

2022 Tribal Motor Vehicle Safety Summit



Can treating alcohol use disorder with emerging technology improve the health and wellbeing of tribal members?



November 2, 2022

Today's Speaker



Matthew Mitchell

Director of Strategic
Partnerships



- 30+ years domestic and international experience in the rehabilitation space
- Cook County Juvenile Probation (1992-2000)
- Colorado 2nd Judicial Adult Probation Dept (2000 – 2002)
- ADT Security Systems – Business Development (2002 – 2004)
- SCRAM Systems – Business Development, Government Relations (2004 - 2022)
- MJM Solutions – President and Founder (2022 – present)
- SOBRsafe – Director of Strategic Partnerships (2022 – present)



Our Vision

**Creating a workplace that focuses on the safety
and well-being of the worker by:**

ensuring that the workplace is safe → alcohol-free, enhanced security measures

providing safe roadways for our communities → promoting alcohol-free driving

directing employees to Employee Assistance Programs → empowering life improvement

Technology

Machinery and equipment developed from the application of scientific knowledge.



Alcohol Use Disorder (AUD)

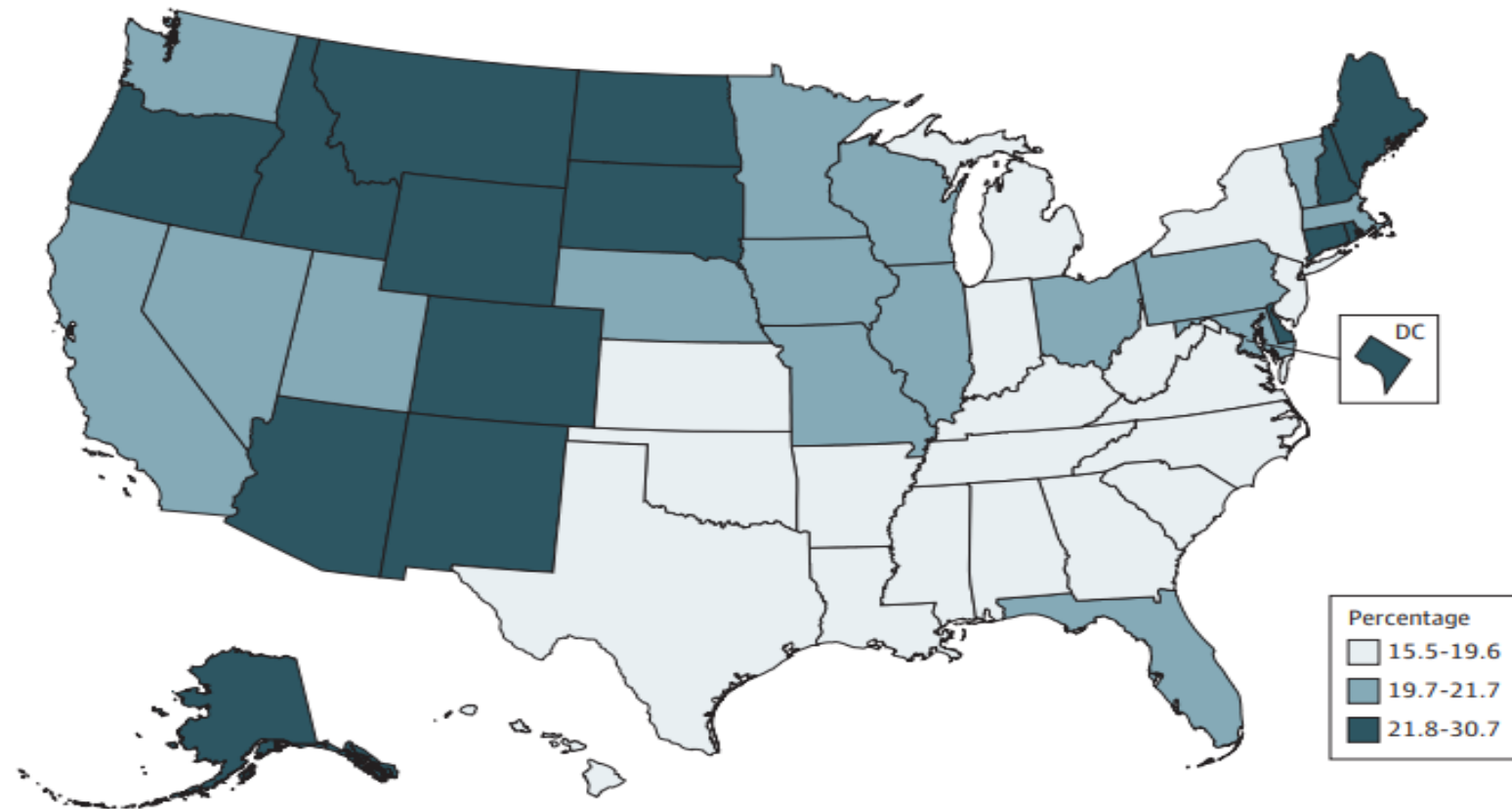
In 2019, an estimated 14.5 million people in the United States had an AUD.

