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Original Research Article

Factors associated with successful implementation of telehealth abortion in 4 United States clinical practice settings

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ABSTRACT

Objective: To overcome obstacles to delivering medication abortion services during the COVID-19 pandemic, clinics and providers implemented new medication abortion service models not requiring in-person care. This study identifies organizational factors that promoted successful implementation of telehealth and adoption of “no test” medication abortion protocols.

Study design: We conducted 21 semi-structured, in-depth interviews with health care providers and clinic administrators implementing clinician-supported telehealth abortion during the COVID pandemic. We selected 15 clinical sites to represent 4 different practice settings: independent primary care practices, online medical services, specialty family planning clinics, and primary care clinics within multispecialty health systems. The Consolidated Framework for Implementation Research guided our thematic analysis.

Results: Successful implementation of telehealth abortion included access to formal and informal inter-organizational networks, including professional organizations and informal mentorship relationships with innovators in the field; organizational readiness for implementation, such as having clinic resources available for telehealth services like functional electronic health records and options for easy-to-use virtual patient-provider interactions; and motivated and effective clinic champions.

Conclusions: In response to the need to offer remote clinical services, 4 different practice settings types leveraged key operational factors to facilitate successful implementation of telehealth abortion. Information from this study can inform implementation strategies to support the dissemination and adoption of this model.

Implications: Examples of successfully implemented telehealth medication abortion services provide a framework that can be used to inform and implement similar patient-centered telehealth models in diverse practice settings.

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1. Introduction

To keep patients and providers safe during the COVID-19 pandemic, many health care providers and clinics throughout the United States (US) shifted from providing in-person care to offering remote clinical services. Abortion care was no exception. The pandemic prompted the emergence of new evidence-based, “no-test” clinic protocols [1]. In July 2020, a US District Court of Maryland placed an injunction on the US Food and Drug Administration's (FDA) mifepristone Risk Evaluation and Mitigation Strategy (REMS) program barring its in-person dispensing and signature requirements [2]. Although the US Supreme Court later lifted the in-

junction on January 12, 2021, the door had already been opened to the wider potential of providing direct-to-patient telehealth medication abortion services, which we will refer to as “telehealth abortion.” Telehealth abortion, as defined in this paper, combines the use of synchronous or asynchronous telemedicine consultations with health care providers, no-test abortion protocols, and delivery of mifepristone and misoprostol medications to patients without requiring in-person visits to a clinic.

Processes required to adopt and implement new service models in clinics and other health care settings are challenging because they often require system-wide changes [3]. Evidence-based changes take on average 17 years to be incorporated into routine care [4,5]. The slow pace at which many medical practices move to adopt new evidence-based service models prompted a landmark report published in 2001 by the Institute of Medicine (IOM) that called for the pursuit of scientifically valid plans that

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substitute new, reliable systems for old, unreliable ones [6]. The IOM appealed to researchers to study how medical practices introduce and meaningfully sustain new models of care through implementation science. Implementation science research suggests factors associated with successful adoption of health innovations are diverse, and are affected by the resources and capacities of the clinical sites (including staff expertise, material resources, organizational structures, and management), the nature of the innovation (how well can it be adapted to the needs of the site), and external forces such as regulatory and reimbursement structures [5,7]. Commonly used implementation strategies include the cultivation of clinic champions who advocate for and support the intervention [8]. Effective champions are generally respected members of the clinical site, who have some authority to direct resources to support implementation and possess a personal commitment and passion for effecting change [9].

Despite the growing body of evidence around how various factors influence successful implementation, few studies have evaluated the introduction of novel abortion services in different health care practice settings [10]. This is important because innovations related to abortion care remain challenging given the political spotlight under which they operate. Unlike other clinical services, abortion services are forced to adapt to ever-changing state and federal laws and respond to extreme stigma. The financial impact for clinics and abortion providers who struggle to comply with frequent regulatory changes limits resources and creates obstacles that reduce the likelihood of service delivery innovation [3]. The successful and rapid strategies used to change abortion provision during the COVID-19 pandemic warrant a careful assessment so that they can support broad dissemination and implementation to other practice settings [11]. Here, we describe factors that contributed to the successful implementation of telehealth abortion in 4 clinical practice settings in the US.

