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Vermont Center on Behavior & Health
The University of Vermont

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LARNER COLLEGE OF MEDICINE

# Disseminating Evidence Based Interventions for Treating Opioid Use Disorder into Rural Communities

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*College of Medicine*

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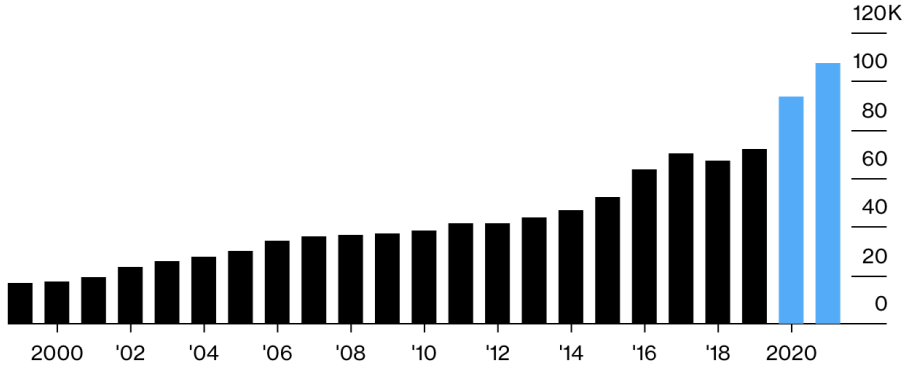
# The US Opioid Crisis

- The US opioid epidemic remains a **severe public health crisis**
- Overdose (OD) deaths:
  - Have continued to increase, with a sharp rise during the COVID-19 global pandemic to surpass 100,000 deaths in 2021 (Figure 1).
  - Opioid-related OD deaths have shown a similar pattern, with >70% of deaths occurring among males (Figure 2).

- Annual economic cost
  - Fatal opioid ODs estimated at $550 billion
  - Economic costs of OUD estimated at $471 billion
  - Combined cost is a staggering $1.02 trillion

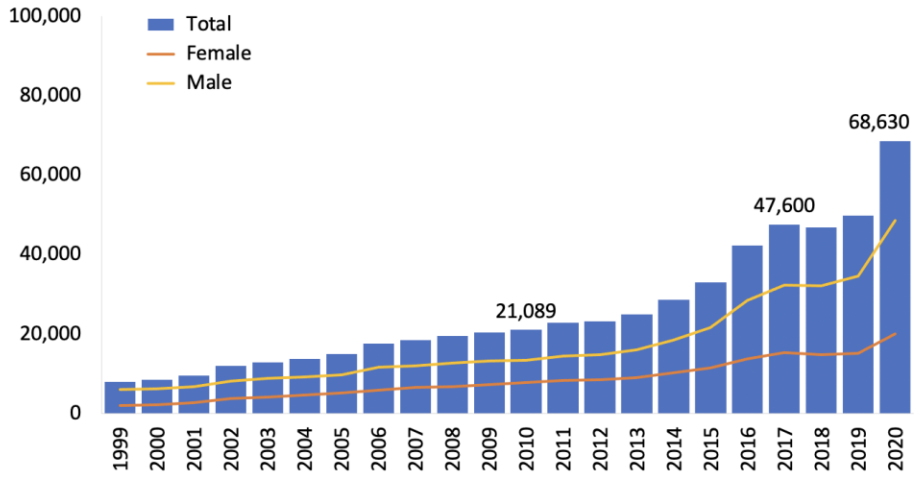
Luo & Florence, 2021

US drug overdose deaths soared during the Covid-19 crisis




Source: National Center for Health Statistics, National Vital Statistics System, Mortality.

**National Overdose Deaths Involving Any Opioid, Number Among All Ages, by Gender, 1999-2020**




*Among deaths with drug overdose as the underlying cause, the any opioid subcategory was determined by the following ICD-10 multiple cause-of-death codes: natural and semi-synthetic opioids (T40.2), methadone (T40.3), other synthetic opioids (other than methadone) (T40.4), or heroin (T40.1). Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2020 on CDC WONDER Online Database, released 12/2021.