1 in 5 deaths of US adults ages 20-49 is from excessive drinking - **leading cause of preventable death.**

Centers for Disease Control and Prevention (CDC), excessive alcohol use leads to over 95,000 deaths in the U.S. every year.

Deaths & UAD

Figure. Estimated Percentage of Total Deaths Attributable to Excessive Alcohol Use Among US Adults Aged 20 to 49 Years, 2015 to 2019



Inequity in Health Care

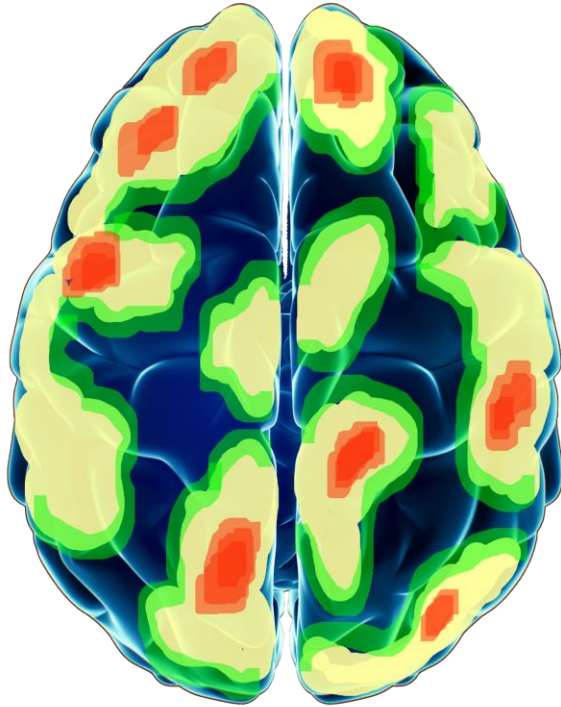
The American Indian and Alaska Native people have long experienced lower health status when compared with other Americans.

The Indian Health Service Reports AI/AN members rate highest in heart disease, unintentional injuries (Auto Accidents), diabetes, cirrhosis, cancer, flu, suicide and assault.

Alcohol Use Disorder

A brain disease that can be inherited. Long-term alcohol use can produce changes in the brain that can cause people to crave alcohol, lose control of their drinking and require greater quantities of alcohol to achieve its desired effects. AUD can also cause people to experience withdrawal symptoms if they discontinue alcohol use.

Alcohol and the Brain



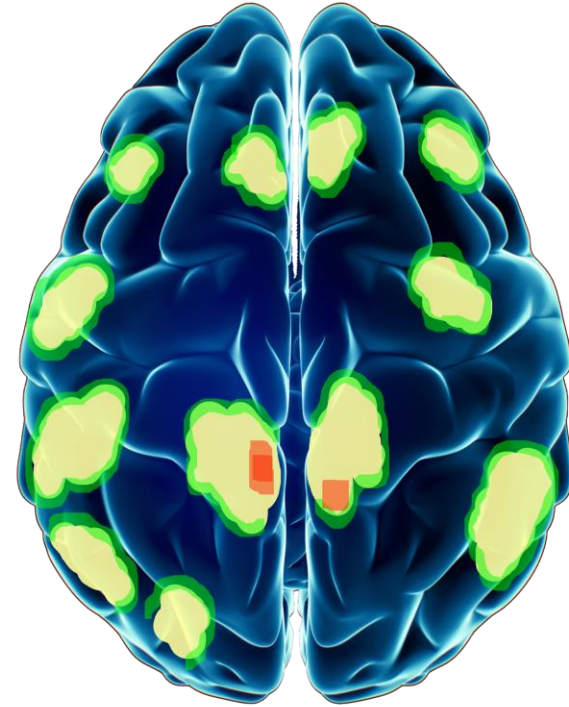
Healthy Brain

High level of brain activity indicated by the yellow and red imaging.



Healing Brain (10 Days)

After 10 days of abstinence from substance use, brain activity is still severely limited.



