

Regional and Rural Approaches to Youth Suicide Prevention: Integration Across Care Systems

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Financial Disclosures

- Dr. Gogol-Tagliaferro consults with the Right Care Right Now Project.
- Dr. Weyand on the Provider Advisory Council for Aetna/OhioRise



Objectives

Explain at least three unique barriers to pediatric behavioral health access in rural communities and describe how behavioral health integration models can improve access to timely mental health care for children and adolescents.

Summarize at least two evidence-based ways behavioral health integration supports youth suicide prevention, including early identification of behavioral health concerns, routine screening for depression and suicide risk, and coordinated care pathways that improve engagement in treatment for children and adolescents.

Identify at least three practical strategies for implementing pediatric behavioral health integration in rural healthcare settings that increase access to behavioral health services, strengthen care coordination, and support suicide prevention efforts among youth and their families.



Outlining the Issue at Hand

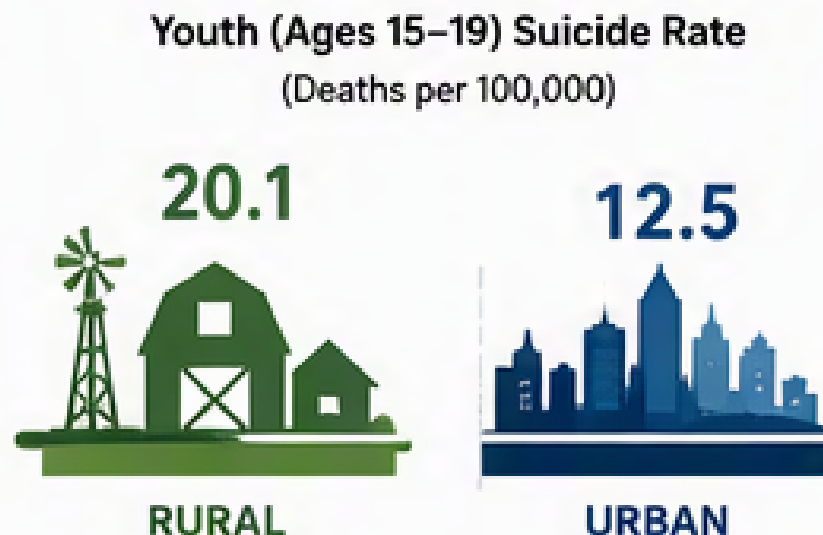
- Since 2007, suicide deaths among young people have climbed steadily, reaching their highest point in 2017¹.
- Across those years (2007–2017), suicide mortality among youth 10 to 19 rose 85.3% (from 3.87 to 7.17 per 100000) — a proportional jump unmatched by any adult age group.
- Although rates eased following 2017, they were still high as of 2023, when suicide stood as the third leading cause of death among youth aged 1-19².



THE BURDEN OF SUICIDE IN RURAL YOUTH

Suicide is a leading cause of death for youth.

Rural youth have higher suicide rates than urban youth.



The rural–urban suicide rate gap has widened over time.

Rural Differences

- Patterns of suicide mortality across rural communities³:
 - Rural youth face rates double those of their peers
 - Growth in suicide deaths outpaces what urban areas report
 - Firearms as lethal means used more often



Access Disparities in Rural Areas

- Limited rural access to behavioral health services^{4,5}
- Associated with poorer health outcomes
- ~½ of children with mental health needs receive no dedicated specialist care
 - Shortage of mental health professionals, greater outside cities
 - Fewer still specialize in pediatric care



APPALACHIAN-SPECIFIC CONSIDERATIONS



Appalachia experiences significant behavioral health disparities.



High rates of depression and suicide, particularly in rural and economically distressed counties.



Limited healthcare access and behavioral health workforce shortages.



In Ohio, 14 of the 15 counties with the highest suicide rates are rural and/or Appalachian.