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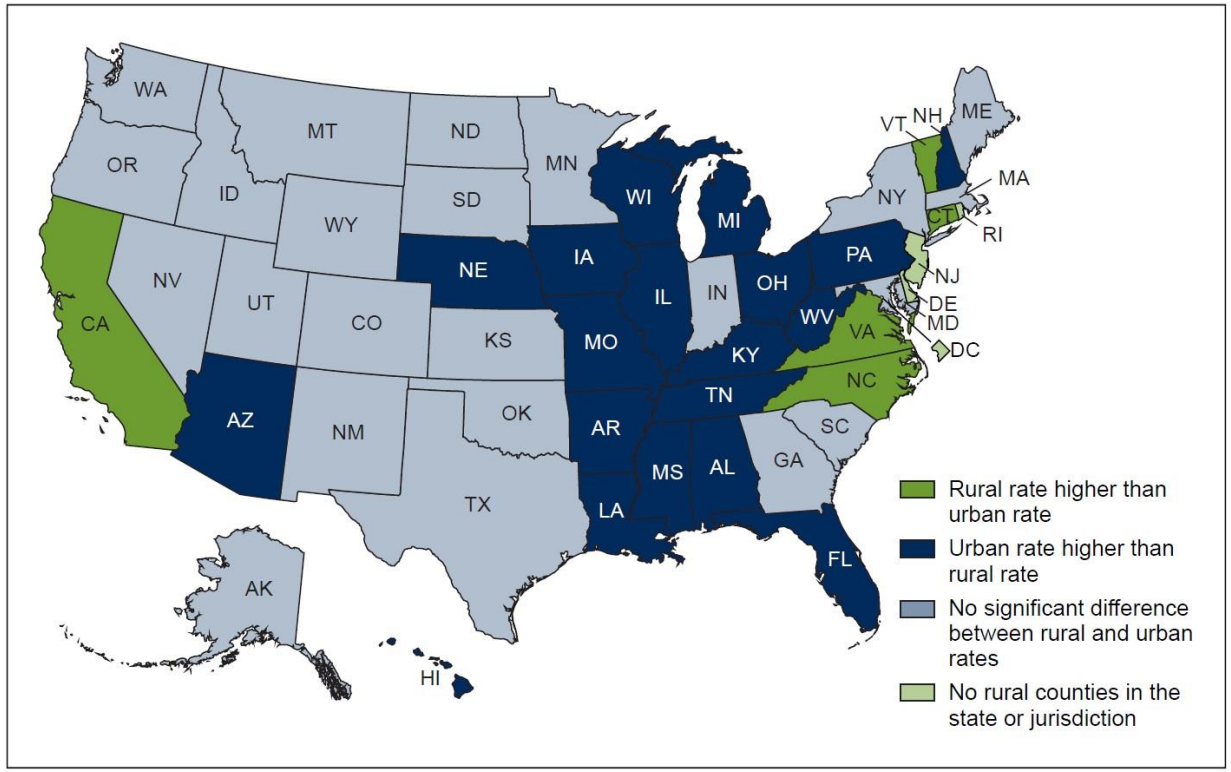
# Opioid Overdose in Rural Areas

- From 1999 through 2019, **drug overdose deaths increased** from 4.0 per 100,000 to 19.6 in rural counties

- In 2019, **rates of drug overdose deaths in rural counties were higher than in urban counties** in California, Connecticut, North Carolina, Vermont, and Virginia.

