



Access to behavioral health treatment: Challenges for rural communities and opportunities through technology

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Chief Clinical Officer



Agenda

- ✿ Introduction
 - ✿ About Bamboo Health
- ✿ Current state of mental health and substance use disorder (SUD) care in the U.S.
- ✿ Impact on rural communities
 - ✿ Mental health
 - ✿ SUD
- ✿ Solutions
 - ✿ Role of technology

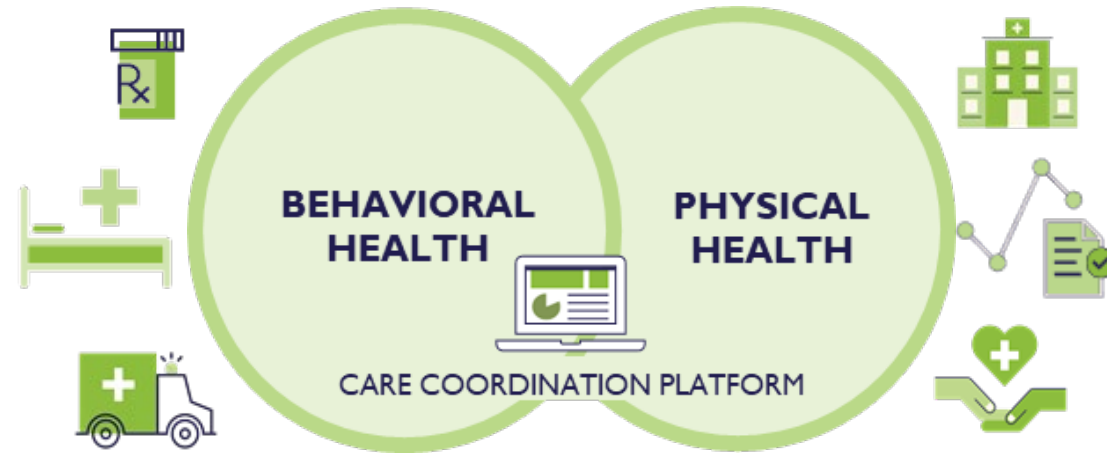




Our Vision

Revolutionizing care collaboration for the improvement of whole person care.

About Bamboo Health



PMP
Gateway®

NarxCare®

PMP
AWARxE®

PMP
InterConnect®

44 States
and growing

Pings™
A BAMBOO HEALTH SOLUTION

2,500 Hospitals
8,000 Post-Acutes
1 Bil. Encounters Annually

OpenBeds®
A BAMBOO HEALTH SOLUTION

13 States
and growing

Bamboo Health Impact and Scale



We offer a range of digital health solutions, backed by one of the **largest, most interoperable care coordination networks in the country**, dedicated to sharing actionable insights to improve patient health and well-being at the point of care.

Current State of Behavioral Health

Current State of Behavioral Health



108,000+

Drug Overdose Deaths
April 2021 – April 2022

*Provisional data from CDC



Up 4%

Suicide Rate Increase

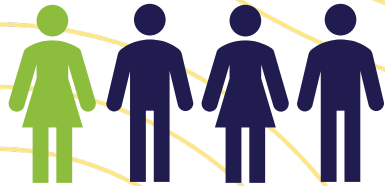
*Provisional data from CDC and
American Foundation for Suicide Prevention



Alert

U.S. Surgeon General issues advisory
on youth mental health

*December 2021



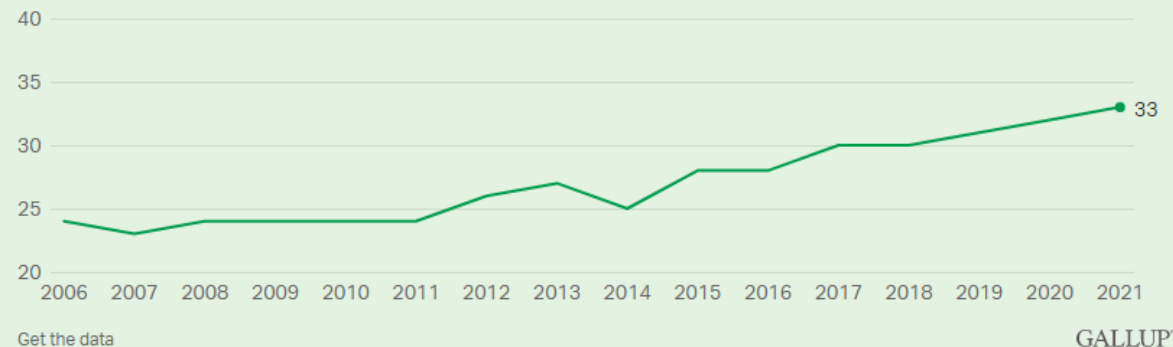
1 in 4

Adults Have Mental Illness

*National Institute of Mental Health

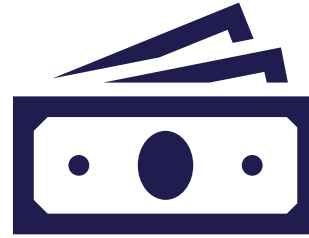
Negative Experience Index in 2021

— Negative Experience Index



[World Unhappier, More Stressed Out Than Ever \(gallup.com\)](https://www.gallup.com/2021/09/16/world-unhappier-more-stressed-out-than-ever.aspx)

Substance Use Crisis



\$1.5 trillion

Economic toll of opioid crisis in 2020

*Sept. 2022 Joint Economic Committee
Congressional Report



Up \$486 billion
from 2019

Parity for Physical and Behavioral Health Coverage

- ✿ 1996: Mental Health Parity Act
- ✿ 2008: Mental Health Parity and Addiction Treatment Equity Act
- ✿ Required health insurers and group health plans to cover mental health and substance use treatment on par with medical and surgical benefits
- ✿ Recent report to Congress revealed patients are STILL being denied access to evidence-based treatment for conditions like:
 - ✿ Autism
 - ✿ Opioid-use disorder
 - ✿ Eating disorders



Impact on Rural Communities

Urban vs. Rural America



Urban

- 3% of land area
- Home to 80.7% of population



Rural

- 97% of land area
- Home to 19.3% of population
- 46.7% of rural residents live in the south (agriculture and industry)



Rural vs. Urban Mental Health



- Similar prevalence of mental health conditions in urban and rural areas

- Four "A's" and an "S"

- Accessibility

- Availability

- Acceptability

- Affordability

- Stigma



[Obstacles to Treatment— The Four “A’s” and an “S” | 3 | Accessibility, \(taylorfrancis.com\)](#)



