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An evaluation of telemedicine provision of medication abortion across six states

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Summary

The objective of this study was to compare acceptability between patients who received site-to-site telemedicine and in-person medication abortion services (teleMAB and in-person MAB, respectively) in 11 Planned Parenthood health centers across six states. In total, 712 patients completed a brief survey on the same day they received abortion care; of those, 246 (36%) also completed a two-week follow-up survey. Of the 712 people who completed the in-clinic survey, 358 were in-person MAB patients and 354 were teleMAB patients. Both in-person MAB and teleMAB patients were highly satisfied with the abortion services they received (71.2% and 80.5% respectively), though teleMAB patients were more likely than in-person MAB patients to report being highly satisfied ($p < 0.01$). Among those who completed the follow-up survey, satisfaction remained high, as the majority of both groups reported they would seek the same care again if they needed an abortion in the future (73.2% in-person MAB and 83.3% teleMAB, $p = 0.9$). Though most telemedicine patients said they felt comfortable interacting with the provider and technical issues were rare, almost a quarter (20.9%) of teleMAB patients reported that they would have preferred to be in the same room as their provider.

In the context of ever-increasing abortion restrictions in the United States, these findings indicate that site-to-site telemedicine care is an acceptable model and could be broadly adopted. However, in recognition of patients who would have preferred to be in the same room as the provider, telemedicine services should be expanded in concert with efforts to maintain or expand in-person medication abortion provision. Further research should explore the impact of telemedicine on the accessibility of abortion care and patient preferences as restrictions mount for both in-person and telemedicine provision of abortion services.

Introduction

In 2008, a Planned Parenthood affiliate in Iowa implemented the first telemedicine service for abortion care. In this “site-to-site model,” medication abortion patients went to a health center and consulted with a physician located elsewhere via a secure videoconference. An evaluation of the model in Iowa found patients were highly satisfied with the telemedicine provision of medication abortion compared to in-person care (1). Planned Parenthood has now expanded the site-to-site telemedicine model to 21 states. Prior studies found that patients were highly satisfied with the site-to-site telemedicine model (2).

The Quality of Care framework (3) positions patient satisfaction and acceptability as main components of high-quality care across the spectrum of health care services. In the context of telemedicine service delivery, many studies have sought to assess patient satisfaction and acceptability as indicators of quality telemedicine care. Thus, examining patient satisfaction and acceptability offers insight into the overall quality of telemedicine care (3,4). With increasing shifts to telemedicine provision of many sexual and reproductive health services, it is critical to continue to center patient experiences. In this study, we evaluated the acceptability of telemedicine provision of medication abortion compared to standard in-person care using patient-reported measures of satisfaction in Planned Parenthood health centers across six states.

Methods

Data were collected between June 2017 and December 2018 at 11 Planned Parenthood health centers as site-to-site telemedicine models were rolled out in six states (Maryland, Nevada, New York, Ohio, Oregon, and Virginia). Some centers provided both in-person care (in-person MAB) and telemedicine provision of medication abortion (teleMAB), but most just provided one modality of care. Not all centers recruited for the full study period. Individuals were eligible if they received medication abortion, were 18 years or older, and could read English or Spanish. A brief same-day survey was administered to people who presented to participating health centers for medication abortion for both standard and telemedicine care. Individuals who provided contact details were also sent a follow-up online survey two weeks after seeking care. Up to three email reminders were sent about the online survey to those who agreed to be contacted. Respondents received a \$15 gift card for participating in the clinic survey and an additional \$20 gift card for participating in the follow-up online survey.

Patients provided electronic consent when completing the first survey on tablets. The survey included open- and closed-ended questions about demographics as well as reasons for and experiences with seeking medication abortion. Satisfaction was measured through a variety of measures, including whether the patient would recommend the service to a friend or family member and how they rated overall satisfaction on a five-point Likert scale. TeleMAB patients were asked additional questions about their experiences with the service and if they would have preferred to be in the same room as the provider. The online follow-up survey contained additional demographic questions and questions about the patient’s overall experience with medication abortion. Descriptive statistics, Pearson’s chi-square tests, and logistic regression were conducted using Stata 15. The study was approved by the Allendale Investigational Review Board.

Results

Patient Characteristics

Of the 712 people who completed the in-clinic survey, 358 were in-person MAB patients and 354 were teleMAB patients. For the overall study sample, the mean age was 26.5 years (SD=5.6 years). Most patients had completed high school, while about one quarter had completed college or higher.

