



UPMC Medical Toxicology Telemedicine Bridge Clinic

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Medication Treatment for OUD Should Not Be Delayed

- Initiation of medication treatment should not be delayed while completing initial assessment and intake¹
- Medication therapy should not be contingent upon participation in behavioral therapy^{1,2}
- Both office-based and home buprenorphine induction are safe and effective¹
- Patients seeking addiction treatment are 7 times more likely to be engaged if they are seen on the same day compared to waiting 2+ days³

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

- Gaps in knowing where to go for treatment^{1,2}
- Difficulty accessing care^{1,2}
- Long wait times^{1,2}
- Geographical distance from treatment providers^{1,2}
- Pennsylvania patients wait up to 3 weeks for MOUD treatment³

1. Substance Abuse and Mental Health Services Administration (SAMHSA). 2020. *Key substance use and mental health indicators in the United States: Results from the 2019 National Survey on Drug Use and Health* (HHS Publication No. PEP20-07-01-001, NSDUH Series H-55). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. Retrieved from <https://www.samhsa.gov/data/>.
2. Hall NY, Le L, Majmudar I, Mihalopoulos C. Barriers to accessing opioid substitution treatment for opioid use disorder: A systematic review from the client perspective. *Drug Alcohol Depend.* 2021 Apr 1;221:108651. doi: 10.1016/j.drugalcdep.2021.108651. Epub 2021 Feb 26. PMID: 33667783.
3. Kawasaki S, Francis E, Mills S, Buchberger G, Hogentogler R, Kraschnewski J. Multi-model implementation of evidence-based care in the treatment of opioid use disorder in Pennsylvania. *J Subst Abuse Treat.* 2019 Nov;106:58-64. doi: 10.1016/j.jsat.2019.08.016. Epub 2019 Aug 28. PMID: 31540612; PMCID: PMC7194237.

Bridge Clinic Model

Bridge Clinic = rapidly accessible, short-term service where practitioners can prescribe buprenorphine as “bridge” MOUD treatment

Telemedicine Bridge Clinic = services are provided without initial in-person exam

Bridge Clinic models (both in-person and virtual) have been shown to be effective and accepted by patients¹

1. Taylor JL, Wakeman SE, Walley AY, Kehoe LG. Substance use disorder bridge clinics: models, evidence, and future directions. *Addict Sci Clin Pract.* 2023 Apr 14;18(1):23. doi: 10.1186/s13722-023-00365-2. PMID: 37055851; PMCID: PMC10101823.

Telehealth as a Solution

- Utilization of telemedicine expanded 63-fold during the Covid-19 public health emergency¹
- Telemedicine MOUD treatment outcomes are similar to traditional care^{2,3,4}
- Programs to provide rapid access to buprenorphine treatment were successfully implemented in several states during the public health emergency with good outcomes⁵
- Retention in treatment and rate of opioid overdose were improved among Medicare patients who accessed telemedicine OUD treatment⁶

1. Samson, L., Tarazi, W., Turrini, G., Sheingold, S., Medicare Beneficiaries' Use of Telehealth Services in 2020 – Trends by Beneficiary Characteristics and Location (Issue Brief No. HP-2021- 27). Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. December, 2021.

2. 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

3. 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

4. Hailu R, Mehrotra A, Huskamp HA, Busch AB, Barnett ML. Telemedicine Use and Quality of Opioid Use Disorder Treatment in the US During the COVID-19 Pandemic. *JAMA Netw Open*. 2023 Jan 3;6(1):e2252381. doi: 10.1001/jamanetworkopen.2022.52381. PMID: 36692880..

5. Samuels EA, Khatri UG, Snyder H, Wightman RS, Tofighi B, Krawczyk N. Buprenorphine Telehealth Treatment Initiation and Follow-Up During COVID-19. *J Gen Intern Med*. 2022 Jan 3:1–3. doi: 10.1007/s11606-021-07249-8. Epub ahead of print. PMID: 34981357; PMCID: PMC8722662.