Figure 1: The Context for Understanding Rural Mental Health and Substance Use

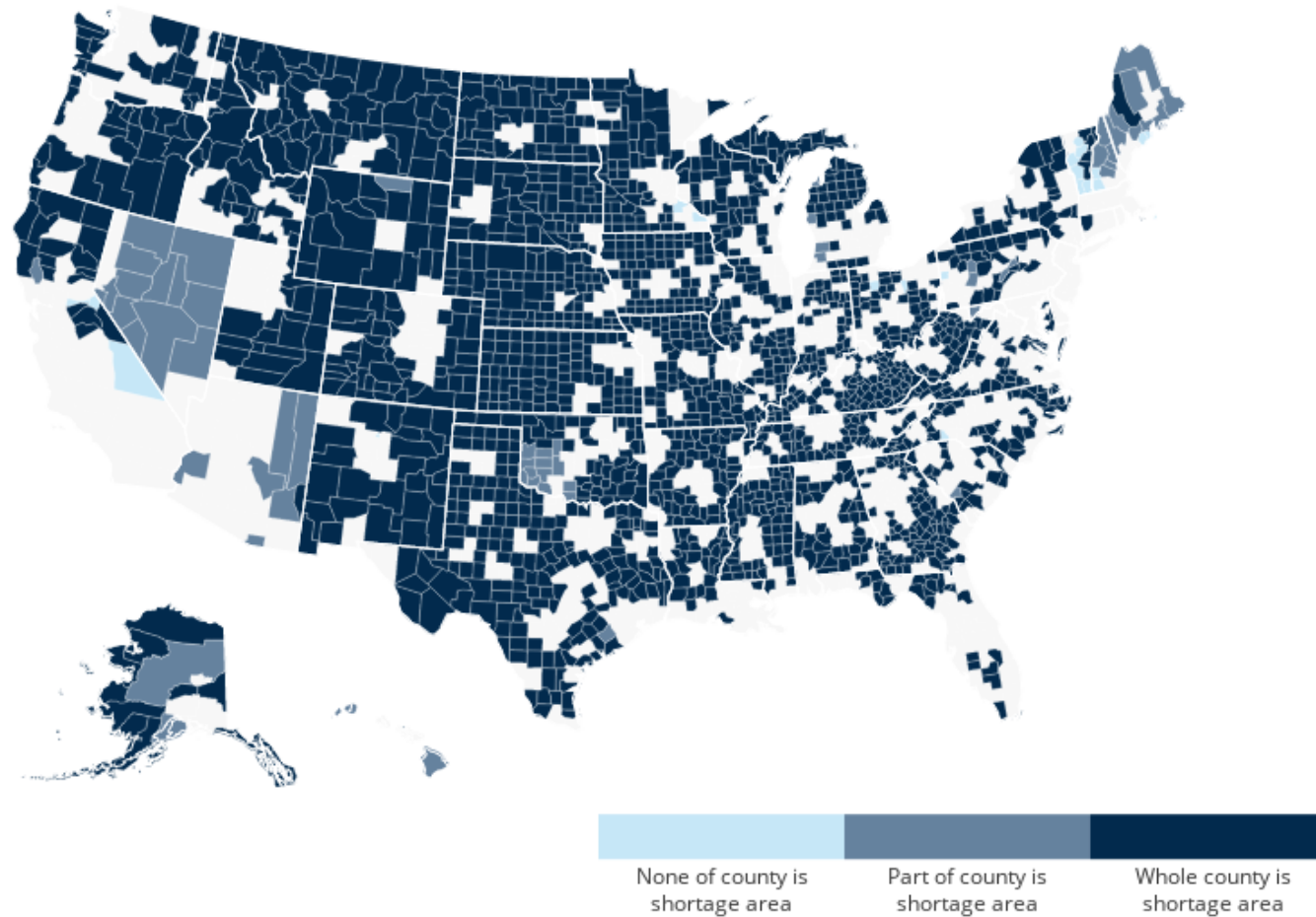
While mental illness overall is comparable between urban and rural communities, individuals in rural areas are more likely to suffer from depression and suicidality.



[Behavioral Health in Rural America.pdf \(uiowa.edu\)](#)

Access to Mental Health in Nonmetro Areas

Health Professional Shortage Areas: Mental Health, by County, 2022 - Nonmetropolitan



Source: data.HRSA.gov, July 2022.

Substance Misuse in Rural Communities

- ❁ Overprescribing of opioids hit rural communities hard in late 1990s and early 2000s
- ❁ Overdose deaths [increased 325% in rural counties](#) between 1999 and 2015
- ❁ Beyond deaths, there are other factors that are harder to quantify. In one West Virginia county, an estimated 60% of children are parentless ... a social worker called it the "lost generation"

Harder to Access SUD Treatment

- 56.3% of rural counties lack a provider with a DEA license to prescribe buprenorphine, down from 67.1% in 2012
- Almost 30% of rural Americans live in a county without a buprenorphine provider (compared to 2% of urban Americans)
- OTPs (Opioid Treatment Programs) not available in 80% of counties in the U.S.

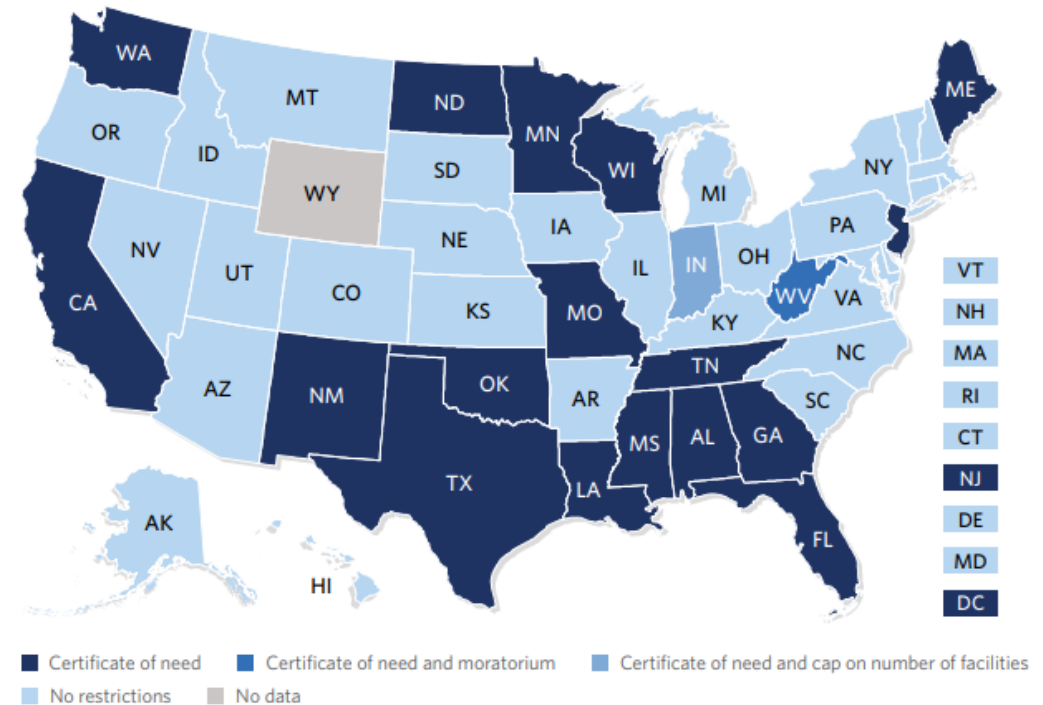
[Geographic Distribution of Providers With a DEA Waiver to Prescribe Buprenorphine for the Treatment of Opioid Use Disorder: A 5-Year Update - Andriella - 2019 - The Journal of Rural Health - Wiley Online Library](#)

[overview-of-opioid-treatment-program-regulations-by-state.pdf \(pewtrusts.org\)](#)

Figure 1

19 States and the District of Columbia Impose Barriers on Opening New OTPs

Restrictions on new OTPs as of June 1, 2021



Notes: Wyoming has no data because the state has no OTPs or related regulations. A certificate of need is a legal document demonstrating the need for a new facility.

