

# A Telemedicine Bridge Clinic Successfully Engages Patients in Buprenorphine Treatment

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# Disclosure Information

## A Telemedicine Bridge Clinic Successfully Engages Patients in Buprenorphine Treatment

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☀ No disclosures



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# Learning Objectives

- ☀ Review barriers to accessing evidence-based treatment of OUD
- ☀ Discuss telehealth as an opportunity to address those barriers
- ☀ Summarize current regulatory landscape of MOUD treatment via telehealth
- ☀ Present the UPMC Medical Toxicology Telemedicine Bridge Clinic model and experience
- ☀ Consider role of telehealth integration into addiction treatment moving forward

# U.S. Drug Overdose Deaths

## 12 Month-ending Provisional Number and Percent Change of Drug Overdose Deaths

Based on data available for analysis on: 06-Mar-22

Figure 1a. 12 Month-ending Provisional Counts of Drug Overdose Deaths: United States

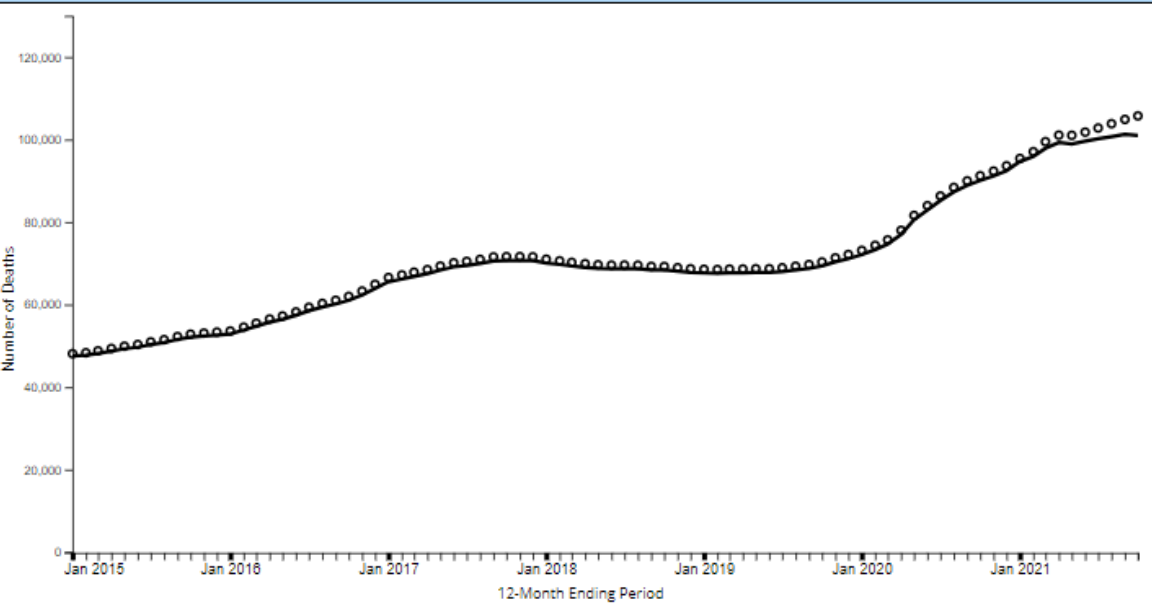
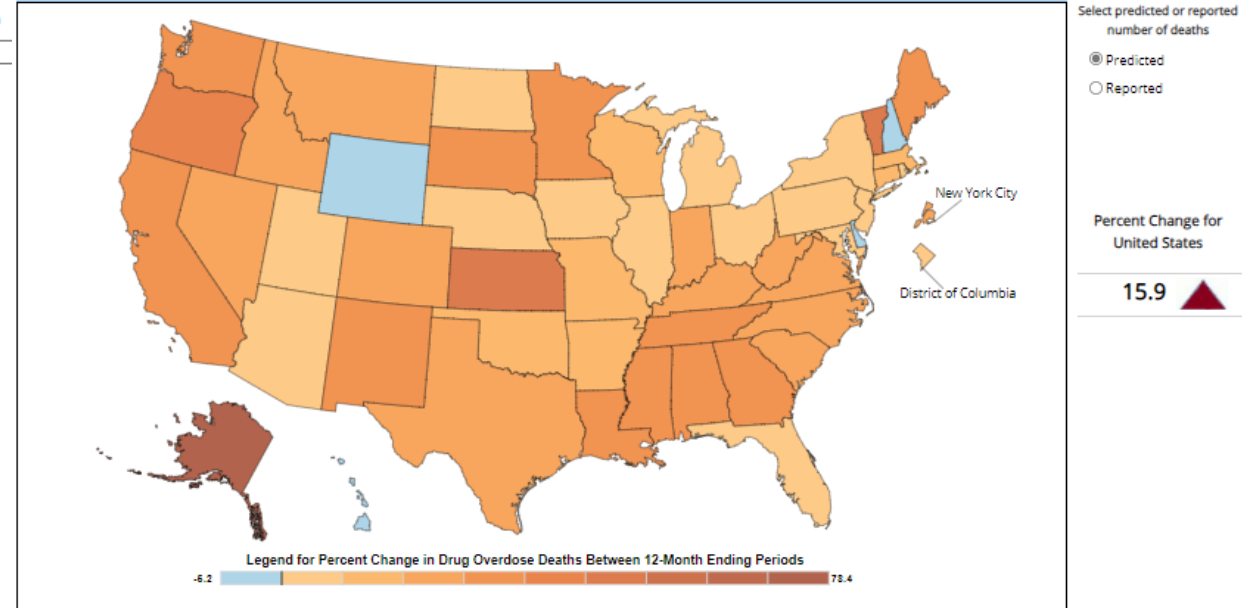


