



Center on
Rural Addiction
UNIVERSITY OF VERMONT





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Rural Addiction**
UNIVERSITY OF VERMONT

3 years of the COVID-19 Pandemic: What we've learned, and how it can make us better at treating rural patients with SUD

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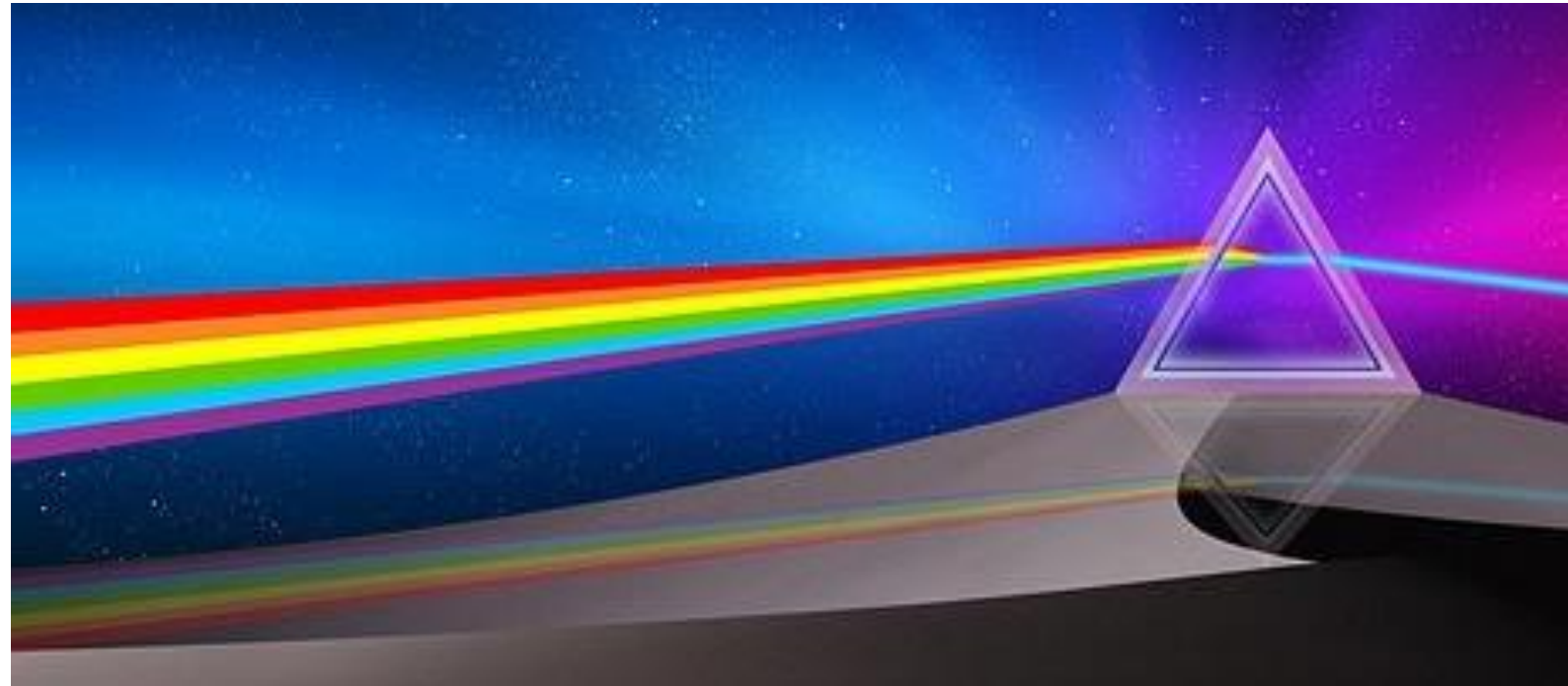
University of Vermont



Disclosures

- I have no financial disclosures.
- The lens:

Rural
Family
Surgeon
Pandemic
Science Writer



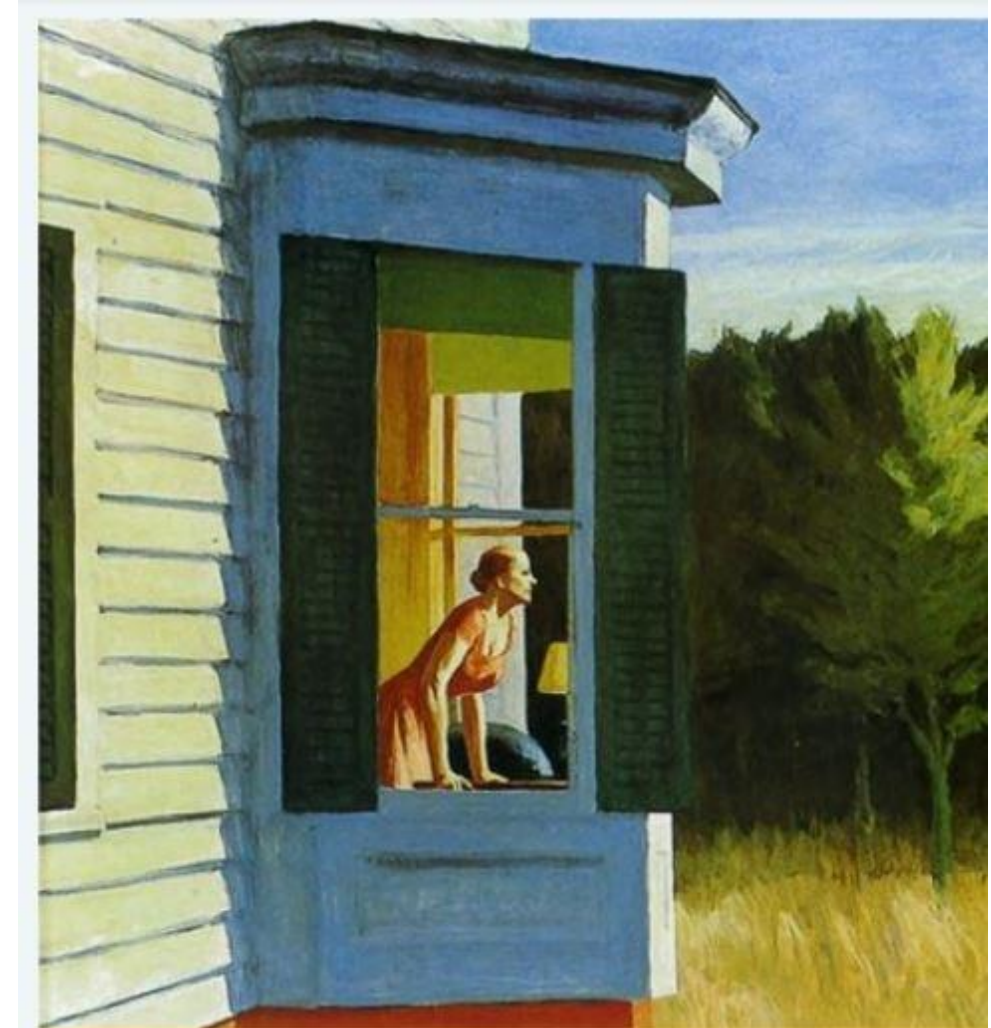
This talk

Overview

- **COVID-19 Pandemic**
 - Effect on people with OUD and SUD
 - Effect on rural providers and healthcare systems
- **Lessons from History**
 - Prior pandemics
 - Prior efforts toward vaccine confidence and uptake
- **Efforts and Initiatives**
 - COVID-19 Vaccine confidence efforts
 - COVID-19 Vaccine uptake efforts
- **We Still Have Work to Do**
 - Telehealth access
 - Foster personal trust
 - Support policies that sensibly reduce barriers

COVID-19 Pandemic: Effect on **People with OUD and SUD**

- UVM-CORA Baseline Needs Assessment (BNA)
- Central Vermont Prevention Coalition
- Literature Review
 - Medical risk of COVID-19 for people with OUD and SUD
 - Economic impact of COVID-19
 - Mental Health