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Harder to Access Affordable Care

- ⚙️ Affordability is significantly correlated to use of care
 - ⚙️ Increased cost sharing has been associated with forgoing necessary BH treatment, and higher costs of services can result in a lower likelihood of accessing MH services.
- ⚙️ Rural residents are more likely to be uninsured or underinsured and more likely to receive Medicaid than urban residents.
- ⚙️ Two-thirds of the rural uninsured population live in states that did not expand Medicaid
- ⚙️ Among those covered by private insurance, rural residents are more likely than urban residents to have a high deductible health plan



Solutions

Screening and Prevention

- ✿ Substance use screening should be integrated into primary care, community settings, and emergency department protocol
- ✿ Screening, Brief Intervention, and Referral to Treatment ([SBIRT](#)) - early intervention and treatment services for those with or at risk for developing SUD
 - ✿ Those who screen positive can receive [brief interventions](#) (5-30 minutes) from primary care, not to treat SUD but to encourage them towards treatment and discourage progression to more severe use disorder
- ✿ SBIRT reimbursement available through Medicare, Medicaid, and other insurers
- ✿ Brief Intervention (BI) was shown to be primarily effective with alcohol abusers
- ✿ SBIRT has been shown to result in healthcare cost savings that range from \$3.81 to \$5.60 for every \$1.00 spent

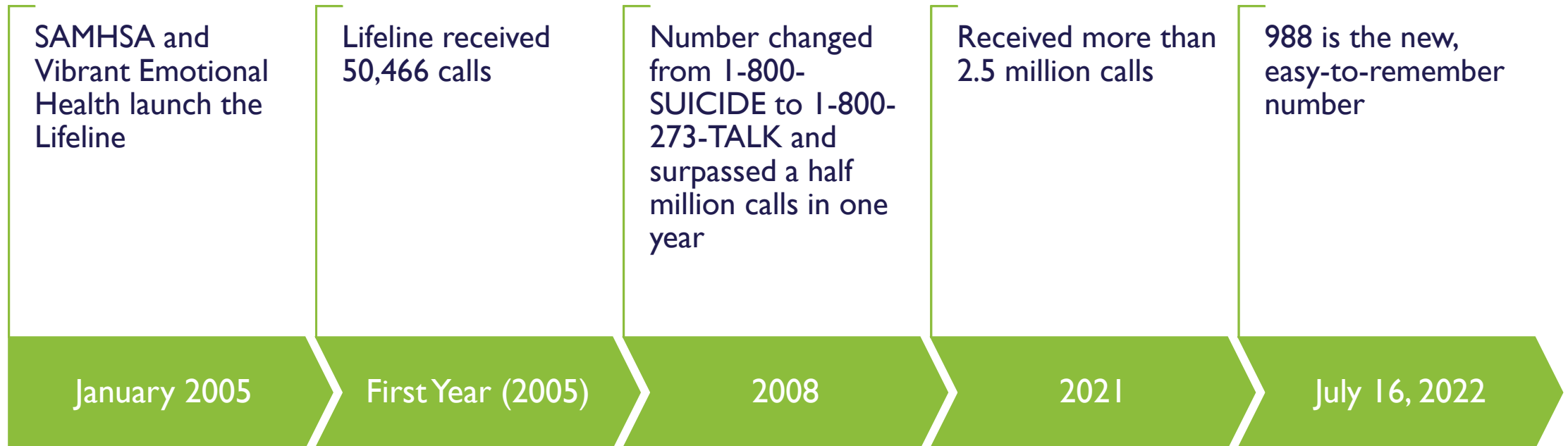
Screening and Prevention

- ✿ U.S. Preventative Services Task Force recently recommended screening all adults for depression and those under the age of 65 for anxiety
- ✿ It should start before adulthood
 - ✿ NAMI: "Approximately [50%](#) of lifetime mental health conditions begin by age 14 and [75%](#) begin by age 24. At the same time, the average delay between when symptoms first appear and intervention is approximately [11 years](#)."
 - ✿ Screenings recommended by the American Academy of Pediatrics
 - ✿ Medicaid requirement to screen if Medicaid-eligible

Step between Prevention and Access: 988

- ✿ The 988 Suicide & Crisis Lifeline was formerly known as the National Suicide Prevention Lifeline
- ✿ The U.S. Substance Abuse and Mental Health Services Administration (SAMHSA) and Vibrant Emotional Health launched the original lifeline on January 1, 2005
- ✿ Three-digit number launched July 2022
- ✿ Provides support to people facing behavioral health challenges
- ✿ Comprised of a national network of more than 200 local crisis centers

Timeline for 988 Suicide and Crisis Lifeline



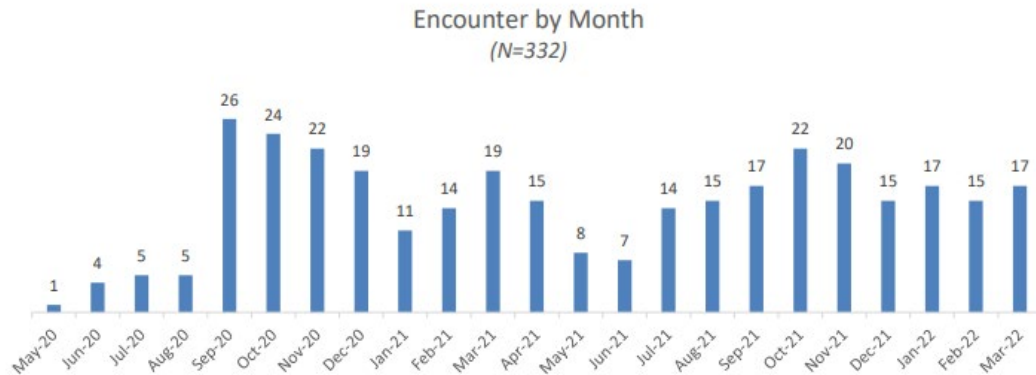
988 Results

- ⚙ 45% increase in overall volume in August 2022 compared to August 2021
- ⚙ Improvement in the number of calls, texts, and chats that were answered as well as improvement in the average speed of answer

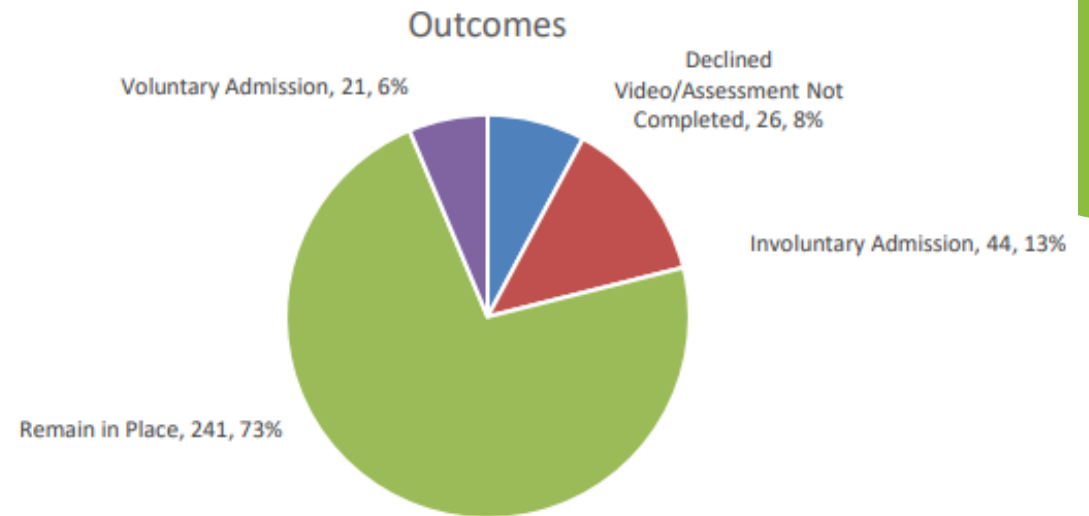
	August 2022	August 2021
Overall volume	361,000	209,000
Answered	88%	67%
Response time	42 seconds	2.5 minutes

