in the mental health system. This included sharing a full draft of the recommendations with those leaders and incorporating their feedback and insights into the final report.

Conclusion

Mental health care for the residents of Uvalde and the broader region is at a critical juncture. Because of the leadership of its elected officials, there is a unique opportunity for the community to take major steps in transforming the region's mental health system to better meet the needs of people who live there, closer to home. The recent tragedy and its impact on the health system, and on the mental health of residents, adds to the urgency of creating positive change.

This report provides a framework for local leaders, the Governor, and the Texas Legislature to take concrete steps to begin this transformation. The best mental health care is provided in an integrated health care system and, as with all illnesses, the earlier mental illness is identified and treated, the better. Realizing this vision for the people of Uvalde and the broader region requires a commitment to treating mental illnesses like physical illnesses and designing a system that accounts for the unique needs of the Texans who call this rural region home. There is a clear need for expansion of capacity and resources, but we believe that local community and health system leaders are ready and able to implement the proposed changes. The team also sincerely hopes that these recommendations offer practical, actionable, and impactful steps to honor the memory of those lost on May 24, 2022, empowering the survivors and community they left behind.

Victim Impact and Treatment Models

Defining the Scope of Victims

The May 24, 2022 Robb Elementary tragedy was a devastating act of mass violence that set in motion a community behavioral health response. The impact of the event will linger for years, if not generations. In the aftermath of mass violence events, the community becomes "a covictim of this type of violence,"[11] which has an impact on community cohesion and causes grief to ripple out beyond victims' families and loved ones. Furthermore, cultural, and religious norms have an impact on mourning practices in the wake of such events, as well as on the likelihood of survivors to reach out for mental health services. Cultural awareness and sensitivity are crucial in the aftermath of these events.

Those affected by mass violence include the deceased, survivors, first responders, second responders, and the community. Survivors' social proximity and physical proximity to the victim(s) affect the depth and intensity of their grief and trauma.

Anticipating Short- and Long-Term Impact

One objective of this report is to estimate the prolonged impact of the Robb Elementary tragedy on the mental health of those affected by the event. School shootings have an immediate impact on morbidity and mortality, but research also shows a broader sustained impact on survivors.

The traumatic effects of mass violence on victims are well-documented, with the literature indicating that mass shootings increase rates of depression and anxiety as well as risks of suicide among youth and adults, while reducing overall community and emotional well-being.[12] The Meadows Institute's review of the literature addressing responses to traumatic loss and the short- and long-term impact, summarized below, can also be found in full detail in Appendix 2: Literature Review: Victim Impact and Treatment Models.

Victim Impact

Survivors of targeted mass violence are reported to be at higher risk of distress with a stronger impact on safety and trust compared to survivors of natural disasters. Community organizations, schools, and businesses positions communities are "covictims"[13] in the aftermath of mass violence events. Mass violence can lead to social disruption and the loss of a collective

[11] Rowhani-Rahbar, A., Zatzick, D. F., & Rivara, F. P. (2019). Long-lasting consequences of gun violence and mass shootings. *JAMA, 321*(18), 1765–1766. https://doi.org/10.1001/jama.2019.5063
[12] Soni, A. & Tekin, E. (2022, September 15). *Mass Shootings in the United States: Population Health Impacts and Policy Levers*. Health Affairs Health Policy Brief. https://www.healthaffairs.org/content/briefs/mass-shootings-united-states-population-health-policy-levers
[13] Rowhani-Rahbar, A., Zatzick, D. F., & Rivara, F. P. (2019). Previously cited.

community identity and healing within the community.[14] A lack of unity after the event can worsen mental health outcomes and hinder the coordination of services when needed most.

Within the greater community, mass shootings are associated with a 27% decline in the likelihood of having excellent community wellbeing and a 13% decline in the likelihood of having excellent emotional health four weeks following the tragedy.[15] Rates of post-traumatic stress disorder (PTSD) are higher for both children and adults who are directly impacted compared to community members.[16] Persistence of symptoms is dependent on the number of victims, with effects being more serious among those exposed to a higher number of victims.[17] Having ten or more victims caused the most significant decline in community wellbeing.[18] Studies show that community wellbeing is lowest one month after a shooting and increases gradually thereafter.[19]

People who experience mass violence tend to process the aftermath in three phases.[20] The first phase is the acute phase, defined by denial, shock, and disbelief.[21] The second phase is the intermediate phase, characterized by fear, anger, anxiety, panic, difficulty focusing, depression, and sleep disturbances.[22] The third and final phase is the long-term phase, in which people come to terms with the realities of the mass tragedy, with periods of adjustment and relapse in which maladaptive reactions may call for specialized interventions.[23] Of course, there can be important individual differences among community members with regard to their response to mass violence. These variations are often influenced by age, gender, race, cultural background, proximity to the event, exposure to prior traumas or losses, and preexisting mental health issues. The following describes important differences in how people respond to mass violence as a function of age and proximity to the event.

Children and Youth

Beyond the immediate impact on morbidity and mortality, school shootings have a profound impact on the mental health, grief, and trauma responses of children (11 years and younger)

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[14] Crandall, W. R., Parnell, J. A., & Spillan, J. E. (2013). *Crisis management: Leading in the new strategy landscape* (2nd ed.). Sage.
[15] Soni, A., & Tekin, E. (2020, November). *How do mass shootings affect community wellbeing?* National Bureau of Economic Research Working Papers. https://www.nber.org/system/files/working_papers/w28122/w28122.pdf
[16] Lowe, S. R., & Galea, S. (2017). The mental health consequences of mass shootings. *Trauma, Violence, & Abuse, 18*(1), 62–82. https://doi.org/10.1177/1524838015591572
[17] Soni, A., & Tekin, E. (2020, November). Previously cited.
[18] Soni, A., & Tekin, E. (2020, November). Previously cited.
[19] Soni, A., & Tekin, E. (2020, November). Previously cited.
[20] Substance Abuse and Mental Health Services Administration. (2017). *Mass violence and behavioral health.* Disaster Technical Assistance Center Supplemental Research Bulletin. https://www.samhsa.gov/sites/default/files/dtac/srb-mass-violence-behavioral-health.pdf
[21] Substance Abuse and Mental Health Services Administration. (2017). Previously cited.
[22] Substance Abuse and Mental Health Services Administration. (2017). Previously cited.
[23] Substance Abuse and Mental Health Services Administration. (2017). Previously cited.

and youth (12–17 years of age) survivors. School shootings increase prescription antidepressant use among those younger than 20 years old by 21% in the first two years following a shooting.[24] Increases in prescription antidepressants use were less significant in areas with more mental health providers who focus on behavioral rather than pharmacological interventions.[25] Recent research shows that students in Texas who were exposed to a school shooting had increased "absenteeism and grade repetition," reduced levels of "high school graduation, college enrollment, and college completion," and reduced levels of "employment and earnings at ages 24–26."[26]

Adaptive grief reactions are considered normative and allow for the processing of grief while working through painful emotions and creating a "new normal." Maladaptive grief reactions are characterized by prolonged and intense distress accompanied by difficulties in daily functioning, often involving hopelessness about the future.[27] These reactions vary as a function of developmental stage. For example, very young children may have difficulty separating from caregivers and / or exhibit behavioral regressions (e.g., irritability, tantrums, language delays). School-aged children may become more socially withdrawn and avoid doing activities they used to enjoy, while youth may engage in more risk-taking behaviors such as substance abuse, reckless driving, and / or self-harm.

Adults

According to the U.S. Department of Veterans Affairs, victims of mass violence and natural disasters commonly experience acute stress reactions (e.g., emotional instability, panic, difficulty focusing, and sleep disturbances) that can decrease over time.[28] These myriad reactions, often seen in the immediate aftermath, encompass an evolution of emotions that range from anger, sadness, and fear to helplessness and hopelessness.[29] Over time, certain individual, social, and community-level risk factors can influence the manifestation of psychological disorders such as depression, anxiety, and PTSD, as well as somatic and medical conditions.[30] For example, in the first year following a disaster, PTSD prevalence ranged

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[24] Rossin-Slater, M., Schnell, M., Schwandt, H., Trejo, S., & Uniat, L. (2020). Local exposure to school shootings and youth antidepressant use. *Proceedings of the National Academy of Sciences of the United States of America*, *117*(38), 23484–23489. https://doi.org/10.1073/pnas.2000804117

[25] Rossin-Slater, M., Schnell, M., Schwandt, H., Trejo, S., & Uniat, L. (2020). Previously cited.

[26] Cabral, M., Kim, B., Rossin-Slater, M., Schnell, M., & Schwandt, H. (2022, May). Trauma at school: The impacts of shootings on students' human capital and economic outcomes. National Bureau of Economic Research Working Papers. https://www.nber.org/system/files/working_papers/w28311/w28311.pdf

[27] Kaplow, J. B., Layne, C. M., Saltzman, W. R., Cozza, S. J., & Pynoos, R. S. (2013). Using multidimensional grief theory to explore the effects of deployment, reintegration, and death on military youth and families. *Clinical child and family psychology review, 16*(3), 322–340. https://doi.org/10.1007/s10567-013-0143-1

[28] U.S. Department of Veterans Affairs. (n.d.). *The impact of disaster and mass violence events on mental health.* National Center for PTSD. https://www.ptsd.va.gov/professional/treat/type/violence_trauma_effects.asp

[29] U.S. Department of Veterans Affairs. (n.d.). *Risk and resilience factors after disaster and mass violence.* National Center for PTSD. https://www.ptsd.va.gov/professional/treat/type/disaster_risk_resilience.asp

[30] U.S. Department of Veterans Affairs. (n.d.). Previously cited.

between 30–40% in direct victims, 10–20% in first responders, and 5–10% in community members.[31] Additionally, mass shootings increase PTSD, depression, and anxiety of survivors in relation to the degree of physical distance and social proximity to the shooting.[32]

The Substance Abuse and Mental Health Services Administration (SAMHSA) reports that media exposure to graphic images and videos, lack of social support, and limited access to resources, all of which are common in rural communities, present additional risks.[33] A lack of unity in the community after a mass shooting can also worsen mental health outcomes and hinder the coordination of services when needed most.[34] However, protective factors that promote resiliency in affected people include individual strengths (e.g., sense of optimism and helpful coping strategies) and the use of "effective post-intervention techniques," which can provide people with useful emotional and behavioral coping skills (such techniques are described in Appendix 2: Literature Review: Victim Impact and Treatment Models).[35]

First and Second Responders

First responders include law enforcement, firefighters, emergency medical workers, and dispatch. Thirty percent of first responders have behavioral health issues, such as PTSD and depression, compared to 20% of the general population.[36] The short- and long-term impact of mass violence on first responders includes situations of moral injury in which first responders, particularly law enforcement, sense a failure to protect the public, even though these situations are sometimes out of their control[37] (see further detail in Appendix 2: Literature Review: Victim Impact and Treatment Models).

Vicarious trauma and vicarious grief are forms of psychological distress linked to traumatized people who are sometimes referred to as "second responders," such as mental health workers, community workers, medical, or community volunteers either from within or outside of the

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[31] U.S. Department of Veterans Affairs. (n.d.). Previously cited.

[32] Shultz, J. M., Thoresen, S., Flynn, B. W., Muschert, G. W., Shaw, J. A., Espinel, Z., Walter, F. G., Gaither, J. B., Garcia-Barcena, Y., O'Keefe, K., & Cohen, A. M. (2014). Multiple vantage points on the mental health effects of mass shootings. *Current Psychiatry Reports*, *16*(469). https://doi.org/10.1007/s11920-014-0469-5

[33] Substance Abuse and Mental Health Services Administration. (2017). Previously cited.

[34] Cowan, R. G., Blum, C. R., Szirony, G. M., & Cicchetti, R. (2020). Supporting survivors of public mass shootings. *Journal of Social, Behavioral, and Health Sciences, 14*, 169–182. https://doi.org/10.5590/JSBHS.2020.14.1.12

[35] Makwana, N. (2019). Disaster and its impact on mental health: A narrative review. *Journal of family medicine and primary care*, *8*(10), 3094. https://doi.org/10.4103/jfmpc.jfmpc_893_19

[36] Substance Abuse and Mental Health Services Administration. (2018, May). *First responders: Behavioral health concerns, emergency response, and trauma.* Disaster Technical Assistance Center Supplemental Research Bulletin. https://www.samhsa.gov/sites/default/files/dtac/supplementalresearchbulletin-firstresponders-may2018.pdf

[37] Papazoglou, K., Blumberg, D. M., Chiongbian, V. B., Tuttle, B. M., Kamkar, K., Chopko, B., Milliard, B., Aukhojee, P., & Koskelainen, M. (2020). The Role of Moral Injury in PTSD Among Law Enforcement Officers: A Brief Report. *Frontiers in psychology*, *11*, 310. https://doi.org/10.3389/fpsyg.2020.00310

community.[38] These people can absorb the trauma experience, which allows them to mirror PTSD symptoms and causes potential psychological distress.[39]

Best Practice Theoretical and Treatment Models

Theoretical models in counseling refer to concepts that provide a framework used to describe and understand our thoughts, emotions, and behaviors. As policymakers consider interventions for specific populations with specific clinical characteristics, theory-driven, evidence-based treatment models should be implemented.

Present theoretical work and research largely examines trauma and grief of adult populations and thus leaves a gap in the needs of children and youth in the wake of traumatic events, including mass violence. In addition, the field of childhood grief is relatively new compared to the field of childhood trauma. The following briefly describes a theoretical model of grief, and its interplay with traumatic stress, that the team has used as the basis for their treatment recommendations in the Uvalde region. Descriptions of other theoretical models of grief are available in Appendix 2: Literature Review: Victim Impact and Treatment Models.

Multidimensional Grief Theory

When considering implementation of therapeutic approaches, it is important to understand that the expression and experience of grief will vary from person to person. The following information provides an overview of the likely presentations of grief due to a traumatic experience that should be recognized in school, faith, primary care, and overall community settings.

Unlike other psychological issues, such as depression or post-traumatic stress, grief in general is not necessarily harmful or debilitating. Multidimensional grief theory explores grief through the lenses of both "adaptive," also referred to as normative, and "maladaptive" responses.[40] Children's grief is profoundly impacted by the caregiving environment and support received from their families and the community. Adaptive grief reactions are more likely to occur when children are provided with healthy coping mechanisms to process their grief and are empowered to feel and express the range of emotions that come with loss.[41] Multidimensional grief theory describes three primary grief-related challenges that bereaved people are likely to experience; these include circumstance-related distress, separation distress, and existential / identity distress.

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[38] Cowan, R. G., Blum, C. R., Szirony, G. M., & Cicchetti, R. (2020). Previously cited.

[39] Quitangon, G., & Evces, M. R. (2015). *Vicarious trauma and disaster mental health: Understanding risks and promoting resilience.* Routledge.

[40] Kaplow, J. B., Layne, C. M., Saltzman, W. R., Cozza, S. J., & Pynoos, R. S. (2013). Using multidimensional grief theory to explore the effects of deployment, reintegration, and death on military youth and families. *Clinical child and family psychology review, 16*(3), 322–340. https://doi.org/10.1007/s10567-013-0143-1

[41] Kaplow, J. B., Layne, C. M., Saltzman, W. R., Cozza, S. J., & Pynoos, R. S. (2013). Previously cited.

- **Circumstance-related distress**, sometimes referred to as traumatic grief, is the intense emotional pain and preoccupying thoughts associated with the *cause* of death. This type of distress is often present in the wake of highly traumatic and violent deaths.[42] Normative grief responses to traumatic loss include intense sadness, anger, repulsion, or terror, along with distressing thoughts and images of the death, that tend to decrease over time with the increase of positive memories of the deceased. By contrast, maladaptive responses include severe emotional distress, violent behavior, extreme rage, guilt, shame, or ongoing preoccupation with revenge fantasies.[43]
- **Separation distress** involves yearning to be reunited with the person who died, which can manifest in normative ways such as intensely longing for the person and feeling like a part of them is now missing. Maladaptive separation distress includes taking on unhealthy habits and behaviors to feel close to the deceased person, which may also include suicidal ideation with the goal of reunification in an afterlife.[44]
- **Existential / identity distress** involves grappling with sense of self, the future, and finding meaning in life after loss. Normative responses involve feeling lost without the person or wondering how they will get through life without the person. Maladaptive responses to this type of distress involve the perception of a permanent loss of personal identity, believing that nothing matters in life, and hopelessness about the future without the deceased, which can lead to suicidal ideation.[45]

Tiered Intervention Model for Children and Youth

An evidence-based, three-tiered intervention approach has been shown to be effective in reducing distress in youth and addressing all three of the previously mentioned dimensions of grief, in the wake of a mass shooting event (see Appendix 2: Literature Review: Victim Impact and Treatment Models).

- **Tier 1** is intended for the immediate aftermath and should be implemented within three months of the event and includes reinforcing safety and providing children with coping mechanisms and social support and can be implemented by non- mental health professionals.
- **Tier 2** interventions are typically implemented two- to three-months after the event and include skills-based group intervention (e.g., Trauma and Grief Component Therapy).
- **Tier 3** interventions are generally reserved for people who are experiencing high levels of distress and are typically implemented at least two- to three-months after the event. There are a number of Tier 3 interventions that can be implemented for youth depending on their specific trauma- and / or grief-related symptoms (see Appendix 3:

[42] Rynearson, E.K. (2001). *Retelling violent death*. Routledge.
[43] Kaplow, J. B., Layne, C. M., Saltzman, W. R., Cozza, S. J., & Pynoos, R. S. (2013). Previously cited.
[44] Kaplow, J. B., Layne, C. M., Saltzman, W. R., Cozza, S. J., & Pynoos, R. S. (2013). Previously cited.
[45] Kaplow, J. B., Layne, C. M., Saltzman, W. R., Cozza, S. J., & Pynoos, R. S. (2013). Previously cited.

Trauma- and Grief-Informed, Evidence-Based Practices for Children and Youth Impacted by Mass Shootings).

Tiered Interventions for Adults

The evidence-based, three-tiered intervention model[46] is also applicable to the adult population. Tier 1 includes interventions such as psychoeducation, outreach, public health messaging, and Psychological First Aid. Tier 2 includes grief- and trauma-informed approaches containing skills for recovery. Tier 3 includes interventions that are intensive in nature for those who may have had existing serious mental illness (SMI) prior to the event or developed post-event. Modalities used may include cognitive behavioral therapy, cognitive processing therapy, eye movement desensitization therapy, prolonged exposure therapy, as well as brief eclectic psychotherapy and narrative exposure therapy.[47]

Treatment Approaches for First Responders

Treatment for first responders must be tailored to meet individual needs, while taking into consideration the unique needs for various subgroups (firefighters, police, emergency medical technicians, volunteers, dispatch, etc.). Literature recommends post-trauma evaluation to consider acute or chronic exposure to trauma as well as morally injurious events.[48] For law enforcement organizations, proactive measures are recommended for education regarding moral injury and post-traumatic stress that begin at the recruitment level and continue with ongoing safeguards, such as baseline psychological assessments and annual mental health check-ins to ensure early detection of warning signs.[49]

The stigma of seeking mental health treatment, which is pervasive in the majority of law enforcement organizations, must be overcome to effectively provide treatment to law enforcement officers (LEOs). To achieve success, outreach should include access to peer engagement through an anonymous platform such as the Texas Law Enforcement Peer Network[50] (TLEPN), Texas' state funded and statutorily supported law enforcement peer network. TLEPN enables LEOs to connect with a specially trained peer without revealing their identity or organization with which they are affiliated. This anonymity is necessary to overcome stigma and protect the LEO from adverse employment actions either real or perceived. Currently, TLEPN is not available in all parts of the state. Full state funding for TLEPN would

[46] Institute of Medicine. (2015). *Healthy, resilient, and sustainable communities after disasters: Strategies, opportunities, and planning for recovery.* The National Academies Press. https://doi.org/10.17226/18996
[47] American Psychological Association. (2017). *Clinical practice guideline for the treatment of PTSD.* https://www.apa.org/ptsd-guideline/ptsd.pdf
[48] Papazoglou, K., Blumberg, D. M., Chiongbian, V. B., Tuttle, B. M., Kamkar, K., Chopko, B., Milliard, B., Aukhojee, P., & Koskelainen, M. (2020). Previously cited.
[49] Papazoglou, K., Blumberg, D. M., Chiongbian, V. B., Tuttle, B. M., Kamkar, K., Chopko, B., Milliard, B., Aukhojee, P., & Koskelainen, M. (2020). Previously cited.
[50] S.B. 64, 87(R) (2021). https://capitol.texas.gov/tlodocs/87R/billtext/html/SB00064F.htm

ensure LEOs across Texas, including those from the many law enforcement agencies that responded to Uvalde, have access to peer training and peers, when and where they need them.

In Uvalde, volunteer fire department and emergency medical service personnel were also critical to the response. Regular exposure to trauma – a shooting, an automobile accident, or a house fire – can lead to complex mental health conditions, including depression, anxiety, and PTSD with rates as high as five to 10 times that of the general population. Thus, all first responders are susceptible to a mental health crisis. To meet the needs of all first responders affected by the Uvalde tragedy and those impacted daily elsewhere in our state, the Texas Legislature should consider expanding the TLEPN to formally establish and fund a broader, first responder peer network. Confidential peer services would then be available at no cost to all Texas first responders.

Mental Health Impact and Data Collection Methods and Trends

Uvalde County Behavioral Health Landscape

Pre-Mass Violence Incident

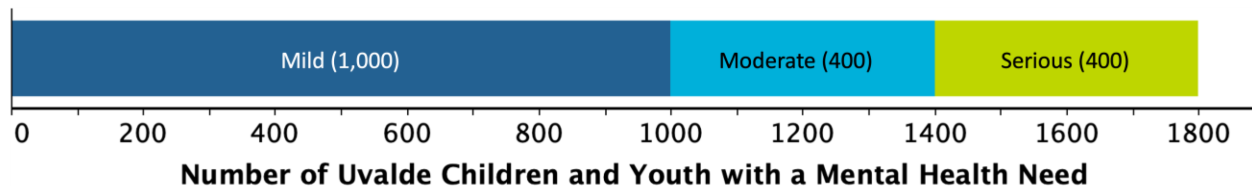
The capacity needed in an ideal mental health system depends on the number of people with mental health needs, which changes with the size of each population. Children, youth, and adults have distinct but overlapping mental health needs that are best treated within systems of care. A system of care is a coordinated network of community-based services and supports created to meet the challenges faced by adults with serious mental illnesses (SMI) and children and youth at risk for or diagnosed with serious emotional disturbances (SED) and their families.[51]

Estimated Children and Youth Behavioral Health Needs

Pre-Mass Violence Incident

The Meadows Institute uses community-level sociodemographic information and applies rigorously researched epidemiological data to estimate mental health needs. As shown in Figure 1, approximately 1,800 children and youth in Uvalde County (36% of all children and youth) had any mental health condition in 2020. Most of these mental health conditions were mild to moderate in severity (78%; 1,400 children and youth), and 400 children and youth had a SED.

Figure 1: Severity of Mental Illness Among Children and Youth in Uvalde County, Pre-Mass Violence Incident (2020)[52]



Approximately three-quarters (75%; 300) of the children and youth with a SED lived in poverty (Table 1). The most serious conditions (conditions causing so much impairment that the child or youth is at risk for out-of-home, out-of-school placement, or involvement in the child welfare or juvenile justice systems) affected a small number of children and youth in the region

[51] Whitson, M. L., Kaufman, J. S., & Bernard, S. (2009). Systems of care and the prevention of mental health problems for children and their families: Integrating counseling psychology and public health perspectives. *Prevention in Counseling Psychology: Theory, Research, Practice and Training*, *3*(1), 3–9.

[52] Any mental health need is the sum of mild mental health need, moderate mental health need, and serious emotional disturbance, estimated using Kessler, R. C., et al. (2012a). Prevalence, persistence, and sociodemographic correlates of DSM-IV disorders in the National Comorbidity Survey Replication Adolescent Supplement. *Archives of General Psychiatry, 69*(4), 372–380. 10.1001/archgenpsychiatry.2011.160; Kessler, R. C., et al. (2012b). Severity of 12-Month DSM-IV disorders in the National Comorbidity Survey Replication Adolescent Supplement. *Archives of General Psychiatry, 69*(4), 381–389. 10.1001/archgenpsychiatry.2011.1603; and Holzer, C., Nguyen, H., & Holzer, J. (2022). *Texas county-level estimates of the prevalence of severe mental health need in 2020*. Dallas, TX: Meadows Mental Health Policy Institute.

(approximately 30 children and youth; <1% of the population). Common conditions affecting youth (ages 12-17) in Uvalde County in 2020 were major depressive episodes (experienced by an estimated 10% of the population; approximately 500 youth) and PTSD (2%; approximately 100 youth). In 2020, approximately 40% of all children and youth in Uvalde County experienced one or more adverse childhood experiences (ACEs).

The most recent data available from the Centers for Disease Control and Prevention (CDC) report deaths from suicide in 2020, with provisional data available for calendar year 2021. In both 2020 and 2021, fewer than 10 children and youth completed suicide per year,[53] with the actual number suppressed based on federal privacy protocols to protect the confidentiality of the deceased.

Table 1: Twelve-Month Prevalence of Mental Health Needs Among Children and Youth in Uvalde County, Pre-Mass Violence Incident (2020)[54,55]

	Age Range	Prevalence (% of Total Population)
Total Population – Children and Youth	**6–17**	**5,000**
Child Population	6–11	2,000 (40%)
Youth Population	12–17	3,000 (60%)
All Mental Health Needs (Mild, Moderate, and SED)[56]	**6–17**	**2,000 (40%)**
Mild Conditions	6–17	1,000 (20%)
Moderate Conditions	6–17	400 (8%)
Serious Emotional Disturbance (SED)	6–17	400 (8%)
SED in Poverty[57]	6–17	300 (6%)
At Risk of Out-of-Home / Out-of-School Placement[58]	6–17	30 (<1%)

[53] The CDC suppresses death counts for sub-national data representing zero to nine (0-9) deaths to assure confidentiality, so no more precise data on child and youth suicide deaths in Uvalde County are available.
[54] U.S. Census Bureau. (2022). Previously cited.
[55] All population estimates were rounded to reflect uncertainty in the underlying American Community Survey estimates. Because of this rounding, percentages may not always add up to 100%.
[56] Kessler, R. C., et al. (2012a). Previously cited; Kessler, R. C., et al. (2012b). Previously cited; and Holzer, C., Nguyen, H., & Holzer, J. (2022). Previously cited.
[57] Holzer, C., Nguyen, H., & Holzer, J. (2022). Previously cited; Poverty data obtained from the U.S. Census Bureau, American Community Survey 2016-2020 Five-Year Public Use Microdata Sample (PUMS). https://www.census.gov/programs-surveys/acs/data/pums.html
[58] Based on our prior work in developing community-based service arrays in response to system assessments (in WA, MA, CT, NE, and PA), the Meadows Institute estimates that one in 10 children with SED in poverty would require time-limited, intensive home and community-based services to reduce risk of out-of-home or out-of-school placement.

	Age Range	Prevalence (% of Total Population)
Adverse Childhood Experiences[59]		
Population with 1 ACE	6–17	1,000 (20%)
Population with 2 or More ACEs	6–17	1,000 (20%)
Specific Disorders – Youth (Ages 12-17)		
Major Depressive Episode[60]	12–17	500 (10%)
Bipolar Disorder[61]	12–17	60 (1%)
Post-Traumatic Stress Disorder[62]	12–17	100 (2%)
First Episode Psychosis – New Cases per Year[63]	12–17	<6 (<1%)
Specific Disorders – Children (Ages 6-11)		
Depression – Children[64]	6–11	30 (<1%)
Mortality		
Number of Deaths from Suicide in 2020[65]	<18	<10
2021 (Provisional)	<18	<10

Table 2 details the estimated number of youth (ages 12-17) with SUD in Uvalde County. In 2020, approximately 7% of all youth (200 youth) had any SUD. Just over one-third of youth with any SUD (2%; 70 youth) also experienced a comorbid major depressive episode.

[59] Child and Adolescent Health Measurement Initiative. (2021). 2019-2020 National Survey of Children's Health (NSCH) data query - Texas. Data Resource Center for Child and Adolescent Health. www.childhealthdata.org

[60] Substance Abuse and Mental Health Services Administration. (2021). *2019-2020 National Survey on Drug Use and Health: Model-Based Prevalence Estimates* – Texas. NSDUH Table 30.

[61] Kessler, R. C., Petukhova, M., Sampson, N.A., Zaslavsky, A.M. & Wittchen, H-U. (2012). Twelve-month and lifetime prevalence and lifetime morbid risk of anxiety and mood disorders in the United States. *International Journal of Methods in Psychiatric Research, 21*(3), 169–184. https://doi.org/10.1002/mpr.1359

[62] Kessler, R. C., Petukhova, M., Sampson, N.A., Zaslavsky, A.M. & Wittchen, H-U. (2012). Previously cited.

[63] Kirkbride, J. B., Hameed, Y., Ankireddypalli, G., Ioannidis, K., Crane, C. M., Nasir, M., Kabacs, N., Metastasio, A., Jenkins, O., Espandian, A., Spyridi, S., Ralevic, D., Siddabattuni, S., Walden, B., Adeoye, A., Perez, J., & Jones, P. B. (2017). The epidemiology of first-episode psychosis in early intervention in psychosis services: Findings from the Social Epidemiology of Psychoses in East Anglia [SEPEA] study. *American Journal of Psychiatry, 174*, 143–153. https://doi.org/10.1176/appi.ajp.2016.16010103

[64] Perou, R., Bitsko, R. H., Blumberg, S. J., Pastor, P., Ghandour, R. M., Gfroerer, J. C., Hedden, S. L., Crosby, A. E., Visser, S. N., Schieve, L. A., Parks, S. E., Hall, J. E., Brody, D., Simile, C. M., Thompson, W. W., Baio, J., Avenevoli, S., Kogan, M. D., Huang, L. N., & Centers for Disease Control and Prevention (CDC). (2013). Mental health surveillance among children – United States: 2005-2011. *MMWR supplement, 62*(2), 1–35.

[65] Centers for Disease Control and Prevention, National Center for Health Statistics. (2021, December). Underlying cause of death 1999-2020 on CDC WONDER online database. Data are from the multiple cause of death files, 1999-2020, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. For more information, see: http://wonder.cdc.gov/ucd-icd10.html

Table 2: Twelve-Month Prevalence of Substance Use Disorders Among Youth (12-17) in Uvalde County, Pre-Mass Violence Incident (2020)[66]

Population	Youth Prevalence (% of Total Population)
Total Population	**3,000**
Population in Poverty	2,000 (67%)
Any Substance Use Disorder[67]	**200 (7%)**
In Poverty with SUD[68]	40 (1%)
Alcohol-Related SUD[69]	70 (2%)
Illicit Drug-Related SUD[70]	100 (3%)
Comorbid Major Depressive Episode and SUD[71]	70 (2%)
SUD Mortality[72]	
Number of Drug Overdose Deaths in 2020	<10
Number of Alcohol-Induced Deaths in 2020	<10

Estimated Adult Behavioral Health Needs

Pre-Mass Violence Incident

The adult prevalence section contains data on mental health needs and severity levels, SUD, and deaths from suicide or drug overdose.

As shown in Figure 2, approximately 4,900 adults in Uvalde County (25% of all adults) are estimated to have had any mental health condition in 2020. Most adults living with mental health conditions had mild to moderate needs (82%; 4,000 adults), with the remaining 900 adults having a SMI. Compared to the distribution of severity levels for adults experiencing any

[66] All population estimates were rounded to reflect uncertainty in the underlying American Community Survey estimates. Because of this rounding, percentages may not always add up to 100%.

[67] Substance Abuse and Mental Health Services Administration. (2021). Previously cited. NSDUH Table 23.

[68] The percentage of adults in poverty with an SUD is based on DPPYILLALC (Illicit Drug or Alcohol Dependence in Past Year) x Poverty Cross-tabulation, National Survey on Drug Use and Health, 2019-2020. The percentage was applied to the estimated number of adults in poverty in Texas. Poverty estimates are based on the PUMs 2020 poverty proportions, applied to the American Community Survey estimates.

[69] Substance Abuse and Mental Health Services Administration. (2021). Previously cited. NSDUH Table 22.

[70] Substance Abuse and Mental Health Services Administration. (2021). Previously cited. NSDUH Table 20.

[71] The local prevalence of co-occurring major depressive episodes (MDE) and substance use disorders among youth are based on the intersection between the national prevalence rate of MDE and substance use disorder, from the 2020 National Survey on Drug Use and Health: Detailed Tables – Tables 9.5 and 9.7, and the Texas-based estimates of MDE from the *2019-2020 National Survey on Drug Use and Health: Model-Based Prevalence Estimates* – Texas, NSDUH Table 30.

[72] Centers for Disease Control and Prevention, National Center for Health Statistics. (2021, December). Previously cited. Overdose deaths are classified using underlying cause-of-death ICD-10 codes: X40–44, X60–64, X85, and Y10–Y14. Alcohol induced deaths are classified using any underlying cause of death and multiple causes of death category, “alcohol-induced causes.”

mental health need in Texas (statewide), Uvalde County had a similar percentage of adults with moderate or severe mental health needs (59% in Uvalde County vs. 58% in Texas).

Figure 2: Severity of Mental Illness Among Adults in Uvalde County, Pre-Mass Violence Incident (2020)[73]

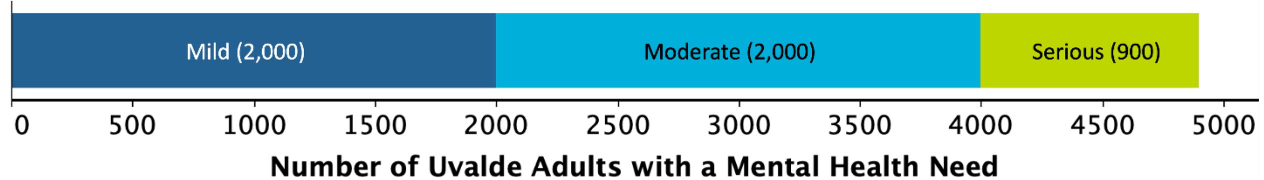


Table 3 shows the estimated 12-month prevalence of mental health disorders among Uvalde County adults. Of the estimated 900 adults living with SMI, approximately two-thirds (67%; 600 adults) lived in poverty. Based on 2020 data, most adult mental health needs included major depression (5% of the adult population; 1,000 adults) and PTSD (5%; 900 adults). Generalized anxiety disorder was prevalent among 3% of the adult population (500 adults). Fewer than 10 adults completed suicide in Uvalde County in 2020, with the actual number not identified because of protocols designed to protect the privacy of people who have died in situations where there are a small number of deaths.[74]

Table 3: Twelve-Month Prevalence of Mental Health Disorders Among Adults in Uvalde County, Pre-Mass Violence Incident (2020)[75]

Mental Health Condition	Prevalence (% of Total Population)
Total Adult Population	**20,000**
Population in Poverty	9,000 (45%)
SMI in Poverty[76]	600 (3%)

[73] Any mental health need is the sum of mild, moderate, and serious mental illness, estimated from prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 64,* 617–627. 10.1001/archpsyc.62.6.617; and Holzer, C., Nguyen, H., & Holzer, J. (2022). Previously cited.
[74] The CDC suppresses death counts for sub-national data representing zero to nine (0-9) deaths to assure confidentiality, so no more precise data on adult drug overdose or alcohol-related deaths in Uvalde County is available.
[75] All population estimates were rounded to reflect uncertainty in the underlying American Community Survey estimates. Because of this rounding, percentages may not always add up to 100%.
[76] Holzer, C., Nguyen, H., & Holzer, J. (2022). Previously cited. Poverty data was obtained from the U.S. Census Bureau, American Community Survey 2016-2020. Previously cited.

Mental Health Condition	Prevalence (% of Total Population)
Major Depression[77]	1,000 (5%)
Bipolar I Disorder[78]	100 (1%)
Generalized Anxiety Disorder[79]	500 (3%)
Post-Traumatic Stress Disorder[80]	900 (5%)
Coordinated Specialty Care for First Episode Psychoses (FEP) Incidence- New Cases per Year (Ages 18–34)[81]	<6 (<1%)
Mortality	
Number of Deaths by Suicide (2020)[82]	<10

As shown in Table 4, in 2020, approximately 10% of adults in Uvalde County (approximately 2,000 adults) had SUD, with around 3% (500 adults) living in poverty with SUD. Around half of all SUD cases (1,000 adults) involved co-occurring psychiatric and SUD. Fewer than 10 adults died from drug overdose or alcohol-related reasons in 2020, with the actual number not identified because of CDC protocols designed to protect the privacy of people who have died in situations where there are a small number of deaths.[83]

Table 4: Twelve-Month Prevalence of Substance Use Disorders Among Adults in Uvalde County, Pre-Mass Violence Incident (2020)

Population	Prevalence (% of Total Population)
Total Population	**20,000**
Population in Poverty	9,000 (45%)

[77] Holzer, C., Nguyen, H., & Holzer, J. (2022). Previously cited.
[78] Holzer, C., Nguyen, H., & Holzer, J. (2022). Previously cited.
[79] Holzer, C., Nguyen, H., & Holzer, J. (2022). Previously cited.
[80] Goldstein, R. B., Smith, S. M., Chou, S. P., Saha, T. D., Jung, J., Zhang, H., Pickering, R. P., Ruan, W. J., Huang, B., & Grant, B. F. (2016). The epidemiology of DSM-5 posttraumatic stress disorder in the United States: Results from the National Epidemiologic Survey on Alcohol and Related Conditions-III. *Social Psychiatry and Psychiatric Epidemiology, 51*(8), 1137–1148. 10.1007/s00127-016-1208-5
[81] Kirkbride, J. B., Hameed, Y., Ankireddypalli, G., Ioannidis, K., Crane, C. M., Nasir, M., Kabacs, N., Metastasio, A., Jenkins, O., Espandian, A., Spyridi, S., Ralevic, D., Siddabattuni, S., Walden, B., Adeoye, A., Perez, J., & Jones, P. B. (2017). Previously cited.
[82] Centers for Disease Control and Prevention, National Center for Health Statistics. (2021, December). Previously cited.
[83] The CDC suppresses death counts for sub-national data representing zero to nine (0-9) deaths to assure confidentiality, so no more precise data on adult drug overdose or alcohol-related deaths in Uvalde County is available.

Population	Prevalence (% of Total Population)
Any Substance Use Disorder[84]	**2,000 (10%)**
In Poverty with SUD[85]	500 (3%)
Alcohol-Related SUD[86]	2,000 (10%)
Illicit Drug-Related SUD[87]	1,000 (5%)
Comorbid Psychiatric and SUD[88]	1,000 (5%)
SUD Mortality[89]	
Number of Drug Overdose Deaths in 2020	<10
Number of Alcohol-Induced Deaths in 2020	<10

Mental Health Projections – Post Mass Violence Incident

As described in greater detail in the Victim Impact and Treatment Models section, one goal of this report is to estimate the prolonged impact of the Robb Elementary tragedy on mental illness within the community. School shootings have an immediate impact on morbidity and mortality, but research also shows a broader sustained impact on survivors. For example, 2022 research on students in Texas who were exposed to a school shooting had "increased absenteeism and grade repetition, reduction in high school graduation, college enrollment, and college completion, and reduce employment and earnings at ages 24–26.[90] Findings from another study assessing the effect of school shootings on high schools and student performance shows a decrease in standardized test scores in math and English for California students in ninth grade, persisting up to three years post-shooting.[91]

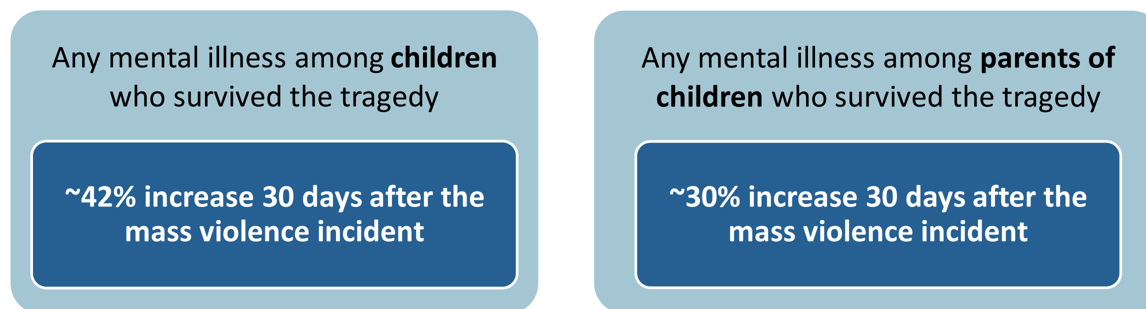
School shootings have a long-term impact on mental illness among survivors *and* the larger community. One scientific review found that mass shootings increase PTSD, depression, and

[84] Substance Abuse and Mental Health Services Administration. (2021). Previously cited. NSDUH Table 23.
[85] The percentage of adults in poverty with a SUD is based on DPPYILLALC (Illicit Drug or Alcohol Dependence in Past Year) x Poverty Cross-tabulation, National Survey on Drug Use and Health, 2019-2020. The percentage was applied to the estimated number of adults in poverty in Texas. Poverty estimates are based on the PUMs 2020 poverty proportions, applied to the American Community Survey estimates.
[86] Substance Abuse and Mental Health Services Administration. (2021). Previously cited. NSDUH Table 22.
[87] Substance Abuse and Mental Health Services Administration. (2021). Previously cited. NSDUH Table 20.
[88] Co-occurring psychiatric and substance use disorders among adults are generated using rates of any mental illness (AMI) and substance use disorder (SUD), from the 2020 National Survey on Drug Use and Health: Detailed Tables - Tables 8.1 and 8.7 (SUD), and the Texas-based estimates of AMI from the *2019-2020 National Survey on Drug Use and Health: Model-Based Prevalence Estimates* – Texas, Table 27.
[89] Centers for Disease Control and Prevention, National Center for Health Statistics. (2021, December). Previously cited. Overdose deaths are classified using underlying cause-of-death ICD-10 codes: X40–44, X60–64, X85, and Y10–Y14. Alcohol induced deaths are classified using any underlying cause of death and multiple causes of death category, "alcohol-induced causes."
[90] Cabral, M., Kim, B., Rossin-Slater, M., Schnell, M., & Schwandt, H. (2022, May). Previously cited.
[91] Beland, L. P., & Kim, D. (2016). The Effect of High School Shootings on Schools and Student Performance. *Educational Evaluation and Policy Analysis, 38*(1), 113–126. https://doi.org/10.3102/0162373715590683

anxiety of survivors, but in relation to the degree of physical distance and social proximity to the shooting.[92] After a 1988 elementary school shooting, for example, the prevalence of PTSD among child survivors post-incident increased to as high as 91% and among their parents to as high as 54%.[93,94] Among parents, those with children under the age of 18 were most affected by mass shootings.[95]

Among the greater community, a mass shooting was associated with a 27% decline in the likelihood of having excellent community wellbeing and a 13% decline in the likelihood of having excellent emotional health, four weeks following the incident.[96,97] As the number of victims of a shooting increased, the longer symptoms among the community lasted.

