

By Lori Uscher-Pines, Lauren E. Riedel, Ateev Mehrotra, Sherri Rose, Alisa B. Busch, and Haiden A. Huskamp

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DATAWATCH

Many Clinicians Implement Digital Equity Strategies To Treat Opioid Use Disorder

Drawing upon a longitudinal survey of clinicians who treat patients with opioid use disorder (OUD), we report changes over time in telemedicine use, clinicians' attitudes, and digital equity strategies. Clinicians reported less use of telemedicine (both video and audio-only) in 2022 than in 2020. In March 2022, 77.0 percent of clinician respondents reported implementing digital equity strategies to help patients overcome barriers to video visits.

Lori Uscher-Pines (luscherp@rand.org), RAND Corporation, Arlington, Virginia.

Lauren E. Riedel, Harvard University, Boston, Massachusetts.

Ateev Mehrotra, Harvard University.

Sherri Rose, Stanford University, Stanford, California.

Alisa B. Busch, Harvard University.

Haiden A. Huskamp, Harvard University.

Telemedicine use increased dramatically after the first COVID-19 pandemic stay-at-home orders were issued in March 2020, with high and sustained use for behavioral health and substance use disorder services.¹ Maintaining access to care via telemedicine was critical for treating opioid use disorder (OUD), as overdose deaths involving opioids reached an estimated all-time high of 80,816 in 2021.²

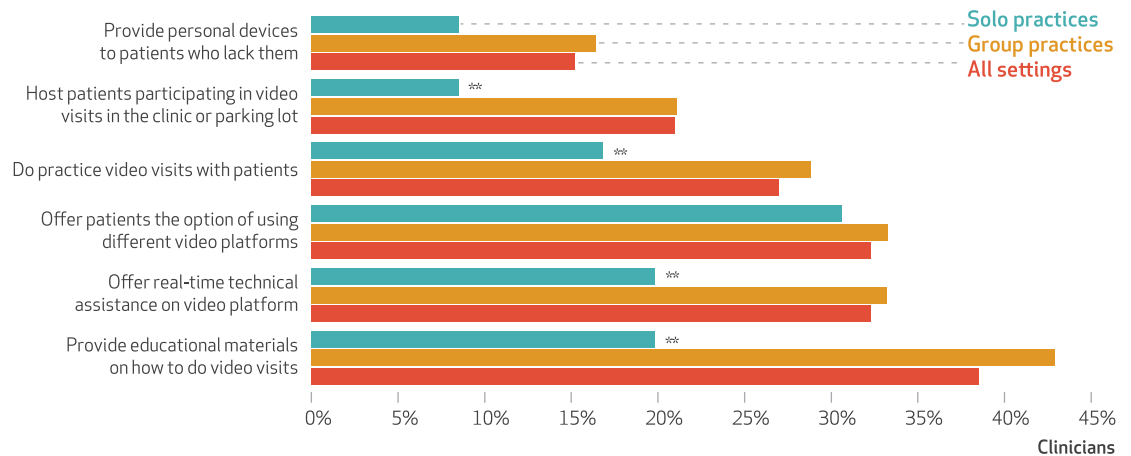
In the ongoing debate about the future of telemedicine policy, the role of audio-only telemedi-

cine visits is a contentious issue. Because millions of patients might not have the devices, digital literacy, or broadband capacity to participate in video visits,³ clinicians have two options: offer audio-only visits that may be perceived as lower quality or implement digital equity strategies to support patients in accessing video visits.

We surveyed clinicians treating patients with OUD and found that 77.0 percent reported implementing one or more digital equity strategies to support patients who faced barriers to video visits (data not shown). As shown in exhibit 1,

EXHIBIT 1

Digital equity strategies used by US clinicians to support patients who face barriers to video visits for opioid use disorder (OUD), March 2022



SOURCE Authors' descriptive analysis of data from wave 2 of a two-wave survey of clinicians treating OUD (March 2022). **NOTES** N = 435. Respondents were asked: "Some patients do not have the necessary technology or digital literacy to participate in video visits. Are there any steps taken at your main practice setting to help these patients participate in video visits? Select all that apply." p-value levels are for differences comparing the proportion of respondents in solo versus group practices. **p < 0.05

With dedicated efforts to bridge the digital divide, video visits can replace seemingly inferior, as well as less sustainable, audio-only visits.

the three most common strategies across practice settings were providing educational materials on how to do video visits (38.5 percent), offering real-time technical assistance on the video platform (32.3 percent), and offering patients the option of using different video platforms (32.3 percent). Without ongoing, multipronged efforts to support patients in accessing video visits, the growth of telehealth may exacerbate inequities in access.