Mobile Crisis Response in Rural Communities

- ✿ Generally, mobile crisis response teams are more robust in urban areas – easier to centrally locate near a greater number of people in need
- ✿ Some rural communities are beginning to adopt them with the buildout of 988 and to decrease pressure on emergency medical and law enforcement response



Data from Virtual Crisis Care in South Dakota which gives law enforcement iPads to initiate video chats between person in crisis and a counselor



[Mental Health Crisis Teams Aren't Just for Cities Anymore | Kaiser Health News \(khn.org\)](https://www.khn.org/mental-health-crisis-teams-aren-t-just-for-cities-anymore)

Access to Evidence-Based Treatment

- ✿ "I do think that screening is a good idea, with a caveat of, 'What are we going to do once we screen?'" [said Dr. Luana Marques](#), associate professor in the department of psychiatry at Harvard Medical School and clinical psychologist at Massachusetts General Hospital.
- ✿ Access is particularly challenged in rural communities
 - ✿ 570 counties across the U.S. have no psychologists, psychiatrists, or counselors – most of these are rural
 - ✿ 75% of rural counties have NO mental health providers or fewer than 50 per 100,000 people ([ABC News analysis of CMS data](#))



Telehealth



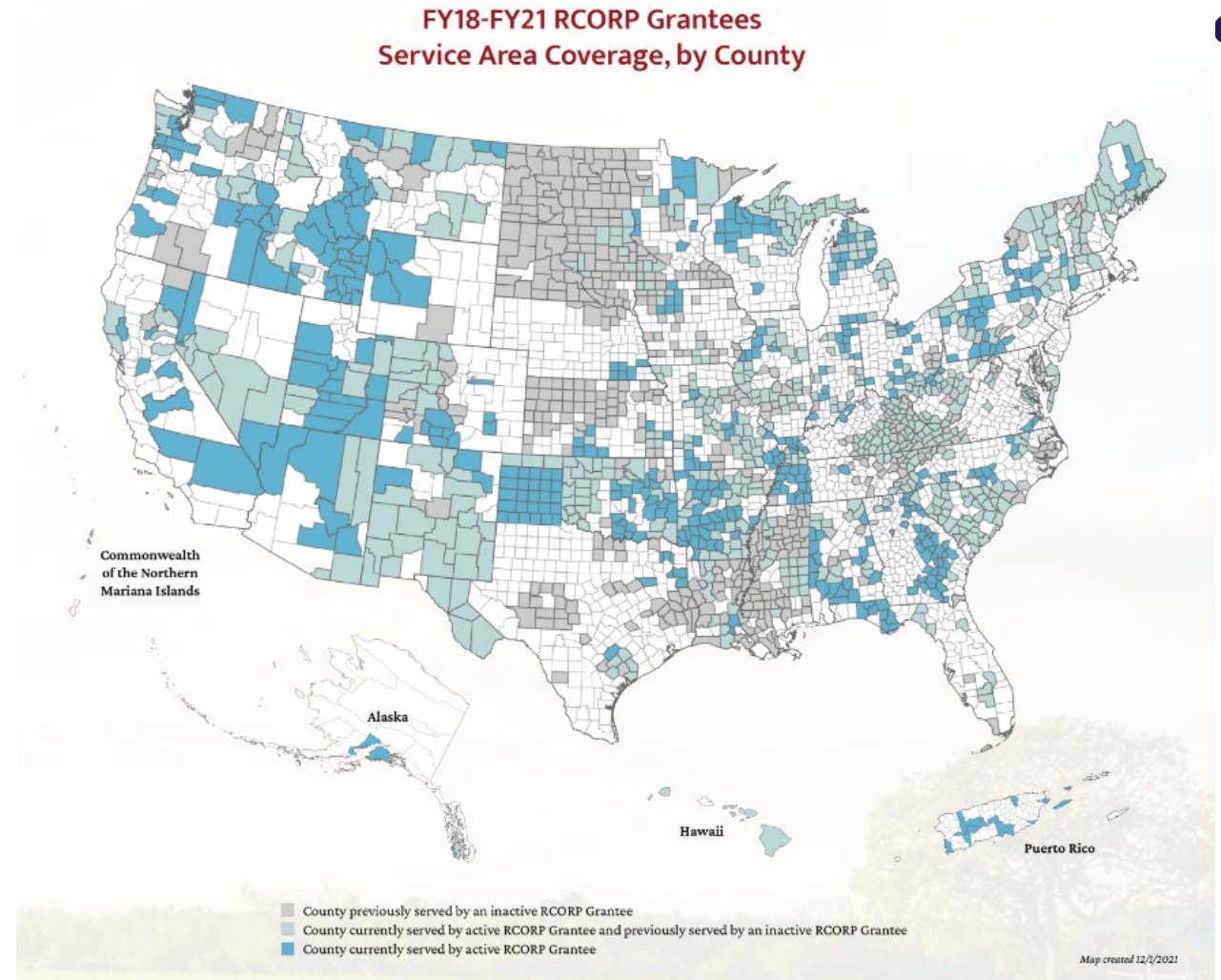
Train more
psychiatrists



Train primary
care

Rural Communities Opioid Response Program

- Health Resources Services Administration (HRSA) has awarded almost \$300 million in grant funding as part of the Rural Communities Opioid Response (RCORP)
 - Expand access through health centers/primary care
 - Use telehealth for opioid use disorder treatment
 - Increase opioid use disorder treatment in primary care
- **NEW:** Additional \$104 Million in funding for RCORP to expand Substance Use Treatment and Prevention in Rural Communities



[About RCORP | RCORPTA \(rcorp-ta.org\)](#)
[Opioid Response | HRSA](#)

[HHS Invests over \\$104 Million to Expand Substance Use Treatment and Prevention in Rural Communities to Combat the Overdose Epidemic | HRSA](#)

Harm Reduction

- ✿ WHAT: Strategies, policies, tactics, and ideas aimed at keeping people who use drugs alive (preventing or reversing overdose) and healthy (preventing infectious disease, low-threshold options for care and treatment)
- ✿ GOAL: Show compassion and meet people who use drugs where they are so when they are ready, they are more likely to pursue treatment and recovery



Needle Exchanges



Safe Injection Sites



Overdose reversal drug
access (Narcan)



Role of Technology



Prevention



Treatment



Recovery



Prevention: PDMPs



Original Investigation | Health Policy

Systematic Evaluation of State Policy Interventions Targeting the US Opioid Epidemic, 2007-2018

Byungkyu Lee, PhD; Wanying Zhao, MS; Kai-Cheng Yang, MS; Yong-Yeol Ahn, PhD; Brea L. Perry, PhD

Abstract

IMPORTANCE In response to the increase in opioid overdose deaths in the United States, many states recently have implemented supply-controlling and harm-reduction policy measures. To date, an updated policy evaluation that considers the full policy landscape has not been conducted.

