

Telehealth for Contraceptive Care During the Initial Months of the COVID-19 Pandemic at Local Health Departments in 2 US States: A Mixed-Methods Approach

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ABSTRACT

Objectives: This study examined implementation of telehealth for contraceptive care among health departments (HDs) in 2 Southern US states with centralized/largely centralized governance structures during the early phase of the COVID-19 pandemic. Sustaining access to contraceptive care for underserved communities during public health emergencies is critical. Identifying facilitators and barriers to adaptive service provision helps inform state-level decision making and has implications for public health policy and practice, particularly in states with centralized HD governance.

Design: Mixed-methods study including a survey of HD clinic administrators and key informant interviews with clinic- and system-level staff in 2 states conducted in 2020.

Setting: Health department clinics in 2 Southern US states.

Participants: Clinic administrators (survey) and clinic- and system-level respondents (key informant interviews). Participation in the research was voluntary and de-identified.

Main Outcome Measures: (1) Telehealth implementation for contraceptive care assessed by survey and measured by the percentage of clinics reporting telehealth service provision during the pandemic; and (2) facilitators and barriers to telehealth implementation for contraceptive care assessed by key informant interviews. For survey data, bivariate differences between the states in telehealth implementation for contraceptive care were assessed using χ^2 and Fisher exact tests. Interview transcripts were coded, with emphasis on interrater reliability and consensus coding, and analyzed for emerging themes.

Results: A majority of HD clinics in both states (60% in state 1 and 81% in state 2) reported a decrease in contraceptive care patient volume during March-June 2020 compared with the average volume in 2019. More HD clinics in state 1 than in state 2 implemented telehealth for contraceptive services, including contraceptive counseling, initial and refill hormonal contraception, emergency contraception and sexually transmitted infection care, and reported facilitators of telehealth. Medicaid reimbursement was a predominant facilitator of telehealth, whereas lack of implementation policies and procedures and reduced staffing capacity were predominant barriers. Electronic infrastructure and technology also played a role.

Conclusions: Implementation of telehealth for contraceptive services varied between state HD agencies in the early phase of the pandemic. Medicaid reimbursement policy and directives from HD agency leadership are key to telehealth service provision among HDs in centralized states.

KEY WORDS: contraception, COVID-19, health policy, Medicaid, public health, telemedicine

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People across the nation reported delaying or cancelling a visit for sexual and reproductive health care, or had difficulty obtaining

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contraceptives during the COVID-19 pandemic.¹ Economic hardship, pandemic-related job loss, and fear of contracting COVID-19 contributed to delayed care.² Delays and cancellations disproportionately affected lower-income and Black and Hispanic women.¹ Limitations in access to contraceptive services may widen preexisting disparities in women's health.^{3,4} Service delivery adaptations, such as telehealth, are needed.^{4,5}

To mitigate the spread of COVID-19, federal and state agencies expanded regulations to encourage telehealth service provision. At the federal level, restriction eases on the Health Insurance Portability and Accountability Act resulted in expansion of outpatient telehealth services through real-time audio and video services.⁶ Waivers for Medicare and Medicaid were also implemented, whereby telehealth services were billed as if they were provided in-person.⁷ State-level Medicaid agencies, important payers for contraceptive services,⁸ issued orders to allow physicians, nurse practitioners, and physician assistants to provide telehealth services.^{9,10}

Privacy laws, licensing laws, and permitting reimbursement created a service opportunity whereby patients might not be seen otherwise.¹¹ This is especially important for contraceptive services as disruptions in care may lead to unintended pregnancies, delayed identification and treatment of sexually transmitted infections (STIs), and continued barriers to obtaining contraceptives.¹

