HHS Public Access

Author manuscript

Sex Transm Dis. Author manuscript; available in PMC 2024 August 01.

Published in final edited form as:

Sex Transm Dis. 2023 August 01; 50(8): 518–522. doi:10.1097/OLQ.0000000000001826.

A Description of Telehealth use among STI providers in the United States, 2021

William S. Pearson, PhD[1], **Philip A. Chan, MD**[1,2], **Melissa A. Habel, MPH**[1], **Laura T. Haderxhanaj, PhD**[1], **Matthew Hogben, PhD**[1], **Sevgi O. Aral, PhD**[1]

[1]Division of STD Prevention, Centers for Disease Control and Prevention, Atlanta, GA.

[2]Department of Medicine, The Warren Alpert Medical School, Brown University, Providence, Rhode Island.

Abstract

Background—Telehealth offers one approach to improving access to Sexually Transmitted Infection (STI) prevention and care services. Therefore, we described recent telehealth use among those providing STI related care and identified opportunities for improving STI service delivery.

Materials and Methods—Using the DocStyles web-based, panel survey conducted by Porter Novelli from September 14 to November 10, 2021, 1,500 healthcare providers were asked about their current telehealth usage, demographics, and practice characteristics, and compared STI providers (≥10% of time spent on STI care and prevention) to non-STI providers.

Results—Among those whose practice consisted of at least 10% STI visits (n=597), 81.7% used telehealth compared to 75.7% for those whose practice consisted of less than 10% STI visits (n=903). Among the providers with at least 10% STI visits in their practice, telehealth use was highest among obstetrics and gynecology specialists (OB/GYNs), those practicing in suburban areas, and those practicing in the South. Among providers whose practice consisted of at least 10% STI visits and who used telehealth (n=488), the majority were female and OB/GYNs practicing in suburban areas of the South. After controlling for age, gender, provider specialty, and geographic location of their practice, providers whose practice consisted of at least 10% STI visits had increased odds (OR:1.51, 95% CI:1.16–1.97) of using telehealth compared to providers whose visits consisted of less than 10% STI visits.

Conclusions—Given the widespread use of telehealth, efforts to optimize delivery of STI care and prevention via telehealth are important to improve access to services and address STIs in the United States.

Short summary:

Correspondence: William S. Pearson, PhD, MHA, Division of STD Prevention, Centers for Disease Control and Prevention, Atlanta, GA, 404-639-6459, wpearson@cdc.gov.

Conflict of interest statement: The authors declare no conflicts of interest in the completion of this work. This work was conducted as part of regular work for the Centers for Disease Control and Prevention.

Disclaimer: The findings and views of this work are those of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

Telehealth is an accepted approach among providers who treat STIs to deliver STI care and prevention services.

Keywords

Telehealth; sexually transmitted infection; sexually transmitted disease

Introduction

Sexually transmitted infections (STIs) including syphilis, gonorrhea, and chlamydia continue to increase across the United States, with approximately 1.6 million cases of chlamydia, nearly 700,000 cases of gonorrhea, and just over 130,000 cases of syphilis reported in 2020.[1] The burden of STIs results in substantial morbidity and healthcare system costs.[2] Additionally, significant disparities in STI rates exist for several groups including African American/Black (AA/B) and Hispanic/Latino (H/L) communities that have historically had decreased access to health services.[3] Therefore, approaches which increase access to STI care and prevention are needed and specifically so in areas of the United States with high STI rates.

Telehealth refers to the delivery of medical care from a distance (i.e., over the internet or phone)[4], and can be offered as one approach to improve STI care and prevention. The COVID-19 pandemic in the United States led to significant barriers in access to care for many health services.[5] The disruption in the healthcare system resulted in an overall decrease in the use of routine health services culminating in an overall decrease in the health of many communities[6] including STI services.[7–9] These disruptions required innovative solutions for delivering healthcare including for STI care and prevention in a safe manner and pushed the healthcare system into relying more heavily on telehealth as a way for engaging patients and providing needed care.[10] In fact, a recent report by the Office of the Assistant Secretary for Planning and Evaluation showed that during 2020, there was a 63-fold increase in the use of telehealth among Medicare beneficiaries[11], and a report by the CDC showed a 154% increase in the use of telehealth overall from March 2019 to March 2020[12].