Given prior research discussed above, the Meadows Institute estimates that Uvalde children who survived the tragedy will see a ~42% increase in any mental illness 30 days after the shooting.[98] Mental illness among Uvalde parents of children who survived will also increase (~30%).

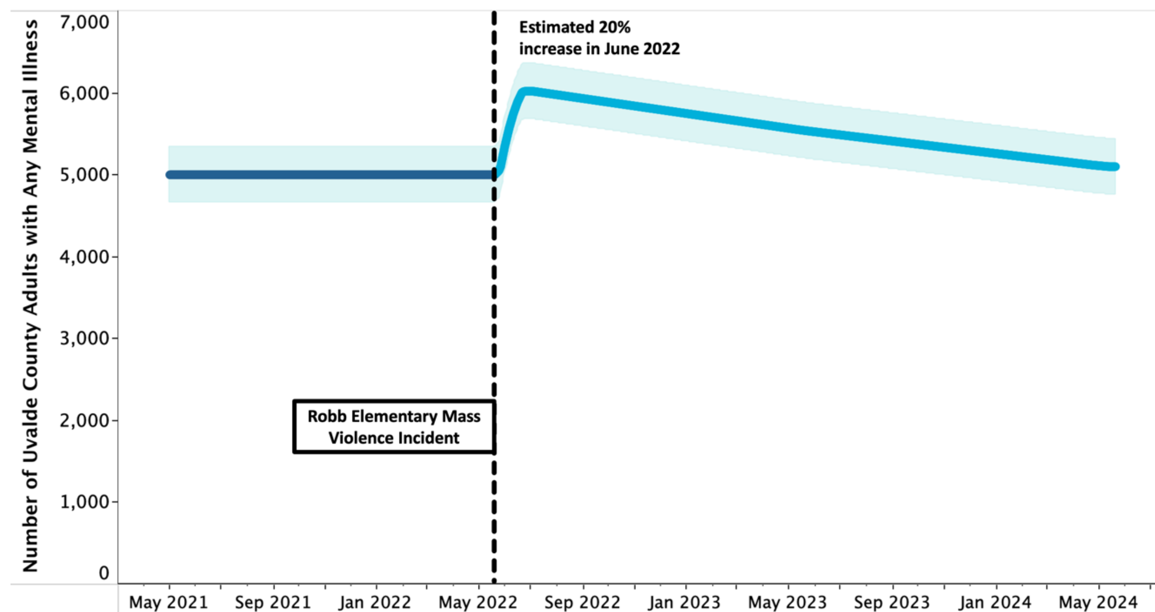


The Meadows Institute also estimates that the mental health of adults in the greater community changed post-incident. Figure 3 shows the projected change in the number of Uvalde County adults suffering from mental illness before and after the Robb Elementary tragedy. Prior to the mass violence incident, an estimated 5,000 adults in Uvalde County had any mental illness in the twelve months preceding the mass violence incident. The team estimates a 20% increase in the prevalence of mental illness one month after the shooting. This

[92] Shultz, J. M., Thoresen, S., Flynn, B. W., Muschert, G. W., Shaw, J. A., Espinel, Z., Walter, F. G., Gaither, J. B., Garcia-Barcena, Y., O'Keefe, K., & Cohen, A. M. (2014). Previously cited.
[93] North, C. S. (n.d.). *Mental health response to community disasters: A fact sheet for disaster mental health planners, first responders, and providers*. University of Missouri, Disaster and Community Crisis Center. https://dcc.missouri.edu/assets/doc/dcc_community_mh_response_factsheet.pdf
[94] Lowe, S. R., & Galea, S. (2017). Previously cited.
[95] Soni, A., & Tekin, E. (2020, November). Previously cited.
[96] Soni, A., & Tekin, E. (2020, November). Previously cited. National Bureau of Economic Research Working Papers. https://www.nber.org/system/files/working_papers/w28122/w28122.pdf
[97] Soni, A., & Tekin, E. (2020, November). Previously cited.
[98] Lowe, S. R., & Galea, S. (2017). Previously cited.

translates to 6,000 total Uvalde County adults (1,000 *additional* people) having a mental health need at the end of June 2022. As shown in Figure 3, the number of additional people suffering from mental illness will slowly decline over the subsequent two years but will not return to pre-incident levels.[99]

Figure 3: Estimated Prevalence of Any Mental Illness Among Adults in Uvalde County Following the Mass Violence Incidence (May 2021 to May 2024)[100]



Priority Needs County Judges Identified

To gain additional insight into Texas communities and identify potential areas of unmet need, a virtual survey was sent to county judges in Uvalde County and the other counties in the region.[101] The survey was active for just under a month with one follow-up email reminding and encouraging participation.[102]

Responses

Eleven (34%) of the 32 county judges completed they survey.[103] Those responding represent 16% of the population of the 32-county region. Judges in counties in closer geographic

[99] Soni, A., & Tekin, E. (2020, November). Previously cited.
[100] Soni, A., & Tekin, E. (2020, November). Previously cited.
[101] The counties included in the survey were: Atascosa, Bandera, Blanco, Comal, Dimmit, Edwards, Frio, Gillespie, Hays, Jim Hogg, Karnes, Kendall, Kerr, Kimble, Kinney, La Salle, Llano, Mason, Maverick, McMullen, Medina, Menard, Real, Schleicher, Starr, Sutton, Uvalde, Val Verde, Webb, Wilson, Zapata, Zavala
[102] The survey was run using the Survey Monkey platform and was open from September 16th, 2022, until October 17th, 2022. Follow up email was made on October 5th, 2022.
[103] One respondent from each of the following counties participated in the survey: Atascosa, Edwards, Frio, Kerr, Kimble, Kinney, McMullen, Menard, Real, Uvalde, and Val Verde.

proximity to Uvalde County were more likely to respond (see Map 3 in Appendix 9: County Judge Survey).

Results

Three major themes emerged from the survey:

- **There is a lack of local services and inpatient psychiatric care for the community.** Eighty-two percent of respondents indicated that families travel, on average, 50 miles or more to transport their child or youth to inpatient psychiatric treatment followed by 91% indicating that law enforcement travel, on average, 50 miles or more to transport adults to inpatient psychiatric treatment. (See Figure 15 and Figure 16 in Appendix 9: County Judge Survey).
- **There are not enough mental health response teams and related training opportunities for law enforcement in the communities.** Nearly 73% of the total responses indicated that there were either no mental health response teams available in the community or the respondents did not know if they existed. Additionally, 75% of the total responses indicated that there were no available trainings for law enforcement on mental health response in their community or that the respondents did not know if they existed. (See Figure 17 and Figure 18 in Appendix 9: County Judge Survey).
- **There are opportunities to expand and improve children and youth mental health services.** All respondents indicated that they would prioritize at least one of the available children and youth services options, and 82% of the respondents indicated that the development of new family- and community-based treatment options could be easily adopted by the juvenile justice system. Lastly, when asked what school services respondents would like to see made available in their local schools, trainings received the most responses (31) (see Figure 19, Figure 20, and Figure 21 in Appendix 9: County Judge Survey).

Regional Psychiatric Bed Needs

Approach for Estimating Regional Psychiatric Beds Needed

The Meadows Institute adapted the methods used in prior assessments in other communities in Texas to project the number of psychiatric beds needed to serve adults seeking care in the 32-county area through 2050[104] accounting for anticipated impact on mental health need from the tragedy. In addition, the Meadows Institute used the following inputs to make the projections:

- Number of psychiatric inpatient admissions between 2016 and 2019 for residents of the 32-county region to any inpatient psychiatric unit in the state:[105]

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[104] This methodology was used to project psychiatric bed need in the Meadow's Institute's community assessment of Lubbock and Nueces County.

[105] Texas Hospital Inpatient Discharge Research Use Data Files. (2016-2019). Texas Department of State Health Services. Austin, Texas.

  - Separated by patient county of residence and age group (adults and children / youth)
  - Excluding state hospital admissions
- Average length of stay for those inpatient admissions by patient county of residence and age group
- Population growth by patient county of residence and age group.[106]

Those inputs were used to calculate the number of beds needed to meet the demand for inpatient psychiatric care in each of the 32 counties in the region. Note that these projections do *not* consider the development of new community outpatient capacity and are designed to estimate the number of beds a community might need if no programmatic changes are made.

Two additional adjustments were then made to adequately predict the proper size of a potential inpatient psychiatric facility in Uvalde County.

- Given the large geographic span of the 32-county region, the Meadows Institute does not anticipate all residents requiring inpatient psychiatric care in all 32 counties would receive care at this potential facility in Uvalde County. To adjust for that variation in need between the counties, different percentages were applied to the anticipated psychiatric admissions from each county (see Appendix 7: Methodology for Determining Counties' Anticipated Admissions Percentages to Psychiatric Beds in Uvalde County for Table 22 of the percentages across counties and a description of the process for determining the appropriate percentages).
- The average number of beds was then adjusted to accommodate need such that, on an average day, the facility would operate at 75% capacity. The use of average daily census compared to facility capacity in projecting need has important implications, as noted in the footnote below.[107]

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[106] The 32-county population is projected to grow by 91% for adults and 55% for children/youths from 2020 to 2050. The region is expected to have a higher rate of growth than the State of Texas, where the population is projected to grow by 65% for adults and 43% for children/youths from 2020 to 2050. The distribution of county-level population growth rates within the 32-county area shows a positive skew; the average county-level growth from 2020 to 2050 is 55% for adults and 23% for children/youths whereas the median growth is 8% for adults and 10% for children/youth (minimum projected population change is a 26% decline in adult and 31% decline in child/youth population; maximum projected growth expected is an 895% increase in the adult population and a 209% increase in the child/youth population). Population projections from Texas Demographer Population Projections Program, 2018. https://demographics.texas.gov/data/tpepp/projections/

[107] Operating below this capacity can lead to financial sustainability issues and operating above this percentage can lead to an increased risk of adverse events and increased stress on the facility and staff. Operating at a higher capacity also increases the risk of experiencing a shortage of beds at a particular point and the resultant need to divert patients or place them in a waiting room for extended periods, neither of which is optimal for patient care. See Jones, R. (2013). *Optimum bed occupancy in psychiatric hospitals*. https://www.researchgate.net/publication/252626295_Optimum_bed_occupancy_in_psychiatric_hospitals and Boyle, J., Zeitz, K., Hoffman, R., Khanna, S., & Beltrame, J. (2014). Probability of Severe Adverse Events as a

Number of Regional Psychiatric Beds Needed

The result of the bed needs projections are shown in Table 5, below. By 2030, the 32-county region is estimated to need 16 psychiatric beds for children and youth and 34 beds for adults – totaling 50 psychiatric beds, to operate at an average daily census of 75% of capacity. By 2025, the adult bed need increases to 42, for a total of 58 beds needed.

Table 5. Estimated Psychiatric Bed Capacity Needs for the 32-County Region, 2030 – 2050

Capacity			
Year	Children / Youth (<18)	Adults	Total
2023	16	34	50
2025	16	35	51
2030	16	36	52
2040	17	39	56
2050	16	42	58

Future Directions in the Use of Data

Uvalde Specific Data on the Mental Health Impact of the Robb Elementary Tragedy

The Meadows Institute evaluated data on the use of mental health supports and services available in Uvalde County before and after the mass violence incident by analyzing three data sources:[108]

1. Hill Country MHDD (the local mental health authority serving Uvalde) aggregated administrative records
2. Community Health Development, Inc. (the federally qualified health center in Uvalde County) patient encounter-level medical records
3. #UvaldeStrong hotline aggregated administrative records.

Overall, two significant changes in services appear to have occurred:

- The FQHC experienced higher behavioral health service utilization among children and adults compared to prior years
- Many people accessed care the #UvaldeStrong hotline immediately after the tragedy.

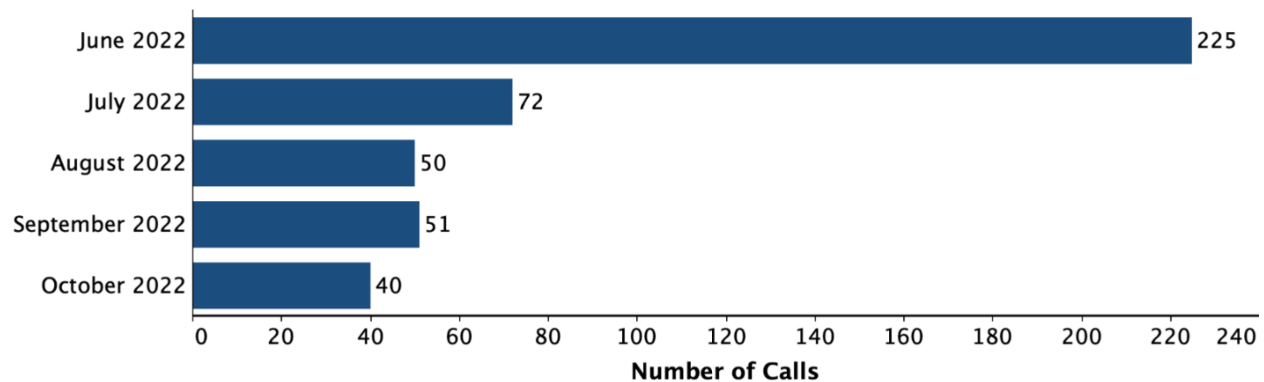
The FQHC experienced higher behavioral health service utilization among children and adults compared to prior years. This remained higher than previous years for both adults and children. Unlike children and youth (who maintained elevated levels of service use throughout May 2022), service use among adults increased but rapidly declined in the last week of May.

Function of Hospital Occupancy. *IEEE Journal of Biomedical and Health Informatics*, *18*(1), 15–20. https://doi.org/10.1109/JBHI.2013.2262053.

[108] The Meadows Institute requested data from the Uvalde Memorial Hospital system but did not receive it.

Initially, there were high levels of utilization of the #UvaldeStrong hotline. The number of hotline calls, overall, were highest in the month immediately after the tragedy and slowly decreased over time after that. As can be seen in Figure 4, there were 225 calls to the #UvaldeStrong hotline in June 2022.

Figure 4: Hotline Call Volume Post Robb Elementary Mass Violence Incident (June to October 2022)[109]



Given these changes and the anticipated future impacts, it is prudent to continue tracking the prevalence and severity of mental illness and service utilization across systems in Uvalde over time. Although the Meadows Institute conducted one of the most robust assessments of mass violence incidents on mental health service utilization using local data, the trends observed reflect short-term changes only given the recency of the event in relation to this assessment (~6 months post-incident).

The Meadows Institute identified a range of opportunities for Uvalde County stakeholders to leverage data to identify shifts in demand and need for mental health services over time in Table 6 and Table 7, below. Ideally, data are harmonized and analyzed prospectively from a multi-system perspective, meaning that a single patient can be identified as intersecting with multiple systems (i.e., juvenile justice, TCHATT, and the FQHC). Quality data integration across silos may be done by data scientists, a health informatics organization, or local health information exchange (HIE).[110,111] A HIE works to mitigate data silos by enabling data sharing between hospitals, clinics, public health, laboratories, imaging centers, jails / prisons, health providers and social service organizations. Data are merged across systems such that a digital fingerprint is generated to identify a single patient who encounters multiple systems. Once operational, this patient identification process across systems permits automatic, passive

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[109] Administrative data was provided by the LMHA and #UvaldeStrong hotline. The Meadows Institute aggregated numbers stratified by month.

[110] To provide an example of a highly functional health information exchange (HIE), the Meadows Institute has often engaged with PHIX in El Paso, Texas. https://phixnetwork.org/

[111] The utility of any HIE will be dependent upon the breadth and quality of the data available and the quality of the patient matching process.

monitoring of people who suffer from mental illness or begin demonstrating mental health symptoms over time.

Table 6 lists metrics that are already available to Uvalde stakeholders for analysis. The Meadows Institute recommend Uvalde County stakeholders continue to track these metrics to identify changes in need for mental health services.

Table 6: Metrics to Quantify Changes in Need for Mental Health Services in Uvalde Using Pre-Existing Data Sources[112]

Context / Source	Recommended Metrics to Continue Tracking
Schools	Grades
	Test scores
	Absenteeism
	Repeated grades
	Visits to school nurse (particularly for mental health related problems)
	Disciplinary referrals / suspensions
	Referrals to school counselors
Hospitals	Emergency department (ED) visits among Uvalde residents
	Use of inpatient psychiatric care by residents (by age)
	Length of stay in inpatient psychiatric beds (by age)
	ED and outpatient visits for primary mental health disorders
	ED and outpatient visits for primary SUD
	Visits to EDs for suicide attempts and/or ideations
	Medications for mental health conditions prescribed
LMHA	Service utilization (by age)
	Levels of care used over time
	Use of crisis services and crisis hotline
	Referrals to inpatient care (by age)
FQHC / Community Clinics	Service utilization (by age)
	Medications for mental health conditions prescribed
	Number of patients diagnosed with mental illness (primary and/or secondary)
	Number of patients diagnosed with SUD (primary or secondary)
	Positive screens for common mental health conditions (depression, anxiety)
Law Enforcement	911 calls for service by type of call (crisis services)

[112] The list of prospective data sources and metrics for ongoing monitoring is not exhaustive; rather, it is intended to illustrate the opportunities available to monitor community need and detect changes in need using data that are already available.

The following table identifies new metrics that Uvalde County stakeholders should consider tracking to quantify the long-term effects of the Robb Elementary mass violence incident on mental health in Uvalde County.

Table 7: Example Metrics that Uvalde Stakeholders Might Begin Tracking to Identify Changes in Need for Mental Health Services in Uvalde[113]

Context / Source	Recommended New Metrics to Track
School Administrative Data	Online vs. in-person schooling
	TCHATT participation
	Students' use of TCHATT services
Student Surveys in Schools	UCLA PTSD RI-5, Brief Version[114]
	Prolonged Grief Disorder Checklist[115]
	Short mood and feelings questionnaire[116]
Hospital (ED)	Screen for common mental health conditions universally (depression, anxiety, post-traumatic stress)[117]
Uvalde Strong Hot Line	Calls at the caller-level, including call taker notes
	Transfers to outside organizations for mental health assessment (Hotline to LMHA or police, for example)
Justice System	Prevalence of mental illness among adults in Uvalde jails
	Prevalence of mental illness in the juvenile justice system
	Mental Health diversion and / or mandated substance use treatment uptake and completion rate
	Creation and use of specialty, drug, or veterans' courts among residents with a mental health need
Law Enforcement, First Responders (Fire / EMS)[118]	Law enforcement-initiated calls for service by type of call
	Overdose emergency and overdose deaths in community
	Suicides, attempted suicides, or unexplained deaths that could be suicides in the community

[113] The list of prospective data sources is not exhaustive; rather, it is intended to illustrate the breadth of opportunities to monitor community need and detect changes in need via new data collection and analysis.
[114] Rolon-Arroyo, B., Kaplow, J.B., Oosterhoff, B., Layne, C.M., Steinberg, A., & Pynoos, R. (2020). The UCLA PTSD Reaction Index for DSM-5 Brief Form: A screening tool for trauma-exposed youth. *Journal of the American Academy of Child and Adolescent Psychiatry, 59* (3), 434-443
[115] Kaplow, J. B., Layne, C., Oosterhoff, B., Goldenthal, H., Howell, K., Wamser-Nanney, R., Burnside A., Calhoun K., Marbury D., Johnson-Hughes L., Kriesel M., Staine M. B., Mankin M., Porter-Howard L., & Pynoos, R. (2018). Validation of the Persistent Complex Bereavement Disorder (PCBD) Checklist: A developmentally informed assessment tool for bereaved youth. *Journal of Traumatic Stress*, *31*(2), 244–254.
[116] Angold, A., Costello, E. J., Messer, S. C., Pickles, A., Winder, F., & Silver, D. (1995) The development of a short questionnaire for use in epidemiological studies of depression in children and adolescents. *International Journal of Methods in Psychiatric Research*, 5, 237 – 249.
[117] Standardized protocols for handling positive screening test results must also be developed.
[118] Shultz, J. M., Thoresen, S., Flynn, B. W., Muschert, G. W., Shaw, J. A., Espinel, Z., Walter, F. G., Gaither, J. B., Garcia-Barcena, Y., O'Keefe, K., & Cohen, A. M. (2014). Previously cited.

Context / Source	Recommended New Metrics to Track
	Absenteeism, resignations, use of force incidents, and misconduct that leads to disciplinary action (arrest even if after termination or resignation)
	Law enforcement calls to schools, student referrals to law enforcement, student law enforcement off campus engagement (ticketing, arrests, detention)
	Additional deployment of screening assessments to identify mental health conditions among first responders (including secondary traumatic stress, fear, hypervigilance, suicidality, among other conditions)

Periodic Epidemiological Study and Mental Health Needs Assessment

Unfortunately, knowledge of the long-term trajectory of mental health in a community impacted by a mass violence incident is limited. The few studies that track the impact of mass violence incidents do not do so beyond 12 months. If a rigorous, comprehensive assessment of mental health in Uvalde County after the Robb Elementary mass violence incident is desired, stakeholders should consider contracting with an organization to conduct a periodic epidemiological study. This study would track the prevalence of mental illness and substance use in the community over time and would be conducted every two years. This investment would provide Uvalde with a "gold standard" summary of the community's mental health needs across domains (i.e., schools, justice, and community) over time. This information could be used to develop and deploy a customized intervention strategy in Uvalde County, while informing service delivery in communities that must manage the aftermath of similar tragedies in the future.

The high degree of stakeholder engagement in the Uvalde community uniquely positions the county to conduct such a study and greatly expand knowledge on the long-term effects of a mass violence incident on a community's mental health over time.

In addition, the community should undertake a regional mental health needs assessment. Mental health needs assessments, according to SAMHSA, are a "systematic approach to identifying community needs and determining program capacity to address the needs of the population being served."[119] This could be done through Hill Country MHDD's process for re-certification as a certified community behavioral health clinic (CCBHC). Hill Country MHDD is required to regularly update its initial needs assessment, developed by the state as a condition of CCBHC certification, every three years.[120,121]

[119] *How States Can Conduct a Needs Assessment*. (n.d.). Retrieved December 2, 2022, from https://www.samhsa.gov/section-223/certification-resource-guides/conduct-needs-assessment
[120] *How States Can Conduct a Needs Assessment*. Previously cited.
[121] For more on the criteria regarding CCBHC certification see, *Criteria for the Demonstration Program to Improve Community Mental Health Centers and to Establish Certified Community Behavioral Health Clinics* (p. 68). (2016). U.S. Department of Health & Human Services.

Historical and Currently Identified Mental Health Needs

This section outlines the ideal structure for a mental health system. This is important because in each community there are components, processes, and coordination within the historical system that do not align or are absent from the ideal version. Because of the unique nature of this assessment, it considers not only the historical mental health needs of Uvalde but also the unique current needs stemming from the tragedy. Therefore, this section describes the current state of services as well as the needs of the community following an ideal system of care framework.

Emotional / Mental Health

Guiding Principles and the Ideal System of Care

The guiding principle for the Meadows Institute's work throughout Texas is that the traditional approach of treating the mind and body separately has led to inadequate and often inappropriate care for people with mental illnesses and SUD; an overuse of jails, emergency departments (EDs), and hospital beds; and treatment of adults with SMI and children and youth with SED that stands in sharp contrast to the integrated care provided to people with complex physical health needs. Care for mental illness and SUD should be the same as care for physical illness unless clinical needs or public safety warrants a specialty approach, with integration of care the norm and not simply a goal.

For more details on transforming mental health care please see the publication, "*A Unified Vision for Transforming Mental Health & Substance Use Care.*"[122]

The following core principles guide the Meadows Institute's work:

- **Identification and treatment of mental health concerns and substance misuse should occur at the earliest stage in the illness and within traditional health care systems**, just as with any other physical illness. As with any other illness, the earlier a disorder is identified and aggressively treated, the better the outcome will be for the person experiencing it. Additionally, absent public or personal safety concerns, treatments should be provided in the general health care system. This includes community-based, crisis, and inpatient mental health care options that are embedded in health systems, not the criminal justice system. In practice, this means that traditional reliance on law enforcement response to mental health crises should be shifted, to the degree possible, to the medically facing response used for all other health crises.
- **It is particularly important to identify and provide treatment for children, youth, and their families at the earliest point possible**, because untreated mental illnesses, emotional disturbances, and substance misuse can have cascading effects on the child or youth's health, school performance, and other factors that, if left unaddressed, are

[122] A Unified Vision for Transforming Mental Health & Substance Use Care. (2020, December 16). MMHPI. https://mmhpi.org/topics/announcements/unified-vision-launch/

associated with greater risks of entry into the juvenile justice and adult criminal justice systems.

- **Many people with diagnoses of mental illnesses and SUD have complex physical health needs** and, conversely, many people with complex physical health needs suffer from mental illnesses such as depression or SUD that can compromise care. Given this, emergency assessment and hospitalization of people with mental illness diagnoses should occur, whenever possible, in settings that can assess and treat both physical and mental health conditions. Cross-system efficiencies that target navigation and coordination of treatment must include capabilities to identify acute physical and mental health needs at each entry point. Communities should prioritize the expansion and evolution of existing intensive community-based services to mitigate the need for hospitalizations, incarceration, and crisis services, with the goal of improving health, well-being, and quality of life for those in need.
- **It is important that SUD services are integrated into the overall treatment of a person in an ideal behavioral health system.** Specific SUD treatment protocols such as medically supervised detoxification and medication-assisted treatment must be developed within the broader context of integrated physical and behavioral health care.

No community in Texas or the nation has a system that seamlessly incorporates all of these principles. In many instances, mental health care delivery is fragmented and segregated from the health care system. Too often, the mental health system in communities looks like the system depicted in the following figure, when it should look as much as possible like the system depicted in the second – and ideal – mental health system diagram.

To reflect these principles, the Meadows Institute developed the framework for an “ideal system”. This ideal system, and the principles that underlie it, informed the assessment. The discussion that follows first presents the ideal system and then discuss specific initiatives and opportunities that will enable Uvalde to approach this ideal system, over time.

Figure 5: The Current Mental Health Care System

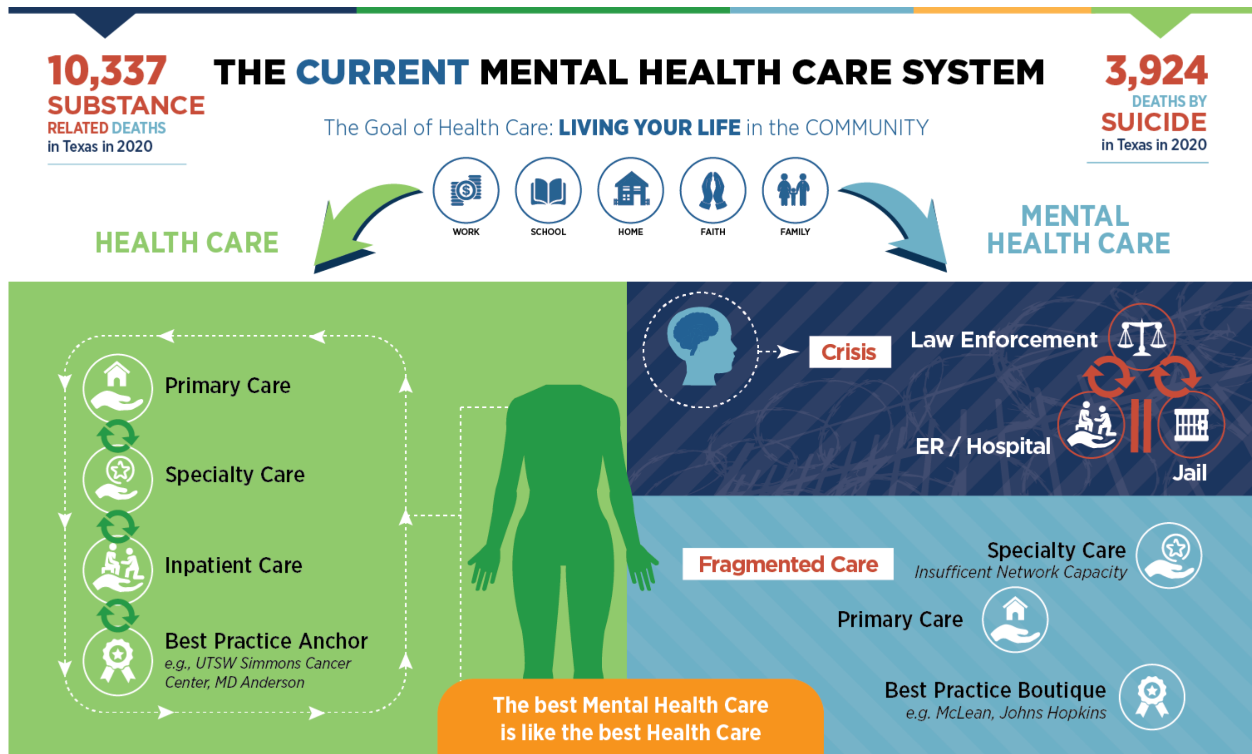
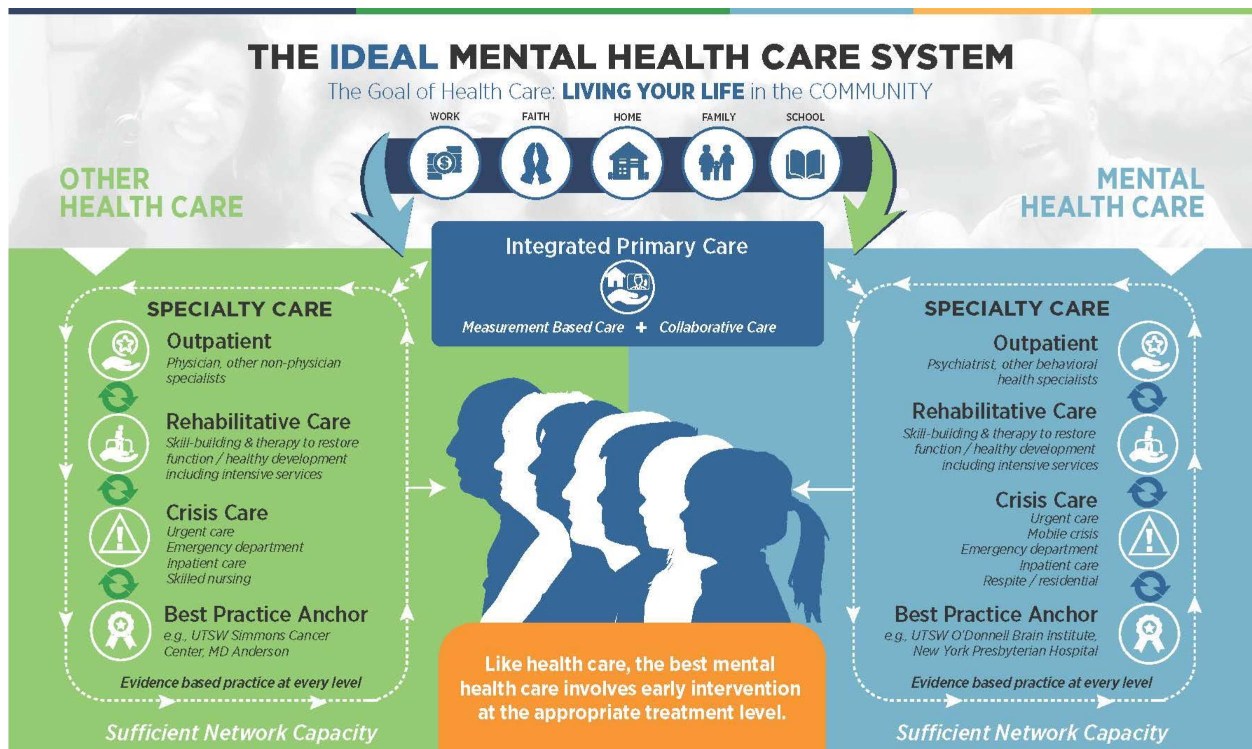


Figure 6: The Ideal Mental Health Care System



The Historical Uvalde Region System and Current Transformative Needs

Life in the Community

Life in the community, as depicted at the top of Figure 6, includes the range of community settings where people and families spend their time. Health needs – including diseases affecting the brain such as mental health disorders as well as other health conditions, both chronic (like diabetes) or acute (like orthopedic accidents) – occur in the social context of life: work, home, family, schools, and faith communities. The sections that follow describe local initiatives and opportunities in the Uvalde community and region.

Community Collaboration

It is essential for a formal leadership team to "own" and "drive" the changes needed for the mental health system in Uvalde County. While community leaders are committed to improving mental health services for Uvalde County residents, currently, there is no broad-based planning group to oversee issues related to mental health and bring all entities together to develop a strategic direction for the transformation of the overall Uvalde County mental health system.

Community collaboration is critical to sustainable change. The creation of a formal leadership group with a goal of improving behavioral health care in the county will facilitate communication and create a plan for expanding services in a systematic way. This leadership group would provide overall direction and integration of efforts across the entire mental health system. The group should include a variety of members, be a place where local leaders meet to discuss data and make policy decisions, and where workgroups can report up to a centralized group. Given the many needs of the Uvalde County system and engagement of the political leadership, the Meadows Institute recommends the creation of a leadership group that comprises elected officials, physical health care providers such as hospital systems and primary care providers, mental health care leaders and providers including SUD treatment and recovery providers, representatives of the veterans' community, school districts, law enforcement including juvenile justice, community members with lived experience, and others to provide an integrated approach to improving treatment for mental illnesses in Uvalde County. This leadership group should provide overall direction and integration of efforts across the entire spectrum of systemic transformation work.

Ultimately, it is up to Uvalde County and other counties in the region to decide how to create a governing structure to implement system reform, including identifying participants, establishing the degree of formal authority exercised by the group, and deciding how it defines and performs its role. However, it is also important that the leaders of local health systems and elected officials are members of such a group. The group should include principals or executive level leadership (not staff) from all major stakeholder organizations.

To support the functioning of the planning group, it is imperative that new positions be established; a minimum of two positions (two full-time equivalents) are needed to assume responsibilities for providing oversight of the group and the overall coordination of the work, including staff support and managing specific tasks to support the implementation of policies for continuing system improvements in Uvalde County. Additionally, these positions would require data retrieval for metrics set by the planning group. These positions would coordinate with the overall identified partners to access appropriate data and report outcomes back to the group. Therefore, the positions require experience with project management, data and outcome analysis, and administrative oversight as well as excellent working relationships with members of the collaborative.

Schools

Uvalde Consolidated Independent School District (CISD) uses a Multi-Tiered System of Support (MTSS) to provide all students with behavioral and mental health support. The MTSS framework includes universal promotion strategies for all students (Tier 1), targeted services and supports for a smaller group of students experiencing or at risk of experiencing a mental and behavioral health challenge (Tier 2), and specialized and individualized services for the small number of students with complex mental and behavioral health needs that Tier 1 or Tier 2 programs cannot adequately meet (Tier 3).[123] MTSS is an evidence-based framework for integrating services to address academic and behavioral needs.[124] Uvalde CISD implemented MTSS in 2018, and it continues to be a strong foundation for addressing the needs of students.

Uvalde CISD has a continuing partnership with Community in Schools (CIS), which provides two counselors and support services at all three MTSS tiers. In response to the Uvalde tragedy, Uvalde CISD built upon its existing system by incorporating comfort dogs and implementing classroom guidance lessons facilitated by counselors to help address the school community's needs. Uvalde CISD has also increased its focus on Tier 2 and 3 supports; each campus now has a full-time licensed professional counselor (LPC) or social worker on site.

The Trauma and Grief (TAG) Center at the Meadows Mental Health Policy Institute[125] has trained all Uvalde CISD counselors and clinicians in both Tier 1 and Tier 2, evidence-based interventions that focus on addressing trauma and grief in elementary, middle, and high-school students. TAG Center's clinicians provide ongoing consultation and supervision as a part of these trainings. Uvalde CISD leadership reports that the community support from organizations

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[123] American Institutes for Research. (2017, September). *Mental health needs of children and youth: The benefits of having schools assess available programs and services*. https://www.air.org/sites/default/files/downloads/report/Mental-Health-Needs-Assessment-Brief-September-2017.pdf

[124] *ESSA and MTSS for Decision-Makers*. (n.d.). National Association of School Psychologists (NASP). Retrieved November 15, 2022, from https://www.nasponline.org/research-and-policy/policy-priorities/relevant-law/the-every-student-succeeds-act/essa-implementation-resources/essa-and-mtss-for-decision-makers

[125] The Trauma and Grief Center at the Hackett Center for Mental Health, Meadows Mental Health Policy Institute.

has been extensive, including Family Service of San Antonio, the TAG Center at The Hackett Center for Mental Health, and the Child Bereavement Center of South Texas. Hill Country MHDD and Community Health Development Inc. serve as the providers for urgent needs and psychiatric evaluations. Through these community supporters, the district has been able to support students, families, and staff in both English and Spanish.

Uvalde CISD is also implementing the Texas Child Health Access Through Telemedicine (TCHATT) program in partnership with the University of Texas Health Science Center at San Antonio. Senate Bill (S.B.) 11 (86th Regular Session, 2019) established the Texas Child Mental Health Care Consortium to foster collaboration on pediatric mental health care among medical schools in Texas.[126] The Texas Child Mental Health Care Consortium is responsible for overseeing five key initiatives, including TCHATT. TCHATT is a statewide program that gives schools access to mental health providers via telemedicine and telehealth to help children and youth with urgent mental health needs whom school personnel have identified as high-risk. Urgent assessments and short-term stabilization care are available through TCHATT, increasing community-wide urgent care capacity. TCHATT also provides linkages for follow-up care to specialty outpatient mental health providers. There are additional school districts in the region participating in TCHATT, as detailed in Table 8.

Table 8: Regional TCHATT Implementation, September 2022[127]

LMHA Region	Total ISDs	ISDs Without TCHATT	With TCHATT		
			ISDs	# Campuses	Student Population
Border Region Behavioral Health Center	10	9	1	50	42,325
Camino Real Community Services	21	13	8	40	14,122
Hill Country Mental Health & Developmental Disabilities Centers	48	34	14	100	61,892

Stakeholders report that the presence of the media and discouraging voices on social media have hampered the desire of students, teachers, and staff to reengage with the community at large. Currently, the community has a limited number of local programs and youth activities. Uvalde CISD leadership expressed a strong desire for the development of engagement opportunities for the community to come together around this shared experience to meet the needs of the school staff and families by providing a space for the overall community to move forward together.

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[126] Senator Jane Nelson filed S.B. 10, which ultimately passed as a component of Senator Larry Taylor's S.B. 11.
[127] Texas Child Mental Health Care Consortium. (n.d.). *Texas Child Health Access Through Telemedicine*. https://tcmhcc.utsystem.edu/tchatt/

Uvalde CISD is committed to meeting the current and future needs of the school community. Addressing ways to improve communication and general engagement with the larger behavioral health coalition is essential to ensure that the future needs of students and staff are addressed.

Faith Community

A key component of good mental health is having meaningful and lasting social connections. One of the community entities that still regularly mediates between the individual and the larger society and is prepared to offer ongoing community support, is the local congregation – whether it be a church or other faith community. The prospects for congregations to support people experiencing mental health issues to achieve recovery in the community are significant, especially when they collaborate with mental health providers and other agencies that can deliver evidence-based and clinically necessary treatment and supports. By providing opportunities to become members of a community and to develop and maintain positive social relationships, congregations and other faith-based groups can play a significant role in supporting people experiencing emotional and mental health issues on their journeys to recovery.

Faith and mental health initiatives can be organized into the following ways. The models certainly overlap in many instances; for example, some initiatives or programs incorporate one or more types of models in their work, but this taxonomy might be useful as leaders consider how to supplement and strengthen their current work.

Table 9. Faith and Mental Health Initiatives

Faith-Mental Health Model	Goal / Approach	Examples
Educate Faith Communities to Increase Mental Health Literacy and Awareness	Uses educational and training methods to increase understanding of mental illness, reduce stigma, and increase capacity to refer for services.	San Antonio's Wellness Center for Families of Faith and the city's Mental Health Action Team provide mental health education.[128]

[128] *Faith-Based Initiative Structure*. (n.d.). Retrieved November 17, 2022, from https://www.sanantonio.gov/portals/0/Files/HumanServices/FaithBased/Resources/Structure-Infographic.pdf#view=Fit

Faith-Mental Health Model	Goal / Approach	Examples
Equip Congregations for Mental Health Ministry	Trains congregation members in the provision of community-based support to people with mental health conditions and / or their families.	Grace Alliance and Fresh Hope[129] provide support group manuals and training. The Mental Health Chaplaincy of Seattle[130] provides training in companionship.
Engage Faith Communities as Partners to Improve Mental Health System Access and Performance	Works collaboratively with congregations to improve system access and mental health outcomes.	The Memphis Model[131] establishes covenants between a health system and congregations, who work together to decrease hospital readmissions and improve mental health services access. Bridges to Care and Recovery in St. Louis[132] train congregations in mental health ministry and provides referral pathways and financial support for accessing mental health services.
Establish System-Level Efforts to Promote Faith and Mental Health Collaboration	Leaders develop a community-wide coalition or collaborative that systematically disseminates mental health education, training, and ministry throughout a geographic region.	The Interfaith Mental Health Coalition in Chicago[133] and the Interfaith Coalition for Mental Health in Indianapolis[134] organize mental health conferences and other mental health training and education events and develop mental health advocacy capacities among collaborating partners. Pathways to Promise[135] works with national faith groups and other leaders to disseminate mental health education and ministry resources.

