Refocus on Alcohol Dependence (ROAD) Pilot Project Report

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Authors and ROAD team members:
Dr. Jody Kamon, Lead Evaluator, Center for Behavioral Health Integration
Dr. Lisa Watts Natkin, Evaluator, Center for Behavioral Health Integration
Dr. Javad Mashkuri, ROAD Project Director, Central Vermont Medical Center

ROAD team members:
Kate Burkholder, Clinical Supervisor, Treatment Associates
Hilary Denton, Recovery Program Manager, Turning Point Center of Central Vermont
Jennette DiFazio, Counselor, Treatment Associates
Jamie Keough, Peer Recovery Coach, Turning Point Center of Central Vermont
Amber Thomas, Counselor, Treatment Associates

THE University of Vermont HEALTH NETWORK
Central Vermont Medical Center

Treatment Associates, Inc

TURNING POINT CENTER Central Vermont

Center for Behavioral Health Integration, LLC

Statement of Need:

Prior to the establishment of ROAD, there was no system of care for Alcohol Use Disorder (AUD) in Central Vermont, despite data that suggest an overwhelming unmet need. Problematic alcohol use is a widespread concern and Vermonters' alcohol use is among the highest in the country. In 2020, Vermont had the 8th highest prevalence of AUD.[7] Compared to the U.S., Vermont's past 30-day alcohol use is significantly higher (60.9% vs. 50.9%) and past 30-day binge alcohol use is higher (26.1% vs. 24.2%).[8] Locally collected data indicate that from March 2021-February 2022, 917 people were diagnosed with AUD in our catchment area, higher than the number of new opioid use disorder (OUD) diagnoses.[10]

This problem is negatively impacting the health of our population. Alcohol-attributable deaths steadily increased from 2012 to 2016 across the state (275 to 342), with 3.6 times as many alcohol-attributable deaths as opioid overdose deaths in 2016.[11,12] These deaths are primarily due to chronic alcohol-related conditions, although deaths due to acute conditions have grown at a faster rate.[11] From 2012 to 2016 alcohol poisoning deaths increased by 129%.[11] While alcohol-attributable deaths were increasing, the number of Vermonters in treatment for AUD steadily decreased during the same timeframe (4,061 vs. 3,340).[11]

In 2020, as the pandemic unfolded, the State established VTHelplink (www.vthelplink.org), a statewide, public resource for finding substance use treatment and recovery services in Vermont. In 2021, nearly triple the amount of people in our catchment area sought help through VTHelplink for alcohol than for any other substance:[8] alcohol: 58%, heroin and other opioids: 18%, stimulants: 13%, cannabis and other hallucinogens: 8%, other depressants: 3%.[13] However, within our catchment area**, the percent of people with AUD who initiated treatment was significantly lower than those with OUD *which has the established Hub & Spoke system of care* (OUD: 81% vs. AUD: 34%) and the percent who engaged in services over time was even worse (OUD: 62% vs. AUD: 11%).**[14] Thus, the development of the ROAD program (defined below) was an effort to develop a system of care for AUD which could have a positive impact for Washington County and Vermont.

ROAD Program Background

The Refocus on Alcohol Dependence (ROAD) program is a community treatment pathway that can help people quit or reduce risky drinking. ROAD was a pilot project aimed to refine the clinical protocol(s) and referral pathways to treatment for individuals diagnosed with Alcohol Use Disorder (AUD) in the Central Vermont Medical Center (CVMC) Emergency Department (ED). ROAD aimed to make getting help easier and more accessible by using a low barrier approach to AUD care that is designed to help people get the help they need when they needed it.

The ROAD pilot program was a partnership between CVMC, Treatment Associates (TA), and the Turning Point Center of Central Vermont (TPCCV). Staff from these three entities worked closely together to establish the beginnings of a system of care for AUD. Essentially, when individuals from the target population defined below were admitted to the ED, the ED followed specific protocols designed to identify and address immediate needs. One central step within the protocol was to engage a recovery coach to meet with the individual while they were still being treated in the ED. The goal of this initial meeting was to make a connection with the individual and engage them into committing to continued community-based services and supports post-ED visit.