Study Data And Methods

We recruited a national sample of 602 clinicians who provide medication treatment for OUD to participate in a longitudinal survey. As reported in prior publications describing results from the first wave of the survey, participants were recruited using WebMD/Medscape's online panel of 2.5 million clinicians.⁴ Respondents needed to hold a current buprenorphine prescribing waiver, spend at least eight hours per week in an outpatient setting, prescribe OUD medications (buprenorphine, naltrexone, or methadone) to two or more patients in a typical month, have conducted the majority of their pre-pandemic visits in person, and have delivered at least one telemedicine visit since 2020. Respondents also needed to be a primary care physician, psychiatrist, nurse practitioner, certified nurse specialist, or physician assistant. We conducted two survey waves, fielded in December 2020 and March 2022. The second wave included 425 respondents (a 70.6 percent retention rate). Sample attrition was unrelated to telemedicine use; however, analyses used nonresponse weights to account for attrition. We elected not to use sampling weights because, to our knowledge, there is no data source on the characteristics of the population that we aimed to represent (that is, all clinicians currently providing

OUD medication treatment).⁵

In both survey waves, we asked respondents about their use of in-person, video, and audio-only visits for patients with OUD in the prior month and their attitudes about the quality of video compared with audio-only visits. In March 2022 we also asked several questions about views on the ideal mix of in-person, video, and audio-only visits for patients with OUD after the pandemic has ended, as well as digital equity strategies implemented to support patients who engage in video visits. Questions for each survey round are in the online appendix.⁶

We calculated descriptive statistics and used chi-square tests for bivariate comparisons to assess whether past use of audio-only visits and preference for audio-only visits in the future were associated with clinician type, primary practice setting, and the proportion of patients in the clinician's panel either insured by Medicaid or uninsured. We used paired *t*-tests to assess whether changes in telemedicine use and attitudes about telemedicine over time were significant. Analyses were conducted using Stata. Harvard's Institutional Review Board approved the study.

There were two key limitations of our study. First, our surveys were not administered to a probability-based sample, so the results might not be representative of all clinicians who treat patients with OUD. However, characteristics of our sample of respondents were generally similar to those of respondents to prior national surveys of waived clinicians.⁷ Second, survey responses may have been affected by recall and response bias, as respondents were asked to estimate their telehealth use in the prior month.

Study Results

Among the 425 respondents who completed both survey waves, 41.2 percent were primary care physicians; 23.3 percent were psychiatrists; and 35.5 percent were nurse practitioners, certified nurse specialists, or physician assistants. Most (72.7 percent) worked in single- or multi-specialty group practices, and 16.2 percent worked in solo practice (exhibit 2).

AUDIO-ONLY TELEMEDICINE USE Our findings revealed that from December 2020 to March 2022, telemedicine use (including both video and audio-only) among respondents declined from a mean of 56.7 percent of all OUD visits to 41.5 percent ($p < 0.01$). Audio-only visits declined from 20.2 percent to 11.6 percent of all OUD visits ($p < 0.01$). In December 2020 and March 2022, audio-only visits constituted 35.6 percent and 28.0 percent of all telemedicine visits for OUD, respectively.

EXHIBIT 2

Characteristics of respondents to survey of US clinicians providing treatment for opioid use disorder (OUD), 2020–22

Characteristics	Wave 1	Wave 2	
	Respondents (N = 602)	Respondents (n = 425)	Nonrespondents (n = 177)
Training			
Primary care physician	40.0%	41.2%	37.3%
Psychiatrist	23.4	23.3	23.7
Nurse practitioner or certified nurse specialist	23.1	22.6	24.3
Physician assistant	13.5	12.9	14.7
Primary practice setting			
Single-specialty group practice	39.2	39.3	39.0
Multispecialty group practice	34.1	33.4	35.6
Solo practice	16.3	16.2	16.4
Opioid treatment program	5.2	5.9	3.4
Other	5.3	5.2	5.7
Location of primary practice setting			
Large city	38.2	38.1	38.4
Suburb near a large city	37.0	37.7	35.6
Small city or town	15.3	14.4	17.5
Rural area	9.5	9.9	8.5
Years since completing medical training			
Less than 5	16.6	16.0	18.1
5–10	31.7	31.8	31.6
11–15	15.8	16.0	15.3
16 or more	35.9	36.2	35.0
Mean estimated percent of prior-month OUD visits using telemedicine in December 2020			
Audio-only	20.3	20.3	20.3
Video	36.6	36.8	36.1