6. Jones CM, Shoff C, Hodges K, Blanco C, Losby JL, Ling SM, Compton WM. Receipt of Telehealth Services, Receipt and Retention of Medications for Opioid Use Disorder, and Medically Treated Overdose Among Medicare Beneficiaries Before and During the COVID-19 Pandemic. *JAMA Psychiatry*. 2022 Oct 1;79(10):981-992. doi: 10.1001/jamapsychiatry.2022.2284. Erratum in: *JAMA Psychiatry*. 2022 Oct 1;79(10):1048. PMID: 36044198; PMCID: PMC9434479.

Review of Telehealth for MOUD

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

Guillen AG, Reddy M, Saadat S, Chakravarthy B. Utilization of Telehealth Solutions for Patients with Opioid Use Disorder Using Buprenorphine: A Scoping Review. *Telemed J E Health*. 2021 Oct 29. doi: 10.1089/tmj.2021.0308. Epub ahead of print. PMID: 34714172.

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).

Patient Engagement

- Patient with substance use disorder seeks care anywhere in Pennsylvania
- If patient is unable to be seen by a local provider that day, he/she can be referred to the UPMC Medical Toxicology Bridge Clinic
 - Referrals received from COEs, non-COE treatment providers, jails/probation, EDs, SCAs, word of mouth, residential rehabilitation facilities, primary care, prehospital providers, and others
- Bridge clinic appointment is scheduled ASAP, often within 2 hours on the same day, with a physician who is actively practicing in emergency medicine, medical toxicology, and addiction medicine
 - Patients can select video or audio-only telemedicine appointments based upon capabilities and preference
- Appointments can be scheduled 24/7 via an online scheduling platform
- Bridge clinic appointment times: Monday-Friday 9a-5p (currently)
- Patient is connected with long-term treatment via County SCA, local treatment provider, or contracted outpatient care coordinators

Overview of First 6210 Patient Encounters

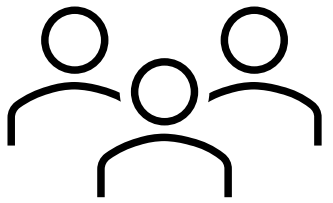


April 27, 2020 to July 31, 2023

Primary Payor Type (94% Medicaid or Uninsured)