- Compared to their urban counterparts, data also suggest that rural people with OUD have:
  - Higher prevalence of **prior OD**
  - Poorer knowledge about **opioid OD risk factors**
  - Poorer knowledge of **OD response strategies**




Dunn et al., 2016; Hedegaard & Spencer, 2021

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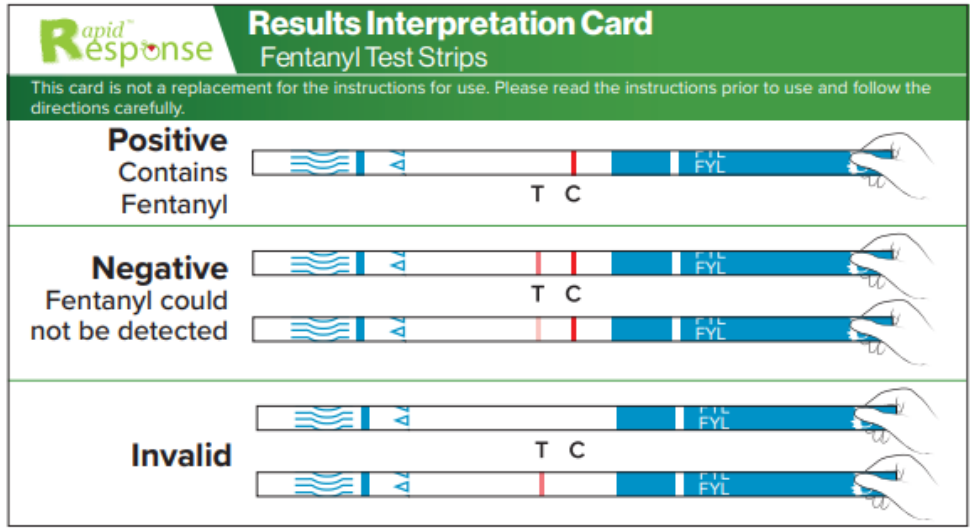
# Harm Reduction: Test Strips

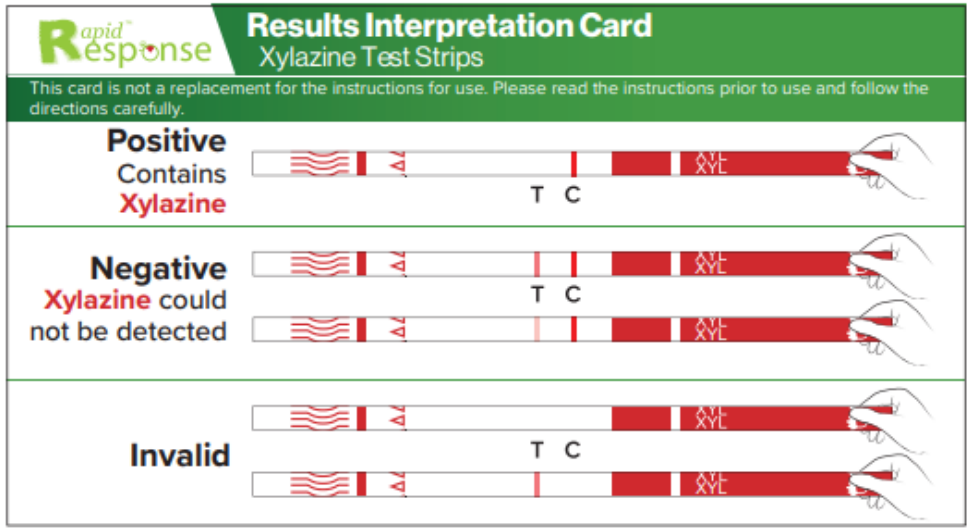
## Fentanyl

- Available in the US since 2011
- Intended for testing urine
- Off-label use testing drug sample diluted in water
- 96% sensitivity, 90% specificity
- State laws vary (i.e., legal harm reduction supplies vs. illegal "drug paraphernalia")

## Xylazine

- Newly available in the US in Spring 2023
- Intended for testing drug sample diluted in water
- 100% sensitivity; 85% specificity
- Cross-reacts with lidocaine (false-positives are common in cocaine samples containing lidocaine as an adulterant)




CDC (2022). https://www.cdc.gov/stopoverdose/fentanyl/fentanyl-test-strips.html; BTNX (2023). https://www.btnx.com/HarmReduction

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# Treatment for Patients with OUD

- Effective approaches to prevent overdose and counter adverse effects:
  - **Distribute naloxone** for overdose reversal
  - **Increase availability of effective OUD treatment**, particularly agonist maintenance