[129] *Mental Health Grace Alliance*. (n.d.). Mental Health Grace Alliance. Retrieved November 17, 2022, from https://mentalhealthgracealliance.org
[130] *Mental Health Chaplaincy – a companioning presence in the city*. (n.d.). Retrieved November 17, 2022, from http://mentalhealthchaplaincy.org/
[131] *Congregational Health Network—Methodist Le Bonheur Healthcare*. (n.d.). Retrieved November 17, 2022, from http://www.methodisthealth.org/about-us/faith-and-health/congregational-health-network
[132] *Behavioral Health Network*. (n.d.). Retrieved November 17, 2022, from https://www.bhnstl.org/
[133] *Get Involved with the Coalition! | Interfaith Mental Health Coalition*. (n.d.). Retrieved November 17, 2022, from https://interfaithmhc.org/
[134] *Home | Interfaith Coalition for Mental Health*. (n.d.). Interfaith Coalition for Mental Health of Greater Indianapolis. Retrieved November 17, 2022, from https://www.icmhindy.org/
[135] *Pathways to Promise | Bridging Faith, Culture, and Mental Health*. (n.d.). Retrieved November 17, 2022, from https://www.pathways2promise.org/

Faith-Mental Health Model	Goal / Approach	Examples
Embed Mental Health Services in Faith Communities	Mental health services are delivered in the congregation setting to increase access to faith-friendly approaches to mental health.	West Texas Counseling and Guidance[136] co-locates mental health services and support groups in area congregations. Using "task-shifting" methods, Houston's Hope and Healing Center & Institute[137] embeds mental health support services and interventions within congregations. It also provides a wide array of mental health treatments and interventions at the center.

Integrated Primary Care

As noted on Figure 6: The Ideal Mental Health Care System, integrated primary care health settings are where people should receive routine medical care and where the vast majority of children, youth, and adults with mild-to-moderate mental health needs should also receive mental health care. The family doctor's office is the ideal medical and behavioral health home to detect any health need in its earliest stage and successfully provide associated routine care. Integrating mental health treatment into primary care settings, especially in the Uvalde region's rural communities, is an essential strategy for increasing access to mental health services for children, youth, and adults. Moreover, integrated behavioral health is an integral framework for providing early treatment to those with most mild-to-moderate conditions in primary care, while also crafting streamlined referral pathways for those in need of more specialized and intensive care.[138]

Child Psychiatry Access Network (CPAN)

Most children and youth struggling with mild-to-moderate anxiety, depression, attention issues, and other behavior challenges in the Uvalde region could have their needs adequately addressed in primary care settings. However, early detection and treatment requires primary care providers (PCPs) to be sufficiently supported and staffed. One exemplary resource on this

[136] *WTCG Locations: West Texas Counseling & Guidance*. (n.d.). Retrieved November 17, 2022, from https://www.sanangelocounseling.org/directoryListings/index
[137] *About Us*. (n.d.). Hope and Healing Center and Institute. Retrieved November 17, 2022, from https://hopeandhealingcenter.org/about-us/
[138] Straus, J. H., & Sarvet, B. (2014). Behavioral Health Care for Children: The Massachusetts Child Psychiatry Access Project. *Health Affairs*, *33*(12), 2153–2161. https://doi.org/10.1377/hlthaff.2014.0896

front is CPAN, a program that the Texas Child Mental Health Care Consortium launched in May 2020.[139, 140]

Integration of mental health treatment in primary care is the strategy with the most potential to address workforce challenges.

When mental health needs are identified, pediatric PCPs can access CPAN hub's referral network for psychiatric consultation, behavioral health intervention recommendations, and referrals to community services and resources to best address the mental and behavioral health needs of their patient population. Specialty outpatient service providers play a critical role in CPAN when referral sources for mental health conditions cannot be managed in primary care. Additionally, when mild-to-moderate behavioral health presentations are internally managed through primary care, specialty care providers' waitlists are subsequently minimized – allowing for more expeditious referrals on behalf of higher acuity patients.

Pediatric PCPs in Uvalde County can enroll in CPAN free of charge through UTHSCSA.[141] Three Uvalde practices are already enrolled: Encina Pediatrics & Primary Care, Sage Family Medicine Associates, PA, and Uvalde Family Practice. Combined, these three practices have enrolled five physicians and three nurse practitioners who can leverage mental health and case management expertise through the program. Ultimately, the UTHSCSA CPAN referral network, for Uvalde County specifically, enables pediatricians and PCPs to be best equipped to refer their patients to identified community services and supports, which uniquely target the behavioral health needs of children and youth.

Clinical Integration Models

Integration of mental health and substance use treatment in primary care is the strategy with the most substantive potential to address workforce challenges by better leveraging both primary care and behavioral health specialty care workforces.[142] Specifically, two models best

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[139] Kolko, D. J., Campo, J., Kilbourne, A. M., Hart, J., Sakolsky, D., & Wisniewski S. (2014). Collaborative care outcomes for pediatric behavioral health problems: A cluster randomized trial. *Pediatrics,* 133(4), e981–e992. https://doi.org/10.1542/peds.2013-2516

[140] Richardson, L. P., Ludman, E., McCauley, E., Lindenbaum, J., Larison, C., Zhou, C., Clarke, G., Brent, D., & Katon, W. (2014). Collaborative care for adolescents with depression in primary care: a randomized clinical trial. *JAMA*, *312*(8), 809–816. https://doi.org/10.1001/jama.2014.925

[141] The 32-county region represented in this report receives CPAN services through the University of Texas Health Science Center at San Antonio (UTHSCSA), Dell Medical School (DMS), Texas Tech University Health Science Center at El Paso (TTUHSC El Paso), and University of Texas Rio Grande Valley (UTRGV).

[142] Asarnow, Joan Rosenbaum, Rozenman, M., Wiblin, J., & Zeltzer, L. (2015). Integrated medical-behavioral care compared with usual primary care for child and adolescent behavioral health: A meta-analysis. *JAMA Pediatrics*, *169*(10), 929. https://jamanetwork.com/journals/jamapediatrics/fullarticle/2422331

highlight the effectiveness of addressing workforce shortages by treating patients in primary care instead of referring them to overwhelmed and understaffed specialty care systems: the Collaborative Care Model (CoCM) and Primary Care Behavioral Health (PCBH).

CoCM and PCBH each have the capacity to magnify the reach of our limited workforce many times over; analyses carried out by the Meadows Institute illustrate how CoCM can leverage psychiatrists 3.5 times over, and PCBH can leverage other licensed practitioners 2.65 times over.[143] In early 2021, comprehensive studies through both RAND and the Bipartisan Policy Center endorsed these strategies,[144] and RAND[145] offered specific recommendations for scaling them nationwide. Both CoCM and PCBH have shown growing promise with pediatric populations.[146,147]

Though certain distinctions exist between the two population health approaches, CoCM and PCBH both effectively address workforce shortages via the following mechanisms:

- Sharing an interdisciplinary team-based structure
- Treating a wide array of behavioral health presentations
- Stigma-reduction by receiving services in primary care instead of specialty mental health settings
- Utilizing evidence-based measures to guide treatment planning and monitoring
- Utilizing existing insurance billing codes for long-term financial sustainability for practices
- Allowing for real time availability of behavioral health care
- Employing brief, evidence-based interventions in a short-term care format to help patients access care faster and reduce symptoms of distress sooner.

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[143] Meadows Mental Health Policy Institute. (2022). Integration and the pediatric behavioral health workforce. https://mmhpi.org/wp-content/uploads/2022/03/Briefing-Summary_BHI_Workforce_Pediatrics_March2022.pdf

[144] BPC Behavioral Health Integration Task Force. (2021). *Tackling America's mental health and addiction crisis through primary care integration: Task force recommendations.* Bipartisan Policy Center. https://bipartisanpolicy.org/wp

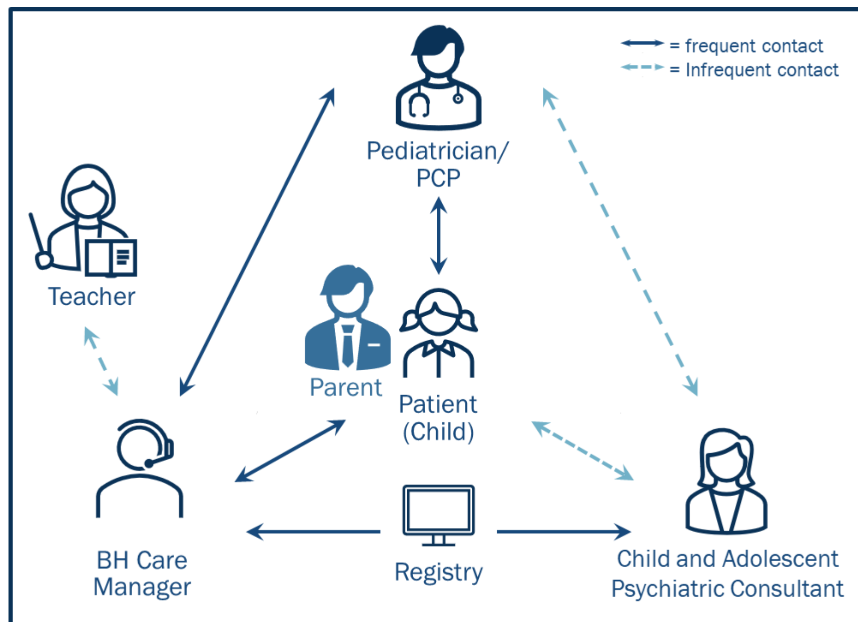
[145] McBain, R. K., Eberhart, N. K., Breslau, J., Frank, L., Burnam, M. A., Kareddy, V., & Simmons, M. M. (2021). How to transform the U.S. mental health system: Evidence-based recommendations. RAND Corporation. https://www.rand.org/pubs/research_reports/RRA889-1.html; -content/uploads/2021/03/BPC_Behavioral-Health-Integration-report_R01.pdf

[146] Remoue Gonzales, S., & Higgs, J. (2020). Perspectives on integrated behavioral health in pediatric care with immigrant children and adolescents in a Federally Qualified Health Center in Texas. *Clinical Child Psychology and Psychiatry, 25*(3), 625–635. https://journals.sagepub.com/doi/10.1177/1359104520914724

[147] Campo MD, J. V., Geist MD, R., & Kolko PhD, D. J. (2017). Integration of Pediatric Behavioral Health Services in Primary Care: Improving Access and Outcomes with Collaborative Care. *La Revue Canadienne de Psychiatrie*, *63*. https://doi.org/10.1177/070674371775166

Collaborative Care Model: CoCM is an evidence-based approach[148] that delivers mental health services efficiently and effectively in primary care settings comprised of a care team led by the PCP and including a behavioral health care manager and consulting psychiatrist, as demonstrated in Figure 7. CoCM is the most extensively researched and evidence-based population health integration strategy to detect and treat mental health and SUD before they become crises.[149] Importantly, CoCM is proven to work well for Black, Hispanic or Latino, and other communities of color.[150, 151]

Figure 7: Collaborative Care Model



By embedding mental health services into medical practices, CoCM can significantly expand access to mental health assessment and treatment for people who are experiencing mental health concerns, which will lead to improved health outcomes and reduced costs to the overall health system. CoCM is an evidence-based model for integrated care that is currently reimbursable in primary care, covered by Medicare since 2017 and by nearly all commercial and many Medicaid payers.[152] Additionally, it is a model with strong evidence of

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[148] Centers for Medicare & Medicaid Services. (2019, May). Behavioral health integration services. https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/BehavioralHealthIntegration.pdf

[149] Carlo, A. D., Barnett, B. S., & Unützer, J. (2021). Harnessing collaborative care to meet mental health demands in the era of COVID-19. *JAMA Psychiatry*, *78*(4), 355. https://doi.org/10.1001/jamapsychiatry.2020.3216

[1] Meadows Mental Health Policy Institute. (2021). *Lone star depression challenge.* https://mmhpi.org/the-lonestar-depression-challenge/

[150] Wells, K., Sherbourne, C., Schoenbaum, M., Ettner, S., Duan, N., Miranda, J., Unützer, J., & Rubenstein, L. (2004, April). Five-year impact of quality improvement for depression: Results of a group-level randomized controlled trial. *Archives of General Psychiatry, 61*(4), 378–386. https://pubmed.ncbi.nlm.nih.gov/15066896/

[151] Ell, K., Aranda, M. P., Xie, B., Lee, P-J., & Chou, C-P. (2010, June). Collaborative depression treatment in older and younger adults with physical illness: Pooled comparative analysis of three randomized clinical trials. *American Journal of Geriatric Psychiatry, 18*(6), 520–530. https://pubmed.ncbi.nlm.nih.gov/20220588/

[152] American Psychiatric Association. (2019). Coverage for psychiatric Collaborative Care Management (CoCM) codes. file:///C:/Users/bwils/Downloads/CoCM-Payers-June-2019.pdf

cost-savings.[153,154,155] CoCM is being implemented in healthcare systems serving millions of Texans.[156]

Primary Care Behavioral Health (PCBH) Model: PCBH is an alternative model for integrating mental and behavioral health services in primary care. Specifically, behavioral health consultants (BHC) provide co-located consultative support to PCPs and provide brief counseling interventions with patients. Uvalde's FQHC, Community Health Development, Inc. (CHDI), provides behavioral health services to the community using PCBH. Leadership of the organization shared that since the tragedy, CHDI has increased behavioral health staff and added school-based clinics for direct behavioral health service provision. To mitigate the stigma of seeking mental health services, CHDI is embedding behavioral health services into medical and dental practices as well as in community locations, including a local shopping center. CHDI began providing these services for those impacted by the tragedy within 12 hours of the event. The organization also delivers crisis counseling to their own staff to address potential vicarious trauma experienced as they support their community. CHDI has made these services available to existing patients and the community at no cost.

As an existing FQHC, CHDI has access to the FQHC Incubator Program at the Texas Department of State Health Services,[157] if the program receives additional funding by the Texas Legislature. The FQHC Incubator Program was recently funded by Senate Bill (S.B.) 8,[158] which the 87th Texas Legislature passed in October 2021 with funds from the Coronavirus State Fiscal Recovery Fund (42 U.S.C. Section 802)[159] established under the American Rescue Plan Act of 2021 (Pub. L. No. A117-2).[160] Incubator Program goals are to support non-profit health care organizations by enabling them to increase access to health care for Texans through:[161]

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[153] Unützer, J., Harbin, H., Schoenbaum, M., & Druss, B. (2013, May). The Collaborative Care Model: An approach for integrating physical and mental health care in Medicaid health homes. Center for Health Care Strategies, Inc. https://www.chcs.org/resource/the-collaborative-care-model-an-approach-for-integrating-physical-and-mental-health-care-in-medicaid-health-homes/

[154] Press, M. J., Howe, R., Schoenbaum, M., Cavanaugh, S., Marshall, A., Baldwin, L., & Conway, P. H. (2017). Medicare payment for behavioral health integration. *New England Journal of Medicine, 376*(5), 405–407. https://doi.org/10.1056/NEJMp1614134

[155] Davenport, S., Matthews, K., Melek, S. P., Norris, D., & Weaver, A. (2018, February 12). *Potential economic impact of integrated medical-behavioral healthcare: Updated projections for 2017*. Milliman. file:///C:/Users/bwils/Downloads/Milliman-Report-Economic-Impact-Integrated-Implications-Psychiatry.pdf

[156] Meadows Mental Health Policy Institute. (2021). *Lone star depression challenge.* https://mmhpi.org/the-lonestar-depression-challenge/

[157] *FQHC Incubator Program*. (n.d.). Retrieved December 1, 2022, from https://dshs.texas.gov/fqhc-incubator/

[158] Senate Bill 8, S.B. 8, 87(3). Retrieved December 1, 2022, from https://capitol.texas.gov/tlodocs/873/billtext/pdf/SB00008F.pdf#navpanes=0

[159] 42 USC 802: Coronavirus State fiscal recovery fund, Social Security. Retrieved December 1, 2022, fromhttp://uscode.house.gov/view.xhtml?req=(title:42%20section:802%20edition:prelim)

[160] H.R.1319 - 117th Congress (2021-2022): American Rescue Plan Act of 2021, no. H.R. 1319 (2021). http://www.congress.gov/

[161] *FQHC Incubator Program*. Previously Cited.

- Expanding services or access to existing FQHCs and FQHC look-alikes
- Promoting and support new non-profit and public entities through the FQHC development process.

Although the application period for S.B. 8 funding closed on September 26, 2022,[162] CHDI may be able to leverage program funds in the future to support and expand their services in the Uvalde community if the program re-opens for new applicants.

Cultural Competency

An important component of any clinical integration model is culturally competent services. Given the high percentage of Uvalde residents that are Hispanic or Latino, providers should hire and train staff to address cultural competence and linguistic needs for this population of patients. Research has shown that, compared to non-Hispanics or Latinos, people in the Hispanic or Latino population believe PCPs should treat child mental health problems, and these parents are more willing to allow their child to receive mental health services if recommended by a PCP.[163] This suggests that Hispanic or Latino adults are more likely to seek advice about mental health from a PCP than from a specialist.[164,165,166] Given these findings, primary care may be a good setting for mental health interventions for the Hispanic or Latino population, especially through use of CoCM, as previously mentioned.

Primary care providers increase their effectiveness when they are cognizant of the role of race and ethnicity during discussions on mental health issues and the delivery of mental health services.[167] Cultural perceptions associated with mental health, such as addressing stigma and collaborating with PCP, should be considered when developing and administering interventions for very diverse Hispanic or Latino populations. Furthermore, increasing efforts to provide education about mental illnesses, mental health providers, and other issues relating to mental health can help reduce stigma. When this information can be provided in a reassuring manner

[162] *HHS0012233: Open Enrollment for Federally Qualified Health Center Incubator Program*. (n.d.). Retrieved December 1, 2022, from https://apps.hhs.texas.gov/PCS/HHS0012233/

[163] Brown, J. D., Wissow, L. S., Zachary, C., & Cook, B. L. (2007). Receiving advice about child mental health from a primary care provider: African American and Hispanic parent attitudes. *Medical Care, 45*(11), 1076–1082. https://doi.org/10.1097/MLR.0b013e31812da7fd

[164] Cook, B. L., Zuvekas, S. H., Carson, N., Wayne, G. F., Vesper, A., & McGuire, T. G. (2014). Assessing racial/ethnic disparities in treatment across episodes of mental health care. *Health Services Research, 49*(1), 206–229. https://doi.org/10.1111/1475-6773.12095

[165] Brown, J. D., Wissow, L. S., Zachary, C., & Cook, B. L. (2007). Previously cited.

[166] Miranda, J., & Cooper, L. A. (2004). Disparities in care for depression among primary care patients. *Journal of General Internal Medicine, 19*(2), 120–126. https://doi.org/10.1111/j.1525-1497.2004.30272.x

[167] Brown, J. D., Wissow, L. S., Zachary, C., & Cook, B. L. (2007). Previously cited.

by a culturally credible and easily accessible provider, stigma is more likely to be reduced, and the person seeking care will remain consistent with services.[168]

Compared to non-Hispanics or Latinos, people in the Hispanic or Latino population believe primary care providers should treat child mental health problems.

These parents are also more willing to allow their child to receive mental health services if recommended by a primary care provider.

Specialty Outpatient Mental Health Care and Telehealth

As noted in Figure 6: The Ideal Mental Health Care System, some conditions, including psychiatric and other illnesses, require tailored interventions provided by specialized providers in outpatient settings. Specialists are needed to treat more complex depression, bipolar disorder, schizophrenia, PTSD, and other conditions that require specialized interventions.

Providers of specialty outpatient mental health care include psychiatrists, other psychiatric practitioners (physician assistants and advanced psychiatric nurse practitioners), psychologists, social workers, marriage and family therapists, professional counselors, and chemical dependency counselors in private practice, outpatient clinics, counseling centers, and school-based clinics that offer mental health services. These settings should provide diagnosis, medication management and / or individual, family, and group therapies, including a range of evidence-based treatments.

As mentioned above in the Integrated Primary Care section, these specialty resources should be utilized by and prioritized for people with high-moderate to severe mental health disorder needs. As illustrated in Figure 2 above, only 18% of adult residents (900) in Uvalde County are estimated to have severe mental health disorders or SMI. Most people with SMI would benefit from treatment in a specialized mental health setting, such as an academic medical center, outpatient psychiatric practices, and / or a LMHA.

As is the case in the rest of the nation, Uvalde faces a shortage in specialty behavioral health providers. Therefore, there is a critical need to maximize the use of telehealth to assure access to this level of treatment. Furthermore, while limited capacity of specialty services is a driving factor for this need, telehealth also provides anonymity, an important issue, especially in rural communities. Telehealth for all behavioral needs should be an option to residents of Uvalde County.

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[168] Mishra, S. I., Lucksted, A., Gioia, D., Barnet, B., & Baquet, C. R. (2009). Needs and preferences for receiving mental health information in an African American focus group sample. *Community Mental Health Journal, 45*(2), 117–126. https://doi.org/10.1007/s10597-008-9157-4

Specialty Rehabilitative Care

In addition to high quality specialty outpatient mental health, some severe conditions require intensive specialty rehabilitative interventions provided by specialized providers in outpatient settings. These settings, such as a LMHA, provide specialty outpatient care, ongoing case management, and specialty rehabilitative care. People with chronic mental health conditions and those in most need should have access to intensive wrap-around services in their community. These people often need more intensive outpatient treatment to maintain stability in the community and without that level of service, may find themselves in a cyclical pattern of hospitalization or incarceration. These services include Assertive Community Treatment[169] (ACT), Forensic Assertive Community Treatment[170] (FACT), and Coordinated Specialty Care[171] (CSC) for first episode psychosis treatment services. These are often referred to as wrap-around services. Wrap-around services build on family and community supports and people's strengths, while utilizing a combination of resources to best serve people in the community.[172]

Currently, there are limited intensive outpatient services available to residents in the Uvalde region and few of the specialized services noted above are available. As the LMHA, Hill Country MHDD is responsible for providing intensive services to people with SMI. However, due to the geographic span and coverage needs of Hill Country MHDD, these services are not readily available. Hill Country MHDD does not offer ACT services; however, they do have people enrolled in level of care 4 services.[173] Hill Country MHDD also does not offer CSC in any counties in their region. While Hill Country MHDD works diligently to develop person centered care plans to address the needs of people with complex needs, these services are limited, and dedicated teams are not available to Uvalde County residents. Of the 149 people that qualified to receive

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[169] *How to Use the Evidence-Based Practices KITs*. (2008). Substance Abuse and Mental Health Services Administration Center for Mental Health Services. https://store.samhsa.gov/sites/default/files/SAMHSA_Digital_Download/howtouseebpkits-act_0.pdf

[170] Substance Abuse and Mental Health Services Administration. (2019). *Forensic Assertive Community Treatment (FACT): A Service Delivery Model for Individuals with Serious Mental Illness Involved with the Criminal Justice System*. https://store.samhsa.gov/product/Forensic-Assertive-Community-Treatment-FACT-A-Service-Delivery-Model-for-Individuals-With-Serious-Mental-Illness-Involved-With-the-Criminal-Justice-System/PEP19-FACT-BR

[171] Eisen, K., Hardy, K., Noordsy, D. L., & Ballon, J. S. (2022). Special Report: What Is 'Coordinated Specialty Care,' and Why Is It Effective? Psychiatric News. https://doi.org/10.1176/appi.pn.2022.05.5.1

[172] Bruns, E., & Walker, J. (2008). Ten Principles of the Wraparound Process. In The Resource Guide to Wraparound (p. 10). https://nwi.pdx.edu/NWI-book/Chapters/Bruns-2.1-(10-principles-of-wrap).pdf

[173] The purpose of level of care 4 is to reduce or stabilize symptoms and risk behaviors, improve overall functioning, and build strengths and resiliency in the child/youth and caregiver through a team approach. Caregiver resiliency is fostered by building on strengths and natural supports and linking to community resources using the wraparound planning process. See more details here, Texas Department of State Health Services. (2016). Texas Resilience and Recovery Utilization Management Guidelines: Child and Adolescent Services. https://hhs.texas.gov/sites/default/files/documents/doing-business-with-hhs/provider-portal/behavioral-health-provider/um-guidelines/trr-utilization-management-guidelines-child.pdf

ACT services in the Hill Country MHDD region, only 65 received the service, 84 fewer adults than recommended in FY 2021.[174]

Assertive Community Treatment

An ACT team serves people who have serious and complex behavioral health needs and often find themselves cycling between hospitals, emergency services, and the criminal justice system. People with the highest need often require assertive outreach and engagement before enrolling in the full array of ACT services. Fortunately, state-mandated criteria for services were clarified in 2017 to allow pre-enrollment outreach to help teams better prioritize care for people most in need of services.[175]

ACT teams focus on people who are receiving care that is more expensive than ACT to justify the intensity and cost of this treatment. Research shows that high fidelity ACT teams can yield significant cost savings in hospital and emergency room use, but only among people with the highest needs and use of these services. High-fidelity ACT achieves its cost savings by stabilizing repeat episodes of psychosis and acute symptoms, which reduces the costs associated with repeated use of inpatient care, emergency services, and the criminal justice system, with one study finding a reduction in 32 days of hospitalization per year.[176] At an approximate cost of $12,500 per person per year, ACT expenditures can be offset by reducing hospitalization by 13 days in a year or incarceration by 130 jail days in a year. Recovery-oriented ACT was associated with cost savings in annual hospital use for people with recent high utilization of services.[177]

ACT should be managed so people are stepped down assertively to lower levels of care as soon as they are stabilized to the point where they can reliably engage in less intensive interventions and free up limited ACT capacity for people with high needs. Protocols should also ensure coordination with system partners who serve people receiving ACT services to avoid premature transitions to lower levels of care. To accomplish this, Hill Country MHDD should develop teams that adhere to current ACT fidelity standards to ensure that the highest quality of services is delivered.

Not only is the Uvalde community in need of formal, high-fidelity ACT services for people with SMI, co-occurring SUD, and complex medical issues, but there is also a need to meet the unique intervention and treatment needs of those with high criminogenic risk. This “fit” between

[174] Data were provided by Hill Country MHDD. [2022].
[175] Miller, J., & Strickland, R. (March 15, 2017). Assertive Community Treatment Fidelity Tool: Using the Tool of Measurement of Assertive Community Treatment as an alternative to the Dartmouth Assertive Community Treatment Scale [Memorandum]. Texas Health and Human Services Commission.
[176] Morrissey, J. P., Domino, M. E., & Cuddeback, G. S. (2013). Assessing the effectiveness of recovery-oriented ACT in reducing state psychiatric hospital use. *Psychiatric Services, 64*(4), 303-311. For a review see Bond, G. R., McGrew, J. H., & Fekete, D. M. (1995). Assertive outreach for frequent users of psychiatric hospitals: A meta-analysis. *The Journal of Mental Health Administration, 22*(1), 4-16.
[177] Morrissey, J. P., Domino, M. E., & Cuddeback, G. S. (2013). Previously cited.

intervention and person is essential, because these interventions require special skills to reduce criminal justice involvement. As an initial step to providing these specialized services, it will be important for the ACT team to also coordinate services closely with community supervision and be trained to implement risk-need-responsivity[178] (RNR) principles.[179] Implementing RNR entails assessing and reducing various aspects of criminogenic risk – criminal thinking, substance use, and associating with bad influences, for example – by matching interventions to each person's specific risk factors. Collaboration between mental health agencies and criminal justice system is essential in managing people with SMI and criminal justice involvement once in community settings.[180]

Coordinated Specialty Care

As noted in Table 1, prevalence data for Uvalde County indicates that 10 or fewer transition-age youth (ages 14-24) experience first episode psychosis each year, meaning that while it is rare, there is a need for treatment options in Uvalde County. The most effective treatment for first episode psychosis is CSC, a multi-disciplinary treatment team that provides support to patients more robust than the typical office visits and medication management. CSC is the gold-standard for treating first episode psychosis and helps eliminate the elevated risk of violence for people experience psychosis, something of particular importance given that untreated psychosis is associated with a higher likelihood of violence. The goal of CSC is to provide effective treatment and support as early in the course of illness as possible. Current research shows participants in CSC programs have fewer inpatient hospitalizations, helping keep them in the community and preserving their social functioning and quality of life.[181] This is particularly critical for transition-age youth, as they are just beginning to step into their adult lives—the earlier they can receive treatment and support, the more likely they are to be able to continue to pursue self-determined lives in their community without having to rely on costly, disruptive, and ineffective inpatient treatment.

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[178] The risk-need-responsivity model states that, "states that the risk and needs of the incarcerated individual should determine the strategies appropriate for addressing the individual's criminogenic factors before and after release." See the following for more details, Module 5: Section 2. The Risk-Need-Responsivity Model for Assessment and Rehabilitation | Transition from Jail to Community. (n.d.). National Institute of Corrections. Retrieved November 18, 2022, from https://info.nicic.gov/tjc/module-5-section-2-risk-need-responsivity-model-assessment-and-rehabilitation

[179] Skeem, J. L., Winter, E., Kennealy, P. J., Louden, J. E., & Tatar, J. R., 2nd (2014). Offenders with mental illness have criminogenic needs, too: toward recidivism reduction. Law and human behavior, 38(3), 212–224. https://doi.org/10.1037/lhb0000054

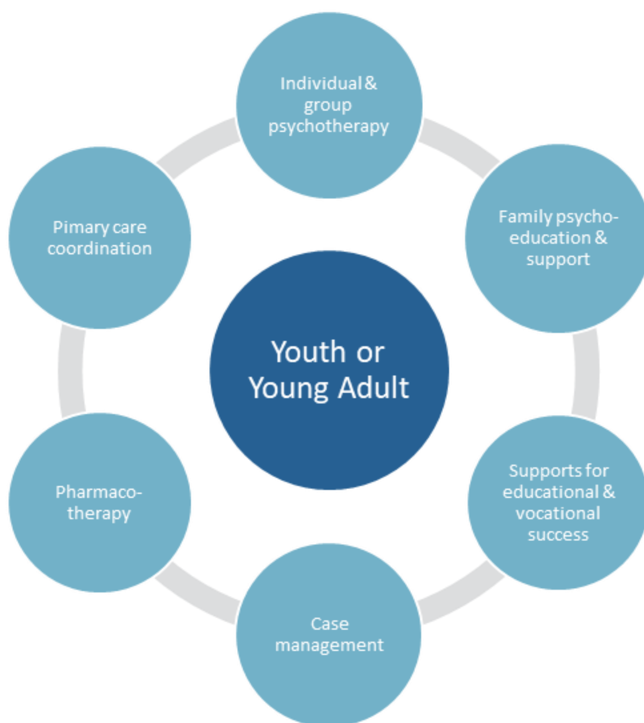
[180] Lamberti, S. (2016). Preventing Criminal Recidivism Through Mental Health and Criminal Justice Collaboration. Psychiatric Services, 67(11), 1206–1212. https://doi.org/10.1176/appi.ps.201500384

[181] Westfall, M. B. E., Kohler, C. G., Hurford, I., Abegunde, C., Agosti, D., Brinen, A., Cadman, M. L., Conroy, C., Ered, A., Fooks, A., Franco, O., Huque, Z. M., Namowicz, D., O'Connor, S., Oross, M., Payne, E., Sarpal, D. K., Schmidt, L. R., Swigart, A., Wenzel, R. M., … Calkins, M. E. (2021). Pennsylvania coordinated specialty care programs for first-episode psychosis: 6- and 12-month outcomes. Early intervention in psychiatry, 15(5), 1395–1408. https://doi.org/10.1111/eip.13084

CSC is an intensive, team-based, multi-intervention approach to treating youth and young adults experiencing the onset of psychosis. This approach involves multiple services, including:

- Individual and group psychotherapy
- Pharmacotherapy
- Family psychoeducation and support
- Case management
- Individualized assessments, training and supports integrated with treatment to achieve and maintain educational and vocational success
- Primary care coordination.

Figure 8: Coordinated Specialty Care Approach



CSC services are individualized, meaning the intention and duration of services are based on the participants needs and goals. The typical program provides services for 24 months; however, some programs can provide care for up to 36 months. Evidence from multiple studies indicates most patients need at least two years of treatment to achieve success.

Hill Country MHDD does not provide CSC services, reporting the primary barrier to implementing this program is securing the staff needed to implement the model to fidelity. Nonetheless, they have expressed interest in starting a CSC program when they can meet the required staffing needs. To maximize their service offerings with current staff, Hill Country MHDD is prioritizing programs like the YES waiver and other services that reach a broader population.

Funding for a CSC program is available through HHSC, and Hill Country MHDD is likely the best suited to act as the primary contracting entity for this funding. To overcome the resource barriers currently preventing implementation, Hill Country MHDD and Uvalde County should explore coordination and subcontracting arrangements with other entities with expertise in psychiatry, psychology, and other licensed clinical providers to provide components of the program currently unavailable. With the staffing and resource related challenges addressed via this type of collaborative contracting arrangement, Hill Country MHDD can develop a

comprehensive billing and reimbursement methodology by leveraging the funding available through HHSC for people without a payor and to supplement components of the program not reimbursable by commercial and Medicaid payors.

Children and Youth

Intensive community-based services are a critical component of the children's behavioral health continuum of care. These services, which can be provided in a home, school, or other community setting, can address a child or youth's behavioral health needs before they reach a point of crisis, or their mental health deteriorates to a point in which they require more restrictive care such as inpatient hospitalization. Additionally, after a mental health crisis, intensive community-based services also provide the level of clinical intervention and support necessary to successfully return a child or youth to a healthy developmental trajectory within their home and community. In either situation, community-based services and supports must be provided in a context that is child-centered, family-focused, strengths-based, culturally competent, trauma-informed, and responsive to each child and youth's psychosocial, developmental, and treatment needs. When services can be provided in home and in community settings, the clinician can better observe family dynamics; identify what is important to the child / youth and family; understand the roles of language, culture, and religion; and consider whether extended family or friends are available to support the child or youth. The team can also gain information about the family's general welfare and assist the family to obtain food, clothing, and other key resources that enable children and youth to thrive. When services are arranged through the school, the clinical team can also gain a better understanding of the person's peer dynamics and academic considerations. The clinical team is then able to connect the child or youth and family to resources and additional services based on what they observe.

Trauma and Grief Component Therapy[182] (TGCT) is one example of an evidence-based intervention that can be used in community- and / or school-based settings and is designed to address the trauma- and grief-related needs of children and youth impacted by mass violence. TGCT is an assessment-driven treatment for children and youth whose histories of exposure to trauma, traumatic loss and / or severe adversity place them at high risk for severe and persisting distress, functional impairment, and developmental disruption. Unlike other "trauma-focused" interventions, TGCT is unique in that it directly addresses trauma, grief, and the interplay between trauma and grief, which is unfortunately common among children and youth in Uvalde at the current time. TGCT has been implemented in school districts, mental health clinics, and juvenile justice sites across the nation and abroad and has been used

[182] Saltzman, W., Layne, C.M., Pynoos, R. S., Olafson, E., Kaplow, J.B., & Boat, B. (2017). *Trauma and grief component therapy for adolescents: A modular approach to treating traumatized and bereaved youth.* Cambridge University Press.

successfully in the aftermath of mass shootings, including those in Columbine and Santa Fe High School.

Utilizing a learning collaborative (LC) model to train school- and community-based clinicians in evidence-based interventions, including TGCT is recommended. LC methodology is intended to support the effective delivery and sustained use of evidence-based treatments in community practice settings. Clinicians participating in LCs become proficient in implementing the intervention and receive ongoing support and consultation to ensure the sustainability of the implementation. Each LC lasts for one year and includes an initial two-day training as well as monthly consultation calls with a licensed subject matter expert clinician to ensure ongoing sustainability of the intervention and fidelity to the model.

The Handle with Care Program[183] employs a system of communication between law enforcement, schools, and mental health professionals to provide best-practice, trauma- and grief-informed care and mitigate negative effects of potentially traumatic events on children and youth. This program is grounded in the fact that trauma – and grief-informed care is most successful if we can meet children where they are – in their schools and community – and provide timely and effective behavioral health interventions in the immediate aftermath of a traumatic event. The program enables law enforcement to easily notify schools if an officer encounters a child or youth at a traumatic scene, so schools can refer the student for timely intervention if necessary.

Multisystemic Therapy (MST) is a well-established evidence-based practice for youth (ages 12 to 17) living at home with more severe behavioral problems related to willful misconduct and delinquency, and it has proven outcomes and cost benefits when implemented with fidelity.[184,185] In addition, the developers of MST are currently working to create specialized supplements to meet the needs of specific sub-groups of youth. MST is an intensive, home-based service model that can be delivered by qualified mental health professionals (QMHPs) and provided to families in their natural environment at times convenient to the family.

For youth with the highest intensity of need and at most risk of out of home placement, Uvalde County stakeholders should support Hill Country MHDD as they utilize newly allocated funding

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[183] HWC Behavior Management System. (n.d.). Retrieved December 2, 2022, from https://www.handlewithcare.com/

[184] Huey, S. J. Jr., Henggeler, S. W., Brondino, M. J., &, Pickrel, S. G. (2000). Mechanisms of change in multisystemic therapy: Reducing delinquent behavior through therapist adherence and improved family and peer functioning. J*ournal of Consulting and Clinical Psychology*, *68*(3), 451–467.

[185] Schoenwald S. K., Henggeler S. W., Pickrel S. G., & Cunningham, P. B. (1996). Treating seriously troubled youths and families in their contexts: Multisystemic therapy. In M. C. Roberts (Ed.), *Model programs in child and family mental health*, 317–332. Lawrence.

to implement MST.[186] In addition to being an effective intervention, the availability of MST in the community can and should reduce some of the capacity challenges currently experienced in other programs intended for youth with intensive needs at risk of being placed outside of their homes. Collaboration between stakeholders who refer youth as well as those providing services will be imperative to ensure youth who need MST are able to obtain timely access. This type of coordination will require stakeholders to communicate and develop referral processes in advance of program implementation as well as continued communication to refine referral processes and program decisions. Stakeholders should also take an active role to ensure the availability of the program is well known and understood by child and youth serving systems to ensure this resource is made available at the point in a child or youth's experience where it can be most effective at preventing out of home placement.

The Youth Empowerment Services Waiver (YES Waiver) program provides specialized services to children and youth ages three to 18 years whose mental health needs are so serious that they would otherwise need institutional care or whose parents would turn to state custody for care.[187] Children, youth, and families receive services that are identified through the wraparound planning process, coordinated by a designated provider. The waiver provides a variety of intensive, home and community-based services and supports youth and their families to supplement, enhance, and offer alternatives to the more traditional supports available. Services available as part of the YES Waiver include respite care, adaptive aids and supports, community living supports, family supports, minor home modifications, non-medical transportation, paraprofessional services, professional services, supportive employment services, supportive family-based alternatives, and transitional services.

The Meadows Institute estimates that approximately 400 children and youth in Uvalde County have a SED and 30 have mental health conditions that place them at risk of out-of-home or out-of-school placement (Table 1). Children and youth with SED, especially those at risk of being removed from their community, would benefit from intensive community-based services to improve their emotional and behavioral functioning and keep them in their home. Hill Country MHDD is the only local provider currently offering the YES Waiver program, serving 10 Uvalde County children and youth in 2022.[188] With approximately 30 Uvalde County children and youth with mental health conditions that place them at risk of out-of-home or out of school

[186] $4.7 million is available according to HHSC Needs Capacity Assessment released in July 2022 that expanded the use of MST in Texas. HHSC seeks to fund seven to nine local mental and behavioral health authorities to provide services directly or indirectly. Retrieved from *Summary of HHSC Response to Uvalde*. (2022). https://www.hhs.texas.gov/sites/default/files/documents/august-2022-smmcac-agenda-item-6e.pdf
[187] Texas Health and Human Services. (n.d.). *YES Waiver*. https://www.hhs.texas.gov/services/mental-health-substance-use/childrens-mental-health/yes-waiver
[188] Data were provided by Hill Country MHDD. [October 18th, 2022]. Number of services utilized by level of care, calendar year 2018 to 2022. Personal communication with [Kristie Jacoby, Juan Marquez, Landon Sturdivant, Eddie McDaniel, Robert Millet Jr., Maria Baskett, and Randall Consford].

placement, there is a need for roughly 20 more children and youth to be served in the YES waiver.

With expansion, evolution, and enhancement of these specialty rehabilitative services for adults, children and youth, the high acuity services offered by Hill Country MHDD will serve as leaders in the community for people moving into recovery.

Crisis Care within the Ideal System of Care

The ideal crisis continuum exists within a broader system of care that identifies and responds to the mental health needs of the person in the community. Without the availability of community-based mental health services that address needs ranging from mild to serious, the crisis end of the services spectrum becomes the default point of entry for care. In the ideal system, most people would have their mental health needs identified prior to reaching a point of crisis. Developing a strong community-based services continuum that people can access prior to being in crisis is critical to preventing crises and maximizes efficient use of the available crisis services. When meaningful community-based alternatives to inpatient treatment are absent, many people in crisis have nowhere to turn but to the most restrictive, disruptive, and expensive care.

The Texas Administrative Code defines "crisis" as a situation in which: (a) a person presents an immediate danger to self or others; (b) a person's mental or physical health is at risk of serious deterioration; or (c) a person believes that they present an immediate danger to self or others or that their mental or physical health is at risk of serious deterioration.[189] Common examples of a mental health crisis include: (1) thoughts or plans to commit suicide; (2) a person's existing mental health disorder deteriorates, creating serious symptoms; (3) someone whose current functioning restricts their ability to go school or work, maintain healthy relationships, or successfully engage in activities of daily living; or (4) major changes in mood that affect functioning.

For many, crisis services act as the front door to mental health treatment, making the availability of a continuum of quality crisis services extremely important.

From a system intervention perspective, individual crises exist on a spectrum, with some crises requiring immediate intervention in a safe and secure place such as an ED, while others are best resolved and treated in a community-based setting such as a school, office, via telehealth, or in a home environment. Both ends of the

[189] Texas Administrative Code, Title 25, Part 1, Chapter 416, Subchapter a, Rule §416.3 (2014). https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=25&pt=1&ch=416&rl=3

crisis spectrum require a significant response; the challenge lies in ensuring treatment occurs in the most appropriate setting.

Crisis Continuum

A strong mental health service system includes a crisis response and ongoing care management structure that provides support for children, youth, and adults who are affected by a single traumatic event as well as those struggling with complex mental health challenges.[190] Crisis service providers work closely with a person and the person's family to address behaviors that put the person or others at risk of harm. For many people, crisis services act as the front door to mental health treatment, making the availability of a continuum of quality crisis services extremely important.

The ideal crisis continuum is based on the fundamental principle that people have the greatest opportunity for healthy development when they maintain their ties to community and family while receiving help. SAMHSA practice guidelines provide an overview of the ideal continuum of crisis services and outline essential values for crisis services.[191] These values and guidelines emphasize:

- Rapid response
- Safety
- Crisis triage
- Active engagement of the person in crisis
- Reliance on natural supports

Examples of crisis response includes warm lines; 24 hours a day, seven days a week hotline; mobile crisis supports; short- to intermediate term in-home supports; and local out-of-home options such as respite care, 23-hour stabilization / observation beds, and short-term residential interventions.

Table 10 outlines the elements of the ideal crisis system and their status in the Uvalde region.