Payor Category % of Total Charges by Category

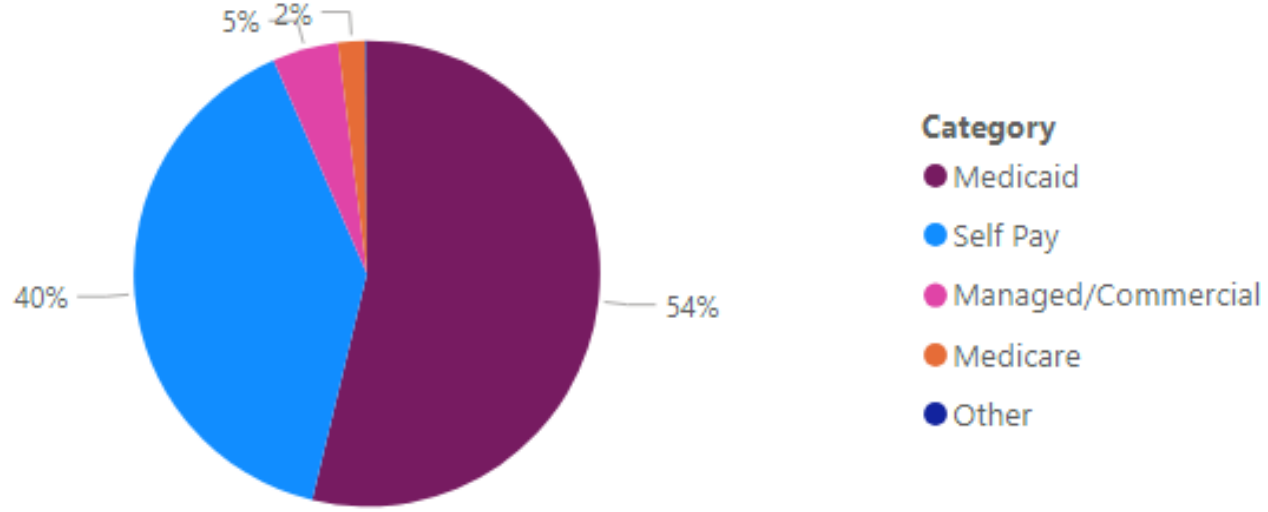
3327 Patients



- Age Range: 17-79
- ~57% Male
- ~43% Female



>90% audio/telephone only visits



“Comfort Meds”

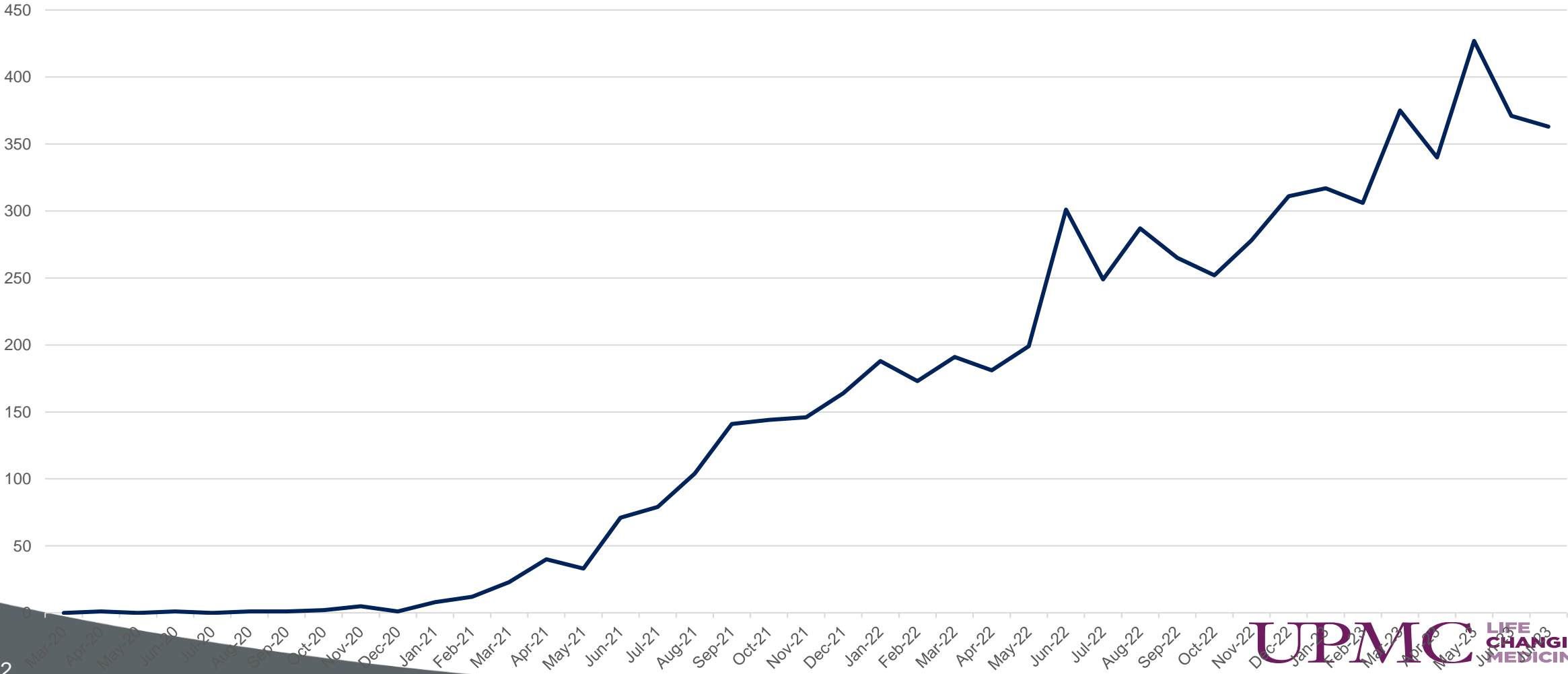
- Medications to manage symptoms of mild to moderate withdrawal while initiating buprenorphine
- Typical medications:
 - Clonidine: 0.1-0.2 mg PO q6 hours PRN diaphoresis, tremor, anxiety
 - Hydroxyzine: 25-50 mg PO q6 hours PRN anxiety
 - Loperamide: 2-4 mg PO q4-6 hours PRN diarrhea
 - Ondansetron: 4-8 mg ODT or PO q6 hours PRN nausea
 - Trazodone: 50mg PO QHS/Mirtazapine 7.5mg PO QHS PRN insomnia
 - Gabapentin: 400mg PO TID (short-term until MOUD at full dose)
 - Benzodiazepines if needed for severe discomfort/anxiety (supervised, temporary)