- Agonist medications for OUD (**MOUD**: buprenorphine, methadone) represent the most efficacious treatment for OUD:
  - **Longer-acting** opioids
  - Administered daily
  - **Less euphoric effects; greater safety;** reduced withdrawal and cravings; lower illicit opioid use; reduced risk behaviors for infectious disease, etc.
  - **More effective than non-pharmacological approaches** for:
    - Retaining patients in treatment
    - Reducing illicit opioid use
    - Reducing all-cause and opioid-related mortality
  - **Long-term treatment** is recommended and associated with better outcomes


NIDA, 2022

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# Treatment for Patients with OUD

## Methadone

- Long-acting full opioid agonist that binds to and occupies mu-opioid receptors, prevents or reverses withdrawal symptoms, reduces craving for opioids
- Limitations
  - Produces/maintains dependence on opioids
  - Full opioid agonist
  - Relatively strict rules for dispensing
  - Risk of overdose death for non-tolerant individuals

Dole, 1969; Jaffe, 1990; Larochelle et al., 2018; Mattick et al., 2009; Ward, 1992


## Buprenorphine

- Partial opioid agonist associated with less euphoria & sedation vs. full agonists (e.g., methadone)
- Associated with less craving & illicit opiate use vs. placebo
- Similarly effective as moderate doses of methadone on:
  - Treatment retention
  - Reducing illicit opioid use
  - Opioid craving
- Available in a general medical setting without rigid regulatory regulations and required daily observation of dosing

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# Opioid Treatment in Rural Areas

- Despite the efficacy of MOUD, **only 22% of Americans with OUD received treatment in the past year**.
- While office-based buprenorphine is compatible with rural, sparsely-populated areas, **treatment remains underutilized, especially in rural and remote areas** where
  - over half of counties lack a single provider, and
  - providers also often carry far fewer patients than permitted
- **Innovative approaches are urgently needed to expand access** to evidence-based treatments for OUD in rural areas

Andrilla et al., 2021; Jones et al., 2015; SAMHSA, 2022; Sigmon, 2014, 2015

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**September 2019:** Three Rural Centers of Excellence on Substance Use Disorders (RCOEs) established with support from the Health Resources & Services Administration (HRSA) Rural Communities Opioid Response Program

**Their mission:** To support rural providers and staff in their efforts to treat patients with substance use disorders, with an overarching aim of expanding addiction treatment capacity in HRSA-designated rural counties.

- **UVM CORA's mission: To provide consultation, resources, education, and technical assistance in evidence-based best practices to healthcare providers and staff in our rural communities.**




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# UVM CORA Objectives

Leverage expertise in evidence-based practices for treating OUD and other SUDs to:

- **IDENTIFY** real-time needs of rural communities and science-supported methods for effectively addressing current and future addiction treatment needs.
- **DELIVER** ongoing technical assistance and workforce training to support the effective use of best practices for assessing and treating rural patients.
- **DISSEMINATE** education and resources on evidence-based treatment and prevention to rural providers and policymakers.

## SURVEILLANCE & EVALUATION

- Conducts **baseline needs assessments (BNAs)** to identify real-time needs and barriers in rural communities
- Assist providers and practices with establishing and improving data systems
- Monitors drug use patterns in rural communities

## BEST PRACTICES

- Provide in-person and remote **technical assistance** to implement evidence-based practices
- Provide **hardware, software, resources** and training in new and expanded models of care and delivery

## EDUCATION & OUTREACH

- **Community Rounds Webinar Series**
- Quarterly **Newsletter**
- **Research Spotlights**
- Resource Library & Online **Learning Collaborative**

## CLINICAL & TRANSLATIONAL

- **Provides consultation & peer mentoring** in evidence-based treatment and patient-centered care coordination
- Clinical and Translational **Scholarship Program**
- **Clinician Office Hours** program