Source: Ohio Department of Health, 2023

Mental Health Care in Rural Areas

- Burden often falls on pediatricians and advanced practice providers, family medicine practitioners, as well as in the ER.^{6,7}
- Concerns about training and capacity to treat.



Mental Health Emergencies for Rural Youth

- Access to consultants can be limited.
- Shortages of inpatient psychiatric beds lead to longer ER stays.⁸
- Inadequate treatment – sent home for outpatient care.
- Many lost to follow-up.⁹

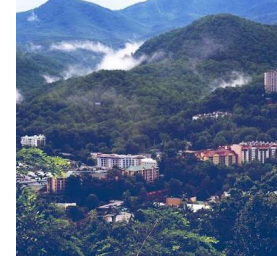


Rural Appalachia

- Rural Appalachia is part of a 13-state region that stretches from southern New York to northern Mississippi and includes all of West Virginia. [\[arc.gov\]](#)
- The region is characterized by mountainous terrain and geographic isolation, which can make transportation and access to medical services more difficult. [\[britannica.com\]](#)
- Many rural Appalachian communities face economic challenges, including lower household incomes, higher poverty rates, and lower labor force participation compared with other rural areas in the United States. [\[arc.gov\]](#)
- Strong family ties, close-knit communities, local traditions, music, storytelling, and a deep sense of place are important aspects of Appalachian culture. [\[arc.gov\]](#), [\[britannica.com\]](#)



Rural Appalachia in Ohio



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RISK FACTORS FOR RURAL & APPALACHIAN YOUTH

STRUCTURAL FACTORS



- Mental health workforce shortages
- Long travel distances to care
- Transportation barriers
- Lack of insurance/underinsurance
- Limited crisis resources

SOCIAL & CULTURAL FACTORS



- Mental health stigma
- Concerns about privacy in small communities
- Reduced help-seeking
- Geographic and social isolation

CLINICAL & FAMILY RISK FACTORS

- Depression
- Previous suicide attempts
- Substance use
- Adverse childhood experiences
- Bullying
- Family conflict
- Family history of suicide



Firearm access is higher in rural areas and increases risk of suicide death. Lethal means counseling is critical.



Cite



Permissions



Metrics



Comments

Firearm Storage and Firearm Suicide

Matthew Miller, MD, MPH, ScD¹; Joeseeph Wertz, MD²; Sonja A. Swanson, ScD³; [et al](#)

» [Author Affiliations](#) | [Article Information](#)

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doi:10.1001/jamanetworkopen.2025.19266



RELATED ARTICLES



FIGURES



SUPPLEMENTAL CONTENT

- Among the 725 individuals who died by suicide (mean [SD] age, 47.1 [19.7] years; 554 males [85.0%]), 606 (83.6%) decedents died by firearm suicide and 119 (16.4%) died by non-firearm suicide
- Adolescents who died by firearm suicide were far more likely to have lived in a household with unlocked firearms than were adolescent decedents who died by non-firearm suicide methods.



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- Suicide Prevention Resource Center Recommendations
 - Raise the issue in a non-judgemental way, focusing on safety
 - Develop a plan: Discuss safe storage options (gun safe, storing away from home)



Response to youth mental health crisis; rural focus¹¹

- **Primary preventive interventions:**
 - Strengthening youth connections with family/friends
 - Discouragement of substance abuse initiation, regulating social media
 - Addressing root causes
- **Secondary interventions:**
 - Early detection through screening, suicide prevention discussion, therapy if appropriate
- **Tertiary:**
 - Focus on harm reduction. (Narcan, lockboxes, cable triggers for firearms = harm reduction).



EVIDENCE-BASED PREVENTION STRATEGIES



1. Universal Suicide Screening

Identify at-risk youth early using validated tools.



2. School-Based Programs

Gatekeeper training, awareness, skills-based programs, and crisis response protocols.



3. Safety Planning & Follow-Up Care

Collaborative safety planning, family involvement, and continuity of care.