Prescribing Buprenorphine

- Patients who have already tolerated buprenorphine
 - Prescribe 8-2mg SL BID x ___ days until established follow up
- Home induction
 - Prescribe 8-2 SL BID x ___ days until established follow up
 - Review symptoms of opioid withdrawal with patient and explain risk of precipitated withdrawal
 - Recommend not taking first dose until patient feels fairly significant symptoms
 - Patient may tear/cut strip in quarters/eighths to take every 1-2 hours until symptoms improved x 4-8 doses then commence 8-2mg SL BID
 - Provide discharge instructions to support the patient's home induction

Sustained Growth Over 3 Years

UPMC Telemedicine Bridge Clinic Volume by Month, 4/20-7/23

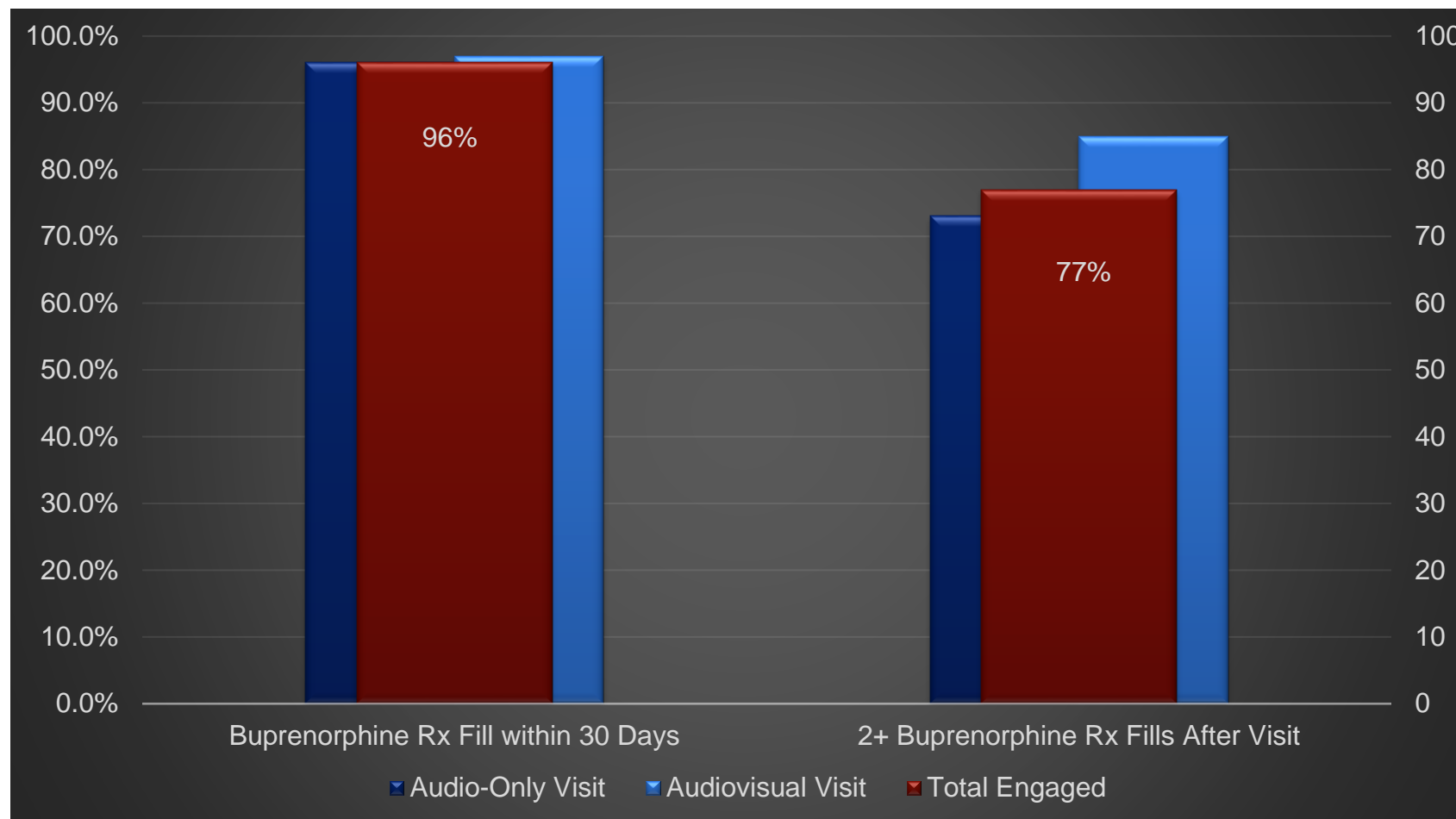


48 Counties Served in 2020-2022

- Allegheny, Blair, Washington, Greene, Bucks, Armstrong, Montgomery, Beaver, Clearfield, Butler, Cambria, Fayette, Erie, Huntingdon, Elk, Indiana, Potter, Mercer, Bedford, Lycoming, Delaware, Somerset, Philadelphia, Clarion, Monroe, Northampton, York, Clinton, Lawrence, Northumberland, Venango, McKean, Cameron, Berks, Lehigh, Chester, Jefferson, Centre, Crawford, Dauphin, Tioga, Luzerne, Reading, Lancaster, Cumberland, Pike, Wayne

Excellent Rate of Engagement in Buprenorphine Treatment

Telemedicine Bridge Clinic Patients Engaged in OUD Medication Treatment



Lynch MJ, Houck P, Meyers J, Schuster J, Yealy DM. Use of a Telemedicine Bridge Clinic to Engage Patients in Opioid Use Disorder Treatment. *J Addict Med.* 2022 Mar 7. doi: 10.1097/ADM.0000000000000967. Epub ahead of print. PMID: 35258040.

6 Month Outcomes

- 150 UPMC For You patients with continuous coverage before and after bridge clinic visit for OUD
- Increased outpatient behavioral health and primary care utilization; decreased ED and inpatient utilization
- Reduction in costs 6 months after first bridge visit compared to month before
 - 62% reduction in unplanned care costs
 - 38% reduction in all care costs *excluding* pharmacy
 - 10% reduction in all care costs *including* pharmacy
- Median days of buprenorphine treatment increased from 0% to 73% with persistent median coverage >50% after 6 months

