

Original Research Article

Telehealth for contraceptive care: Lessons from staff and clinicians for improving implementation and sustainability in Illinois ^{☆,☆☆}



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ABSTRACT

Objective: To solicit Illinois staff and clinician perspectives on rapid implementation of telehealth for contraceptive counseling and recommendations to improve and sustain it in the long term.

Study design: Researchers recruited and interviewed clinicians ($n = 20$) in primary care and obstetrics/gynecology clinics across 13 health care systems in Illinois, as well as clinicians ($n = 11$), leadership ($n = 6$) and staff ($n = 7$) from Planned Parenthood of Illinois clinics. Guided by the Consolidated Framework for Implementation Research, we coded and analyzed interview transcripts in Dedoose with a focus on themes regarding steps to improve quality and sustainability of telehealth.

Results: Participants expressed generally positive attitudes towards telehealth, noting that it increased access to care and time for patient education. Still, many highlighted areas of implementation that needed improvement. Clinic operations were complicated by gaps in telehealth training and the logistical needs of balancing telehealth and in-person appointments. Clinics had difficulty ensuring patient awareness of telehealth as an option for care, in addition to deficiencies with the telehealth technology itself. Finally, innovative resources for telehealth patients, while existent, have not been evenly offered across clinics. This includes the use of self-injection birth control, as well as providing medical equipment such as blood pressure cuffs in community settings. Some themes reflect issues specific to contraceptive counseling while others reflect issues with telehealth implementation in general, including confusion about reimbursement.

Conclusion: Illinois contraceptive care providers and staff wish to sustain telehealth for the long term, while also recommending specific improvements to patient communications, clinic operations, and access to supportive resources.

Implications: Our study highlights considerations for clinics to optimize implementation of telehealth services for contraceptive care. Providers described the value of clear workflows to balance in-person and telehealth visits, streamlined communications platforms, targeted patient outreach, training on providing virtual contraceptive care, and creative approaches to ensuring patient access to resources.

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1. Introduction

Before COVID-19, the use of telecommunication technology in family planning services relied on text messaging and mobile apps [1]. Pandemic-related need for reduced in-person services in order to protect patients and health care workers has changed the way clinics deliver contraceptive care. A survey in late 2020 showed that while Long-Acting Reversible Contraceptive placement and removal services have been negatively impacted by the pandemic,

there has been a broad increase in the use of telehealth for contraceptive services during the same time period [2]. This transformation provides an opportunity to explore telehealth in contraceptive care: specifically, video or phone medical visits [3,4]. Recent studies have begun to examine this topic, indicating generally positive attitudes towards telehealth for contraceptive counseling among both patients and providers, though drawbacks do exist [3,5].

However, if telehealth is to become a long-term component of care, it is important to identify aspects of its implementation that require optimization to provide the most sustainable benefit. As part of a larger study of telehealth for contraceptive care in Illinois during the pandemic, our study sought clinician and staff perspectives on the implementation of telehealth, including workflow, resources used, staff training, and other practice-level changes. As an accompaniment to a separate analysis about perceived patient experiences, the aim of this analysis was to determine how to sustain positive developments stemming from the rapid innovations of telehealth, and to explore lessons learned for family planning providers.

2. Methods

2.1. Recruitment

This study included two rounds of recruitment. First, the research team reached out to known professional contacts via phone or email, identifying potential participants who provide contraceptive care in Illinois. We used purposive sampling to achieve diversity by geography (Chicago city, Chicago suburbs, central/southern Illinois), practice type (academic, community health center, private practice), and clinician type (obstetrician/gynecologist (ob/gyn) and family medicine, nurse midwives and nurse practitioners). This initial round did not include collaboration with Planned Parenthood of Illinois (PPIL), an organization that plays a significant role in family planning provision in Illinois. After receipt of grant funding, we conducted a second round of recruitment using email contacts provided by PPIL collaborators. The research team used purposive sampling to gain input from providers, administrators, and medical assistants, with geographic diversity across the state. Of the 26 people invited to interview in the non-PPIL sample, 20 completed interviews; of the 36 invited to interview in the PPIL sample, 20 completed interviews (Fig. 1). The University of Chicago Institutional Review Board issued an exemption for the non-PPIL portion of the study and approved the PPIL portion, which also included collection of quantitative data, through expedited review.