2. Material and methods

In Spring 2020, in response to the COVID-19 pandemic, networks of mostly primary-care providers began to innovate telehealth abortion. Working together, Plan C, an advocacy organization dedicated to improving access to medication abortion in the US, and the University of Washington launched a research endeavor called, Access, Delivered, with the goal of studying abortion care innovations in various practice settings across the US. Plan C posted an invitation on relevant listservs and spoke with personal contacts in the field, seeking clinicians interested in addressing abortion access issues during COVID-19. Those who were interested in implementing a new model of care were offered mentorship, connections to a learning collaborative and, in some cases, small grants to cover startup costs. Members of the University of Washington research team began observing learning collaborative conversations and, from those discussions, created the first edition of the Access, Delivered Provider Toolkit. The Toolkit provides a step-by-step guide for providers and clinics interested in implementing novel telehealth abortion services [12].

2.1. Theoretical framework

To meet our study aims, we used a qualitative approach to perform a hybrid deductive-inductive thematic analysis guided by the Consolidated Framework for Implementation Research (CFIR) [13,14]. We used CFIR *a priori* because it is a widely used implementation framework to organize and structure interview findings related to clinical practice [13].

2.2. Study setting

We conducted semi-structured, in depth interviews in November and December 2020 with participants from clinical sites representing 4 different practice settings: (1) independent primary-care providers (independent PCPs), (2) telemedicine only, web-based health care clinics (online clinics), (3) specialized family planning clinics (family planning clinics), and (4) primary-care clinics within multispecialty health systems (health system). “Independent” PCPs included solo practitioners as well as providers practicing in single-site clinics with multiple practitioners. We categorized locations of the clinical sites and patients as urban, suburban, or rural based on the US census definitions [15]. We also used the Guttmacher Institute classifications of state abortion policy for each clinical site location, which we grouped into the following categories: very supportive, supportive, leans supportive, middle-ground, leans hostile, hostile, very hostile [16]. For the purposes of this study, we aggregated Guttmacher’s separate classifications of “very supportive” and “supportive” to an overall classification of “supportive.” Regardless of classification, each site provided telehealth abortion in their respective state.

2.3. Sample and recruitment

We recruited participants from the Plan C network via email and employed purposive sampling to capture interviews that were informationally rich and represented a variety of practice settings [17]. To be eligible, participants had to be involved in implementing or providing direct-to-patient telehealth medication abortion services. Participants included clinic administrators and staff, and health care providers, such as medical assistants, nurse practitioners, physician assistants, registered nurses and physicians. We did not systematically inquire about the specialty of the physicians, but understood that each physician participating in this study was board certified in Family Medicine. We excluded clinics offering site-to-site telehealth abortion because those models require patients to travel to the clinic [18,19]. We invited 24 individuals for interviews. One declined and 2 never responded. We offered USD 25 gift card to each participant for their time.

2.4. Data collection

AEF, a PhD student in public health with experience working in abortion policy and qualitative research, conducted most interviews with a research coordinator (MRR) who took notes, and asked follow-up questions when necessary. After receiving consent, we conducted the virtual interviews at a location of the participants’ choosing using HIPAA-compliant video conferencing software. The interviews averaged 70 minutes in length. A transcription service (Rev.com) and 2 study volunteers transcribed the audio recorded interviews. We de-identified and reviewed each transcript for accuracy.

EAJ, a medical anthropologist and qualitative methods consultant, and EMG, a family medicine physician with abortion research experience, provided iterative reflective guidance throughout the data collection phase. After each interview, we fine-tuned the interview guide to align better with the CFIR framework, and reflect participants’ clinical roles. Questions included the participant’s role, involvement with choosing to add or include telehealth abortion, steps taken to implement the service, perceived barriers and facilitators to successful implementation, and resulting adjustments to the service. We also collected supporting documents and resources such as clinic protocols and patient-facing materials. We administered a separate post-interview follow-up survey using REDCap (Research Electronic Data Capture) to collect information about participant demographics, clinic role and title, professional

Table 1

Characteristics of participating clinic sites by clinic location, patient location, abortion policy of state in which clinic resides and clinic size (N=15)