COVID-19 Pandemic: UVM-CORA Baseline Needs Assessment

Vermont

Spring/Summer 2020

333 practitioner responses

New Hampshire

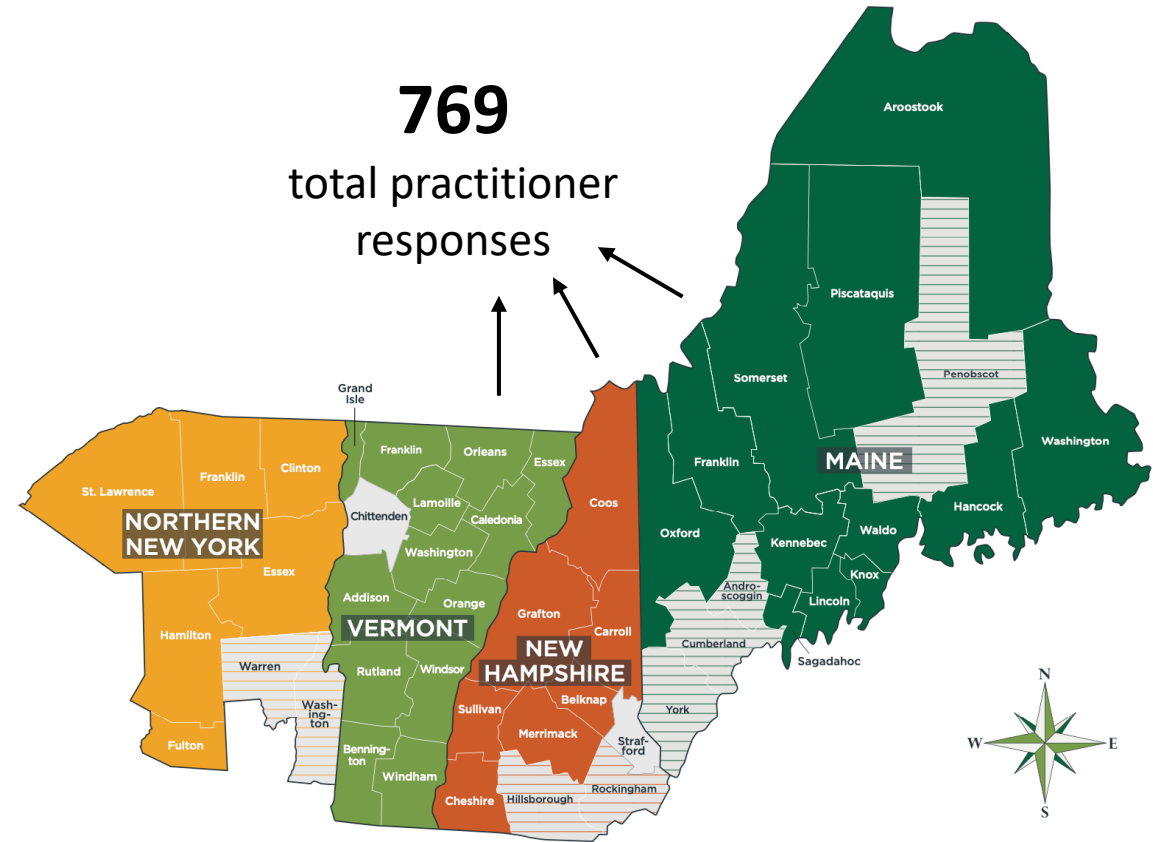
Winter 2020-2021

152 practitioner responses

Maine

Spring 2021

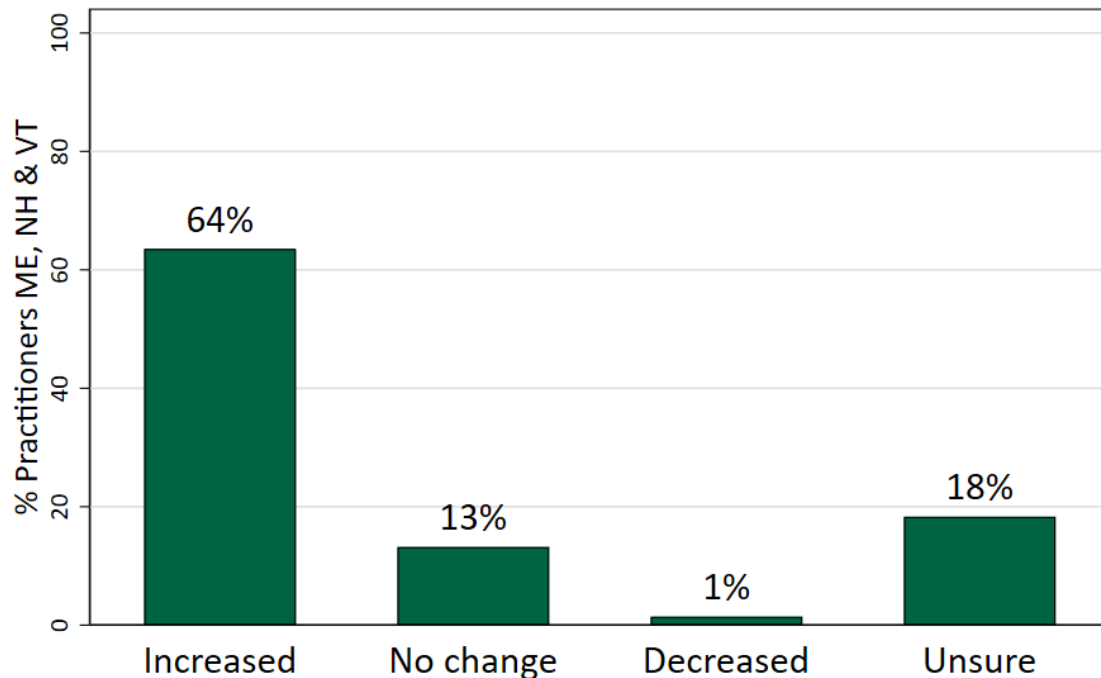
284 practitioner responses



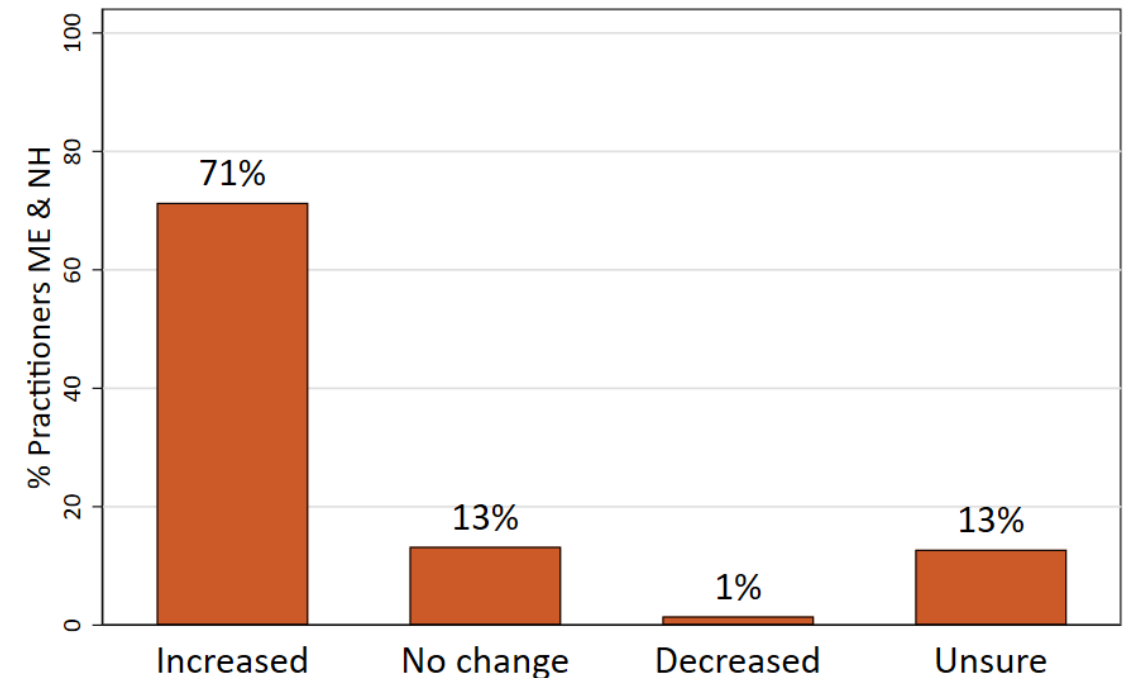
Concern over COVID-19 impact on patient health = 7.4 / 10

COVID-19 Pandemic: UVM-CORA Baseline Needs Assessment

How do you think substance use has changed in your patients since the pandemic began?

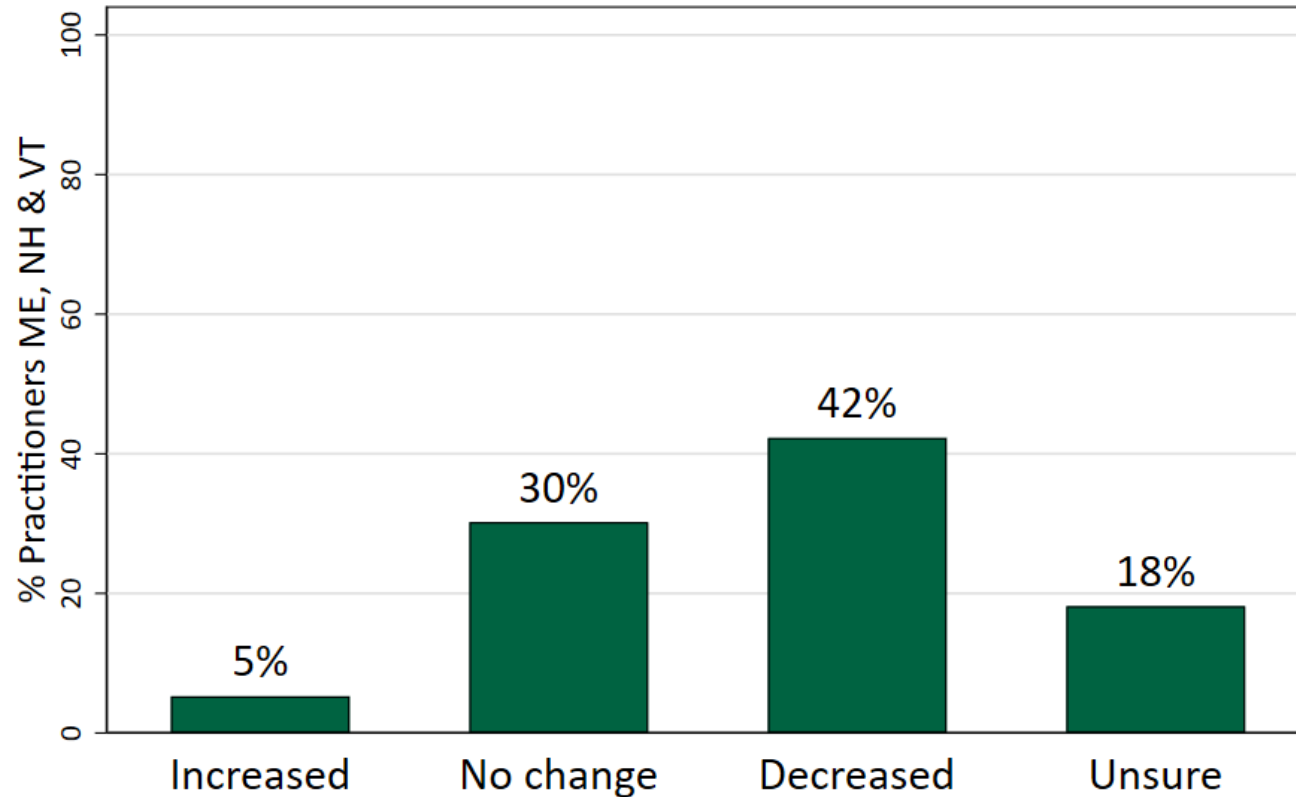


How do you think opioid use has changed in your community since the pandemic began?




COVID-19 Pandemic: UVM-CORA Baseline Needs Assessment

How do you think access to opioid treatment for your patients has changed since the pandemic began?



COVID-19 Pandemic: Effect on People with OUD and SUD

- **Central Vermont Prevention Coalition (2021)¹**
 - Pandemic exacerbated **negative outcomes for SUD** in Central Vermont
 - 35% of people in treatment returned to use
 - **Relaxed regulations** were helpful
 - Take-home doses of MOUD
 - Telehealth follow-up visits
 - **Virtual recovery meetings** were less helpful
 - Reduced participation rate
 - Uncertain effect on return-to-use rates
 - High levels of reported COVID-19 **vaccine hesitancy**
 - 59% of patients in treatment for OUD
 - 69% of patients who returned to OUD use



EXECUTIVE SUMMARY
COVID-19 Pandemic Impact on People with Substance Use Disorders

In the winter of 2021, Central Vermont Prevention Coalition surveyed 159 Central Vermonters either actively using drugs, in treatment for opioid use disorder (OUD), or in recovery, and the organizations that serve them. The goal of the survey was to understand the impact of COVID-19 on substance use disorder (SUD) populations and related organizations in Central Vermont.

Key Findings

COVID-19 has exacerbated negative outcomes and created additional challenges for people with substance use disorders in Central Vermont.

Return-to-use rates

- 35% of patients in treatment for OUD reported returning to substance use during the pandemic, primarily heroin, crack cocaine, and cocaine. People in recovery who returned to use typically did so with alcohol.
- Returning to use while in treatment did not exclude patients from continuing medication-assisted treatment or counseling for OUD.

Relaxed regulations were helpful

- Relaxed federal and state regulations around telehealth and take-home doses of medications helped people navigate transportation, childcare, and the need to stay home during COVID-19.
- **Only 6%** of patients in treatment for OUD reported misusing their medication

Virtual recovery meetings were less helpful

- Virtual meetings were initially welcomed but over time people found them less effective than in-person meetings.
- Lack of in-person meetings led to reduced participation rates and possibly increased return-to-use rates.

People who use drugs continued safe practices

- **86%** of people who use drugs (PWUD) reported maintaining safer use practices during the pandemic, such as using new syringes and fentanyl test strips supplied by Vermont CARES.

Organizational stability

- Organizations whose sole source of funding was linked to reimbursement, grants, and state support for substance use programming had the least interruptions in staffing and care delivery.

High levels of COVID-19 vaccine hesitancy

- **59%** of patients in treatment for OUD and **69%** of patients who returned to using substances reported they were hesitant or would not choose to receive the COVID-19 vaccine.