2.2. Data collection

We used the same data collection methods with both study populations. Researchers trained in qualitative research methods conducted interviews using an in-depth interview guide. The interview guide included 20 questions on topics ranging from impact on patient care, to practice level changes. The Consolidated Framework for Implementation Research (CFIR) informed the research questions, interview guide, and analysis; the CFIR defines 37 constructs of a clinical practice change, within five major domains [6]. Of these constructs, researchers included interview questions that fit into those constructs relevant to our primary goal of determining how to optimize implementation of telehealth, such as Patient Needs and Resources, and External Policy and Incentives [6].

Researchers (BS, ZW, RD, AB) conducted audio-recorded interviews over Zoom lasting approximately 40 to 45 minutes. Interviews took place July -September 2020 (non-PPIL) and January - April 2021 (PPIL). All subjects provided oral consent before inter-

views. We offered a \$40 gift card in appreciation of interviewees' time.

2.3. Analysis

We used a thematic content analysis approach [7]. Using the automated transcription function on Zoom, researchers converted de-identified audio files into written transcripts, which we then manually verified and coded using Dedoose (version 8.0) software. Three researchers (LH, AB, ZW) developed a codebook based on the interview guide and emerging themes, then used this codebook to code the same set of transcripts. We further refined code definitions and resolved discordances through discussion. We repeated this process until researchers established a sufficient level of coding concordance. Three researchers (LH, AB, ZW) then divided the remaining transcripts and finished coding independently. Afterwards, researchers (LH, AB, BS, RD, IH) developed code summaries to highlight prominent themes and to enable in-depth analysis and synthesis.

3. Results

The non-PPIL sample consisted of only clinicians, mostly working in Chicago-area sites and community health centers, whereas about half of the 20 participants recruited in the PPIL sample were clinicians, with others being clinical support or administrative staff (Table 1). All participants had experience providing or supporting telehealth provision of contraception. We describe major themes and subthemes below, organized using the three most relevant of the five CFIR domains: Implementation Process (with a focus on Execution); Inner Setting (with a focus on Network & Communications and Available Resources; and Outer Setting (with a focus on Patient Needs & Resources and External Policy and Incentives) (Table 2) [6,8].

3.1. Implementation process

3.1.1. Telehealth offered appointment convenience and efficiency

In general, participants had positive attitudes toward telehealth for contraceptive counseling, with some calling telehealth "phenomenal" and noting that "health care in general is moving more towards a telehealth setting." Many believed that visit quality was comparable to in-person care, if not better. Participants also emphasized that the convenience of telehealth has allowed for improved patient access to care, and that patient feedback was largely positive. In particular, providers observed that telehealth increased workflow efficiency by eliminating "wait times" and "the check in process and the rooming process." Additionally, the telehealth workflow shifted time spent on the physical exam or waiting for things like patients to "drop their urine [sample] off" toward patient engagement. Telehealth benefited patients by decreasing the overall amount of time spent getting health care while allowing for more patient education, when needed. As one pediatrician noted, they were able to "deep dive into what was going on and really do some effective counseling and motivational interviewing," which many considered to be a positive aspect of telehealth. As a result of these benefits, nearly all participants stated that their clinics were interested in maintaining telehealth options long term.