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[190] Pires, S. A. (2010). *Building a system of care: A primer (2nd edition).* National Technical Assistance Center for Children's Mental Health, Georgetown University Center for Child and Human Development.

[191] Substance Abuse and Mental Health Services Administration. (2009). Practice guidelines: Core elements in responding to mental health crises. Office of Consumer Affairs, Center for Mental Health Services. https://store.samhsa.gov/shin/content/SMA09-4427/SMA09-4427.pdf

Table 10: Continuum of Crisis Services in an Ideal System[192]

Continuum of Crisis Services in an Ideal System – Uvalde Region			
Program or Service	**Hill Country MHDD Region**	**Border Region**	**Camino Real**
24/7 Crisis Hotlines provide direct services delivered through a free telephone line that is answered 24 hours a day, seven days a week (24/7) by licensed and trained staff. A 24/7 crisis hotline provides immediate support, appropriate referrals, and linkages to a mobile crisis team or emergency medical services (EMS) response, if appropriate.	Yes	Yes	Yes
Mental Health Integration with 9-1-1 Response: When an individual calls 9-1-1 and reports a mental health emergency, the call center plays a role in dispatching law enforcement as the first response includes a mental health clinician who can manage calls with clinical expertise and effectively assess the presence of an emergency related to mental health needs.	No	No	No
Multi-Disciplinary Response Teams (MDRTs): Based on the community paramedicine model, MDRTs include a paramedic, a licensed master's level mental health professional with at least five years' experience in providing mental health emergency care, and a tenured law enforcement officer with advanced crisis and mental health peace officer training. They are the first line of response to mental health emergencies and need access to same-day medication, linkages to a housing provider, and access to community hospital beds.	No	No	No

[192] Meadows Mental Health Policy Institute. (December 2016). *Behavioral health crisis services: A component of the continuum of care.* https://www.texasstateofmind.org/wp-content/uploads/2017/01/MMHPI_CrisisReport_FINAL_032217.pdf

Continuum of Crisis Services in an Ideal System – Uvalde Region			
Program or Service	**Hill Country MHDD Region**	**Border Region**	**Camino Real**
Mobile Crisis Outreach Teams (MCOTs) provide a rapid response to crisis calls in the community by mental health specialists who provide outreach, de-escalate crises, and make determinations for needed treatment. Mobile outreach is a key service that can help with onsite assessment, rapid medication when a psychiatric prescriber is available by telephone or tele-medicine (using mobile devices), and transportation of people who agree to go to a crisis respite program, crisis residence, or a peer-operated crisis program. In most communities in Texas (and across the nation), crisis outreach services are either not sufficiently available after business hours or are hindered by inadequate geographic coverage (e.g., there may be one crisis team located at a single site in a large metropolitan or geographic area). Other communities may have multiple outreach programs that are not connected to each other, resulting in limited coordination. An effective system of care has multiple crisis sites, including mobile outreach and communication protocols among crisis teams, that allow coordination and critical information sharing. This helps promote efficiency, care coordination, and sharing of after-hours coverage.	Yes – Although mobile crisis services are available in the region, a full time MCOT team made up of staff fully dedicated to mobile crisis services does not exist in Uvalde County. Hill Country MHDD has four mobile crisis outreach teams (Hays, Comal, Kerr, Val Verde) covering its 19 counties.	Yes – MCOT co-responds with the Laredo Police Department.	Yes – Camino Real has MCOT in at least half of the counties it serves. MCOT sites operate late hours Monday – Friday and until 5 pm on Saturday and Sunday.

Continuum of Crisis Services in an Ideal System – Uvalde Region			
Program or Service	**Hill Country MHDD Region**	**Border Region**	**Camino Real**
Youth Mobile Crisis Teams:[193] These teams specialize in working with youth and caregivers to deescalate crises, provide limited in-home supports, and link the young person and family to appropriate ongoing services. They have a strong track record of diverting youth from inpatient placement and helping them remain in their community. They have been shown to reduce ED use, psychiatric hospitalization, and out-of-home placement and provide a 30-to-90-day bridge to engage in ongoing care. Well-established programs in Wisconsin,[194] Ohio,[195] and Washington[196] provide examples for implementation. Youth Mobile Crisis teams differ from traditional MCOTs in two major ways: (1) they are staffed by people who specialize in working with children, youth, and families; and (2) are staffed much more intensively, meaning they can provide dozens of hours of care over time as opposed to the less than 10 that is typical for most MCOTs. These teams provide support beyond initial crisis stabilization and follow-up, with specialized features such as the ability to respond proactively to an urgent, escalating need (rather than having to wait for a crisis) and ongoing, 24/7 availability of comprehensive, in-home supports.	No	No	No

[193] These are also known as Pediatric Crisis Stabilization and Response Teams (PCSRTs).
[194] Children's Mobile Crisis Team. (n.d.). *Children's Community Mental Health Services & Wraparound Milwaukee.* https://wraparoundmke.com/programs/mutt/.
[195] Ohio Department of Mental Health and Addiction Services. (n.d.). *Mobile Response Stabilization Services (MRSS).* https://mha.ohio.gov/community-partners/early-childhood-children-and-youth/resources/mobile-response-stabilization-services.
[196] *Children's Crisis Outreach Response System (CCORS)—King County.* (n.d.). Retrieved October 31, 2022, from https://kingcounty.gov/depts/community-human-services/mental-health-substance-abuse/services/Youth/CrisisOutreach.aspx. About the Seattle/King County, WA Children's Crisis Outreach Response Systems (CCORS): Another program similar to both CMCT and MRSS, CCORS has a track record of diverting over 90% of hospital admissions.

Continuum of Crisis Services in an Ideal System – Uvalde Region			
Program or Service	**Hill Country MHDD Region**	**Border Region**	**Camino Real**
Crisis Transportation: A crisis system should include transportation services that are provided in a safe and timely manner when crisis services are needed. Depending on the circumstance, this service is provided by mobile crisis teams, EMS, or local law enforcement.	No – Not a dedicated transportation system. Law enforcement and EMS provide crisis transportation.	No – Not a dedicated transportation system but MCOT, law enforcement, and EMS provide crisis transportation services as needed.	No – Not a dedicated transportation system but MCOT, law enforcement, and EMS provide crisis transportation services as needed.
Peer Crisis Services include peer-led interventions and support that are provided in a calming, home-like environment during a crisis, operated by people with lived experience of mental illness. These services are intended to last less than 24 hours but can last several days.	No – Peer services are available, but there are no peer services focused on crisis services.	Yes – Certified family partners operate in this function.	No – Peer services are available, but there are no peer services focused on crisis services.
Walk-in Crisis Centers are physical walk-in locations in which medical staff conduct crisis assessments and triage. Crisis urgent care centers, which may be based in a hospital, provide immediate walk-in crisis services, including assessment, medication administration, and support services.	No – People may walk into any of their clinics and can be served if in crisis.	No – People may walk into any of their clinics and can be served if in crisis.	No – People may walk into any of their clinics and can be served if in crisis.
Crisis Telehealth Services provide access to emergency psychiatry services at crisis facilities and other settings, allowing highly trained staff to provide interventions over the phone without the cost of the person in crisis needing to be on site continuously or when services would otherwise be unavailable. Crisis telehealth services include assessment, crisis de-escalation, and prescribing services.	Yes	Yes	Yes – Available at two crisis residential units.

Continuum of Crisis Services in an Ideal System – Uvalde Region			
Program or Service	**Hill Country MHDD Region**	**Border Region**	**Camino Real**
Crisis Respite offers opportunities to provide a safe environment to resolve crises and help people engage in services. Depending on the needs of the person, the acuity of the crisis, and the resources of the program, many people can use these services as an alternative to inpatient care. Providing respite for a person or a child / family prevents further escalation and decompensation, thereby avoiding a crisis that could result in hospitalization or incarceration.	Yes – Hill Country MHDD operates a 16-bed crisis stabilization unit for adults in Kerrville and has a temporarily closed 6-bed crisis respite program for children and youth in Hays County that serves their 19 counties. The unit for children and youth is expected to reopen spring 2023.	No	No
Short-Term Crisis Residential services provide urgent care treatment in a safe environment for people who are experiencing acute crisis symptoms. These units are used as a step-down out of an extended observation unit for people who need more time for stabilization and are not ready to return to the community. They may also be used for people who are at risk for decompensation, such as someone who has become homeless and requires placement. Short-term crisis residential services include 24-hour supervision, prompt assessments, medication administration, individual / group treatment, meetings with family and other supports, and referrals to community treatment.	No	No	Yes – Camino Real operates two crisis residential units (in Lytle and Eagle Pass).

Continuum of Crisis Services in an Ideal System – Uvalde Region			
Program or Service	**Hill Country MHDD Region**	**Border Region**	**Camino Real**
Extended Observation Unit (EOU) / Crisis Stabilization Unit: EOUs play a significant role in allowing people in crisis to be stabilized in the community rather than at an inpatient facility or a hospital ED. EOUs are secure facilities with the capacity to accept involuntary (via emergency detention) and voluntary patients who are experiencing a psychiatric crisis. This feature provides law enforcement officers an alternative to taking people in crisis to jail or a hospital. An EOU is not appropriate for people with high medical needs, who need to be restrained or secluded, or who are actively violent; however, almost all other psychiatric crises can be managed in an EOU. An EOU provides intensive, time-limited treatment in a safe environment for people who have significant thoughts of suicide or significantly compromised ability to cope in the community. EOU services include prompt assessments, medication administration, meetings with extended family and other supports, and referrals to appropriate services.	No	Yes	No
Psychiatric Emergency Centers: Also referred to as psychiatric emergency services, the essential functions of a psychiatric emergency center include immediate access to assessment and triage, treatment, and stabilization for people with the most serious and emergent psychiatric symptoms. Services include assessment, treatment, stabilization services, and immediate access to emergency medical care.	No	No	No

Continuum of Crisis Services in an Ideal System – Uvalde Region			
Program or Service	**Hill Country MHDD Region**	**Border Region**	**Camino Real**
Hospital Emergency Departments (EDs): Similar to a psychiatric emergency center, hospital EDs include immediate access to assessment, treatment, stabilization, and admission / referral to inpatient care for people experiencing the most serious and emergent psychiatric symptoms. Services include assessment, treatment, stabilization services, immediate access to emergency medical care, referral, and admission to inpatient psychiatric care.	No – There is no designated ED to focus on psychiatric emergencies or provide psychiatric emergency services in their region.	No – There is no designated ED to focus on psychiatric emergencies or provide psychiatric emergency services in their region.	No – There is no designated ED to focus on psychiatric emergencies or provide psychiatric emergency services in their region.
Inpatient treatment services are reserved for people with mental illnesses who are a danger to themselves or others or who have a psychosis or compromised ability to cope in the community and cannot be safely treated in a less-restrictive level of care. Inpatient services include treatment, assessments, medication administration and management, meetings with extended family and others, transition planning, and referrals to appropriate community services.	No – Psychiatric inpatient services are not available. People requiring inpatient treatment must be transported out of the region (i.e., San Antonio, Austin, San Angelo, Belton).	No – Border Region contracts with many private hospitals in the Rio Grande Valley and San Antonio and surrounding areas.	No – Camino Real contracts with four private hospitals in San Antonio.

Few communities in Texas or the nation currently offer all these services as part of their crisis services continuum. Community planners should prioritize the services most beneficial to their communities and focus on effectively implementing those services.

Strengthening the Uvalde Region System with a New Behavioral Health Campus

Where a continuum of crisis and community mental health care does not exist or is limited, the burden of emergency mental health care falls largely on hospital EDs and jails. Many people with psychiatric emergencies use EDs for assistance instead of receiving the specialized crisis care they need. As a result, overcrowding and psychiatric boarding can become an increasing problem for EDs, most of whom are not fully equipped to provide adequate behavioral health assessment and treatment. The default disposition is often inpatient admission or discharge without adequate behavioral health follow up.

Adding facility-based services as part of a behavioral health campus and a comprehensive crisis continuum can provide comprehensive, community-based, and less restrictive solutions for the complex problems of ED overcrowding and the overrepresentation of psychiatric patients in the criminal justice system.[197] In a campus model, alternatives to an ED are available for people experiencing a mental health crisis, permitting them to receive care at a facility equipped to quickly triage, assess, and initiate treatment within a safe and healing environment. People may arrive via walk-in, law enforcement drop-off, or transfer from an ED. Law enforcement can use the behavioral health campus as their central behavioral health receiving facility, dropping off people via a secure, separate entrances (one for adults and one for children and youth).

Overall, the analysis suggests that a psychiatric facility in Uvalde County could provide needed services to the regional population in the coming years if no changes are made to community services. As described in the section on Regional Psychiatric Bed Needs, the Meadows Institute estimates that 34 adult beds may be needed in 2023, 36 adult beds may be needed in 2030, and 42 adult beds may be needed in 2050 to accommodate projected demand. Similarly, children and youth may require 16 beds in 2023 through 2050.[198]

Table 11: Estimated Bed Capacity Needs for Uvalde Region, 2023 – 2050

Capacity			
Year	**Children / Youth (<18)**	**Adults**	**Total**
2023	16	34	50
2025	16	35	51
2030	16	36	52
2040	17	39	56
2050	16	42	58

[197] Substance Use and Mental Health Services Administration. (2020). *National guidelines for behavioral health crisis care: Best practice toolkit*. https://www.samhsa.gov/sites/default/files/national-guidelines-for-behavioral-health-crisis-care-02242020.pdf

[198] Note that the child population for the 'closer to Uvalde' subset of counties declines between 2035 and 2050, hence this lower number of beds in 2050.

LMHA-Operated Behavioral Health Campus

To adequately meet the needs in the Uvalde County region, the Meadows Institute recommends the development of a LMHA-operated behavioral health campus with outpatient clinic, crisis respite, crisis residential, and extended observation services to provide behavioral health services and access to crisis triage and response for children, youth, and adults. The campus should be designed to facilitate rapid triage, early intervention, initiation of treatment, and continuous observation. As a comprehensive state-of-the art, trauma-informed behavioral health campus, the services can be tailored to the unique needs of the community.

The behavioral health campus is a unique and innovative concept that would combine a modern, trauma-informed architectural design and a multiservice collaborative clinical model. An interdisciplinary team comprised of psychiatrists (and other psychiatric prescriber professionals), nurses, counselors, social services staff, and peers focuses on early intervention, crisis resolution, and discharge planning. Services for children, youth, and adults would be provided in separate areas of the campus. After a comprehensive triage of needs with links to necessary community services or a 23-hour observation and intervention period, people can return to the community, avoiding unnecessarily restrictive and costly hospitalization.

People needing further clinical stabilization could instead be transferred to crisis respite or crisis residential services or to a higher level of care based on clinical necessity. A flexible 16 bed adult unit can be used as either an extended observation unit to provide 48-hour observation services or as a crisis respite or crisis residential unit for crisis stabilization of less than 14 days, with an additional 16-bed unit to support the needs of children and youth in crisis.

The campus could contain space for co-located community partners, ongoing behavioral health services that would facilitate efficient enrollment of people into long term community-based care, and peer or community health worker run programs to provide post-crisis wraparound supports and wellness programs. This facility could also be a research, training, and internship site for Southwest Junior College and Sul Ross State University behavioral health assistants, nursing and professional counseling students, as well as psychiatric residents, advanced nurse and physician assistant practitioners, and medical students from across the region.

For the behavioral health campus, the Meadows Institute recommends three components be included in the design:

- LMHA operated outpatient clinic with flexible wellness facility space
- LMHA operated 16-bed crisis center for adults, with flexibility to accommodate extended observation, crisis respite, and crisis residential services
- LMHA operated 16-bed crisis center for children and youth with flexibility to provide crisis respite and crisis residential services

LMHA Operated Behavioral Health Outpatient Clinic with Flexible Wellness Facility Space

Acting as the welcoming center and triage point for people needing mental health treatment, the outpatient clinic anchors the behavioral health campus. Designed to address children, youth, and adult crisis, and their ongoing clinical continuity of care needs, the facility would offer crisis mental health counseling and psychiatric evaluation, recovery support, medication management, connection to outpatient community treatment services, and triage to a higher level of care where needed. This facility would also be the new home for Hill Country MHDD outpatient clinic services, replacing the overcrowded facility leased in Uvalde.

LMHA Operated 16-bed Crisis Center for Adults

Designed for flexibility, this type of facility can be used to address shorter-term clinical intervention needs, such as extended observation and crisis inpatient stabilization services. Depending on need, the unit can be designed to accommodate both adults needing crisis stabilization in a secure extended observation area and an adjacent unit designed to address people needing crisis respite or crisis residential services. This crisis center would include 24/7 nursing and psychiatric care (e.g., initiation of medication-assisted treatment), substance use counseling, treatment for co-occurring medical conditions, and connection to outpatient treatment and other community resources.

LMHA Operated 16-bed Crisis Center for Children and Youth

Crisis respite offers opportunities to provide a safe environment to resolve crises and help children and youth engage in services. Depending on needs and the acuity of the crisis, many children and youth can use these services as an alternative to inpatient care. Providing respite for a child / youth can prevent further escalation of relational stressors and decompensation, thereby avoiding a crisis that could result in hospitalization or incarceration.[199] This short-term crisis respite service would include 24-hour supervision, prompt assessments, medication administration, individual / group treatment, meetings with family and other supports, and referrals and a warm handoff and engagement to treatment.

Financial Considerations

The city of Uvalde donated seven acres of land on King Fisher Lane, directly off Highway 90, adjacent to the Uvalde County Fairplex, and down the street from the Uvalde County Justice Center; therefore, the project requires no land acquisition costs. The Meadows Institute estimated the cost for the entire build as one cost for all three components of the behavioral health campus. The costs required for the project include both one-time construction and furnishing costs and annual recurring operating costs.

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[199] Texas Health and Human Services. (n.d.). *Take time Texas: What is respite?* https://apps.hhs.texas.gov/taketimetexas/what-is-respite.html#:~:text=Rather%20it%20is%20part%20of,while%20you%20take%20a%20break.

Table 12: LMHA-Operated Behavioral Health Campus with Outpatient Clinic, 16-Bed Crisis Respite, Crisis Residential and Extended Observation Services for Adults and 16-Bed Unit for Children/Youth

Campus Components	FTEs	Land Size Needed	Other Notes
16 adult bed facility 16 child / youth bed facility Outpatient clinic for children, youth, and adults	67	6 Acres	98,250 SF (38,250 SF Building and 60,000 Parking)

Construction Cost	Furnishing Cost	Annual Operating Cost
$30 million	$3.6 million	$10 million

Figure 9. Uvalde Region Behavioral Health Campus

Additional Private Psychiatric Bed Capacity

Given the behavioral health campus will not meet the projected inpatient capacity necessary to serve the region, the Meadows Institute also recommends appropriating designated private psychiatric bed (PPB) funding for the region to purchase beds in San Antonio. These beds would meet the needs of high acuity patients who cannot be stabilized or who do not demonstrate improvement in symptoms in the regional facility. In 2025, this would require purchasing an additional 19 adult beds for the region, which can be purchased from inpatient psychiatric facilities at a cost of $750 per day or an annual cost of approximately $5.2 million.

Table 13: Additional Private Psychiatric Bed Capacity for Uvalde Region

Number of Adult Beds	Bed Day Cost	Annual Cost
19 adults	$750	$5.2 million

Physical / Medical

Impact of Mass Violence on Disease State

Exposure to mass violence has a profound impact on the mental and physical health of survivors, with the literature demonstrating that the adverse mental health impacts of exposure to mass violence include higher rates of developing PTSD compared to the general population.[200,201] According to the U.S. Department of Veterans Affairs, "between 5% and 10% of individuals within a community where mass violence has occurred will develop PTSD."[202] Survivors who have pre-existing trauma and mental health issues are more likely to experience traumatic stress reactions.[203,204] As physical and mental health are intricately connected, trauma can lead to poor health outcomes. PTSD is associated not only with mental health conditions such as anxiety and depression[205] but also physiological conditions such as cardiometabolic disease[206] (a combination of heart disease and a metabolic disorder such as Type 2 Diabetes), neurocognitive disorders[207] (decreased mental function from a medical condition), and dementia,[208] as well as sleep disturbances, hypertension, angina pectoris (chest pain from to reduced blood flow to the heart), tachycardia (elevated heart rate), other heart disease, stomach ulcers, gastritis (inflammation of the stomach lining), arthritis, and SUD.[209,210,211] PTSD is a risk factor for the development of medical illnesses.

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[200] Murthy, R. S. (2007). Mass violence and mental health—recent epidemiological findings. *International review of psychiatry (Abingdon, England)*, *19*(3), 183–192. https://doi.org/10.1080/09540260701365460

[201] Norris, F. H., Slone, L. B., Baker, C. K., & Murphy, A. D. (2006). Early physical health consequences of disaster exposure and acute disaster-related PTSD. *Anxiety, Stress & Coping: An International Journal*, *19*(2), 95–110. https://doi.org/10.1080/10615800600652209

[202] U.S. Department of Veterans Affairs. (2019). *Risk and resilience factors after disaster and mass violence*. https://www.ptsd.va.gov/professional/treat/type/disaster_risk_resilience.asp

[203] Levers, L. L., & Hyatt-Burkhart, D. (2019). *Clinical mental health counseling: Practicing in integrated systems of care*. Springer.

[204] U.S. Department of Veterans Affairs. (2019). Previously cited.

[205] Norris, F. H., Slone, L., Baker, C., & Murphy, A. (2006). Early physical and health consequences of disaster exposure and acute disaster related PTSD. *Anxiety, Stress, and Coping: An International Journal, 19*(2), 95–110. https://doi.org/10.1080/10615800600652209

[206] Wolf, E. J., & Schnurr, P. P. (2016). PTSD-Related Cardiovascular Disease and Accelerated Cellular Aging. *Psychiatric annuals, 46,* 527–532. https://doi.org/10.3928/00485713-20160729-01

[207] Burri, A., Maercker, A., Krammer, S., & Simmen-Janevska, K. (2013). Childhood trauma and PTSD symptoms increase the risk of cognitive impairment in a sample of former indentured child laborers in old age. *PloS one*, *8*(2), e57826. https://doi.org/10.1371/journal.pone.0057826

[208] Yaffe, K., Vittinghoff, E., Lindquist, K., Barnes, D., Covinsky, K. E., Neylan, T., Kluse, M., & Marmar, C. (2010). Posttraumatic stress disorder and risk of dementia among U.S. veterans. *Archives of general psychiatry*, *67*(6), 608–613.

[209] Norris, F. H., Slone, L., Baker, C., & Murphy, A. (2006). Previously cited.

[210] Russell, M. A., Vasilenko, S. A., & Lanza, S. T. (2016). Age-Varying Links Between Violence Exposure and Behavioral, Mental, and Physical Health. *The Journal of adolescent health*, *59*(2), 189–196. https://doi.org/10.1016/j.jadohealth.2016.03.038

[211] Miller, M. W., Lin, A. P., Wolf, E. J., & Miller, D. R. (2018). Oxidative Stress, Inflammation, and Neuroprogression in Chronic PTSD. *Harvard review of psychiatry*, *26*(2), 57–69. https://doi.org/10.1097/HRP.0000000000000167

PTSD is a risk factor for the development of medical illnesses.

There is more research on the correlation between negative health outcomes and chronic trauma experiences throughout a person's lifespan, such as ACEs, than on acute trauma, which is defined as a singular event lasting moments or hours.[212] ACEs, which can include physical and psychological abuse, have been shown to lead to not only mental health conditions, but also to physical health conditions like diabetes, heart disease, lung disease, liver disease, and cancer.[213] These health outcomes have been reported independently of whether the people experienced PTSD and "that exposure to multiple, cumulative traumatic events across the life span was linked to negative health outcomes."[214]

Exposure to violence, including "witnessing violence, threat of violence, and violence victimization," is associated with increased adverse health outcomes.[215] Violent weapon related exposure such as gun violence is associated with SUD, chronic physical symptoms that impede daily functioning, and poor self-reported health.[216] Children who witness community violence are exposed to risk factors for "substance abuse, aggression, anxiety, depression, and antisocial behavior"[217] and have higher rates of physical inactivity, smoking, asthma, suicide attempts, and other health issues in adulthood.[218]

Research examining the survivors of school shootings indicates that survivors experience PTSD symptoms beyond mental health challenges. These symptoms include anxiety and avoidance, along with physical responses such as hypervigilance and increased arousal or sensitivity to their external environment.[219] Beyond individual health outcomes, research indicates a

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[212] D'Andrea, W., Sharma, R., Zelechoski, A. D., & Spinazzola, J. (2011). Physical health problems after single trauma exposure: when stress takes root in the body. *Journal of the American Psychiatric Nurses Association*, *17*(6), 378–392. https://doi.org/10.1177/1078390311425187

[213] Felitti, V. J. et al. (1998). Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults. *American Journal of Preventive Medicine*, *14*(4), 245–258. https://doi.org/10.1016/S0749-3797(98)00017-8

[214] Sledjeski, E. M., Speisman, B., & Dierker, L.C. (2008). Does the number of lifetime traumas explain the relationship between PTSD and chronic medical conditions? Answers from the National Comorbidity Survey-Replication (NCS-R). *Journal of Behavioral Medicine, 31,* 341-349.

[215] Russell, M. A., Vasilenko, S. A., & Lanza, S. T. (2016). Previously cited.

[216] D'Andrea, W., Sharma, R., Zelechoski, A. D., & Spinazzola, J. (2011). Previously cited.

[217] Kilpatrick, D. G., Acierno, R., Saunders, B., Resnick, H. S., Best, C. L., & Schnurr, P. P. (2000). Risk factors for adolescent substance abuse and dependence: data from a national sample. *Journal of consulting and clinical psychology*, *68*(1), 19–30. https://doi.org/10.1037//0022-006x.68.1.19

[218] Van Niel, C., Pachter, L. M., Wade, R., Jr, Felitti, V. J., & Stein, M. T. (2014). Adverse events in children: predictors of adult physical and mental conditions. *Journal of developmental and behavioral pediatrics : JDBP*, *35*(8), 549–551.

[219] Palinkas, L. A., Prussing, E., Reznik, V. M., & Landsverk, J. A. (2004). The San Diego East County school shootings: a qualitative study of community-level posttraumatic stress. *Prehospital and disaster medicine*, *19*(1), 113–121. https://doi.org/10.1017/S1049023X00001564

correlation between the exposure of pregnant women to mass shootings and adverse infant health outcomes including low birth rates and premature birth.[220]

First responders who respond to mass casualty incidents are at higher risk than the general public of developing PTSD, even more so in human-made mass casualty incidents, like mass violence incidents. Law enforcement officers have higher rates of depression, PTSD, and risk of narrowed carotid artery diameter, which can increase the risk of stroke.[221] Additionally, emergency medical staff, such as doctors and nurses, have been shown to have elevated cortisol levels during severe emergency situations.[222] Elevated cortisol levels can cause a variety of medical conditions including hypertension, depression, anxiety, weight gain, osteoporosis, and muscle weakness.[223]

Medical Access in Uvalde County

Access to medical care is essential for promoting and maintaining good health and managing physical health conditions in any community. In Uvalde County, there are several entry points for accessing physical healthcare. As noted above, exposure to violence, including witnessed gun violence is associated with increased adverse health outcomes[224] and those exposed to this kind of violence are almost five times as likely to report poor health.[225] Uvalde County providers must be aware of the changing medical conditions and the risk for adverse health outcomes due to the mass violence incident.

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[220] Dursun, B. (2019). The Intergenerational Effects of Mass Shootings. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3474544

[221] Benedek DM, Fullerton C, Ursano RJ. First responders: mental health consequences of natural and human-made disasters for public health and public safety workers. Annu Rev Public Health. 2007;28:55-68. doi: 10.1146/annurev.publhealth.28.021406.144037. PMID: 17367284.

[222] Sluiter, J. K., van der Beek, A. J., & Frings-Dresen, M. H. (2003). Medical staff in emergency situations: severity of patient status predicts stress hormone reactivity and recovery. *Occupational and environmental medicine, 60*(5), 373–375. https://doi.org/10.1136/oem.60.5.373

[223] Sluiter, J. K., van der Beek, A. J., & Frings-Dresen, M. H. (2003). Previously cited.

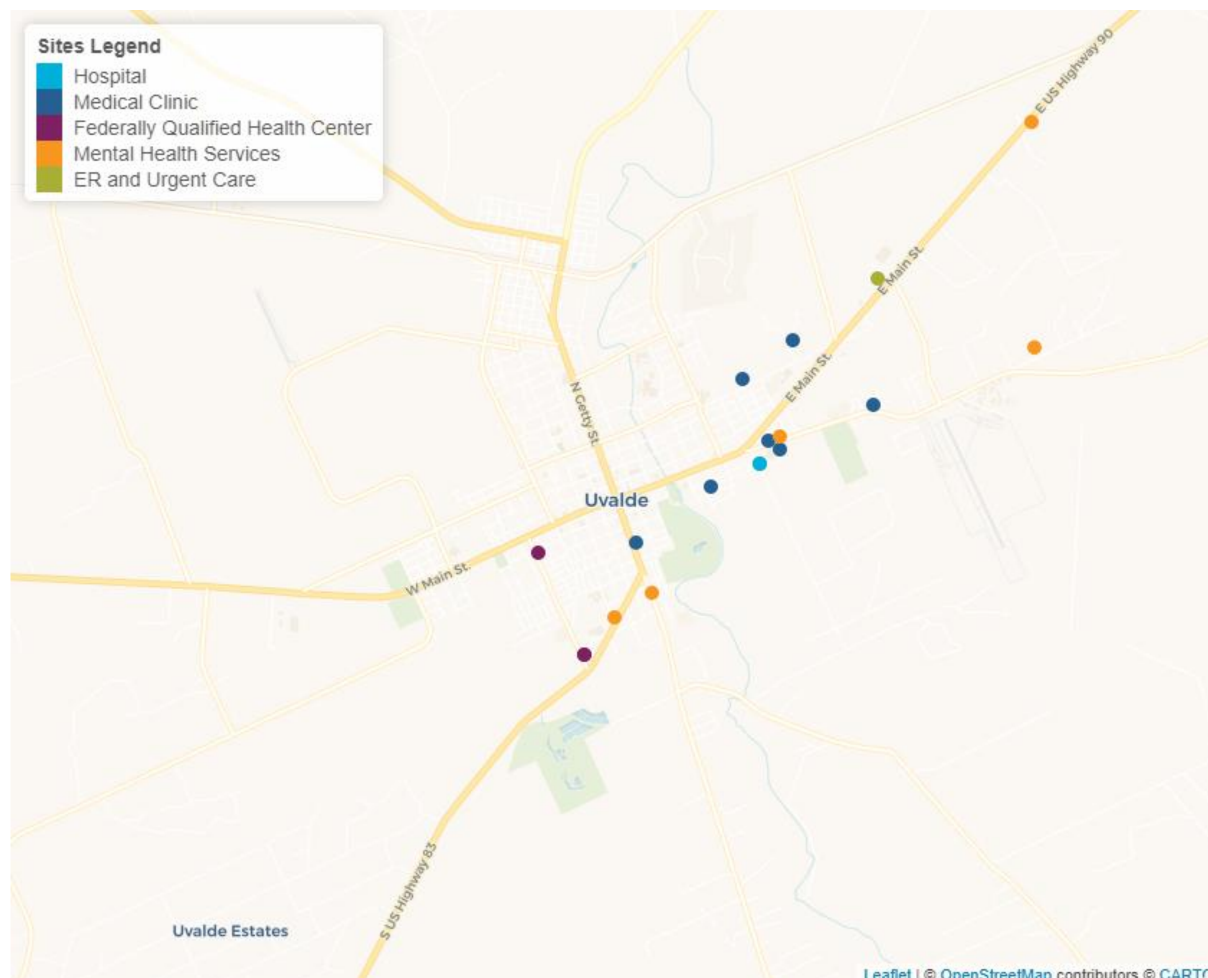
[224] D'Andrea, W., Sharma, R., Zelechoski, A. D., & Spinazzola, J. (2011). Previously cited.

[225] D'Andrea, W., Sharma, R., Zelechoski, A. D., & Spinazzola, J. (2011). Previously cited.

Table 14: Uvalde County Medical Access (2022)

Uvalde County Medical Access	
Provider	**Services**
Uvalde Memorial Hospital	County funded critical access hospital serving Uvalde and surrounding communities. It has 25 inpatient medical beds and a variety of outpatient specialties, including women's health, surgical services, rehabilitation services, family and internal medicine, wound care, radiation oncology, hematology, hospice, orthopedics, palliative care, and labs and imaging services.
Uvalde Memorial Outpatient Specialty Clinic	Provides local access to specialty physicians. The following services are available: pain management, nephrology, podiatry, pulmonology, dermatology, neurology, vascular / endovascular surgery and orthopedics and spine surgery.
Uvalde Memorial Family and Internal Medicine Clinic	Provides access to preventative care and disease management via prevention, detection, and treatment of illnesses through wellness visits, immunizations, and health management.
Uvalde Memorial Sabinal Health Clinic	Provides care through prevention, detection, and treatment of illnesses via wellness visits, immunizations, and health management.
Center for Community Wellness	An FQHC providing family medicine services, acute and chronic illness management, women's health, immunizations and wellness exams, preventative care screenings and care coordination and specialty care referrals, along with dental and behavioral health.
Sage Family Medicine Associates	Provides primary care services, well child exams, well woman exams, annual physicals, prenatal care, adult and pediatric immunizations, and preventative health care.
Uvalde Family Practice Association	Provides an array of services for both adult and pediatric patients. Services include preventative medicine, internal medicine, pediatrics, gynecological services, geriatric care, immunizations, and diabetic education.
South Texas Urgent Care Center	Provides walk-in medical care as well as immunizations, sports and school physicals, stitches, and x-ray services.

Map 2: Uvalde County Medical Access (2022)



Workforce

The Pediatric Mental Health Crisis is in Part a Workforce Crisis

As Surgeon General Dr. Vivek Murthy warned late last year in America's first ever public health advisory focused on mental health,[226] even before COVID-19, mental illness among America's youth was already at a crisis point; the pandemic has made it much worse. While that historic advisory emphasized the need to address the workforce, it perhaps understated the impact on access to care created by the country's over-stretched and mis-deployed workforce. Recent estimates predict provider shortages across six behavioral health subspecialties surpassing a quarter of a million full-time equivalents (FTEs) by 2025.[227] More alarmingly, the pediatric

[226] The U.S. Surgeon General's Advisory. (2021). *Protecting youth mental health.* https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf

[227] Health Resources and Services Administration/National Center for Health Workforce Analysis; Substance Abuse and Mental Health Services Administration/Office of Policy, Planning, and Innovation. (2015). *National projections of supply and demand for behavioral health practitioners: 2013-2025.* https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/data-research/behavioral-health-2013-2025.pdf

mental health workforce shortage will lead to long-term negative outcomes, particularly in underserved communities,[228] with pronounced inequities across communities of color.[229]

In addition to shortages, the pediatric mental health workforce is not well-deployed upstream in U.S. primary care settings as compared to other industrialized nations.[230] This is a major reason why the U.S. fails to detect and treat mental health needs until eight to ten years after symptoms emerge.[231] Furthermore, pediatric health care expenses are higher in the U.S. than in almost all other industrialized countries,[232] while research consistently suggests that U.S. pediatric health outcomes fall far below that of average citizens living in other peer nations.[233]

Characteristics of Behavioral Health Providers in the Uvalde Region

As the U.S. faces a health care workforce shortage compounded by an increasing need for behavioral health services, in Texas, critical staff shortages and high turnover rates persist even though behavioral health providers and social service organizations are diligently working to increase staffing levels. Furthermore, the health care workforce experienced a steep decline due to the COVID-19 public health emergency and continues to struggle to make up losses and meet current demand.[234]

Reports obtained from the Texas Board of Nursing, HHSC, and the Texas Medical Board indicate that the demand is greater than the supply of available providers. To illustrate, Table 28 (see

[228] U.S. Department of Health and Human Services, Health Resources and Services Administration, National Center for Health Workforce Analysis. (2020). *Using HRSA's health workforce simulation model to estimate the rural and non-rural health workforce.* https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/dataresearch/hwsm-rural-urban-methodology.pdf

[229] Ramchand, R., Gordon, J. A., & Pearson, J. L. (2021). Trends in suicide rates by race and ethnicity in the United States. *JAMA Network Open, 4*(5), e2111563. https://doi.org/10.1001/jamanetworkopen.2021.11563

[230] Tikkanen, R., Fields, K., Williams III, R. D., & Abrams, M. K. (2020). *Mental health conditions and substance use: Comparing U.S. needs and treatment capacity with those in other high-income countries*. Commonwealth Fund Issue Briefs. https://www.commonwealthfund.org/publications/issue-briefs/2020/may/mental-health-conditionssubstance-use-comparing-us-other-countries

[231] Martini, R., Hilt, R., Marx, L., Chenven, M., Naylor, M., Sarvet, B., & Ptakowski, K. K. (2012). Best principles for integration of child psychiatry into the pediatric health home. *American Academy of Child & Adolescent Psychiatry.*https://www.aacap.org/App_Themes/AACAP/docs/clinical_practice_center/systems_of_care/best_principles_for_ integration_of_child_psychiatry_into_the_pediatric_health_home_2012.pdf

[232] Squires, D., & Anderson, C. (2015). *U.S. health care from a global perspective: Spending, use of services, prices, and health in 13 countries.* Commonwealth Fund Issue Briefs.

[233] Emanuel, E. J., Gudbranson, E., Van Parys, J., Gørtz, M., Helgeland, J., & Skinner, J. (2021). Comparing health outcomes of privileged U.S. citizens with those of average residents of other developed countries. *JAMA Internal Medicine, 181*(3), 339–344.

[234] National Council for Mental Wellbeing and Health Management Associates. (2022, January). *Behavioral Health Workforce is a National Crisis: Immediate Policy Actions for States* [Issue Brief]. https://www.healthmanagement.com/wp-content/uploads/HMA-NCMW-Issue-Brief-10-27-21.pdf

Appendix 11: Uvalde Region Workforce) shows the number of behavioral health physicians[235] who are practicing in the Uvalde region in 2022, with the shortage of licensed psychiatrists and addiction medicine specialists especially dire. There are no available providers in some areas and only 92 behavioral health physicians providing services for the entire 32-county region, which represents one behavioral health physician per 13,370 residents. In Uvalde County, there is only one psychiatrist available per 25,000 county residents. There are currently no psychiatrists in Uvalde County that focus specifically on the estimated 5,000 children and youth ages six and over in the county.

New HHSC Funded Hill Country MHDD Positions in Uvalde*

- Therapist
- Psychiatrist
- Crisis Care Coordinator
- Care Coordinator
- Certified Family Partner
- Administrative Tech
- Community Transport Driver

**As of fall 2022*

Additionally, Table 29 (see Appendix 11: Uvalde Region Workforce) shows there are a total of 181 licensed psychologists and psychological associates with addresses in the Uvalde region in 2022, indicating that one licensed psychologist is available for every 6,796 residents. There are also 570 licensed chemical dependency counselors (1 provider for every 2,158 residents), 2,266 licensed clinical social workers, licensed marriage and family therapists, and licensed professional counselors (1 provider for every 543 residents), and 200 licensed specialists in school psychology (1 provider for every 6,150 residents). Notably, in Uvalde County, there are only two licensed psychologists providing services for the entire county, which represent one psychologist per 12,500 Uvalde County residents.

While some providers may reside in the Uvalde region, they might practice in neighboring communities or may not provide direct care to patients. Also, many of the licensed mental health professionals with a registered address in the region may be affiliated with local universities and thus have limited clinical appointments. Therefore, the providers-to-population ratio for all providers is likely an overestimation of the number of providers available to serve the population of the Uvalde region.

One key challenge in the Uvalde region is offering wages as competitive as those in surrounding areas like Austin and San Antonio. The LMHA in Austin, for example, recently conducted a compensation reclassification for staff across its workforce, increasing salaries and wages by approximately 10%, in addition to other incentives such as sign-on bonuses for new hires and

[235] Behavioral health physicians refer to physicians with psychiatry, addiction medicine, psychoanalysis, or developmental-behavioral health specialties.

longevity pay bonuses for tenured staff.[236] To further illustrate, Hill Country MHDD posted a position seeking a psychiatrist with a salary of $200,000 and received no applicants for one year. After funding from HHSC allowed Hill Country MHDD to increase the salary to $300,000, they received two applicants. Yet, as of the publication of this assessment, the position remains open because qualified candidates report that they are not interested in providing services in Uvalde County.

In short, Hill Country MHDD reports that several psychiatrist positions have been open for more than one year, and 28% of the workforce (184 of the 662 behavioral health positions) remain vacant across their 19 counties. Similarly, Uvalde Memorial Hospital leadership has reported reduced capacity across service lines because of workforce challenges, which ultimately impacts patient care.

Strategies for Enhancing Workforce Diversity, Competency, and Capacity

The workforce challenges touch on the issues faced by the evolving systems of care and the way behavioral health services are administered. To meet the growing demand for behavioral health care, systems must rethink and redesign the delivery of behavioral health care by identifying ways to more effectively use the workforce to increase access to behavioral health.

The current behavioral health workforce across the country is not large enough to meet the growing demand for behavioral health across the care continuum, with over 80% of the population in some states living in a mental health professional shortage area.[237] Behavioral health needs left unmet can soon become a behavioral health crisis. Broadening the concept of what constitutes the workforce can play a vital role in increasing access to behavioral health support. The most effective strategies for supporting people with behavioral health conditions will reach beyond crisis response to strengthen access to prevention, early intervention, and community-based treatment and recovery-oriented services that can help people avoid crises. Thus, developing the capacity of health care providers other than behavioral health specialists to address behavioral health conditions upstream, including health integration practices, is an important strategy. This includes the expansion of the behavioral health workforce to include peer support, non-traditional health workers, and community health workers who live and work in the community they serve. These workers often share racial, ethnic, language, and socioeconomic status with the populations who they serve and can be a powerful tool to address workforce challenges, health equity, and diversity needs.

[236] Business Plan Update 3rd Quarter Fiscal Year 2022 Relating to Strategic Plan FY 2021-22. (2022). https://integralcare.org/wp-content/uploads/2022/08/FY22-3rd-Qtr-Business-Plan-Update-FINAL.pdf
[237] USAFacts. (2021, June 9). Over one-third of Americans live in areas lacking mental health professionals. https://usafacts.org/articles/over-one-third-of-americans-live-in-areas-lacking-mental-health-professionals/

To meet the growing demand for behavioral health care, systems must rethink and redesign the delivery of behavioral health care by identifying ways to more effectively use the workforce to increase access to behavioral health

Funding and Financial Incentives to Attract and Retain Workforce

Compensating behavioral health providers at a level reflecting the current increased demand for their services within the health care system is imperative. While the pandemic has further exacerbated the need for behavioral health providers across all disciplines providing services in the field, across the country, Medicaid and non-Medicaid funded programs and reimbursement scales have not kept pace. This has amplified a financial shortfall already in place pre-pandemic, making it very difficult for organizations to pay the wages and benefits necessary to retain their workforce or attract the necessary staff to meet the increased need.[238]

Enhance and Promote Partnerships with Regional Academic Institutions

Both SWTJC and Sul Ross State University are well positioned to expand their training offerings in support of the growing needs of the behavioral health workforce across the Uvalde region.