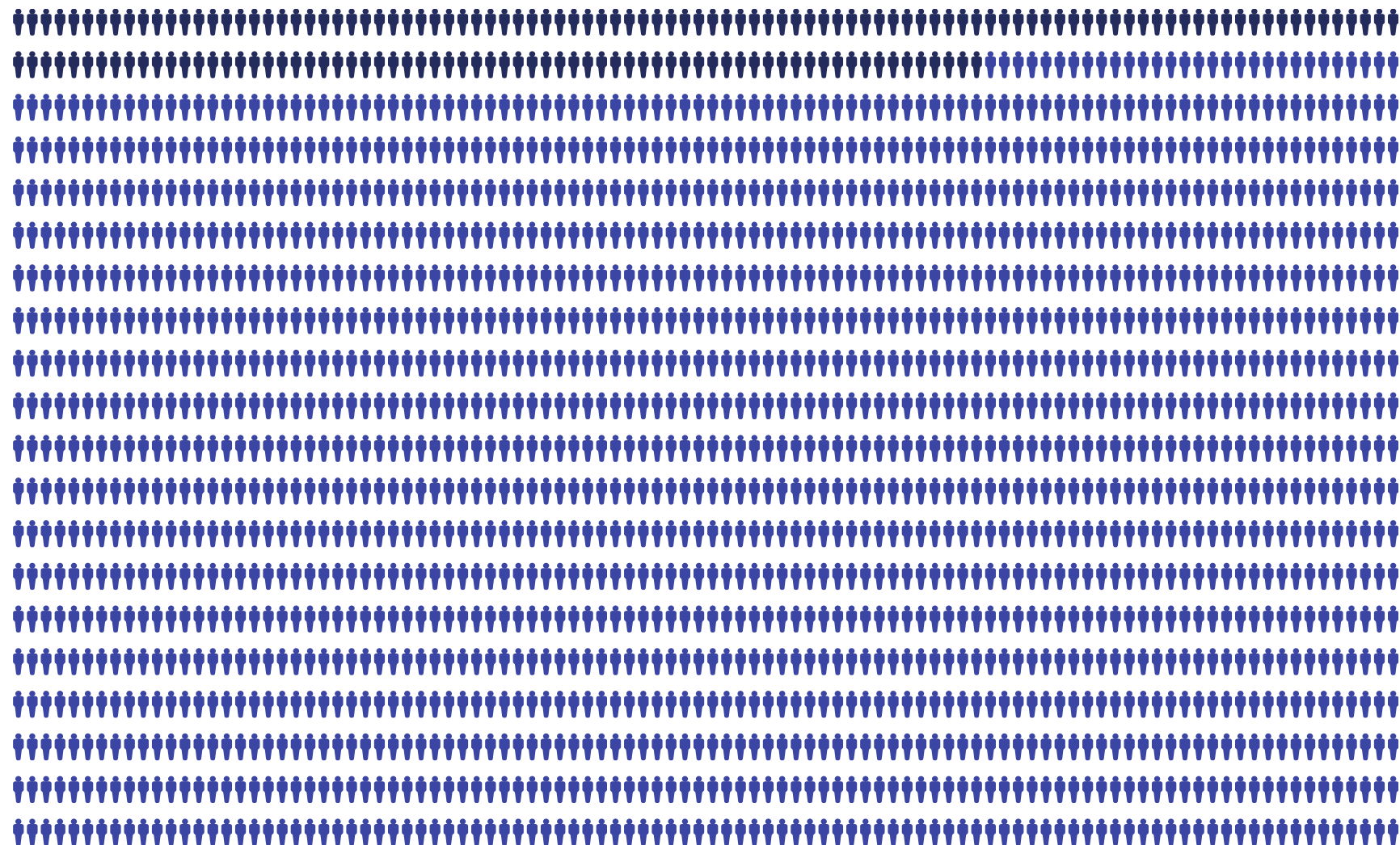
Healing Brain (100 Days)

After 100 days of abstinence, activity is improving but the brain still needs more time to recover.

The Problem

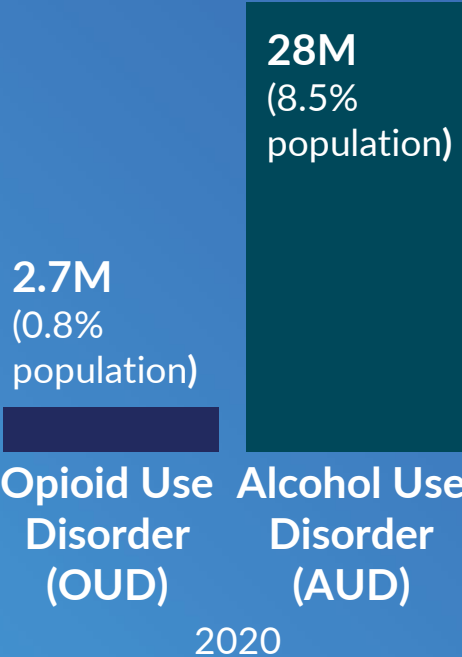
Alcohol Use Disorder (AUD)

Chronic relapsing brain disorder characterized by an impaired ability to stop or control alcohol use despite adverse social, occupational, or health consequences.