Limited data do exist on the extent to which telehealth is used for STI related care[13], including HIV and Pre-exposure prophylaxis (PrEP) services[14–17] as well as contraceptive[18] and obstetrical and gynecologic services[19]. However, there are no data that provides general descriptive information on the extent of use of telehealth specifically among healthcare providers who treat STIs. Therefore, the goal of the current study was to determine the extent of telehealth use among healthcare providers who provide STI care and prevention services, and to better describe this population with a focus on gaps in care and areas for improvement.

Materials and Methods

The data used in these analyses were taken from an internet, panel survey conducted by Porter Novelli, a global communications consulting company, among a group of physicians,

nurse practitioners and physician assistants. This panel consists primarily of primary care providers working in the specialties of Family Medicine, Internal Medicine, Obstetrics and Gynecology (OB/GYN) and Pediatrics. Providers are screened to include only those who have been practicing for at least three years; actively see patients; work in as an individual or in a group, or hospital practice; and work in the United States. Survey respondents were paid an honorarium that ranged between $20 and $100 for completing the survey.[20] The CDC Institutional Review Board has determined that the use of this data is considered secondary and is not human subjects research and thus does not require IRB oversight.

From September 14 to November 10, 2021, a convenience sample of 1,751 providers responded to this round of the survey. Since our questions focused on telehealth among persons who treated STIs, we excluded pediatricians from our sample, resulting in a total of 1,500 providers that were categorized as being either Family practice, n = 456; Internist, n = 544; OB/GYN, n = 250; nurse practitioner (NP) n = 98; or physician assistant (PA) n = 152. Pediatricians were excluded due to varying adolescent confidentiality and minor consent laws across states.

For the 1,500 respondents, we further stratified our sample into providers whose practice consisted of at least 10% STI care, and those with less than 10% STI care. We chose this percentage to make sure we included providers who did see patients for STI care, even though that was not the focus of their practice. For example, the 10% threshold assumed that if a family practitioner sees 100 patients per week, 10 of them might have STI concerns. This proportion of care for STIs was ascertained with the question “What proportion of your visits include screening, diagnosing, or treating for sexually transmitted infections?”, and responses were self-reported. All respondents were then asked if they currently used telehealth in their practice using the following question “Telehealth - sometimes called telemedicine - lets you provide care for patients without an in-person office visit. Telehealth is done primarily online with internet access on a computer, tablet, or smartphone, and can be done without video on a telephone. Do you currently use telehealth as part of your practice?”. Demographics of these respondents including average age, gender, region of the country in which they practiced, and the level of urbanicity in which they practiced were reported.

To gain a better understanding of healthcare providers who treated STIs and also used telehealth for their practice, we then focused our analyses on those providers whose practice consisted of at least 10% STI care and prevention services, and who indicated that they currently used telehealth in their practice, resulting in a sample of N = 488. Among this sample, we provided descriptive demographics including specialty, average age, gender, region of the country in which they practiced, and the level of urbanicity in which they practiced.

Additionally, a question was asked about the use of telehealth to specifically diagnose, manage, and treat STIs which resulted in a sample of 242 providers who responded in the affirmative to this question. Among this group of 242 providers, a series of statements were made to determine the acceptability of telehealth. Responses were gathered using a Likert scale that included “Strongly agree”, “Agree”, “Neither agree nor disagree”, “Disagree’,

and “Strongly disagree”. These statements included “Telehealth is an important part of my practice.”, “Telehealth has made my practice more efficient.”, “Telehealth will become an even more important tool for my practice in the future”, and “I am fairly compensated for telehealth visits”. We grouped together the responses that included “Agree” and “Strongly agree” and reported these percentages.

Finally, we employed logistic regression models to determine the odds of using telehealth among providers whose practice consisted of at least 10% STI care compared to those whose practice consisted of less than 10% STI care. Our logistic regression models included current use of telehealth as the dependent variable, and percentage of practice devoted to STI care as the independent variable. Our adjusted model controlled for age, gender, and race of the provider as well as location of the practice. All analyses were conducted using SAS v4.