SWTJC has the Patient Care Technician Program,[239] which offers courses leading to a Level 1 certificate as a nurse assistant, phlebotomy technician, electrocardiogram technician, or medical assistant. The two-semester program prepares those seeking certification by the nurse aide training and competency evaluation program as a certified nurse assistant, which paired with a behavioral health curriculum and certification program, could be a good candidate program for training mental health technicians needed for a future psychiatric facility in Uvalde.

Additionally, Sul Ross State University Rio Grande College also has a campus in Uvalde and is a partner institution with SWTJC that offers upper-level courses leading to bachelor's degrees as well as master's degree programs. The Master of Education with a degree in counseling[240] includes a clinical mental health counseling track that prepares students to become licensed professional counselors (LPCs).

To support the financial needs of educational institutions like SWTJC and Sul Ross State University, the U.S Department of Education's Developing Hispanic-Serving Institutions

[238] National Council for Mental Wellbeing and Health Management Associates. (2022, January). Previously cited.
[239] Southwest Texas Junior College. (n.d.). *Patient Care Technician Certificate Level 1 (51.3902) Uvalde Campus*. https://www.swtjc.edu/academics/programs-and-degrees/technical-programs/patient-care-technician.html
[240] Sul Ross State University. (n.d.). https://www.sulross.edu/courses/med-counselor-education-with-school-counselor-certification-or-lpc-track/

Program-Title V[241] and the Health Resources and Services Administration (HRSA) developed the Behavioral Health Workforce Education and Training (BHWET) Programs for paraprofessionals[242] and for professionals.[243] The purpose of these grant programs is to provide funding to develop and expand community-based experiential training, such as field placements and internships, to increase the supply of students preparing to become behavioral health-related paraprofessionals, while also improving distribution of a quality behavioral health workforce across rural and underserved communities. These are competitive grant programs that have proven to be effective in advancing workforce development in rural communities.

Sul Ross State University and SWTJC can support the growing behavioral health workforce need through the following strategies:

- Create educational opportunities to build the mental health workforce by creating student "resource centers" on different campuses around the Uvalde region. These centers would offer, among other things, mental health counseling by Sul Ross graduate counseling students under the supervision of an LPC. The centers would: (1) give access to SWTJC students (and potentially staff) to mental health counseling; and (2) provide training opportunities in the local communities. They could also provide peer support and professional mentoring as well as access to a food pantry and assistance with basic needs.
- SWTJC should add a behavioral health certification as part of their existing patient care technician program. The behavioral health certification will provide additional training to students and prepare them to work in mental health facilities.

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[241] U.S. Department of Education. (n.d.). *Developing Hispanic-Serving Institutions Program - Title V*. https://www2.ed.gov/programs/idueshsi/index.html

[242] U.S. Department of Health and Human Services, Health Resources and Services Administration. (n.d.). *HRSA-21-090 Behavioral Health Workforce Education and Training Program for Paraprofessionals.* https://www.grants.gov/web/grants/view-opportunity.html?oppId=328445

[243] U.S. Department of Health and Human Services, Health Resources and Services Administration. (n.d.). *Behavioral Health Workforce Education and Training Program for Professionals*. https://www.hrsa.gov/grants/find-funding/HRSA-21-089

Telehealth and Assisted Technologies to Impact Workforce Capacity

The COVID-19 pandemic has changed healthcare, leading patients and providers to new care delivery methods like telehealth, which has been shown to alleviate workforce issues as well as reduce barriers to behavioral health.[244,245,246]

The increased demand for treatment presents an opportunity for providers in the Uvalde region to maximize innovative practices around telehealth as an essential mode of service delivery.[247] Telehealth also allows for the use of services delivered by psychiatrists or psychiatric nurse practitioners, which can help to expand workforce capacity by ensuring that the appropriate workforce is deployed. For example, the Lucine Center for Trauma and Grief, a group practice providing teletherapy to youth exposed to trauma and loss, is currently bolstering the behavioral health response in Uvalde by providing more specialized mental health treatment to impacted youth who are unable to access those services in person.

These efforts have the potential to support rural communities in accessing mental health support as well as reducing unnecessary hospital transports for people who can be stabilized in the community. In addition to the expanded use of telehealth, the use of assisted technologies can further increase access to mental health care and improve workflows. Implementing risk stratification protocols and utilizing the full functionality of the electronic health record develops data-driven care coordination that can increase operational efficiencies, identify gaps in care, connect ecosystems within the organization, and improve access to care.

Explore Affordable Housing Options to Support Workforce Efforts

According to local Uvalde officials, like in many communities across the country, it has become increasingly difficult for low- and middle-income workers to buy or rent housing in the areas where they work.[248] This could be a result of the limited supply of housing that is affordable to this segment of the workforce, but also due to wages not keeping up with the increasing cost of

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[244] Nelson, E., & Patton, S. (2016). Using videoconferencing to deliver individual therapy and pediatric psychology intervention with children. *Journal of Child and Adolescent Psychopharmacology, 26*(3), 212-220.
[245] Richardson, L. K., Frueh, B. C., Grubaugh, A. L., Egede, L., & Elhai, J. D. (2009). Current directions in videoconferencing tele-mental health research. *Clinical psychology: a publication of the Division of Clinical Psychology of the American Psychological Association, 16*(3), 323–338. https://doi.org/10.1111/j.1468-2850.2009.01170.x
[246] Egede, L. E., Acierno, R., Knapp, R. G., Walker, R. J., Payne, E. H., & Frueh, B. C. (2016). Psychotherapy for depression in older veterans via telemedicine: Effect on quality of life, satisfaction, treatment credibility, and service delivery perception. *The Journal of Clinical Psychiatry*, *77*(12), 1704–1711. https://doi.org/10.4088/JCP.16m10951
[247] Centers for Medicare & Medicaid. (2021, December 28). *Medicaid Guidance on the Scope of and Payments for Qualifying Community-Based Mobile Crisis Intervention Services*. https://www.medicaid.gov/federal-policy-guidance/downloads/sho21008.pdf
[248] Parlow, M. J. (2015). Whither Workforce Housing? *Journal of Affordable Housing & Community Development Law*, *23*(3–4), 373–392. https://ir.lawnet.fordham.edu/cgi/viewcontent.cgi?article=2525&context=ulj

living.[249] Because of limited affordable housing options, leadership in the Uvalde area report that many workers move to the edges of the region or San Antonio in search of housing and increased wages.

To alleviate workforce and housing challenges, communities across the country are exploring workforce housing, defined as housing that is affordable to households earning between 60 and 120% of area median income and located near places where they work.[250] Workforce housing is generally intended for middle-income workers, which includes professions such as health care workers, teachers, police officers, and first responders, that typically do not qualify for affordable housing subsidized by low-income housing tax credits or housing choice vouchers.

The low supply of housing, particularly affordable housing, paired with high workforce demands compel further exploration and implementation of strategies to stimulate the development of workforce and affordable housing options in the Uvalde region. A concrete next step that Uvalde County leadership can take to encourage housing development is to start the conversation in the community as well as with housing developers, to help raise awareness about the need for workforce and affordable housing options. Local leadership must play a role in dispelling misconceptions associated with affordable housing, so the community can help support affordable housing initiatives. As housing continues to become increasingly scarce in the region, local leadership can begin to explore workforce housing and how it fits within the affordable housing landscape as well as other possible strategies to drive needed change and better serve the needs of middle-income workers. To support this process, the development of a strategic, community-wide analysis and plan to address housing needs and affordability issues is an important step forward. Such a plan can help create a unified vision for the future of the Uvalde region, including proactive goals related to growth, since housing affordability and availability affects many aspects of the community that include economic development, workforce development and retention efforts, and the needs of retirees, the elderly and those with disabilities. The following are questions that the Meadows Institute suggests leadership begin to explore:

- What is a balanced supply in the Uvalde region of housing based on type, access to jobs, and tenure?
- What are major obstacles for housing developers, potential buyers, and renters and how can these obstacles be mitigated?
- What is the community's perception of affordable housing?
- What are the region’s policies and practices around the development of affordable housing?
- How can public policy encourage housing development?

[249] Parlow, M. J. (2015). Previously cited.
[250] Wilt, M. (2017, October 13). Why workforce housing is so hard to find. *The Texas State Affordable Housing Corporation.* https://www.tsahc.org/blog/post/why-workforce-housing-is-so-hard-to-find

Student Loan Repayment Assistance to Support Recruitment and Retention Efforts
The Texas Loan Repayment Program for Mental Health Professionals provides loan repayment assistance for certain mental health professionals practicing in mental health professional shortage areas (MHPSAs) and can help support workforce recruitment and retention efforts. The Texas Legislature created the program in 2015, seeking to address the state's critical mental health provider shortage and improve access to mental health services in Texas. It encourages qualified mental health professionals to provide direct care in MHPSAs and mental health services to Medicaid recipients and CHIP enrollees.

Since its inception in 2015, funding for the program has remained level at $1,035,938[251] per year. If additional funding is provided for the program in the upcoming legislative session, it may provide opportunities to recruit new professionals to the Uvalde region. Uvalde County meets the federal criteria necessary to be designated as a shortage area and currently has three MHPSA facilities: Community Health Development Inc., an FQHC which is automatically designated as a MHPSA per HRSA as well as Sabinal Health Clinic and Uvalde Medical and Surgical Associates, both of which are rural health clinics.[252]

Leverage Non-Traditional, Non-Specialist Providers
Peer Support. The integration of peer support services and expansion of the peer support workforce helps address wellness and recovery needs through use of peers as an essential programmatic element of a comprehensive behavioral health system. SAMHSA[253] asserts that mental health services should afford opportunities for contact with others whose personal experiences with mental illness and past mental health crises allow them to convey a sense of hopefulness first-hand. In addition, "peers can offer opportunities for the individual to connect with a supportive circle of people who have shared experiences—an option that may have relevance given feelings of isolation and fear that may accompany a mental health crisis."[254] Evidence demonstrates that peer support specialists can play a meaningful and impactful role in the behavioral health system by alleviating workforce shortage issues[255] and reducing inequities[256] in services across the crisis continuum. Peers do not provide clinical services;

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[251] Texas Higher Education Coordinating Board, TX GAA, Article III, Rider 56, page III-65. (2022–2023). https://www.lbb.texas.gov/Documents/GAA/General_Appropriations_Act_2022_2023.pdf
[252] U.S. Department of Health and Human Services, Health Resources and Services Administration. (n.d.). *What is Shortage Designation?* https://bhw.hrsa.gov/workforce-shortage-areas/shortage-designation
[253] Substance Abuse and Mental Health Services Administration. (2020). *National guidelines for behavioral health crisis care: Best practice toolkit.* https://bit.ly/2XVmxpj
[254] Substance Abuse and Mental Health Services Administration. (2009). What are peer recovery support services? *Recovery Community Services Program.* https://store.samhsa.gov/sites/default/files/d7/priv/sma09-4454.pdf
[255] Chapman, S. A., Blash, L. K., Mayer, K., & Spetz, J. (2018). Emerging Roles for Peer Providers in Mental Health and Substance Use Disorders. *American Journal of Preventive Medicine, 54*(6 Suppl 3), S267–S274. https://doi.org/10.1016/j.amepre.2018.02.019
[256] Ojeda, V. D., Munson, M. R., Jones, N., Berliant, E., & Gilmer, T. P. (2021). The Availability of Peer Support and Disparities in Outpatient Mental Health Service Use Among Minority Youth with Serious Mental Illness. *Administration and policy in mental health, 48*(2), 290–298. https://doi.org/10.1007/s10488-020-01073-8

rather, they provide vital support to people and facilitate access to community-based resources, including recovery-oriented and consumer-operated programs and assistance to food and housing resources.[257]

To increase peers as an essential solution to the workforce crisis, it is important that funding for the cost for training peer specialists is readily available. This means supplementing funding for peer support staff who are in training as well as providing funding for peer support mentors to promote retention as an added benefit that can help sustain this strategy to increase the peer support workforce.

Community health workers (CHWs) are community members trained to facilitate interactions between the health care system, individual patients, and the communities where they live. Exploring innovative approaches to expanding the behavioral health workforce includes increasing access to services using these non-specialists to deliver care and expanding the implementation of emerging practices to train and utilize a nontraditional workforce.

An effort of Harvard Medical School's GlobalMentalHealth@Harvard initiative, the Empower Model enables non-specialist health workers to learn via a digital environment to deliver evidence-based psychological treatments for a wide range of mental health and SUD. This digital environment includes learning opportunities surrounding innovative delivery systems and systems integration and provides the following workforce expansion opportunities:

- Brief treatment protocols and training programs to enable non-specialists to deliver treatments and achieve positive outcomes
- Digital training to build competencies and provide remote supervision
- Peer-to-peer models for supervision and quality assurance.

Community Trainings

Training is an important component to providing best practice treatment, evidence-based interventions and increasing mental health literacy in the region. The following table provides recommendations for mental health trainings for specific population groups, including community- and school-based clinicians, mental health providers, educators and school staff, caregivers and parents, and first responders. Although the Meadows Institute recommends that all these trainings are conducted in the next two years, the team has prioritized several that are more critical child-focused treatment and / or caregiver support trainings.

[257] Hepburn, S. (2021, August 10). The Chronic Misunderstanding of the Peer Role in Behavioral Health. *#CrisisTalk.* https://talk.crisisnow.com/the-chronic-misunderstanding-of-the-peer-role-in-behavioral-health/

Table 15: Prioritized Mental Health Trainings for Specific Populations

Training	Tier	Audience	Time & Cost	Facilitator(s)
Prioritized Trainings				
Teen Mental Health First Aid (tMHFA): Sessions teach teens (in grades 9-12) how to identify, understand, and respond to signs of mental health and substance use challenges in their friends and peers and how to connect them to a "trusted adult."[258]	1	High School Students	$3,300 for 125 attendees (6) 45-minute sessions or (3) 90-minute sessions	Numerous trainers exist and vary by region. Upcoming trainings are listed here.
Parenting Matters: Supporting Children in the Aftermath of a School Shooting: This workshop explores what to expect after children experience a school shooting, signs and symptoms of post-traumatic stress and grief, and when to seek additional support for children.	1	Caregivers	$6,800 for 20 attendees 4-hour virtual workshop	TAG (Trauma and Grief Center), National Child Traumatic Stress Network
Bounce Back: An evidence-based intervention for elementary-aged students exposed to trauma, including cognitive-behavioral coping strategies and trauma processing.[259]	2	Elementary School Counselors	$4,500 for 15 onsite attendees for 1.5 days Or $3,000 for 15 onsite attendees for one day	The Center for Resiliency, Hope, and Wellness in Schools
Supporting Students Exposed to Trauma and Grief: Tips for Teachers: Sessions explore manifestations of trauma and grief in students of different ages and how teachers can create trauma- and grief-informed classrooms.	1	Teachers, Administrators, and Other School Professionals	$6,000 1-hour virtual session	TAG

[258] *Teen Mental Health First Aid*. (n.d.). Born This Way/Foundation. https://www.mentalhealthfirstaid.org/wp-content/uploads/2021/11/tMHFA-General-One-Pager_21.11.05-v1-2.pdf
[259] *CBITS Training Packages.* (n.d.). The Center for Safe and Resilient Schools & Workplaces and Treatment and Services Adaptation Center for Resiliency, Hope, and Wellness in Schools. Retrieved December 6, 2022, from https://dm0gz550769cd.cloudfront.net/cbitsdelp/e4/e418d06e1a0ac1706c755578968ba238.pdf

Training	Tier	Audience	Time & Cost	Facilitator(s)
Trauma and Grief Component Therapy for Adolescents (TGCT): An evidence-based intervention for adolescents ages 11–21 whose histories of exposure to trauma, bereavement, and traumatic bereavement (or other life adversities), place them at high risk for severe persisting distress, functional impairment, and developmental disruption.	2, 3	Middle and High School Counselors Mental Health Providers*	$138,500 for 80 in-person participants or $99,700 for 50 virtual participants (includes a training manual and 12 months of consultation calls). Two full days	TAG
Beyond Burnout: Exploring the Cost of Caring: This workshop explores how the work of professionals impacts them by identifying tools to decrease risk for compassion fatigue, vicarious trauma, secondary traumatic stress, and burnout.	1	Teachers, Administrators, and Other School Professionals (including School Safety Professionals) Mental Health Providers PCPs	$3,000 virtual session 1–3 hours	TAG
Psychological First Aid (PFA): Evidence-informed training module for assisting people in the immediate aftermath of disaster and terrorism to reduce initial distress and foster short and long-term adaptive functioning.	1	School Support Personnel Faith-Based Leaders Medical Personnel First Responders Uvalde Together Resiliency Center (UTRC) Support / Partner Staff	Free 5-hour online course	The National Child Traumatic Stress Network (NCTSN), the Learning Center for Child and Adolescent Trauma Participants can register online.

*Mental health providers include psychiatrists, psychologists, and other licensed behavioral health providers.

Table 16: Cost of Prioritized Mental Health Trainings

Prioritized Training Costs				
Training	**Cost**	**Per Person Cost**	**Cost for 100 People**	**Cost of Two Sessions**
Teen Mental Health First Aid	$3,300 for 125 attendees	$26.40	$2,640	
Parenting Matters: Supporting Children in the Aftermath of a School Shooting	$6,800 for 20 attendees	$340	$34,000	
Bounce Back	$4,500 for 15 attendees	$300	$30,000	
Supporting Students Exposed to Trauma and Grief: Tips for Teachers	$6,000 for 1-hour virtual session (no size limit)			$12,000
Trauma and Grief Component Therapy for Adolescents	$138,500 for 80 in-person attendees			$277,000
Beyond Burnout: Exploring the Cost of Caring	$3,000 virtual session (no size limit)			$6,000
Psychological First Aid	Free			
Total Cost for All Trainings				**$361,640**

Table 17. Other Recommended Mental Health Trainings for Specific Populations

Training	Audience	Time & Cost	Facilitator(s)
Mental Health First Aid Training: A course that teaches people how to help someone who is developing a mental health problem or experiencing a mental health crisis.	Appropriate for anyone ages 18 and older who wants to learn how to help a person who may be experiencing a mental health related crisis or problem	$23.95 per person 7.5-hour course that typically spans two days in either a virtual, live, or blended format[260]	Numerous trainers exist and vary by region. Upcoming training are listed here.
Growing Through Grief: How Parents / Caregivers Can Help to Support Bereaved Youth: Workshop sessions include how grief presents in youth of different ages, common bereavement-related challenges that children and youth experience, and practical tools for parents / caregivers to help support their children in the aftermath of a death.	Caregivers	$8,000 for 10 attendees (6) 1-hour virtual workshop sessions	TAG
Trauma- and Bereavement-Informed Assessment Competency Training: Training in how to assess traumatized and / or bereaved youth and how to make clinical decisions using trauma- and grief-informed, measurement-based care.	Middle and High School Counselors Mental Health Providers*	$3,000 virtual workshop 1–3 hours	TAG
Safety Planning Intervention for Suicide Prevention: Training that teaches how to complete a safety plan for people at risk of suicide by walking them through the six-step safety plan and providing opportunities for practice.	Mental Health Providers and Staff PCPs and Staff	Free 4-hour virtual training session	Self-guided virtual training. Participants can register online.

[260] *Mental Health First Aid.* (n.d.). National Council for Mental Wellbeing. Retrieved December 6, 2022, from https://www.mentalhealthfirstaid.org/wp-content/uploads/2022/07/22.06.17_Adult-MHFA-Flier.pdf

Training	Audience	Time & Cost	Facilitator(s)
Prolonged Exposure Therapy: Training equips clinicians to apply this therapy in treatment.	Mental Health Providers	$1,500 per person 2–4 days	Center for the Treatment and Study of Anxiety – University of Pennsylvania
Cognitive Processing Therapy (CPT): Training equips clinicians to apply this therapy in treatment.	Mental Health Providers	Varies from $40–$460, typically spans 2–3 days, in addition to either: • $1,000 per person for 20 hours of group consultation calls; or • $2,000 per person for 12 hours of individual consultation	Various providers through CPT for PTSD
Prolonged Exposure (PE) **Program**: Training equips clinicians to apply this therapy in treatment.	Mental Health Providers	Varies from $277–$1,500 per person in either format: • 7 online modules • 4-day workshop	Various providers
Trauma focused Cognitive Behavioral Therapy (TF-CBT): Evidence-based training for individual treatment for children and youth ages 3–18 who are experiencing psychological distress related to traumatic life events.	Licensed Mental Health Professionals	Costs vary depending on the type of training (virtual or in person) and whether a person is seeking certification Two full in-person days or three half virtual days, followed by consultation calls for certification	Numerous approved agencies / trainers exist. Upcoming trainings are listed here.

Training	Audience	Time & Cost	Facilitator(s)
Skills for Psychological Recovery (SPR): This intervention aims to help survivors gain skills to manage distress and cope with post-disaster stress reactions adversity.	Teachers, Administrators, and Other School Professionals Faith-Based Leaders PCPs and Staff First Responders UTRC Support / Partner Staff	Free 5-hour virtual session	Self-guided virtual training. Participants can register online.
Counseling on Access to Lethal Means: Training to support persons at risk of suicide that describes how to counsel on approaches and strategies to put time and distance between someone at risk and lethal means.	While this course is primarily designed for mental health professionals, others who work with people at risk for suicide, such as health care providers and social service professionals, may also benefit.	Free 2-hour virtual session	Self-guided virtual training. Participants can register online.
Ask About Suicide to Save a Life (AS+K): Training to recognize the warning signs of suicide, which include notable behaviors and characteristics, that can be indications of a person's risk for suicidal behavior and steps to take to connect someone at risk to qualified care. Can be delivered in Spanish.	First Responders Sports Coaches Student Group Leaders Faith-Based Leaders Funeral Home Staff Judicial Staff Teachers, Administrators, and Other School Professionals	Free 8-, 2.5-, or 1-hour formats	Self-guided virtual training.

Training	Audience	Time & Cost	Facilitator(s)
ASIST: Interactive workshop in suicide first-aid that teaches how to recognize when someone may be at risk of suicide and to create a plan that will support immediate safety. Although widely used by healthcare providers, participants do not need any formal training to attend the workshop—ASIST can be learned and used by anyone.	Mental Health Providers and Staff PCPs and Staff Communities in Schools[261] First Responders	Varies from $300–$5,000 per person Typically, two days	Numerous providers, which vary by region, and are all found through LivingWorks.
Texas Law Enforcement Peer Network Training, TCOLE 6400 and the Train-the-Trainer TCOLE 6401: These training prepare the student to not only recognize and appropriately manage stress, trauma, and burnout in themselves but also in their peers. It addresses the signs and symptoms of trauma and compassion fatigue and provides guidance on appropriately addressing suicide. There is also an explanation of cultural competence as it relates to service providers. Aside from taking the courses, ensuring all members of law enforcement sign-up or have awareness of the peer network would ensure they have access to mental health service providers and resources which are included with the network along with access to a peer or the 24-hour crisis hotline partner, CopLine.	Law Enforcement Officers	TCOLE 6400 is a 16-Hour course and TCOLE 6401 is an additional 8 hours. There are no direct costs associated with the training as the program is completely state funded.	There are a number of trainers in this region who can provide the training. The schedule of training classes can be established by contacting the network.

*Mental health providers include psychiatrists, psychologists, and other licensed behavioral health providers.

[261] Home—Communities in Schools. (n.d.). Retrieved December 5, 2022, from https://www.communitiesinschools.org/

Additional Resources

The following resources do not include a specific training component but might be helpful:

- **Eliminate the Wait Toolkit** – This toolkit includes a set of strategies that stakeholders can implement to help eliminate the wait for inpatient competency restoration services in Texas.[262]
- **Mental Health: A Guide for Faith Leaders** – This guide provides information to help faith leaders work with members of their congregations and families who are facing mental health challenges. Its goal is to help faith leaders understand more about mental health, mental illness, and treatment as well as help break down the barriers that prevent people from seeking the care they need.[263]
- **Mental Health Ministry Toolkit for Faith Communities** – This toolkit is designed to help faith communities develop spiritual care with people and families who are facing mental illness, addictions, and trauma.[264]

[262] Texas Judicial Commission on Mental Health. (n.d.). *The Texas Toolkit for Rightsizing Competency Restoration Services.* http://www.texasjcmh.gov/media/erwfq1mp/eliminate-the-wait-toolkit-1-19-22-final.pdf
[263] American Psychiatric Association Foundation and the Mental Health and Faith Community Partnership Steering Committee. (2018). *Mental Health: A Guide for Faith Leaders*. https://www.psychiatry.org/File%20Library/Psychiatrists/Cultural-Competency/Mental_Health_Guide_Tool_Kit_2018.pdf
[264] Pathways to Promise. (2017). *Mental Health Ministry: A Toolkit for Faith Communities*. https://www.pathways2promise.org/wp-content/uploads/2018/02/P2P-Mental-Health-Toolkit-2017.pdf

Findings and Actionable Recommendations

In the previous sections, the Meadows Institute presented key findings and recommendations for short- and long-term systemic change in an integrated approach to mental health care in the Uvalde region. In the aggregate, these recommendations point the way to a comprehensive system of care that will address the mental health needs today and for generations to come.

The Meadows Institute included estimated costs for each recommendation. These are overall costs of the program and do not include estimates on revenue that could potentially be generated through billing Medicaid or other insurance.

1. Build a Regional Behavioral Health Campus in Uvalde, Supported by Additional Specialty Resources in San Antonio.
Finding 1. In projecting the need for inpatient bed capacity for the Uvalde region,[265] the Meadows Institute considered historical psychiatric bed use, the tragedy, and additional considerations related to the ability of the region's workforce to fully meet those needs locally. The Meadows Institute estimates the number of overall inpatient beds needed for the region in 2023 is 34 beds for adults and 16 beds for children and youth. It is beyond the capacity of any rural community to operate a facility of this size, given workforce demands and the complexity of some cases that require a full continuum of health supports beyond just the facility (e.g., specialty medical care for geriatric and other complex medical cases, special facilities for people presenting with severe risks of violence towards themselves or others). Accordingly, the Meadows Institute recommends that a dual approach be taken, where the maximum number of beds be operated within the 32-county Uvalde region and more specialized capacity be offered in the nearest major metropolitan area (San Antonio). This is a best practice model similar to how other severe health conditions, such as heart disease and cancer, are handled in rural communities (i.e., routine cases are managed locally, and complex cases are referred to major metropolitan areas with the full array of health resources available). The Meadows Institute recommends two 16 bed facilities based locally (32 total beds), a new outpatient clinic, and the purchase of an additional 19 beds in San Antonio in 2025 with growth to 26 beds by 2050. Until the behavioral health campus is operational, 50 beds dedicated to the Uvalde region must be purchased in San Antonio.

[265] Uvalde region, as defined by HHSC, includes the following 32 counties: Atascosa County, Bandera County, Blanco County, Comal County, Dimmit County, Edwards County, Frio County, Gillespie County, Hays County, Jim Hogg County, Karnes County, Kendall County, Kerr County, Kimble County, Kinney County, La Salle County, Llano County, Mason County, Maverick County, McMullen County, Medina County, Menard County, Real County, Schleicher County, Starr County, Sutton County, Uvalde County, Val Verde County, Webb County, Wilson County, Zapata County, and Zavala County.

1. Build a Regional Behavioral Health Campus in Uvalde, Supported by Additional Specialty Resources in San Antonio.	
Recommendation 1a – In Region Solution: Create a behavioral health campus located at the front of the property the City of Uvalde donated (directly off Highway 90 on King Fisher Lane, adjacent to the Uvalde County Fairplex). The campus should include an outpatient clinic; a 16-bed extended observation, crisis respite and / or crisis residential facility for adults; and a 16-bed extended observation and respite facility for children and youth. The local mental health authority (LMHA), Hill Country Mental Health & Developmental Disabilities (Hill Country MHDD) will operate all facilities. It is anticipated the design / build phase will require 18 months.	**Estimated Cost:** $30 million construction; $3.6 million furnishings and equipment; and $10 million in annual operations.
Recommendation 1b – Out of Region Solution: It will also be necessary to purchase beds in San Antonio to meet the needs of high-acuity patients who cannot be stabilized or who do not demonstrate improvement in symptoms in the local facility. These beds can be purchased from inpatient psychiatric facilities at an estimated cost of $750 per day. To meet the estimated need, this would require the purchase of 19 beds in 2025. However, for the coming biennium, until the two new facilities are operational, the full number of 50 beds will need to be purchased in San Antonio.	**Estimated Cost prior to the new facilities:** $13.7 million per year. **Estimated Cost after local beds are operational:** $5.2 million per year, beginning in 2025.[266]

[266] Please note the transportation costs associated with transfer of people to outside facilities are not included in these estimates.

2. Expand Workforce Capacity	
Finding 2. Workforce development is critical to addressing the outpatient and facility-based recommendations in this assessment. The workforce must be appropriately trained,[267] paid, and have access to affordable housing in the region to maintain high quality mental health services.	
Recommendation 2a. Maintain new positions and increased salaries for the Hill Country MHDD staff in Uvalde County.	**Estimated Cost:** $2.5 million per year.
Recommendation 2b. Southwest Texas Junior College should add a behavioral health certification as part of their existing patient care technician program. The behavioral health certification program would provide additional training to students and prepare them to work in mental health facilities.	**Estimated Cost:** $500,000 for development and one year of operations. $250,000 per year thereafter.
Recommendation 2c. Local leaders in Uvalde should explore affordable housing options to support workforce efforts.	**Estimated Cost:** A cost estimate can be developed once more information is available.
Recommendation 2d. Leverage the skills and expertise of peers, family partners, and community health workers trained in mental health support and resource facilitation. Ensure funding for the cost to train peer specialists is readily available.	**Estimated Cost:** $20,000 per year.

[267] Training recommendations and cost are provided in the Increase Mental Health Literacy and Community Capacity section.

<table>
<tr><th colspan="2">3. Increase Mental Health Literacy and Community Capacity</th></tr>
<tr><td colspan="2">Finding 3a. Training in trauma and grief, along with general mental health education, is needed across the region for the general public, primary care providers (PCPs), hospital staff, behavioral health providers, school personnel, faith leaders, and first responders to provide a continuum of trauma- and grief-informed mental health care.</td></tr>
<tr><td>Recommendation 3a. Fund the seven prioritized, best practice trauma, grief, and mental health trainings (see page 100 for the full list) for up to 100 people per year for two years, while providing ongoing consultation from trauma and grief experts. These trainings represent a tiered approach to providing mental health care, whereby youth and adults receive the “right form of support at the right time.”</td><td>Estimated Cost: $361,640 per year.</td></tr>
<tr><td colspan="2">Finding 3b. The assessment made clear that community leaders are committed to improving mental health services for Uvalde County residents. Nonetheless, there are limited community collaborations currently underway, and there is no broad-based planning group that includes providers, hospitals, academic institutions, schools, law enforcement, community members with lived experience, courts and elected political leadership. Community collaboration is critical to sustainable change.</td></tr>
<tr><td>Recommendation 3b. The Uvalde community should establish a broad-based planning group, with dedicated staff funded to support the effort. The group should include executive leadership from the major health care organizations, academic institutions, schools, law enforcement, courts, and elected political leadership, along with community members with lived experience, to prioritize and strategize on their future mental health system.

To support the functioning of the planning group, it is imperative that new positions be established; a minimum of two positions (two full-time equivalents) are needed to assume responsibilities for providing oversight of the group and the overall coordination of the work, including staff support and managing specific tasks to support the implementation of policies for continuing system improvements in Uvalde County.</td><td>Estimated Cost: $300,000 per year.</td></tr>
</table>

4. Strengthen Mental Health Outpatient Treatment Capacity	
Finding 4. The mental and physical health impacts of the Robb Elementary tragedy are significant and will require increased access to evidence-based treatment for the survivors[268] of the tragedy and the surrounding community, including telehealth services. As is the case across Texas, the Uvalde region faces a shortage of specialty behavioral health providers; however, this shortage is even more prominent due to its rural setting. Telehealth is paramount to ensuring treatment access for the region.	
Recommendation 4a. The Uvalde region should continue to strengthen efforts to integrate mental health treatment in primary care through the Child Psychiatry Access Network (CPAN).	**Estimated Cost:** No additional costs anticipated. CPAN is funded through current state legislative appropriations.
Recommendation 4b. The health-related institutions (HRIs) responsible for the Uvalde region should prioritize outreach to all school districts in the region to recruit participation in the Texas Child Health Access Through Telemedicine (TCHATT).	**Estimated Cost:** No additional costs anticipated. HRI costs are funded through current state legislative appropriations.
Recommendation 4c. Create mental health resource centers for students and staff at the Southwest Texas Junior College (SWTCJ) and Sul Ross State University campuses. These centers could offer mental health counseling by state university graduate counseling students under the supervision of a licensed professional counselor. This opportunity would: (1) give students and staff access to mental health counseling; and (2) provide training opportunities in local communities. The centers could also provide peer support, professional mentoring, and access to a food pantry.	**Estimated Cost:** $600,000 annually per resource center.
Recommendation 4d. To preserve anonymity, fund an out of region telehealth vendor for residents of Uvalde County, allowing access telehealth therapy providers who do not live in the region.	**Estimated Cost:** $100,000 per year for 100 people.

[268] Please note the Meadows Institute define survivors to include both the literal survivors of the tragedy as well as all who were affected by the tragedy (i.e., parents, care givers, citizens, first responders, providers).

5. Improve Mental Health Crisis Capacity	
Finding 5. There is a need for increased capacity in regional crisis response for children and youth.	
Recommendation 5a. Fund a Youth Mobile Crisis Team[269] specialized in working with youth and caregivers to deescalate crises, provide limited in-home supports, and link the young person and family to appropriate ongoing services. Such teams, in multiple states, have been shown to reduce emergency department (ED) use, psychiatric hospitalization, and out-of-home placement. A Youth Mobile Crisis Team provides a 30-to-90-day bridge to engage in ongoing care.	**Estimated Cost:** $1.1 million per team per year. $275,000 in additional startup costs per team.
Recommendation 5b. Fund the Handle with Care Program to employ a system of communication between law enforcement, schools, and mental health professionals to provide best-practice, trauma- and grief-informed care and mitigate negative effects of potentially traumatic events on youth. This program is grounded in the fact that trauma- and grief-informed care is most successful if we can meet children where they are – in their schools and community – and provide timely and effective behavioral health interventions in the immediate aftermath of a traumatic event. The program enables law enforcement to easily notify schools if an officer encounters a child or youth at a traumatic scene, so schools can refer the student for timely intervention if necessary.	**Estimated Cost:** $85,000 annual cost per school district.

[269] These are also known as Pediatric Crisis Stabilization and Response Teams (PCSRTs).

<table>
<tr><th colspan="2">6. Develop Mental Health Intensive Outpatient Treatment Capacity</th></tr>
<tr><td colspan="2">Finding 6a. Currently, there are limited intensive outpatient services available to residents in the Uvalde region and few of the specialized intensive evidence-based treatments that can prevent hospitalization and support long-term recovery for youth and adults with severe needs. These services include Assertive Community Treatment (ACT) and Coordinated Specialty Care (CSC). Of the 149 people that Hill Country MHDD reported were appropriate to receive ACT services only 65 received the service, 84 fewer adults than recommended in FY 2021. While these programs require additional supports to operate in rural areas, they are available in other rural parts of Texas and other states. It is both more efficient and effective to maximize these outpatient resources than to increase inpatient bed capacity.</td></tr>
<tr><td>Recommendation 6a. Hill Country MHDD should ramp up to four regional Rural ACT teams to serve their entire 19-county region. Meeting the need in Uvalde, specifically, requires 50% capacity of one team; half of a Rural ACT team’s time has the capacity to serve up to 25 people in Uvalde. The first team developed should prioritize Uvalde County. Due to workforce shortages, these Rural ACT teams should also receive specialized training in the Risk Needs Responsivity (RNR), enabling them to effectively treat the unique needs of people with moderate to high criminogenic risk.

For people experiencing a first episode of psychosis, Hill Country MHDD should utilize a specialized, coordinated, multiple-entity approach to build and implement a regional CSC program in Uvalde County. Prevalence data for Uvalde County indicates that up to six transition-age youth (18-24) will experience first episode psychosis (FEP) each year. CSC is the gold standard treatment for FEP but is not currently offered by Hill Country MHDD. Therefore, a minimum of 10% capacity of one team covering the entire Hill Country MHDD region (100-person capacity) should be dedicated to Uvalde.</td><td>Estimated Cost for ACT: $1 million per Rural ACT team per year, in addition to the following:
– $500,000 in additional startup costs per team.
– Development year training, technical assistance, and baseline and year 1 fidelity reviews: $95,000
– Bi-annual fidelity review per team: $60,000.

(Training and technical assistance scalable with multiple teams.)

Estimated Cost for CSC:
$475,000 per CSC team per year.</td></tr>
</table>

6. Develop Mental Health Intensive Outpatient Treatment Capacity	
Finding 6b. For youth with the highest intensity of need and at most risk of out of home placement, Uvalde County stakeholders should support Hill Country MHDD as they utilize newly allocated funding to implement Multisystemic Therapy (MST), an intensive, family- and community-based intervention with proven effectiveness for serious juvenile offenders. Uvalde County does not currently have MST; however, Hill Country MHDD has been identified as an awardee to establish one team with coverage extending into Uvalde County.	
Recommendation 6b. Uvalde County stakeholders should actively communicate the availability of this team to child and youth serving systems, so this resource is made available at the point in a youth's experience where it can be most effective at preventing out-of-home placement. This will require stakeholders to coordinate and develop referral processes in advance of program implementation, as well as continued communication to refine referral processes and program decisions.	**Estimated Cost:** The program is currently funded by the state but will require ongoing appropriations.

7. Enhance Data Capacity and Monitor Changes	
Finding 7. Gaining a comprehensive understanding of the change in behavioral health service utilization and severity in the community in the months following the tragedy is challenging. Understanding the impact of this tragedy over time requires data.	
Recommendation 7a. Develop and implement a data collection strategy that includes tracking existing metrics, creating new metrics, and a revised epidemiological study every two years.	**Estimated Cost Year 1:** $300,000 for planning work with the community to develop protocol and scope of work. **Estimated Cost Year 2:** $500,000 - $2 million per study, depending on design launch data collection of Year 1 plan.
Recommendation 7b. Hill Country MHDD should undertake a regional mental health needs assessment to monitor the progress of implemented changes.	**Estimated Cost:** $150,000 per assessment.

8. Build Integrated Treatment Capacity	
Finding 8. The Uvalde region should continue to build integrated care models in primary care settings to address workforce challenges and provide early interventions and treatment.	
Recommendation 8a. Identify primary care health systems committed to the implementation of measurement-based care (MBC) and the Collaborative Care Model (CoCM) or Primary Care Behavioral Health (PCBH) model. Conduct a brief scan of each system to: (1) understand readiness to implement priority reforms (universal screening, measurement-based care, billing reform); and (2) develop a realistic and achievable multi-year plan to implement MBC system-wide for mental health and substance use disorders (SUD). CoCM and PCBH are of increased importance in this region given that research has shown that, compared to non-Hispanics or Latinos, people in the Hispanic or Latino population believe PCPs should treat child mental health problems, and that these parents are more willing to allow their child to receive medications or visit a therapist if recommended by a PCP.[270]	**Estimated Cost:** $75,000 for startup incentive funding and $250,000 for technical assistance per health system. CoCM and PCBH can be billed to Medicaid and other insurance sources.
Recommendation 8b. Over a three-to-five-year period, identified health system(s) should implement universal screening for depression (and other mental health and SUD) system-wide. They should also implement use of MBC for all patients treated for a behavioral health disorder in the primary care setting. Lastly, reengineer workflows and billing systems to take advantage of CoCM payment codes for primary care-based depression treatment.	**Estimated Cost:** No additional costs anticipated beyond 8a.

[270] Brown, J. D., Wissow, L. S., Zachary, C., & Cook, B. L. (2007). Receiving advice about child mental health from a primary care provider: African American and Hispanic parent attitudes. *Medical Care, 45*(11), 1076–1082. https://doi.org/10.1097/MLR.0b013e31812da7fd

9. Implement Pertinent Statewide Recommendations	
Finding 9a. As noted above, workforce development is critical to address the outpatient and facility-based recommendations in this assessment. The following are statewide recommendations that would have an impact on the Uvalde region.	
Recommendation 9a(i). Increase state funding to the Texas Loan Repayment Program for Mental Health Professionals to create additional access for the Uvalde region.	**Estimated Cost:** $1,035,938 per year to double the size of the current program.
Recommendation 9a(ii). The state of Texas should direct licensing agencies to waive out-of-state licensing prohibitions for all mental health and addiction license types, on an emergency basis, as was done for the regions affected by Hurricane Harvey in 2018 and for COVID-19 on a statewide basis. This should be done immediately, reviewed annually, and remain in place until a sufficient workforce is available in Texas. As across Texas, the Uvalde region faces a shortage of specialty behavioral health providers; however, this shortage is even more prominent due to its rural setting.	**Estimated Cost:** No additional costs anticipated.
Recommendation 9a(iii). Expand the peer support Medicaid benefit established through 85(R) H.B. 1486 to include certified family partners as a provider type and authorize Medicaid reimbursement for family support services provided to families of children and youth ages 20 and under.	**Estimated Cost:** No more than $1.5 million based on fiscal note from 85(R) H.B. 1486.
Recommendation 9a(iv). Review Medicaid rates paid to mental health providers and take action to allow for increased salaries.	**Estimated Cost:** A cost estimate can be developed once more information on the size of the rate increase and the applicable providers are determined.
Recommendation 9a(v). Authorize Medicaid reimbursement for services provided by licensed master social workers (LMSWs), licensed marriage and family therapist (LMFT) associates, and licensed professional counselor (LPC) associates. Currently, Medicaid does not reimburse for services provided by LMSWs, LMFT associates, or LPC associates. This limitation hinders rural	**Estimated Cost:** $1.5 million per year.