“ *Increased work stress, a type of isolation I've never known, and believing I could hide the smell of a problem behind a mask.”*
 - Respondent on returning to use

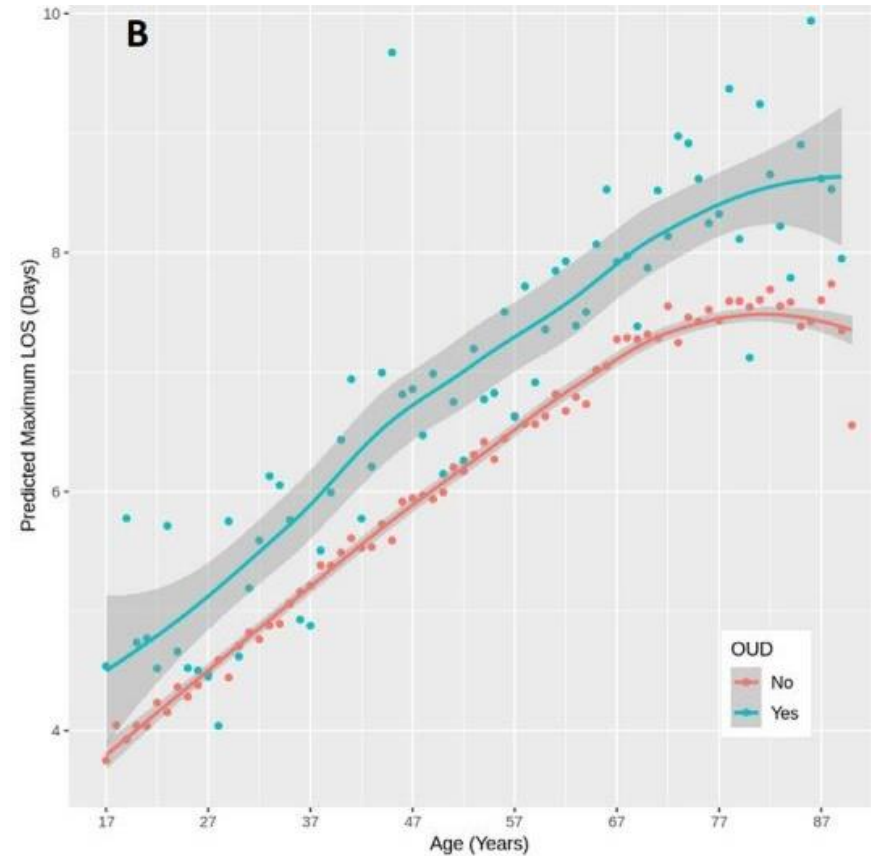
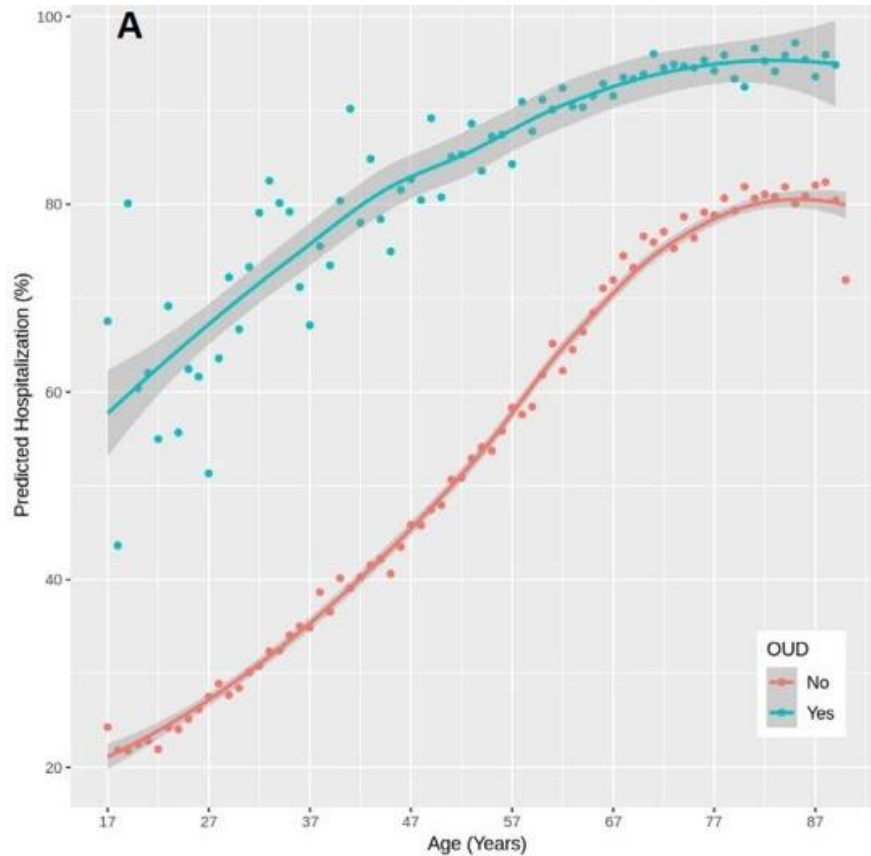
“ *I have 3 kids at home with no care, 2 of the 3 kids to virtual school. I'm a single mom so phone appointments have been helpful in many ways!”*

COVID-19 Pandemic: Effect on **People with OUD** – Medical Risk

People with OUD who contract COVID-19 have:

(A) Higher risk of hospitalization

(B) Longer predicted hospital stay

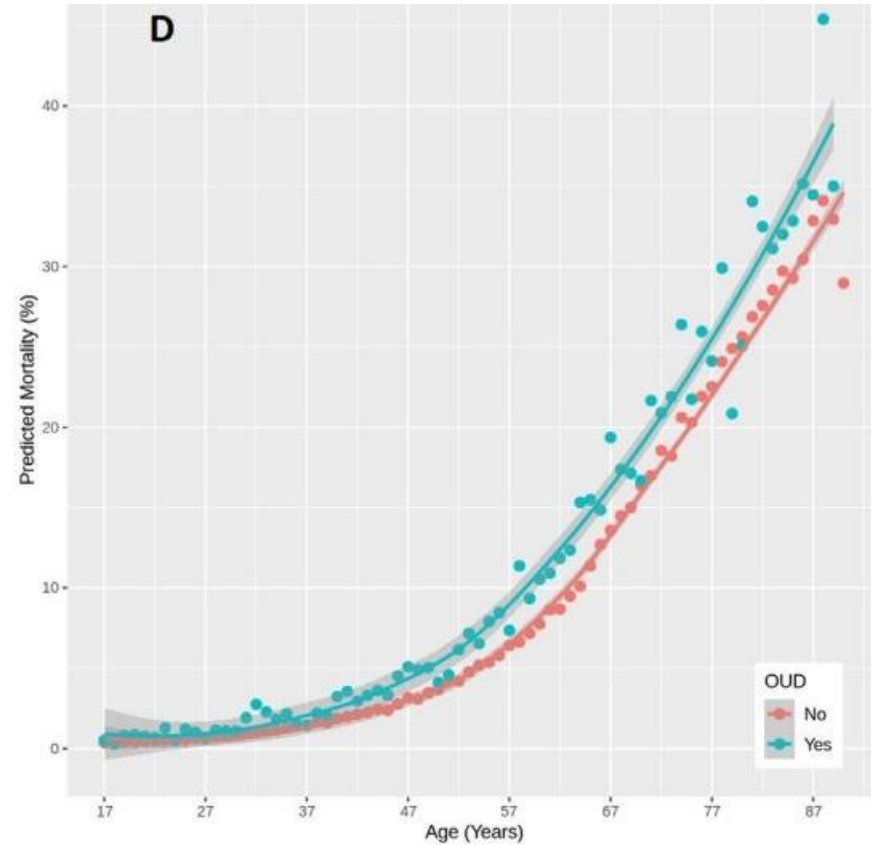
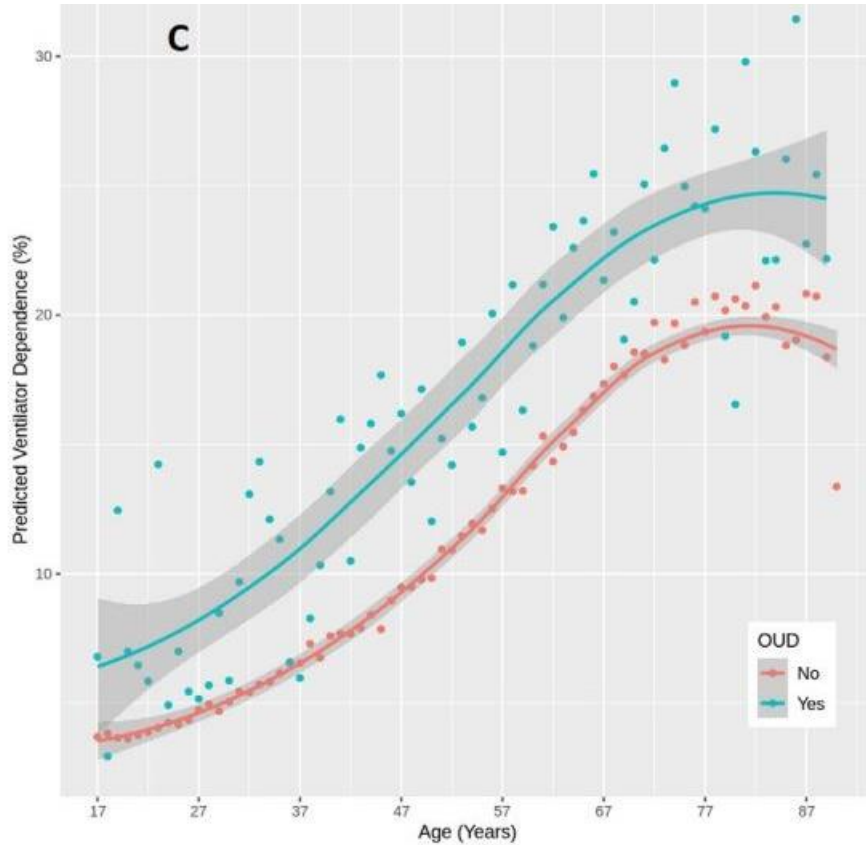


COVID-19 Pandemic: Effect on **People with OUD** – **Medical Risk**

People with OUD who contract COVID-19 have:

(C) Higher ventilator requirement

(D) Higher mortality rate



COVID-19 Pandemic: Effect on People with OUD – Economic

■ Unemployment due to Pandemic

- Peak unemployment 13% (Q2 of 2020)¹
- 16.9 million unemployed¹
- 33.1 million with decreased employment due to shutdowns¹