Figure 1b. Percent Change in Predicted 12 Month-ending Count of Drug Overdose Deaths, by Jurisdiction: October 2020 to October 2021



# Substance Use Disorders During a Pandemic

- ☀ Implications of isolation, stress, and anxiety on substance use
- ☀ Access to social supports
- ☀ Substance use in isolation and risk of overdose
- ☀ Adherence to distancing and sanitizing procedures
- ☀ Incarceration
- ☀ Housing instability
- ☀ Stigma
- ☀ Existing systemic inequities based on race, socioeconomic status, and geography
- ☀ Variance in drug supply, purity, and adulterants



1. Ornell F, Moura HF, Scherer JN, Pechansky F, Kessler FHP, von Diemen L. The COVID-19 pandemic and its impact on substance use: Implications for prevention and treatment. *Psychiatry Res.* 2020;289
2. LeSaint KT, Snyder HR. Impact of Social Distancing on Individuals Who Use Drugs: Considerations for Emergency Department Providers. *West J Emerg Med.* 2020;21(5):1102-1104. Published 2020 Aug 18

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# OUD Medication Treatment

- ☀ MOUD with an opioid agonist associated with:
  - ☀ More than double the abstinence rate from nonmedical opioid use<sup>2</sup>
  - ☀ Reduced incidence of HIV and Hepatitis C<sup>1,3,4</sup>
  - ☀ Mortality reduction of up to 50%<sup>4</sup>
  - ☀ Reduction in crime and improved social functioning<sup>4</sup>
  - ☀ Correction of neurobiological dysfunction that leads to relapse<sup>1</sup>
  - ☀ 42% overall annual reduction in healthcare costs<sup>5</sup>

1) Bart G. Maintenance Medication for Opiate Addiction: The Foundation of Recovery. *J Addict Dis.* 2012 July; 31(3): 207-225.

2) Weiss, R.D.; Potter, J.S.; Griffin, M.L. et al. Long-term outcomes from the National Drug Abuse Treatment Clinical Trials Network Prescription Opioid Addiction Treatment Study. *Drug and Alcohol Dependence* 150:112-119, 2015

3) Tsui JI et al. Opioid agonist therapy is associated with lower incidence of hepatitis C virus infection in young adult persons who inject drugs. *JAMA Intern Med.* 2014 December; 174(12): 1974-1981.