OBJECTIVE To evaluate 6 US state-level drug policies to ascertain whether they are associated with a reduction in indicators of prescription opioid abuse, the prevalence of opioid use disorder and overdose, the prescription of medication-assisted treatment (MAT), and drug overdose deaths.

DESIGN, SETTING, AND PARTICIPANTS This cross-sectional study used drug overdose mortality data from 50 states obtained from the National Vital Statistics System and claims data from 23 million commercially insured patients in the US between 2007 and 2018. Difference-in-differences analysis using panel matching was conducted to evaluate the prevalence of indicators of prescription opioid abuse, opioid use disorder and overdose diagnosis, the prescription of MAT, and drug

Key Points

Question Are US state drug policies associated with variation in opioid misuse, opioid use disorder, and drug overdose mortality?

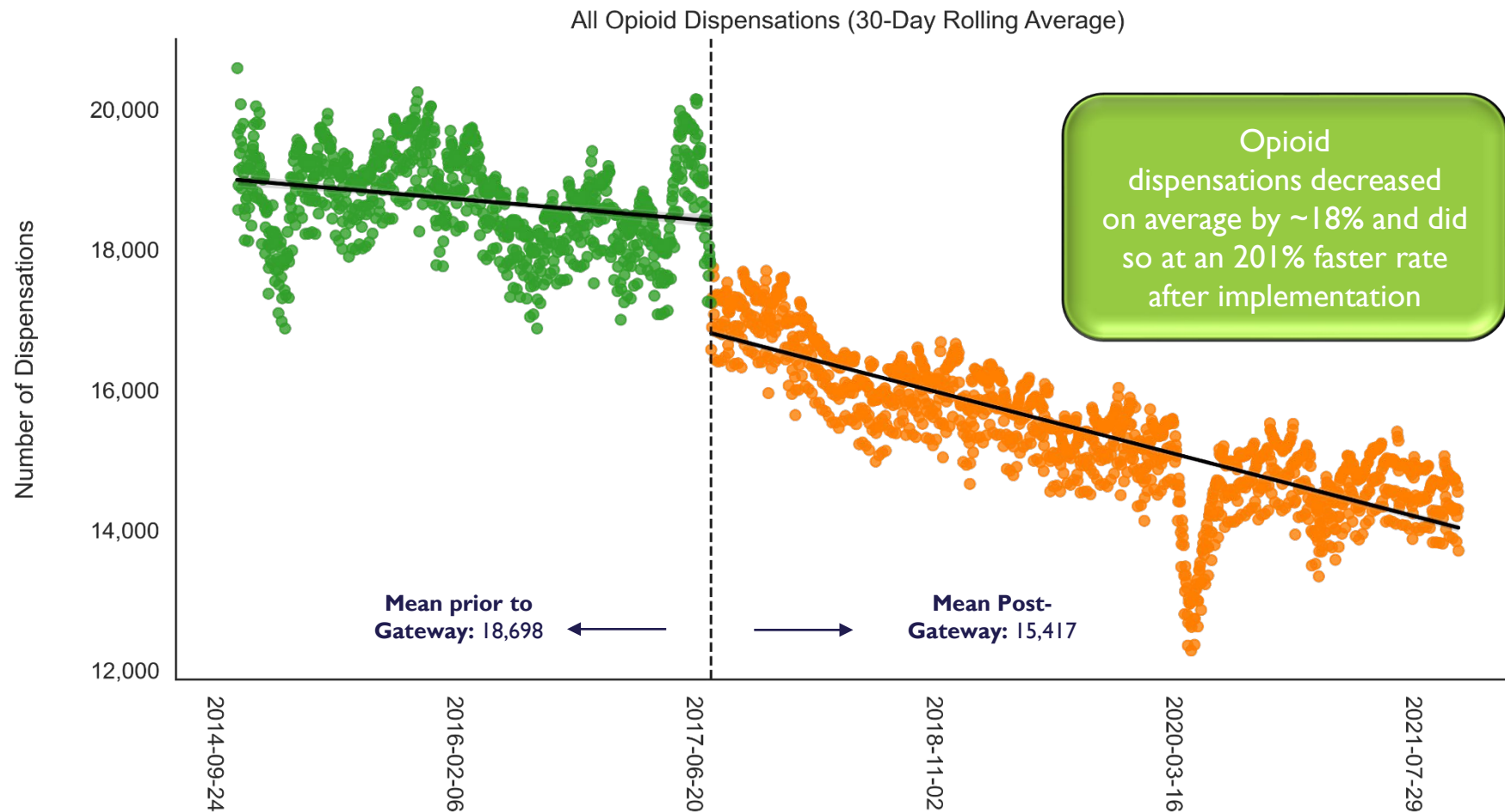
Findings In this cross-sectional study of state-level drug overdose mortality data and claims data from 23 million commercially insured patients in the US between 2007 and 2018, state policies were associated with a reduction in known indicators of prescription opioid misuse as well as deaths from prescription opioid overdose and

Indiana Opioid Dispensation Trends: Schedules II-V

Pre- and Post-Gateway Implementation

t0: 11/05/2014 to 07/29/2017

t1: 07/30/2017 to 11/05/2021

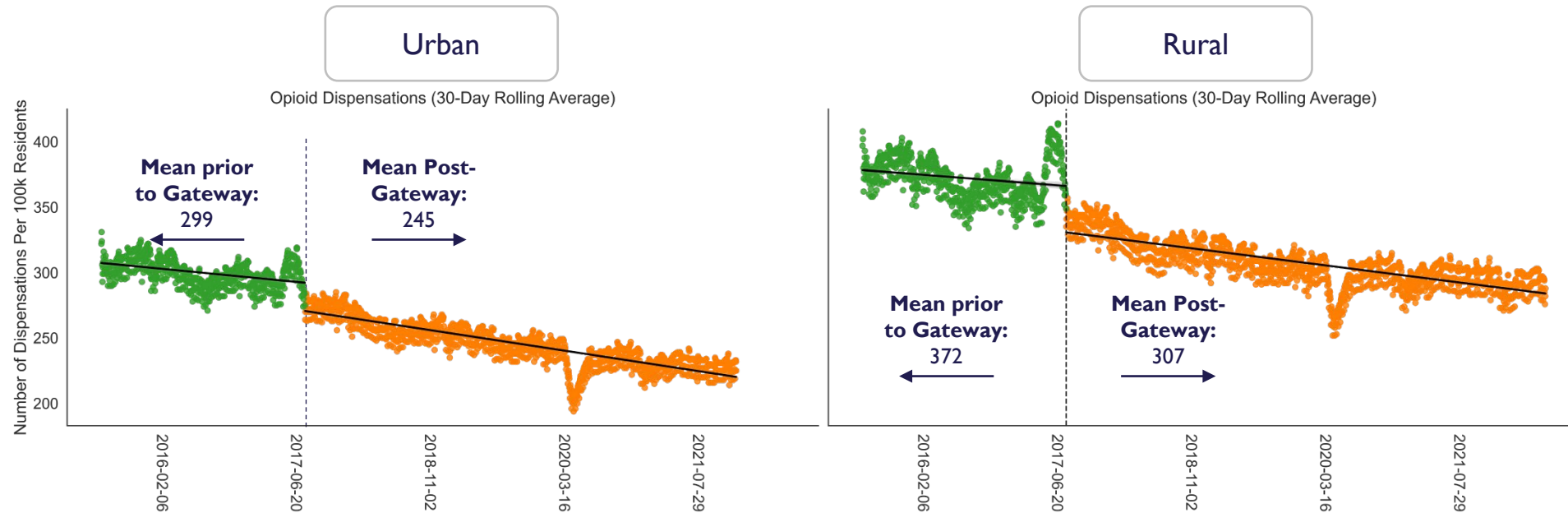


Indiana Opioid Dispensation Trends: Schedules II-V

Pre- and Post-Gateway Implementation

t0: 06/22/2015 to 07/29/2017

t1: 07/30/2017 to 11/05/2021



Opioid dispensations among patients from rural areas was 22.5% lower after product implementation relative to patients from urban areas

Same Healthcare Access?