Results

Among our sample of 1,500 providers, 1,172 (78.1%) reported currently using telehealth and 597 (39.8%) indicated that at least 10% of their time was spent on STI care and prevention. Among those whose practice consisted of at least 10% STI visits (n=597), 81.7% used telehealth compared to 75.7% for those whose practice consisted of less than 10% STI visits (n=903). The majority of the 1,500 providers were internal medicine physicians (36.3%), located in the South (34.4%), and suburban areas (51.1%), were on average 47.9 years of age (11.4 years standard deviation), and were male (59.9%) (Table 1).

When describing the sample of providers whose practice consisted of at least 10% STI care and who used telehealth (n=488), a slightly higher percentage of providers were identified as OB/GYNs (33.4%), compared to Family practice (27.9%), and Internists (25.8%). When looking at geographic distribution, the greatest percentage of these providers were located in the South (30.3%), followed by the West (24.4%), the Northeast (23.8%), and was lowest in the Midwest (21.5%). The greatest percentage of these providers were located in in suburban areas (48.6%), followed by urban areas (42.6%) and a much lower percentage were found in rural areas (8.8%). The average age of the provider was 46.9 years, and sex of the provider was nearly evenly distributed with 49.8% being female and 50.2% being male. (Table 2)

Focusing on providers who responded in the affirmative that they used telehealth to diagnose, manage and treat STIs (n=242), we found that the majority were positive about their experience, except for one aspect: reimbursement. Only 48.3% indicated that they agreed or strongly agreed that they were fairly compensated for their telehealth visits. Comparatively, 84.3% agreed or strongly agreed that telehealth would become an even more important tool for their practice in the future, 73.1% agreed or strongly agreed that telehealth made their practice more efficient, and 83.5% agreed or strongly agreed that telehealth was an important part of their practice. (Figure 1)

In unadjusted logistic regression models, those whose practice consisted of at least 10% STI care were 43% more likely to use telehealth in their practice compared to providers whose practiced consisted of less than 10% STI care (1.43 OR; 1.11–1.85 95% CI). Additionally, when controlling for specialty, region of the country, metro location, age and sex of the

provider, those whose practice consisted of at least 10% of STI care were 51% more likely to use telehealth in their practice compared to those whose practice consisted of less than 10% STI care (1.51 aOR; 1.16–1.97 95% CI). (Table 3)

Discussion

This is among the first studies to evaluate telehealth use specifically for STI care and prevention services using a national panel survey. The use of telehealth has been critical during the COVID-19 pandemic for delivery of these services. The findings from these analyses suggest that telehealth is a technology that is being used by providers nationally to diagnose, manage and treat STIs, but that full adoption of telehealth has not been reached. It should be noted that this data was collected during the Fall of 2021 which was a period of time where there was a driving force to make healthcare accessible while social isolation was being promoted for safety and health reasons. This phenomenon may have been a tipping point for the use of telehealth and it is hoped that this usage can be sustained as a viable method for making healthcare more accessible to more people.

Providers who use telehealth for STI care and prevention services tend to be OB/GYNs practicing in suburban areas of the South. Optimizing telehealth delivery of STI care and prevention services might include expansion to other areas of the United States including rural areas and other settings which focus on under-resourced communities and groups that have been marginalized.

While a significant number of providers reported telehealth use in the United States for STI care and prevention services, we found that reimbursement and payment by insurers is a noted barrier to sustainability which is consistent with other reports.[21] During the COVID-19 pandemic, many states implemented emergency regulations and policies to facilitate the delivery of medical care by telehealth which had previously prevented the widespread adoption of telehealth. The official COVID-19 public health emergency is planned to end on May 11 of 2023, and the Consolidated Appropriations Act of 2023 has set forth plans to extend many of the telehealth flexibilities for Medicare. However, at this time, details on reimbursement for services paid for outside of Medicare are not known. Payment systems which represent the standard-of-care and are sustainable are needed for telehealth to continue to be an option for STI care and prevention. These systems are vital for telehealth to be a viable option for many clinics.