4) Schuckit MA. Treatment of Opioid-Use Disorders. *N Engl J Med.* 2016 July 28; 375: 357-368

5) Tkacz J, Volpicelli J, Un H, Ruetsch C. Relationship between buprenorphine adherence and health service utilization and costs among opioid dependent patients. *J Subst Abuse Treat.* 2014 Apr; 46(4): 456-62



# Medication Treatment for OUD Should Not Be Delayed

- ☀️ Initiation of medication treatment should not be delayed while completing full assessment and intake<sup>1</sup>
- ☀️ Medication therapy should not be contingent upon participation in behavioral therapy<sup>1,2</sup>
- ☀️ Both office-based and home buprenorphine induction are safe and effective<sup>1</sup>
- ☀️ Patients seeking addiction treatment are 7 times more likely to be engaged if they are seen on the same day compared to waiting 2+ days<sup>3</sup>



1. American Society of Addiction Medicine (ASAM) National Practice Guideline for the Treatment of Opioid Use Disorder: 2020 Focused Update. *J Addict Med.* 14(2S Suppl 1):1-91
2. National Academies of Sciences, Engineering, and Medicine 2019. Medications for Opioid Use Disorder Save Lives. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25310>.
3. Roy PJ, Choi S, Bernstein E, Walley AY. Appointment wait-times and arrival for patients at a low-barrier access addiction clinic. *J Subst Abuse Treat.* 2020 Jul;114:108011. doi: 10.1016/j.jsat.2020.108011. Epub 2020 Apr 22. PMID: 32527508.

# Barriers To Accessing Evidence-Based Treatment

- ☀ ~240 patients with OUD per x-waivered provider in US<sup>1</sup>
- ☀ >50% of x-waivered providers do not prescribe to capacity, and some do not prescribe at all<sup>2</sup>
- ☀ Gaps in knowing where to go for treatment<sup>3,4</sup>
- ☀ Difficulty accessing care<sup>3,4</sup>
- ☀ Long wait times<sup>3,4</sup>
- ☀ Geographical distance from treatment providers<sup>3,4</sup>

1. Langabeer JR, Stotts AL, Cortez A, Tortolero G, Champagne-Langabeer T. Geographic proximity to buprenorphine treatment providers in the U.S. *Drug Alcohol Depend.* 2020 Jun 24;213:108131. doi: 10.1016/j.drugalcdep.2020.108131. Epub ahead of print. PMID: 32599495.

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# Telehealth as a Solution

☀️ Telemedicine MOUD treatment results in similar retention rates as face-to-face

☀️ University of Maryland<sup>1</sup>

- ☀️ 177 patients treated
- ☀️ 57% retention rate after 3 months
- ☀️ 86% with opioid negative UDS

	Time in telemedicine treatment			
	1 week	1 month	2 months	3 months
Percent ( <i>n</i> ) engaged	97.7% (173)	91.0% (161)	72.8% (129)	57.4% (101)
Percent ( <i>n</i> ) noncumulative negative urine opiate screens of engaged patients	78.6% (136)	80.1% (129)	86.0% (111)	86.1% (87)

Percent engagement reported on total *n* of 177.

☀️ West Virginia<sup>2</sup>

- ☀️ 90 day retention of 51%
- ☀️ No statistical difference compared to face-to-face group in time to abstinence or relapse frequency

Comparison of 90-day Retention Rates between Telepsychiatry Group and Face-to-face Group for Patients Enrolled Before 10/01/2014

Group	Stayed less than 90 days	Stayed more than 90 days	Total	p
Telepsychiatry	23(48.9%)	24(51.1%)	47	0.99
Face-to-face	30(50.8%)	29(49.2%)	59	



1. Weintraub E, et al. Expanding access to buprenorphine treatment in rural areas with the use of telemedicine. *The American Journal on Addictions*. 2018; 27: 612-617

2. Zheng W, et al. Treatment outcome comparison between telepsychiatry and face-to-face buprenorphine medication-assisted treatment (MAT) for opioid use disorder: A 2-Year retrospective data analysis. *J Addict Med*. 2017; 11(2): 138-144.