4. Family-Centered Approaches

Engage caregivers and strengthen family connections & monitoring.



5. Telehealth & Integrated Care

Expand access through telehealth and integrated behavioral health in primary care.

SCHOOL-BASED PREVENTION: A CRITICAL ACCESS POINT

In many rural communities, schools are often the primary system supporting youth mental health.

Effective School-Based Approaches

- ✓ Gatekeeper training for staff and students
- ✓ Suicide awareness and destigmatization
- ✓ Skills-based social-emotional learning
- ✓ School-based mental health services
- ✓ Clear crisis response and referral pathways



RECOMMENDATIONS FOR PEDIATRIC PRACTICE



Routine suicide screening for adolescents.



Universal depression screening and early identification of mood disorders.



Safety planning for any youth with suicidal ideation.



Lethal means counseling, especially regarding firearms.



Partner with schools to improve identification and referral pathways.



Utilize telehealth to expand specialty access.



Implement family-based interventions to strengthen caregiver support.



Develop community coalitions (including schools, healthcare, faith, and youth organizations).

Advisory on Youth Mental Health Crisis

- 2021, US Surgeon General issued a national emergency declaration for youth mental health
- Jointly declared by the American Academy of Pediatrics, American Academy of Child & Adolescent Psychiatry, and Children's Hospital Association¹⁰



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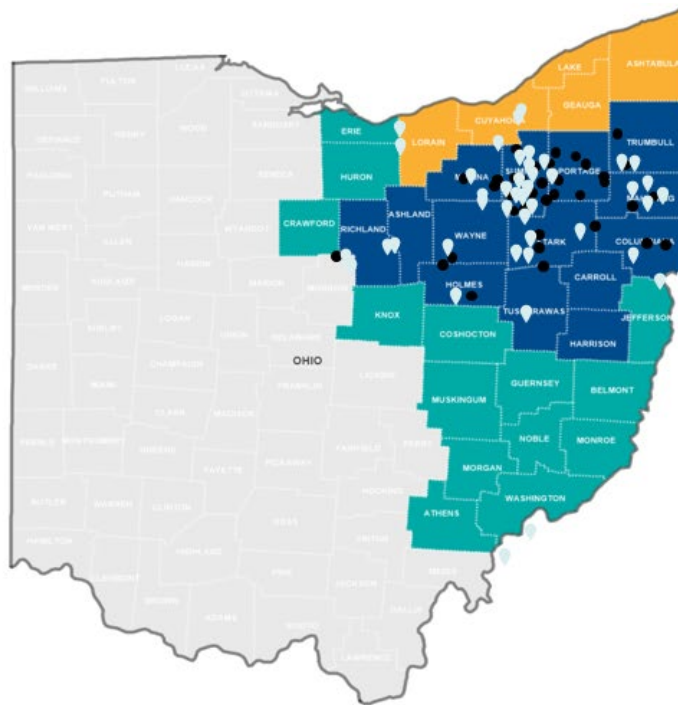
Employed primary care group launched in 1995 and now has **46 sites in 15 counties.**

Nearly **280 primary care pediatricians** and advanced practice providers.

Approximately **240,000 unique patients.**

Nearly **716,000 patient visits annually.**

School nursing in 44 districts, school-based health care/telehealth in 14 districts.



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Primary Care Interventions

Screening for mental health concerns at adolescent well visits.

Electronic medical record enhancements: clinical decision support through Smart Sets and Our Practice Advisories (OPAs).

Epic e-consults – ability to asynchronously connect with psychiatry regarding patient management.



Collaborative Care Regional Psychiatry Model

- A designated psychiatrist per region.
- Monthly office hours plus secure messaging for cases.
- Ongoing education for primary care.