## Overdose Prevention and Management





## Pharmacotherapies

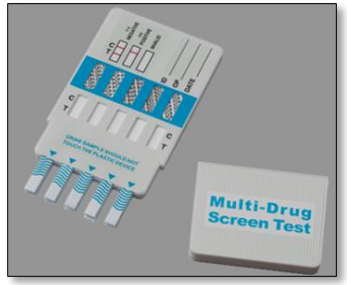


## Technology-Assisted Components

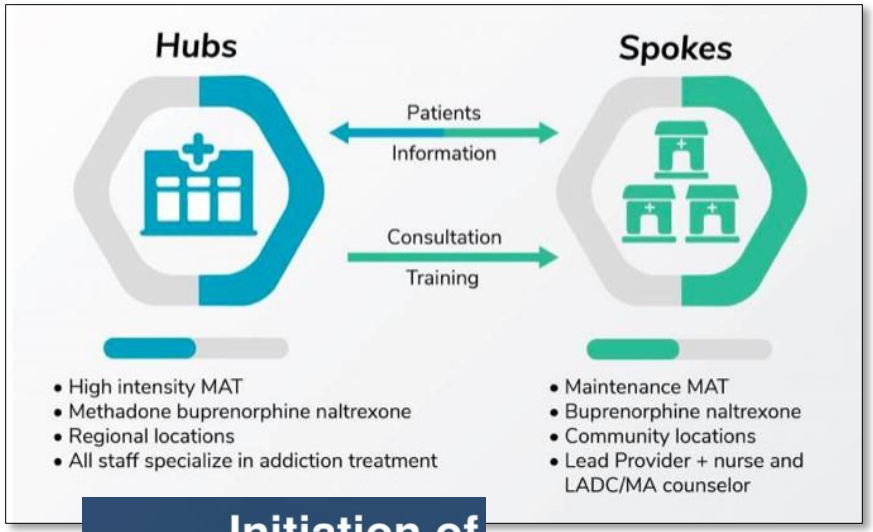
## Medication Safekeeping


## Biochemical Monitoring

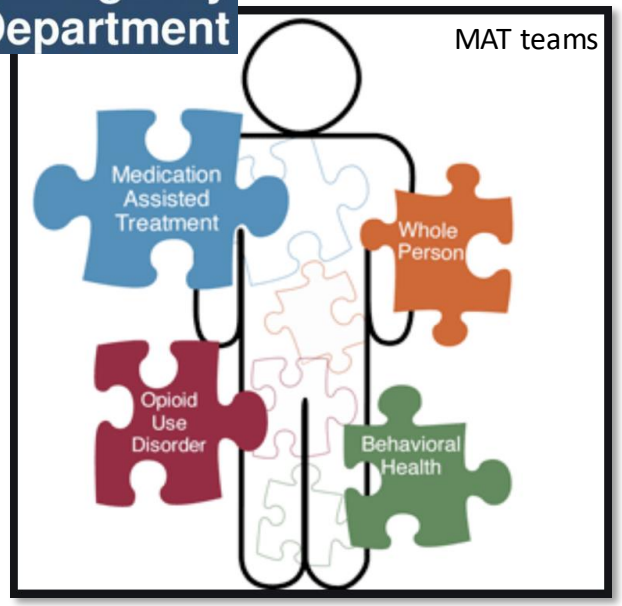




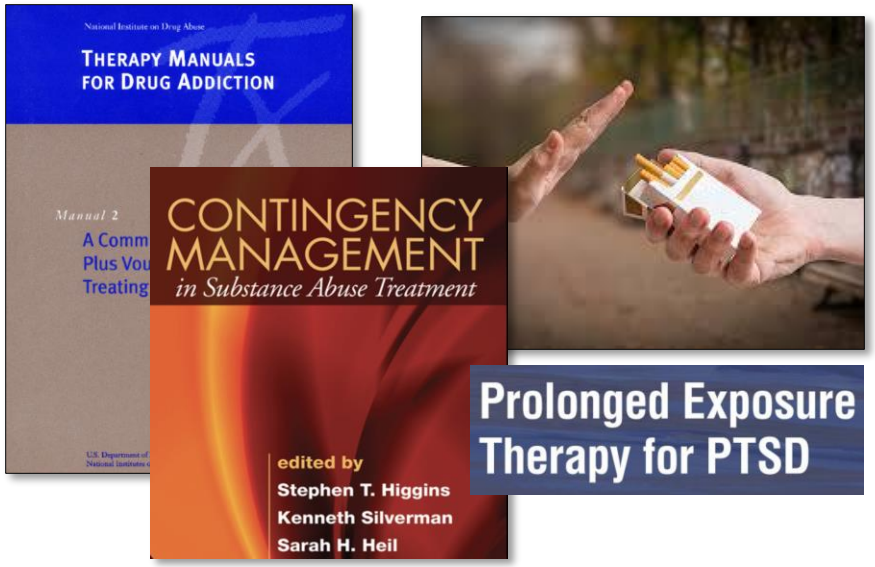
## Expanding System Capacity




**Initiation of Buprenorphine in the Emergency Department**




## Addressing Co-Occurring Problems






**Prolonged Exposure Therapy for PTSD**

## Patient- and Family-Centered Care



## Assessments

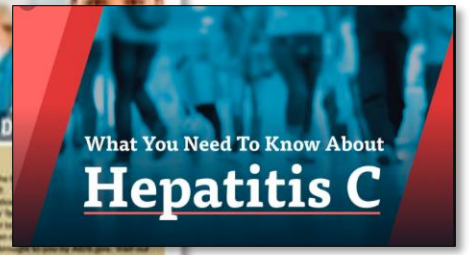
TREATMENT NEED QUESTIONNAIRE ©



| | YES | NO |
|---|---|---|
| Have you ever used a drug intravenously? | 2 | 0 |
| If you have ever been on medication-assisted treatment (e.g. methadone, buprenorphine) before, were you successful? | 0 | 2 |
| Do you have any legal issues (e.g. charges pending, probation/parole, etc)? | 1 | 0 |
| Are you currently on probation? | 1 | 0 |
| Have you ever been charged (not necessarily convicted) with drug dealing? | 1 | 0 |
| e that needs treatment? | 2 | 0 |
| lical problems (e.g. hepatitis, HIV, diabetes)? | 1 | 0 |
| blems (e.g. major depression, bipolar, severe | 1 | 0 |


ADDICTION SEVERITY INDEX | ASI

## Infectious Disease Prevention

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# Years 1 - 4

To date, CORA has supported **over 32,000 rural health care providers** across **all 50 states.**

## Health Care Provider Support & Training

>6,700 **Community Rounds** participants from 46 states, with 550 CME credits claimed