The Medicaid program specifically has been identified as a significant payer of STI care and prevention services[22], and opportunities for billing of Medicaid to sustain the provision of sexual health services has been specifically noted in STD clinics[23]. Telehealth has been proposed as an effective way of engaging patients in Medicaid managed care plans.[24] For Medicaid programs, telehealth is defined and reimbursed differently in each state.[25] However, the Centers for Medicare and Medicaid Services has provided state Medicaid programs with guidance on how to cover telehealth and has given a fair degree of latitude to states in how they determine the requirements of telehealth to be reimbursed.[26] This guidance could also be used by private payers to improve telehealth uptake.

Providers and specifically OB/GYN's in the South, where higher rates of STIs are noted[1], were found to report a higher number of providers using telehealth than other areas of the United States. However, providers from rural areas as well as those in the Midwest reported less telehealth use. This represents a missed opportunity as telehealth is specifically designed as a method for delivering STI care and prevention over larger distances. Additionally, to address health equity, equitable access to telehealth is also needed, ensuring that those who need it most are able to use it.[27] Future approaches to determine how to effectively implement telehealth in these settings, and also among primary care providers and at other safety-net clinics which provide STI care and prevention to under-resourced and marginalized communities. Less than one-third of primary care providers who identified as either family practice or internists, and who treated STIs, reported telemedicine use.

Limitations

This study is subject to several limitations. First, data was obtained from a one-time, cross-sectional survey by self-report which can allow for recall and response bias.

Secondly, the definition of telehealth used in this survey was broadly defined as "Telehealth is done primarily online with internet access on a computer, tablet, or smartphone, and can be done without video on a telephone" which does not specifically distinguish between telephonic and video interaction with the patient. The terms telehealth and telemedicine have been used interchangeably, however they do have different meanings, where telehealth is viewed more of a general term that encompasses a broader aspect on non-live, healthcare services, whereas telemedicine is more specific and pertains to the provision of real-time, clinical care.[28] Therefore, our analysis does not provide a precise assessment of telehealth. Definition of telehealth sometimes also varies depending on the context and could have led to misreporting.

Thirdly, *e*ven though our data was collected from a panel of healthcare providers from across the country, and our sample size was relatively large, our findings are not necessarily representative of all providers of STI health services. Future analyses could focus on a larger sample of providers who specialize in providing STI care.

A fourth limitation that could be considered when interpreting these results is that we excluded pediatricians from this analysis. Pediatricians are known to treat sexually transmitted infections in their practice. However, we intended to focus on telehealth services provided to adults, rather than to children and/or their parents which may entail different considerations for the provision of telehealth services compared to providing telehealth to adults.

Future directions

The overall high use of telehealth among all providers, including those who treat STIs, is noted, but there is room for improvement, especially in rural areas of the country. The COVID-19 pandemic required the health system to quickly change its approach to providing needed health services and the health system did so with the use of telehealth and limited information on benefits of the technology. Several aspects of telehealth that require further evaluation include, but are not limited to, the quality of information exchange

during the physician-patient interaction, seamless integration of the technology into clinical workflow, value-based reimbursement for the use of the technology and evidence-based clinical guidance for specialty services.[29, 30] More specifically, the field of STI care and prevention has its own unique nuances for how and why people seek care, as well as how that care is best provided. Therefore, more focused work on the provision of these sexual health services through the use of telehealth and telemedicine is needed.