Health department (HD) clinics are key safety net clinics that provide contraceptive services to underserved patient populations.⁸ Nationwide, HD clinics comprise 21% of the safety net clinics providing family planning services to low-income, uninsured, and underinsured populations.¹² Health department clinics serve 4% of the total women receiving sexual and reproductive health care across the nation, while serving higher percentages of adolescent patients (6%) and patients less than 100% federal poverty level (8%).¹³ The governance structures of HD clinics vary across states and may influence service delivery. In states with decentralized structures (N = 30), HDs are led by local government employees or county health boards.¹⁴ In centralized or largely centralized governance structures (N = 11), local HDs are led by state-level employees,¹⁴ and statewide policies can have wide-ranging implications for the availability of services, such as telehealth.¹⁵ Regional differences exist, with states in the southeastern United States having more variation including more centralized, shared (HDs governed by both state and local authorities), and mixed (having more than one governance type) structures compared with other regions in the United States.¹⁵

The aims of this study were to (1) examine contraceptive service provision via telehealth during the initial months of the COVID-19 pandemic among HDs in 2 Southern US states with centralized and largely centralized governance structures (using survey data); and (2) identify facilitators and barriers to telehealth in this context (using key informant interviews). We examined related factors including patient volume, staffing capacity, and plans to maintain telehealth services beyond the pandemic. The 2 states selected for this study have centralized and largely centralized structures and decision-making processes that can have wide-ranging impacts for service provision across each state.¹⁴ The 2 states have sociodemographically similar populations and similar legislative environments, resources, and capacities.^{16,17} Importantly, the 2 states have some of the highest rates of pregnancies that were wanted later or unwanted,¹⁸ and people in both states continue to face multiple barriers to access to care including contraceptive care. Because of the relative newness of telehealth implementation for contraceptive care during the pandemic, literature on this topic, especially among safety net clinics, is limited. Findings have implications for public health policy and practice, particularly in states with centralized HD governance. Findings may inform efforts to maintain essential services, such as contraceptive care, during a public health emergency and efforts to expand access to care for underserved populations.

Methods

This is a mixed-methods study utilizing a clinic-level survey and key informant interviews.

Contraceptive care clinic survey

A cross-sectional survey of HD clinic administrators in 2 Southern states was conducted (July–November 2020) and assessed clinic characteristics and contraceptive provision. Clinics were identified from state HD websites and through clinic lists provided by leadership in both states. Before fielding the survey, all clinics were prescreened by phone to verify eligibility, address, and clinic administrator's name. Clinics that offered any contraceptive service in the year preceding the survey (2019) were eligible to participate.

The survey included questions related to the scope of contraceptive provision, clinic policies and practices, and organizational characteristics. Clinic administrators were asked to report on the early months of the pandemic (March–June 2020), including whether patient volume and staffing capacity had increased, decreased, or remained the same during that period

compared with 2019. Clinics indicated which contraceptive services were offered via telehealth in 2019 (prior to COVID-19) and which services were offered via telehealth during March-June 2020. Clinics were given 4 response options regarding their plans for future telehealth service offerings: plan to provide only telehealth services that were offered by the clinic prior to March 2020; plan to continue some but not all telehealth services offered by the clinic during March-June 2020; plan to continue all telehealth services offered by the clinic during March-June 2020; and do not plan to offer telehealth services in the future.

The survey was administered via paper surveys developed in OpenText TeleForm software¹⁹ and Web-based surveys (Qualtrics software).²⁰ Each clinic administrator, addressed by name, was sent a survey up to 3 times (via US mail and FedEx) and contacted by email and telephone follow-up to maximize response rate. A preincentive valued at \$50 was sent with the first mailing and another incentive valued at \$50 was sent with the third mailing or to respondents who completed the survey. Participation was voluntary and de-identified. The study was approved by the Institutional Review Board at East Tennessee State University.

Contraceptive care clinic survey data analysis

Categorical variables were expressed as frequencies and percentages. Statistical significance of differences between states was determined using χ^2 tests of independence for categorical response options; where there were fewer than 5 responses, Fisher's exact test was used. All analyses were conducted using SAS version 9.4 (Cary, North Carolina).²¹ Statistical significance was assessed at an α level of .05.