	Overall (N = 712)	In-person MAB (N = 358)	TeleMAB (N = 354)
Age in years, mean (SD)	26.5 (5.6)	26.5 (5.4)	26.5 (5.7)
State where care was provided			
Maryland	346 (48.5)	182 (50.8)	162 (45.9)
Nevada	164 (23.0)	26 (7.3)	138 (39.1)
New York	20 (2.8)	1 (0.28)	19 (5.4)
Ohio	54 (7.6)	34 (9.5)	20 (5.7)
Oregon	34 (4.8)	31 (8.7)	3 (0.9)
Virginia	95 (13.3)	84 (23.5)	11 (3.1)
Education, n (%)			
Less than high school	24 (3.4)	9 (2.5)	15 (4.2)
High school	219 (30.8)	101 (28.2)	118 (33.3)
Some college	245 (34.4)	126 (35.2)	119 (33.6)
College	128 (18.0)	65 (18.2)	63 (17.8)
Some professional school	32 (4.5)	18 (5.0)	14 (4.0)
Professional school	37 (5.2)	23 (6.4)	14 (4.0)
Missing	27 (3.8)	16 (4.5)	11 (3.1)

Abortion preferences

Just over one-third of patients had at least one previous abortion (37.9%), of which 61.5% were prior medication abortions and 34.8% were prior surgical abortions. When asked what factors drove their current abortion decision-making, most patients reported wanting an abortion as soon as possible (60.7%) or specifically wanting a medication abortion (44.5%). Having an abortion close to home, in a certain location, or on a certain day was also a factor for some patients. TeleMAB patients were less likely than in-person MAB patients to have had a prior abortion. This association persisted after controlling for age ($p=0.002$, results not displayed).

Table 2 Abortion preferences				
	Overall (N = 712)	In-person MAB (N = 358)	TeleMAB (N = 354)	<i>p</i> ¹
Ever had prior abortion, n (%)	270 (37.9)	156 (43.6)	114 (32.2)	<0.01
Prior abortion type (among those with prior history), n (%)				0.62
Surgical/ aspiration abortion	94 (34.8)	55 (35.3)	39 (34.2)	
Medication abortion	166 (61.5)	93 (59.6)	73 (64.0)	
Not sure	2 (0.7)	2 (1.3)	-	
Missing	8 (3.0)	6 (3.9)	2 (1.8)	
Abortion type desired, n (%)				0.34
Strongly wanted surgical (suction or aspiration) abortion	11 (1.5)	8 (2.2)	3 (0.9)	
Leaning toward surgical (suction or aspiration) abortion	9 (1.3)	6 (1.7)	3 (0.9)	
No strong feeling either way	61 (8.6)	29 (8.1)	32 (9.0)	
Leaning toward medication abortion	97 (13.6)	44 (12.3)	53 (15.0)	
Strongly wanted medication abortion	509 (71.5)	262 (73.2)	247 (69.8)	
Missing	25 (3.5)	9 (2.5)	16 (4.5)	
Most important factor influencing choice for current abortion type, n (%)²				
Wanted abortion as soon as possible	432 (60.7)	209 (58.4)	223 (63.0)	0.21
Wanted abortion as close to home as possible	49 (6.9)	21 (5.9)	28 (7.9)	0.40
Wanted abortion in certain clinic or city	18 (2.5)	9 (2.5)	9 (2.5)	1.00
Wanted abortion on certain day or time	19 (2.7)	10 (2.8)	9 (2.5)	1.00
Wanted to have a medication abortion	317 (44.5)	162 (45.3)	155 (43.8)	0.42
Wanted cheapest procedure	5 (0.7)	2 (0.6)	3 (0.9)	0.69
¹ P value of Pearson chi square tests.				
² Reported percentages not out of 100; patients could provide multiple responses.				

Acceptability

Overall, both in-person MAB and teleMAB patients were highly satisfied with the abortion services they received (71.2% and 80.5% respectively), though teleMAB patients were more likely than in-person MAB patients to report being satisfied ($p < 0.01$). Using logistic regression to compare patients who were very satisfied to those who were less than very satisfied, teleMAB patients were more likely to report being very satisfied than in-person MAB patients after controlling for age (aOR=1.52, $p = 0.03$, results not displayed). Most patients reported feeling comfortable asking questions to the provider (93.3% in-person MAB v. 96.6% teleMAB) and that they would recommend the same service to a friend (74.0% in-person MAB v. 79.9% teleMAB; $p > 0.05$).