These services and supports specifically included scheduling an intake appointment with TA to pursue outpatient substance use treatment for their alcohol use and to engage in peer recovery services and supports through the TPCCV. When an individual agreed to TA services, the recovery coach obtained permission to release their information to TA so that TA could reach out to them to schedule an intake appointment. In addition, the recovery coach obtained a similar release allowing the peer recovery coach to reach out to them as well. With permission, TA and TPCCV staff would reach out to the individual within days of their release from the ED to engage them into services and supports. The hope is that through the connection within the ED and the assertive outreach by the community providers and supports, more individuals would engage in services and supports designed to help them reduce their alcohol use.

The target population of the pilot project was individuals who present at the CVMC ED with the following: alcohol intoxication, alcohol withdrawal or request for alcohol medication assisted withdrawal services, and/or an AUDIT-10 score associated with moderate-severe AUD. The geographic rural area was Central Vermont Medical Center's (CVMC) catchment area, which included Washington County and five towns in Orange County, Vermont. CVMC recognizes that accessing culturally appropriate services in dispersed rural communities is a challenge, even more so for under-resourced populations who are disproportionately burdened by behavioral health disparities, making the need for inclusive efforts like ROAD critical.

Goals and objectives

- Develop the Hub and Spoke model for AUD
- Increase referrals to specialty substance use treatment
- Increase in the number of referred individuals who initiate specialty substance use treatment services
- Ensure individuals referred are able to access specialty substance use treatment services in a timely manner
- Ensure individuals at CVMC's ED are connected with and offered Peer Recovery Services and Supports
- Reduce alcohol use among individuals taking part in ROAD services

ROAD funding for 2021-2022 was provided by the Division of Substance Use Programs (DSUP). Additional quality indicators identified through the grant from DSUP included:

- After the implementation date, at least 50% of CVMC ED patients who meet criteria for inclusion in ROAD are referred to the Hub (TA).
- After the implementation date, as least 75% of CVMC ED patients who meet criteria for inclusion in ROAD and are referred to the Hub (TA) have scheduled an appointment.
- At least 50% of CVMC ED patients who meet criteria for inclusion in ROAD and have a scheduled appointment receive a service from the Hub within three business days.

Methods

The CVMC Emergency Department (ED) identified and tracked patients that presented with alcohol intoxication, withdrawal syndrome, or were requesting medically assisted withdrawal services (in the past, commonly referred to as "detox"). ED staff informed the TPCCV recovery coaches that a patient who is eligible for the ROAD program presented to the ED. As mentioned above, a recovery coach would meet with the patient letting them know about the ROAD program encouraging them to enroll in the ROAD program. If the patient decided to enroll, they would sign consent paperwork, answer demographic questions, and answer the AUDIT C questions. The recovery coach or ED staff would enter that data, information about medications administered, and discharge plans into a HIPAA compliant, secure data collection platform, REDCap. When medically indicated, patients were admitted to CVMC Inpatient units from the ED at which point, inpatient staff would complete another REDCap survey sharing information about medications given at discharge from inpatient and the disposition plan. When discharged from the ED or inpatient units, ROAD patients were referred to TA, TPCCV, their primary care physician, or other treatment programs.