Site #	#. interviewed	Approx. # patients served*	Clinic location (urban, suburban, rural)	Patient location (urban, suburban, rural)	Guttmacher Institute abortion policy classification	Clinic Size (# of clinicians in practice)
Independent primary care providers (independent PCPs)						
1	1	500	Urban	Urban, Suburban, Rural	Supportive	1
2	1	380	Rural	Urban, Suburban, Rural	Supportive	1
3	1	No data	No data	No data	Leans supportive	1
4	1	0	Suburban	No data	Supportive	2–10
5	1	0	Suburban	Suburban, Rural	Leans Supportive	1
6	1	0	Urban	Urban	Supportive	2–10
Telemedicine only web-based healthcare clinics (online clinic)						
7	2	100	Online	Urban Suburban Rural	Supportive	2–10
8	1	3,000	Online	No data	Multi-state (Leans Supportive, Leans Hostile)	11–50
9	2	75	Online	Rural	Leans Supportive	1
Specialized family planning clinics (family planning clinics)						
10	1	136	Urban	Urban, Suburban, Rural	Leans Supportive	2–10
11	1	30	Rural	Rural	Leans Supportive	1
12	5	130	Urban	No data	Supportive	11–50
13	1	0	No data	No data	Leans Hostile	1
Primary care clinics within multispecialty health systems (health system)						
14	1	30	Urban	Urban, Suburban	Leans Supportive	>50
15	1	1	Urban	Urban	Supportive	>50

* The approximate number of telehealth abortion patients served at time of interview, as reported by participants, with services starting sometime between March 2020 and January 2021, except for one clinic that reported online consultations starting as early as 2017.

experience since training, date the clinic started offering telehealth abortion and approximate number of patients served by telehealth abortion [20]. The survey contained additional questions about the type of clinical practice (Table 1). We have included the questionnaire as a Supplement.

2.5. Analysis

We used descriptive statistics to describe the 15 clinical sites offering telehealth abortion (Table 1). Two investigators created an initial codebook, coding 20% of the interviews until the research team agreed on the codes. We completed the codebook based on an initial deductive template rooted in the CFIR framework and used it to code the remaining interviews [13]. We produced memos to track and synthesize thematic decisions and consensus. The investigator team met regularly to review interview content, resolve coding discrepancies, provide thematic discoveries, and discuss data saturation [21]. Through this process, we derived common factors that contributed to successful implementation of telehealth abortion. We identified constructs representing 3 of the 5 CFIR domains: Outer Setting, Inner Setting, and Individuals Involved (i.e., characteristics of the champions or other supportive clinical staff). We used Dedoose qualitative analysis software to manage our data [22].

2.6. Ethical considerations

The University of Washington's Institutional Review Board reviewed this study for exempt status.

3. Results

We completed 21 interviews from 15 different clinical sites (Table 1). Eleven sites were already offering telehealth abortion at

the time of their interviews, and 4 sites were about to initiate services. Six sites represented independent PCPs, 3 represented online clinics, 4 represented specialized family planning clinics, and 2 represented health systems. Most clinical sites enrolled in this study were located in urban areas and in states with “supportive” or “leaned supportive” abortion policies. Participants whose clinics initiated telehealth abortion after the US declared a public health emergency in 2020, served a range of 1–500 patients. One clinic was an exception, having served about 3,000 patients using telemedicine consultations and in-clinic medication dispensing since 2017.

Regardless of practice setting, we found that implementing telehealth abortion required sites to address 4 main operational components: patient engagement, consultation, medication dispensing, and patient follow-up (Fig. 1). Below, we describe key factors that allowed participants to successfully meet these components.

3.1. Implementation factors outside the clinic site

3.1.1. Access to formal and informal inter-organizational networks

Participants drew on external organizations or individuals for support while implementing telehealth abortion. A participant from an online clinic describes the invaluable assistance from a national organization, stating: “The support of being a NAF [National Abortion Federation] member is crucial to our success...as a business and being able to be part of the bigger picture of abortion services...they've been really instrumental in assisting us” (Nurse Practitioner, Online clinic).