# Review of Telehealth Utilization for Buprenorphine

- ✦ Incorporation of telehealth technology with medication-assisted treatment for OUD is associated with:
  - ✦ Higher patient satisfaction
  - ✦ Comparable retention rates
  - ✦ Overall reduction in healthcare costs
  - ✦ Increased access to and utilization of buprenorphine



# Federal Regulations: Telemedicine Prescribing of Controlled Substances

## ☀ Ryan Haight Act, 2008<sup>1</sup>

- ☀ Requires in-person initial assessment prior to prescribing a controlled substance

## ☀ Exceptions for telemedicine provision of buprenorphine under the Controlled Substances Act<sup>2,3</sup>

- ☀ Patient must be in a DEA-registered facility OR in the presence of a DEA registered (but not x-waivered) practitioner
- ☀ Telemedicine provider is licensed to practice and prescribe buprenorphine in the state where the patient is being seen
- ☀ Telemedicine provider is engaged in the usual course of clinical practice
- ☀ Patient documentation requirements and maximum prescribing limit maintained by telemedicine provider



1. 21 USC § 829 (e)(3)(A))
2. 21 U.S.C. § 802(54)(A),(B)
3. file:///D:/Opioid%20Education/Pain%20Addiction%20and%20Opioid%20Papers/hhs-telemedicine-dea-final-508compliant.pdf

# Public Health Emergency Regulatory Waivers

- Waived the initial requirement for an in-person assessment for the initiation of buprenorphine treatment.
- Allowed for audio-only visits for buprenorphine induction.

January 31, 2020	March 6, 2020	March 16, 2020	March 31, 2020
Public Health Emergency declared	CMS agreed to pay for telemedicine visits	DEA announced telemedicine could be used to prescribe buprenorphine	DEA clarified that audio <b>OR</b> video visits permitted for prescribing buprenorphine



# Telemedicine Pandemic Response

	<b>Site 1 NYC Health + Hospitals Virtual Buprenorphine Clinic</b>	<b>Site 2 Rhode Island Buprenorphine Hotline</b>	<b>Site 3 Zuckerberg San Francisco General Bridge Clinic</b>	<b>Site 4 University of Pennsylvania Outpatient Substance Use Treatment Program</b>
Organization type	Academic private non-profit, city government	Academic private non-profit	Academic, county government	Academic private non-profit
Funding source	Government, insurance reimbursement	Government contract/grant funded (CDC; SAMHSA)	Grant funded	Insurance reimbursement
Clinic type	Bridge clinic*	Bridge clinic*	Bridge clinic*	Outpatient clinic
New or existing program	New	New	Existing, previously did not offer telehealth	Existing, previously did not offer telehealth
Telehealth capability	Audio and audiovisual	Audio only	Audio only	Audio and audiovisual
Date telehealth visits launched	March 27, 2020	April 15, 2020	April 10, 2020	March 23, 2020
In-person visits	Not offered	Not offered	Offered	Not offered
Clinic provider specialties	Addiction medicine, addiction psychiatry	Addiction medicine, emergency medicine, internal medicine, medical toxicology	Addiction medicine, family medicine, obstetrics, internal medicine	Emergency medicine, psychiatry
Target population	People experiencing homelessness; people recently incarcerated	People experiencing homelessness; people recently incarcerated; people discharged from the emergency department	People experiencing homelessness; people in COVID-19 isolation/quarantine; people discharged from the emergency department or hospital	People recently incarcerated; people discharged from the emergency department; people calling institutional hotline for support

	<b>Total n (%)</b>
Number of patients	159
Age, mean (range)	43.0 (20–73)
Sex	
Male	121 (76.0)
Female	38 (24.0)
Race-ethnicity	
Black non-Hispanic	35 (23.0)
White non-Hispanic	49 (32.0)
Latinx/Hispanic	24 (16.0)
Other	45 (29.0)
Patient insurance	
Uninsured	8 (5.0)
Medicaid	117 (74.0)
Medicare	25 (16.0)
Other	9 (6.0)
Prior buprenorphine experience	
No	40 (25.0)
Yes, prescribed	89 (55.0)
Yes, not prescribed	34 (21.0)
Initiation or maintenance visit	
Initiation	135 (85.0)
Maintenance	24 (15.0)
Telehealth modality	
Audio only	87 (60.0)
Audiovisual	59 (40.0)
Returned visit within 30 days of initiation	
No	27 (17.0)
Yes	132 (83.0)



# Direct to Patient Urgent Telemedicine Addiction Care

**UPMC**  
LIFE CHANGING MEDICINE

## UPMC Medical Toxicology Telemedicine Bridge Program

UPMC Medical Toxicology is providing addiction medicine bridge clinic services via telemedicine throughout Pennsylvania in collaboration with the PA Department of Drug and Alcohol Programs and local Single County Authorities (SCAs).