1

10x Bigger
Than The
Opioid
Epidemic*



* National Survey on Drug Use and Health SAMHSA's Center for Behavioral Health Statistics and Quality

Drinking Habits

At-risk (or risky) drinking. Drinking a quantity of alcohol that increases the risk for alcohol-related health problems. At-risk drinking is sometimes referred to as hazardous or heavy drinking, and it is generally defined by the amount of alcohol someone drinks, on average, in a day or week:

Binge drinking. Defined by the amount of alcohol a person drinks over a period of 2 to 3 hours. Binge drinking is common and can result in injuries and death from accidents and violence while also raising the risk for cancer, heart disease, and other chronic conditions.

AUD Diagnosis & Risk Factors

Behavioral based indicators

- ✓ Unsuccessful attempts in limiting or reducing drinking
- ✓ Forgoing or limiting participation in activities at home or work or school

Risk factors

- ✓ Family History
- ✓ Mental Health Co-Occurring Disorders

AUD Impacts

Safety Sign Shadow Matching Game

Laminate Game Board and Game Pieces. Cut out the laminated Game Pieces. Use to match the safety signs to their shadowed shape, practicing the meaning of each sign as you go!



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COVID and the Drinking Surge

60%

Of Americans increased drinking since pandemic began; 34% reported binge drinking ([source](#))

41%

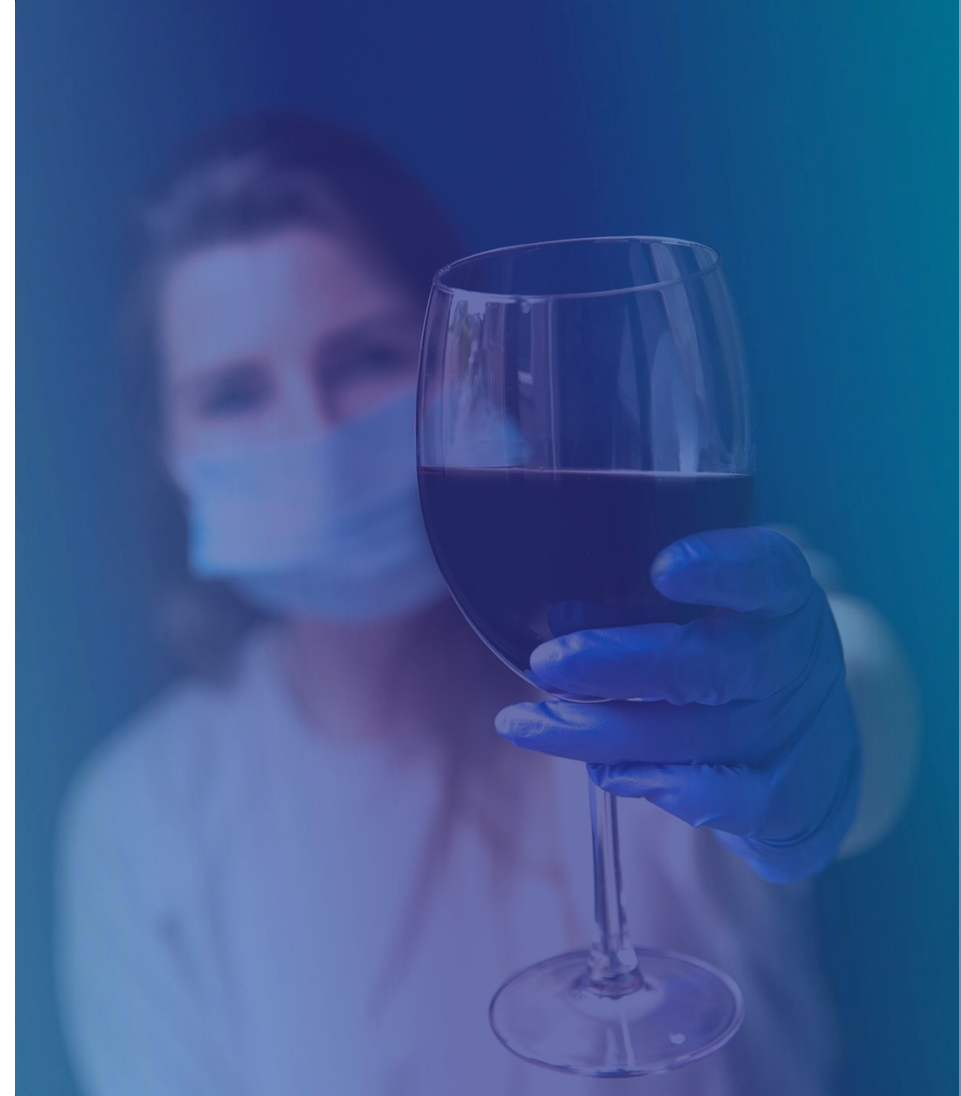
Increase in heavy drinking among women ([source](#))