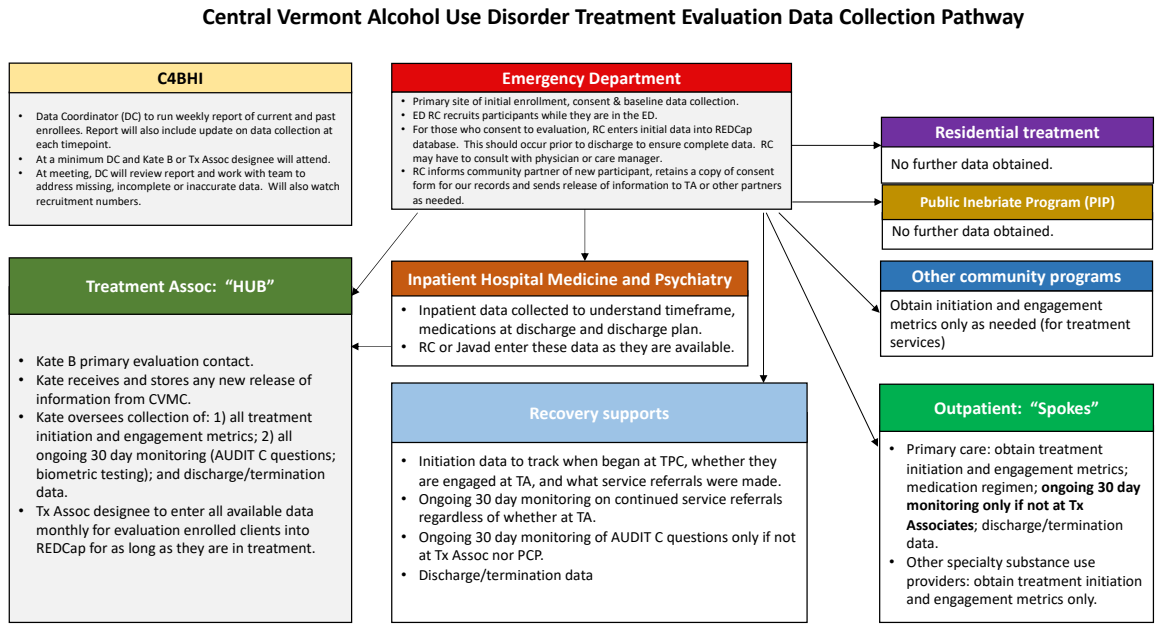
To measure ROAD engagement, staff at CVMC's ED and inpatient units, TA and TPCCV tracked enrollment, initiation and engagement into respective programs and services. Tracking included variables such as the date of first contact, first appointment offered, intake conducted, physician visit, and medication prescribed.

To measure severity of alcohol use at intake into the ED, participants are asked to complete the full, ten-item version of the World Health Organization's Alcohol Use Disorders Identification Test (AUDIT). The AUDIT score ranges from 0 to 40 with higher scores being indicative of greater severity of alcohol use disorder. To measure changes in alcohol use over time, both TA and TPCCV staff asked participating individuals to complete the first three items of the AUDIT on a monthly basis for as long as they were engaged in TA or TPCCV for a maximum of six months post ED

visit. The first three items can be scored on their own, referred to as the AUDIT C. These items ask about frequency of drinking, the typical number of drinks per drinking occasion, and the frequency of binge alcohol use. For analyses overtime, if a participant had multiple months where they completed the AUDIT C, the last timepoint was used.

The time period for data collection ranges from October 18, 2021 through August 31, 2022. Please see Figure 1 for a visual representation of the data collection pathway.

Figure 1: Data Collection Pathway

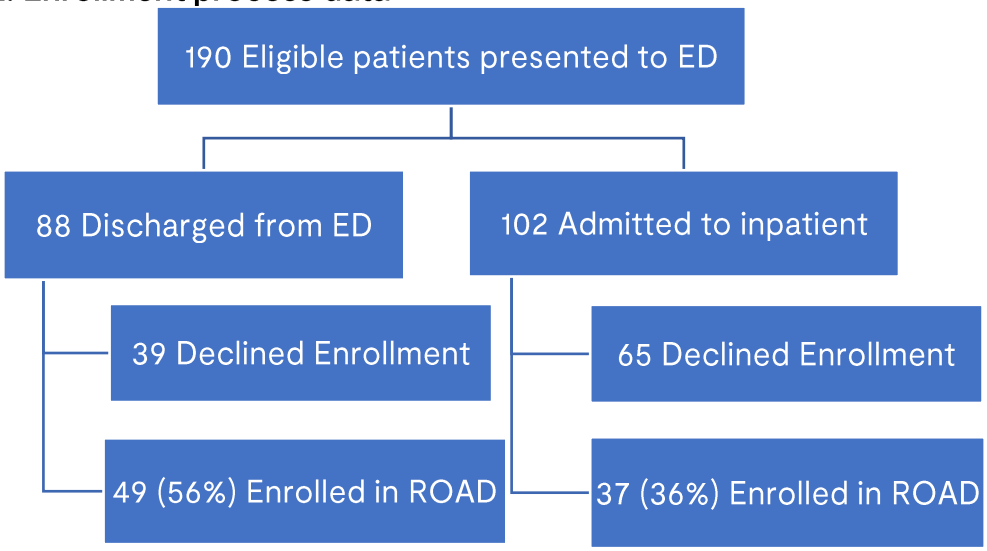


Results

Patient Engagement into the ROAD program:

190 patients presenting to the ED were found to be eligible for the ROAD program and 45% (n=86) of those patients enrolled in the ROAD program. More than half of the eligible patients that presented at the ED (54%), were admitted to Inpatient (n=102). As reflected in Figure 2., patients were more likely to enroll in ROAD if they were seen solely in the ED vs. being subsequently admitted to inpatient services (56% enrolled vs. 36% enrolled respectively).