External parties provided informational materials, emotional and logistical support, and funding for start-up costs (Table 2). Participants also reached out to their personal and professional networks, which were either individuals or clinics further along in implementing telehealth abortion, to learn about key operational elements and important steps for implementation. We found that informal mentorship benefited primarily family planning clinics and

Table 2
Organizations participants stated that support the implementation of telehealth abortion

Supporting organization	Definition	Funding	Regulatory compliance	Medical protocols	Model of service	Service operations	Referrals	Community
American Civil Liberties Union (ACLU)	Offers information about laws, regulations, and litigation related to abortion access and rights ^a		•					
Gynuity Health Projects	Provides research and technical assistance on reproductive health technologies with on-going research on telehealth abortion care ^b				•			
MYA Network	Supports primary care-based clinicians offer abortion care and connects patients to these services ^c					•	•	•
National Abortion Federation (NAF)	Professional association of abortion providers which represents and supports abortion providers in delivering care ^d	•	•	•	•	•		•
Plan C	Provides operational technical assistance to medication abortion providers ^e	•	•			•	•	•
Reproductive Health Access Project (RHAP)	Mobilizes, trains, and supports clinicians to make reproductive health care accessible ^f			•	•	•		•
Resources for Abortion Delivery (RAD)	Protects, supports, and improves the abortion care delivery system through funding, technical, and legal assistance ^g	•	•					

^a American Civil Liberties Union (ACLU). Our Fights, Our Asks: Biden's To-Do List 2021 [January 29, 2021]. Available from: <https://www.aclu.org/>.

^b Gynuity Health Projects. Gynuity envisions a world in which each individual has access to safe and effective reproductive and maternal health care—delivered where, when, and how needed. 2021 [January 29, 2021]. Available from: <https://gynuity.org/>

^c MYA Network. 2021 [April 29, 2021]. Available from: <https://myanetwork.org/>

^d National Abortion Foundation (NAF) 2021 [January 29, 2021]. Available from: <https://prochoice.org/>.

^e Plan C. A safe at-home abortion is here 2021 [January 29, 2021]. Available from: <https://www.plancpills.org/>

^f Reproductive Health Access Project. We mobilize, train, and support clinicians to make reproductive health care accessible to everyone. 2021 [January 29, 2021]. Available from: <https://www.reproductiveaccess.org/>

^g Resources for abortion delivery (RAD) 2021 [January 29, 2021]. Available from: <https://www.radprogram.org/index.php>.

Fig. 1. Four components of clinician supported telehealth abortion provision.

independent PCPs, whereas health systems and online clinics rarely drew on informal mentors (Table 3, 1.1).

3.1.2. External policies and protocols

Participants also relied on multiple sources to develop protocols for their clinical site. They used examples from published protocols and documents from reproductive health organizations, including template consent and patient information sheets, service delivery checklists, and business strategy plans. Participants referenced these published protocols as authoritative, standard-of-care resources when proposing telehealth abortion to external stakeholders and to clinic leadership and other staff (Table 3, 1.2).

3.2. Implementation factors from inside the clinic site

3.2.1. Leadership engagement

Organizational leadership support for telehealth abortion was essential for successful implementation. Champions working for change in health systems and independent PCPs working in clinics with multiple clinicians were less efficient with service implementation because their organizational leaders saw this new service as competing with other clinical priorities. Family planning clinics and online clinics collaborated more, with multiple staff members engaging in collective decision making with their organizational leadership (Table 3, 2.1). As 1 participant stated: “It’s much easier for those of us who are working in independent clinics, because we’re a small practice...our clinic administrator is wonderfully flexible...when we raised the idea of expanding services by telemedicine, everybody was really excited... this is a very familial, non-hierarchical work environment, and so we’re a practice that is very adaptable... and makes decisions collectively about what we’re all comfortable with” (Physician, Family Planning clinic).

3.2.2. Organizational readiness for implementation

Clinics with resources needed for telehealth abortion such as electronic health records (EHR), capacity for medication dispensing and mailing, and professional liability insurance coverage for abortion implemented their services faster than clinics without those existing resources. Online clinics did not need as many resources as the other practice settings because they did not require a clinical facility and could design their platforms from scratch rather than adapt existing systems, thereby reducing staff time inputs. Health systems already had well-established EHRs, video platforms and other telehealth infrastructures. As a clinician at a family planning clinic summarized: “When the ACOG v FDA case was won, and

we temporarily could mail mifepristone, I took that as a greenlight that, ‘Okay, this is all above board.... And I can do this.’ And so I put into place mailing mifepristone, and we had already been doing telehealth visits since March of 2020. So, that part was very easy. We already had digital consent forms in place through DocuSign. We do all of our paperwork electronically” (Nurse Practitioner, Family Planning clinic).

In comparison, practice settings with paper-based patient charts required more time to adapt operations. Participants who added telehealth abortion without previously having provided traditional in-clinic abortion, felt the need to consult their professional liability insurers (Table 3, 2.2).