Key-informant interviews

Key-informant interviews were conducted (June-November 2020) with HD staff at the local clinic and state levels in states 1 and 2. Contact lists of family planning providers and administrators at the local and state levels were provided by HDs in both states. Each individual was contacted up to 5 times through e-mail and/or phone to schedule an interview.

The semistructured interview guide asked respondents to describe how the initial months of the COVID-19 pandemic impacted contraceptive care patient volume, clinical staffing capacity, and facilitators and barriers to providing contraceptive services through telehealth.

All interviews were conducted via phone and audio recorded with consent of the participant. The recordings were transcribed, coded with QSR International's NVivo 12 software,²² and analyzed by a team

of research staff. Participation was voluntary and de-identified. The study was approved by the medical Institutional Review Board at East Tennessee State University.

Key-informant interview data analysis

Qualitative analysis was completed in 2 phases: a rapid analytic approach,^{23,24} then interrater agreement and consensus coding.²⁵ The rapid analytic approach consisted of reviewing data and summarizing responses in matrices.²⁶ The codebook was developed on the basis of emergent themes identified during phase 1. Interviews were coded and interrater agreement was calculated. If interrater agreement was less than 80%, consensus coding was applied.²⁵

Mixed-methods approach

While similar experiences in telehealth service provision between the 2 states were expected because of their similar location and HD structure, the survey data showed differences in telehealth services between the states and the qualitative data were explored to help understand these experiences by examining facilitators and barriers to telehealth at multiple levels including structural/policy, organizational, provider, and patient levels. The qualitative analysis approach helped explain quantitative differences between states that emerged during the survey data analysis and looked at similarities and differences between states in each of the 3 areas: staffing capacity, patient volume, and telehealth implementation.

Results

Contraceptive care clinic survey

A total of 112 HD clinics were included in this study: 62 clinics from state 1, out of 74 eligible clinics, and 50 clinics from state 2, out of 55 eligible clinics. Overall, an 87% response rate was achieved (84% for state 1 and 91% for state 2).

While both states reported decreases in contraceptive care patient volume during the early phase of the pandemic, fewer clinics in state 1 (59.7%) experienced a decrease in patient volume compared with state 2 (80.9%) ($P < .05$) (Figure 1). Regarding staffing capacity, 77.6% of clinics in state 1 reported no changes in staffing capacity, while most clinics in state 2 (66.7%) reported a decrease in staffing capacity ($P < .001$) (Figure 1).

Few clinics across both states offered reproductive health services via telehealth prior to the pandemic, with STI care being the most frequently offered service via telehealth in state 1 (18.0%) and refills of

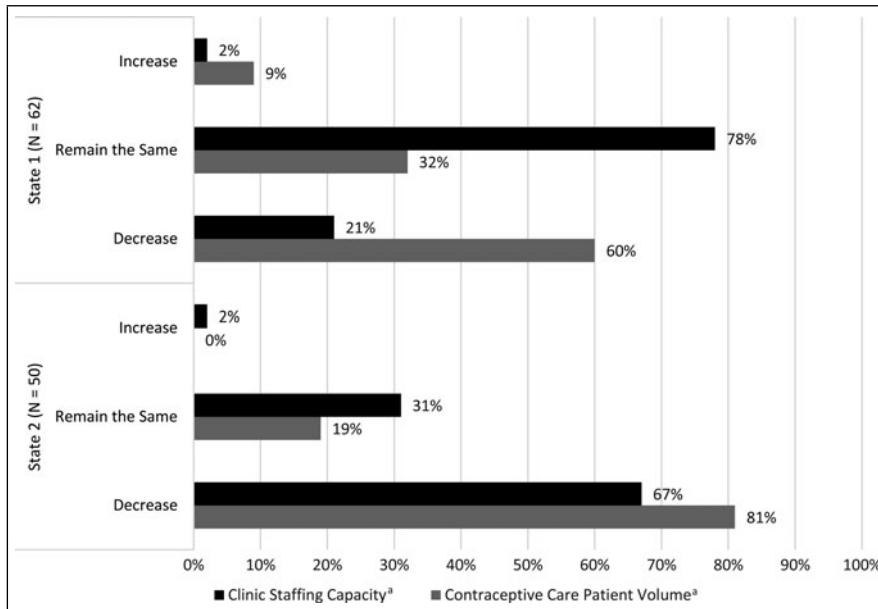


FIGURE 1 Proportion of Health Department Clinics Reporting Changes in Contraceptive Care Patient Volume and Clinical Staffing Capacity During the COVID-19 Pandemic (March-June 2020) Relative to Before the Pandemic (2019) by State (N = 112 Clinics). Data Are From the 2020 Contraceptive Care Clinic Survey