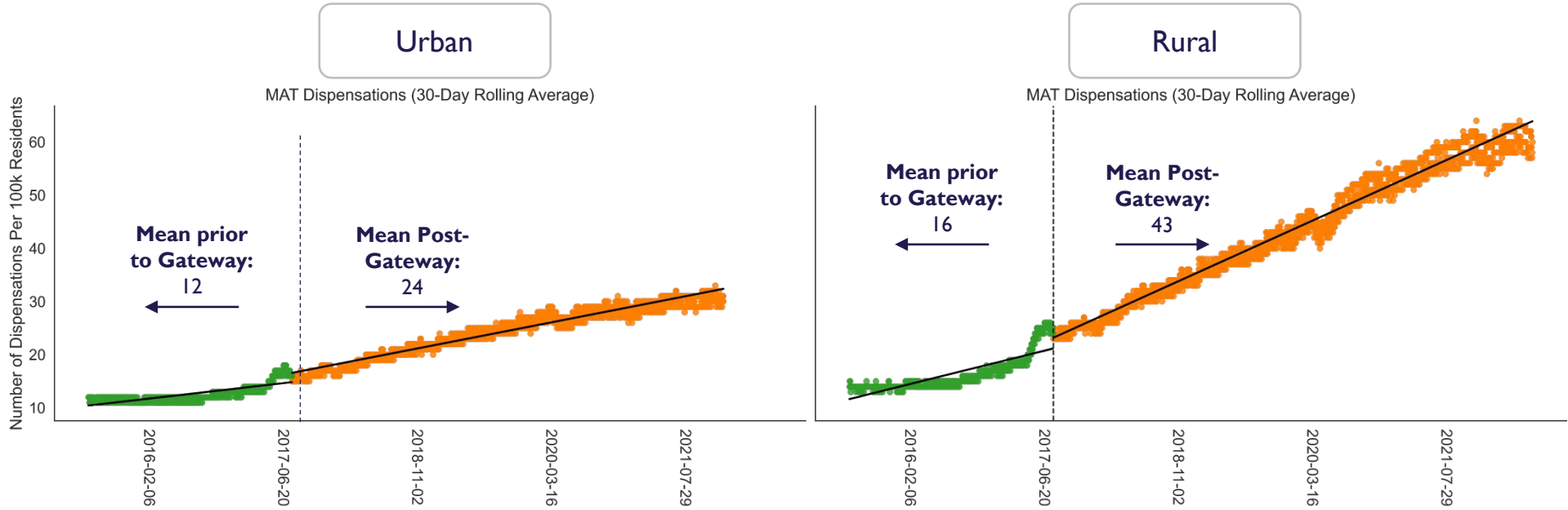
Higher prevalence of chronic pain?

Indiana Buprenorphine MAT Dispensation Trends

Pre- and Post-Gateway Implementation

t0: 06/22/2015 to 07/29/2017

t1: 07/30/2017 to 11/05/2021



Buprenorphine dispensations among patients from rural areas was ~57% higher and increased at a ~86% faster rate after product implementation compared to patients from urban areas.

Population adjusted counts = (30-day rolling avg for dispensation counts * 100,000)/population size for urban vs rural subgroup

Technology and Access to Treatment



Telehealth



Care Coordination



Telehealth

67%

Accessed telehealth
in the last year, up
from 37% in 2019

[J.D. Power 2022 U.S. Telehealth Satisfaction Study](#)

57%

Prefer telehealth for
regular mental
health appointments

1.8x

More new mental
health diagnoses
than in-person visits

[Telehealth begins to fulfill its promise | athenahealth](#)

"We just need more resources and now that behavioral health has become the forefront not only within our community, but also nationally, The biggest [challenge] is the stigma. There's rural challenges as well, but people don't want to go into a clinic, so we have seen high success when there was an audio [option] allowed for them to just touch base with their therapist."

Dr. Karen Severns, Behavioral Health Director for the Indian Services Great Plains Area

[America's mental health care deserts: Where is it hard to access care? - ABC News \(go.com\)](#)

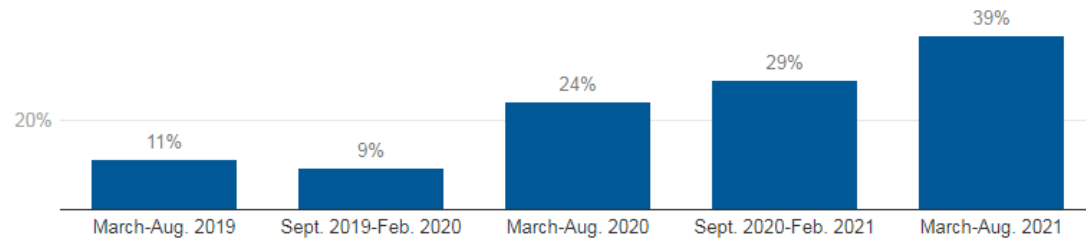
Telehealth

Figure 2

Share of visits with a mental health and substance use disorder primary diagnosis, 2019-2021

Share of telehealth visits

Share of all outpatient visits



SOURCE: KFF and Epic Research analysis of Cosmos data • PNG



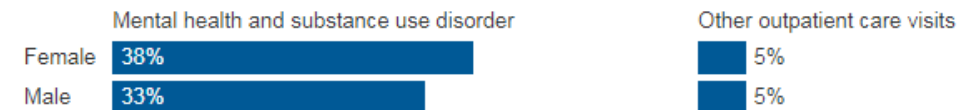
Figure 3

Share of outpatient visits delivered by telehealth, by patient characteristics, March-August 2021

Age Group



Male vs. Female



Urban vs. Rural



SOURCE: KFF and Epic Research analysis of Cosmos data • PNG



Telementoring: Project ECHO

- ✿ Agency for Healthcare Research and Quality funded to project to help increase access to care for rural patients (originally started in New Mexico) via telementoring
- ✿ Links primary care clinics in rural areas to academic health center in Albuquerque
- ✿ Focus is on training rural doctors, nurses, and other clinicians on chronic disease management
- ✿ Originally began to provide better care to patients with hepatitis C
- ✿ Expanded to other chronic conditions, including behavioral health and SUD treatment
- ✿ [Project ECHO - Moving Knowledge, Not People \(unm.edu\)](https://www.unm.edu/projectecho/)
- ✿ [Project ECHO | Agency for Healthcare Research and Quality \(ahrq.gov\)](https://www.ahrq.gov/projectecho/)