3.2.3. Clinic staff access to knowledge and information

Every champion spent time on training and educating staff on workflow issues, and figuring out new technologies to seamlessly connect scheduling, obtaining instantaneous electronic signature on the FDA required mifepristone Patient Agreement Form, proper EHR documentation and patient care visits by video. Staff members in health systems and larger practice settings (> 10 clinicians) required more training in values clarification and no-test protocols than staff in smaller clinics. Health system champions had the added burden of taking on tasks like creating call center flowcharts and outlining clinic security plans. Regardless of practice setting type, champions provided ongoing organizational training and adjusted processes to improve workflow and tracking, starting as early as after their first few telehealth abortion patients (Table 3, 2.3).

3.3. Characteristics of clinic site champions

3.3.1. Provider and staff self-efficacy

The health care providers who participated in the study and whom we identified as champions of this new model of care exhibited a great deal of passion and determination to ensure the successful implementation of the service and overcame numerous logistical barriers (Table 3, 3.1). As 1 clinician stated: “(Implementing the service) brought on a little bit more work. But it’s not to the point that I can’t handle it...I’m just so happy to be a part of it. Because I just think it’s such a great (service)...ethically, you have to do the right thing, regardless of whether that means you’re gonna get paid or not...you have to do the right thing for the patient” (Administrator, Family Planning clinic).

Table 3

Participant quotations exemplifying factors, and their definitions, associated with successful implementation of telehealth abortion, by practice setting type

	Implementation factors	Factor definition	Practice setting ^a	Representative quotes ^b
1	<i>Implementation factors outside the clinic site</i>			
1	Access to formal and informal inter-organizational networks	<i>The degree to which the clinical organization is connected with other external organizations or individuals. These include both formal and informal inter-organizational connections. Often participants receive financial or technical support from professional organizations committed to supporting service implementation. Participants also cited support from individuals at other provider sites already working through the implementation process for a similar service. In both cases, external supports offered suggestions or guidance for how to implement services.</i>	Independent PCP and Family Planning clinic practice settings benefited more from inter-organizational supports.	Physician, Independent PCP ...because we are such a small practice, things get done very much by the seat of the pants...(A mentor at a large FP clinic in another state) suggested to get our friends to start trying to make appointments and just see what doesn't work (and go from there)...she has saved me many hours, so even just simple (advice) like, this is the language you need to use with your malpractice when asking questions. It's so helpful.
2	External policies and protocols	<i>External recommendations or guidelines for clinical practice and service delivery. Common supports included specific documents and protocols supported and published by reputable sources, which participants drew on and adapted for their own internal implementation and service design.</i>	No difference between practice settings.	Physician, Health System The consensus statement that was published in Contraception early in the pandemic, with a suggested protocol, was really helpful because we were trying to do those things. And I was trying to say, 'oh, there's evidence, it's okay.' (Our clinical leader) is going to feel much better if something in a journal article saying to do this. Because there's nobody else in [my city] is doing this. Physician, Family Planning Clinic I think having a protocol that was published by NAF, and approved by a lot of important clinical groups, is extremely helpful to make the case that we are providing standard of care. So, without changes to the NAF clinical guidelines to accommodate telemedicine, I'm sure we would have been a lot more hesitant. But in terms of liability, it makes a huge difference when our groups that set the standard of care are condoning the really low risk of taking on telemedicine as part of our practice.
2	<i>Implementation factors from inside the clinic site</i>			
1	Leadership Engagement	<i>Commitment, involvement, and accountability of leaders and managers, at any level of the organization with the implementation of the service. Also includes committees within a health system. Leadership support is essential for the service, even if they are not involved in the implementation itself.</i>	Health system and Independent PCP practice settings required additional efforts such as educational sessions, regular meetings to gather support and buy-in.	Physician, Independent PCP ...my 2 bosses said everyone should be fine with (telehealth medication abortion)...We are meeting with the higher-ups of the organization, to talk about (the strategic plan of the service)... about how administration will find these services. I've been told there shouldn't be really any pushback, but we do have a meeting this week to just introduce that we're doing this. Physician, Health System We have a reproductive health committee that meets once a month. That's across all practices, and disciplines...people from social work, billing, IT, and reproductive health providers...we deal with all different things, like changes in protocol, and deciding to move to a no-touch for medication abortion...We submit the changed protocol to our administrative clinical group and they have to approve it...And then they have another clinical directors meeting and those meetings are sometimes a presentation by someone in the leadership about any particular issue, (such as this service).