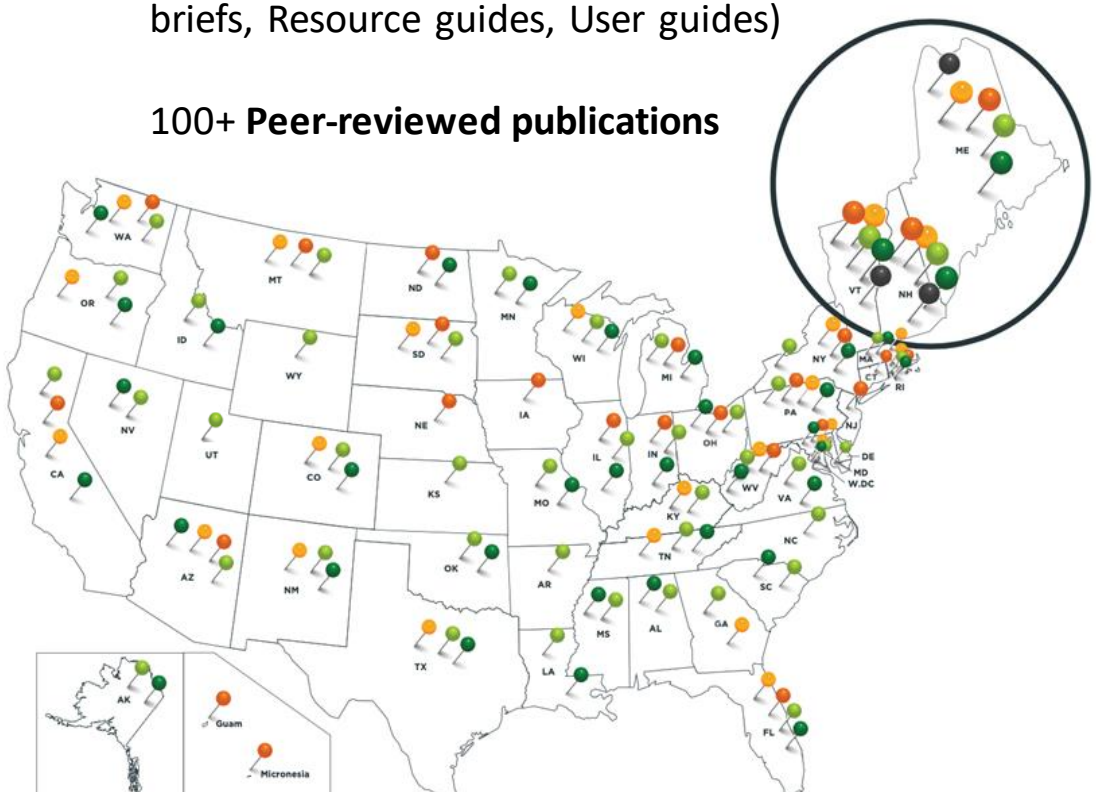
**Clinician Office Hours** to connect rural providers to individualized expert support

**Scholarship Program** events for intensive clinical team training, with 180 CME credits claimed

## Education Portfolio

30+ **Tools tailored for rural use** (Research spotlights, Data reports, Data briefs, Resource guides, User guides)

100+ **Peer-reviewed publications**




## Technical Assistance Supplies & Resources

>950 **TA interactions** in 33 states

>350,000 **supplies disseminated** (harm reduction, tobacco cessation, medication safety)

## Robust Platform for Dissemination

2,188 **Listserv** subscribers from 45 states

2,783 **CORA website** visitors per month from 48 states

450+ **conference presentations** to diverse audiences

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# Community Rounds Workshop Series

**Webinars** on critical topics related to substance use treatment in rural areas

**CME credit** available for live attendance or for watching the recording within 30 days

To register or view recordings and slides, visit: ***uvmcora.org/our-programs/community-rounds/***


**August 30, 2023**

Reaching People Where They're At: Smoking Cessation Treatment Delivery at Your Door

Matthew Carpenter, PhD

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# Educational Resources

## User Guides


## Resource Guides


## Research Spotlights

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Richard Rawson, PhD
Best Practices

Gail Rose, PhD
Best Practices and
Clinical & Translational

# Three Rural Centers of Excellence (RCOEs)

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**University of Vermont**

- Expanding evidence-based treatment and harm reduction for OUD and other SUDs via education, technical assistance, and resources
- Patient focused approaches serving the needs of rural populations through innovative technology and telehealth strategies
- VT, NH, ME, northern NY

Find us at:
www.uvmcora.org
or cora@uvm.edu

UR MEDICINE
Recovery Center of Excellence

**University of Rochester**

- Reduce morbidity and mortality related to SUD
- Working to engage communities/ reduce stigma, save lives, and support primary care
- Serving any rural community, with focus on 39 counties in KY, NY, OH, PA, TN, WV

Find us at:
recoverycenterofexcellence.org

RCOE
THE FLETCHER GROUP
RURAL CENTER OF EXCELLENCE

**Fletcher Group**

- Expansion of recovery housing capacity & quality
- Rural recovery ecosystem support services: Employment, housing, transportation
- Evidenced-based education & training
- Working across rural U.S.

Find us at:
www.fletchergroup.org

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# Thank you!
# Questions?

Email us at: cora@uvm.edu
Request support: uvmcora.org/connect-with-us

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