Figure 2. Enrollment process data



Demographics

Almost three-quarters (n=63, 73%) of the ROAD enrollees identified as male, while 27% (n=23) identified as female. The average age of participants was 44.2 (SD = 12.9) with ages spanning from 23 to 80 years of age. There were no significant differences by participant gender or age in who enrolled in ROAD.

Medications

While in the Emergency Department and Inpatient services, medication assisted treatment for Alcohol Use Disorder (AUD) and Alcohol Withdrawal Syndrome (AWS) were initiated. Table 1. details the types of medications provided within the ED and inpatient units for ROAD enrollees. On average, patients across all settings were prescribed 1.2 medications (SD = 0.85). In addition, patients were asked if they have used opioids in the weeks prior to their ED admission, 13% reported opioid use.

Table 1. Medications received

Medications received				
	In ED (n=86)	ED Discharge (n=49)*	Inpatient Discharge (n=37)	TA Initial (n=41)
Gabapentin	33	39	26	17
Naltrexone	20	35	20	13
Acamprosate	0	0	1	1
Benzodiazepines	8	2	1	1
Clonidine	1	0	0	0
Phenobarbital	42	0	0	0
Other**	0	0	2	2
None received	4	5	5	5

*Individuals admitted to inpatient are excluded from ED discharge; **Other included Antabuse, methadone, Remeron, Suboxone

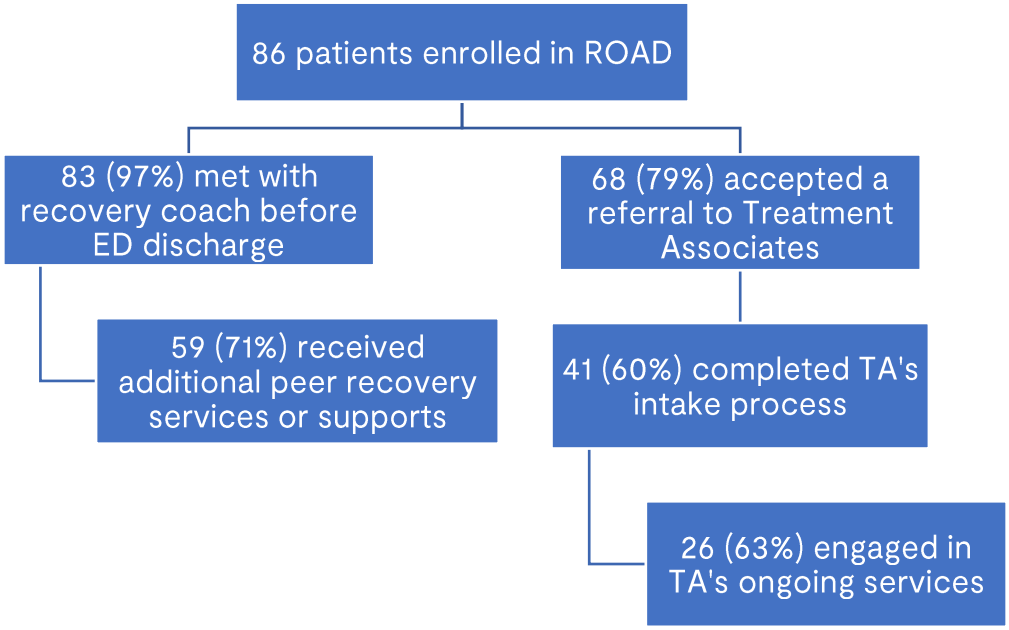
The ROAD team tracked referrals made when individuals were discharged from CVMC's ED and inpatient services. Table 2. reflects the percent of individuals referred to different community-based services.