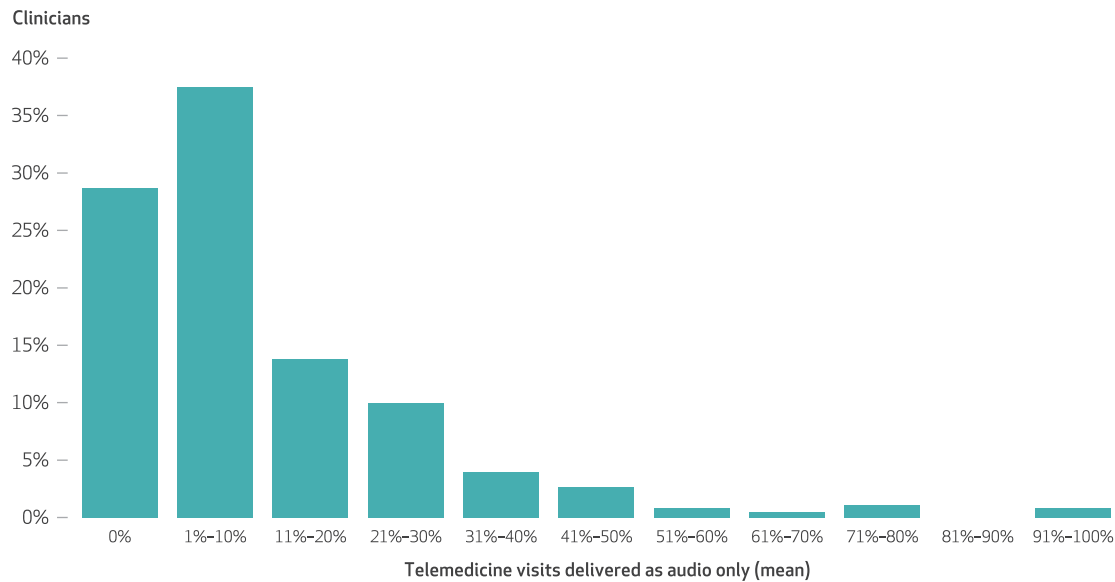
SOURCE Authors' analysis of data from a two-wave survey of clinicians treating OUD conducted in December 2020 and March 2022.
NOTE Data presented in the exhibit are not weighted, as explained in the Study Data And Methods.

Among the 372 (87.5 percent) respondents who reported conducting some telemedicine visits with patients with OUD as of March 2022 (data not shown), 28.7 percent were not conducting any audio-only visits, whereas 9.9 percent reported that more than 30 percent of their total visits were audio-only visits (exhibit 3). High audio-only telemedicine use (greater than one-third of all visits) was not associated with clinician type, primary practice setting, or patient insurance (data not shown).

ATTITUDES AND PREFERENCES ON AUDIO-ONLY VISITS In March 2022, 61.0 percent of respondents agreed that video visits were as effective as in-person care, whereas 31.5 percent agreed that audio-only visits were as effective as in-person care (exhibit 4). Furthermore, over time, more respondents perceived that audio-only visits were inferior to video visits in quality, although differences were not significant. The proportion of respondents reporting that patients received higher-quality care via video visits than via audio-only visits increased from 63.5 percent in December 2020 (data not shown) to 69.7 percent in March 2022 ($p = 0.20$) (exhibit 4).

In March 2022, when participants were asked what percentage of all visits with patients with OUD they would prefer to conduct via audio-only telemedicine after the pandemic, the mean response was 7.4 percent. However, the majority of respondents (63.5 percent) said that they would prefer to have no audio-only visits with patients with OUD after the pandemic (data not shown). There were no significant differences in preferences for audio-only visit use after the pandemic by clinician type, primary practice setting, or patient insurance. (For question wording, see questions 11 and 12 under wave 2 in the appendix).⁶

DIGITAL EQUITY STRATEGIES Clinicians in group practices were more likely than those in solo practices to report implementing one or more digital equity strategies to support patients in accessing video visits (79.7 percent versus 59.0 percent; $p < 0.01$) (data not shown). Clinician type and proportion of total patients who had Medicaid coverage or were uninsured were not associated with implementing digital equity strategies.