# Program Description

- ☀ Patients anywhere in PA with SUD unable to be seen by a local medical provider on the day of presentation are referred to the UPMC Medical Toxicology Bridge Clinic scheduling number
- ☀ Bridge clinic appointment is scheduled ASAP, typically within 2 hours on the same day
  - ☀ Audiovisual vs. audio-only
- ☀ Providers are physicians board certified in emergency medicine, medical toxicology, and addiction medicine
- ☀ Bridge clinic appointment times: Monday-Friday 9a-5p

# Audiovisual or Audio-Only Visit

- Evaluation includes full addiction and medical history with remote exam
- Patients requiring benzodiazepines or non-buprenorphine opioids must complete a video visit
- Review of PDMP and available medical records
- Motivational interviewing employed
- EHR documentation and electronic prescribing to local pharmacy



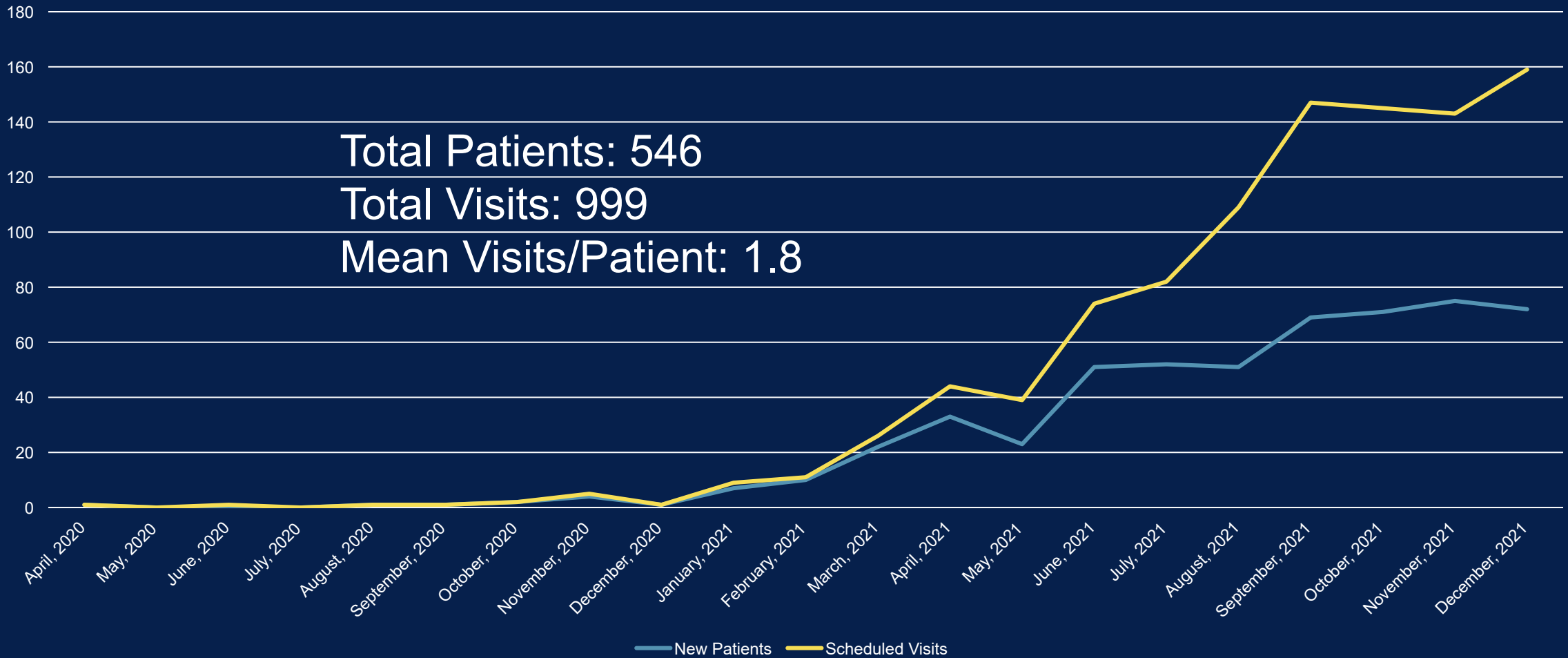
# MOUD Home Induction

- Patients who meet criteria for moderate to severe OUD and/or opioid withdrawal are prescribed unobserved home buprenorphine induction with micro-dosing protocol
  - When SOWS  $\geq 17$ , begin 2-0.5 mg SL q1-2 hours x 4 doses
  - Then 8-2mg SL BID x 7 days or until established follow-up appointment
  - Dosing tailored to patient need
  - Written home induction instructions provided via MyUPMC application
- Patient is prescribed naloxone nasal spray

# Transition to Long-Term Care

- Follow-up plan reviewed with patient
- Patients without established follow up are referred to County D&A offices and/or local providers
- Developing partnerships to connect every patient to remote Certified Recovery Specialist to facilitate follow up
- Limited short-term follow up with the Bridge Clinic for re-evaluation and ongoing prescribing if needed when local treatment engagement is delayed >7 days

# Patient Volume 4/27/2020-12/31/2021



# Overview of First 573 Patients

- ☀️ 573 total patients
  - ☀️ 40.3% female
  - ☀️ Mean age: 39.6 (range: 18-74)