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Table 3 (continued)

2	Organizational readiness for implementation	<i>The level of resources dedicated for service implementation and on-going operations. For telehealth abortion, this includes EHR, mailing capacity, and professional liability insurance.</i>	Online clinic and health system practice settings were able to pivot quickly to address these needs, whereas practices with paper-based systems required more adapting.	Physician, Family Planning Clinic ...the thing that took the longest for us was getting our paperwork online... medical history, sign consent forms and make payments online, because we are pretty low-tech clinic, we do not use electronic medical records, we have all paper charts. And so just figuring out the technology and having staff time to actually build a web form, and to get everything functioning online was really our biggest hurdle...it takes time to get all of those forms built, functional and user friendly...And so that took us around 6 weeks, start to finish. Just going through multiple iterations of having all of our legal paperwork and parental consents, and documentation for folks who have Medicaid...(Our whole team worked on) changing our paperwork to reflect telemedicine.
3	Clinic staff access to knowledge and information	<i>Clinic staff's access to educational information, including colleagues, and knowledge about the service and how to incorporate it into work tasks for smooth roll-out. When timely and pertinent training is involved, a new service is more likely to be successful.</i>	Independent PCP and online clinic practice settings often required less training, whereas larger clinics (> 10 clinicians) with multiple sites needed ongoing efforts to implement the service.	Physician, Independent PCP There's a lot of information about medication abortion and protocols...that I'm going to be training the staff on...Then it's a matter of, getting the rest of the staff comfortable with the whole no-touch part of it...I've really been starting informal conversations to talk to the other providers, like, "You don't need an ultrasound. You don't need a follow-up appointment." ... I hope to do more training like values clarification with the rest of the staff...Right now, the social workers do a lot of options counseling and we refer patients out that need abortion care...It'll be a shift in training that we can offer these services...
3 <i>Characteristics of clinic site champions</i>				
1	Provider and staff self-efficacy	<i>Providers or staff who believe in their own ability to accomplish required actions to achieve service implementation goals. Staff with high self-efficacy, or site "champions" are more likely to make a decision to embrace the changes of a new service and stay fully committed even in the face of difficult challenges and obstacles.</i>	Nearly all sites had a champion implementor with high self-efficacy. No difference between practice settings.	Administrator, Online Clinic (When I was setting up the service) everything was, "It can't be done, it can't be done." And if I hadn't been as stubborn as I am, I don't know that I would still be where I am today...this is just my nature. I really care about the project, I feel like telehealth abortion had great potential to open up care in these (rural) areas, and I really believed in it...There's no financial resources. When you have an idea, you have to kind of prove yourself. I'm putting a ton of my money into starting this nonprofit. We're seeing a lot of patients and a lot of patients have these amazing stories about why they couldn't have gotten care without us. And it's all worth it now...I would (now) like to be that supportive person for someone else. Physician, Independent PCP ... I tend to be somebody who makes decisions going, this is the right thing to do, and weighing of some of the benefits and risks, but not spending a ton of time in the minor details of the risks and benefits.

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Table 3 (continued)