20%

Increase in beer, wine and liquor sales from 2019 to 2020, resulting in revenues of \$41.9 B ([source](#))

50%

Increase in alcohol-related liver damage referrals at Johns Hopkins, from end 2019 to end 2020 ([source](#))





Workplace Drinking Epidemic

270%

Greater likelihood of accident for workers with an alcohol problem ([source](#))

11%

Of workplace fatality victims test alcohol-positive ([source](#))

35%

Of patients with an occupational injury were at-risk drinkers ([source](#))

21%

Of workers reported that a coworkers drinking jeopardized their own productivity and safety ([source](#))

23-47%

Of workplace accidents are related to alcohol ([source](#))

Logistics/Warehousing Concerns

856K

Forklift operators with no CDL requirement – lacking alcohol testing, proper training, etc. ([source](#))

\$1 B+

Annual cost of fatal injuries in logistics/warehousing sector ([source](#))

11%

Of forklifts involved in an accident each year ([source](#))

10%

Of sector workers are heavy alcohol users ([source](#))





Fleet Management Safety

56K

Commercial drivers with substance abuse violations in 2020 ([source](#))

24K

Heavy and light trucks involved in alcohol-related fatal accidents in 2018 ([source](#))

\$148K

Average cost of a commercial truck accident with one person injured ([source](#))

\$7 MM

Average cost of that accident with a single fatality ([source](#))

Higher Insurance Costs

38%+

Of Workers' Comp claims related to substance abuse in the workplace ([source](#))

3x

The normal level of employee health benefits, as used by substance abusers ([source](#))

300%

Higher medical costs, as incurred by substance abusers ([source](#))

20%

Indicated savings on Workers' Comp *alone*, with utilization of innovative "safety measure" solutions ([source](#))



Treatment Options



Withdrawal & Detox

Medically managed withdrawal or detoxification can be safely carried out under medical guidance.

The most severe form of alcohol withdrawal is known as alcohol withdrawal delirium or delirium tremens (DT's).

Symptoms (which are typically experienced in addition to others caused by alcohol withdrawal) include delirium (confusion), high blood pressure, and agitation.

Medication

Naltrexone. By blocking alcohol from interacting with certain receptors in the brain, naltrexone reduces the pleasurable feelings brought on by alcohol consumption and lessens cravings for alcohol. Naltrexone is often provided as a monthly injection.

Acamprosate. Consumption of alcohol can disturb the balance of certain chemicals in the brain. By helping to re-balance these chemicals, acamprosate lessens the craving for alcohol.

Disulfiram. This medication discourages alcohol use by causing uncomfortable symptoms including nausea, diarrhea, and vomiting when alcohol is consumed.

Professional Services

Family counseling. For people with alcohol use disorder and their families, this form of therapy helps all involved to identify and face consequences of alcohol use in order to support reduction in or abstinence from alcohol consumption.

Mutual help groups. These include 12-step facilitation therapy programs like Alcoholics Anonymous in which participants actively help and support one another in their recovery from alcohol use disorder.