  - ☀️ 551 patients evaluated
    - ☀️ No show rate of 3.8%
- ☀️ 87.3% audio only
- ☀️ ~82% of patients had Medicaid or were uninsured

Primary Payer Type	Patients with Payer Identified (n=568)
Medicaid	362 (63.7%)
Self-Pay	104 (18.3%)
Medicare	35 (6.2%)
Commercial	64 (11.3%)

# Referral Pattern

Referral Source	Patients Referred and Evaluated for OUD (n=573)
County Drug and Alcohol Commission	50 (8.7%)
Harm Reduction Organization/Mobile Clinic	175 (30.5%)
Addiction Treatment Provider	249 (43.5%)
Word of Mouth	50 (8.7%)
Unknown/Not Reported	49 (8.6%)

\*29/573 patients had recently been released from incarceration

\*7/573 patients were pregnant or post-partum



# Engagement in MOUD Analysis

- ☀️ Quality Assurance analysis performed to assess engagement in medication treatment following scheduled bridge clinic appointment
- ☀️ Approved by UPMC Quality Review Council
- ☀️ 207 scheduled appointments from 4/27/2020-7/31/2021
  - ☀️ 200/207 (97%) completed an appointment
  - ☀️ 192/200 (96%) with primary OUD
- ☀️ PA Prescription Drug Monitoring Program data reviewed for each patient to assess buprenorphine prescription for patients with OUD

# Rate of Engagement in Buprenorphine Treatment

- ☀ 96% of patients scheduled for OUD visits filled a buprenorphine prescription within 30 days of the telemedicine visit
- ☀ 77% filled 2 or more prescriptions
- ☀ No difference between audio-only and audiovisual visits

	Total Engaged (n=192)	Audio-Only Visits (n=153)	Audiovisual Visits (n=39)
Buprenorphine Rx Fill within 30 days	185 (96%)	147 (96%)	38 (97%)
2+ Buprenorphine Rx Fills After Visit	147 (77%)	112 (73%)	33 (85%)



# Vulnerable Population Reached, UPMC HP

☀️ Deprivation and Vulnerability Indices compared to other UPMC HP members

	<b>UPMC Toxicology Telemedicine Bridge Clinic</b>	SPMI + SUD (UPMC HP)	SUD Only (UPMC HP)	No MH or SUD (UPMC HP)
Area Deprivation Index 110+	<b>64.40%</b>	48%	51.50%	38.50%
Social Vulnerability Index 80+	<b>71.70%</b>	60%	58.30%	49.20%