Care Coordination



- ❁ Technology can facilitate care coordination and connect silos between physical and behavioral health
- ❁ E-notifications alert providers when a patient is admitted, discharged, or transferred from a hospital
- ❁ Allows a provider to take real-time action instead of waiting for claims data or the patient to provide information about the care event





Lack of physical & behavioral health coordination leads to:

- ❁ Higher, costly ED utilization
- ❁ Longer inpatient stays
- ❁ More hospital readmissions
- ❁ ED boarding and strain on hospital resources
- ❁ Higher risk of overdose or suicide
- ❁ Unnecessary procedures and tests
- ❁ Medication errors

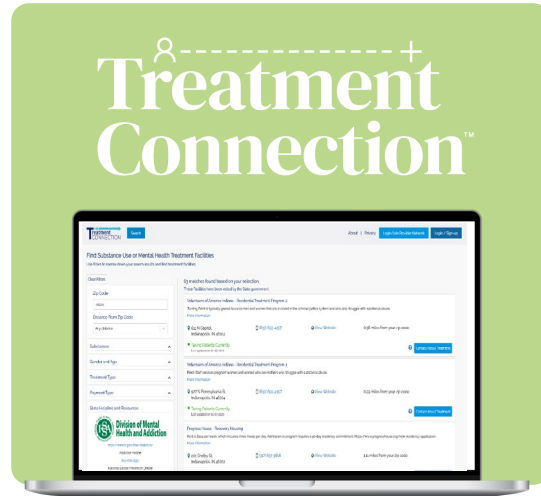
A bifurcated system cannot address the significant overlap between physical and behavioral health. According to the Substance Abuse and Mental Health Services Administration (SAMHSA), "the solution lies in integrated care – the coordination of mental health, substance abuse, and primary care services. Integrated care produces the best outcomes and is the most effective approach to caring for people with complex healthcare needs."

SAMHSA
Substance Abuse and Mental Health
Services Administration



FIND RIGHT HELP

General Public



State Supported Substance Use & Mental Health Treatment Provider Search Portal

Public-facing network portal of state approved practitioners for when someone knows they need help, but it's difficult finding it.

ROUTE TO HELP

Providers & Practitioners

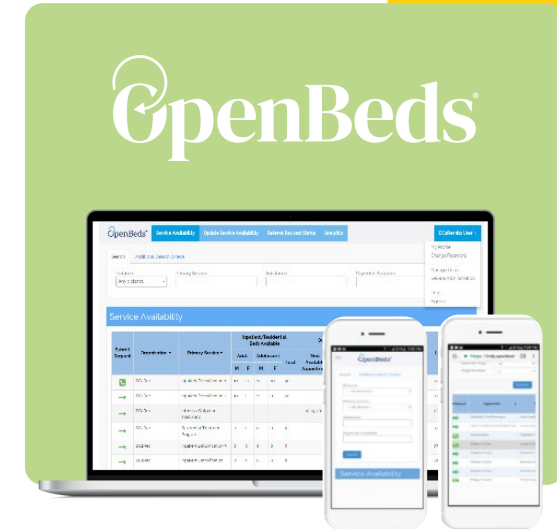


State Supported Crisis Management Platform

Quickly diffuse situations for those in a behavioral health crisis by responding to and routing individuals to appropriate care setting

REFER TO HELP

Providers & Practitioners



State Supported Behavioral Health Treatment and Referral System

Referral to placement in minutes by providers from any care setting: emergency department, primary care, specialty office, or others.

OpenBeds & Crisis Footprint

BY THE STATES



Alaska. Statewide OpenBeds launched in 2019 for mental health and SUD services.



Delaware. Statewide OpenBeds launched in 2017 for mental health and SUD services, along with integration with the state's regional crisis lines.



Indiana. OpenBeds pilot launched in 2017 and statewide OpenBeds launched in 2018 for mental health an SUD services, along with statewide integration to the 211 system.



Idaho. Statewide Crisis Management Solution launch for 2022 to support Nationwide 988 implementation, working with their ID Crisis & Suicide Hotline.



Maine. Statewide OpenBeds launch for mental health and SUD services in process in 2022, along with integration with the state's statewide crisis system.



Michigan. Statewide OpenBeds launch for mental health and SUD services pending in 2021, along with integration with the state's new crisis line.



Missouri. Statewide 2022 OpenBeds launch for mental health and SUD services, crisis management and justice involved in process.



North Carolina. Statewide Critical Resource Tracker launch in 2020 to automate COVID data submission, remove the reporting burden from acute care hospitals, and expand clinician and community access to care. OpenBeds statewide launch in 2022.



Nebraska. Regional OpenBeds launched in 2020 for mental health services and is now expanding across the state to include SUD services.



Nevada. Statewide OpenBeds launched in 2020 for mental health and SUD services.



New Hampshire. RFP award to establish a comprehensive crisis management system, including statewide closed-loop referral and capacity system that launched in 2022.



New Mexico. OpenBeds digital health access and referral network developed and implemented state-wide.



Ohio. In collaboration with the National Alliance on Mental Illness (NAMI) OpenBeds's Treatment Connection public facing system was implemented now expanding OpenBeds statewide.



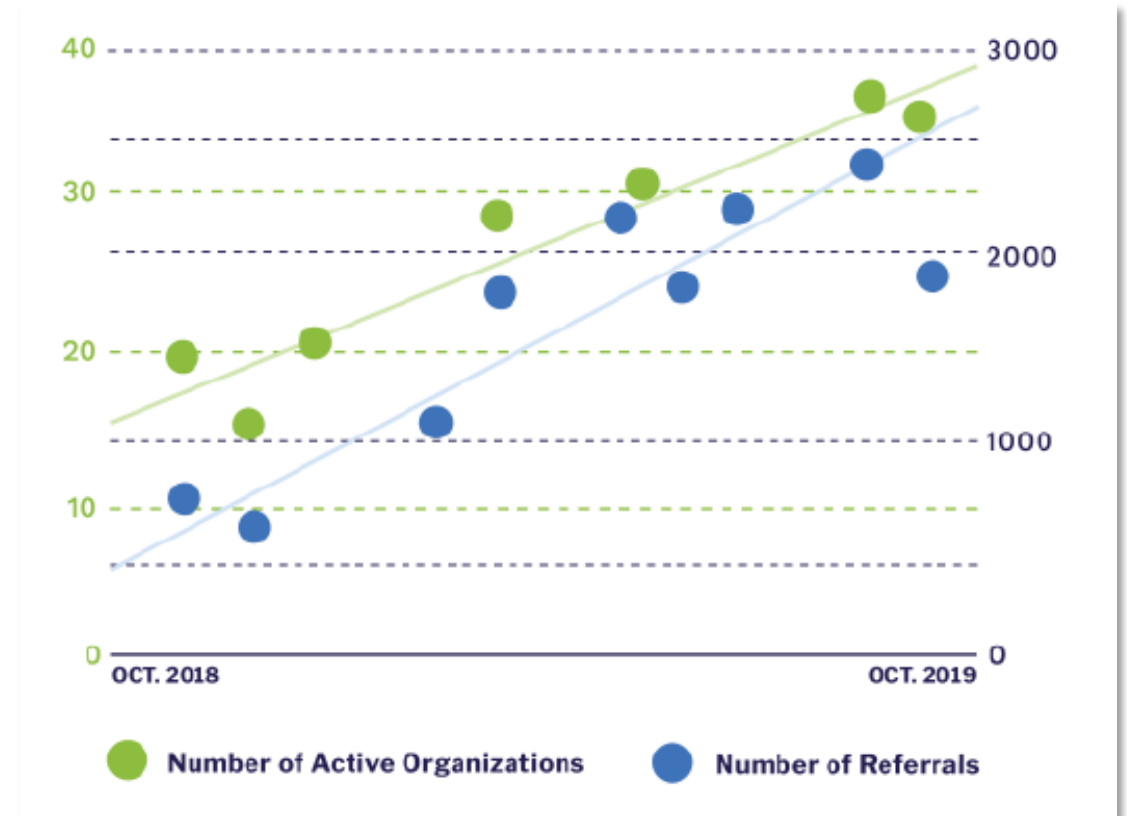
Washington. OpenBeds and crisis management solution launch in 2022 in eight counties.