Co-Location model

- Co-located model
- Reliance on out-of-network
- Lost to follow-up



Integrated BH Care in Pediatric Practices (Close to Home)

- Building cohesive behavioral-medical teams at each practice
- Education on value-based population health care
- Efficient care coordination
- Standardize the integration process across pediatric practices



TABBICAT® Implementation Model

Triage

Assessment

Brief **B**ehavioral
Intervention

CAre Coordination

Tracking



Critical Components of
TABBICAT® development:

- Collaboration between Behavioral Health and Primary Care leadership
- Quickly scalable and adaptable
- Care Coordination to address disparities
- Standardized model that can be tailored to meet the needs of each community



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Integration as an Evidenced- Based Solution

In an integrated model patients were:

- 12 times more likely to engage in treatment
- 10 times more likely to receive minimum dose of therapy
- 19 times more likely to complete treatment

REVIEW ARTICLES | JULY 15 2025

Integrated Primary Care and Mental Health Service Utilization: A Meta-Analysis

Cody A. Hostutler, PhD ; Jeffrey D. Shahidullah, PhD; Tiffany M. Rybak, PhD; Kevin G. Stephenson, PhD; Kurt A. Freeman, PhD; Leah LaLonde, PhD; Sarah Danzo, PhD; Elizabeth T. Koval, PhD; Helen Hughes, HS; Andrew R. Riley, PhD

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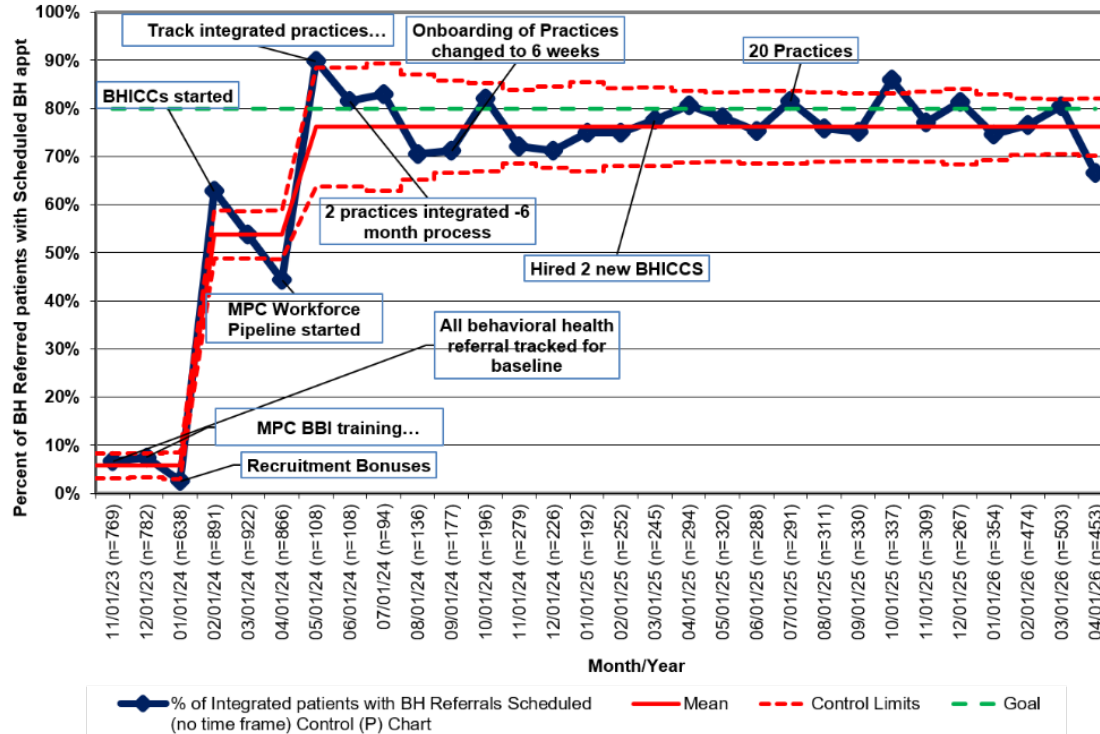
Pediatrics (2025) 156 (2): e2025071275.