Cost of Care Compared to 30 Days pre-Bridge Clinic

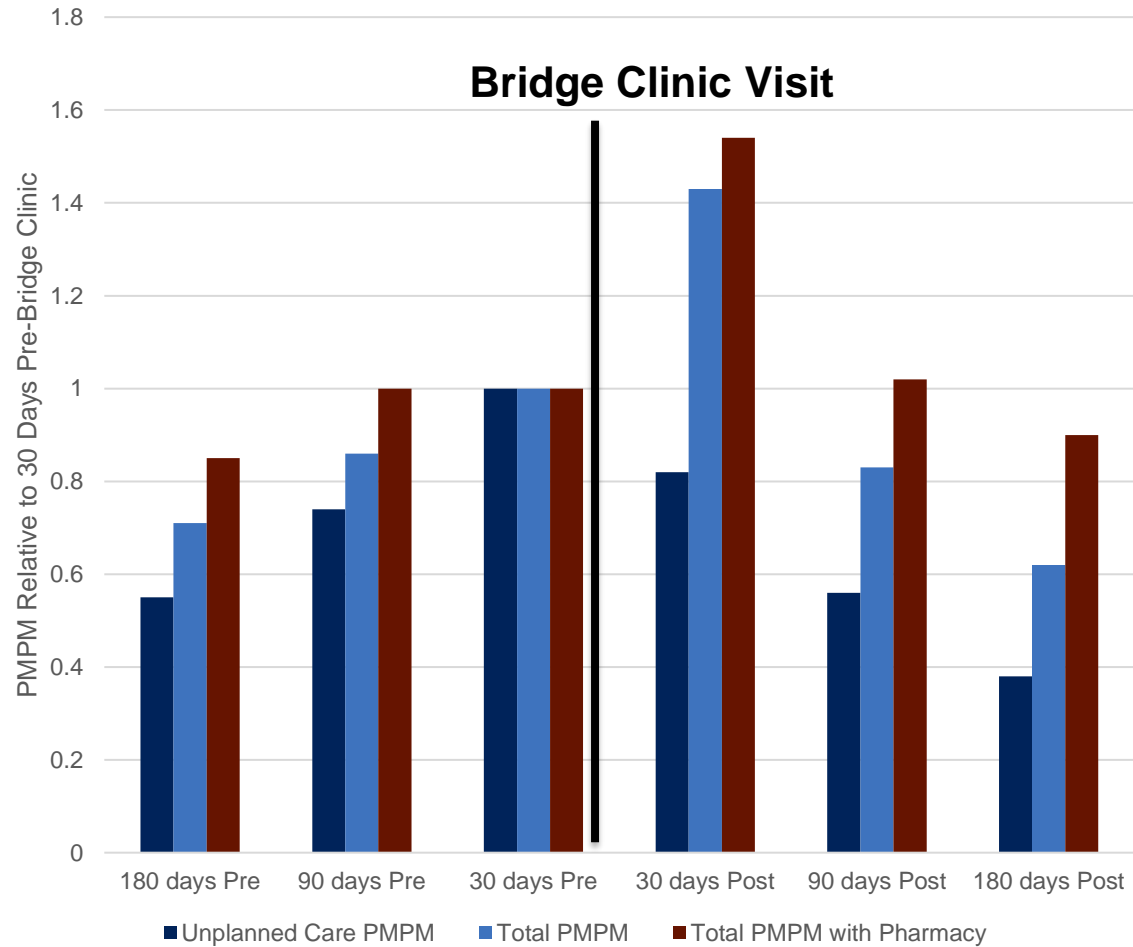


Figure 1a. Costs of care (PMPM) relative to 30 days Pre-Bridge Clinic Engagement

Changes in SUD-Specific PMPM Compared To Pre-Bridge Clinic By Service Category

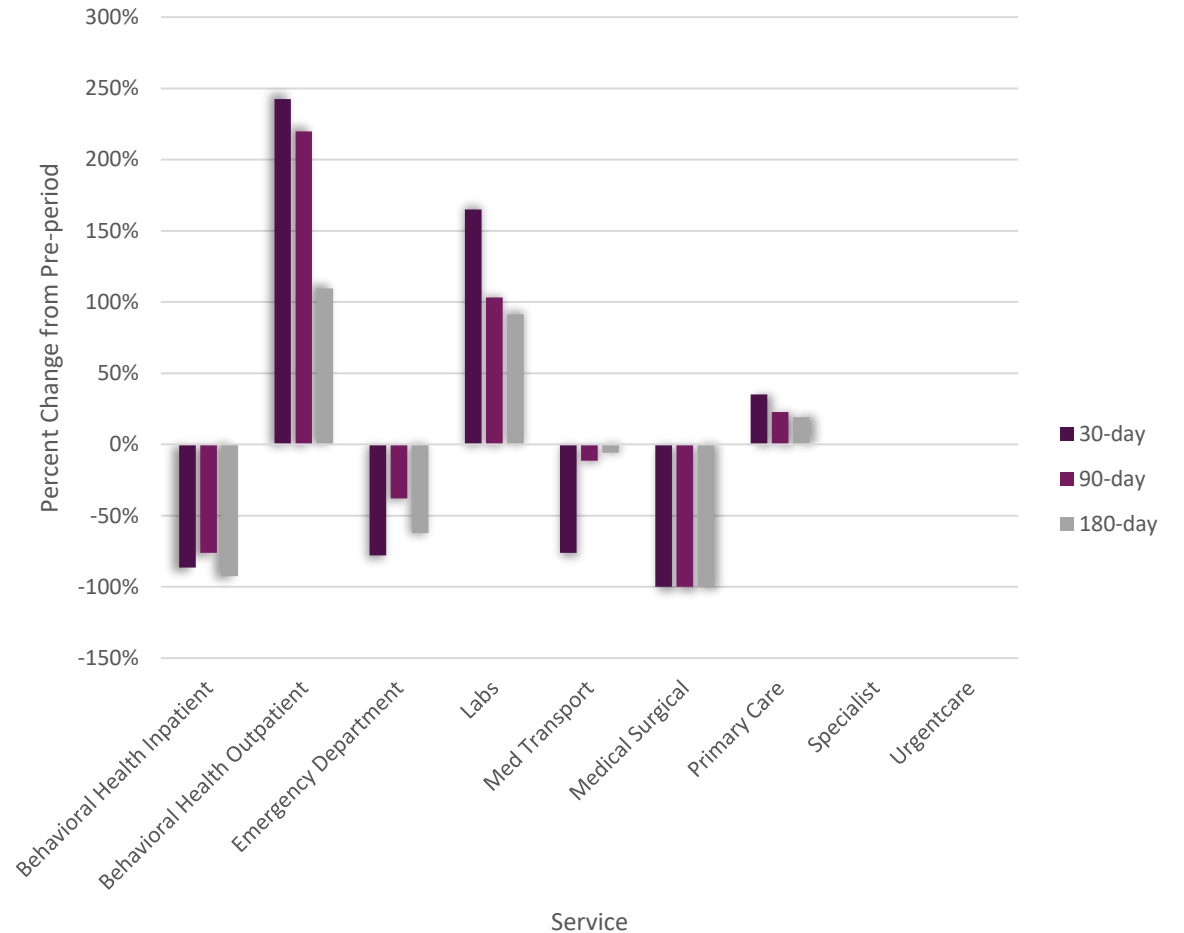


Figure 1b. Percent change in SUD-specific care costs before and after Bridge Clinic engagement by service category

PA DHS Medicaid Analysis of Bridge Clinic

• Outcomes

- Significantly higher rates of engaging non-white PA residents
- Higher risk of comorbidity or recent ED visit
- Significantly higher 30 day engagement on MOUD compared to other providers (92% vs.74%)
- Increasing proportion of days covered on buprenorphine following bridge visit
- ~2% absolute reduction in ED visits relative to other programs (~13% relative reduction) in month of engagement
- Significantly lower overall cost of care in the month of visit compared to other providers

	Bridge Patients (552)	Comparison (9813)
Gender		
Female	255 (46.2%)	4780 (48.7%)
Race/Ethnicity		
White	449 (81.34%)*	8714 (88.8%)
Black	85 (15.4%)*	858 (8.7%)
Hispanic	5 (0.91%)*	57 (0.58%)
Chronic Conditions		
AUD	65 (11.8%)*	873 (8.9%)
Other SUD	414 (75%)*	6959 (70.9%)
HCV	108 (19.6%)*	1218 (12.4%)
Recent ED Visit	237 (42.9%)*	3718 (37.9%)

Questions?