References

1. STD Surveillance Report Accessed on October 15, 2022 at: https://www.cdc.gov/std/statistics/2020/default.htm
2. Chesson CW. The Estimated Direct Lifetime Medical Costs of Sexually Transmitted Infections Acquired in the United States in 2018. Sex Transm Dis 2021; Apr 1;48(4):215–221. [PubMed: 33492093]
3. US Department of Health and Human Services, Centers for Disease Control and Prevention. CDC WONDER Online Database. Sexually Transmitted Disease Morbidity 1984–2014 Accessed on August 27, 2022 at: http://wonder.cdc.gov/std-sex.html
4. US Department of Health and Human Services. What is telehealth? Accessed on October 3 at: https://telehealth.hhs.gov/patients/understanding-telehealth/
5. Petersen Kaiser Family Foundation. Health System Tracker. How have health spending and utilization changed during the coronavirus pandemic? 2021. Accessed on September 23, 2002 at: https://www.healthsystemtracker.org/chart-collection/how-have-healthcare-utilization-and-spending-changed-so-far-during-the-coronavirus-pandemic/
6. Administration for Strategic Preparedness and Response (ASPR). 2021. Accessed on September 23, 2022 at: https://files.asprtracie.hhs.gov/documents/covid-19-healthcare-delivery-impacts.pdf
7. Pinto CN, Niles JK, Kaufman HW, et al. Impact of the COVID-19 Pandemic on Chlamydia and Gonorrhea Screening in the US. Am J Prev Med 2021;61(3):386–393. [PubMed: 34020848]
8. Tao J, Napolean SC, Maynard MA, et al. Impact of the COVID-19 Pandemic on Sexually Transmitted Infection Clinic Visits. Sex Transm Dis 2021;48(1):e5–e7. [PubMed: 33181578]
9. Napolean SC, Maynard MA, Almonte A, et al. Considerations for STI Clinics During the COVID-19 Pandemic. Sex Transm Dis 2020;47(7):431–433. [PubMed: 32355107]
10. Rogers B, Tao J, Murphy M, Chan PA. The COVID-19 pandemic and sexually transmitted infections: Where do we go from here? Sex Transm Dis 2021;48(7):e94–e96. [PubMed: 33872225]
11. Office of the Assistant Secretary of Planning and Evaluation (ASPE). 2021. Medicare Beneficiaries' Use of Telehealth in 2020: Trends by Beneficiary Characteristics and Location Accessed on September 23, 2022 at : https://aspe.hhs.gov/reports/medicare-beneficiaries-use-telehealth-2020
12. Koonin LM, Hoots B, Tsang CA, et al. Trends in the Use of Telehealth During the Emergence of the COVID-19 Pandemic — United States, January–March 2020. MMWR Morb Mortal Wkly Rep 2020;69:1595–1599. [PubMed: 33119561]
13. COVID-19 & The State of The STD Field. National Coalition of STD Directors Accessed on November 11, 2022 at: https://www.ncsddc.org/wp-content/uploads/2020/08/STD-Field.Survey-Report.II_.Final-8.6.20.pdf.
14. Auchus IC, Jaradeh K, Tang A, et al. Transitioning to Telehealth During the COVID-19 Pandemic: Patient Perspectives and Attendance at an HIV Clinic in San Francisco. AIDS Patient Care STDS 2021; 35(7):249–254. [PubMed: 34242090]
15. Boshara AI, Patton ME, Hunt, et al. Supporting Retention in HIV Care: Comparing IN-Person and Telehealth Visits in a Chicago-Based Infectious Disease Clinic. AIDS Behav 2022;26(8):2581–2587. [PubMed: 35113267]
16. Yelverton V,Qiao S, Weissman S, et al. Telehealth for HIV Care Services in South Carolina: Utilization, Barriers, and Promotion Strategies During the COVID-19 Pandemic. AIDS Behav 2021;25(12):3909–3921. [PubMed: 34173137]

17. Hoth AB, Shafer C, Dillon DB, et al. Iowa TelePrEP: A Public-Health_Partnered Telehealth Model for Human Immunodeficiency Virus Preexposure Prophylaxis Delivery in a Rural State. Sex Transm Dis 2019;46(8):507–512. [PubMed: 31295217]

18. Lindberg L, Mueller J, Haas M, Jones RK. Telehealth for Contraceptive Care During the COVID-19 Pandemic: Results of a 2021 National Survey. Am J Public Health 2022;112(S5):S545–S554. [PubMed: 35767798]

19. DeNicola N, Grossman D, Marko K, et al. Telehealth Interventions to Improve Obstetric and Gynecologic Health Outcomes: A systematic Review. Obstet Gynecol 2020;135(2):371–382. [PubMed: 31977782]