SUD = Substance Use Disorder

SPMI = Severe and Persistent Mental Illness

MH = Mental Health





# Limitations

- ☀ Retrospective
- ☀ Small number
- ☀ No clear comparison group
- ☀ No access to all follow up documentation and claims
  - ☀ Behavioral therapy
  - ☀ Methadone
- ☀ No access to urine drug screens
- ☀ PDMP findings may not reflect direct intervention effect

# Opportunities

- ☀️ Improve warm handoff and acute care referral processes
- ☀️ Reduce barriers to accessing treatment for patients and providers
- ☀️ Integrate with local long-term treatment services
- ☀️ Improve time to engagement
- ☀️ Expand access to OUD treatment for pregnant women
- ☀️ Expand access for rural Americans
- ☀️ Bridge the gap for individuals released from jail to community providers

# Emergency Department Warm Handoff

- ☀️ Only 12% of patients treated in the ED for nonfatal opioid overdoses subsequently receive MOUD
- ☀️ 28.5% of patients prescribed buprenorphine from the ED fill another buprenorphine prescription within 30 days
- ☀️ Low barrier access to a telemedicine bridge clinic can improve the continuum of care in this high-risk population



# Telemedicine + Mobile Treatment

- ☀ Remote provider with mobile treatment and data collection resources
- ☀ 94 patients treated in rural MD
  - ☀ 77.7% 7 day retention
  - ☀ 58.5% 90 day retention
- ☀ 33% reduction in non-medical opioid use
- ☀ Patients saved average of:
  - ☀ 6.5 miles distance
  - ☀ 10 minutes driving time



# Challenges

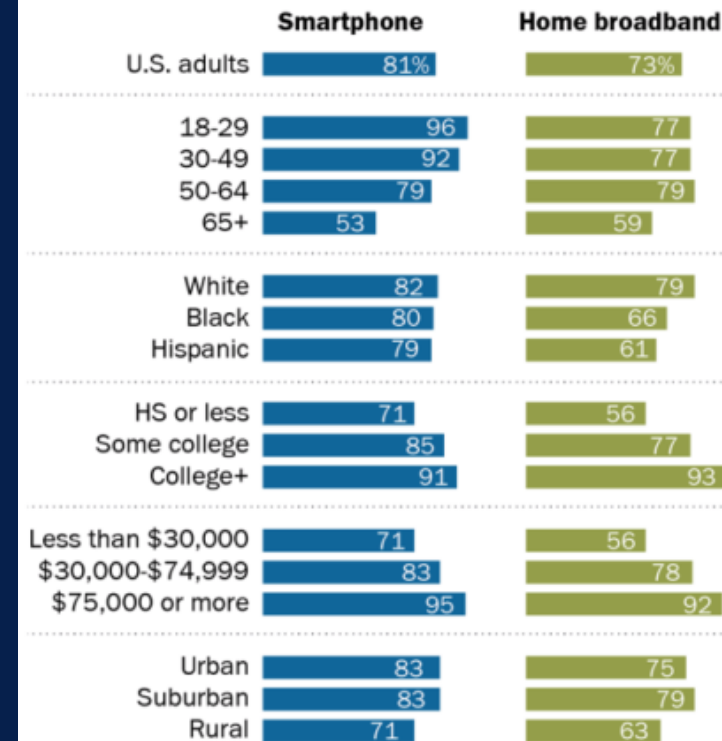
- ☀️ Broadband and internet access
- ☀️ Rapid accessibility results in unscheduled and non-reimbursed provider time
- ☀️ High percentage of Medicaid and uninsured patients results in poor reimbursement
  - ☀️ Traditional Fee For Service structure inadequate
- ☀️ Care navigator and certified recovery specialist services are incompletely reimbursed
- ☀️ Urine drug screens
- ☀️ Repeat visits without local engagement
- ☀️ Identity theft

# Access to SUD Telehealth

- ☀ Digital divide exacerbates inequities in access to care
- ☀ Rural and low-income groups have substantially reduced access to stable internet<sup>1</sup>
- ☀ Broadband infrastructure investment as a social determinant of health<sup>2</sup>
- ☀ Audio-only access to telehealth alleviates disparities in access to care

## Majorities of Americans have a smartphone, subscribe to broadband, but this varies by education, income

% of U.S. adults who say they have or own the following



Note: Respondents who did not give an answer are not shown. Whites and blacks include only non-Hispanics. Hispanics are of any race.