<https://doi.org/10.1542/peds.2025-071275> [Article history](#) 

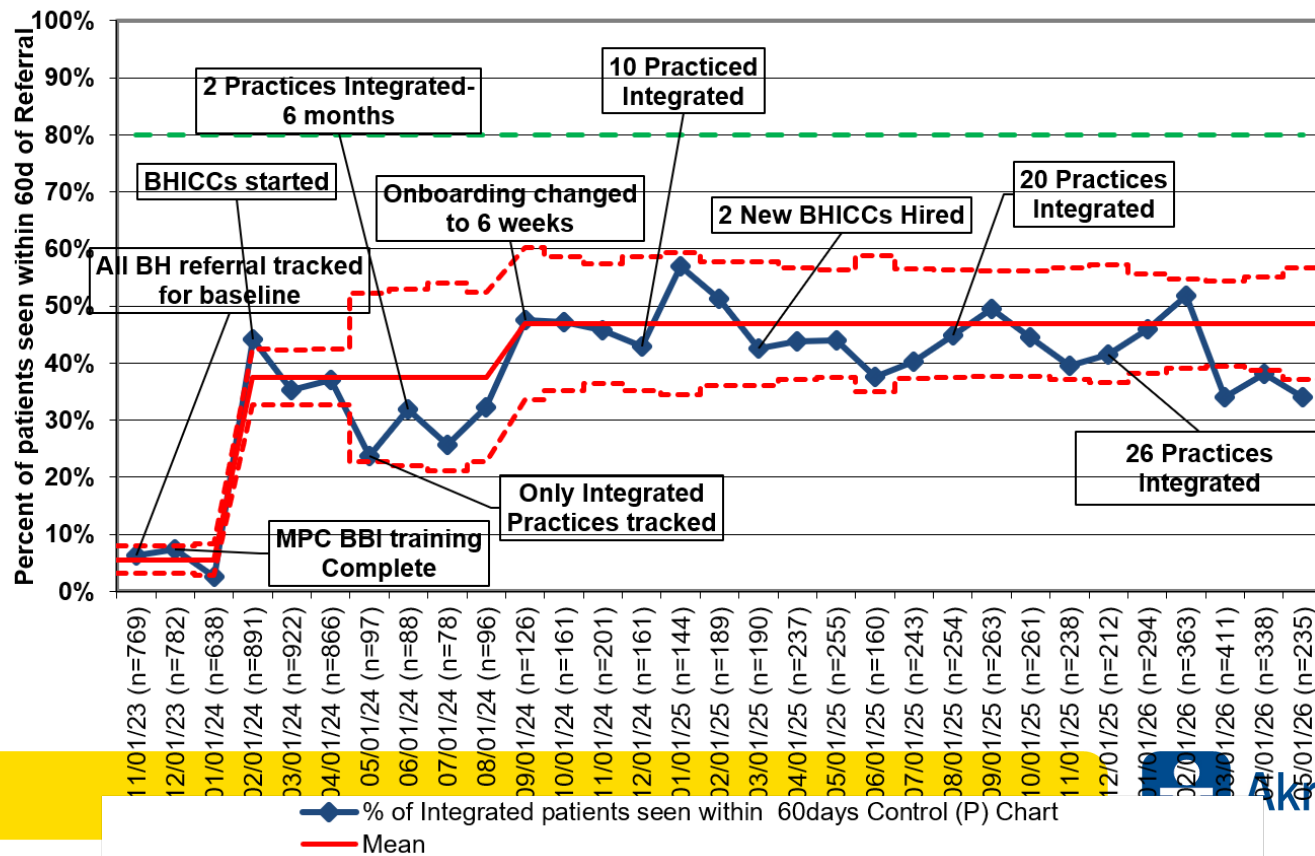


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% of Integrated patients with BH Referrals Scheduled (no time frame) Control (P) Chart