3.1.2. Providers had difficulty balancing telehealth and in-person visits

While most of the telehealth workflows mentioned by participants worked sufficiently, there were some aspects consistently reported as challenging to implement. One of the most frequently mentioned issues was the use of mixed provider schedules where

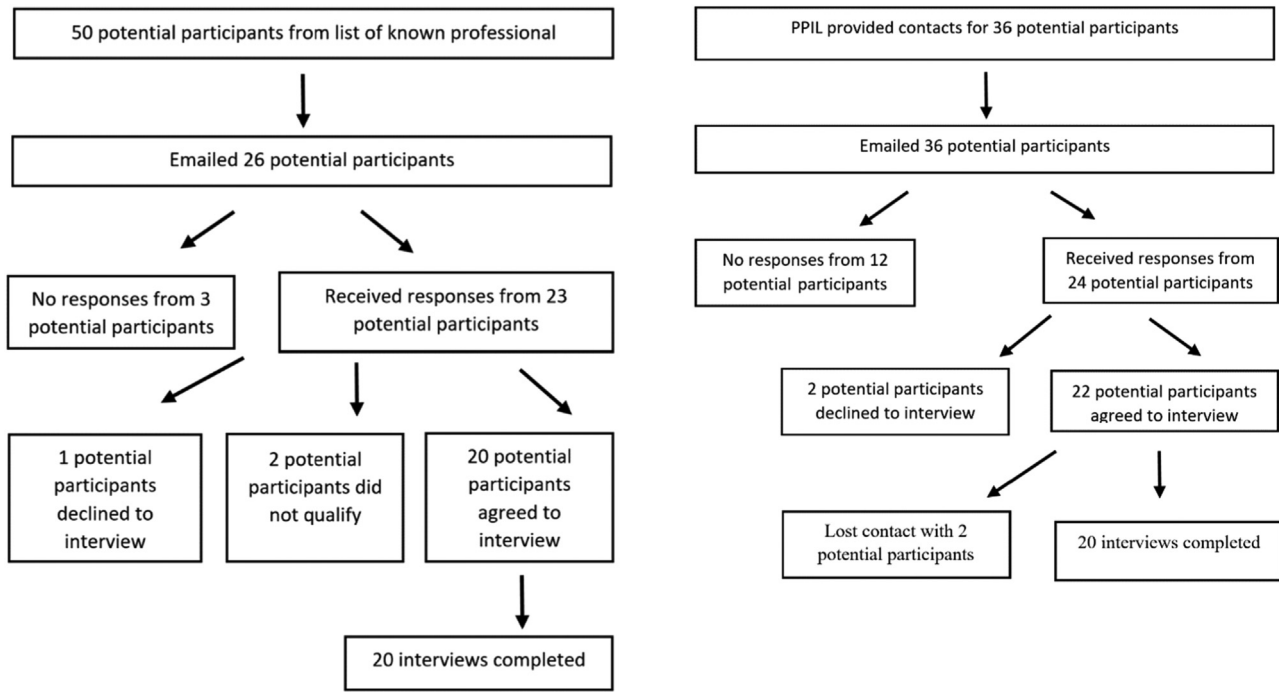


Fig. 1. Recruitment process for qualitative interviews of non-Planned Parenthood of Illinois clinicians (left) and Planned Parenthood of Illinois clinicians (right).

Table 1

Clinicians from non-Planned Parenthood of Illinois (non-PPIL) clinics (n = 20, July -September 2020) and clinicians and staff from Planned Parenthood of Illinois (PPIL) (n = 20, January-April 2021) who participated in qualitative interviews about contraceptive care by telehealth

Non-PPIL	Participants (all clinicians)
Geography	
Chicago-area sites	14
Sites outside Chicago	6
Clinic type	
Community health center	11
Academic health center	4
Private clinic	5
Specialty	
OB/GYN (physicians, midwives)	8
Family medicine/pediatrician (physician, NPs, PAs)	12
Additional roles	
Clinic leadership	3
PPIL	Participants
Geography	
Chicago-area sites	8
Sites outside of Chicago	5
No specific region/statewide	7
Position type	
Clinician (non-leadership)	11
Clinician support (RHAs)	3
Leadership/admin	6