^a $P < .05$.

hormonal contraceptives being the most frequently offered service via telehealth in state 2 (10.0%). During the pandemic, significantly more clinics in state 1 reported offering telehealth for contraceptive counseling, refills of hormonal contraceptives, emergency contraceptives, and STI care than in state 2. In addition, 73.3% of clinics in state 1 reported offering initial prescriptions for hormonal contraceptive methods via telehealth while no clinics in state 2 offered this service ($P < .001$). Eighty-two point three percent of clinics in state 1 offered any contraceptive service via telehealth during the pandemic while 30.0% of clinics in state 2 reported offering any service through telehealth ($P < .001$) (Table 1).

In state 1, 35.3% of clinics reported planning to return to the telehealth services that were offered prior to the pandemic, 39.2% of clinics planned to maintain some telehealth services that were introduced during the pandemic, 21.6% of clinics reported plans to maintain all telehealth services available during the pandemic, and only 3.9% of clinics reported no plans to maintain telehealth services beyond the pandemic. Conversely, most clinics in state 2 (71.7%) reported no plans to maintain telehealth services beyond the pandemic ($P < .001$) (Figure 2).

Key-informant interviews

In total, 20 respondents completed key-informant interviews (9 from state 1 and 11 from state 2).

Respondents from one state represented 6 of 11 health districts and respondents from the other state represented all 4 health districts. In state 1, 9 respondents worked at the state level including district clinical directors, senior nurse practitioners, and a nurse supervisor. In state 2, 7 respondents worked at the clinic level and 4 respondents worked at the state level, including preventive health nurses, site supervisors, and program managers.

Contraceptive care patient volume

Respondents from both states noted a reduction in contraceptive care patient volume during the early phase of the pandemic, and similar factors across both states contributed to this reduction including reduced staffing capacity to provide services, COVID-19 safety protocol (not letting people in the facility), and fear of the virus. Respondents from state 2 noted additional contributing factors to reduced patient volume, including clinics being closed and diverted to other clinics, patient no-shows, and patients delaying care due to reduced clinic capacity (see Table 2 for representative quotes).

Staffing capacity

Interview respondents from both states noted similar factors contributing to reduced clinical staffing capacity. Notably, COVID-19 response impacted job duties as staff were reassigned to new roles. As one respondent from state 2 said, “We are having to use

TABLE 1
Select Contraceptive Services Provided via Telehealth at Health Department Clinics By State Before the COVID-19 Pandemic (2019) and During the Early Months of the Pandemic (March-June 2020) (N = 112 Clinics)^a

	Telehealth Before COVID-19			Telehealth During COVID-19		
	State 1 (N = 62) N (%)	State 2 (N = 50) N (%)	Total (N = 112) N (%)	State 1 (N = 62) N (%)	State 2 (N = 50) N (%)	Total (N = 112) N (%)
Prescribe initial hormonal contraceptive methods	6 (9.8)	1 (2.0)	7 (6.3)	44 (73.3)	0 (0.0)	44 (40.0) ^b
Prescribe refill hormonal contraceptive methods	7 (11.5)	5 (10.0)	12 (10.8)	49 (81.7)	15 (30.0)	64 (58.2) ^b
Provision of emergency contraception	5 (8.2)	0 (0.0)	5 (4.5)	38 (63.3)	0 (0.0)	38 (34.6) ^b
Sexually transmitted infection care	11 (18.0)	1 (2.0)	12 (10.8) ^c	32 (53.3)	8 (16.0)	40 (36.4) ^b
Contraceptive counseling	8 (13.1)	2 (4.0)	10 (9.0)	47 (78.3)	4 (8.0)	51 (46.4) ^b
Any contraceptive care telehealth service provided ^d	13 (21.0)	5 (10.0)	18 (16.1)	51 (82.3)	15 (30.0)	66 (58.9) ^b

^aData are from the 2020 Contraceptive Care Clinic Survey.