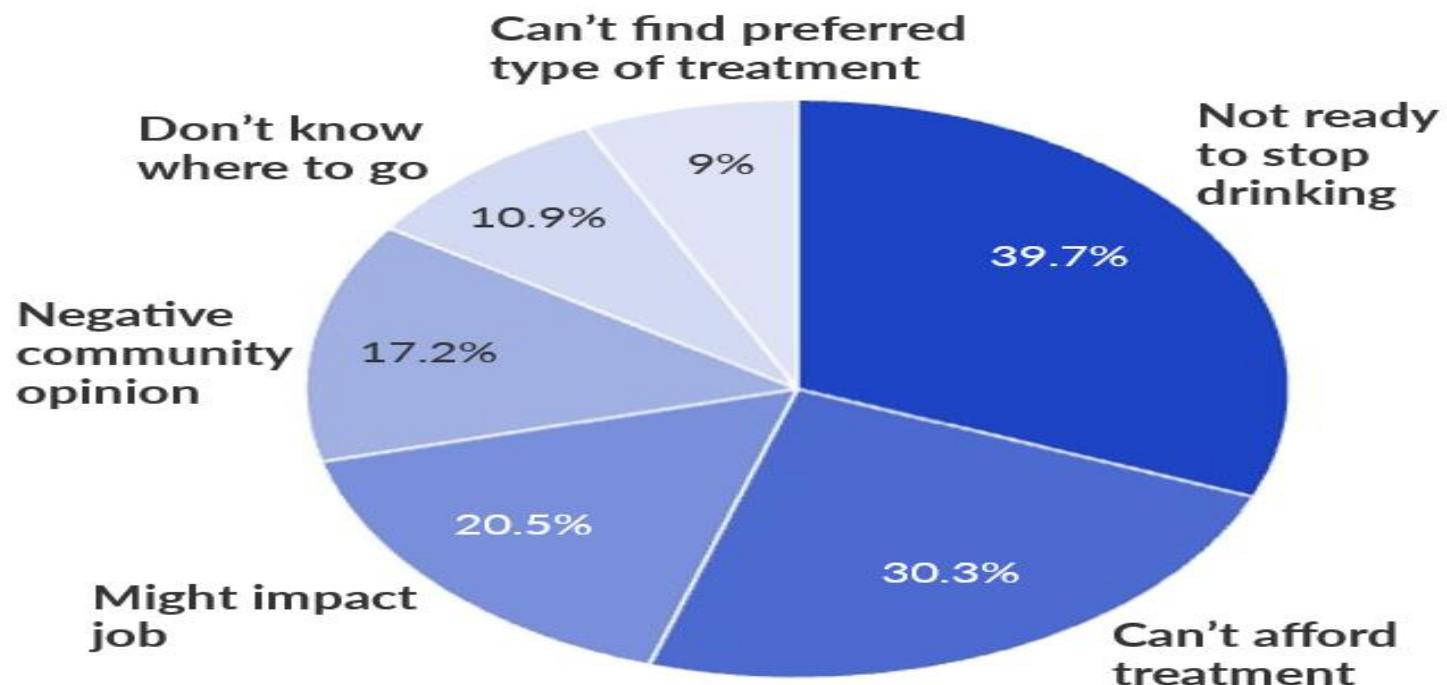
Cognitive-behavioral therapy (CBT). This form of therapy is based on the principle that one's thoughts, feelings, and behaviors can all influence one another. The goal is to help patients reduce or stop alcohol use by adjusting patterns of thinking and feeling that can lead to consumption of alcohol.

Motivational enhancement therapy (MET). This therapy helps people identify and accept ambivalent feelings about drinking with the goal of strengthening a commitment to reduced drinking or abstinence.

Barriers to Success

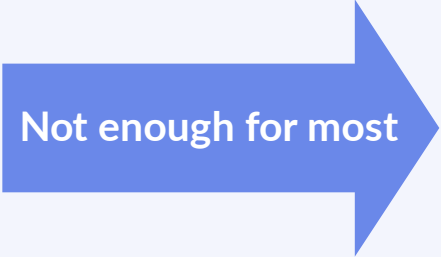
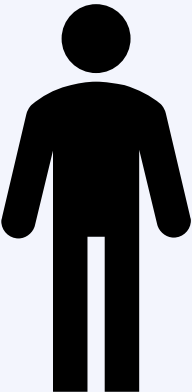
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Significant barriers for treatment



Treatment Gap

Patient Options For AUD Treatment



Residential Rehab



Facility

! CRITICAL

40-50 hours / week

Detox
Peer Support
Behavioral Support

1- 3 months

Freemium apps / Community support groups



Home

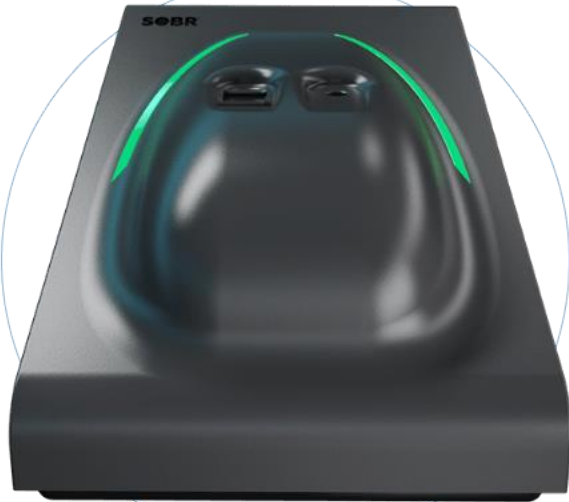
↓ LOW

1-5 hours / week

Peer Support
Digital trackers
Online Chat Forums

Variable Time

Alcohol Screening Technology



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Transdermal – Through the skin



Advanced technology supporting the current substance policy, providing added assurance against alcohol-related incident, financial and reputational risk...while supporting rehabilitation.