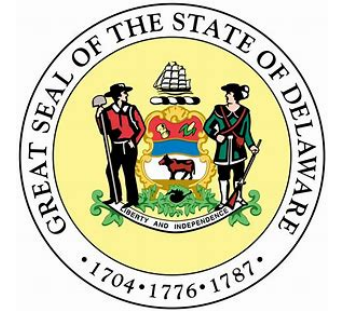
What makes Delaware Treatment and Referral Network (DTRN) unique?

- Our most highly utilized OpenBeds referral network
 - How it started (2018):
 - Week one – 95 referrals
 - Year one – 20,924
 - How it's going:
 - 950+ referrals per week
 - Milestone: 100,000 Referrals reached on 12/17/21

10x

increase in weekly referrals





OpenBeds In Delaware

“ The 100,000 referrals through DTRN demonstrates that we are mending the fractured behavioral health system in Delaware, so people can get access to treatment and on the path to recovery....*Newsweek recently recognized Delaware in November 2021 as one of only four states that the CDC reported as having a decrease in the annual percentage rate of opioid deaths. DTRN was a significant tool contributing to this reduction.* ”

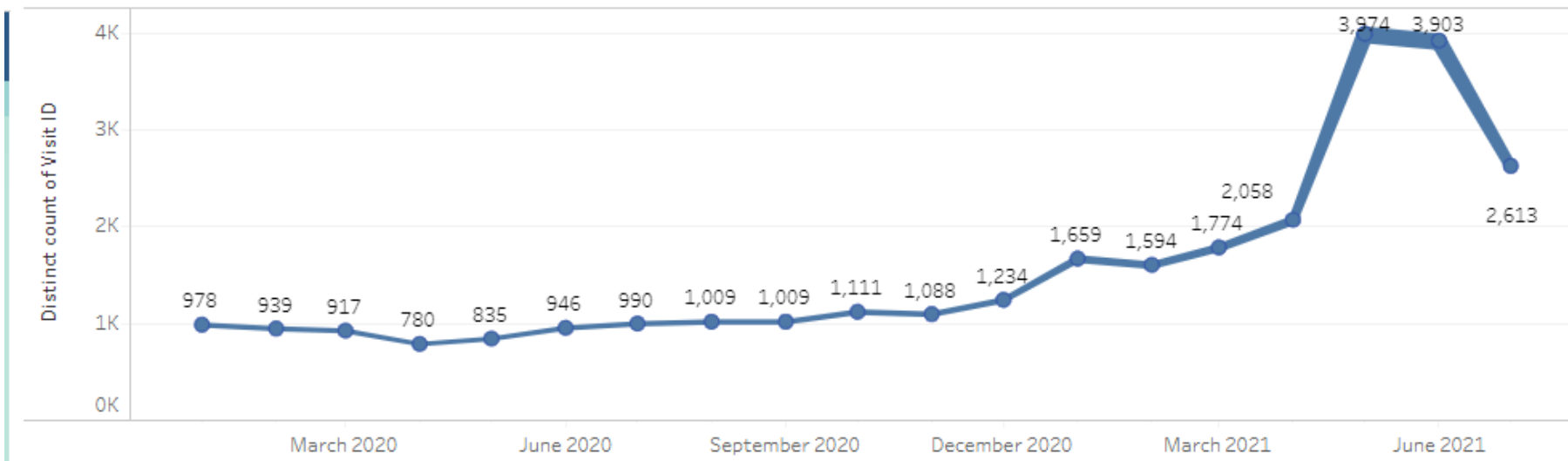
Delaware Lieutenant Governor Bethany Hall-Long, Ph.D., RN

What Monarch was Able to Gain by Using Pings

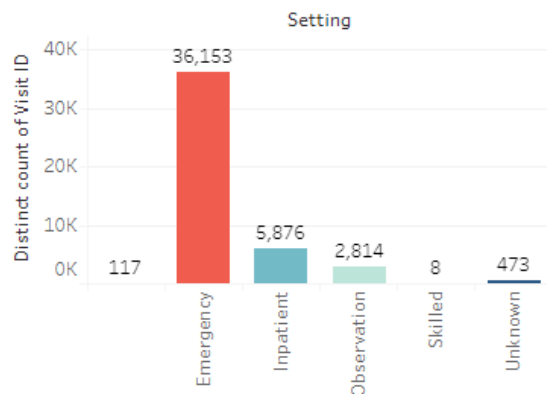
45,438 HOSPITAL VISITS

4.19 AVERAGE LOS

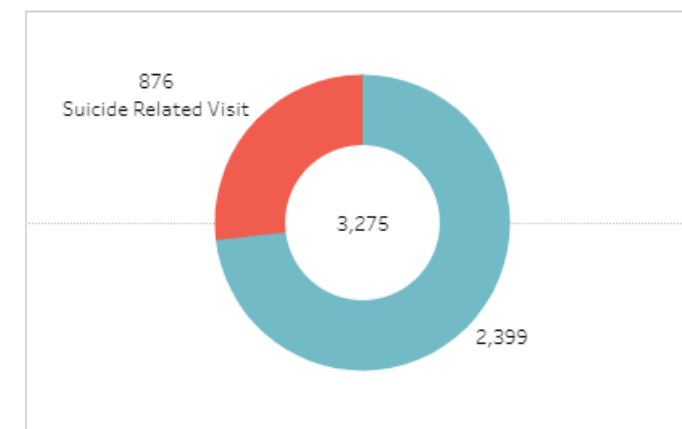
Number of Pings by Month



Total Count of Visits by Setting



Suicide Related





Thank you!

Questions?

connect@bamboohealth.com



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- <https://www.ruralhealthinfo.org/charts/7>
- <https://www.ruralhealthinfo.org/toolkits/substance-abuse/2/harm-reduction/naloxone#:~:text=Many%20rural%20communities%20are%20seeking%20to%20decrease%20drug,overdoses%2C%20leading%20to%20decreased%20overdose-related%20morbidity%20and%20mortality.>
- <https://www.samhsa.gov/sbirt>
- <https://www.taylorfrancis.com/chapters/mono/10.4324/9781315189857-3/obstacles-treatment%E2%80%94four-ellen-greene-stewart>
- <https://www.uhccommunityandstate.com/content/articles/importance-of-integrating-physical-and-behavioral-health>
- [World Unhappier, More Stressed Out Than Ever \(gallup.com\)](https://www.gallup.com/186721/world-unhappier-more-stressed-out-than-ever.aspx)