% of Integrated patients seen within 60days Control (P) Chart



Improving BH Care in Rural Appalachia: Sprint QI project 1.26-3.26 (Lee, Szigethy, Gogol-Tagliaferro, & Weyand, 2026)

- In 2 rural Appalachian Practices:
 - No concerns for Access (all patients able to get in within 60 days)
 - MHT had difficulty filling schedule (baseline of 34% of available clinical time filled)
- Goal: to increase number of referrals that were scheduled and to fill provider schedule



PDSA 1: MHT
trained to
schedule own
appointments

- Metric 1: Number of Appointments Scheduled after Referral:
 - Starting Mean: 83.33%
 - Most Recent Mean: 76.85%
- Metric 2: Percentage of Patients Scheduled during MHT Availability:
 - Starting Mean: 34.30%
 - Most Recent Mean: 41.35%

PDSA 2: Warm
handout education
document for
PCPs

- Metric 1: Number of Appointments Scheduled after Referral:
 - Starting Mean: 83.33%
 - Most Recent Mean: 76.85%
- Metric 2: Percentage of Patients Scheduled during MHT Availability:
 - Starting Mean: 34.30%
 - Most Recent Mean: 41.35%

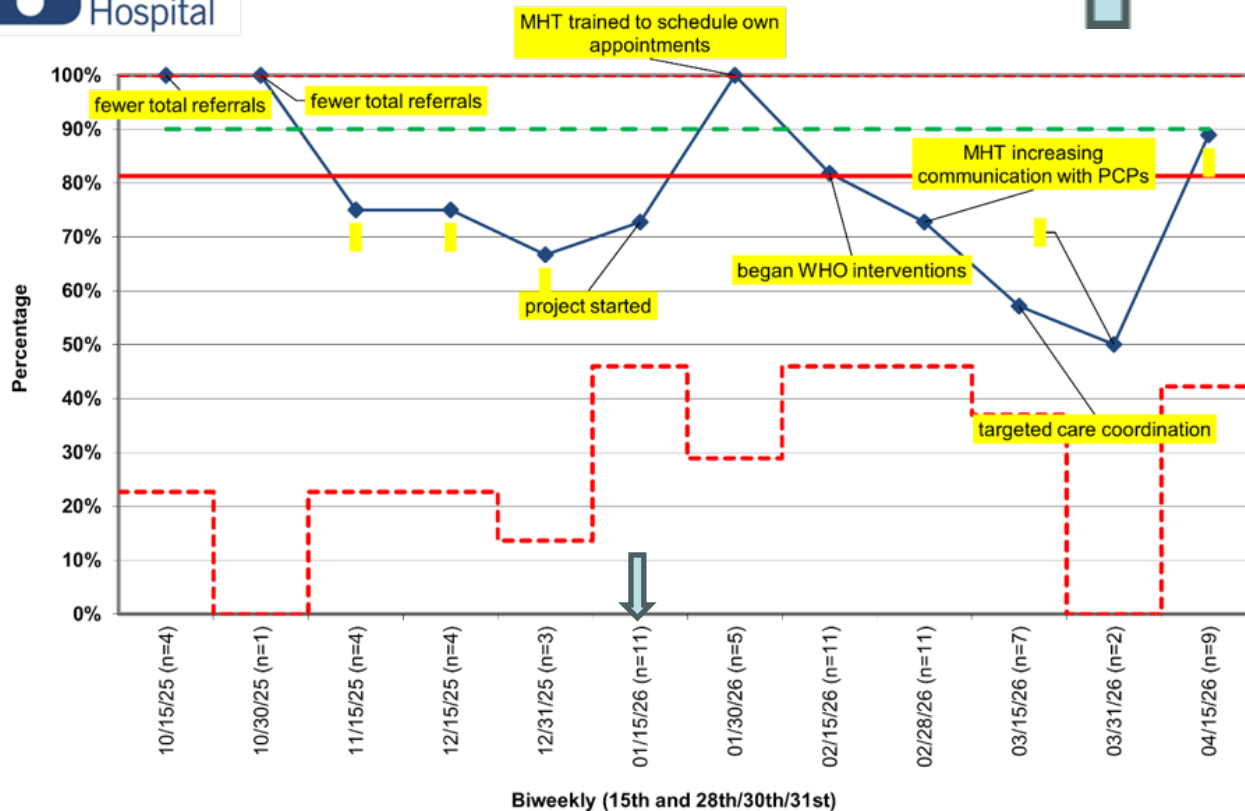
PDSA 3: Targeted