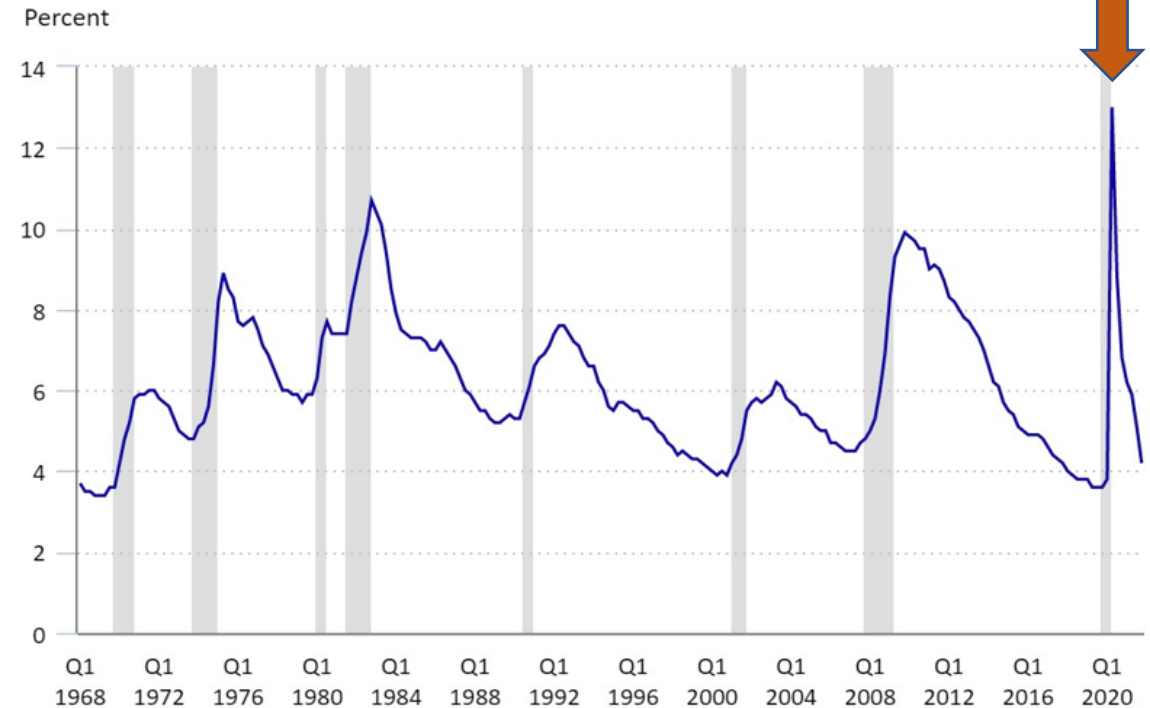
■ Job Insecurity

- Deterioration in job performance^{2,3}
- Increased depression and anxiety.^{2,4}

■ Domino Effect

- Housing
- Food
- Transportation
- Health insurance

Chart 1. Unemployment rate for people 16 years and older, quarterly averages, seasonally adjusted, 1968–2021



Hover over chart to view data.

Note: Shaded areas represent recessions as determined by the National Bureau of Economic Research. Turning points are quarterly. Q1 = first quarter, Q2 = second quarter, Q3 = third quarter, and Q4 = fourth quarter.

Source: U.S. Bureau of Labor Statistics, Current Population Survey.

“COVID-19 disruptions at the structural and community level affected outcomes related to mental health and drug use at the individual level.”⁵

COVID-19 Pandemic: Effect on People with OUD – Economic

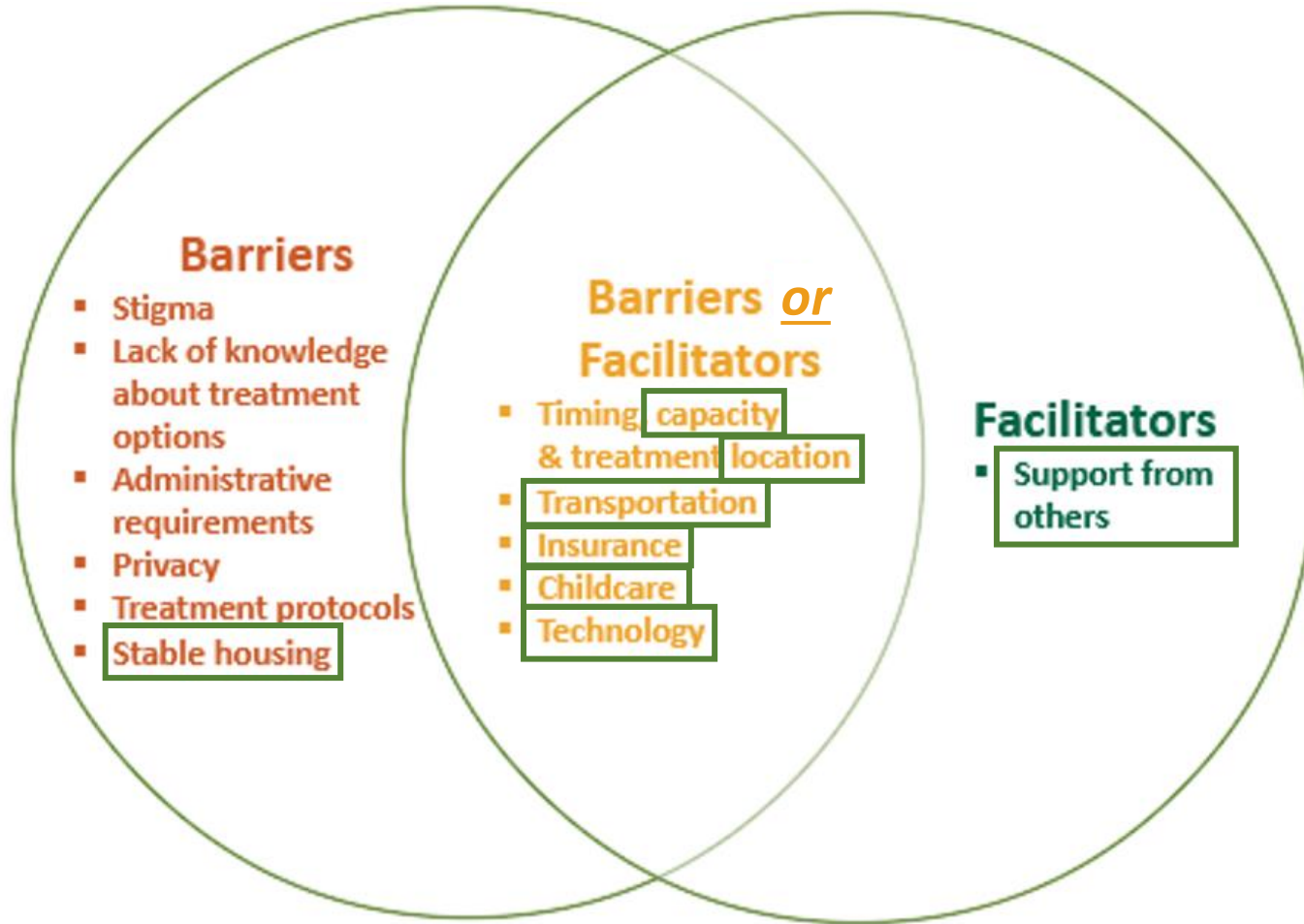
■ Food insecurity

- Northern New England survey (2022)¹
 - 10% of adults
 - 16% of children
 - 33% of respondents utilized food assistance programs in the past year
 - Food-insecure respondents reported higher rates of anxiety, depression, skipping medications due to cost, and substance use.
- Rates of food insecurity are 4x to 7x higher among people with OUD (47% - 71%)²
- Risk of opioid-related mortality rises with food insecurity (OR = 1.21)³



COVID-19 Pandemic: Effect on **People with OUD** – Treatment

- How economic & social impacts from COVID-19 translate to OUD treatment barriers



- Decreased treatment **access**¹
 - Lack of phone/internet
- Decreased treatment **quality**¹
 - Lack of social support
- Policy decisions²
 - Decrease barriers** (mobile outreach, mail delivery, relaxed telemedicine regulations),
 - Exacerbate barriers** (social distancing led to reduced in-person connections, fewer available providers, high technology demands)

COVID-19 Pandemic: Effect on People with OUD and SUD

■ Effect on Mental Health

■ Depression and Anxiety

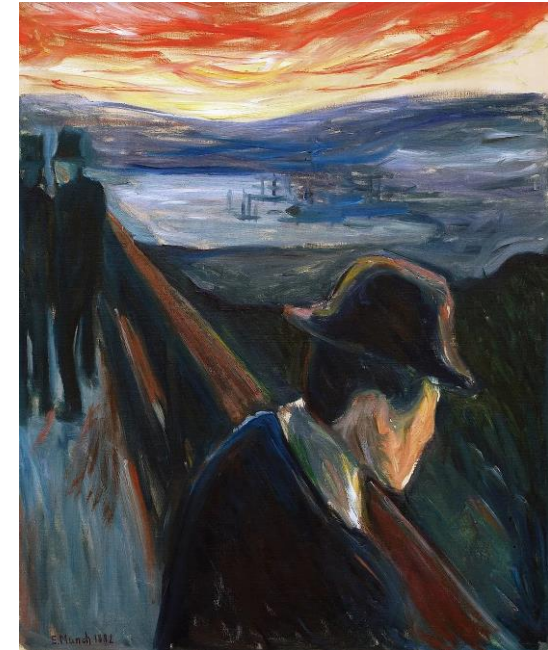
- Increased **depression** (29%), **anxiety** (29%), **PTSD** (33%), and **sleep problems** (57%) compared to pre-pandemic.¹
- 55% of people who lost someone to COVID-19 had **intense grief reactions**.¹

■ Substance Use

- Rural Kentucky: “**The intersection of two crises**.”²
- Rural Oregon: Loneliness, depression, suicidal ideation, and increased heroin use.³

■ Overdose

- **57.7% increase** in death due to drug overdose (May 2020 vs. May 2019).⁴
- **26% increase in opioid calls** to US Poison Control Centers.
Rural calls increased by 14% more than urban calls.⁵
Rural exposures **at home** increased by 13% more than urban.⁵



COVID-19 Pandemic: Effect on **People with OUD and SUD**

■ Effect on Mental Health

■ Suicidality

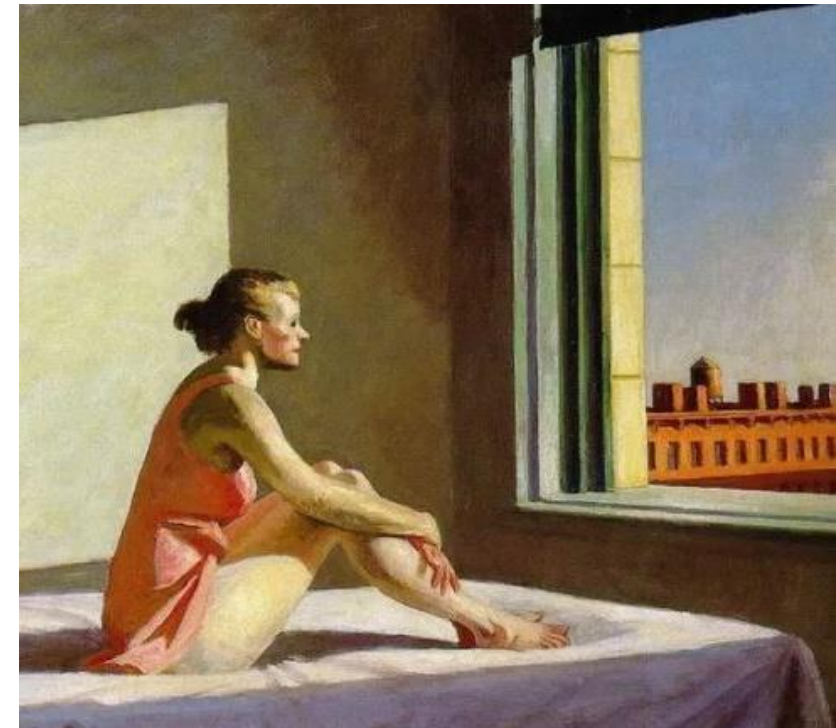
- Increased encounters for **suicidal ideation** and **suicide attempts** (IRR = 1.19), especially in rural areas (IRR = 1.22), compared to pre-pandemic¹
- “The Perfect Storm” of **rural risk factors** plus **pandemic risk factors**²