9. Implement Pertinent Statewide Recommendations	
providers' ability to hire additional mental health professionals and, therefore, develop a sustainable mental health workforce. Allowing services provided by these professionals to be reimbursed will allow rural providers to financially accept LMSW, LMFT associates, and LPC associates who are completing their training. Not only will LMSW, LMFT associates, and LPC associates provide services while working towards final licensure, but some professionals may decide to practice in rural areas once full licensure is obtained.	
Recommendation 9a(vi). Expand the Texas Health and Human Services Commission (HHSC) definition of qualified mental health professionals (QMHPs) to include people with an associate degree or a patient care technician certification that includes a behavioral health focus, and people with any bachelor's degree who complete the credentialing process. QMHPs can currently provide mental health targeted case management and mental health rehabilitative services, as authorized by HHSC. QMHPs thus serve a vital role in behavioral health systems of care, executing programs under the supervision of a licensed clinician. HHSC currently limits QMHPs to people with a bachelor's degree in certain mental health related fields or a license as a registered nurse.	**Estimated Cost:** None, other than administrative.
Finding 9b. As noted above, training in trauma and grief, along with general mental health education, is needed across the region for first responders to provide a continuum of trauma- and grief-informed mental health care.	
Recommendation 9b. Provide funding for the Texas Law Enforcement Peer Network (TLEPN) to operate statewide and ensure law enforcement officers across Texas, including those from the many law enforcement agencies that responded to the Uvalde tragedy, have access to peer training and peers, when and where they need them.	**Estimated Cost:** With an additional $600,000 in annual funding, TLEPN can add peer coordinators in four additional regions and ensure statewide access.

Appendices

Appendix 1: Texas Health and Human Services Commission Uvalde Region Mental Health Needs Assessment Scope of Work

The Health and Human Services Commission (HHSC) awards Hill Country Community MHMR d\b\a Hill Country MHDD Centers (Grantee) a planning grant to assist with completing a needs assessment evaluating historical and ongoing service trends in Uvalde, Texas, and surrounding counties. The grant includes evaluating any increased or growing regional needs for mental health services resulting from the Robb Elementary School Uvalde Mass Violence incident of 2022. Grantee must submit the completed needs assessment to HHSC no later than December 31, 2022, to inform potential funding and policy needs for the 88th Texas Legislature (2023).

Grantee must complete a needs assessment for Uvalde, Texas, and the surrounding region. The needs assessment must include information on any increase in mental health services experienced in Uvalde and surrounding counties resulting from the Robb Elementary School Uvalde Mass Violence incident. Grantee must:

1. Partner with local / regional government and elected officials to support the inclusion of a local perspective on all historical and current needs;
2. Develop a needs assessment that includes, but is not limited to, the following information:
    a. Background;
    b. Theoretical models, such as the Population Exposure Model or Model of Responses to Trauma and Bereavement;
    c. Scope of the problem;
    d. Victim impact (*i.e.,* a description of individual and community response to the trauma, including school-aged children, first responders, and other special populations);
    e. Mental health impact on individuals and the surrounding 32 counties;
    f. Data collection methods and trends in mental health data before and after the Robb Elementary School Uvalde Mass Violence incident;
    g. Historical and currently identified, addressed, and anticipated mental health needs, gaps, and barriers in Uvalde and the surrounding region, including:
        i. Emotional / Mental health;
        ii. Physical / Medical;
        iii. Financial; and
        iv. Civil, including workforce.
    h. Future mental health focus;
    i. Meeting anticipated and unmet needs;
    j. Summary and recommendations;
    k. Actionable recommendations and findings to inform HHSC, the 88th Texas Legislature (2023), elected officials, and local communities in the 32-county region.

Appendix 2: Literature Review: Victim Impact and Treatment Models

Responses to Trauma and Bereavement

The May 24, 2022 Robb Elementary mass violence tragedy was a devastating act that has had a traumatic impact on many individuals and the community as a whole. The tragedy set in motion a resilient community behavioral health response, and its impact will linger for years, if not generations. These ripple effects will continue to reverberate through the Uvalde community, as well as other communities across our state and nation.

The traumatic effects of mass violence on victims are well-documented, with the literature indicating that mass shootings increase rates of depression and anxiety, as well as risks of suicide among youth, and reduce overall community and emotional well-being.[271] Although the overlapping fields of childhood trauma and bereavement are far less developed than that of adults, the Meadows Institute's review of the literature identified theoretical models and relevant responses to traumatic loss that include Multidimensional Grief Theory,[272] bereavement by traumatic loss,[273] community response to disasters and mass violence,[274] and moral injury among first responders and law enforcement.[275] Victims and survivors of mass violence can be community members of any religion, race, ethnic background, or socioeconomic status. Additionally, the review includes evidence-based interventions for the treatment of trauma and loss.

Victim Impact

According to the U.S. Department of Veterans Affairs, victims of mass violence and natural disasters commonly experience acute stress reactions (e.g., emotional instability, panic, difficulty focusing, and sleep disturbances) that can decrease over time.[276] These myriad reactions often seen in the immediate aftermath encompass an evolution of emotions that range from anger, sadness, and fear to helplessness and hopelessness.[277] Over time, certain individual, social, and community-level risk factors can influence the manifestation of psychological disorders such as depression, anxiety, and PTSD as well as somatic and medical conditions.[278] For example, in the first year following a disaster, PTSD prevalence ranged between 30–40% in direct victims, 10–20% in first responders, and 5–10% in community

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[271] Soni, A. & Tekin, E. (2022, September 15). Previously cited.
[272] Kaplow, J. B., Layne, C. M., Saltzman, W. R., Cozza, S. J., & Pynoos, R. S. (2013). Previously cited.
[273] Neria, Y., & Litz, B. T. (2004). Bereavement by traumatic means: The complex synergy of trauma and grief. *Journal of loss & trauma*, *9*(1), 73–87. https://doi.org/10.1080/15325020490255322
[274] Cowan, R. G., Blum, C. R., Szirony, G. M., & Cicchetti, R. (2020). Previously cited.
[275] Papazoglou, K., Blumberg, D. M., Chiongbian, V. B., Tuttle, B. M., Kamkar, K., Chopko, B., Milliard, B., Aukhojee, P., & Koskelainen, M. (2020). Previously cited.
[276] U.S. Department of Veterans Affairs. (n.d.). Previously cited.
[277] U.S. Department of Veterans Affairs. (n.d.). Previously cited.
[278] U.S. Department of Veterans Affairs. (n.d.). Previously cited.

members.[279] Additionally, mass shootings increase PTSD, depression, and anxiety of survivors in relation to the degree of physical distance and social proximity to the shooting.[280]

Beyond the immediate impact on morbidity and mortality, school shootings have a profound impact on the mental health, grief, and trauma responses of (11 years and younger) and adolescent (12–17 years of age) survivors. School shootings increase prescription antidepressant use among those younger than 20 years old by 21% in the first two years following a shooting.[281] Increases in prescription antidepressants use were less significant in areas with more mental health providers who focus on behavioral rather than pharmacological interventions.[282]

SAMHSA reports that media exposure to graphic images and videos, lack of social support, and limited access to resources, which are common in rural communities, present additional risks.[283] A lack of unity in the community after a mass shooting also can worsen mental health outcomes and hinder the coordination of services when needed most.[284] However, protective factors that promote resiliency in affected people include individual strengths (e.g., sense of optimism and helpful coping strategies) and the use of "effective post-intervention techniques," which can provide individuals with useful emotional and behavioral coping skills such as support and relaxation techniques that can help to balance and regulate the body.[285]

Theoretical Models

Theoretical models of response to trauma and loss can be useful in helping to gauge what is normative and to predict a greater risk of mental health issues post-event, including post-traumatic stress and prolonged grief. Much of the current literature examines trauma and loss for adults, leaving a significant gap in research for the developmentally appropriate analysis of PTSD and grief reactions in children and adolescents, which manifests much differently than in adults. A related area of research involves understanding socioenvironmental contexts (i.e., cultural or familial factors) in youth mourning, which informs theories, case conceptualization, and formulations of interventions that most effectively reduce maladaptive grief reactions.[286] Although the integration of this theoretical and empirical work in youth populations is ongoing,

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[279] U.S. Department of Veterans Affairs. (n.d.). Previously cited.

[280] Shultz, J. M., Thoresen, S., Flynn, B. W., Muschert, G. W., Shaw, J. A., Espinel, Z., Walter, F. G., Gaither, J. B., Garcia-Barcena, Y., O'Keefe, K., & Cohen, A. M. (2014). Previously cited.

[281] Rossin-Slater, M., Schnell, M., Schwandt, H., Trejo, S., & Uniat, L. (2020). Previously cited.

[282] Rossin-Slater, M., Schnell, M., Schwandt, H., Trejo, S., & Uniat, L. (2020). Previously cited.

[283] Substance Abuse and Mental Health Services Administration. (2017). Previously cited.

[284] Cowan, R. G., Blum, C. R., Szirony, G. M., & Cicchetti, R. (2020). Previously cited.

[285] Makwana, N. (2019). Previously cited.

[286] Kaplow, J. B., Rolon-Arroyo, B., Layne, C. M., Rooney, E., Oosterhoff, B., Hill, R., Steinberg, A. M., Lotterman, J., Gallagher, K., & Pynoos, R. S. (2020). Validation of the UCLA PTSD Reaction Index for DSM-5: A Developmentally Informed Assessment Tool for Youth. *Journal of the American Academy of Child and Adolescent Psychiatry*, *59*(1), 186. https://doi.org/10.1016/j.jaac.2018.10.019

research shows that bereaved youth in the general population have a higher likelihood of suffering from mental health problems than non-bereaved youth.[287,288]

Multidimensional Grief Theory

The field of childhood grief remains in its infancy. The childhood bereavement and grief literature provide little guidance surrounding the distinguishing features of "adaptive" versus "maladaptive" grief reactions.[289] As a result of the new DSM-5 diagnostic criteria for Prolonged Grief Disorder, maladaptive grief reactions tend to be defined by the duration of time that one has been experiencing distress since the death, often failing to account for environmental factors that can heavily influence grief reactions, especially among children.[290] Multidimensional Grief Theory (MGT) is a developmentally informed model that encompasses both adaptive and maladaptive grief reactions in youth. MGT also emphasizes that children's grief reactions do not occur in a vacuum, and children heavily rely on the caregiving environment to aid in mourning. Distinguishing between positive adjustment versus maladjustment with regard to children's grief must consider the socioenvironmental factors that influence outcomes, including the caregiver's own grief reactions and need for support. The multidimensional grief model encompasses the following content domains:

Circumstance-Related Distress (Traumatic Grief)

Normative "circumstance-related distress" involves adaptive adjustment to the intense emotional pain associated with the *cause of* the death. Expected reactions occurring in the aftermath of highly distressing and traumatic deaths, such as those involving "violence, volition, and violation of societal laws or social mores"[291] include sadness, anger, repulsion, or terror. These reactions are expected to recede over time while the ability to experience positive memories of the deceased increases. Maladaptive circumstance-related distress is characterized by serious and continuous negative reactions to the way the person died, to the extent that the bereaved person experiences severe emotional or behavioral distress and functional impairment, such as avoidance, rage, guilt, shame, or preoccupation with intervention or revenge fantasies.[292]

When individuals or communities are directly exposed to life threats and witness the traumatic deaths of people close to them, circumstance-related distress often involves the interplay of

[287] Kaplow, J. B., Rolon-Arroyo, B., Layne, C. M., Rooney, E., Oosterhoff, B., Hill, R., Steinberg, A. M., Lotterman, J., Gallagher, K., & Pynoos, R. S. (2020). Previously cited.
[288] J.B., Saunders, J., Angold, A., & Costello, E.J. (2010). Psychiatric symptoms in bereaved versus non-bereaved youth and young adults: A longitudinal, epidemiological study. *Journal of the American Academy of Child and Adolescent Psychiatry, 49*, 1145-1154.
[289] Kaplow, J. B., Layne, C. M., Saltzman, W. R., Cozza, S. J., & Pynoos, R. S. (2013). Previously cited.
[290] Kaplow, J. B., Layne, C. M., Saltzman, W. R., Cozza, S. J., & Pynoos, R. S. (2013). Previously cited.
[291] Rynearson, E.K. (2013). *Retelling violent death*. Routledge.
[292] Kaplow, J. B., Layne, C. M., Saltzman, W. R., Cozza, S. J., & Pynoos, R. S. (2013). Previously cited.

both post-traumatic stress and grief reactions during the aftermath of the event.[293] For example, a caregiver who learns of the violent death of their child will most likely experience post-traumatic stress related to the death event itself along with intense grief and sorrow over the physical absence of their child. Evidence also shows that circumstance-related distress can occur even when a death is anticipated (e.g., witnessing the prolonged deterioration, suffering, or traumatic images of a loved one dying of cancer).[294]

Separation Distress

Normative "separation distress" occurs when missing the deceased person and yearning or longing to be reunited with that person. Conversely, indications of maladaptive separation distress include the persistence of suicidal ideation with the goal of reunification with the loved one and / or mirroring unhealthy elements of the deceased person's habits or behaviors to feel connected to that person. In cases of caregiver loss, separation distress can become more severe when the relationship with the surviving caregiver is conflictual, or if the caregiver has difficulty communicating about the deceased person or is experiencing their own intense separation distress.[295]

Existential / Identity Distress

Normative "existential / identity distress" includes disruptions in the sense of self, future plans, and finding meaning after loss. Additionally, the surviving loved one may have difficulty taking on new roles or duties that were formerly provided by the lost loved one. Indications of maladaptive existential / identity distress involve prolonged and intense levels of distress which may include the perception of loss of personal identity, a sense that nothing else matters, and a sense of hopelessness about the future without the deceased, leading to suicidal ideation.[296]

Bereavement by Traumatic Loss

The study of traumatic loss, particularly because of malicious violence, is relatively new, which has resulted in varying theories about the causes of prolonged grief reactions in the context of traumatic loss. One view supports the notion that traumatic loss should be treated as a traumatic stressor and in small percentages of cases classified as PTSD due to the conceptualization that violent loss produces feelings of intense anxiety, which is common to traumatic stressors.[297] Notably, this theory does not consider the attachment relationship or

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[293] Layne, C.M., Kaplow, J.B., Oosterhoff, B., Hill, R., & Pynoos, R. (2017). The interplay of trauma and bereavement in adolescence: Integrating pioneering work and recent advancements. *Adolescent Psychiatry, 7*(4), 266-285.
[294] Kaplow, J.B., Howell, K.H. & Layne, C.M. (2014). Do circumstances of the death matter? Identifying socioenvironmental risks for grief-related psychopathology in bereaved youth. *Journal of Traumatic Stress, 27*(1), 42-49.
[295] Kaplow, J. B., Layne, C. M., Saltzman, W. R., Cozza, S. J., & Pynoos, R. S. (2013). Previously cited.
[296] Kaplow, J. B., Layne, C. M., Saltzman, W. R., Cozza, S. J., & Pynoos, R. S. (2013). Previously cited.
[297] Green, B. L., Krupnick, J. L., Stockton, P., Goodman, L., Corcoran, C., & Petty, R. (2001). Psychological outcomes associated with traumatic loss in a sample of young women. *American Behavioral Scientist, 44*(5), 817–837. https://doi.org/10.1177/00027640121956511

separation distress experienced among those who lost loved ones to violence. Moreover, a National Institute of Health article[298] reports that various psychiatric and physical health morbidities are attributed to traumatic loss, including high blood pressure, cancer, ulcerative colitis, and suicidality, indicating a major public health concern for those suffering the traumatic loss of significant attachment figures, especially the loss of a child. Thus, evaluating both the circumstances of the death (e.g., violent death) as well as the relational connection (including the meaning of the loss to the individual survivors) are critically important.

Research demonstrates that PTSD and grief are distinct psychological reactions that can each arise after traumatic loss. Studies that further distinguish grief reactions from post-traumatic stress have emerged since the initial proposed inclusion of Persistent Complex Bereavement Disorder in the DSM-5,[299] which was the first bereavement-related disorder to include a traumatic bereavement specifier, denoting an increased risk for more severe psychological distress (e.g., PTSD), in response to homicide or suicide deaths in particular. Studies have attempted to decipher how severe grief reactions develop and persist over time and how they may differ or relate to PTSD responses. For example, a study conducted after the 2007 Virginia Tech mass shooting explored how physical proximity and social proximity influence post-traumatic stress outcomes and serve as predictors of longitudinal grief reactions. Results of the study identified five risk markers to be used in screening instruments after mass casualty shootings: "(a) social closeness to someone killed in the shootings, (b) peritraumatic fear for another's safety, (c) elevated PTS symptoms, (d) elevated grief reactions, and (e) prior history of mental health problems."[300] This important work helped to shed light on the wide range of grief reactions that can occur after traumatic loss in an attempt to avoid pathologizing normative grief responses among those exposed to these types of tragedies.

Impact on First Responders and Law Enforcement

SAMHSA reports that 30% of first responders (law enforcement, emergency medical, and firefighters) have behavioral health issues such as PTSD, anxiety, and depression compared to 20% of the general population.[301] First responders face many mental and physical health outcomes because of occupational exposure to natural or human-made disasters like mass violence incidents. Exposure to deceased victims and injured survivors, experiencing personal trauma from the event, and managing urgent duties of the job can be overwhelming.[302] First

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[298] Neria, Y., & Litz, B. T. (2004). Previously cited.

[299] American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). https://doi.org/10.1176/appi.books.9780890425787

[300] Smith, A. J., Layne, C. M., Coyle, P., Kaplow, J. B., Brymer, M. J., Pynoos, R. S., & Jones, R. T. (2017). Predicting Grief Reactions One Year Following a Mass University Shooting: Evaluating Dose-Response and Contextual Predictors. *Violence and victims, 32*(6), 1024–1043. https://doi.org/10.1891/0886-6708.VV-D-16-00043

[301] Substance Abuse and Mental Health Services Administration. (2018, May). *First Responders: Behavioral Health Concerns, Emergency Response, and Trauma.* Disaster Technical Assistance Center Supplemental Research Bulletin. https://www.samhsa.gov/sites/default/files/dtac/supplementalresearchbulletin-firstresponders-may2018.pdf

[302] Cowan, R. G., Blum, C. R., Szirony, G. M., & Cicchetti, R. (2020). Previously cited.

responders are also exposed to threats to personal safety, long work hours, shift work, poor sleep, and other adverse experiences. Research shows that the nature of public health and safety work creates "collateral damage" that also impacts social and interpersonal relationships in this subgroup.[303]

Research further indicates that trauma can impact individuals beyond the mental and physical realms. Invisible wounds involving "afflictions of the soul" are seemingly far more challenging to heal and referred to as moral injury.[304] Instances of moral injury include situations where first responders, especially police officers, fail to protect the public even though these events are sometimes out of their control, such as crimes against children, violence, the inability to save victims, and negotiating with suicidal people.[305]

A recent study of uniformed law enforcement officers showed that moral injury significantly predicted PTSD (avoidance, hyperarousal, and re-experiencing symptoms in particular), which helps to shed light on risk factors faced by police officers and other first responders when exposed to occupational-related trauma.[306] Highlighting the risk of misdiagnosis and the potential of neglecting significant comorbid aspects impacting symptoms, this study recommended that the evaluation of post-trauma symptoms among law enforcement officers also consider acute or chronic exposure to trauma as well as morally injurious events. Furthermore, proactive measures recommended for law enforcement organizations include the responsibility for education regarding moral injury and post-traumatic stress that begins at the recruitment level and continues with ongoing safeguards, such as baseline psychological assessments and annual mental health check-ins to ensure early detection of warning signs moving forward.[307] Since some first responders may avoid receiving help until symptoms become intolerable, it is ideal after a mass violence event to create support group options for first responders and to expect them to prolong seeking help through the long-term phase and beyond.[308] The use of peer led support briefings often open lines of communication in group settings where responders have a shared experience.

Hundreds of police officers responded to Robb Elementary at the time of the shooting. There were 496 police officers from 146 agencies across Texas, who, over the following days and

[303] Substance Abuse and Mental Health Services Administration. (2018, May). Previously cited.
[304] Carey, L. B., Hodgson, T. J., Krikheli, L., Soh, R. Y., Armour, A. R., Singh, T. K., & Impiombato, C. G. (2016). Moral Injury, Spiritual Care and the Role of Chaplains: An Exploratory Scoping Review of Literature and Resources. *Journal of religion and health*, *55*(4), 1218–1245. https://doi.org/10.1007/s10943-016-0231-x
[305] Papazoglou, K., Blumberg, D. M., Chiongbian, V. B., Tuttle, B. M., Kamkar, K., Chopko, B., Milliard, B., Aukhojee, P., & Koskelainen, M. (2020). Previously cited.
[306] Papazoglou, K., Blumberg, D. M., Chiongbian, V. B., Tuttle, B. M., Kamkar, K., Chopko, B., Milliard, B., Aukhojee, P., & Koskelainen, M. (2020). Previously cited.
[307] Papazoglou, K., Blumberg, D. M., Chiongbian, V. B., Tuttle, B. M., Kamkar, K., Chopko, B., Milliard, B., Aukhojee, P., & Koskelainen, M. (2020). Previously cited.
[308] Cowan, R. G., Blum, C. R., Szirony, G. M., & Cicchetti, R. (2020). Previously cited.

weeks, responded to provide supplemental police services to the Uvalde community.[309] Most of these officers returned to their assigned duties and jurisdictions without any mental health support services. Additionally, following this event, several agencies whose personnel were a part of the initial response, have taken administrative action with officers for misconduct, including failure to take the appropriate action during the event. Several officers have either resigned or been terminated. Mass casualty events, especially those involving children, often result in law enforcement personnel facing negative perceptions from the public, the media, and the families of the victims. This scrutiny along with the necessary investigation into how law enforcement responded combined with the administrative actions which follow findings of violations of policies and or protocols can compound the potential for moral injury trauma for every law enforcement officer present at the time.

Moreover, vicarious trauma is referenced in the literature as a type of psychological distress linked to caregivers of traumatized individuals (e.g., combat-related PTSD impacting military spouses) who are sometimes referred to as “second responders,” including counselors or other supportive roles responding to mass violence events either from within the community or from outside the community.[310] These individuals can absorb the trauma experience, which allows them to mirror PTSD symptoms and causes potential psychological distress.[311] Those most at risk for vicarious trauma include individuals with a history of trauma, those lacking trauma- and grief-informed training, and, among mental health providers, lack of experience working with traumatized or grieving individuals.[312]

Community Response and Cultural Considerations

Individuals in communities experience and process the aftermath of mass violence in three phases.[313] The first phase is the acute phase, defined by denial, shock, and disbelief.[314] The second phase is the intermediate phase, characterized by fear, anger, anxiety, panic, difficulty focusing, depression, and sleep disturbances.[315] The third and final phase is the long-term phase, in which individuals come to terms with the realities of the mass tragedy, with periods of adjustment and relapse in which maladaptive reactions may call for specialized interventions.[316]

The impact of mass violence on organizations, schools, and businesses positions communities as “covictims” in the aftermath causing the potential for social disruption and the loss of unity and healing.[317] Mass shootings are associated with a 27% decline in the likelihood of having

[309] Personal communication with the Vice President of the Texas Police Chiefs Association (June 23, 2022).
[310] Cowan, R. G., Blum, C. R., Szirony, G. M., & Cicchetti, R. (2020). Previously cited.
[311] Quitangon, G., & Evces, M. R. (2015). Previously cited.
[312] Cowan, R. G., Blum, C. R., Szirony, G. M., & Cicchetti, R. (2020). Previously cited.
[313] Substance Abuse and Mental Health Services Administration. (2017). Previously cited.
[314] Substance Abuse and Mental Health Services Administration. (2017). Previously cited.
[315] Substance Abuse and Mental Health Services Administration. (2017). Previously cited.
[316] Substance Abuse and Mental Health Services Administration. (2017). Previously cited.
[317] Rowhani-Rahbar, A., Zatzick, D. F., & Rivara, F. P. (2019). Previously cited.

excellent community wellbeing and a 13% decline in the likelihood of having excellent emotional health four weeks following the tragedy.[318] Rates of PTSD are higher for both children and adults who are directly impacted compared to community members.[319]

Additionally, there are many cultural traditions, norms, and value systems embedded in grief processes that inform all aspects of mourning practices, from the display of emotions to how the deceased are laid to rest. It is vital that all those who respond in the aftermath of mass violence do so with cultural awareness and sensitivity. When a community is comprised of diverse ethnic backgrounds, potential language barriers require special consideration, including the translation of all supportive services and community events into the predominant language. It is also important to note that culture can become a barrier to help-seeking in the community, especially if survivors fear consequences for seeking services. Creating a safe, confidential, supportive, and culturally competent environment is crucial.

Treatment Interventions for Trauma and Loss

Tiered Interventions for Children and Youth

Guided by the National Child Traumatic Stress Network, as well as direct experience intervening in the aftermath of multiple school shootings, the Trauma and Grief Center has outlined tiered interventions, detailed further in Appendix 3: Trauma- and Grief-Informed, Evidence-Based Practices for Children and Youth Impacted by Mass Shootings , that have been shown to be effective in reducing distress among children and adolescents in the aftermath of mass shootings.

- **Tier 1** interventions are intended for the immediate aftermath (within the first three months of the event) and include: Psychological First Aid, which emphasizes safety, comfort, and coping for youth impacted by a school shooting; Skills for Psychological Recovery, which offers short- and long-term coping through strengthening and reinforcement of problem-solving activities; and Child and Family Traumatic Stress Intervention, which aims to prevent post-traumatic stress disorder by targeting social support and coping skills.
- **Tier 2** interventions (group-based; beginning approximately 2–3 months after the event) include Bounce Back a skill-based group intervention to relieve post-traumatic stress, anxiety and depression among elementary-aged children, and Trauma and Grief Component Therapy (TGCT) for Adolescents, an evidence-based, assessment-driven intervention for adolescents ages 11–18 who have experienced trauma and loss.
- **Tier 3** interventions (individually-based; beginning approximately 2–3 months after the event) include Trauma-Focused Cognitive Behavioral Therapy, an evidence-based, child trauma-focused therapy for youth ages 6–18 years of age, designed to reduce post-

[318] Soni, A., & Tekin, E. (2020, November). Previously cited.
[319] Lowe, S. R., & Galea, S. (2017). Previously cited.

traumatic stress and unhelpful grief reactions, and TGCT, which can be utilized individually as a Tier 3 intervention for adolescents. Tier 3 interventions may also include family-focused treatments. Various family members may experience unique trauma and grief reactions, which can create discord in communication and may hinder the ability to empathize or offer support due to differing experiences. Family narrative construction can be used to help family members understand one another's distinctive reactions to the death with the goal of aiding adaptive grieving, enhancing communication, and strengthening the family.[320]

Evidence-based, trauma- and grief-informed assessment is key to understanding which form of treatment may be most appropriate for each child / adolescent exposed to trauma and loss. In other words, the specific practice elements that have been found to reduce traumatic stress reactions in youth are different than the practice elements that have been found to reduce maladaptive grief reactions. Thus, one-size-fits-all treatments for childhood trauma and grief are ineffective, and treatment decisions must be guided by the specific symptom profiles of each individual.[321] Developmentally and culturally sensitive validated assessment measures can be essential tools in this process.[322,323]

Tiered Interventions for Adults

An Institute of Medicine report[324] outlined recommendations for communities affected by a disaster in a three-tiered public health approach that includes multiple intervention strategies with time points up to a year following the event to establish services for survivors based on their unique experiences and needs. The report proposes strategies for triage and assessment to assess and determine the appropriate level of care for those impacted. This model proposes that Tier 1 include interventions such as psychoeducation, outreach, public health messaging, and Psychological First Aid. Tier 2 includes grief- and trauma-informed approaches containing skills for recovery. Tier 3 includes interventions that are intensive in nature for those who may have had existing serious mental illness (SMI) prior to the event or developed post-event. American Psychological Association's Clinical Practice Guideline on PTSD in Adults recommends

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[320] Kaplow, J. B., Layne, C. M., Saltzman, W. R., Cozza, S. J., & Pynoos, R. S. (2013). Previously cited.
[321] Layne, C. M., Kaplow, J. B., & Youngstrom, E. A. (2017). Applying evidence-based assessment to childhood trauma and bereavement: Concepts, principles, and practices. *Evidence-Based Treatments for Trauma Related Disorders in Children and Adolescents.* 67–96. Springer, Cham.
[322] Kaplow, J. B., Layne, C. M., Oosterhoff, B., Goldenthal, H., Howell, K. H., Wamser-Nanney, R., Burnside, A., Calhoun, K., Marbury, D., Johnson-Hughes, L., Kriesel, M., Staine, M. B., Mankin, M., Porter-Howard, L., & Pynoos, R. (2018). Validation of the Persistent Complex Bereavement Disorder (PCBD) Checklist: A Developmentally Informed Assessment Tool for Bereaved Youth. *Journal of traumatic stress*, *31*(2), 244–254. https://doi.org/10.1002/jts.22277
[323] Kaplow, J. B., Rolon-Arroyo, B., Layne, C. M., Rooney, E., Oosterhoff, B., Hill, R., Steinberg, A. M., Lotterman, J., Gallagher, K., & Pynoos, R. S. (2020). Previously cited.
[324] Institute of Medicine. (2015). *Healthy, resilient, and sustainable communities after disasters: Strategies, opportunities, and planning for recovery.* Washington, DC: The National Academies Press. https://doi.org/10.17226/18996

utilizing cognitive behavioral therapy, cognitive processing therapy, eye movement desensitization therapy, prolonged exposure therapy, as well as brief eclectic psychotherapy and narrative exposure therapy.[325]

[325] Cowan, R. G., Blum, C. R., Szirony, G. M., & Cicchetti, R. (2020). Previously cited.

Appendix 3: Trauma- and Grief-Informed, Evidence-Based Practices for Children and Youth Impacted by Mass Shootings

Note that this list of interventions is not exhaustive but includes a sampling of those that have been effective in reducing distress among children and adolescents in the aftermath of school shootings and are available in Spanish.

Interventions by Tier Level

Intervention	Provider	Age Range (Grade Level)	Description
Tier 1	**Immediate aftermath, within the first three months of the event**		
Psychological First Aid (PFA)	Any adult who may encounter youth impacted by the shooting	All ages	PFA emphasizes safety, comfort, and coping for youth impacted by a school shooting. PFA supports survivors through compassionate, non-intrusive assessments of immediate emotional, physical, and practical needs; provision of resources that address specified needs; and connection with social networks such as family, friends, and community helping resources. PFA is designed to be implemented in the immediate aftermath (e.g., within the first 2-3 weeks) of disasters, terrorism, and other emergencies, such as a school shooting.
Skills for Psychological Recovery (SPR)	School- and community-based clinicians; other mental health professionals	5 years and older (Kindergarten and higher)	SPR bolsters short- and long-term coping through the strengthening and reinforcement of problem-solving skills for disaster survivors (e.g., school shooting), typically experiencing moderate levels of distress. SPR manages distress with problem-solving activities such as problem identification, creation of a manageable problem action plan, reaction management for current and future stressors, promotion of positive action and expression, and leveraging social networks. SPR is a 6-session intervention, designed to be used within the first few months of the event. Note that Module I of Trauma and Grief Component Therapy (listed below) can serve as a replacement for SPR, as the practice elements are very similar.

Intervention	Provider	Age Range (Grade Level)	Description
Child and Family Traumatic Stress Intervention (CFTSI)	Community-based clinicians and other mental health professionals	7 – 18 years (2nd – 12th grade)	CFTSI aims to prevent the development of PTSD by targeting areas of low social support and coping skills. CFTSI is designed to increase communication between the child-survivor and caregiver by preparing caregivers for discussions related to their child's feelings, symptoms, and behaviors. CFTSI serves to improve symptom identification of children impacted by traumatic stress, reduce traumatic stress symptoms, increase communication within the family unit to address traumatic stress reactions, and identify whether the child-survivor requires long-term treatment. CFTSI is applicable to diverse trauma types, including school shootings, and acknowledges that families may have experienced multiple traumas. CFTSI is a 4-session intervention.
Tier 2	**Group-based; beginning approximately 2-3 months after the event**		
Bounce Back	School-and community-based clinicians and other mental health professionals	5 – 11 years (K–5th grade)	Bounce Back is a skill-based, group intervention that is aimed at relieving symptoms of post-traumatic stress, anxiety, and depression among elementary aged children exposed to trauma. Children are provided with normalizing education about common reactions to stress and trauma and learn coping skills such as feelings identification, relaxation, helpful thinking, scheduling positive activities, building social support, and problem solving. Children also work on processing traumatic memories and grief in individual sessions with their group leader. The program consists of ten, 1-hour group sessions (4-6 children) usually conducted once a week in a school setting, 2-3 individual trauma narrative sessions, and a parent education session.

Intervention	Provider	Age Range (Grade Level)	Description
Trauma and Grief Component Therapy (TGCT) for Adolescents	School- and community-based clinicians	11 – 18 years (Middle to high school-aged)	TGCT is an evidence-based, assessment-driven intervention for older youth who have been exposed to trauma, bereavement, and / or traumatic losses. Originally designed for small-group settings in schools, TGCT can also be used effectively in individual treatment. TGCT has been implemented in the aftermath of mass shootings and other tragedies (e.g., Columbine and Santa Fe school shootings, 911 attacks) and is designed to reduce symptoms of post-traumatic stress, depression, suicide risk, unhelpful grief reactions, school problems, and disruptive or violent behavior. Positive outcomes include improved rule compliance, peer relations, and school interest. TGCT is a modularized intervention that can be flexibly tailored to meet the needs of students. Module I provides basic coping skills, emotion regulation skills and psychoeducation; Module II assists youth in processing their traumas and / or losses; Module III assists youth in reducing unhelpful grief reactions and harnessing helpful / adaptive grief reactions; and Module IV provides skills for goal setting and "getting back on track" after a trauma or traumatic loss.
Tier 3	**Individually based; beginning approximately 2-3 months after the event**		
Trauma-Focused Cognitive Behavioral Therapy (TF-CBT)	School- and community-based clinicians; other mental health professionals	6 – 18 years (Elementary to high school-aged)	TF-CBT is an evidence-based, child trauma-focused therapy for youth designed to reduce symptoms of post-traumatic stress and unhelpful grief reactions and improve adaptive functioning following trauma. TF-CBT includes skill-building activities focusing on parenting, relaxation techniques, emotion regulation, and cognitive coping. It also incorporates trauma narrative work and processing, conjoint parent-child sessions, and enhancing safety.

Intervention	Provider	Age Range (Grade Level)	Description
Trauma and Grief Component Therapy (TGCT)	School- and community-based clinicians; other mental health professionals	6 – 18 years (Elementary to high school-aged)	TGCT can also be used individually as a Tier 3 intervention, particularly for adolescents who may have preexisting traumas and / or losses prior to the shooting. See information above.

General Trainings

Recommended Trainings for School-Based Clinicians, Educators, and School Staff

- Trauma- and grief-informed risk screening
- Becoming a trauma- and grief-informed school
- Understanding childhood trauma and grief after a mass shooting
- Suicide risk screening and prevention among students
- Vicarious trauma / grief and secondary traumatic stress among educators, administrators, and other school professionals

Recommended Trainings for Community-Based Clinicians and Other Mental Health Providers

- Trauma- and grief-informed assessment competency training
- Evidence-based, best practices to address trauma and grief in children
- Core curriculum on childhood trauma
- Suicide assessment and prevention
- Vicarious trauma / grief and secondary traumatic stress among mental health providers

Additional Resources

- For more information regarding trainings offered by the TAG Center at Meadows Mental Health Policy Institute, please see: https://mmhpi.org/wp-content/uploads/2021/03/TAG_TrainingOptions_2021.pdf
- Or visit the TAG Center's Virtual Learning Library for downloadable webinars and resources, including guidelines for caregivers regarding how to help their grieving children: https://mmhpi.org/work/trauma-grief-center/virtual-learning-library/
- For guidelines for caregivers and parents regarding how to talk to children about the shooting, please see: https://mmhpi.org/wp-content/uploads/2022/05/Helping-Children-After-Uvalde-School-Shooting_TAGCenter_May2022.pdf

Appendix 4: Mental Health First Aid and Youth Mental Health First Aid[326]

Mental Health First Aid

Mental Health First Aid USA is a training similar to traditional First Aid or CPR but is designed to teach people the skills to assist someone who is experiencing mental health symptoms or a mental health crisis. The course uses role-playing and simulations to demonstrate how to recognize and respond to the warning signs of specific illnesses.

Mental Health First Aid teaches participants a five-step action plan, ALGEE, to support someone developing signs and symptoms of a mental illness or in an emotional crisis:

- Assess for risk of suicide or harm
- Listen nonjudgmentally
- Give reassurance and information
- Encourage appropriate professional help
- Encourage self-help and other support strategies

Why Mental Health First Aid?

Mental Health First Aid curriculum exposes participants to the understanding that mental illnesses and addictions are a disorder within the brain, common, and treatable and that it is okay to seek help. Research demonstrates this program's effectiveness in improving knowledge of mental illnesses and substance use, removing fear and misunderstanding, and enabling those trained to offer concrete assistance.

Individuals trained in Mental Health First Aid can help:

- Raise awareness and encourage understanding of the ways in which cultural background can impact the discrimination associated with mental illness
- Reach out to those who living with mental illness who are reluctant to seek help
- Spread resource awareness to students regarding the support that is available on school campus' and in the community
- Provide information on coping strategies

The program is listed in SAMHSA's National Registry of Evidenced Based Programs and Practices. Mental Health First Aid is a low-cost, high-impact program that generates tremendous community awareness and support.

[326] National Council for Mental Wellbeing. (2013, October 10). *Mental Health First Aid*. https://www.mentalhealthfirstaid.org/

Who Created the Course?

Mental Health First Aid USA is coordinated by the National Council for Behavioral Health, the Maryland Department of Health and Mental Hygiene, and the Missouri Department of Mental Health. Mental Health First Aid USA worked with experts at the National Technical Assistance Center for Children's Mental Health at the Georgetown University Center for Child and Human Development to develop the youth program.

Where Can I Learn More?

To learn more about the Mental Health First Aid USA, or to find a course or contact an instructor in your area, visit www.MentalHealthFirstAid.org.

Youth Mental Health First Aid

Like MHFA, Youth Mental Health First Aid USA is an 8-hour public education program which introduces participants to the unique risk factors and warning signs of mental health problems in adolescents, builds understanding of the importance of early intervention, and teaches individuals how to help an adolescent in crisis or experiencing a mental health challenge. YMHFA uses role-playing and simulations to demonstrate how to assess a mental health crisis; select interventions and provide initial help; and connect young people to professional, peer, social, and self-help care.

Who Should Take the Course?

The course is designed for adults who regularly interact with adolescents (teachers, school staff, coaches, youth group leaders, parents, etc.), but is being tested for appropriateness within older adolescent groups (16 and older) to encourage youth peer to peer interaction. In January 2013, President Obama recommended training for teachers in Mental Health First Aid. Since 2008, the core Mental Health First Aid course has been successfully offered to hundreds of thousands of people across the USA, including hospital staff, employers and business leaders, faith communities, law enforcement, and the public.

Texas, MHFA, and YMHFA

The Texas Legislature has recognized the value of MHFA over many years through various bills and initiatives that encourage school personnel to attend MHFA courses. One goal of the MHFA program in Texas focuses on increasing the number of educators and other school personnel trained in MHFA. With increased awareness and availability of MHFA training courses, it is anticipated that many more educators and school staff will complete the training, be better able to recognize signs and symptoms of a mental health or SUD and be better able to help someone in crisis. Between fiscal year 2014 – fiscal year 2022, 83,803 school district employees were trained in MHFA.[327]

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[327] Information obtained from personal communication with the Texas Office of Mental Health (November 4, 2022).

In Texas, MHFA can be accessed through LMHAs and LBHAs and some Education Service Centers (ESCs). Since 2017, Hill Country MHDD has trained Uvalde CISD in Youth MHFA. In FY 2022, the three LMHAs in the region conducted multiple MHFA trainings:[328]

- Hill Country MHDD: 126 trainings (47 adult, 78 youth, and 1 teen)
- Border Region: 14 trainings (4 adult and 10 youth)
- Camino Real: 51 trainings (19 adult, 30 youth, and 2 teen)

Any member of the community can request MHFA training in the region by contacting the LMHA at its general phone number.

[328] Information obtained from personal communication with the Texas Office of Mental Health (November 4, 2022).

Appendix 5: Uvalde Prevalence Data

Prevalence and Demographic Data Pre Mass-Violence Incident (2020)

Preliminary analysis of Uvalde County's behavioral health prevalence begins with a demographic description of the children, youth, and adult population sizes and projected future growth rates for each. Demographic and population data were obtained from the U.S. Census Bureau's 2016-2020 American Community Survey. Population growth projections for adults, children, and youth were obtained from the Texas Demographic Center. Unless otherwise noted, all data presented in this section is for the calendar year (CY) 2020.[329]

Children and Youth Prevalence Data

The children and youth prevalence section contains data on demographic characteristics, poverty, mental health needs and severity levels, and specific behavioral health diagnoses on 6-17-year-olds. Throughout this section, children are defined as ages 6-11, while youth are defined as ages 12-17. Because the prevalence of behavioral health care needs for young children is poorly understood, and very few receive any type of treatment, prevalence data for children under the age of six is not provided.

Children and Youth Demographic Characteristics

Table 18 provides detailed population estimates from 2020, with a demographic breakdown (including age, race, and ethnicity) of children and youth in Uvalde County. Of the estimated 5,000 children and youth in Uvalde County in 2020, the population was predominantly Hispanic or Latino (91%) and evenly split between males and females. There were more youth ages 12-17 living in Uvalde County (60%) compared to younger children ages 6-11 (40%).

More than half of Uvalde County's children and youth (60%) lived in poverty, with younger children (6-11) slightly more likely to live in poverty than older children (12-17) and youth. Approximately 400 Uvalde children and youth suffer from serious emotional disturbance (SED); of these, 75% (or 300 children and youth) live in poverty. Hispanic or Latino children and youth were slightly overrepresented in rates of SED in poverty, accounting for 97% of all children and youth with SED in poverty in Uvalde County.

[329] These estimates are based on historical patterns and do not include adjustments for changes due to the COVID-19 pandemic.

Table 18: Demographic Characteristics of Children and Youth in Uvalde County (2020)[330,331]

	Total Population	Population in Poverty[332]	Population With SED[333]	Population With SED In Poverty
Children and Youth Ages 6-17	5,000	3,000	400	300
Age				
Ages 6–11	40%	50%	50%	33%
Ages 12–17	60%	50%	50%	67%
Gender				
Male	50%	50%	50%	33%
Female	50%	50%	50%	67%
Race				
Non-Hispanic White	7%	6%	7%	3%
African American	0%	1%	0%	0%
Asian American	0%	0%	0%	0%
Native American	1%	1%	0%	0%
Multiple Races	0%	0%	0%	0%
Hispanic / Latino	91%	92%	93%	97%

Table 19 shows how the children and youth poverty rate of Uvalde County compares with Texas (statewide). The percentage of children and youth in poverty is 18 percentage points higher in Uvalde County than in Texas (60% in poverty in Uvalde County vs. 42% in Texas).