20. Porter Novelli Styles. DocStyles Accessed on September 20, 2002 at: https://styles.porternovelli.com/docstyles/

21. Crowley JS, Hidalgo J, McGuire JF, Haddad MS. Emerging Lessons and Policy Options for Sexually Transmitted Infection Telehealth Payment: A Narrative Review. Sex Transm Dis 2022;49(Suppl2):S26–S30. [PubMed: 35617528]

22. Pearson WS, Spicknall IH, Cramer R, Jenkins WD. Medicaid Coverage of Sexually Transmitted Disease Service Visits. Am J Prev Med 2019 Jul;57(1):51–56. [PubMed: 31128954]

23. Pearson WS, Chan PA, Cramer R, Gift TL. Characterizing Financial Sustainability of Sexually Transmitted Disease Clinics Through Insurance Billing Practices. J Public Health Manag Pract 2022 Jul-Aug 01;28(4):358–365. [PubMed: 34939604]

24. Seiler N, Horton K, Pearson WS, Cramer R, Adil M, Bishop D, Heyison C. Addressing the STI epidemic through the Medicaid program: A roadmap for states and managed care organizations. Public Health Reports 2022; 37(1):5–10.

25. The Center for Connected Health Policy. Definitions Accessed on September 14, 2002 at: https://www.cchpca.org/topic/definitions-medicaid-medicare/

26. Medicaid telehealth Accessed on September 14, at: https://www.medicaid.gov/medicaid/benefits/downloads/medicaid-telehealth-services.pdf

27. Health Equity in Telehealth Accessed on December 7, 2022 at: https://telehealth.hhs.gov/providers/health-equity-in-telehealth/

28. Rural Telehealth Evaluation Center. Telehealth: Current Definitions and Future Trends 2022. Accessed on September 23, 2022 at: https://idhi.uams.edu/rtec/wp-content/uploads/sites/4/2022/05/Telehealth-Definitions-Paper-06MAY2022-1.pdf

29. Tuckson RV, Edmunds M, Hodgkins ML. Telehealth. New England Journal of Medicine 2017; 377(16):1585–1592. [PubMed: 29045204]

30. Totten AM, McDonagh MS, Wagner JH. The Evidence Base for Telehealth: Reassurance in the Face of Rapid Expansion During the COVID-19 Pandemic. White Paper Commentary. (Pacific Northwest Evidence-based Practice Center, Oregon Health & Science University under Contract No. 290–2015-00009-I). AHRQ Publication No. 20-EHC015 Rockville, MD: Agency for Healthcare Research and Quality. May 2020

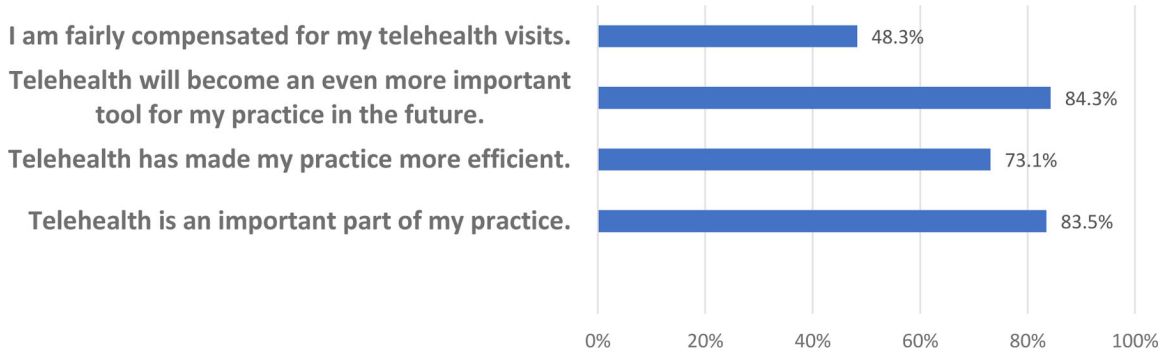

Figure 1.

Attitudes toward telehealth among STI providers who use telehealth to diagnose, manage, and treat STIs, N =242

Table 1.