■ Adolescent populations

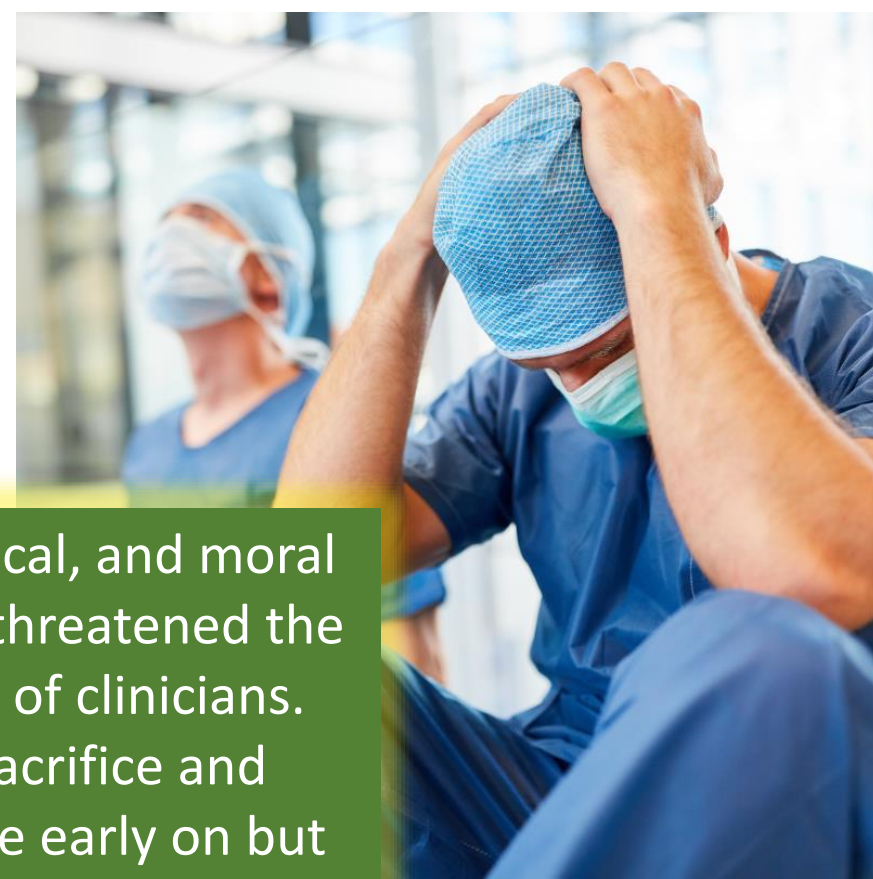
- Increased **depression** (55%), **anxiety** (48%), **sleep problems** (69%), and greater intensity of recent **suicidal ideation** (38%), compared to pre-pandemic^{3,4}

■ Predictors:

- **Loneliness**³, **social media hours**³, and **doomscrolling**⁵



COVID-19 Pandemic: Effect on Providers



■ Clinician Well-being

- Workload^{1, 4}
- Personal risk of infection¹⁻³
- Social isolation¹⁻⁴
- Compassion fatigue^{1,2}
- Ethical tensions^{1,5}
- Public distrust^{1,2}
- Burnout¹⁻⁴

“The physical, psychological, and moral toll of the pandemic has threatened the well-being and integrity of clinicians. The narrative of self-sacrifice and heroism bolstered people early on but was not sustainable over time.”¹

■ Systematic Review³ – how pandemics impact HCW’s

- Mental health: Acute stress disorder, depression, anxiety, insomnia, PTSD
- Risk factors: Frontline, female, lack of adequate PPE, long shifts, inexperience, lack of social support, and quarantine/lockdown

COVID-19 Pandemic: Effect on Rural Healthcare Systems

■ How systems struggled

■ Syringe Service Programs

- Decreased in-person services → Limited relationship-building & supply distribution.¹
- Increased barriers → Increased high-risk injection practices²

■ SUD Treatment Programs³

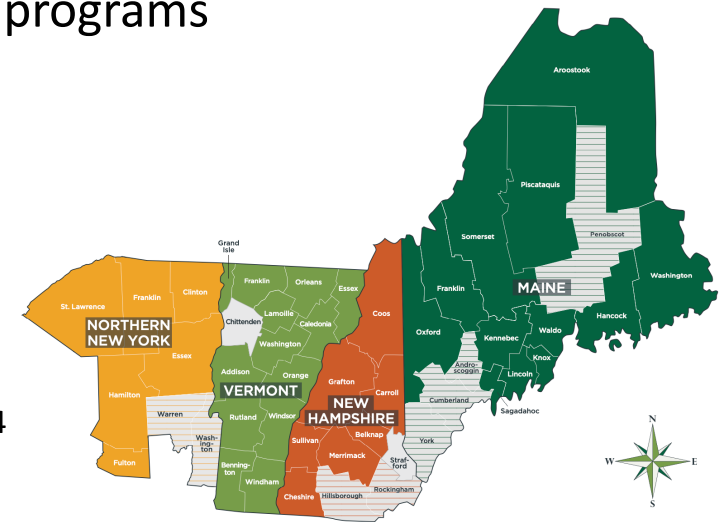
- Decreased new patient capacity → Decreased access to care. Delays in care.
- Reduced friend/family visits → Decreased retention in recovery programs

■ Local Health Departments (Nationwide survey, Dec 2020)⁴

- 17% of school-based services terminated
- 53.9% of mutual help recovery programs reduced service level

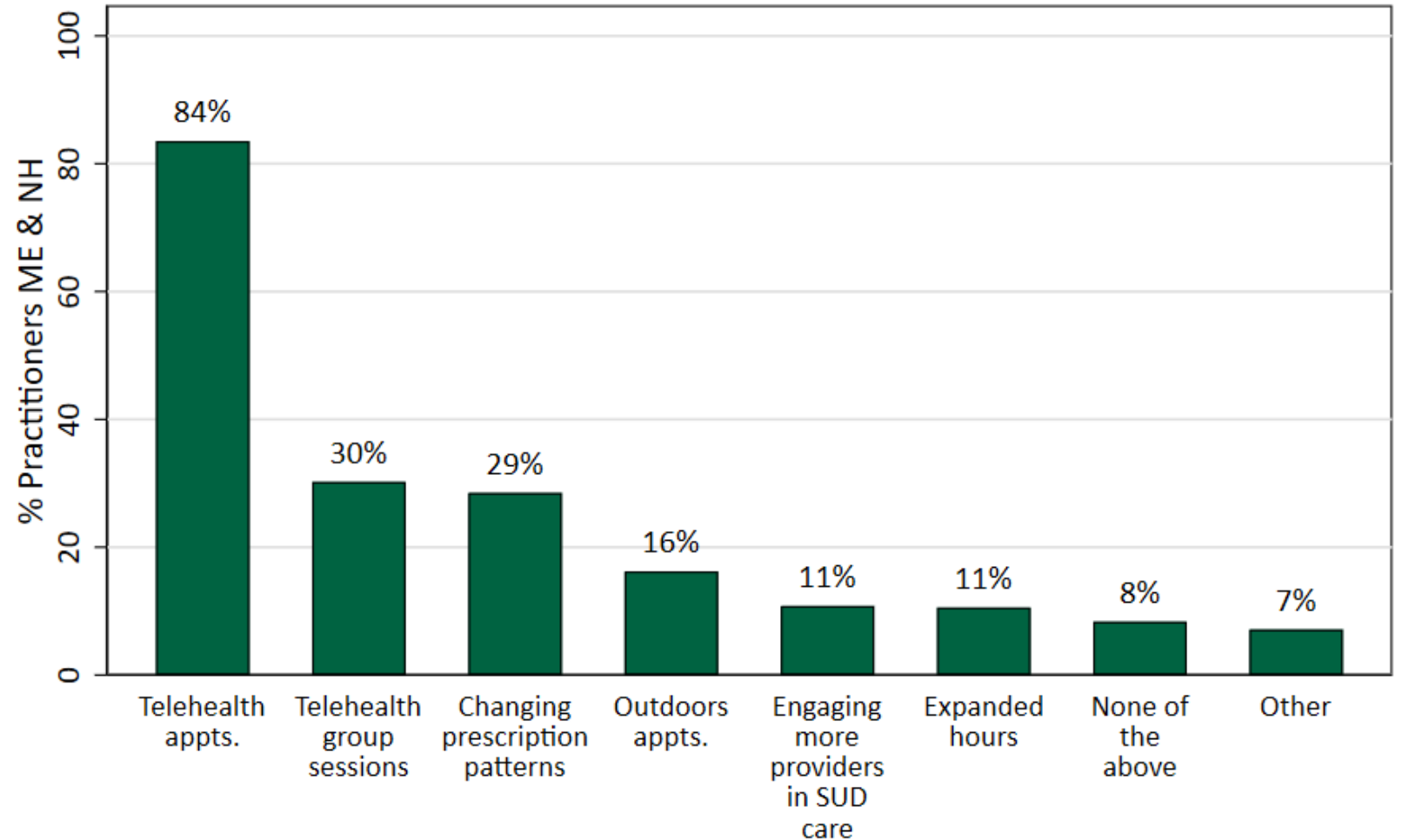
■ How systems adapted

- Increased: Telehealth (72.2%), and mail-out harm reduction (23.8%)⁴
- UVM CORA Baseline Needs Assessment



COVID-19 Pandemic: UVM-CORA Baseline Needs Assessment

What measures have you adopted to ensure continued SUD treatment for your patients during COVID-19?