2	Individual identification with organizations	<i>These family medicine providers are heavily committed to the missions of their clinical organizations, which gives them a deep willingness to engage with service implementation. This includes their commitment to provide “whole person care,” and use of their skillset to provide full spectrum care services to all patients who desire it.</i>	Primary care practice settings, both Independent PCPs and health systems, exhibited strong ethic around ability to provide whole person care.	Physician, Independent PCP ... I think it really just goes along with being a family medicine doctor, in regard to looking at the whole person, offering the full spectrum of services, from prenatal care to abortion care, and thinking of the reproductive justice lens, and giving patients the option to be parents if they want to, or not want to. I think the less we have to refer our patients to other places, the better...we take care of a lot of underinsured, undocumented and Medicaid patients, so, it can be hard getting them the services that they need. The more we can do that in-house, the better, just to provide equitable care.
3	Staff and provider understanding and beliefs about telehealth medication abortion service	<i>Clinical staff and providers' level of enthusiasm about the new service, and their attitudes and value towards it. Values towards this service included providing patients with options, closing a service gap, addressing their clinical needs, and empowering patients to make choices.</i>	No difference between practice settings.	Physician, Independent PCP To me, abortion care...is about options and choices and having people live each day or make their choices so that they can live their life the way they want to live it. Nurse Practitioner, Independent PCP This is my fight and my passion all my life is just to make abortion accessible and to have a choice to have children or to not have children, a reality for all women to allow us to become our fullest people and live our fullest potential. It's just been a long-time passion of mine....I'm also just a real big passionate believer that it should just be part of family practice. It really is just an extension of what we do, we treat families and all their needs, why wouldn't this be part of that?...I love putting power in women's hands...that's what this service is doing.
4	Other personal attributes of champions	<i>Personal traits of telehealth abortion providers and staff that include a tolerance of ambiguity, intellectual ability, competence levels, and learning style, such as the drive to practice evidence-based medicine. They hold strong ethics to eliminate extraneous procedures (ultrasound) or requirements to be in-person that may cause hardships on the patient (generally and during COVID-19).</i>	No difference between practice settings; shared value among participants.	Nurse Practitioner, Family Planning Clinic It's just so nice to be able to provide an easy access service to patients...We don't have to worry that a patient is waiting, we don't have to worry that a patient is having to go through all these...unnecessary steps. In some cases, it feels like the ultrasound and the lab is unnecessary, just because we're able to do it without it now...for me as a provider, knowing that we can reach more people and provide this service in less time to patients, it's huge. Administrator, Online Clinic I had known about the no touch protocols that were coming out from the study in Contraception...and being a NAF member, I knew they changed...to endorse no touch medication abortion. ...we wanted to do that as a way to really make the appointment more convenient for the patient and allow the patient to really be the center of our focus, rather than, in a traditional abortion clinic a lot of times patients are scheduled at the convenience of the doctor...really in all our implementation, we are trying to make things more patient centered.

^a Family planning clinic, specialized family planning clinic; Health system, primary care clinics within multispecialty health system; EHR, electronic health record; Online clinic, telemedicine only health care clinics; Independent PCP, Independent primary care provider.

^b Quotes edited for clarity.

3.3.2. Individual identification with organization

Health systems and independent PCPs shared a strong ethic around the importance of providing whole person care as a core tenant to their identities as primary care providers. They considered the provision of early abortion services in their clinics as improving the quality of care because it prevents the delays that occur when patients are referred out, and convenience for patients is increased (Table 3, 3.2).

3.3.3. Staff and provider understanding and beliefs about telehealth medication abortion service

Participants from all practice types believed that telehealth abortion provides accessible, safe, affordable abortion options, allowing all people to decide for themselves whether to continue with or end a pregnancy (Table 3, 3.3).

3.3.4. Other personal attributes of champions

Participants expressed being personally motivated by the principles of social justice to increase access to abortion. Participants from all practice types shared an excitement about being able to practice up-to-date, evidence-based abortion care made possible by the new no-test protocols. They found that telehealth abortion is more patient-centered because it eschews tests, such as facility-based ultrasounds and blood examinations, which are often clinically unnecessary and burden patients with additional costs (Table 3, 3.4).

4. Discussion

In this investigation of diverse practice settings, we provide a qualitative examination of how direct-to-patient telehealth abortion was implemented as a new abortion service after the US declared a public health emergency due to 2019 Novel Coronavirus in early 2020. Rapid changes to medication abortion services are the culmination of the family planning organizations that published protocols that supported “no-test” abortion care, a temporary injunction on the in-person requirements of the mifepristone REMS program and actions of motivated providers to make this essential service available to patients. Prominent factors that promoted the rapid implementation of telehealth abortion included the support of outside organizations, committed organizational leaders, and the availability of telehealth resources within the clinical sites. Site champions in particular, played a prominent role, especially among primary care providers who were motivated by the principles of social justice to increase access to essential abortion services. The importance of champions in initiating abortion services in primary care has been noted previously [23]. Our findings inform approaches to navigate the complex and multi-faceted challenges of implementing telehealth abortion for patients seeking care in primary care practices, specialized family planning clinics or online, and help bridge the gap for clinics that do not yet recognize the feasibility of providing safe telehealth abortion [24].