^bP < .001.

^cP < .05

^dAny contraceptive care service includes initial hormonal contraceptive methods or refills, medical abortions, provision of emergency contraception, sexually transmitted infection care, and/or contraceptive counseling.

our current nursing staff that would normally provide contraceptive services to do contact investigations.” Similarly, a respondent from state 1 said, “Our staff has also done COVID testing since April 1 . . . I had to pull people from the clinics to do COVID testing.” In addition, staff being quarantined due to illness or exposure to COVID-19, the impact of care-taking responsibilities (ie, childcare), and staff working remotely contributed to reduced staffing capacity in both states (see Table 2 for representative quotes).

Telehealth service provision

Facilitators and barriers to telehealth service provision were noted by respondents in both states. However, state 1 highlighted more facilitators to telehealth whereas respondents from state 2, where fewer clinics provided telehealth, prevalently noted barriers. Several facilitators and barriers emerged in the following categories: policy/structural, organizational, provider, and patient factors, in addition to the pandemic itself (see Table 3 for specific factors).

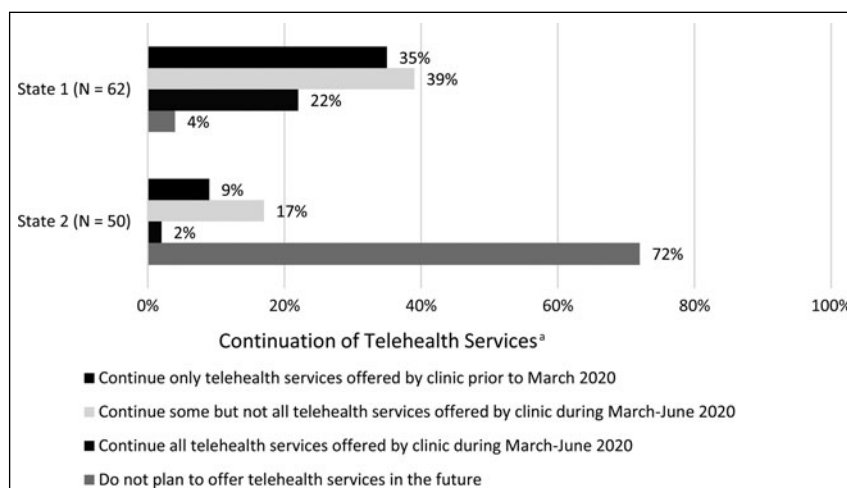


FIGURE 2 Proportion of Health Department Clinics Reporting Plans to Maintain Telehealth Service Provision After the COVID-19 Pandemic by State (N = 112 Clinics). Data Are From the 2020 Contraceptive Care Clinic Survey

^aP < .001.

TABLE 2
Factors Contributing to Reductions in Contraceptive Care Patient Volume and Clinical Staffing Capacity at Health Department Clinics in State 1 and State 2 During the Initial Months of the COVID-19 Pandemic (N = 20 Interviewees)^a

Factors contributing to reductions in contraceptive care patient volume and representative quotes

Reduced staffing capacity

“[Nurse practitioners] were the ones making the visits, which means that in clinics where we had the nurse column scheduled, and a nurse practitioner scheduled, those schedules were combined into one schedule. Our numbers dropped off drastically.” (State 1)

“We don’t have as many providers that are able to provide contraceptive care so the volume of patients specifically for that has decreased.” (State 2)

COVID-19 safety protocol

“Not only did it decrease because we weren’t letting people in the facility but also because we were working with a reduced staff as well.” (State 1)