EXHIBIT 3**Proportion of telemedicine visits that were audio only across US clinicians providing telemedicine for opioid use disorder (OUD), March 2022**

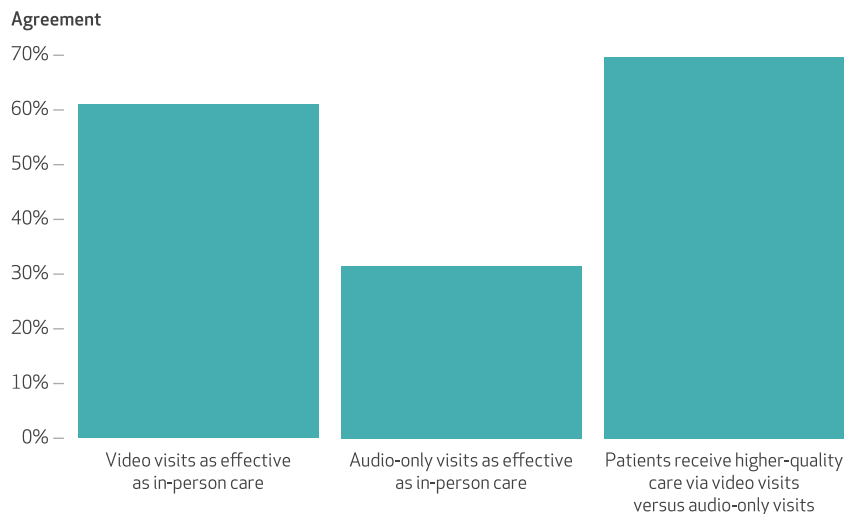
SOURCE Authors' analysis of data from wave 2 of a two-wave survey of clinicians treating OUD (March 2022). **NOTES** $n = 372$. Respondents were asked: "In the past month, what percentage of your visits for patients with opioid use disorder were delivered via audio-only (telephone) visits? Please provide your best estimate." They were also asked similar questions about the proportion of visits that were in person and via video. Results shown here were calculated by dividing the proportion of audio-only visits by the total proportion of video and audio-only visits combined.

Discussion

Although declining in use, audio-only visits have continued to play a significant role in care delivery for patients with OUD, representing more than one in ten total visits and one in three telemedicine visits in March 2022. This relatively high level of use is occurring despite clinicians' concerns about the quality of care provided by audio-only visits and their preference not to deliver audio-only visits after the pandemic has ended. Clinicians reported implementing an array of digital equity strategies, from offering educational materials to providing mobile phones or tablets to support patients in accessing video visits.

Prior research has demonstrated greater use of audio-only visits among low-income patients and patients with OUD compared with other populations.^{8,9} Thus, it is not surprising that clinicians in our sample had sustained adoption of audio-only visits. It is likely that claims data analyses significantly undercount audio-only visits;¹⁰ thus, it is important to find other ways to get a more complete picture of the role of audio-only visits for different patient populations.

Given the quality concerns for some types of audio-only visits, including evidence from prior literature that patients have lower comprehen-

EXHIBIT 4**Percent of clinicians who agreed with statements about the quality of audio-only and video visits among US clinicians providing telemedicine for opioid use disorder (OUD), March 2022**

SOURCE Authors' analysis of data from wave 2 of a two-wave survey of clinicians treating OUD (March 2022). **NOTES** $n = 372$. Respondents were asked: "Please indicate how much you disagree or agree with the following statements about your experience caring for patients with opioid use disorder: I think the care that I have provided via video visits has been as effective as in-person care. I think the care that I have provided via audio-only visits has been as effective as in-person care. My patients receive higher quality care when they participate in video visits compared to audio only-visits."

sion and less satisfaction with audio-only visits,¹¹ it is important to understand how best to increase the availability of video visits. Numerous studies have demonstrated inequities in access to video visits since 2020, with lower rates of video visit use among rural residents, low-income patients, racial and ethnic minority patients, and patients with limited English proficiency.¹² To our knowledge, ours is the first study to explore the implementation of different strategies aimed at addressing these inequities among a national sample of clinicians. It is promising that the majority of clinicians in our sample, particularly those in group practices, were implementing one or more digital equity strategies to support patients who faced barriers to

video visits. However, no single strategy was particularly widespread, suggesting the need to provide more resources and training, as well as guidance on the roles and responsibilities of clinicians versus other community stakeholders (for example, community groups and local government) in helping patients obtain video visits. Further, evidence on the most effective strategies is needed. Clinicians in solo practice are particularly in need of additional resources and community partners to implement the more impactful strategies, as they may lack the staff to offer needed supports. With dedicated efforts to bridge the digital divide, video visits can replace seemingly inferior, as well as less sustainable, audio-only visits. ■

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NOTES

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