SOBRcheck

- ✓ Device placed at entry points
- ✓ Client or resident place hand on device to verify ID, scan for presence of alcohol
- ✓ Real-time entry/vehicle keys approval for alcohol-free clients & residents
- ✓ Compliance Officer notified of failed scans, proceeds to detection protocol
- ✓ Anticipated ~100% compliance rate within 2-3 weeks of install



Compliance Reporting

- ✓ A third-party compliance verification solution
- ✓ Live reporting for easy compliance administration (100% staff daily testing)
- ✓ Secure portal for data access



Dashboard

Common FAQ



- ✓ **SOBRcheck requires no state, federal certification**
- ✓ **Biometric imaging storage only – not fingerprint**
- ✓ **All data secured and password-protected**
- ✓ **Data capacity of 1,000 employees per device**
- ✓ **Microsoft Azure is SOBRcheck's secure cloud platform**
- ✓ **No legal approval is required, as SOBRcheck is just a means to support existing substance policy**



Introducing SOBRsure™

Continuous Alcohol Monitoring
Wearable








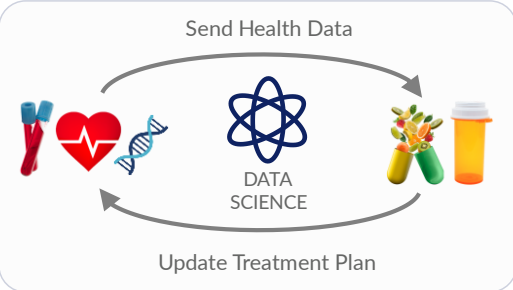






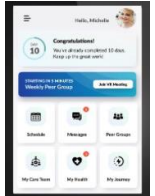

NORTH-STAR

CARE

Personalized, at home virtual rehab powered by
science, technology, and compassion

The Solution

North-Star Care's Products

PRODUCT	PATIENT TOOLS	SERVICES	PURPOSE
 <p>MEDICAL TREATMENT</p>	 <p>Smart Wearables</p>  <p>Lab & DNA Tests</p>	 <p>DATA SCIENCE</p> <ul style="list-style-type: none"> • Safe Home Monitoring • Prescriptions • Key Nutrient Repletion • Genetic Evaluation 	<p>↑ 78%</p> <p>Patient improvement with medication</p>
 <p>BEHAVIORAL SUPPORT</p>	 <p>VR Headset</p>	 <p>Anonymous Avatar</p>  <p>VR Support Meeting</p> <ul style="list-style-type: none"> • Peer Groups • Counseling • Mindfulness • Yoga 	<p>↑ 300%</p> <p>Increase in patient retention with tech-based peer support</p>
 <p>CARE NAVIGATION</p>	 <p>Tablet Device</p>	 <p>Patient Mobile App</p>  <p>Provider Appointment</p> <ul style="list-style-type: none"> • Scheduling • Messaging • Video Conferencing • Health Portal • Education 	<p>↑ 100%</p> <p>Improvement in patient outcomes with care coordination</p>