clinics asked providers to provide both in-person visits and telehealth visits within the same daily schedule. As one nurse midwife described, this process was very chaotic and stressful for the provider, as telehealth visits would be “dropped into the middle of your inpatient or your in-person in-office schedule,” so when the in-person schedule invariably ran late, it was hard to “run back and try to pick up your phone in time to call the person that you said you were going to call.” While running late in clinic was not an unusual occurrence even when the provider was seeing patients only in-person, having sporadic telehealth appointments added an additional layer of complication because it was harder to communicate with the patient who was not physically there. Other clinics described having either to separate providers offering telehealth versus in-clinic appointments on a given day, or to schedule tele-

health appointments in a single block at the beginning or end of the day. Ultimately, as one participant put it, “ideally there would still be some division between [...] telehealth and in-person days.”

The other commonly cited workflow challenge arose when clinics required providers to monitor the visit type for each patient. Some participants stated that their clinics defaulted to scheduling all patients to either telehealth or in-person clinic visits, then had providers look through their schedules to determine whether any patients were inappropriately scheduled for telehealth or in-person visits. One rural ob/gyn described how inefficient this method was when patients could be added to a provider’s schedule at any time leading up to the appointment date, and providers were expected to “keep up with constantly surveilling their schedules and identifying appropriate versus not appropriate” visits. This provider fur-

Table 2

Recommendations to providers and clinics for telehealth sustainability, drawn from qualitative interviews with Illinois clinicians and staff offering contraceptive care

CFIR domain	Topic	Recommendation
Implementation process	Executing	Use block scheduling: Avoid mixed or hybrid provider schedules to reduce delays and decrease stress for providers Develop intake or other screening approaches to determine visit type: Provider management of visit type (telehealth or in-person) is inefficient. Create protocols for patients to self-select telehealth visits and/or to identify the patients who are the best candidates for telehealth visits.
Inner setting	Network & communications	Advocate for improved telehealth technology platforms and communication: Ask the technology companies to improve patient portals, add translation services, etc.
	Readiness for implementation-available resources	Develop formal training for telehealth: Go beyond providing self-guided training modules and provide practice opportunities for trainees. Participants who underwent such training found it to be helpful. Train providers on techniques to facilitate patient privacy: For example, use chat function to ensure that patients are in a private location to complete their appointment without drawing the attention of others who may be off screen.
Outer setting	Patient needs & resources	Increase patient awareness through marketing and outreach: Expanding marketing capability beyond simple social media campaigns to better reach those patients with less privilege and access to social media. Consider providing supportive resources or directing patients to resources in the community: Identify and provide materials, equipment, or other logistical supports that may be needed to complement telehealth services. Consider offering DMPA self-injections to patients: Patients at clinics who did offer DMPA self-injections liked having the choice to self-administer at home.
	External policy & incentives	Advocate for reimbursement policies that cover phone-based telehealth: Reimbursements are important for maintaining phone-based telehealth as an option for care, which can help reach patients unable to complete video-based telehealth visits.

ther worried this approach “misses some patients that would qualify [...] or be available” for telehealth. Many other participants stated that their clinics used screening requirements to either assign patients to a visit type based on their chief complaint, or to offer the patient a choice of visit type when appropriate. Ultimately, it was important to match patients to the correct appointment so that those who require a physical exam or procedures would not waste time on a telehealth appointment, and the rest would not take unnecessary risks coming in person.

3.2. Inner setting

3.2.1. Difficulties using communication technology

Prior to the pandemic, none of the clinics in our study had offered video-based telehealth, and it was only during the pandemic that clinics began utilizing video conferencing services. Some of these services were video platforms geared specifically towards usage in the health care system, such as Teladoc and Doximity, while others were general video conferencing services such as Zoom or Webex. Still, due to the hastened implementation of these novel services in the context of health care delivery, several participants cited challenges with these communication-based technologies during telehealth appointments. These included issues with the telehealth technology itself, such as poor integration of translation services, which one telehealth coordinator noted was “a big barrier for patients.” Another problem was the inconsistent video quality due to poor internet connectivity. One central Illinois family physician noted that their video platform just “needs a lot of bandwidth” and that video connectivity suffered as a result.