“We can have a limited amount of people in the building.” (State 2)

Fear of COVID

“In the beginning, I think the fear of COVID itself had all staff very concerned about who was coming into the clinic and who was not.” (State 1)

“Our patients had been hesitant to come to the clinic for services if they had concerns regarding COVID-19, the message of staying home.” (State 2)

Clinics closed and diverted to other clinics

“There were only four sites they could travel to get services. If you lived in very rural areas, you had to travel through a county or two to get services.” (State 2)

Patient no-shows

“... then they don’t keep their appointments because it’s too far.” (State 2)

Patients delaying care

“At the end of this month, we’re supposed to be with services back three times a week, so those clinics are starting to fill up and some people don’t want to go to a doctor’s office to get tested. Some people don’t want to go that way to get birth control, because it’s actually less costly over here. For those reasons, I’ve had a lot of people say, ‘Oh, I’ll just wait . . .’” (State 2)

Factors contributing to reductions in clinical staffing capacity and representative quotes

COVID-19 response impacted job duties

“Our staff has also done COVID testing since April 1. That in itself, I had to pull people from the clinics to do COVID testing.” (State 1)

“We are having to use our current nursing staff that would normally provide contraceptive services to do contact investigations.” (State 2)

Staff quarantined due to COVID exposure or illness

“If you have somebody that’s exposed to it, they have to be quarantined. If you have an employee that tests positive, they’re quarantined.” (State 1)

“With any illnesses, and them being out or anybody being evacuated, that impacted [staffing capacity], as well.” (State 2)

Care-taking responsibilities

“We have had maybe a few that have had to care for children, so they would have to be out. The schools being out was impactful . . .” (State 1)

“... There were some who had small children whose daycares were closed, who could not work from home who had to use leave to take that time off.” (State 2)

Staff working remotely

“We had people in our WIC program that were allowed to work from home. We had nurse practitioner seniors, they worked from home.” (State 1)

“Staff whose job or duties allowed them to work from home were allowed to work from home . . .” (State 2)

^aData are from key-informant interviews and quotes are representative of each topic for each state, where applicable.

Facilitators of telehealth implementation

Policy/structural factors, including availability of electronic infrastructure and technology as well as Medicaid reimbursement policy, were noted by respondents in state 1 as facilitating telehealth. For example: “I guess the fact that the majority of the population has a cell phone and can communicate by phone.”

About Medicaid policy, a respondent from state 1 said, “It was an approval from Medicaid that gave us permission to offer telehealth to Medicaid patients.”

Respondents in state 1 also emphasized organizational factors as facilitators, including educating patients to utilize telehealth and training providers and staff for telehealth implementation. Notably, “It

TABLE 3
Facilitators and Barriers to Telehealth Service Provision at Health Department Clinics in State 1 and State 2 (N = 20 Interviewees)^a

<i>Facilitators of telehealth service provision</i>	
Policy/structural factors	
Electronic infrastructure and technology	
Medicaid reimbursement policy	
Organizational factors	
Patient education to utilize telehealth	
Clinician and staff training for telehealth	
Provider buy-in	
Patient acceptance	
COVID-19 pandemic	
<i>Barriers to telehealth service provision</i>	
Policy/structural factors	
Limited infrastructure and technology	
No policies or procedures for implementation	
Telehealth billing for nurses	
Inherent limitations to telehealth service provision	
Organizational factors	
Scheduling/staffing limitations	
Provider comfort level	
Patient factors (language barriers, Internet connectivity)	
No barriers to telehealth service provision	

^a See Supplemental Digital Content Appendix 1, available at <http://links.lww.com/JPHMP/A894>, for representative quotes for each of the aforementioned factors from state 1 and/or state 2.

was having our clinicians educated and trained how to provide a new service outside the box of being in a physical building, one-on-one, face-to-face with the patient.”

Respondents in both states emphasized additional facilitators including buy-in and support from the providers and state agency, patient acceptance of telehealth, and the necessity created by the pandemic. “The factor that actually initiated us providing telehealth was the pandemic and patients not feeling comfortable in coming into the clinic. That was the big factor that initiated the telehealth visit.”