Table 2. Referrals to community-based services

Treatment Associates	79%
Other substance use treatment providers	10%
TPCCV peer recovery services	73%
Primary care practice/physician	24%
Home health services	3%
Other	9%

Figure 3 below shows the level of engagement in services once patients were discharged from CVMC. Turning Point Center of Central Vermont (TPCCV) recovery coaches engaged with 97% (n=83) of the 86 patients that enrolled in ROAD ***prior to their discharge from CVMC.*** Of the 86 enrolled patients, 79% (n=68) accepted a referral to TA and of those who were referred to TA, 60% (n=41) completed TA's intake process. Of the 41 patients who completed TA's intake process, 26 (63%) engaged in TA's outpatient counseling services.

Figure 3. Engagement in treatment and recovery services among ROAD enrollees



Regarding recovery services and supports, after individuals were discharged from CVMC, TPCCV recovery coaches successfully followed up and met with 71% (n=59)

of the 83 patients to offer recovery coaching and other peer recovery supports and services through the TPCCV. Recovery coaches also connected with 15% (n=10) of the 68 patients referred to Treatment Associates (TA) between their visit to CVMC and their intake appointment at TA. ***Importantly, 77% (n=66) of individuals enrolled in ROAD engaged in services and supports through Treatment Associates, the Turning Point Center of Central Vermont or both.***

Exploratory analysis of predictive factors for patients who initiated (defined as attending an intake appointment) and engaged (defined as two additional services within 30 days) in services at TA were conducted (e.g., age, gender, Audit score, inpatient admittance, and number of medications administered); however, there were no significant predictors of treatment initiation and engagement at TA.

Audit Results

As shown in Table 3 below, patients entered with elevated scores on the full AUDIT. Scores above 24 are considered to be in the highest risk or severe category indicating the presence of an Alcohol Use Disorder. Follow up data collected over time were obtained from 33 participants. The mean days between the ED intake and the follow up data collection timepoint used in analyses was 82.7 (SD = 49.4, Range = 20 to 205). At the ED intake, as shown in Table 3, there was a significant drop in AUDIT C scores over time, as well as in each individual item of the AUDIT C. This drop was driven largely by the fact that 21 (64%) of the 33 individuals reported complete abstinence from alcohol use at the follow up timepoint.

Table 3. AUDIT scores at intake and over time

	Intake	Follow up	t-test
Intake data (n=86)			
Mean FULL AUDIT score	30.3	not collected	
AUDIT Risk Level:*			
Low risk	6%		
Moderate risk	16%		
Severe risk	76%		
Data over time (n=33)			
Mean AUDIT C score**	10.8	2.2	12.0
Percent abstinent from alcohol	0%	64%	n/a
How often do you have a drink containing alcohol?**, ***	3.7	0.9	10.4
How many drinks do you have on a typical day you are drinking?**, ***	3.4	0.7	12.9
How often do you have X (5 for men; 4 for women & men over age 65) or more drinks on one occasion?**, ***	3.7	0.6	12.0

*2 patients were missing a full AUDIT score at intake;
**all tests statistically significant at p<.001;
***Response for each AUDIT C item range from 0=never or 1 drink to 6=daily or 10+ drinks.

Snapshots of success

The ROAD project team witnessed a significant degree of success among patients enrolled in the ROAD pilot program. Below are four brief snapshots of individuals positively impacted by the program. Individual details have been modified to ensure anonymity.

John, was an elderly man who on average, drank one to two drinks each night throughout his adult life. Unexpectedly, he lost his longtime partner. John began drinking more and more alcohol as a way of coping with the grief of losing their partner. John eventually ended up in the Emergency Department where he was appropriately screened and agreed to enroll in the program. John was referred to Treatment Associates. After his intake at TA, John began meeting weekly with a counselor. Counseling supported him to process his grief and to date, John has successfully cut down to his past healthy limits of one to two drinks a day.

Sara recently lost her job due to her alcohol use. Sara presented at the Emergency Department where she was approached by a recovery coach to enroll in the ROAD program. Sara was referred to Treatment Associates where she completed an intake and agreed to outpatient counseling. In the early stages of her treatment, Sara struggled and continued to have relapses every few weeks until a particular incident happened which resulted in her spending a night in jail. Sara returned to counseling with renewed motivation and began attending multiple groups per week. In addition, she sought out a recovery coach through Turning Point and started working with Working Fields to find employment. Sara is currently employed full time, in recovery and feeling positive about her future.