Additionally, some participants who primarily used a patient portal system to communicate with patients before or after clinic complained that their patient portal system did not allow external printouts and patient resources to be attached to their messages. This was particularly a loss for providers who liked to use “education sheets” when discussing contraceptives, which one clinician noted was “beneficial for patients to have, especially if they are new to contraceptive methods.” To overcome this limitation, some participants suggested uploading a greater variety of documents to the portal system or creating an anonymous, do-not-reply email for patient communications. Others wanted a general im-

provement: “Well, I think we just need a better [electronic health records system] in general. So that our patient portal is better because our patient portals are not great.”

3.2.2. More training desired on patient engagement in new medium

Most participants stated that their clinics provided some training to prepare them for telehealth, whether in the form of formal trainings or resources only, while a few clinics offered none at all. As expected, those participants who received training were more likely to say that they felt adequately prepared for using telehealth, compared to those who received no training at all. However, even amongst those who received training, several participants felt that there were gaps in the training content. While the technical training on how to document and bill was sufficient, one ob/gyn participant stated that they “got less training around, like, this is how you be a doctor through the computer.” For example, establishing rapport with patients through telehealth was a skill frequently cited as difficult to learn.

Another aspect of telehealth that many trained participants felt unprepared for was how to ensure patient confidentiality when providers are unable to see who else is in the room with the patient during appointments, especially for adolescent patients. Since telehealth training did not address this, one participant had to adjust on their own: “When you’re on a telehealth visit, like a video or telephone, you’re not sure exactly where that patient is, who else like, can hear what they’re saying. So I think it took me a second to figure, you know how I was going to approach that.” Some even turned to using the chat function of the video platform to covertly inquire whether the patient was in a private location for their appointment. For instance, as one provider noted, they may send a message telling the patient, “hey, I’m sending something through the chat, you could either verbally respond or type out your response.” Overall, there was not much guidance on how to handle this issue of patient privacy.

Still, despite these gaps in training, most participants felt supported in the transition to telehealth. In fact, nearly all stated that their clinic leadership was actively supportive of the transition, with engagement taking a variety of forms. From designing operating procedures and training programs, to scheduling regular meetings and email communications about telehealth, and even person-

ally answering questions and collecting feedback, leadership played a vital role, both directly and indirectly, in successfully supporting clinic staff in telehealth services.

3.3. Outer setting

3.3.1. Lack of communication with patients about telehealth option

While many patients made use of telehealth services during the pandemic, many participants also felt that their social media campaigns and other outreach methods were inadequate and missing a portion of their patient population. Participants pointed out the potential harms, with one clinician noting that even during the pandemic, when in-person care was not readily available, “people need birth control.” Yet, many patients also had “no idea that [the clinics] offer telehealth.” For such patients, providers noted there could be unmet contraceptive needs, which was especially concerning to some participants because they perceived possible racial and socioeconomic disparities in who was aware of and accessing telehealth care. One cited reason was the unevenness in which social media campaigns reach patients, given gaps in access to social media and the internet. One family physician mentioned that their announcements about telehealth would only reach their social media followers, and “if a patient didn’t necessarily follow [us] on social media, then they didn’t know that we were offering these services.” Other forms of advertising were not pursued as strongly due to lack of staff time to “send out blast texts to patients and/or send mailers.” One provider expressed a common feeling of frustration regarding the difficulties of outreach: “community outreach specifically related to telehealth [is] something I personally am struggling with.”