Barriers to telehealth implementation

Several policy/structural barriers were noted by respondents in both states, including no policies or procedures for implementation, telehealth billing for nurses, and inherent limitations to telehealth service provision. Regarding not having HD policies, one respondent from state 2 stated, “We do not have telehealth capabilities at our department. We do not have the software, the equipment, no policies or

procedures.” Regarding telehealth billing for nurses, a respondent from state 1 noted, “My understanding is for our preventive health, our nurses cannot bill for telehealth services. That would be a barrier.” Similarly, an individual in state 2 remarked, “Actually, nursing staff are not allowed to, and this is per billing guidelines and nurse practice acts and things of that nature. They’re not allowed to provide telehealth services.”

In state 2, unique challenges were noted in regard to infrastructure and technology, “My understanding of telehealth means that you have to have both video and audio capability . . . we do not have that availability to be able to do that.”

Scheduling and staffing limitations were indicated as an organizational challenge. State 1 noted that the difficulties of the nurse practitioner being the only reimbursable staff to provide telehealth were subsequently a challenge for scheduling nurses. State 2 brought up the concern of not having the staffing capacity due to COVID-19 response duties.

Provider factors were also cited as barriers by respondents in state 1, as some providers were not comfortable with telehealth service provision, noting: “I think just because it was so new and so outside the box of what we were used to, I think people just becoming comfortable with doing that and not physically being able to see a patient when they’re talking to them.”

Patient factors were also indicated as a barrier by participants from both states and included language barriers and challenges with Internet connectivity. As one respondent from state 2 noted, “. . . if you come into the clinic you can see visually, but you trying to explain to somebody over the phone with an interpreter, how you use some type of birth control or what you need to do or how you need to do it, sometimes is not as helpful.” In addition, respondents from both states also indicated lack of patient buy-in as a barrier to telehealth implementation. For example, “another challenge could be that maybe the patient just is unsure about all of this and if this is what they need to be doing.” (See Table 3 for specific factors and Supplemental Digital Content Appendix 1, available at <http://links.lww.com/JPHMP/A894>, for representative quotes.)

Discussion

In 2 Southern states with centralized and largely centralized HD governance structure,¹⁴ we found significant differences between states in the provision of contraceptive services via telehealth, though such differences were not expected. These findings may reflect the governance structure in these states as decision-making authority is held by few individuals

at the state level for all local HDs.^{27,28} Per key-informant interview results, it appears that there may be differing directives from state-level HD leadership regarding telehealth implementation for contraceptive services between state 1 and state 2.

It is unlikely that differences in telehealth service provision between the 2 states were driven by reimbursement policy. The Medicaid reimbursement policies passed during the early months of the COVID-19 pandemic, to ensure continued service provision of essential services, were similar between state 1 and state 2,^{9,10} as both states' Medicaid agencies expanded reimbursement for telephonic health care services rendered by physicians, nurse practitioners, physician assistants, and licensed independent practitioners.^{9,10} In fact, insurance reimbursement policy was identified as a key facilitator to telehealth implementation by respondents from both states. Reimbursement policy is an established facilitator of telehealth service provision among health centers, even before COVID-19.²⁹ Legislation to support reimbursement policy for telehealth service provision was essential prior to,²⁹ during the COVID-19 pandemic, and will be critical for telehealth service provision to continue.⁶ Unsurprisingly, the state in which more clinics provided telehealth services during the pandemic had plans to continue this mechanism of service provision in the future.

As noted by study respondents in both states, a barrier to telehealth service provision is restricting nurses from billing for telehealth services for Medicaid beneficiaries. This is a particular challenge for HD clinics, which are primarily staffed by nurses. There were differences between states in the emergency licensure laws passed, but this policy applied to physicians only.³⁰

Survey findings showed that state 1 provided more contraceptive services via telehealth than state 2 despite the decrease in contraceptive care patient volume in both states at the onset of the COVID-19 pandemic. Subsequently, interview respondents' identification of facilitators and barriers corresponded with their state's level of telehealth service provision where respondents from state 1 identified more facilitators of telehealth service provision compared with respondents from state 2, who prevalently identified barriers to telehealth service provision.