Table 19: Children and Youth in Poverty in Uvalde County (2020)[334]

	Total Population	Population in Poverty	% in Poverty
Uvalde County	5,000	3,000	60%
Texas (Statewide)	5,100,000	2,150,000	42%

Figure 10 shows the projected population of children and youth living in Uvalde County through 2050. The total population is expected to increase by 7% by 2050 (from about 5,000 children

[330] U.S. Census Bureau. (2022). American Community Survey 2016-2020 5-year data release. https://www.census.gov/data/developers/data-sets/acs-5year.2020.html

[331] All population estimates were rounded to reflect uncertainty in the underlying American Community Survey estimates. Because of this rounding, percentages may not always add up to 100%.

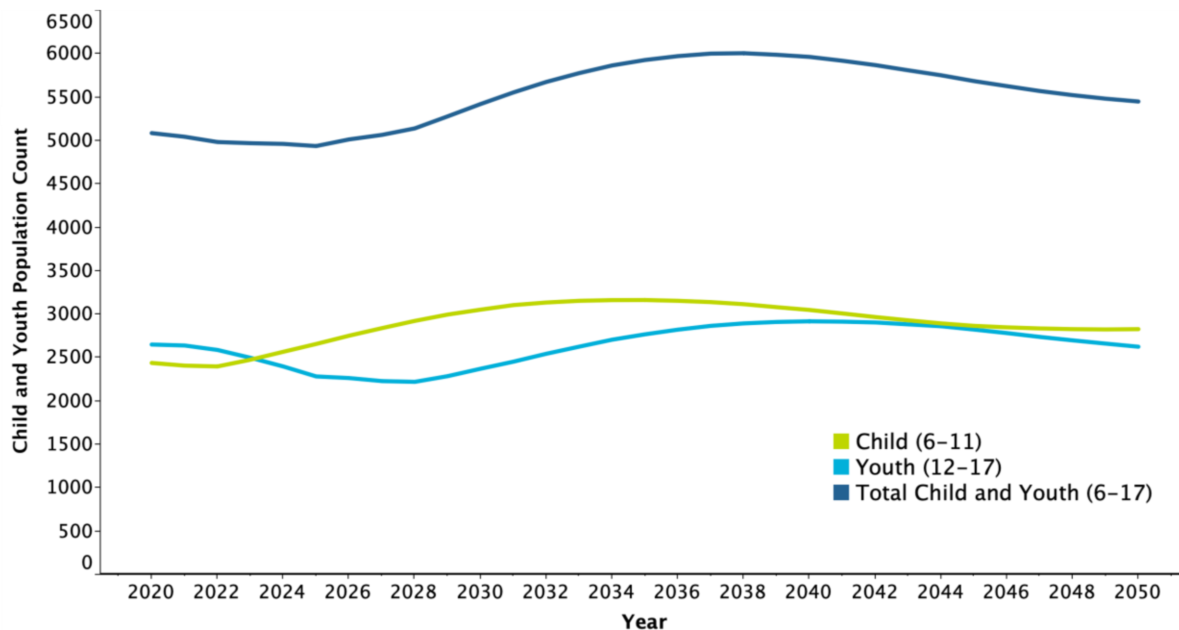
[332] "In poverty" refers to the number of people living below 200% of the federal poverty level for the region. Poverty data obtained from the U.S. Census Bureau. (2022).

[333] The number of children and youth with SED and SED in poverty was estimated using Holzer, C., Nguyen, H., & Holzer, J. (2022). *Texas county-level estimates of the prevalence of severe mental health need in 2020.* Dallas, TX: Meadows Mental Health Policy Institute.

[334] "In poverty" refers to the number of people living below 200% of the federal poverty level for the region. Previously cited.

and youth in 2020 to approximately 5,500 in 2050). Compared to Texas (statewide), the children and youth population in Uvalde County is one-sixth of the expected growth through 2050 (7% for Uvalde County vs. 43% in Texas).

Figure 10: Projected Population Growth of Uvalde County Children and Youth (2020-2050)[335]



Adult Prevalence Data

This section contains data on demographic characteristics, population projections, and poverty levels for adults living in Uvalde County in 2020.

Adult Demographic Characteristics

Table 20 shows that 20,000 adults lived in Uvalde County during 2020. The adult population was comprised largely of Hispanic or Latino (81%) and non-Hispanic White (16%) adults. The age distribution was relatively flat with one-fifth of Uvalde County adults being between the ages of 25 and 34 and an additional one-fifth being age 65 or older. Fifteen percent of adults were between the ages of 18 and 25, 35-44, 45-54, and 55-64, respectively. Nearly half (45%; or 9,000) lived below 200% of the federal poverty level, with adults in the youngest (18-20) and oldest (65 and older) age brackets, females, and Hispanics or Latinos over-represented in poverty rates among Uvalde adults.

Approximately 900 Uvalde County adults suffer from serious mental illness (SMI); of these, two-thirds (67% or 600 adults) also live in poverty. Uvalde adults between the ages of 25 and 54 and female disproportionately suffer from SMI. Notably, adults between the ages of 35 and 44

[335] Population projections are estimated using the American Community Survey 2016-2020 5-year data releases and expected rates of change from the Texas Demographer Population Projections Program, 2018. Previously cited.

experienced twice the rate of SMI in poverty compared to their overall representation in the broader population. In addition, females and those who identify as Hispanic or Latino were over-represented among those who experience SMI in poverty compared to their representation in the general population.

Table 20: Demographic Characteristics of Adults in Uvalde County (2020)[336,337]

	Total Population	Total Population in Poverty[338]	Population With SMI[339]	Population With SMI in Poverty
Adult Population	20,000	9,000	900	600
Age				
18–20	5%	9%	3%	3%
21–24	10%	11%	8%	8%
25–34	20%	13%	23%	17%
35–44	15%	13%	23%	34%
45–54	15%	13%	23%	17%
55–64	15%	13%	10%	10%
65 and older	20%	27%	8%	10%
Gender				
Male	50%	44%	44%	33%
Female	50%	56%	56%	67%
Race / Ethnicity				
Non-Hispanic White	16%	9%	12%	12%
African American	1%	0%	2%	0%
Asian American	1%	0%	0%	0%
Native American	1%	0%	0%	0%
Multiple Races	1%	1%	0%	0%
Hispanic / Latino	81%	90%	85%	88%

Table 21 shows how the adult poverty rate of Uvalde County compares with Texas (statewide). The percentage of adults in poverty is 16 percentage points higher in Uvalde County than in Texas (45% in poverty in Uvalde County vs. 29% in Texas).

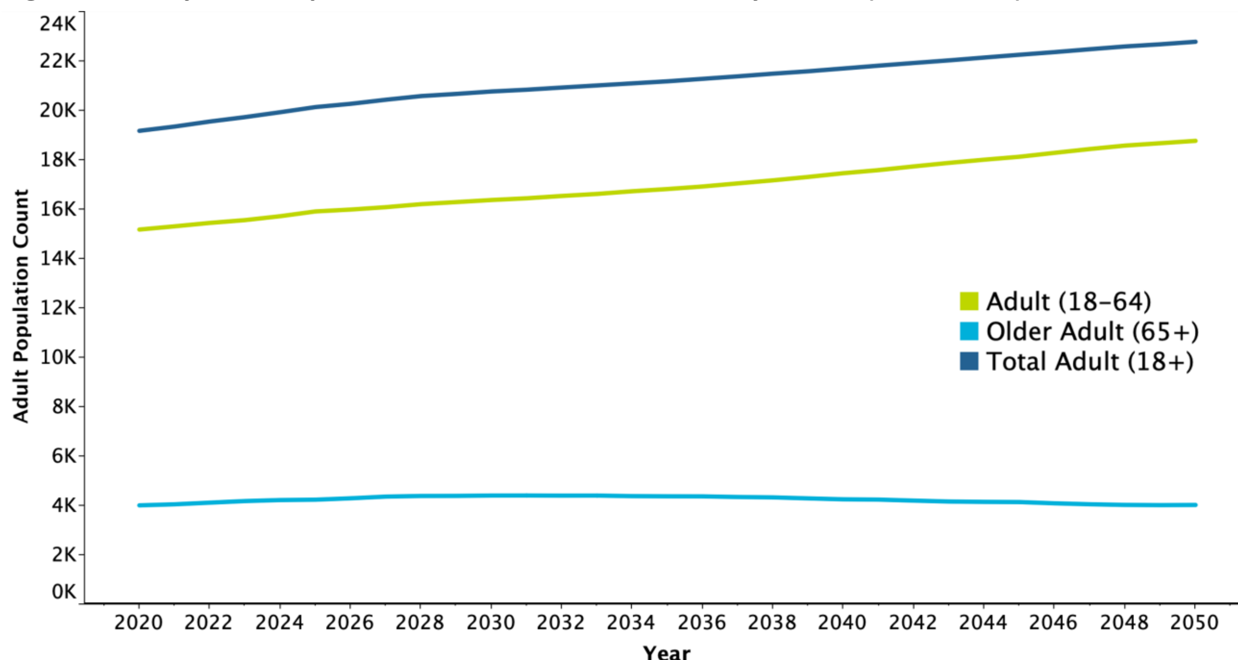
[336] U.S. Census Bureau. (2022). Previously cited.
[337] All population estimates were rounded to reflect uncertainty in the underlying American Community Survey estimates. Because of this rounding, percentages may not always add up to 100%.
[338] "In poverty" refers to the number of people living below 200% of the federal poverty level for the region. Previously cited.
[339] The number of adults with SMI and SMI in poverty was estimated using Holzer, C., et al. (2022). Previously cited.

Table 21: Adults in Poverty in Uvalde County (2020)[340]

	Total Population	Population in Poverty	% in Poverty
Uvalde County	20,000	9,000	45%
Texas (Statewide)	21,750,000	6,300,000	29%

Figure 11 shows the projected population of adults who will be living in Uvalde County through 2050. Overall, the population of Uvalde adults is expected to increase 15% by 2050 (from about 20,000 adults in 2020 to approximately 23,000 adults in 2050). The 18-64-year-old adult population is responsible for most of the expected growth (24% increase between 2020 and 2050), with the older adult (65 and older) expected to remain stable. Compared to Texas (statewide), the adult population in Uvalde County will grow at a much slower rate (15% for Uvalde County adults vs. 65% in Texas).

Figure 11: Projected Population Growth of Uvalde County Adults (2020-2050)[341]



[340] "In poverty" refers to the number of people living below 200% of the federal poverty level for the region. Previously cited.

[341] American Community Survey 2016-2020 and Texas Demographer Population Projections Program. (2018). Previously cited.

Appendix 6: Prevalence Estimation Methodology

Introduction

Dr. Charles Holzer's work is used to provide meaningful estimates based on the most rigorous and contemporary epidemiological sources available regarding overall prevalence of serious emotional disturbance (SED) and serious mental illness (SMI).[342] In 2014, the Meadows Institute commissioned Dr. Holzer to estimate the prevalence of SMI in Texas counties using 2012 and earlier data.[343] Dr. Holzer's original SED and SMI estimates and the Meadows Institute's adaptation of his data, findings, and methodologies to current Texas populations provide the most practically relevant estimates available. The method, described in detail below, uses statistical formulas that apply national prevalence rates to Texas population and demographic data.

Estimating the prevalence of specific mental illnesses such as bipolar disorder, depression, or schizophrenia in different age groups (e.g., children, youth, adults) is a more complicated endeavor – one requiring the incorporation of the best available national studies of the prevalence of those specific disorders. In cases where these alternative epidemiological sources are used, they are always cited and represent the Meadows Institute's judgement to be the best available contemporary source.

Holzer and "Horizontal Synthetic Estimation"

Beginning with his work at the University of Florida in the 1970s, Holzer drew connections between established data (drawn largely from census data), demographics, and the careful study of how these factors correlated with various needs among populations. Holzer derived principles about these connections as presented in the Mental Health Demographic Profile System (MHDPS). This system matched demographic data from the Florida Health Survey with community demographics and known needs for mental health services, creating a model for estimating need in places and situations in which survey data were not available.

The method, which those in the MHDPS team termed "Horizontal Synthetic Estimation," evolved as Holzer refined his work. A crucial step came in the 1980s following the National Institute of Mental Health's Epidemiologic Catchment Area (ECA) program, the largest psychiatric epidemiological study in the United States at the time. Holzer used ECA findings to develop a series of prevalence estimates for the Texas Department of Mental Health and Retardation, a project which led to several similar projects in Colorado, Ohio, and Washington State. Following the 1990 Census and the 1993 National Comorbidity Survey (NCS), Holzer

[342] Charles E. Holzer III, PhD, was an esteemed psychiatric epidemiologist who has worked and published in behavioral science for forty years.

[343] In 2014, the Meadows Institute hired Dr. Holzer to perform a revised county-level prevalence estimate throughout Texas. Dr. Holzer licensed the study and methodology to the Meadows Institute on an ongoing basis.

developed estimates in other states, including Colorado, Wyoming, and Nebraska, and included county-level prevalence estimates.

Holzer's method represented a departure from previous, less-precise methods. He argued that prior approaches mistakenly assumed that local mental health systems served all people with mental health needs. He also criticized indirect methods of estimation, such as those using social indicators (crime levels, poverty, divorce, etc.) with no data on mental illnesses.

Holzer argued that if prevalence estimates and their correlates with demographic characteristics from national epidemiological studies were applied to state and county populations, he could provide more precise estimates of mental health need. He used statistical methods that analyzed survey data from the 2001–2003 Collaborative Psychiatric Epidemiology Surveys (CPES) to estimate the relationships between seven socio-demographic characteristics (i.e., age, sex, race / ethnicity, marital, education, poverty, housing status) and SED and SMI prevalence rates. He then applied these rates to the most up-to-date, available county- or state-level American Community Survey (ACS)[344] population and demographic data, which include estimates of the number of people who can be categorized by the same seven socio-demographic characteristics.

Meadows Institute Adaptation of Holzer's Methodology and Data

In 2014, the Meadows Institute hired Dr. Holzer to perform a revised county-level estimate throughout Texas using 2012 Three-Year ACS data (the most recently available data at the time). Dr. Holzer then licensed the methodology to us for use in estimating prevalence in Texas. From this work, and by using Dr. Holzer's findings, especially his 2012 Meadows Institute-commissioned Texas estimates, a new series of 2018 estimates utilizing the 2018 ACS Five-Year dataset and the 2018 Population Estimates were developed. These data were the most current at the time of this analysis.

Estimating the Prevalence of Specific Disorders

The most recent national prevalence studies conducted by psychiatric epidemiologist Ron Kessler and colleagues, as well as reviews of prevalence studies that target specific disorders are used to estimate the prevalence of specific disorders. The two primary national studies are the National Comorbidity Survey Replication (NCSR)[345] and the National Comorbidity Survey Replication-Adolescent Supplement (NCSR-A).[346] These studies provide national estimates of

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[344] The ACS is an extension of the U.S. Census Bureau. It is an ongoing statistical survey that gathers significant data that, among other things, track shifting demographic data. The use of ACS data helps to align the Holzer estimates with the most up-to-date, local demographic data.

[345] Kessler, R.C., et al. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 64*, 617–627. 10.1001/archpsyc.62.6.617

[346] Kessler, R.C., et al. (2012b). Severity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication Adolescent Supplement. *Archives of General Psychiatry, 69*(4), 381–389. 10.1001/archgenpsychiatry.2011.1603

specific disorders. These estimates are applied to the Texas populations of the same age groups (all adults ages 18 and older and adolescents ages 12–17, respectively).

The national studies did not include all disorders of interest. For example, because of its very low prevalence rate, schizophrenia was not included in the NCSR. The best available reviews of epidemiological studies specific to each diagnosis are used in cases of missing diagnoses in the NCSR or NCSR-A.[347]

[347] See, for example, McGrath, J., et al. (2008). Schizophrenia: A concise overview of incidence, prevalence, and mortality. *Epidemiological Reviews, 30*, 67–76.

Appendix 7: Methodology for Determining Counties' Anticipated Admissions Percentages to Psychiatric Beds in Uvalde County

Given the large geographic span of this assessment's region, with many counties bordering on metropolitan counties, it is unlikely that all residents in the 32-county region who require inpatient psychiatric care would receive care at a potential new inpatient psychiatric facility located in Uvalde County. The calculation approach developed quantified the likelihood that residents of each of the 32 counties would seek care at a new Uvalde facility. This Appendix outlines this approach in greater detail.

Projected Use of Hypothetical New Uvalde Facility due to Shorter Travel Distance

The percentage of a county's population that would use inpatient psychiatric beds in a hypothetical inpatient facility in Uvalde was determined through a travel time analysis of regional resident stays in psychiatric beds, excluding state hospitals, between 2016 and 2019. Specifically, two "drive times" for each patient admitted to an inpatient psychiatric bed between 2016 and 2019 were included in the calculation:[348]

- Travel from the patient's county of residence[349] to the admitting hospital
- Hypothetical travel time from the patient's county to a hypothetical hospital in Uvalde.

Using these travel times, two groups for each county was created: 'Uvalde is closer' and 'Uvalde is further.' If the travel from the patient's county courthouse to the hospital required more time than it would have taken to get to Uvalde's county courthouse, the admissions were counted towards the 'Uvalde is closer' segment of admissions. These categories were translated into a percentage of each county's prospective patients who might be admitted to the hypothetical Uvalde facility rather than the alternative, further away facility that they have historically used. This percentage was applied to the number of anticipated psychiatric admissions from each county to serve as a baseline for patient volume discussions. The percentages generated for each county is shown in Table 22.

[348] Travel time determined by Google Maps via the 'gmapsdistance' package in R: Azuero Melo, R., & Zarruk, D. (2022). gmapsdistance: Distance and Travel Time Between Two Points from Google Maps. R package version 4.0.0. https://CRAN.R-project.org/package=gmapsdistance

[349] The resident's county courthouse was used as the origin for their trip to the hospital at which their admission occurred and their trip to a hypothetical inpatient facility in Uvalde County. The county courthouse was selected as the proxy for resident locations because the common historical pattern of county courthouses being located in the population center of the county.

Table 22: Percentage of Counties' Anticipated Psychiatric Admission to Uvalde[350,351,352]

LMHA	Counties	Proportion of Inpatient Hospitalizations that would be Diverted to a Hypothetical New Hospital in Uvalde (%)
Hill Country MHDD	Bandera County	6%
	Blanco County	3%
	Comal County	2%
	Edwards County	100%
	Gillespie County	8%
	Hays County	3%
	Kendall County	4%
	Kerr County	9%
	Kimble County	82%
	Kinney County	100%
	Llano County	3%
	Mason County	17%
	Medina County	93%
	Menard County	21%
	Real County	100%
	Schleicher County	28%
	Sutton County	56%
	Uvalde County	100%
	Val Verde County	100%
Border Region Behavioral Health	Jim Hogg County	0%
	Starr County	1%
	Webb County	100%
	Zapata County	60%
Camino Real Community Services	Atascosa County	3%
	Dimmit County	100%
	Frio County	97%
	Karnes County	3%
	La Salle County	100%
	Maverick County	100%
	McMullen County	23%
	Wilson County	2%
	Zavala County	100%

[350] Texas Hospital Inpatient Discharge Research Use Data Files. (2016-2019). Previously cited.
[351] Texas Demographer Population Projections Program, 2018. Previously cited.
[352] Azuero Melo, R., & Zarruk, D. (2022). Previously cited.

Inpatient Psychiatric Beds Needed to Accommodate Projected Demand

Table 23 shows to projected number of psychiatric beds needed at the hypothetical Uvalde facility using the anticipated percent of admission to Uvalde for each county described above. The population estimate given in the table relates to the expected growth of the total region, weighted by each county's anticipated admission percentage.

To serve the projected adult patient population, approximately 42 adult beds may be needed to accommodate projected demand in 2050. Children and youth will require roughly 16 beds given the projected demand through 2050.

Table 23: Projected Inpatient Psychiatric Beds Needed to Serve Uvalde[353,354]

Year	Adults		Children / Youth	
	Population	Beds to Operate at 75% Capacity	Population	Beds to Operate at 75% Capacity
2025	429,651	35	156,777	16
2030	448,651	36	159,733	16
2035	464,801	38	160,538	17
2040	480,059	39	157,998	17
2045	494,238	41	154,219	17
2050	506,456	42	151,060	16

[353] Texas Hospital Inpatient Discharge Research Use Data Files. (2016-2019). Previously cited.
[354] Texas Demographer Population Projections Program, 2018. Previously cited.

Appendix 8: Uvalde County Veterans

Prevalence and Demographic Data

Table 24 provides details on Uvalde County's veteran population in 2020. Overall, approximately 1,300 veterans were living in Uvalde County, most of which were male (92%) and over 45 years old (77%). Approximately half of veterans were Hispanic or Latino (50%), with the remainder being predominantly non-Hispanic White (46%).

Table 24: Demographic Characteristics of Veterans in Uvalde County (2020)[355,356]

Demographics	Number / % of Uvalde Veterans
Number of Veterans	1,300
Age	
17–20	1%
21–24	5%
25–34	10%
35–44	8%
45–54	13%
55–64	16%
65 and older	48%
Gender	
Male	92%
Female	8%
Race / Ethnicity	
Non-Hispanic White	46%
African American	2%
Asian American	<1%
Native American	<1%
Multiple Races	2%
Hispanic / Latino	50%

Table 25 shows how the veteran poverty rate of Uvalde County compares with Texas (statewide). Approximately 400 veterans in Uvalde County live in poverty (31% of total veterans), which is 13 percentage points higher than veterans in poverty statewide (18%).

[355] Estimated population of veterans obtained from the National Center for Veterans Analysis and Statistics (2019). Veteran Population by County. Available at https://www.va.gov/vetdata/veteran_population.asp.
To determine demographics, weights were applied to the base population. Weights are from the U.S. Census Bureau, American Community Survey 2016-2020 Five-Year Public Use Microdata Sample (PUMS). Available at https://www.census.gov/programs-surveys/acs/data/pums.html

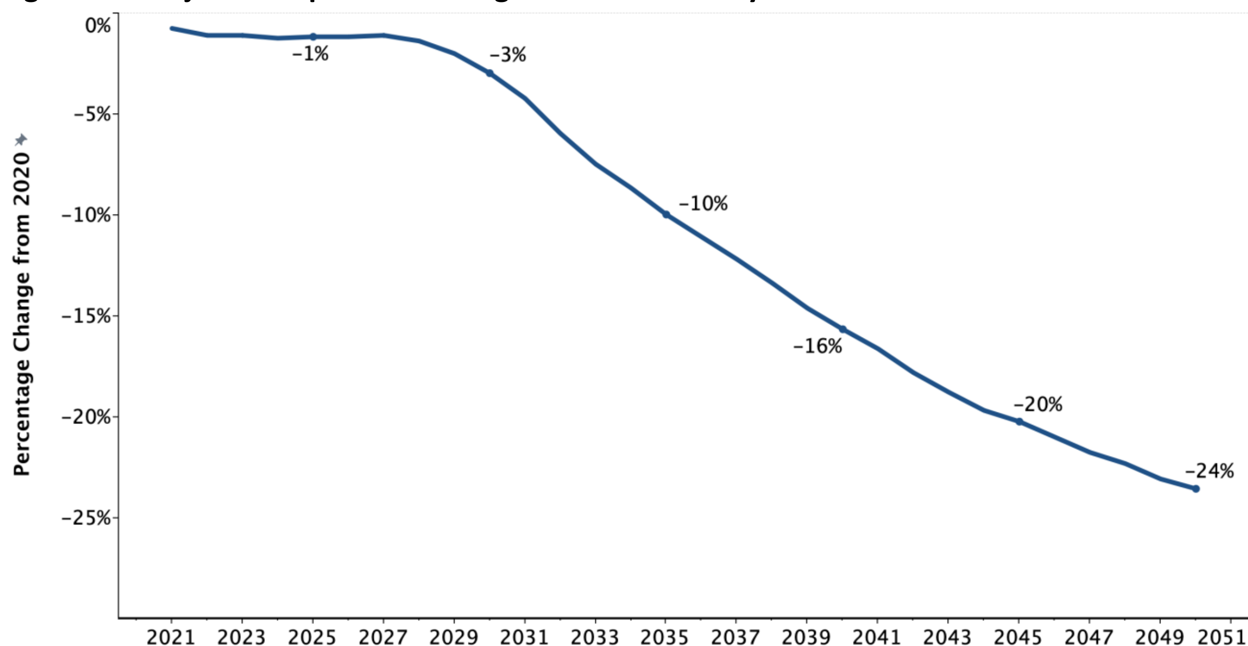
[356] All population estimates were rounded to reflect uncertainty in the underlying American Community Survey estimates. Because of this rounding, percentages may not always add up to 100%.

Table 25: Veterans in Poverty in Uvalde County and in the State of Texas (2020)[357]

	Total Population	Population in Poverty	% in Poverty
Uvalde County	1,300	400	31%
Texas (Statewide)	1,550,000	280,000	18%

Figure 12 shows the projected population of Uvalde County veterans through 2050. Between 2020 and 2030, the number of veterans is expected to be relatively stable, with only a 3% decline over the decade. However, a larger decrease in the number of veterans is expected after 2030 (a 24% decrease from 2020), which is due to many older veterans living in the county. This projected decrease in the number of veterans is larger than the decrease expected across Texas (statewide) of 16%.

Figure 12: Projected Population Change of Uvalde County Veterans from 2020 to 2050[358]



The twelve-month prevalence of behavioral health disorders among Uvalde County veterans is shown in Table 26. Approximately 3% of veterans were living with SMI, with 1% of veterans living in poverty with SMI. Post-traumatic stress disorder affected approximately 10% of all Uvalde County veterans, followed by major depression (6%). Many Uvalde County veterans had a substance use disorder (SUD), with 20% having an illicit drug use-related SUD and 7% having

[357] Poverty data was obtained from U.S. Census Bureau. (2022). Previously cited and applied to the veteran population size.
[358] Estimated population of veterans obtained from the National Center for Veterans Analysis and Statistics (2019). Veteran Population by County. Available at https://www.va.gov/vetdata/veteran_population.asp.

an alcohol-related SUD. Fewer than six veterans were estimated to have completed suicide in Uvalde County in 2020.

Table 26: Twelve-Month Prevalence of Mental Health and Substance Use Disorders Among Veterans in Uvalde County (2020)[359,360,361]

Behavioral Health Condition	Prevalence (% of Population)
Total Veteran Population	**1,300**
Population in Poverty	400 (31%)
Mental Health Needs	
Serious Mental Illness (SMI)[362]	30 (3%)
SMI in Poverty[363]	10 (1%)
Major Depression[364]	60 (6%)
Post-Traumatic Stress Disorder[365]	100 (10%)
Number of Deaths by Suicide in 2020[366]	<6
Substance Use Disorder (SUD) Needs[367]	
Alcohol-Related SUD	70 (7%)
Illicit Drug Use-Related SUD	200 (20%)
Nonmedical Use of Psychotherapeutics	50 (5%)
Nonmedical use of Pain Relievers	30 (3%)

Access to Mental Health Services

The relatively small veteran population in Uvalde County has limited options for accessing military culturally competent mental health care, and each option for access presents its own obstacle. For the more than 500 veterans with a service-connected disability in Uvalde

[359] All population estimates were rounded to reflect uncertainty in the underlying American Community Survey estimates. Because of this rounding, percentages may not always add up to 100%.
[360] The veteran population was also included in the prevalence estimates for adults.
[361] These estimates are based on historical patterns and do not include adjustments for changes due to the COVID-19 pandemic.
[362] Holzer, C., Nguyen, H., & Holzer, J. (2022). *Texas county-level estimates of the prevalence of severe mental health need in 2020*. Dallas, TX: Meadows Mental Health Policy Institute.
[363] Holzer, C., Nguyen, H., & Holzer, J. (2022). Previously cited., & U.S. Census Bureau (2022). Previously cited.
[364] Holzer, C., Nguyen, H., & Holzer, J. (2022). Previously cited.
[365] Veteran posttraumatic stress disorder (PTSD) was estimated using Lehavot, K., Katon, J. G., Chen, J. A., Fortney, J. C., & Simpson, T. L. (2018). Post-traumatic stress disorder by gender and veteran status. *American Journal of Preventive Medicine, 54*(1), e1–e9. 10.1016/j.amepre.2017.09.008
[366] Veteran suicide mortality obtained from the U.S. Department of Veteran Affairs (2022, September). Texas Veteran Suicide Data Sheet, 2020. https://www.mentalhealth.va.gov/suicide_prevention/data.asp.
[367] Local prevalence was estimated using Substance Abuse and Mental Health Services Administration (SAMHSA)'s Restricted Online Data Analysis System (RDAS). (2022, February). National Survey on Drug Use and Health: 2-Year RDAS (2019 to 2020). https://rdas.samhsa.gov/#/survey/NSDUH-2019-2020-RD02YR

County,[368] the U.S. Department of Veterans Affairs (VA) does not have a readily accessible health care clinic within an hour's drive. Counseling services are available through Hill Country MHDD locally, but veterans are not aware of services due to lack of visibility compared to Hill Country MHDD 's other programs. State funded grant programs that provide telehealth may not be accessible to rural veterans due to broadband accessibility issues.

U.S. Department of Veterans Affairs

According to VA national statistics, veterans over the age of 65 are more likely to use VA benefits (compared to other age groups).[369] Almost half of Uvalde County's veteran population is 65 or older, and the VA does not have healthcare facility in Uvalde County. The closest VA healthcare clinics are at least 69 miles away, one to the north in Kerrville, and the other on the west side of San Antonio, with both offering limited outpatient behavioral health services. For higher echelons of VA behavioral health care, such as psychiatry and SUD treatments, veterans must travel to the Audie L. Murphy Memorial Veterans' Hospital in San Antonio (76 miles away).

Additionally, there are two private mental health counselors listed as "VA community providers" (non-VA providers that accept VA health care insurance) located in Hondo (40 miles away) and Vanderpool (42 miles away), that provide access to mental health services and are funded through the VA.[370]

According to the National Center for Veterans Analysis and Statistics, in FY21, the VA spent more than $16.5 million in total expenditures on veterans in Uvalde County. This includes almost $11 million in compensation and pensions, and more than $5 million spent on health care (including mental health care) in support of almost 500 veterans.[371]

Hill Country MHDD

Hill Country MHDD provides another access point to mental health for veterans and tracks veteran and military affiliated family status as part of the intake process. As a CCBHC with a location in Uvalde, Hill Country MHDD must incorporate and implement standards of care that all staff are trained in military cultural competency, so that their system is prepared to serve service members, veterans, and their families.

Hill Country MHDD also houses a nonclinical veteran-focused program called the Military Veteran Peer Network (MVPN). The MVPN Coordinator is funded by the State of Texas through

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[368] United States Census Bureau. (2021). American Community Survey. https://data.census.gov/cedsci/table?t=Veterans&g=0500000US48463&y=2020&tid=ACSDT5Y2020.B21100
[369] VA Utilization Profile 2017. (2020). National Center for Veterans Analysis and Statistics. https://www.va.gov/vetdata/docs/Quickfacts/VA_Utilization_Profile_2017.pdf
[370] All locations and distances are provided through the VA service mapping on va.gov.
[371] U.S. Department of Veterans Affairs. (n.d.) Summary of Expenditures by State for Fiscal Year 2021. https://www.va.gov/VETDATA/Expenditures.asp

the LMHA and trained by the Texas Veterans Commission's Veterans Mental Health Program to provide peer-to-peer support through training, technical assistance, and connection to a statewide network of military trauma-affected veteran peer support. Hill Country MHDD's MVPN Coordinator is officed in Hays County and is responsible for representing the MVPN program in all 19 counties in Hill Country MHDD 's service area. Data on Uvalde veterans engaged with MVPN is unavailable.

Statewide, State-funded Telebehavioral Health Programs

There are additional access points to mental health care for Uvalde veterans through statewide, state-funded telebehavioral health programs for veterans and their families. These include:

- Baylor Scott & White's Research Institute provides clinical counseling to veterans, dependents, and surviving spouses (funded through the Texas Veterans Commission).
- Family Endeavors provides clinical counseling to veterans, dependents, and surviving spouses (funded through HHSC and Texas Veterans Commission).
- One Tribe Foundation provides clinical counseling to veterans, dependents, and surviving spouses (funded through HHSC and Texas Veterans Commission).
- Samaritan Center for Counseling and Pastoral Care provides clinical counseling to veterans, dependents, and surviving spouses (funded through HHSC and Texas Veterans Commission).
- Metrocare Services provides clinical counseling to veterans, dependents, and surviving spouses (funded through HHSC).
- West Texas Counseling and Guidance provides clinical counseling to veterans, dependents, and surviving spouses (funded through HHSC and Texas Veterans Commission).

Given the nature of the technology requirements for video versus voice-only therapies, there is some concern about the availability of quality broadband internet to support rural veterans' access to telebehavioral health programs.

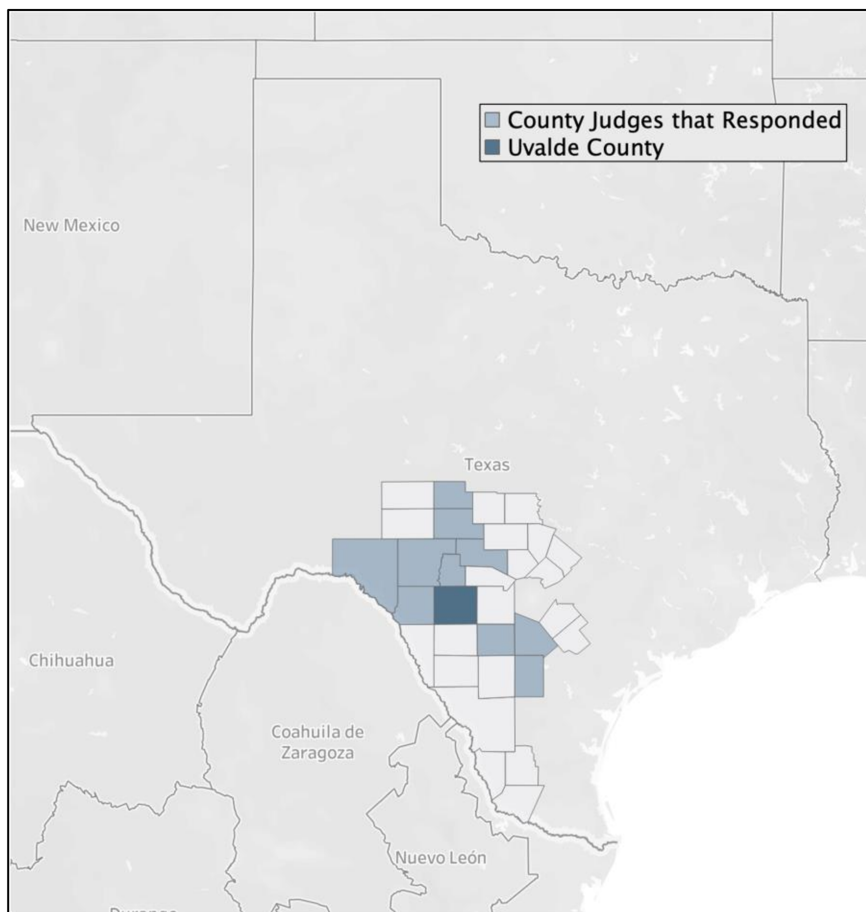
Appendix 9: County Judge Survey

To gain additional insight into Texas communities and identify potential areas of unmet need, a virtual survey was sent to county judges in Uvalde County and the other counties in the region.[372] The survey was active for just under a month with one follow-up email reminding and encouraging participation.[373]

Total Number of Responses

Uvalde and the 31 counties represent 4.5% of the total Texas population.[374] Of that 4.5%, the County Judges that responded to the survey represent 16% of that population and the County Judges that did not respond represent 84% of that population.

Map 3: Survey Respondents Counties (N=11)



[372] The counties included in the survey were: Atascosa, Bandera, Blanco, Comal, Dimmit, Edwards, Frio, Gillespie, Hays, Jim Hogg, Karnes, Kendall, Kerr, Kimble, Kinney, La Salle, Llano, Mason, Maverick, McMullen, Medina, Menard, Real, Schleicher, Starr, Sutton, Uvalde, Val Verde, Webb, Wilson, Zapata, Zavala

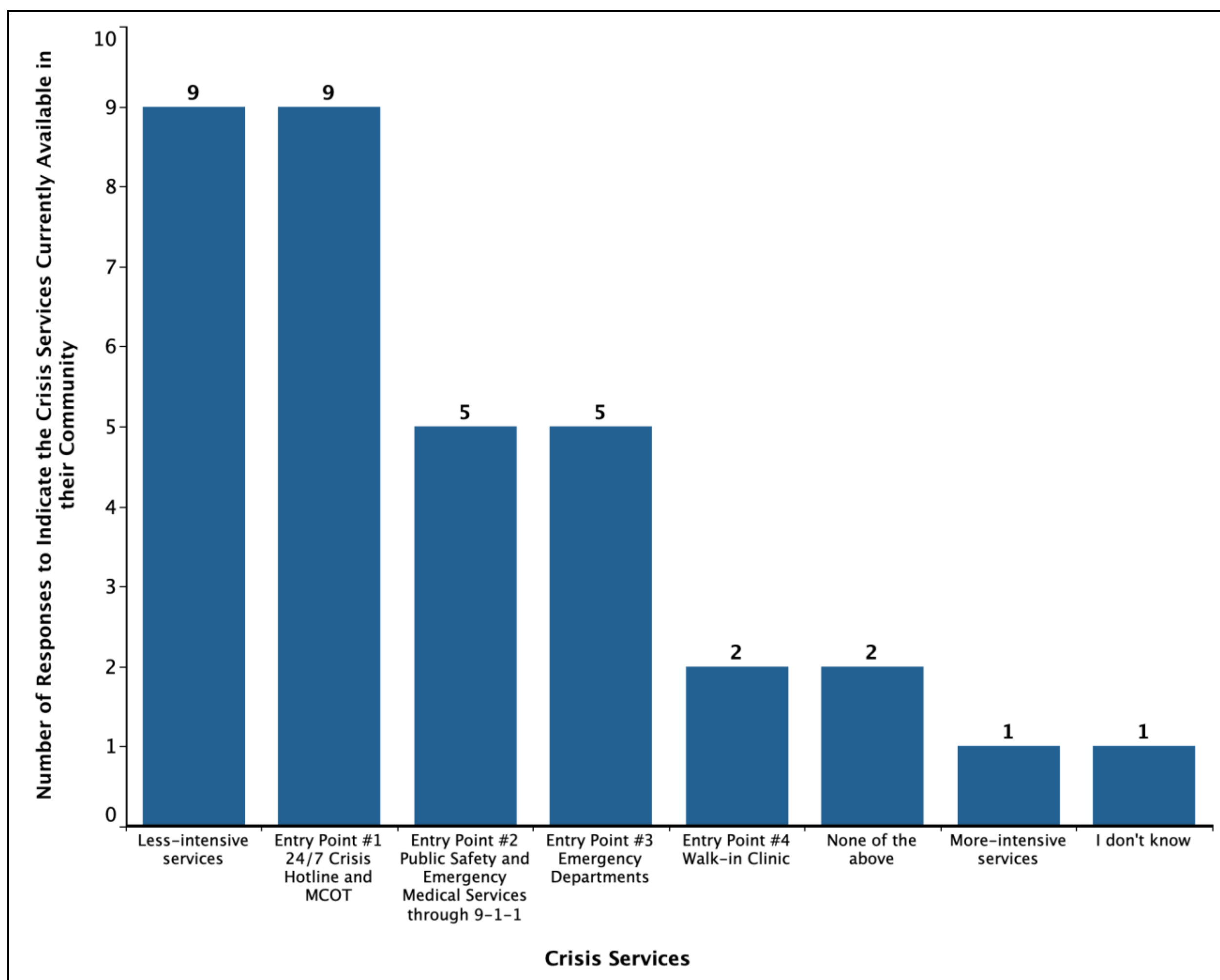
[373] The survey was run using the Survey Monkey platform and was open from September 16th, 2022, until October 17th, 2022. Follow up email was made on October 5th, 2022.

[374] Holzer, C., Nguyen, H., & Holzer, J. (2019). Texas county-level estimates of the prevalence of severe mental health need in 2019.Meadows Mental Health Policy Institute.

Mental Health Support Currently Available

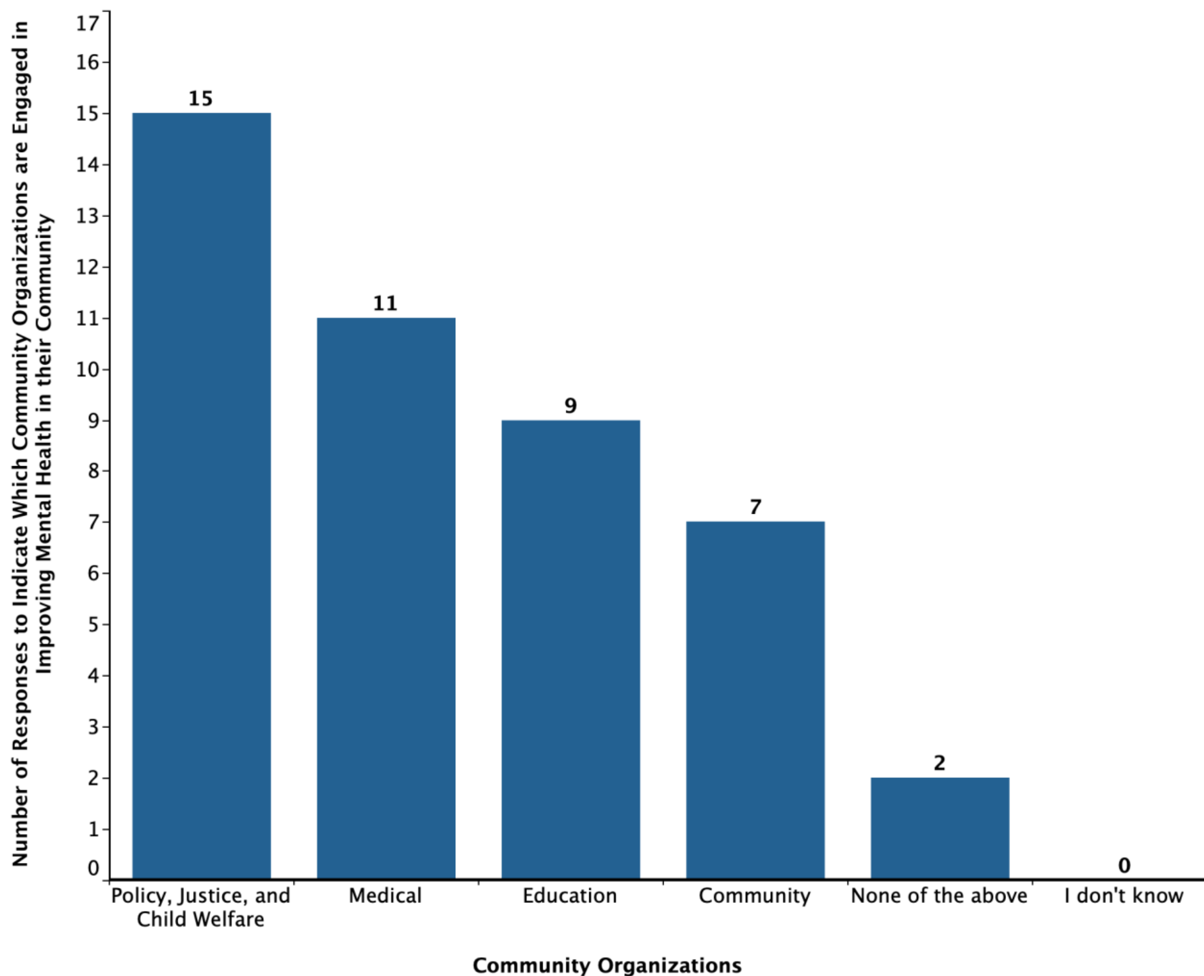
- Less-intensive services and Entry Point #1 24/7 Crisis Hotline and MCOT received the highest number of responses (9) when asked about the current crisis programs and / or services available in their county.
- Policy, justice, and child welfare received the highest number of responses (15) followed by medical (11) when asked about the community organizations engaged in Improving mental health within their community.