3.3.2. Need for innovative patient resources

The use of telehealth meant that certain activities important for contraceptive care, like taking blood pressure or providing injections, could no longer occur at the patient visit. Participants found or suggested innovative ways to circumvent these problems. For example, since monitoring blood pressure is an important part of prescribing estrogen-based birth control methods, some participants stated their clinics gave patients blood pressure cuffs to take home. Several participants whose clinics did not provide blood pressure cuffs had expressed the desire for their clinics to do so. Also, several participants mentioned patients lacking access to technology or private space in which to complete the telehealth appointment. A novel solution proposed by several participants would involve creating “hubs” or “telehealth kiosks”—that is, spaces and equipment in community areas that are free and available to patients in the community. As one participant put it, “I think it would be great if people could check out blood pressure cuffs and pulse ox from [...] every library and park district building [...] little telehealth kiosks available in public. [...] You don’t need much more than a closet and a tablet or computer so that people [...] can access care.” These spaces would provide the privacy, technology, and equipment that patients may need to support the telehealth visit.

3.3.3. Expanded support for depo self-injections

Depot medroxyprogesterone acetate (DMPA, or “depo”) is a common form of birth control that normally requires patients to be in clinic to receive injections. The pandemic and use of telehealth made it more difficult for patients to receive DMPA injections. As a result, some clinics offered support for self-injection, where patients picked up DMPA, usually the subcutaneous (“sub-q”) formulation, from the clinic or a pharmacy to self-administer at home. One urban ob/gyn described:

“It’s relatively easy, any of our patients who chose that [...] our nurse would call them and kind of go through all the instruc-

tions, she’d also give them a link to an online video where they could [...] watch somebody doing self-injections so that they weren’t scared to do it. [...] I think lots of people have liked it. Like, even people who now, like don’t have any other medical contraindications and could be coming in to get depo from, you know, our office, are preferring to do it just because it’s more convenient at home.”

Even participants at clinics that have not yet implemented DMPA self-injections indicated an interest in utilizing it in the future. One family physician stated: “I would love to see this being an opportunity for us to be looking at the development of [...] how people can self-monitor their own [long-acting reversible contraception],” with reference to subq DMPA.

3.3.4. Reimbursement policies affected phone and video visit options

Regardless of whether their clinics already committed to providing telehealth in the long term, most participants agreed that continued reimbursement for telehealth visits at rates similar to in-person visits is vital to the sustainability of telehealth services. As one provider explained, “what we’re hoping is that it’ll be paid the same [as an office visit], at the same rate, because we’re doing the same work.”

Yet, many participants described a rapidly changing landscape when it came to state and federal policies related to reimbursements, resulting in difficulties in integrating these changes into clinic protocols and little guidance for providers regarding billing for telehealth. As one urban ob/gyn put it, “We really had no direction at first. And that was really difficult.” As another central Illinois ob/gyn described, “There were policy changes that we could bill for these visits. So those came from [the state] because we see a [...] huge Medicaid population;” later, other protocols were dictated by the clinic about the use of telehealth, with the clinic mandating that visits “be video, not just phone and we had to use a certain platform to be able to have it as a secured visit for Health Insurance Portability and Accountability Act of 1996 (HIPAA) compliance and such.” Even by the time participants were interviewed, there was still much confusion about whether or not phone visits, in particular, were equally reimbursed. This resulted in widely varied responses by clinics on their practices and policies. Some participants talked about switching from “time-based” billing to “complexity-based billing” as a way to ensure parity in reimbursement. Other participants stated that their clinic only offered video-based telehealth visits or required video to be turned on for at least a part of the visit, due to the perception that phone visits would be under-reimbursed. For example, one urban clinic provider noted they were being “actively encouraged to try and do video visits for everybody who possibly can” to ensure reimbursement. Participants noted that the inability to offer phone visits affected patients. As another urban primary care physician explained the effects on patients who have “limited ability to have enough Wi-Fi or bandwidth to be able to maintain video”: if “they can’t do a phone visit [...] they can really do nothing.” Ultimately, the physician notes, “I think if we were getting reimbursed appropriately for phone visits through a lot of the insurance companies, I think it’d be a lot easier, especially for people who don’t have video or don’t have video on their phone or laptop.”