Carl is a working professional who reports losing his job and his partner due to his alcohol use. Carl ended up in the Emergency Department after months of heavy drinking and agreed to enroll in the ROAD program. Carl was referred to Treatment Associates where he met individually with a counselor for several months. During this time, Carl was able to achieve and maintain sobriety, secure a new job and reconnect with friends. While Carl successfully graduated from Treatment Associate's outpatient program, he relapsed and was readmitted to the Emergency Department. Despite feeling embarrassed about his relapse, he was approached by a recovery coach, reenrolled in the ROAD program and reengaged in counseling again.

Tom was evaluated in the Emergency Department for alcohol use and provided phenobarbital in the ED to manage his alcohol withdrawal symptoms. He had just completed his titration from methadone and had been off of it completely for a week. Tom had begun drinking more to compensate for stopping his methadone medication. After hearing about the ROAD program, Tom decided he would like to try the ROAD program. He was unemployed, without medical insurance at the time, and his score on the Alcohol Use Disorders Identification Test was 40 (highest score possible). Tom opted to work with a peer recovery coach and chose not to attend outpatient treatment services. While working with a recovery coach, Tom also

attended recovery groups daily at the Turning Point Center of Central Vermont. In the following months he continued to abstain from substance use, continued his medication assisted treatment with gabapentin and briefly tried monthly naltrexone injections. He enrolled in a health insurance plan and secured full time employment. At the time, Tom shared that his new job was going well and his family is more supportive of him than ever. When Tom had nine months of recovery time, he had a brief return to alcohol use. He was able to quickly return to his goal of recovery; now has 3 weeks of sobriety and is taking gabapentin again. He acknowledged the medication helps him and he continues to talk weekly with his recovery coach about coping skills and relapse prevention techniques.

Discussion

Alcohol Use disorder (AUD) is a challenging disease to treat. The clinical vignettes demonstrate some very important principles of AUD and its treatment. Often, social determinants of health play a significant role in the lives affected by AUD: employment, housing security, transportation, interaction with the criminal justice system can impact treatment in a positive and or negative manner. Despite the fact that a return to use (relapse) is not a failure of treatment but rather part of the disease process itself, those with AUD experience significant shame and stigma which can prevent them from seeking and staying engaged in care. Ongoing, accessible services and supports need to be in place to mitigate AUD's negative impact on recovery. Such services and supports can be in the form of counselors, family, peers with lived experience and medication when appropriate to name a few. The goal of the ROAD pathway is to create an environment for successful recovery by providing low barrier access to care, a variety of treatment options, and integrated peer services to assist with intake and linkage to care. The care one receives can range from Intensive Care Unit admission for life threatening alcohol withdrawal syndrome to utilization of recovery centers for meetings and counseling from peers with lived experience who assist with the development of a recovery plan. There is no "one size fits all" strategy that works for everyone.

ROAD year one pilot data includes a relatively young population of patients struggling with AUD (mean age = 44.2). The patient population exhibits significant risky use as evidenced by the high AUDIT scores at intake. Within central Vermont, rates of treatment initiation and engagement for those with AUD are low (34% and 11% respectively). Importantly, among this high risk, acute population, the ROAD team was able to engage 77% of individuals into formal substance use treatment and/or peer recovery coaching and other supports (8% engaged in treatment only, 45% engaged in peer supports only, and 23% engaged in both). Among ROAD enrollees, the treatment engagement rates were three times as high alone.

While the sample size among ROAD participants is small, the results are encouraging. The ROAD pilot program demonstrated initial effectiveness in several areas. First, it

is clear that having peer recovery coaches connect with individuals within the ED can increase post-hospital initiation and engagement of community-based treatment and peer recovery services. In addition, data highlighted the critical value of ongoing peer recovery services and supports in helping to reduce individuals' drinking. While a significant proportion of individuals did not seek treatment services, they did seek ongoing recovery services. Within the field of substance use, peer-based recovery services and supports have been found effective in reducing not only substance use but also supporting other life domains critical to recovery (employment, housing, mental health, etc.)[15]. ROAD saw similar results in that individuals significantly reduced their alcohol use.