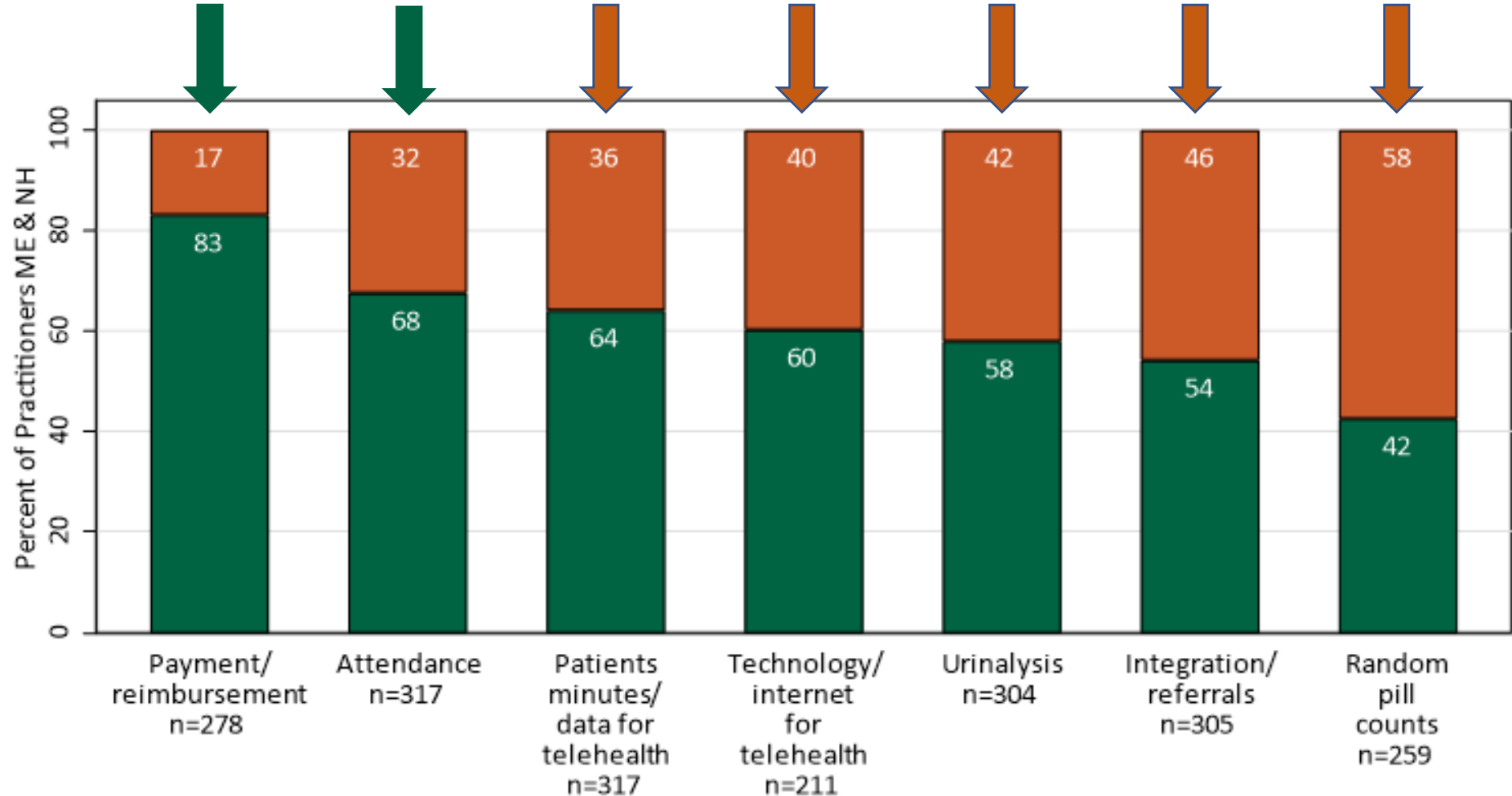


COVID-19 Pandemic: UVM-CORA Baseline Needs Assessment

What has your experience been with changes in SUD treatment services during COVID-19?



What has been working or not working for you?



Lessons from History: Prior Pandemics



Lessons from History: Prior Pandemics – 1918 Influenza

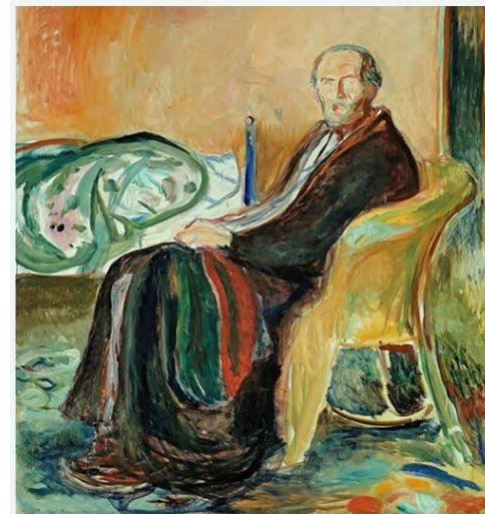
■ Parallels¹⁻³

- Outbreak pattern
- Role of prevention
 - Masking, and Physical distancing
 - Social pushback
- Scapegoating narratives



■ Key Differences¹⁻³

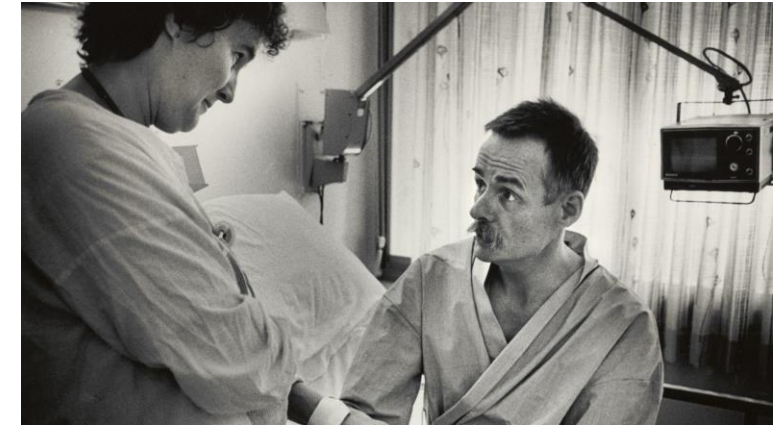
- Influenza A (H1N1) vs. SARS-CoV-2 (2019)
- Hygiene access
- Contact tracing technology
- Antiviral medications
- Effective vaccines
- Deaths: 50 million vs. 6.9 million



Lessons from History: Prior Pandemics – HIV/AIDS

TABLE. Similarities Between HIV/AIDS and COVID-19 in First Years of Each Pandemic ¹

	AIDS	COVID-19
High mortality rate in hospitalized patients	Yes	Yes
Fear, isolation, stigma in affected persons	Yes	Yes
Vulnerable groups at greater risk of infection and death	Yes	Yes
Cases may double in weeks during outbreaks	Yes	Yes
More deaths among people of color	Yes	Yes
Testing delays and errors	Yes	Yes
Lifesaving vaccine available (early/late)	No	No/yes
Effective treatments available (early/late)	No/yes	No/yes
Misinformation threatened prevention and care	Yes	Yes
Community and health worker strength and resilience	Yes	Yes
Activism critical in mobilizing research, care, treatment	Yes	Yes
Political backlash and barriers impeded progress	Yes	Yes



1. Saltzman (2022); 2. Haberer (2021); Photos from Library of Congress AP National Archives and <https://welcome.org>;

Lessons from History: Confidence & Uptake Efforts – Prior Vaccines

■ Influenza

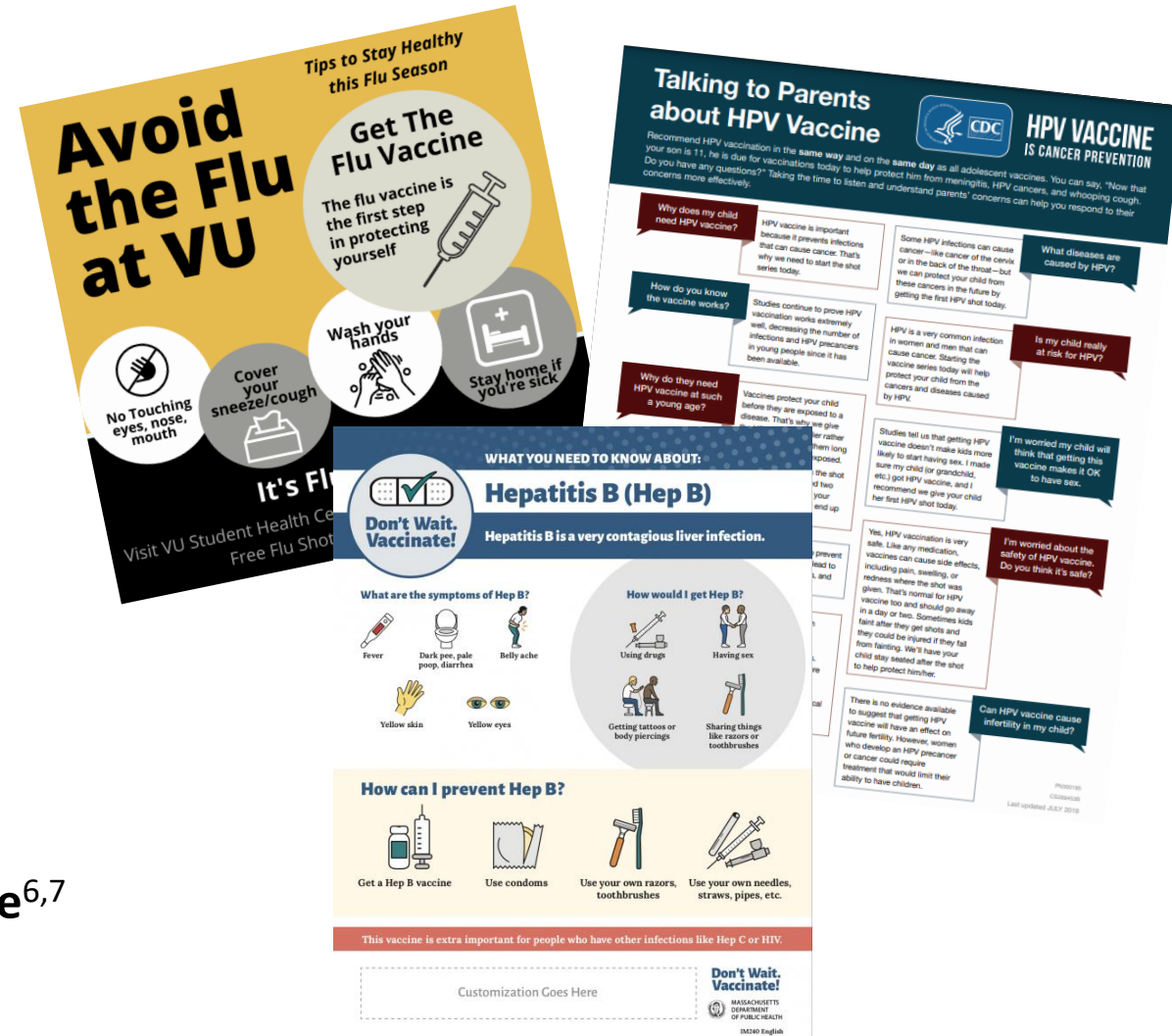
- Ubiquitous and free
- Educate about **disease risks**¹
- Address **complacency**¹
- Educate about **vaccine benefits**¹
- Address **vaccine concerns**¹

■ Human Papillomavirus

- Educate about **disease risks**^{2,3}
- Educate about **vaccine benefits**^{2,4}
- Address vaccine **safety concerns**^{2,3}
- Confident **physician recommendation**^{2,3}
- **Mandate** (maximal uptake from 70% → 90%)⁵

■ Hepatitis B

- **Convenient** (syringe service program site) and **free**^{6,7}
- **Accelerated schedule** (0, 1, and 2 months)^{6,8}
- **Incentives**⁷



1. Schmid (2017); 2. Dempsey (2018); 3. Dempsey (2009); 4. Dempsey (2011);
5. Dempsey (2010); 6. Bowman (2014); 7. Wu (2015) ; 8. Tressler (2019)

A note on confidence, hesitancy, and human nature...