Table 3 Primary outcomes by type of medication abortion (standard or telehealth), in-clinic survey respondents, N = 712.				
	Overall (N = 712)	In-person MAB (N = 358)	TeleMAB (N = 354)	<i>p</i> ¹
Satisfaction, n (%)				<0.01
Very satisfied	540 (75.8)	255 (71.2)	285 (80.5)	
Satisfied	142 (19.9)	81 (22.6)	61 (17.2)	
Unsatisfied	2 (0.3)	2 (0.6)	-	
Very unsatisfied	1 (0.1)	1 (0.3)	-	
Missing	27 (3.8)	19 (5.3)	8 (2.3)	
Comfort asking questions to healthcare provider, n (%)				0.12
Comfortable	676 (94.9)	334 (93.3)	342 (96.6)	
Not comfortable	11 (1.5)	8 (2.23)	3 (0.9)	
Missing	25 (3.5)	16 (4.47)	9 (2.5)	
Would recommend same service to friend, n (%)				0.09
No	19 (2.7)	12 (3.4)	7 (2.0)	
Yes	548 (77.0)	265 (74.0)	283 (79.9)	
Depends	79 (11.1)	38 (10.6)	41 (11.6)	
Not sure	36 (5.1)	24 (6.7)	12 (3.4)	
Missing	30 (4.2)	19 (5.3)	11 (3.1)	
¹ P values for Pearson chi square tests.				

Among those who used the teleMAB services, the majority said they could easily see (93.8%) and hear (96.6%) the provider. Similar to overall satisfaction ratings, most teleMAB patients were highly satisfied with the conversation they had over videoconference (74.9%). In an optional free response, some patients indicated that they did not mind doing the consultation via videoconference and that they were still able to get the information they felt they needed. Still, about a quarter of respondents (20.8%) said they would have preferred to be in the same room as the provider. In an optional free-response, some patients indicated that an in-person interaction with the provider would have felt more personal and comfortable.

Using logistic regression, we compared the age, education, abortion history, abortion preferences, and reasons for seeking abortion care of teleMAB patients who preferred to be in the same room as the provider with those who did not. We found that patients with this preference were slightly younger (median age 26 vs 24 years, $p=0.01$). No other factor in the model differentiated the groups.

Satisfaction after two weeks

Of the 712 people enrolled in the study, 246 (35.0%) completed a two-week follow-up survey. Demographics for these 246 patients are reported in the appendix of this report. The age range between the two groups was largely similar, though there were more college-educated participants and fewer high-school or professional-school-educated participants in the follow-up survey. Two weeks after receiving abortion care, most patients in both groups said they would choose the same service next time. They also rated the quality of care they received highly, with about two-thirds of the patients rating the care as excellent and another quarter of the patients rating the care as very good. A small percentage of patients rated their care as fair or poor (2.9% and 0.4% respectively).

Table 4 Primary outcomes by type of medication abortion (standard or telehealth), online survey respondents, N = 246.				
	Overall (N = 246)	In-person MAB (N = 138)	teleMAB (N = 108)	<i>p</i> ¹
Would choose same service next time, n (%)				0.09
No	18 (7.3)	14 (10.1)	4 (3.7)	
Yes	191 (77.6)	101 (73.2)	90 (83.3)	
Depends	13 (5.3)	6 (4.4)	7 (6.5)	
Not sure	15 (6.1)	11 (8.0)	4 (3.7)	
Missing	9 (3.7)	6 (4.4)	3 (2.8)	
Rating for quality of care received, n (%)				0.28
Excellent	157 (63.8)	83 (60.1)	74 (68.5)	
Very Good	60 (24.4)	33 (23.9)	27 (25.0)	
Good	16 (6.5)	11 (8.0)	5 (4.6)	
Fair	7 (2.9)	6 (4.4)	1 (0.9)	
Poor	1 (0.4)	1 (0.7)	-	
Missing	5 (2.0)	4 (2.9)	1 (0.9)	
¹ P value of Pearson chi square tests.				

Discussion

This study found that acceptability was high for patients receiving site-to-site telemedicine care for medication abortion services in participating health centers across six states. These findings align with other studies that have found patients are highly satisfied with site-to-site models of telemedicine medication abortion provision (2,5–7). In terms of overall satisfaction, telemedicine patients were more satisfied than those who received in-person care, although the reasons for this difference were not explored in this study. Notably, telemedicine patients reported very few technical difficulties.

While patients largely found telemedicine acceptable, almost one-quarter of telemedicine patients would have preferred to be in the same room as the provider. These patients were younger on average, but otherwise similar to those who did not express this preference and cited in-person care as feeling more personal and making them feel more comfortable. This supports findings from a previous evaluation that some patients, on average younger, would have preferred in-person care (1), and a more personal interaction being the biggest reason for this indication (18). This reinforces the importance of ensuring patients are well informed of what a site-to-site telemedicine visit will entail and that they are given options early in the scheduling process. This way, patients seeking an in-person provider-patient interaction can access this modality of care.

This study has some limitations. Several demographic variables are not available for all patients in the study. As a result, we were unable to assess whether factors such as race, residence, and income, were associated with patients' experiences with or preferences for telemedicine abortion services. Second, not all clinics recorded refusal rates, so an overall response rate cannot be calculated. Finally, the study was not designed to assess specific drivers of what may be causing differences in patient satisfaction or preferences.