While the ROAD program demonstrates promise, the program also experienced challenges. Only 45% of those approached in the ED decided to enroll in ROAD. People seek care in the ED when they are in acute pain or discomfort. On the one hand, those experiencing negative consequences related to their AUD might be more motivated to seek treatment and recovery resources, others might be so focused on relieving their acute state that they do not wish to think beyond the immediate. Thus, considering ways to increase overall enrollment into ROAD would be important and may require follow up with these individuals post-hospital visit. In addition, two limitations of the data are that a) data are all self-report; and b) the follow up sample measuring change only includes those who remained engaged. It is possible that those who did not fully engage in services experienced positive gains towards recovery independently.

In summary, despite these limitations, the ROAD pilot program shows promise in engaging individuals with severe AUD into community-based services and supports and ultimately, in reducing alcohol use and its related consequences. Additional resources are needed to help establish and fully evaluate programs such as ROAD.

References

1. Preliminary data retrieved from Vermont Department of Health, Division of Alcohol and Drug Abuse Prevention sponsored pilot project at Central Vermont Medical Center, October 2021-March 2022
2. Pullen E, Oser C. Barriers to substance abuse treatment in rural and urban communities: counselor perspectives. *Subst Use Misuse*. 2014;49(7):891-901. doi:10.3109/10826084.2014.891615
3. Education Development Center. Preventing Substance Misuse in Rural Settings. Developed under the SAMHSA's Center for the Application of Prevention Technologies task order. https://preventionsolutions.edc.org/sites/default/files/attachments/Preventing-Substance-Misuse-in-Rural-Settings.pdf
4. U.S. Census. https://www.census.gov/quickfacts/washingtoncountyvermont

5. Vermont Department of Health. Washington County Community Profile. https://www.healthvermont.gov/sites/default/files/documents/pdf/ADAP_RPP_Data_WashingtonCty.pdf December 2020
6. U.S. Census. https://data.census.gov/cedsci/table?tid=ACSST5Y2019.S1501&g=0500000US50023
7. SAMHSA. 2019-2020 National Survey on Drug Use and Health: Model-Based Prevalence Estimates (50 States and the District of Columbia). Excel.
8. SAMHSA. 2018-2019 National Survey on Drug Use and Health: Model-Based Prevalence Estimates (50 States and the District of Columbia). https://www.healthvermont.gov/sites/default/files/documents/pdf/NSDUH_VT_Detail_2018_2019.pdf
9. Nelson, D. E., Naimi, T. S., Brewer, R. D., & Roeber, J. (2010, September). US state alcohol sales compared to survey data, 1993-2006. https://www.ncbi.nlm.nih.gov/pubmed/20626370.
10. Data retrieved for HRSA RCORP PIMS submission, Central Vermont Medical Center Epic EMR, March 2021-February 2022.
11. Vermont Department of Health, Division of Alcohol and Drug Abuse Prevention. Alcohol-Attributable Deaths in Vermont Data Brief. December 20, 2017. https://www.healthvermont.gov/sites/default/files/documents/pdf/ADAP_Data_Brief_AlcoholDeath.pdf
12. Vermont Department of Health, Division of Alcohol and Drug Abuse Prevention. Opioid-Related Fatalities by County of Residence and County of Death (Vermont and Non-Vermont Residents). 2018. https://www.healthvermont.gov/sites/default/files/documents/pdf/ADAP_2018_Opioid_Death_by%20County.pdf
13. Data retrieved from Vermont Department of Health, Division of Alcohol and Drug Abuse Prevention, VTHelplink. 2021. www.vthelplink.org
14. Improving Access to Substance Use Disorder Treatment. Vermont Department of Health, Vermont Department of Health Access. August 2020. https://www.healthvermont.gov/sites/default/files/documents/pdf/ADAP-2019InitiationAndEngagementForSUD.pdf
15. Bassuk, E.L., Hanson, J., Greene, N., Richard, M., & Laudet, A. (2016). Peer-delivered recovery support services for addictions in the United States: A systemic review. *Journal of Substance Abuse Treatment, 63,* pp 1-9.