The addition of 15 clinics in this study that offered direct-to-patient telehealth abortion, some of which served hundreds of patients during this limited window of time is remarkable. Prior to the pandemic, direct-to-patient telehealth abortion in the US had only been available under restricted research conditions. For example, the Gynuity TelAbortion study had permission from the FDA to mail pills, but required that enrolled subjects first obtain ultrasounds and Rh testing, which many participants reported as barriers [25]. We observed that clinician-supported telehealth abortion provision under non-research conditions could feasibly be offered within 4 different clinic practice settings within weeks during the temporary injunction to suspend the FDA's enforcement of in-person medication dispensing and signature requirements. Even with this temporary judicial benefit, clinic champions still had to

navigate around many existing barriers to meet the federal and state regulations and the logistical challenges of offering telehealth abortion. Nonetheless, we found that telehealth abortion was possible in a diversity of practice settings. When the US Supreme Court in January 2021 reinstated the in-person dispensing requirement, patients returned to traveling to clinics to pick up mifepristone and sign the Patient Agreement Form. However, with the recent lift in the FDA in-person requirement for the duration of the US public health emergency, we have been informed that 10 of 15 clinics enrolled in this study continue to offer no-test medication abortion consultations via telemedicine and to mail mifepristone to patients since it is an effective way to provide care to patients while minimizing risks of SARs-CoV-2 transmission.

Despite their successes, our participants encountered many obstacles in initiating telehealth abortion services. Although the focus of this study is to highlight factors that allowed providers and staff members to overcome these barriers, it must be noted that health care providers based in states that do not permit abortion by telehealth did not qualify for this study. Even among those who were successful in initiating telehealth abortion, we found that providers and clinics had to meet many federal, state and organizational requirements to include abortion care in their services. On the federal level, it included the FDA REMS provider registration and clinic dispensing requirement, and on the state level, clinics had difficulty seeking reimbursement from state Medicaid programs. At the organizational level, providers and staff also had to contend with garnering support from leaders and other staff, find systems that allowed them to do telehealth and obtain Patient Agreement Form signatures electronically. Those providers who were adding telehealth as a new service needed to determine if professional liability insurance would cover such services.

Although our respondents never explicitly stated their most difficult barrier, the FDA mifepristone REMS program is perhaps the most onerous to the initiation of clinician-supported telehealth abortion care. Because of its requirement that clinicians register in one of the drug manufacturers' central databases and order, store and dispense mifepristone instead of writing a prescription for a retail pharmacy, the US FDA has essentially set the tone for widespread misperceptions about the complexity and safety of medication abortion. The FDA REMS program, which was intended to reduce harm, is unnecessary, given mifepristone's proven safety record of more than 20 years, with complications occurring in fewer than 1% of women who have used the drug [26]. The FDA's decision to maintain the mifepristone REMS program even during the US public health emergency is especially distressing, since mifepristone has proven to be safer than many other medications routinely prescribed and managed by primary-care providers, such as anticoagulants, antibiotics, antihypertensive agents and drugs for the treatment of erectile dysfunction [27]. Although our study did not evaluate specifically outcomes and safety of the telehealth services offered at our sites, other studies have shown telehealth abortion to be as safe as in-clinic services [28]. The removal of REMS would allow for telehealth abortion expansion in a number of states across the US, significantly reduce geographic barriers and help to address racial/ethnic disparities in access to high quality, comprehensive reproductive health services.

Our findings should be interpreted in the context of the study's limitations. Because our sampling strategy deliberately selected clinic sites that were exemplars (sites that responded quickly to the opportunity and began offering telehealth abortion within months of the start of the COVID pandemic), the study's findings may not be generalizable to other clinical settings. Our participants were mostly from clinics that were independent or smaller, with only 2 clinic sites representing large health system practice settings. This study examines telehealth abortion only from an imple-

mentation perspective, it does not examine the broader context of the service in terms of quality, follow-up or patient satisfaction.

As the COVID-19 pandemic drags on, the systemic inequities in accessing safe and effective abortion services continue to plague women and people of color in the US more than ever. Telehealth abortion improves access to reproductive health services and for people living long distances from specialized family planning clinics [29]. Our findings show that succinct constructs outside and within clinic organizations assist with the implementation of telehealth abortion. We hope these factors for implementation success can be used to guide broad practice change and adoption of evidence-based medication abortion services. The information from this study will be incorporated into the *Access, Delivered Provider Toolkit* [12].

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:[10.1016/j.contraception.2021.04.021](#).

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