Source: Survey of U.S. adults conducted Jan. 8-Feb. 7, 2019. "Mobile Technology and Home Broadband 2019"

PEW RESEARCH CENTER



1. Anderson M. Mobile Technology and Home Broadband 2019. Pew Research Center. [Mobile Technology and Home Broadband 2019 | Pew Research Center](#). Accessed 3/2/2021
2. Bauerly BC, McCord RF, Hulkower R, Pepin D. Broadband Access as a Public Health Issue: The Role of Law in Expanding Broadband Access and Connecting Underserved Communities for Better Health Outcomes. *J Law Med Ethics*. 2019;47(2\_suppl):39-42. doi:10.1177/1073110519857314

# Telehealth Use Among Safety Net Organizations

☀️ 48.5% of primary care visits occurred via telephone and only 3.4% via video

☀️ 63.3% of behavioral health visits occurred via telephone and only 13.9% via video

Table. Characteristics of Federally Qualified Health Centers in California by Participation in the California Health Care Foundation Initiative

	Federally Qualified Health Centers by participation in the California Health Care Foundation initiative <sup>a</sup>	
	Participating (n = 35)	Not participating (n = 147)
Region in California, No. (%)		
Northern	9 (25.7)	49 (33.3)
Central	8 (22.9)	21 (14.3)
Southern	18 (51.4)	77 (52.4)
No. of unique patients, No. (%)		
≤9999	5 (14.3)	54 (36.7)
10 000-49 999	21 (60.0)	73 (49.7)
50 000-99 999	7 (20.0)	12 (8.2)
≥100 000	2 (5.7)	8 (5.4)
Patient demographics, mean (SD), %		
Aged >65 y	8.4 (5.3)	10.4 (6.9)
Racial/ethnic minority <sup>b</sup>	78.5 (21.6)	73.9 (23.6)
Best served in another language (not English)	36.3 (21.9)	32.7 (21.3)
At or below 100% of poverty line	71.6 (13.5)	69.4 (16.6)

<sup>a</sup> Data are from the Health Resources and Service Administration Uniform Data System.

<sup>b</sup> Defined as individuals who self-identified as Black, Asian, American Indian, Alaska Native, Native Hawaiian, Pacific Islander, other non-White race, more than 1 race, or Hispanic/Latino. The Health Resources and Service Administration Uniform Data System reports these data because patient health care access and use can be influenced by race/ethnicity.

Uscher-Pines L, Sousa J, Jones M, Whaley C, Perrone C, McCullough C, Ober AJ. Telehealth Use Among Safety-Net Organizations in California During the COVID-19 Pandemic. JAMA. 2021 Mar 16;325(11):1106-1107. doi: 10.1001/jama.2021.0282. PMID: 33528494; PMCID: PMC7856569.



# Policy Priorities Post-Pandemic

- Require public and private insurers to reimburse OUD treatment providers for all services delivered via telehealth.
- Set public and private reimbursement rates for telehealth-based OUD services on a par with in-person treatment.
- Expand locations where patients can receive OUD treatment services via telehealth, including their homes.
- Allow patients to access OUD treatment services by telephone.
- Enable correctional institutions to use telehealth for OUD treatment services.
- Enact 2018 SUPPORT Act “special registrations” to expand telemedicine





# Final Takeaways

- ☀️ Telemedicine, both audiovisual and audio-only, can effectively engage patients with MOUD treatment
- ☀️ Long-term outcomes of telemedicine treatment are not yet known
- ☀️ The impact of telemedicine on diversion is unclear
- ☀️ Integration of telemedicine with traditional addiction treatment programs likely improves access and reduces barriers to care

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2. Ornell F, Moura HF, Scherer JN, Pechansky F, Kessler FHP, von Diemen L. The COVID-19 pandemic and its impact on substance use: Implications for prevention and treatment. *Psychiatry Res.* 2020;289
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