Figure 13: Crisis Services Currently Available in their Community (N=11)[375]



[375] County Judges Survey: Survey of County Judges in Uvalde and each of its 31 surrounding counties (September 16, 2022 – October 17, 2022). Of the 32 County Judges that received the survey, 11 completed in full. The results were aggregated then analyzed to get an understanding of the resources available and potential areas for improvement.

Figure 14: Community Organizations Most Engaged in Improving their Community's Mental Health (N=11) [376]

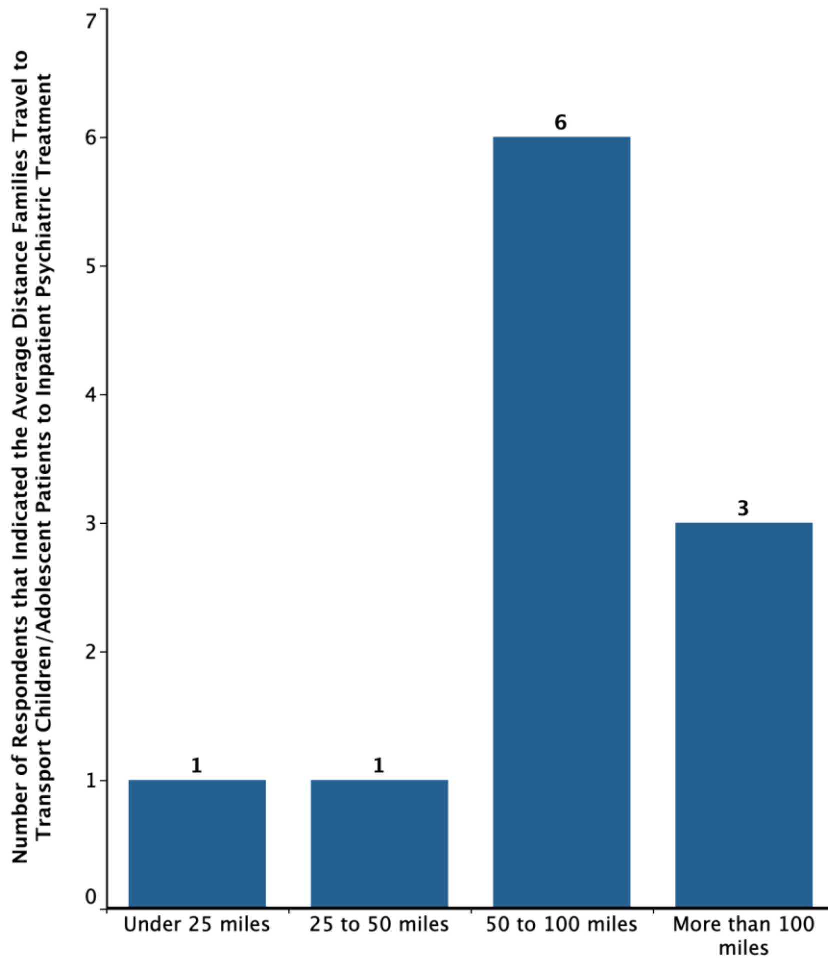


Theme 1: Inpatient psychiatric treatment is far from geographically challenging for community members to access.

Of the 11 respondents, nine indicated that families travel, on average, 50 miles or more to transport their child or adolescent to inpatient psychiatric treatment (82%) and seven indicated that law enforcement travel, on average, 100 miles or more for to transport adults to inpatient psychiatric treatment (64%).

[376] County Judges Survey: Survey of County Judges in Uvalde and each of its 31 surrounding counties (September 16, 2022 – October 17, 2022). Previously cited.

Figure 15: Average Distance Travelled by Families to Transport Children / Youth Patients to Inpatient Psychiatric Treatment[377]



[377] County Judges Survey: Survey of County Judges in Uvalde and each of its 31 surrounding counties (September 16, 2022 – October 17, 2022). Previously cited.

Figure 16: Average Distance Law Enforcement Traveled to Transport Adult Patients to Inpatient Psychiatric Treatment[378]

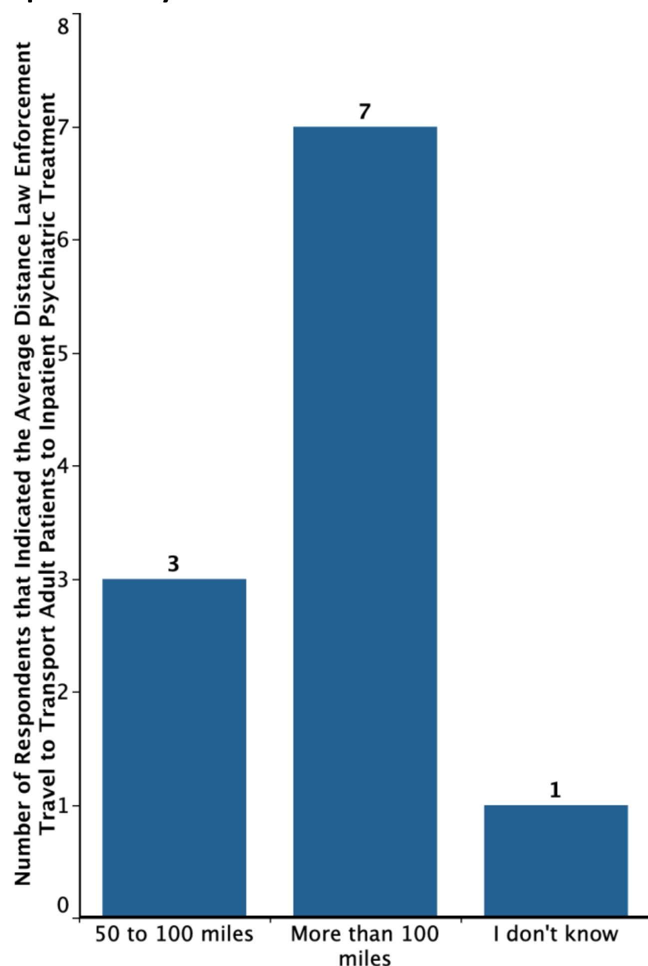


Table 27: Additional Comments Left by the Respondents[379]

Additional Comments
We are very rural and 70 miles away from the nearest hospital. We have no private psychiatric help at all.
Our needs are great. We have no hospital or Medical Doctor in XX County. It's a 3-hour drive for mental health assistance for our patients in a police cruiser. SAD!
County Strengths = Small, Rural area that has not as many issues as larger community. Weakness: smaller community means issues are magnified and take a majority of resources to handle.

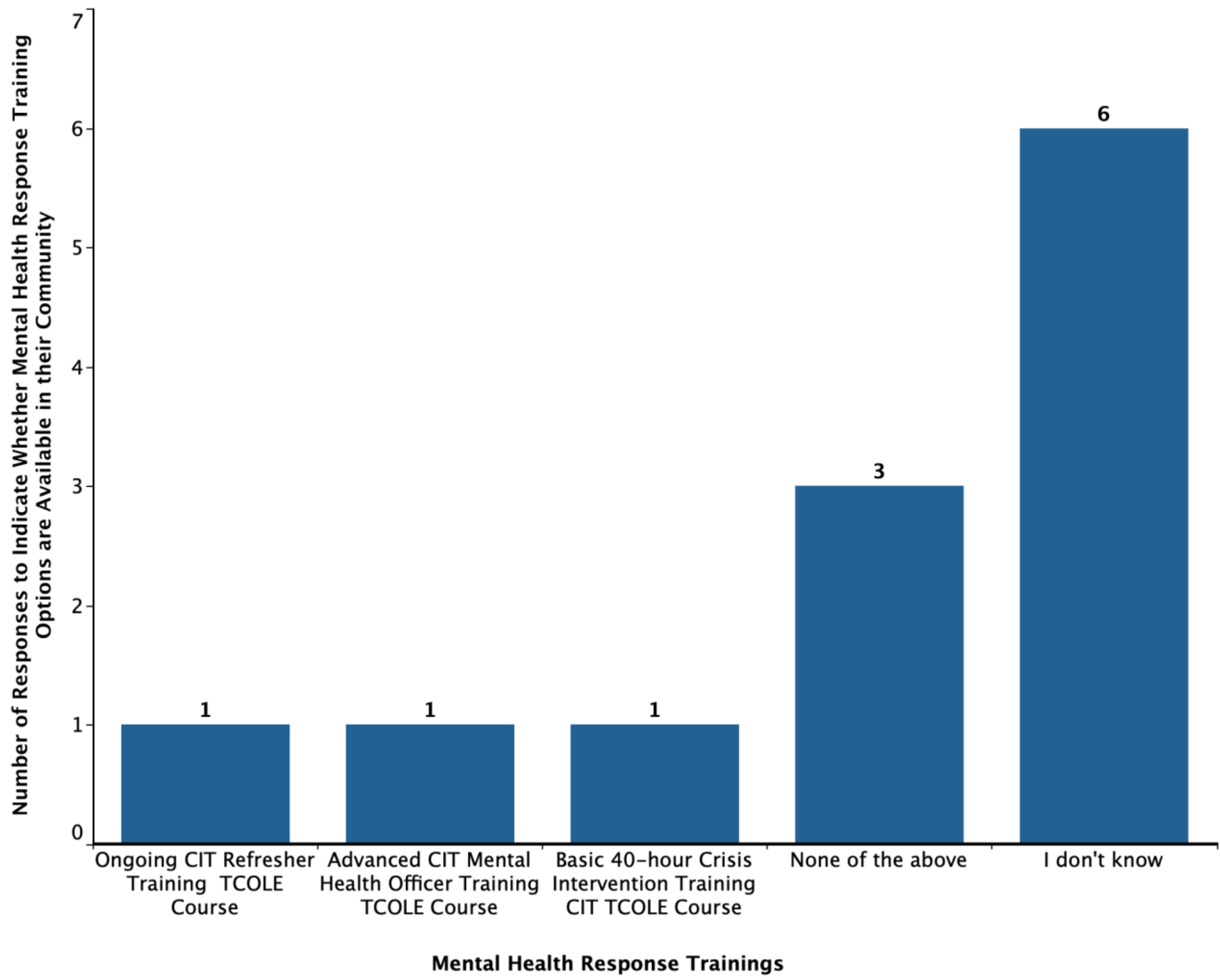
[378] County Judges Survey: Survey of County Judges in Uvalde and each of its 31 surrounding counties (September 16, 2022 – October 17, 2022). Previously cited.
[379] County Judges Survey: Survey of County Judges in Uvalde and each of its 31 surrounding counties (September 16, 2022 – October 17, 2022). Previously cited.

Additional Comments
Funding. We recently had to add a jail mental health teleservice that our regional MHMR had previously provided, and it was a challenge to fund. The lack of state beds available forces us to hold those unfit for trial in county jails, and the juvenile system breaking down also makes youth subjects in crisis a problem with no answer.
We need professional providers and appropriate staffing.

Theme 2: There is a lack of mental health response teams and training in the community.

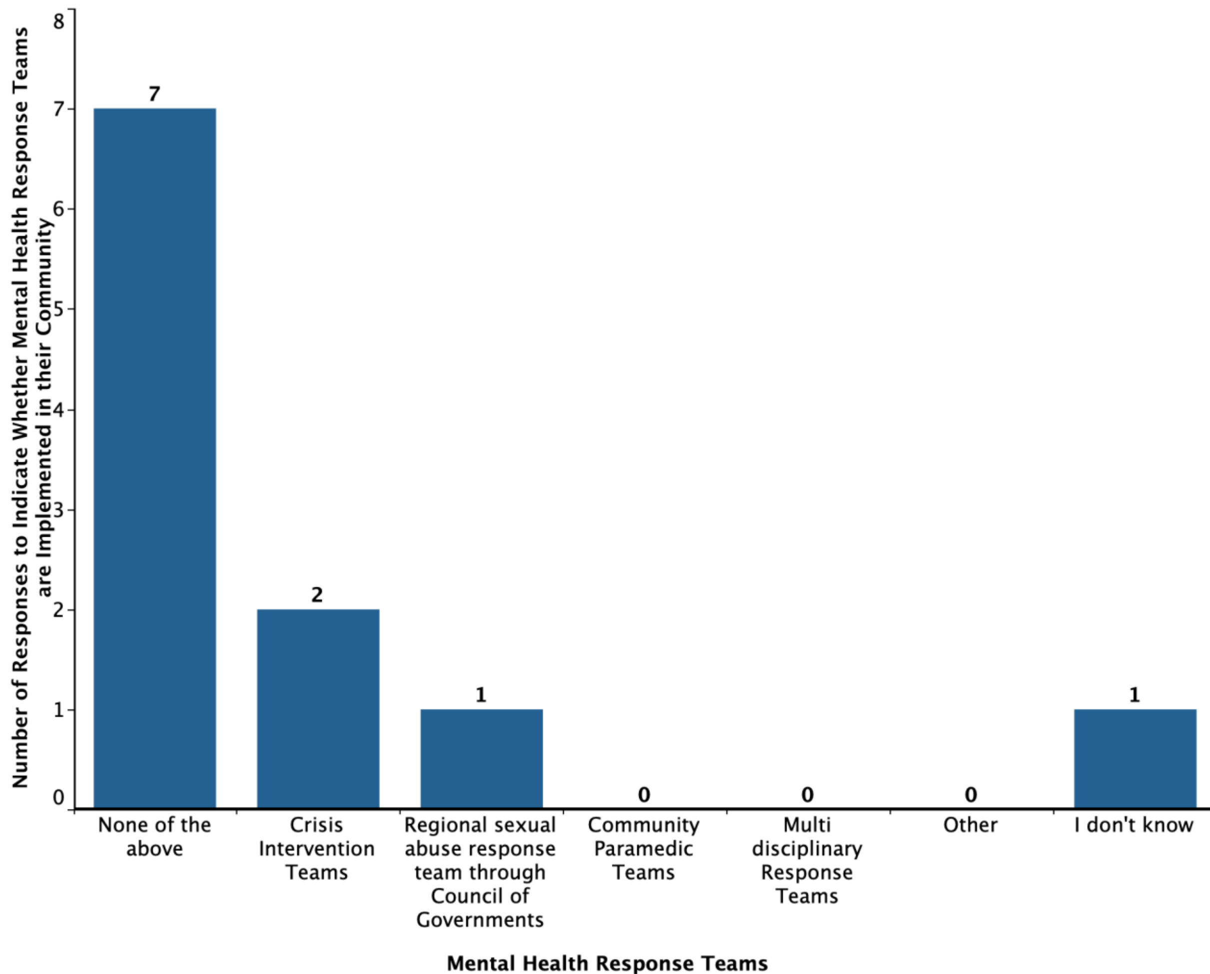
- The majority of responses (50%) indicated that respondents did not know if mental health training options are available in their community and another 25% indicated there were no mental health training options in their community.
- The majority of responses (64%) indicated that there were no mental health response teams in their community.

Figure 17: Number of Responses to Indicate Whether Mental Health Response Training Options are Available in their Community[380]



[380] County Judges Survey: Survey of County Judges in Uvalde and each of its 31 surrounding counties (September 16, 2022 – October 17, 2022). Previously cited.

Figure 18: Number of Responses to Indicate Whether Mental Health Response Teams are Implemented in their Community[381]

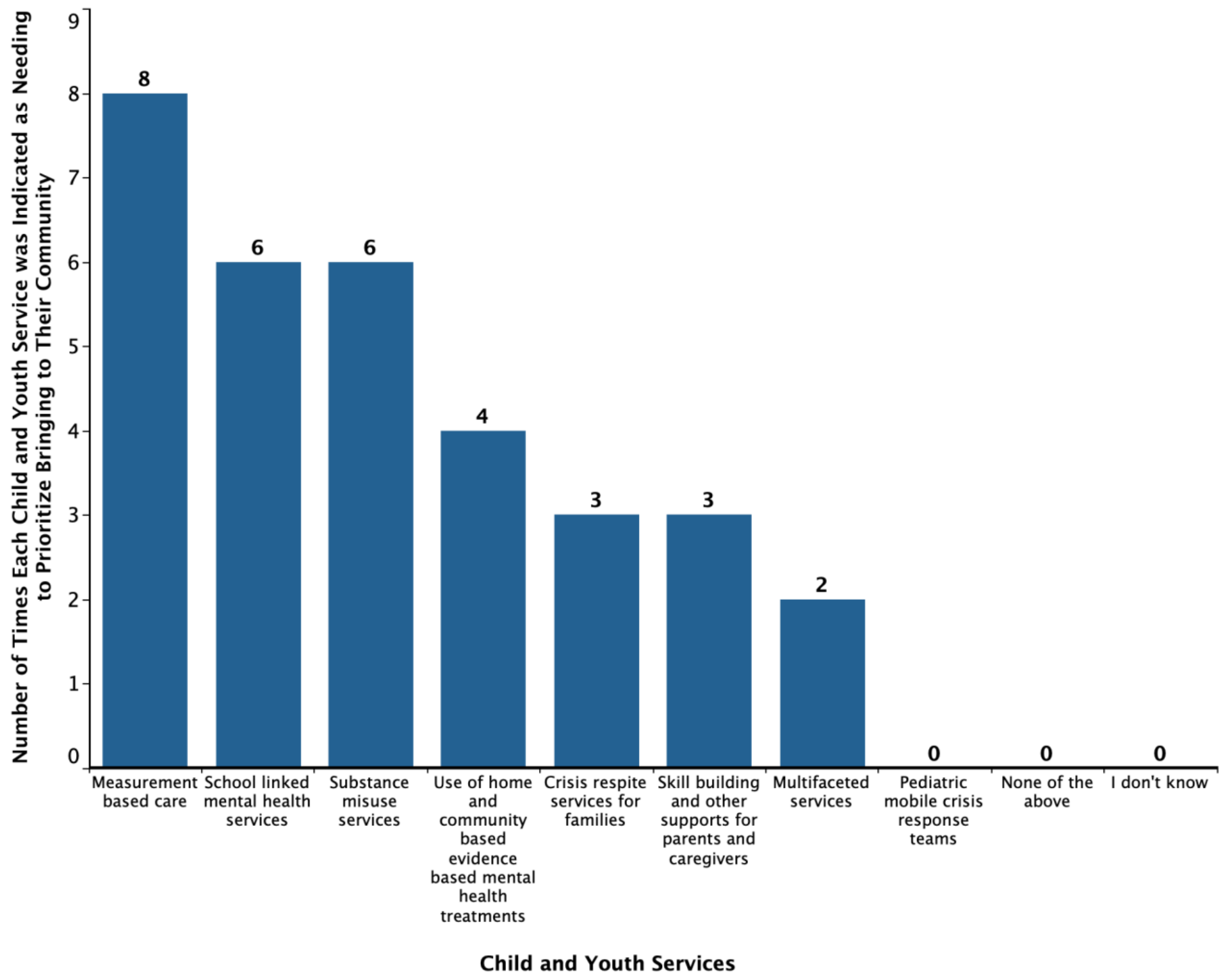


Theme 3: There are opportunities to expand and improve children and youth mental health services.

- All of the respondents indicated that they would prioritize at least one of the available children and youth services options. The child and youth service with the most responses (8) were measurement-based care followed by school linked mental health services (6) and substance misuse services (6).
- 82% of the respondents indicated that the development of new family- and community-based treatment options be easily adopted by the juvenile justice system to divert appropriate at-risk youth from juvenile detention centers.
- When asked what school services respondents would like to see made available in their local schools, trainings received the most responses (31) followed by campus district based mental health provider(s) (9).

[381] County Judges Survey: Survey of County Judges in Uvalde and each of its 31 surrounding counties (September 16, 2022 – October 17, 2022). Previously cited.

Figure 19: Number of Times Each Child and Youth Service was Indicated as Needing to Prioritize Bringing to Their Community[382]



[382] County Judges Survey: Survey of County Judges in Uvalde and each of its 31 surrounding counties (September 16, 2022 – October 17, 2022). Previously cited.

Figure 20: Number of Respondents that Indicated Whether the Development of New Treatment Options Would be Easily Adopted by the Juvenile Justice System[383]

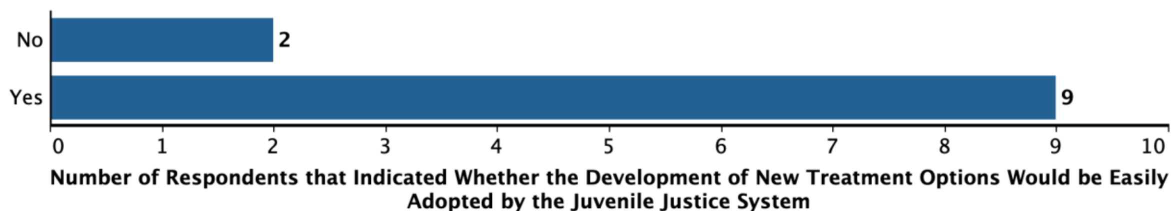
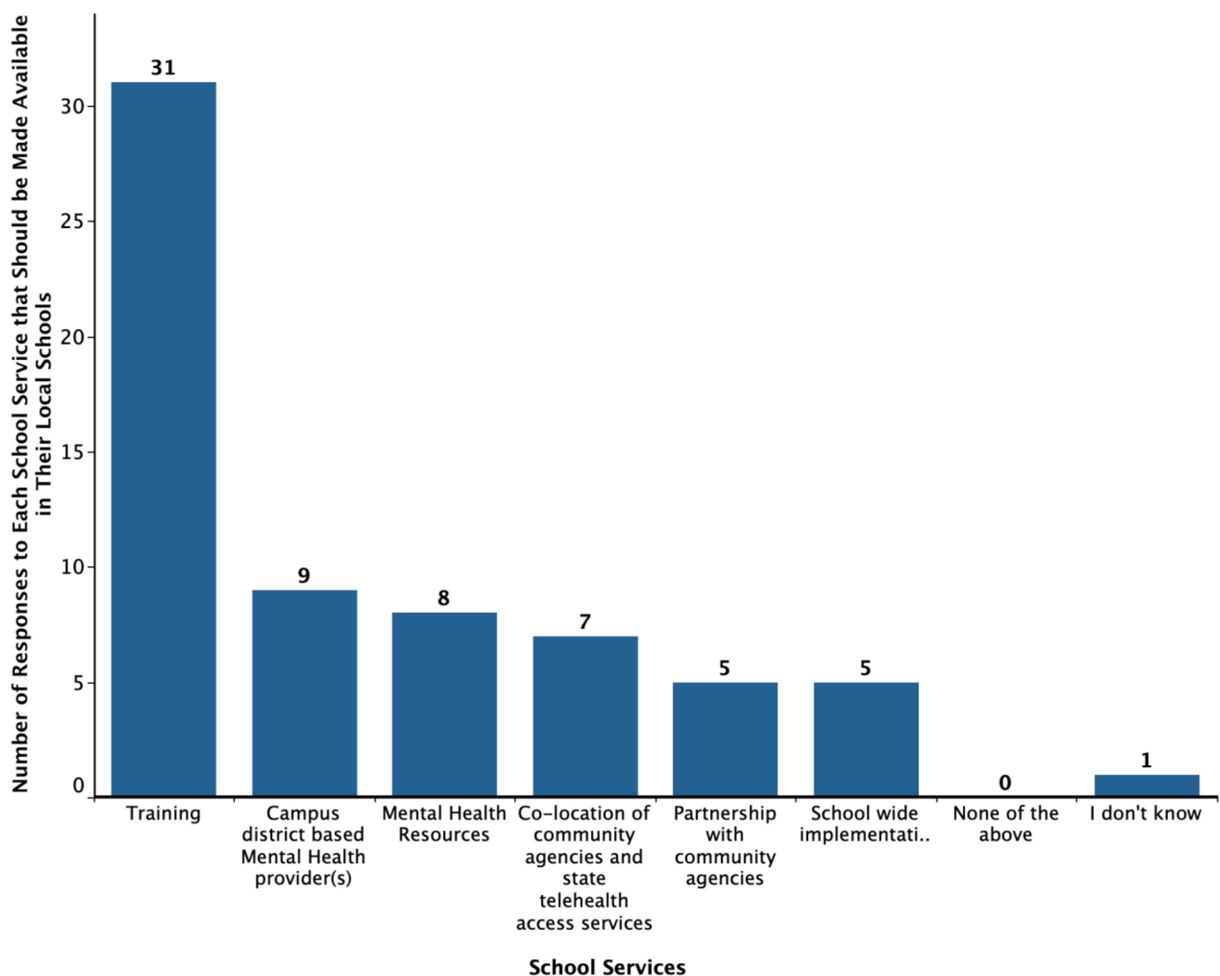


Figure 21: Number of Responses to Each School Service that Should be Made Available in Their Local Schools[384]



[383] County Judges Survey: Survey of County Judges in Uvalde and each of its 31 surrounding counties (September 16, 2022 – October 17, 2022). Previously cited.

[384] County Judges Survey: Survey of County Judges in Uvalde and each of its 31 surrounding counties (September 16, 2022 – October 17, 2022). Previously cited.

Appendix 10: Telehealth Primer

The COVID-19 public health emergency is contributing to an unprecedented demand for behavioral health services and, because of social distancing and stay-at-home orders, has necessitated a significant shift to the use of telehealth. Behavioral health providers have been compelled to offer online and telephonic services to avoid treatment disruption, maintain access to and capacity of services, and remain in business. This kind of rapid adaptation has been important to sustain service delivery during the pandemic. As more behavioral health providers and organizations add innovative telehealth approaches to their practices, there is a growing need to review, evaluate, and identify best practices so that when social distancing is no longer necessary, behavioral health providers, program administrators, and policymakers have a framework to guide future treatment options. These best practices and considerations will also be highly relevant for employers, regulators, and payers in considering how best to integrate these services into health benefit programs.

Even before the pandemic, the use of telehealth was expanding across the country, including Texas. Telehealth has been shown to reduce barriers to treatment by addressing historical challenges with transportation, stigma, and access to care.[385,386,387] The increased demand for telehealth in behavioral health treatment presents an opportunity for providers and regulators to maximize innovative practices around this mode of service delivery. For safe and effective delivery of telehealth services, organizations and providers should consider concerns over safety and confidentiality, the age of service recipients and developmental fit of services, digital literacy, technical issues such as poor internet connection or limited bandwidth, cross-state licensing and credentialing, start-up costs, and reimbursement.

Service providers, treatment programming decision-makers, and managed care organizations, among others, should be familiar with the strengths of telehealth and create strategies to navigate common challenges after the pandemic to ensure safe, efficient, and effective care. Importantly, there are opportunities to shape these innovative telehealth services and the standards of care to which they are upheld in order to support the behavioral health needs of the state's workforce and their families.[388]

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[385] Nelson, E., & Patton, S. (2016). Using videoconferencing to deliver individual therapy and pediatric psychology intervention with children. *Journal of Child and Adolescent Psychopharmacology, 26*(3), 212-220

[386] Richardson, L. K., Frueh, B. C., Grubaugh, A. L., Egede, L., & Elhai, J. D. (2009). Current directions in videoconferencing tele-mental health research. *Clinical Psychology: Science and Practice, 16*(3), 323–338.

[387] Egede, L. E., Acierno, R., Knapp, R. G., Walker, R. J., Payne, E. H., & Frueh, B. C. (2016). Psychotherapy for depression in older veterans via telemedicine: Effect on quality of life, satisfaction, treatment credibility, and service delivery perception. *The Journal of Clinical Psychiatry*, *77*(12), 1704–1711. https://doi.org/10.4088/JCP.16m10951

[388] National Alliance of Healthcare Purchaser Coalitions. (2020, May). *Preparing for the second wave: The path forward for mental health and substance use in the face of COVID-19.*

Toward that end, Methodist Healthcare Ministries commissioned the Meadows Institute to examine the landscape of telehealth, both nationally and locally, and its current evidence base. The *Tele-behavioral Health Primer: Current Knowledge and Best Practices*[389] summarizes the systemic benefits, challenges, and key considerations for successful telehealth implementation, in addition to the regulatory environment and opportunities for the innovative delivery of clinical care.

The goal of this telehealth primer is twofold:

1. It is intended to serve as a tool for clinical decision-makers, highlighting optimal standards of care when using telehealth in treatment and collaborating to create treatment goals and expectations for people receiving services.
2. It highlights policies and programs for policymakers and payers regarding what a high-impact tele-behavioral health system looks like by proposing a framework for an optimal tele-behavioral health system of care.

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https://higherlogicdownload.s3.amazonaws.com/NAHPC/3d988744-80e1-414b-8881-aa2c98621788/UploadedImages/FINAL__Preparing_for_the_Second_Wave_5_1_2020.pdf

[389] Meadows Mental Health Policy Institute. (n.d.). *Tele-behavioral Health Primer: Current Knowledge and Best Practices.* https://mmhpi.org/project/tele-behavioral-health-primer-current-knowledge-best-practices/

Appendix 11: Uvalde Region Workforce

Table 28: Behavioral Health Physicians in Uvalde Region (September 2022)[390]

County	All Behavioral Health Physicians[391]		Psychiatrists		Child and Youth Behavioral Health Physicians		Total Population (6+; 2020)	Child and Youth Population (6-17; 2020)
	Number	Residents Per Provider	Number	Residents Per Provider	Number	Child/Youth Residents Per Provider		
Total Uvalde Region	92	13,370	78	15,769	26	9,231	1,230,000	240,000
Atascosa	5	9,600	5	9,600	1	8,000	48,000	8,000
Bandera	0	---	0	---	0	---	24,000	4,000
Blanco	0	---	0	---	0	---	12,000	2,000
Comal	10	15,500	8	19,375	1	25,000	155,000	25,000
Dimmit	0	---	0	---	0	---	9,000	2,000
Edwards	0	---	0	---	0	---	1,400	400
Frio	3	6,000	3	6,000	1	3,000	18,000	3,000
Gillespie	3	8,000	2	12,000	0	---	24,000	4,000
Hays	23	9,565	21	10,476	5	8,000	220,000	40,000
Jim Hogg	0	---	0	---	0	---	5,000	1,000
Karnes	0	---	0	---	0	---	13,000	3,000
Kendall	8	5,875	7	6,714	5	1,400	47,000	7,000
Kerr	25	1,920	19	2,526	5	1,600	48,000	8,000
Kimble	0	---	0	---	0	---	3,700	700
Kinney	0	---	0	---	0	---	3,700	700
La Salle	0	---	0	---	0	---	6,000	1,000
Llano	0	---	0	---	0	---	18,000	3,000
Mason	0	---	0	---	0	---	3,700	700
Maverick	1	50,000	1	50,000	1	10,000	50,000	10,000
McMullen	0	---	0	---	0	---	600	100

[390] Registry data on all actively practicing physicians with practice addresses in the Uvalde region were abstracted from the Texas Medical Board Open Records Self-Service Portal: orssp.tmb.state.tx.us/ in September of 2022. Psychiatrists were classified as practicing in the Uvalde region if the provider included a practice address located in one of the 32 counties.
[391] Behavioral health physicians refer to physicians with psychiatry, addiction medicine, psychoanalysis, or developmental-behavioral health specialties.

County	All Behavioral Health Physicians[391]		Psychiatrists		Child and Youth Behavioral Health Physicians		Total Population (6+; 2020)	Child and Youth Population (6-17; 2020)
	Number	Residents Per Provider	Number	Residents Per Provider	Number	Child/Youth Residents Per Provider		
Medina	0	---	0	---	0	---	48,000	8,000
Menard	0	---	0	---	0	---	2,400	400
Real	0	---	0	---	0	---	2,600	600
Schleicher	0	---	0	---	0	---	2,500	500
Starr	0	---	0	---	0	---	60,000	15,000
Sutton	0	---	0	---	0	---	3,600	600
Uvalde	1	25,000	1	25,000	0	---	25,000	5,000
Val Verde	1	44,000	1	44,000	1	9,000	44,000	9,000
Webb	8	31,250	7	35,714	5	12,000	250,000	60,000
Wilson	3	16,333	2	24,500	1	9,000	49,000	9,000
Zapata	0	---	0	---	0	---	13,000	3,000
Zavala	0	---	0	---	0	---	10,000	2,000

Table 29: Behavioral Health Providers in Uvalde Region (November 2022)[392,393]

County	LMHA	Population (6+; 2020)	Licensed Psychologists		Licensed Marriage and Family Therapists / Licensed Clinical Social Workers / Licensed Professional Counselors		Licensed Specialists in School Psychology		Licensed Chemical Dependency Counselors	
			Number	Residents Per Provider	Number	Residents Per Provider	Number	Residents Per Provider	Number	Residents Per Provider
Total Uvalde Region		1,230,000	181	6,796	2,266	543	200	6,150	570	2,158
Atascosa	Camino Real Community Services	48,000	2	24,000	45	1,067	3	16,000	17	2,824
Bandera	Hill Country MHDD	24,000	2	12,000	34	706	2	12,000	14	1,714
Blanco	Hill Country MHDD	12,000	1	12,000	20	600	4	3,000	2	6,000
Comal	Hill Country MHDD	155,000	41	3,780	482	322	58	2,672	50	3,100
Dimmit	Camino Real Community Services	9,000	0	---	7	1,286	0	---	0	---
Edwards	Hill Country MHDD	1,400	0	---	0	---	0	---	2	700
Frio	Camino Real Community Services	18,000	0	---	8	2,250	1	18,000	3	6,000
Gillespie	Hill Country MHDD	24,000	2	12,000	33	727	5	4,800	13	1,846
Hays	Hill Country MHDD	220,000	71	3,099	730	301	63	3,492	90	2,444
Jim Hogg	Border Region Behavioral Health	5,000	0	---	1	5,000	0	---	0	---

[392] All data represents the status as of November 2022. Mailing lists for all registered Texas licensed behavioral health providers were obtained from the Texas Health and Human Services Commission. The listed counties represent the provider's mailing address and may differ from the practice location.
[393] Associates and interns are included in the counts for each provider type.

County	LMHA	Population (6+; 2020)	Licensed Psychologists		Licensed Marriage and Family Therapists / Licensed Clinical Social Workers / Licensed Professional Counselors		Licensed Specialists in School Psychology		Licensed Chemical Dependency Counselors	
			Number	Residents Per Provider	Number	Residents Per Provider	Number	Residents Per Provider	Number	Residents Per Provider
Karnes	Camino Real Community Services	13,000	0	---	15	867	3	4,333	5	2,600
Kendall	Hill Country MHDD	47,000	15	3,133	149	315	9	5,222	31	1,516
Kerr	Hill Country MHDD	48,000	19	2,526	125	384	7	6,857	58	828
Kimble	Hill Country MHDD	3,700	0	---	5	740	0	---	0	---
Kinney	Hill Country MHDD	3,700	0	---	1	3,700	0	---	0	---
La Salle	Camino Real Community Services	6,000	1	6,000	1	6,000	0	---	2	3,000
Llano	Hill Country MHDD	18,000	2	9,000	17	1,059	1	18,000	6	3,000
Mason	Hill Country MHDD	3,700	0	---	4	925	1	3,700	1	3,700
Maverick	Camino Real Community Services	50,000	1	50,000	24	2,083	2	25,000	9	5,556
McMullen	Camino Real Community Services	600	0	---	0	---	0	---	0	---
Medina	Hill Country MHDD	48,000	4	12,000	76	632	7	6,857	29	1,655
Menard	Hill Country MHDD	2,400	1	2,400	1	2,400	0	---	0	---
Real	Hill Country MHDD	2,600	0	---	5	520	0	---	0	---
Schleicher	Hill Country MHDD	2,500	0	---	3	833	0	---	0	---
Starr	Border Region Behavioral Health	60,000	1	60,000	42	1,429	8	7,500	11	5,455
Sutton	Hill Country MHDD	3,600	0	---	1	3,600	1	3,600	0	---

County	LMHA	Population (6+; 2020)	Licensed Psychologists		Licensed Marriage and Family Therapists / Licensed Clinical Social Workers / Licensed Professional Counselors		Licensed Specialists in School Psychology		Licensed Chemical Dependency Counselors	
			Number	Residents Per Provider	Number	Residents Per Provider	Number	Residents Per Provider	Number	Residents Per Provider
Uvalde	Hill Country MHDD	25,000	2	12,500	33	758	5	5,000	7	3,571
Val Verde	Hill Country MHDD	44,000	0	---	32	1,375	1	44,000	4	11,000
Webb	Border Region Behavioral Health	250,000	13	19,231	276	906	13	19,231	195	1,282
Wilson	Camino Real Community Services	49,000	3	16,333	88	557	6	8,167	12	4,083
Zapata	Border Region Behavioral Health	13,000	0	---	1	13,000	0	---	4	3,250
Zavala	Camino Real Community Services	10,000	0	---	7	1,429	0	---	5	2,000

Appendix 12: Lists of Acronyms, Tables, and Figures

Acronyms

Acronym	Meaning / Definition
ACE	Adverse Childhood Event
ACS	American Community Survey
ACT	Assertive Community Treatment
AMI	Any Mental Illness
ARPA	American Rescue Plan Act
AS+K	Ask About Suicide to Save a Life
BHC	Behavioral Health Consultants
BHWET	Behavioral Health Workforce Education and Training
CBC	Community Based Care
CBT	Cognitive Behavioral Therapy
TF-CBT	Trauma focused Cognitive Behavioral Therapy
CCBHC	Certified Community Behavioral Health Clinic
CDC	Centers for Disease Control and Prevention
CHDI	Community Health Development, Inc.
CHW	Community Health Worker
CISD	Consolidated Independent School District
CNA	Community Needs Assessment
CoCM	Collaborative Care Model
COPSD	Co-Occurring Psychiatric and Substance Use Disorders
CPAN	Child Psychiatry Access Network
CPES	Collaborative Psychiatric Epidemiology Surveys
CSC	Coordinated Specialty Care
DMS	Dell Medical School
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition
ED	Emergency Department
ECA	Epidemiologic Catchment Area
EMS	Emergency Medical Services
EOU	Extended Observation Unit
ESC	Education Service Center
FACT	Forensic Assertive Community Treatment
FEP	First Episode Psychosis

Acronym	Meaning / Definition
FTE	Full-Time Equivalent
FQHC	Federally Qualified Health Center
HIE	Health Information Exchange
HHS	Texas Health and Human Services
HHSC	Texas Health and Human Services Commission
Hill Country MMDD	Hill Country Mental Health and Developmental Disabilities Centers
HRI	Health-related institution
HRSA	Health Resources and Services Administration
ISD	Independent School District
LC	Learning Collaborative
LEA	Local Education Agency
LEO	Law Enforcement Officer
LMFT	Licensed Marriage and Family Therapist
LMHA	Local Mental Health Authority
LMSW	Licensed Master Social Worker
LOS	Length Of Stay
LPC	Licensed Professional Counselor
LSDC	Lone Star Depression Challenge
MBC	Measurement-based Care
MCOT	Mobile Crisis Outreach Team
MDRT	Multidisciplinary Response Team
MGT	Multidimensional Grief Theory
MHDPS	Mental Health Demographic Profile System
MHM	Methodist Healthcare Ministries
MHPSA	Mental Health Professional Shortage Areas
Meadows Institute	Meadows Mental Health Policy Institute
MST	Multisystemic Therapy
MTSS	Multi-Tiered System of Supports
MVPN	Military Veteran Peer Network
NCS	National Comorbidity Survey
NCSR	National Comorbidity Survey Replication
NCSR-A	National Comorbidity Survey Replication-Adolescent Supplement
PCBH	Primary Care Behavioral Health

Acronym	Meaning / Definition
PE	Prolonged Exposure
PFA	Psychological First Aid
PPB	Purchased Psychiatric Beds
PTSD	Post-Traumatic Stress Disorder
QMHP	Qualified Mental Health Provider
RNR	Risk-Need-Responsivity
SAMHSA	The Substance Abuse and Mental Health Services Administration
S.B.	Senate Bill
SED	Serious Emotional Disturbance
SMI	Serious Mental Illness
SPR	Skills for Psychological Recovery
SUD	Substance Use Disorder
SWTJC	Southwest Texas Junior College
TAG	The Trauma and Grief Center at the Meadows Mental Health Policy Institute
TCHATT	Texas Child Health Access Through Telemedicine
TCMHCC	Texas Child Mental Health Care Consortium
TCOLE	Texas Commission on Law Enforcement
TEA	Texas Education Agency
TGCT	Trauma and Grief Component Therapy
TLEPN	Texas Law Enforcement Peer Network
tMHFA	Teen Mental Health First Aid
TTUHSC El Paso	Texas Tech University Health Science Center at El Paso
UTHSCSA	The University of Texas Health Science Center at San Antonio
UTRC	Uvalde Together Resiliency Center
UTRGV	The University of Texas Rio Grande Valley
VA	U.S. Department of Veterans Affairs
YES Waiver	The Youth Empowerment Services Waiver
YMHFA	Youth Mental Health First Aid

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