Telehealth Capability Among Substance Use Disorder Treatment Facilities in Counties With High Versus Low COVID-19 Social Distancing

Jonathan Cantor, PhD, **Bradley D. Stein, MD, PhD**, **Brendan Saloner, PhD**
RAND Corporation, Santa Monica, CA (JC), RAND Corporation, Pittsburgh, PA (BDS), Johns Hopkins Bloomberg School of Public Health, Baltimore, MD (BS).

Abstract

Objective: To quantify the availability of telehealth services at substance use treatment facilities in the U.S. at the beginning of the COVID-19 pandemic, and determine whether telehealth is available at facilities in counties with the greatest amount of social distancing.

Methods: We merged county-level measures of social distancing through April 18, 2020 to detailed administrative data on substance use treatment facilities. We then calculated the number and share of treatment facilities that offered telehealth services by whether residents of the county social distanced or not. Finally, we estimated a logistic regression that predicted the offering of telehealth services using both county- and facility-level characteristics.

Results: Approximately 27% of substance use facilities in the U.S. reported telehealth availability at the outset of the pandemic. Treatment facilities in counties with a greater social distancing were less likely to possess telemedicine capability. Similarly, nonopioid treatment programs that offered buprenorphine or vivitrol in counties with a greater burden of COVID-19 were less likely to offer telemedicine when compared to similar facilities in counties with a lower burden of COVID-19.

Conclusions: Relatively few substance use treatment facilities offered telehealth services at the onset of the COVID-19 pandemic. Policymakers and public health officials should do more to support facilities in offering telehealth services.

Keywords

COVID-19; social distancing; telehealth

The COVID-19 pandemic complicates the delivery of substance use disorder (SUD) treatment. SUD treatment traditionally depends on in-person contact, as individuals visit treatment programs to receive counseling, testing, dispensed medications such as methadone, and prescriptions for psychotropic medications. Many patients with SUD also have serious underlying health conditions that may increase risk for COVID-19

Send correspondence to Jonathan Cantor, PhD, RAND Corporation, 1776 Main Street, m5159, Santa Monica, CA 90401. jcantor@rand.org.

complications. To deliver care during the COVID-19 pandemic requires treatment facility staff to use personal protective equipment, such as gowns and face shields, that may be difficult to acquire outside of hospitals. Protecting patients and staff from COVID-19 infection is of paramount importance, and can be accomplished by reducing in-person services that can be provided through other means.

To limit in-person transmission risk, opioid treatment programs(OTPs) can issue a takehome supply of up to 14 and 28 days of methadone for less stable and stable patients, respectively. Federal agencies have issued guidance facilitating greater telehealth use by providers, including medication management visits for opioid use disorder.[1] Waivered prescribers can now induce patients onto buprenorphine remotely via telemedicine; and counseling via telehealth is now covered by Medicare and Medicaid. Telehealth can take a variety of forms, but providing telehealth services requires expertise and infrastructure, optimally involving a secure platform with video capability. Adoption of telehealth for SUD treatment requires addressing numerous logistical challenges such as coordinating the transmission of patient information to disparate providers.[2] Demand for telehealth may be especially great in communities that initially underwent extensive social distancing, a strategy to reduce COVID-19community transmission risk. We examine telehealth capability at SUD treatment facilities at the onset of the pandemic when changes in social distancing and telehealth availability are expected to change drastically. We compare capabilities in counties with greater versus lower reductions in travel following COVID-19 social distancing measures. Our results serve as baseline estimates for understanding the change in telehealth availability by treatment facilities as the pandemic progresses.

METHODS

Using the federal Substance Abuse and Mental Health Services Administration's April 1, 2020 Behavioral Health Treatment Service Locator data, which provides a near census of specialty treatment programs subject to federal regulations, we examined telehealth capability, and how it varied by service setting type, provision of medications for opioid use disorder, and payment forms accepted. Changes in travel from February 2 to 8 to April 12 to 18 was calculated using county-level social distancing data from SafeGraph.[3] The data include global positioning system location data from around 45 million mobile devices. For each week, we calculated the share of devices observed outside of their household compared to the week of February 2 to 8. High social distancing counties were defined as counties experiencing travel decreases outside of their home that were 30% or greater; remaining counties were categorized as low distancing. We merged the facility data to county-level adjusted fatal drug overdose rate and urbanicity codes from the Centers for Disease Control and Prevention.[4,5] Counties in the highest quartile of the adjusted fatal drug overdose rate are classified as an elevated fatal drug overdose rate.

Our main outcome of interest is telehealth provision by a facility and our main independent variable of interest is whether the facility is located in a county with high versus low social distancing. We first examine the characteristics of *counties* that were experiencing high versus low social distancing, comparing their location in the four major census regions, whether the counties are located in a metropolitan area, and whether the county was

experiencing elevated fatal drug overdose rate in 2017. We also compare the density of treatment facilities overall and facilities offering telemedicine.

Next, we examine the share of all *facilities* that offered telemedicine stratified by location in a high versus low social distancing county. We further stratify facilities by their location in the different geographic regions and by select facility characteristics such as provision of medications for opioid use disorder, types of payment accepted, and for-profit status. For the facility-level measures we used a univariate logistic regression restricted to facilities with the characteristic and only controlling for whether the facility was in a county with a high or low measure of social distancing. Our study was approved by RAND's Institutional Review Board. All analyses were conducted using Stata version 15.0.