The Solution

Technology

Mobile App Usability Testing

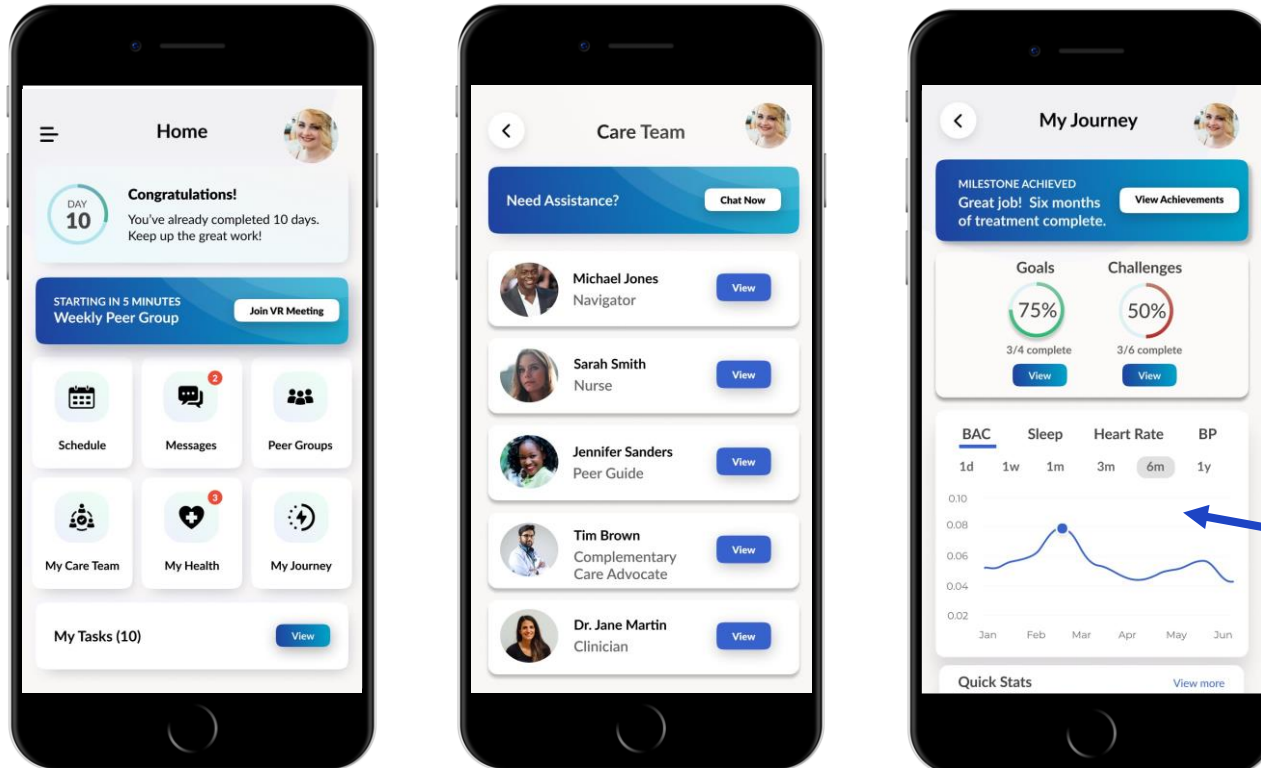
(Nov 2021)



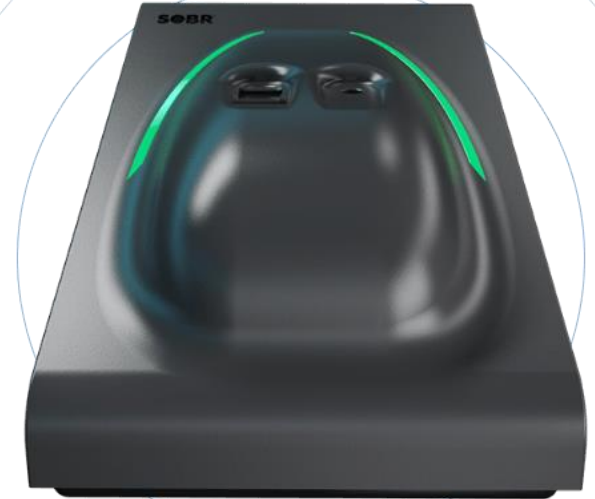
- ✓ SUCCESS RATE **100%**
- ✓ MISCLICK RATE **< 10%**
- ✓ COMPLETION TIME **< 20s**

Mobile App

Seamless patient experience with quick access to daily schedules, provider messaging, health portal, video conferencing, support groups, analytics, and more.



SCREENING



MONITORING

Smart Devices

Using the latest biometric technology, North-Star Care continuously monitors key patient metrics.



- Transdermal Alcohol Concentration (TAC)
- Heart Rate
- Activity Tracker
- Sleep Analysis
- Geolocation

Protective Factors

American Indian/Alaska Native (AI/AN) culture often provides protective factors in AI/AN communities, and culture serves as one of the quintessential pathways toward healing, health and wellness.

Protective factors are elements in a person's life which make it easier to avoid hazard or risk.

Protective factors can come from individuals, families, and communities. The following behavioral, social, familial, or environmental factors may help prevent or reduce the likelihood that an individual may use or become dependent on drugs.

Mending the Broken Circle



Native American Culture has protective factors that helps restore wellness

- ✓ Positive connections to family, community, and friends
- ✓ Cultural and religious beliefs that value harmony and balance
- ✓ Strong coping skills and high self-esteem



Finding Balance

Technology is changing the ways healthcare is delivered –
Telehealth and wearables

Culturally relevant treatment services that have better outcomes

Honoring traditions that balance unity, service to the
community, and sense of belonging

Health and wellbeing that leverages technology and data to save
lives

Want to learn more?

Contact us.

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