Reduced staffing capacity was noted as a key barrier to service provision, though to a lesser extent in state 1 than in state 2. This is consistent with other studies where local HD leaders noted staffing limitations at the beginning of COVID-19 and indicated that funding limitations contributed to difficulties in responding to mandates and emergencies.³¹ Since HDs are charged with investigating and addressing public

health problems affecting the population,³² staffing capacity is essential for emergency response efforts including case investigation and contact tracing.³³ Our findings suggest that competing interests between contraceptive service provision and emergency response resulted in staff who would have normally provided contraceptive services being reassigned to support pandemic response efforts. Staffing shortages within the public health workforce, particularly among nurses, due to lack of funding and other factors, were evident prior to the COVID-19 pandemic.^{34,35} As HD clinics are key to the safety net, maintaining access to contraceptive and other services, even during a public health emergency, is critical.

Top-down leadership support among agency hierarchies is often an active driver of service implementation.³⁶ Documented systems, structures, and procedures to incorporate new practices are similarly important.³⁶ In centralized systems where communication is derived from a small number of state-level employees,^{27,28} such policies and procedures are critical for public health practice. Thus, an absence of state-level policies or procedures for telehealth, particularly in state 2, was another barrier.

Having electronic health records and devices with cameras and microphones facilitates telehealth,^{37,38} whereas limited audio and/or video capabilities including broadband or smartphone technology^{37,39} and necessary equipment such as tablets and software hinder access.^{29,37} Similarly, technological barriers may be persistent for many patients who may not have access to the requisite technology.⁴ As both a facilitator and a barrier, the presence or absence of the requisite technology and infrastructure may impact leaders' decisions regarding the implementation of telehealth among HD clinics.

While these findings represent a thorough mixed-methods case study of 2 state HDs, this study is not without limitations. Results shed light on the importance of state-level leadership buy-in to provide telehealth services but may not be generalizable to all HDs with centralized governance structure. The timing of data collection may be another limitation as policies and practices may have shifted rapidly as the COVID-19 pandemic progressed. The interviews for state 1 did not include clinic-level personnel while the sample for state 2 included primarily clinic-level staff, thus potentially providing slightly different perspectives about service provision in the context of the COVID-19 pandemic. In addition, the decision to implement telehealth services is often influenced by factors not considered fully in this analysis, including community-level and patient factors, such as community Internet coverage, availability of other sources of health care in the community, distribution of

Implications for Policy & Practice

- While telehealth was implemented among public and private health care sectors at the onset of the COVID-19 pandemic, little is known about telehealth for contraceptive care among health departments.
- Agencies should establish policies for maintaining essential services and adopt innovative models of service delivery during public health emergencies to ensure access to contraceptive care for underserved populations.
- Electronic infrastructure contributes to telehealth implementation, so health departments must invest in infrastructure to support telehealth service provision.
- Health insurance policy, including Medicaid, must continue to support equitable service opportunity and eliminate reimbursement restrictions.

underserved populations, transportation challenges, cultural behaviors, and demand for health care services. While not fully considered in this study, these factors may have influenced organizational decision making related to telehealth implementation.

In summary, reimbursement policy is critical to contraceptive care service provision via telehealth among HD clinics. Medicaid agencies and other health insurance programs must prioritize policy that encourages adoption of new models of care provision during public health crises to reach medically underserved populations, ensure equitable service opportunities, and limit restrictions on provider-level reimbursement. In addition, policy and procedures guided by state-level leadership seem to be driving factors to implementing new programs, such as telehealth services, in centralized and largely centralized HDs. These findings highlight the potential impact of policy and procedural directives at state-level HDs during the COVID-19 pandemic and the importance of policy and decision making at the state level in maintaining access to essential contraceptive care services.

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