The future of telemedicine for medication abortion in a changing abortion landscape

The US Food and Drug Administration has made policy changes that opened the possibility for a direct-to-patient model of care, in which pills can be mailed directly to patients from online pharmacies after an online consultation with a provider. The details for how the new policy will be enforced is still being determined, but the direct-to-patient medication abortion model is effective in overcoming barriers to care and has consistently proven safe, satisfactory, and effective globally and in the United States (9–12). In the United States, where non-medically justified burdens and barriers are routinely imposed on patients seeking abortion care, telemedicine has become an increasingly common approach to delivering medication abortion care (13–15). The importance of flexible and varied models of providing medication abortion care has been underscored by the removal of constitutional protections for abortion (16). While direct-to-patient models have received more attention than site-to-site models recently, there are also unique challenges to accessing direct-to-patient abortion care. Anti-abortion politicians have made efforts to criminalize direct-to-patient telemedicine provision of medication abortion, and even in supportive political environments there are other potential barriers to care like digital literacy, health literacy, language barriers, and broadband limitations, among other challenges. Conversely, site-to-site models of telemedicine are uniquely positioned to provide proximity to providers and traditional forms of medical care that may make patients more comfortable. Additionally, site-to-site offers a convenient option for instances when an ultrasound is indicated or desired by the patient due to concerns about dating the pregnancy or ectopic risk (17). Thus, site-to-site teleMAB models are still relevant and important and could emerge as a tool to maintain or expand care as regional demand for abortion services fluctuates in response to political threats to abortion access.

Conclusion

As evidenced by this multi-state evaluation, the site-to-site telemedicine model of care is an acceptable method of abortion care delivery. Within the broader landscape of abortion care modalities that are currently available, site-to-site telemedicine care has the potential to bolster and diversify abortion care delivery while enhancing greater access and choice for people seeking abortion care.

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Acknowledgements

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The findings and conclusions in this article are those of the authors and do not necessarily reflect the views of Planned Parenthood Federation of America, Inc.

Appendix

Table I Demographic frequencies by type of medication abortion (standard or telehealth) among respondents who completed both in-clinic and online surveys, N = 246.			
	Overall (N = 246)	In-person MAB (N = 138)	TeleMAB (N = 108)
Age in years, mean (SD)	25.8 (5.0)	25.4 (5.0)	26.3 (5.1)
Education, n (%)			
Less than high school	7 (2.8)	4 (2.9)	3 (2.8)
High school	62 (25.2)	36 (26.1)	26 (24.1)
Some college	86 (35.0)	48 (34.8)	38 (35.2)
College	69 (28.1)	36 (26.1)	33 (30.6)
Some professional school	11 (4.5)	10 (7.3)	1 (0.9)
Professional school	9 (3.7)	4 (2.9)	5 (4.6)
Missing	2 (0.8)	-	2 (1.9)
Marital status, n (%)			
Married or partnered	68 (27.6)	36 (26.1)	32 (29.6)
Single	27 (11.0)	13 (9.4)	14 (13.0)
Divorced or separated	143 (58.1)	84 (60.9)	59 (54.6)
Missing	8 (3.3)	5 (3.6)	3 (2.8)
Parity, n (%)			
0	124 (50.4)	64 (46.4)	60 (55.6)
1+	119 (48.4)	72 (52.2)	47 (43.5)
Missing	3 (1.2)	2 (1.5)	1 (0.9)
Parity, n (%)			
0	124 (50.4)	64 (46.4)	60 (55.6)
1	56 (22.8)	37 (26.8)	19 (17.6)
2	45 (18.3)	27 (19.6)	18 (16.7)
3	13 (5.3)	6 (4.5)	7 (6.5)
4	1 (0.4)	-	1 (0.9)
5	2 (0.8)	-	2 (1.9)
6+	2 (0.8)	2 (1.5)	-
Missing	3 (1.2)	2 (1.5)	1 (0.9)
Race/ethnicity, n (%)¹			
Hispanic	40 (16.3)	19 (14.0)	21 (19.6)
Black	81 (32.9)	61 (44.2)	20 (18.5)
White	126 (51.2)	62 (44.9)	64 (59.3)
Asian	13 (5.3)	5 (3.6)	8 (1.9)
American Indian/Alaska Native	4 (1.6)	2 (1.5)	2 (1.9)
Native Hawaiian/Pacific Islander	5 (2.0)	1 (0.7)	4 (3.7)
¹ P value of Pearson chi square tests.			
² Reported percentages not out of 100; patients could provide multiple responses.			