Description of Study Population Stratified by Percentage of Practice Devoted to STI Treatment

N =1,500	All Providers, n = 1,500	≥10% STI, n = 597	<10% STI, n = 903
Current telehealth use			
Yes	1,172 (78.1%)	488 (81.7%)	684 (75.7%)
No, but plan to	92 (6.1%)	35 (5.9%)	57 (6.3%)
No	236 (15.7%)	74 (12.4%)	162 (17.9%)
Specialty			
Family Practice	456 (30.4%)	156 (26.1%)	300 (33.2%)
Internist	544 (36.3%)	146 (24.4%)	398 (44.1%)
OB/GYN	250 (16.7%)	213 (35.7%)	37 (4.1%)
NP	98 (6.5%)	41 (6.9%)	57 (6.3%)
PA	152 (10.1%)	41 (6.9%)	111 (12.3%)
Region			
Northeast	340 (22.7%)	137 (22.9%)	203 (22.5%)
Midwest	323 (21.5%)	133 (22.3%)	190 (21.0%)
South	516 (34.4%)	188 (31.5%)	328 (36.3%)
West	321 (21.4%)	139 (23.3%)	182 (20.2%)
Metro			
Urban	583 (38.9%)	243 (40.7%)	340 (37.7%)
Suburban	766 (51.1%)	302 (50.6%)	464 (51.4%)
Rural	151 (10.1%)	52 (8.7%)	99 (10.9%)
Average Age			
Years	47.9 (11.4) *	47.7 (11.0) *	48.0 (11.7) *
Gender			
Male	898 (59.9%)	312 (52.3%)	586 (64.9%)
Female	600 (40.0%)	285 (47.7%)	315 (34.9%)
Other	2 (0.1%)	0 (0.0%)	2 (0.2%)
Race			
White	1,037 (69.1%)	403 (67.5%)	634 (70.2%)
Black or African-American	37 (2.5%)	22 (3.7%)	15 (1.7%)
Asian	328 (21.9%)	141 (23.6%)	187 (20.7%)
Native Hawaiian or other Pacific Islander	4 (0.3%)	1 (0.2%)	3 (0.3%)
American Indian or Alaska Native	7 (0.5%)	2 (0.3%)	5 (0.6%)
Two or more races	40 (2.7%)	9 (1.5%)	31 (3.4%)
Other race	47 (3.1%)	19 (3.2%)	28 (3.1%)

OB/GYN= Obstetrician, gynecologist

NP = Nurse Practitioner

PA = Physician Assistant

* =standard deviation

Table 2.

Characterization of STI Providers who treat STIs and currently use telehealth

Specialty	**≥10% STI who currently use telehealth, n =488**
Family Practice	136 (27.9%)
Internist	126 (25.8%)
OB/GYN	163 (33.4%)
NP	31 (6.4%)
PA	32 (6.6%)
Region	
Northeast	116 (23.8%)
Midwest	105 (21.5%)
South	148 (30.3%)
West	119 (24.4%)
Metro	
Urban	208 (42.6%)
Suburban	237 (48.6%)
Rural	43 (8.8%)
Average Age	
Years	46.9 (10.4)*
Gender	
Male	243 (49.8%)
Female	245 (50.2%)
Other	0 (0.0%)
Race	
White	317 (65.0%)
Black or African-American	22 (4.5%)
Asian	123 (25.2%)
Native Hawaiian or other Pacific Islander	1 (0.2%)
American Indian or Alaska Native	2 (0.4%)
Two or more races	8 (1.6%)
Other race	15 (3.1%)

OB/GYN = Obstetrician, gynecologist

NP = Nurse Practitioner

PA = Physician Assistant

*=standard deviation

Table 3.

Likelihood of STI Providers using telehealth compared to non-STI providers

N = 1,500	**Odds Ratio**	**95% Confidence Interval**
Unadjusted Model		
≥10% STI	1.43	1.11–1.85
<10% STI	Reference	Reference
Adjusted Model *	**Adjusted Odds Ratio**	**95% Confidence Interval**
≥10% STI	1.51	1.16–1.97
<10% STI	Reference	Reference

*Controlling for specialty of practice, region of country, metro, age of provider, gender of provider, and race of provider