Care
Coordination

- Metric 1: Number of Appointments Scheduled after Referral:
 - Starting Mean: 83.33%
 - Most Recent Mean: 76.85%
- Metric 2: Percentage of Patients Scheduled during MHT Availability:
 - Starting Mean: 34.30%
 - Most Recent Mean: 41.35%



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% of Patients Scheduled after Referral



—●— % of Patients Scheduled after Referral

— Mean

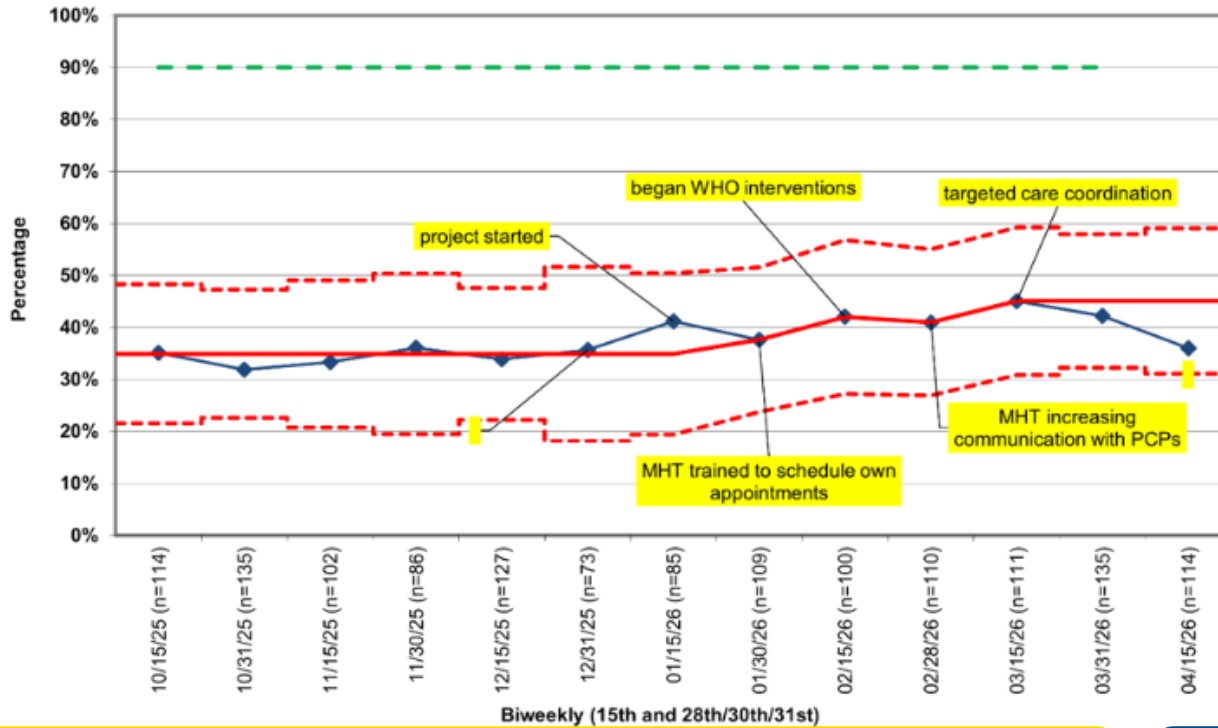
- - - Control Limits

- - - Goal



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% of Patients Scheduled during MHT Availability



◆ % of Patients Scheduled during MHT Availability

— Mean

- - - Control Limits

- - - Goal

Rural Engagement Project Conclusions

- Modest improvement in filling provider schedule, still way under goal of 90%
- Most successful in increasing number of referrals
- Next steps
 - On going barriers to scheduling after referral
 - Identifying barriers to scheduling before patient leaves the office



KEY TAKEAWAY



Rural and Appalachian youth face a convergence of elevated risk and reduced access to care.