- **Would you ~~go skydiving?~~ get the COVID vaccine?**

- A. Yes, for sure
- B. Might consider it
- C. No, never



COVID-19 Efforts and Initiatives: Vaccine Confidence Efforts

- **Basis of hesitancy**
 - Belief that vaccine is **not necessary**^{1,2,4}
 - **Rural** location¹⁻⁵
 - Medical **mistrust**^{1,2,4}
 - Concerns about vaccine **safety**^{1,2,4}
 - **Waiting** to see the vaccine's effect in others^{2,4}
- **Basis of confidence**
 - Centralized sources of **trusted expert** information⁶
 - Trust in the provider due to **other services**⁷
 - Recommendation from **peers** as “vaccine champions”⁷
- **Role of social media**
Zimand-Sheiner et al.⁸
 - Social media trust → vaccine refusal ($p < 0.001$)
 - Mass media trust → vaccine acceptance ($p < 0.001$)
 - Institutional trust → vaccine acceptance ($p < 0.001$)

Iversen et al. *Harm Reduction Journal* (2022) 19:59
<https://doi.org/10.1186/s12954-022-00643-3> Harm Reduction Journal

RESEARCH Open Access

Uptake of COVID-19 vaccination among people who inject drugs

Jenny Iversen^{1*}, Handan Wand¹, Robert Kemp², Jude Bevan³, Myf Briggs⁴, Kate Patten⁵, Sue Heard¹ and Lisa Maher¹

Abstract
Background: People who inject drugs (PWID) may be at elevated risk of adverse outcomes from SARS-CoV-2 infection; however, data on COVID-19 vaccine uptake among PWID are scarce. This study aimed to determine COVID-19 vaccine uptake among PWID, identify factors associated with sub-optimal uptake, and compare uptake to the general population.
Methods: The Australian Needle Syringe Program Survey is an annual sentinel surveillance project, comprising a self-completed questionnaire and provision of a dried blood sample for HIV and HCV testing. In 2021, respondents provided information on their COVID-19 vaccination status. Multivariate logistic regression models identified correlates of vaccine uptake.
Results: Among 1166 respondents, 49% had been vaccinated and in most states and territories, vaccine uptake was significantly lower than among the general population. Independent predictors of vaccine uptake were longer duration of vaccine eligibility (AOR 3.42, 95% CI 2.65, 4.41); prior SARS-CoV-2 diagnostic testing (AOR 2.90, 95% CI 2.22, 3.79); injection of opioids (AOR 1.91, 95% CI 1.20, 3.05); and current opioid agonist therapy (AOR 1.70, 95% CI 1.23, 2.33). Women (AOR 0.70, 95% CI 0.54, 0.92) and those who reported daily or more frequent injection (AOR 0.75, 95% CI 0.57, 1.00) were significantly less likely to be vaccinated.
Conclusions: In most Australian states and territories, uptake of COVID-19 vaccine among PWID lagged uptake among the general population. Increased efforts are required to ensure PWID have equitable access to vaccination. Vaccination programmes within harm reduction services and via outreach, coupled with increased support for peers to act as vaccine champions, are likely to reduce barriers and improve COVID-19 vaccine uptake in this population.
Keywords: People who inject drugs, COVID-19, SARS-CoV-2, Vaccine, Immunisation

1. Khare (2022); 2. Gregory (2022); 3. Khubchandani (2021); 4. King (2021); 5. Mann (2022);

6. Haberer (2021); 7. Iversen (2022); 8. Ziman-Sheiner (2021)

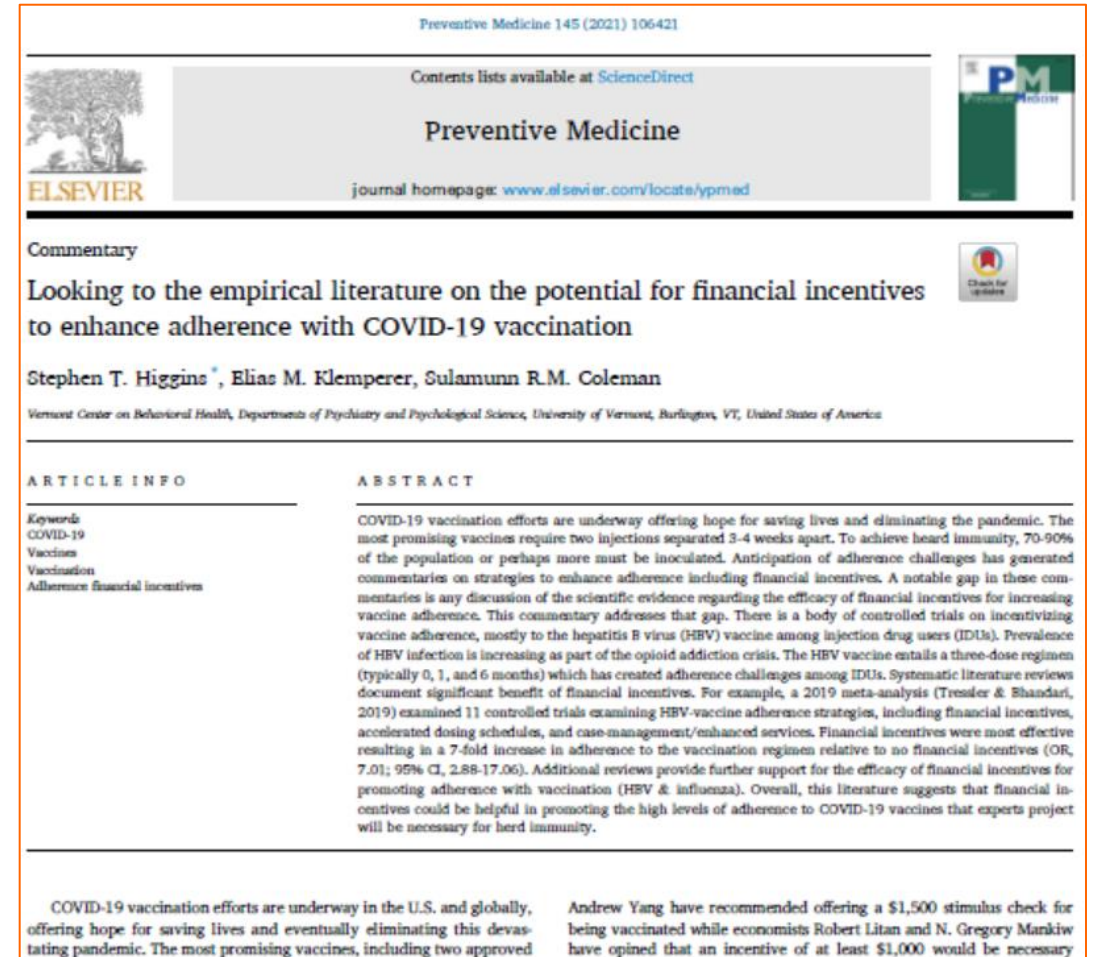
COVID-19 Efforts and Initiatives: Vaccine **Uptake** Efforts

- Uptake can be present without confidence^{1,2}
 - “Hesitant Adopters”²
 - Hesitancy among adults who have taken the vaccine
 - “Very hesitant” (5.3%)
 - “Somewhat hesitant” (8.8%)
 - “A little hesitant” (17.1%)
 - Greater hesitancy: Rural location
Foraging healthcare



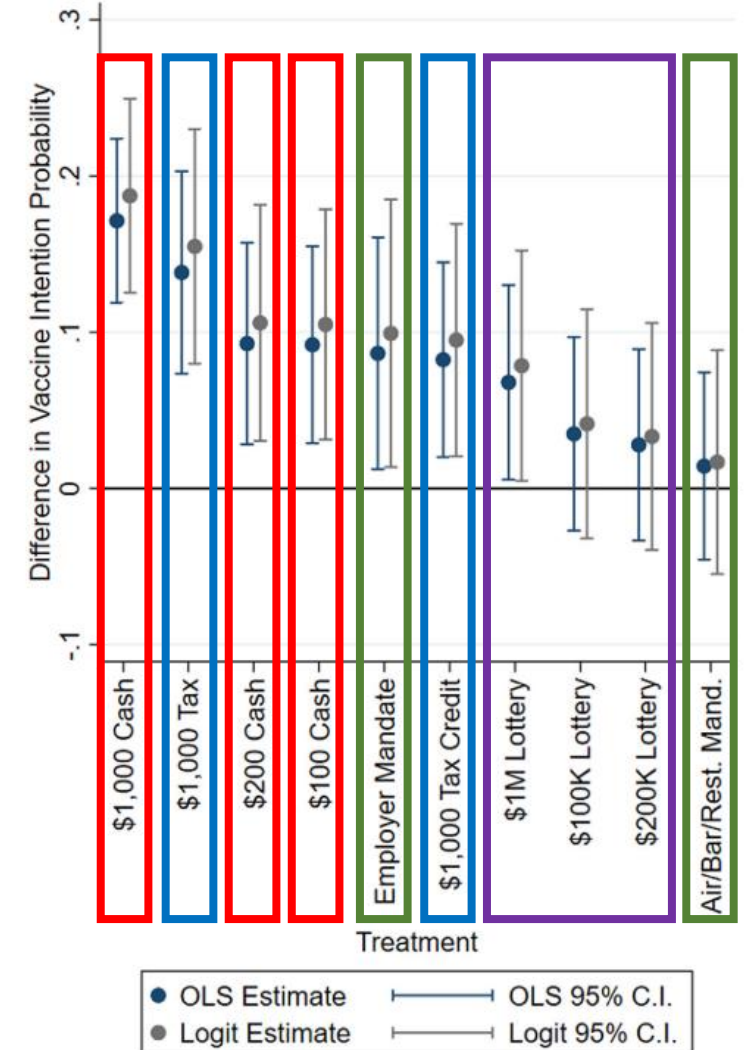
COVID-19 Efforts and Initiatives: Vaccine Uptake Efforts - Incentives

- Do incentives work?
 - Yes.¹⁻³
- What dollar value would it take?
 - \$24 (4.2% more uptake)⁴
 - \$100 + \$200 (expert estimate)¹
 - \$600 (26.9% more uptake), or \$1200 (30.1%)⁵
- What's stopping us?
 - Exacerbate suspicion about vaccine risks¹
 - Coercive; Undermine altruism^{1,6}
 - Funding sources and limits
 - Legal concerns
- Non-monetary incentives
 - Prime parking spots, goods, equipment, stickers
 - Naturalistic (e.g., access to air travel & events)¹



COVID-19 Efforts and Initiatives: Vaccine Uptake Efforts - Mandates

- Do mandates work? If so, for whom?
 - Yes... but with caveats¹⁻⁵
- Fishman et al.¹
 - Cash incentives (\$1000, \$200, or \$100)
 - Tax penalty vs. tax credit
 - Mandates by employers vs. destinations
 - Lotteries (\$1 million, \$200,000, or \$100,000)
- The French Health Pass^{4,5}
 - Vaccine uptake rose (49% to 89%)
 - Post-vaccine regret & anger rose
 - Hesitancy rose (44% to 61%)



COVID-19 Efforts and Initiatives: Putting **Confidence & Uptake** in Perspective

- Perhaps Hesitancy is Historically Healthy Human Nature¹



- Who foraged the berries? From where?
- Has anyone tried a small amount first? How did it go?
- Have our own friends or family eaten berries like this before?