RESULTS

Through April 11, 2020, approximately 43.2% of counties had at least a 30 percent decline in travel. Counties with high social distancing were disproportionately in the northeast, were more likely to have an elevated fatal drug overdose rate in 2017 (25.4% vs 17.1%, $P <$ 0.001), to be core urban counties (50.2% vs 8.7, $P <$ 0.001), and to have a lower ratio of facilities with telehealth per capita (1.9 vs 2.4, $P = 0.0093$) compared to counties with low social distancing (Table 1). There was no statistically significant difference in the ratio of facilities per capita between counties by social distance.

Facilities in counties with high social distancing were less likely than those with low distancing to possess telehealth capability (24.5% vs 39.2%, $P = < 0.001$) (Table 2). Facilities in high social distancing counties were generally less likely than their counterparts to offer telehealth when stratifying by region, type of facility, for-profit status, and type of payments accepted. Gaps of at least 10 percentage points were identified in the Northeast, Midwest, and West. OTPs offering methadone were less likely than other facilities to offer telehealth in both high and low social distancing counties but the difference was not statistically significant, and there was a large difference between high and low social distancing counties in telehealth provision in non-OTP facilities offering buprenorphine and naltrexone (34.3% vs 58.5% $P = <0.001$).

DISCUSSION

Connecting SUD patients with telehealth is critical in the era of COVID-19, but over two thirds of facilities lacked this capability before the pandemic. Telehealth capability was lower in counties that initially underwent greater social distancing, likely because these counties were more likely to be in urban areas (particularly in northeastern cities such as New York) with a greater supply of facilities, a greater population proximal to the facility requiring less travel to a facility, and a higher number of COVID-19 cases. Acquiring technology and training staff,[6] government policies related to telehealth reimbursement, and policies restricting the prescribing of controlled substances are all considered important barriers to tele-SUD.[7] Under COVID-19, the federal government has relaxed its enforcement of standards requiring providers to use secure platforms that comply with federal privacy

protections,[8] potentially increasing the ability of facilities that had not offered telehealth before COVID-19 to make this transition.

This study has limitations. We lacked specificity about the scope and scale of telehealth implementation before COVID-19, and therefore do not know how frequently patients actually used telehealth at these facilities and for what types of treatments. Our social distancing measure also reflects a point in time, and may not fully encapsulate the burden of COVID-19 or pandemic related disruption in a county during the pandemic.

CONCLUSIONS

COVID-19 is a dynamic and unprecedented challenge. Our study provides a baseline to understand the evolution of the SUD treatment system as it seeks to adapt to the need to reduce in-person visits. Further research should examine the extent to which patients are being transitioned from in-person to telehealth visits for SUD treatment, and the effects of that transition on access, quality of care, and patient outcomes.

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TABLE 1.

Descriptive Statistics Comparing Counties That Socially Distanced or Not (N = 3142)

	All Counties	Counties With High Social Distancing	Counties With Low Social Distancing	P
All		43.19%	56.81%	
Census region				P < 0.001
Northeast	6.91%	13.26%	2.07%	
Midwest	33.58%	37.51%	30.59%	
South	39.27%	22.99%	51.65%	
West	20.24%	26.23%	15.69%	
County MSA status				P < 0.001
Metropolitan	26.64%	50.22%	8.71%	
Nonmetropolitan	73.36%	49.78%	91.29%	
Fatal drug overdose rate quartile				P < 0.001
Highest quartile	20.72%	25.42%	17.14%	
Not highest quartile	79.28%	74.58%	82.86%	
Facilities				
The number of facilities in the county per capita	5.44	5.51	5.39	0.6451
The number of facilities in the county that offer telehealth per capita	2.14	1.88	2.35	0.0093

Note: P-value is from chi-squared or t-test comparing the distribution or mean between counties that social distanced or not. Social distance measure is calculated based on changes in the SafeGraph data between February 2 to 8, 2020 and April 12 to 18, 2020. County-level fatal drug overdose rate and MSA status is from Centers for Disease Control and Prevention data in 2017.

TABLE 2.

Percent of SUD Treatment Facilities That Offer Telehealth by Whether the County Socially Distanced or Not (N = 14,066)

	All Counties	Counties With High Social Distancing	Counties With Low Social Distancing	P
All	26.90%	24.54%	39.20%	P<0.001
Census region				
Northeast	17.05%	15.90%	34.97%	P<0.001
Midwest	28.57%	26.20%	40.78%	P<0.001
South	31.03%	28.41%	36.50%	P<0.001
West	28.22%	26.47%	48.48%	P<0.001
Type of facility				
OTP	20.77%	20.33%	25.17%	0.1685
Non-OTP offers buprenorphine or naltrexone	37.79%	34.26%	58.54%	P<0.001
Non-medication	20.29%	18.08%	29.76%	P<0.001
Types of payment accepted				
Medicaid	29.10%	25.80%	43.56%	P<0.001
Private	30.94%	28.13%	44.57%	P<0.001
No payment	11.11%	10.00%	18.42%	0.1302
For-profit status				
Missing	3.13%	0.00%	33.33%	
For-profit	26.36%	25.71%	31.24%	0.0026
Non-profit/governmental	27.54%	24.00%	42.47%	P<0.001
County MSA status				
Metropolitan	24.18%	23.61%	31.34%	0.0002
Nonmetropolitan	37.54%	30.40%	40.98%	P<0.001
Fatal drug overdose rate quartile				
Highest quartile	26.79%	23.66%	43.94%	P<0.001
Not highest quartile	26.96%	25.03%	36.73%	P<0.001

Note: P-value is from a naïve logistic regression that only includes whether the facility was located in a county that social distanced or not. The unit of analysis is the facility, and the main predictor is a county-level measure. Social distance measure is calculated based on county-level changes in the SafeGraph data between February 2 to 8, 2020 and April 12 to 18, 2020. County-level fatal drug overdose rate and MSA status is from Centers for Disease Control and Prevention data in 2017.