We can make a difference through evidence-based, community-informed approaches that:

- Identify youth early
- Strengthen families and schools
- Increase access to care
- Reduce access to lethal means
- Build hope and connectedness

Together, we can protect youth and support brighter futures.



Chelsea's Notes

- Rural/Appalachian Populations- Challenges in serving
- Cultural Considerations/cultural mismatch between providers and patients
- Childhood Opportunity Index?
- Discussions regarding firearms
- Numbers which demonstrate that engagement/not access is a greater concern



References

- 1. Centers for Disease Control and Prevention. About underlying cause of death, 1999–2020. CDC WONDER. 2020. Accessed June 12, 2025. <https://wonder.cdc.gov/ucd-icd10.html>
- 2. Centers for Disease Control and Prevention. About provisional mortality statistics, 2018 through last week. CDC WONDER. 2025. Accessed June 12, 2025. <https://wonder.cdc.gov/mcd-icd10-provisional.html>
- 3. Fontanella CA, Hiance-Steelesmith DL, Phillips GS, et al. Widening rural-urban disparities in youth suicides, United States, 1996–2010. *JAMA Pediatr.* 2015;169(5):466–473. PubMed doi: 10.1001/jamapediatrics.2014.3561
- 4. Whitney DG, Peterson MD. US national and state-level prevalence of mental health disorders and disparities of mental health care use in children. *JAMA Pediatr.* 2019;173(4):389–391. PubMed doi: 10.1001/jamapediatrics.2018.5399
- 5. Hua LL, Lee J, Rahmandar MH, Sigel EJ; COMMITTEE ON ADOLESCENCE; COUNCIL ON INJURY, VIOLENCE, AND POISON PREVENTION. Council on Injury, Violence, and Poison Prevention. Suicide and suicide risk in adolescents. *Pediatrics.* 2024;153(1): e2023064800. PubMed doi: 10.1542/peds.2023-064800
- 6. Cafferty R, Grupp-Phelan J, Anthony B. Children and adolescents with suicidal ideation and the emergency department. *JAMA.* 2024;331(3):193–194. PubMed doi: 10.1001/jama.2023.26291
- 7. Bommersbach TJ, McKean AJ, Olfson M, Rhee TG. National trends in mental health-related emergency department visits among youth, 2011–2020. *JAMA.* 2023;329(17):1469–1477. PubMed doi: 10.1001/jama.2023.4809
- 8. Nash KA, Zima BT, Rothenberg C, et al. Prolonged emergency department length of stay for US pediatric mental health visits (2005–2015). *Pediatrics.* 2021;147(5):e2020030692. PubMed doi: 10.1542/peds.2020-030692
- 9. Hoffmann JA, Krass P, Rodean J, et al. Follow-up after pediatric mental health emergency visits. *Pediatrics.* 2023;151(3): e2022057383. PubMed doi: 10.1542/peds.2022-057383
- 10. The U.S. Surgeon General’s Advisory. Protecting Youth Mental Health: The U.S. Surgeon General’s Advisory. Office of the Surgeon General. 2021. Accessed June 15, 2025. <https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf>
- 11. Steven H. Woolf; The Youth Mental Health Crisis in the United States: Epidemiology, Contributors, and Potential Solutions. *Pediatrics* November 2025; 156 (5): e2025070849. 10.1542/peds.2025-070849