COVID-19 Efforts and Initiatives: Motivational Interviewing



January 26, 2022

Tools to Increase
COVID-19 Vaccine
Uptake: Substance Use
Disorder Populations in
Rural Communities

Mark Depman, MD

[https://www.uvmcora.org/
resources/community-rounds/](https://www.uvmcora.org/resources/community-rounds/)

1. Open-ended questions.
Do not assume vaccine acceptance.
2. Acknowledge patient concerns without judging.
3. Avoid criticizing the patient's information sources. Cite your experience and point them to high quality sources.
4. Show awareness of your status as a messenger.
5. Link vaccine acceptance to the patient's goals.
6. What would need to happen to have you change your mind and get the vaccine?



June 30, 2021

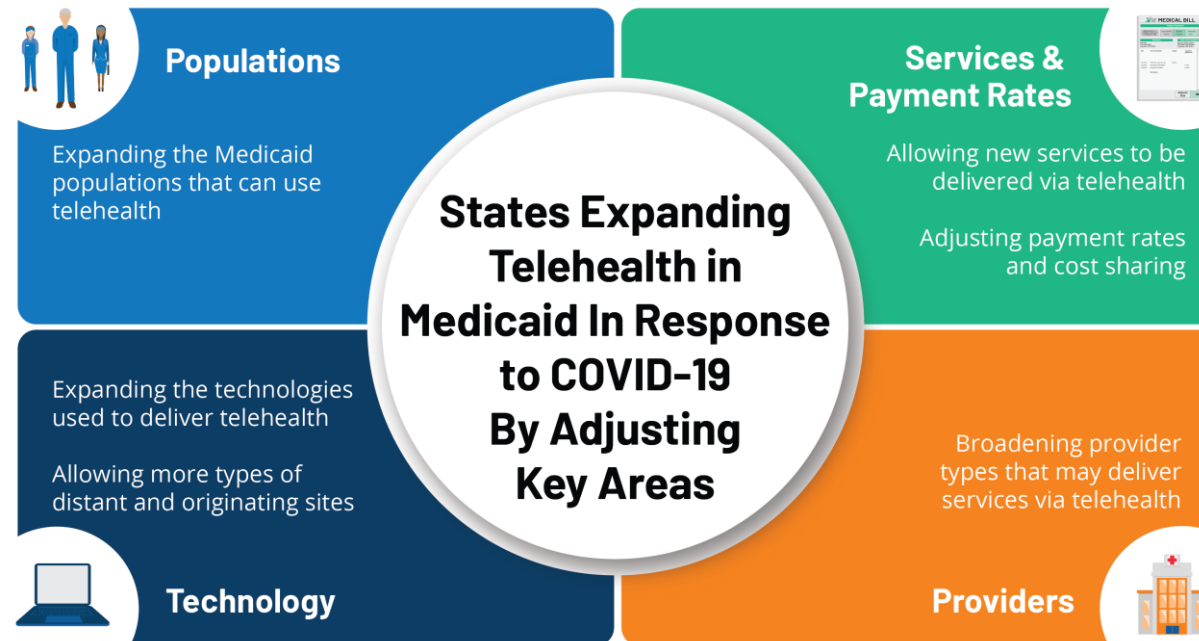
Motivational Interviewing:
Evidence-Based
Strategies and Principles
for Guiding Conversations
With Your Patients

Peter Jackson, MD

[https://www.uvmcora.org/
resources/community-rounds/](https://www.uvmcora.org/resources/community-rounds/)

We Still Have Work to Do: Telehealth

- **Federal and state policies conducive to telehealth access**¹⁻³
 - Reimbursement
 - Interstate reciprocity;⁴ ProviderBridge.org
- **Health care provider infrastructure**¹⁻³
 - Workforce
 - Technology



August 4, 2021
Telehealth for Substance Use Disorders and Considerations for Rural Regions

Allison Lin, MD, MSc

<https://www.uvmcora.org/resources/community-rounds/>

We Still Have Work to Do: Telehealth – Rural people with OUD or SUD

■ Patient access to Telehealth

Device access disparity^{1,2}

Cell phone (Rural **94%**, Urban **97%**)

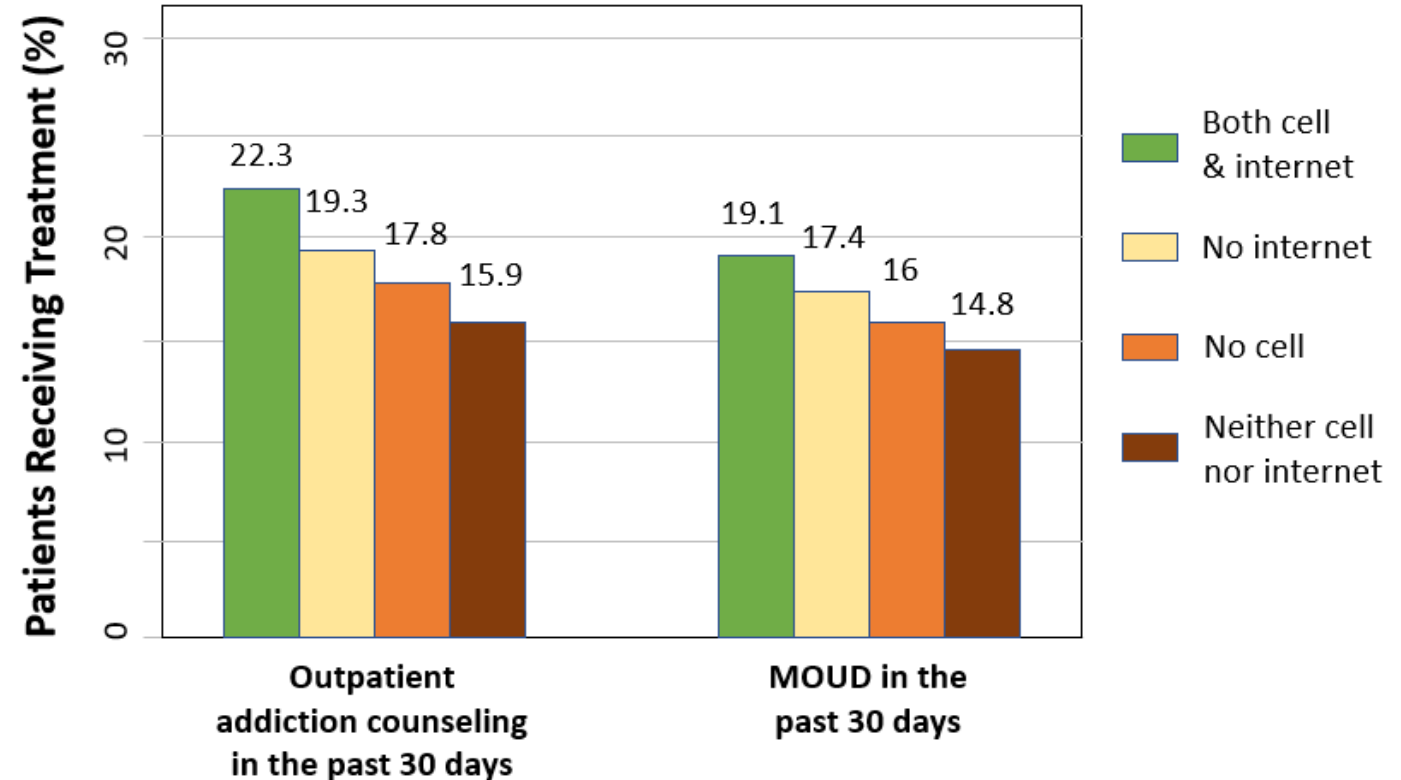
Internet (Rural **93%**, Urban **95%**)

Disparity *within* rural areas^{2,3}

Cell phone (SUD **59%**, non-SUD **94%**)

Internet (SUD **90%**, non-SUD **93%**)

Access to technology is related to increased SUD treatment among rural patients.



We Still Have Work to Do: Foster Personal Trust

- **Successful approaches**
 - Start by listening¹
 - Promote centralized sources of trusted information²
 - Develop messaging with *and* within key populations (e.g., social media)^{2,3}
 - Self-empowerment^{2,3}
 - Altruism^{2,3}
 - Informed decision-making^{1,2}
- **Be a messenger your community knows and trusts**

“Information alone is insufficient... Ultimately, the effectiveness of COVID-19 vaccines will depend on our ability to engender trust in the communities most affected.”¹



We Still Have Work to Do: Support Policies that Sensibly Reduce Barriers

- **Lower threshold for access to MOUD**
 - Elimination of the DATA-Waiver¹
 - Take-home dosing²

- **Easier pathways for receiving harm reduction supplies**
 - Naloxone by mail²
 - Naloxone by vending machine²
 - Naloxone available OTC²

NOVEMBER 2021

Extending Pandemic
Flexibilities for Opioid Use
Disorder Treatment:
Authorities and Methods

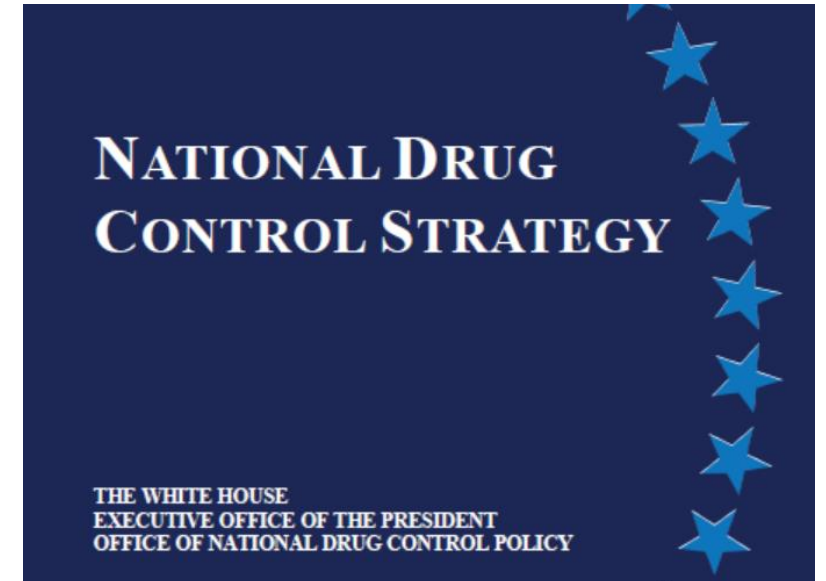
Published in the Minnesota Law Review

BY: BRIDGET C.E. DOOLING & LAURA E. STANLEY



We Still Have Work to Do: Support Policies that Sensibly Reduce Barriers

- **Policies that support evidence-based approaches**
 - Contingency Management incentives¹
- **Build and support the rural health care workforce**
 - Peer Recovery Counseling Specialists¹
 - RCORP – Child & Adolescent Behavioral Health²
- **Engage with the Federal Office of Rural Health Policy**
 - <https://www.hrsa.gov/rural-health/topics/coronavirus>²



Thank You!

Explore our website, view prior Community Rounds,
or sign up for our Listserv: www.uvmcora.org

Email us with questions or requests: cora@uvm.edu

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