4. Discussion

Family planning clinicians and staff expressed generally positive opinions about telehealth for contraceptive care and hoped for continued implementation of telehealth in the long term. Still, many acknowledged that improvements needed to be made for the quality and sustainability of telehealth. Participants identified needs for: streamlined appointment scheduling; additional training; improved telehealth technology; enhanced patient outreach

about telehealth options; innovative community resources; and sustainable reimbursement for telehealth services.

This study solicited opinions of providers and staff of diverse clinics in Illinois. As such, this study was not intended to be representative of perspectives from across the country. Many clinics took different approaches in the rapid shift to telehealth provision of contraceptive care and our findings may reflect both the regions and periods in time during the pandemic when data was collected. Additionally, the non-PPIL participants were recruited through known professional contacts and, as such, were more of a convenience sample. However, researchers worked to ensure recruitment of both providers and clinic staff, from diverse regions within Illinois, and of different roles and subspecialties, in order to generate a diverse sample. As a result, this study was able to get perspectives on difficulties in telehealth that were more pronounced in specific regions or patient demographics.

Overall, our study's findings align well with preexisting literature. Studies prior to the pandemic found that non-video-based telehealth usage for family planning is largely acceptable to patients and providers, especially in the context of medication abortion [1,9,10]. More recently, two New York studies have found the usage of video-based telehealth in contraceptive care to be effective and acceptable to both patients and ob/gyn providers [3,5]. Similarly, when it comes to recommendations for improving telehealth implementation, some prior studies have also highlighted challenges with telehealth technology, including the lack of integrated translation services [3,11], as well as difficulties in logistics of the determining virtual versus in-person visits [11]. Additionally, while existing literature acknowledges complexities of telehealth reimbursement policies [12], our study found that this translated into confusion in clinical practice that negatively affected patient care. Since the lack of reasonable reimbursement could endanger the usage of video and phone for appointments, clear and equitable reimbursement policies are critical.

Some of our study's findings highlight areas of telehealth implementation which prior reproductive health research has not discussed in detail. For one, there was the lack of guidance for providers on how to ensure patient confidentiality, especially in adolescent patients. There have been studies in other fields such as adolescent medicine [13], psychiatry [14–16], and general primary care [17] which have noted both the importance and difficulties of ensuring the physical privacy of patients in telehealth. Yet, this is an area of special concern for providers of contraceptive care because adolescents—who can consent to contraception on their own in 23 states, and under certain circumstances in most other states, including Illinois [18]—may not want members of their household to know their contraceptive decisions [19]. Notably, privacy can be difficult for adolescents to attain because they often must complete telehealth appointments in a shared household space [20]. Our participants suggested actions such as using the chat function to verify a patient is in a private space or engage in private dialog, and we can also look to other fields for guidance on how to address this issue. For example, one paper recommends providers ask adolescent patients to wear headphones and to use yes/no questions in order to limit disclosure of information [12]. Similarly, when it comes to the creative use of resources for patients in the community, there have already been studies on the use of community tools such as blood pressure cuffs or general health kiosks [21,22] and automated dispensing machines for medications [23]. These are similar to the community resource ideas proposed by providers in our study and can serve as models for further study. The experiences and opinions of our participants shed light on recommended improvements in specific areas of telehealth implementation for contraceptive counseling (Table 2).

Finally, this study suggests that there are key policies needed in order to improve and sustain telehealth long term. In partic-

ular, policies to continue reimbursements of telehealth and more equitable reimbursement between phone-based and video-based telehealth can go a long way to not only sustain telehealth, but also address some of the inequities in access to telehealth. Furthermore, policies that encourage funding for community-based resources that can address issues with privacy and access to equipment could improve the experience of contraceptive patients and the providers serving them. More research on telehealth outcomes, such as cost-effectiveness and patient demand, can be helpful to bolster the case for these changes.

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.conx.2022.100083.

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