An observational study of patient experiences with a direct-to-patient telehealth abortion model in Australia

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ABSTRACT

Background While abortion care is widely legal in Australia, access to care is often poor. Many Australians must travel long distances or interstate to access abortion care, while others face stigma when seeking care. Telehealth-athome medical abortion is a potential solution to these challenges. In this study, we compared the experience of accessing an abortion via telehealth-at-home to accessing care in-clinic. Methods Over a 20-month period, we surveyed patients who received medical abortion services at Marie Stopes Australia via the telehealth-athome service or in-clinic. We conducted bivariate analyses to assess differences in reported acceptability and accessibility by delivery model. Results In total, 389 patients were included in the study: 216 who received medical abortion services in-clinic and 173 through the telehealthat-home service. Telehealth-at-home and in-clinic patients reported similarly high levels of acceptability: satisfaction with the service (82% vs 82%), provider interaction (93% vs 84%), and recommending the service to a friend (73% vs 72%). Only 1% of telehealth-at-home patients reported that they would have preferred to be in the same room as the provider. While median time between discovering the pregnancy to first contact with a clinic was similar between groups, median time from first contact to taking the first abortion medication was 7 days longer for telehealth-at-home patients versus in-clinic patients (14 days (IQR 9-21) vs 7 days (IQR 4-14); p<0.01).

Conclusion The telehealth-at-home medical abortion service has the potential to address some of the challenges with provision of abortion care in Australia.

BACKGROUND

While abortion is legal in Australia, access to care is often poor. Many factors converge to affect access: abortion is mostly unavailable in the public system,

Key messages

- ➤ Patients using direct-to-patient telehealth medical abortion services report similarly high levels of care acceptability as in-clinic patients.
- Distance, comfort, and ability to schedule the abortion visit around their responsibilities are among the reasons telehealth patients select the service.
- ➤ Telehealth patients waited a median of 7 days longer than in-clinic patients to take the first abortion medication.

there is a variable upper gestational age limit across states and territories, medical abortion must be provided by a medical doctor, potential patients lack information about where to obtain care, there are provider shortages, and conscientious objection from doctors results in some not being referred for abortion services or made to feel guilty for their choice.

As a result of these barriers, a national study found that roughly one-third of Australian abortion patients travelled more than an hour to access care, and 4% travelled out of their home state. Among these patients, travelling four or more hours was associated with presenting for care after 9 weeks' gestation, which could be due to delays in accessing care, or few sites offering abortion after that gestation.

Telehealth, "the use of telecommunications technologies to deliver health-related services", was first used in Australia in 2011. Since then, telehealth has been used to deliver a wide variety of services, particularly to Australians living in rural and remote areas. Marie Stopes Australia (MSA), a nonprofit private healthcare organisation, operates a network of sexual



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and reproductive health clinics across Australia and is the largest provider of surgical and medical abortion care in Australia. In 2015, MSA launched a telehealthat-home medical abortion service (hereafter, telehealth), available up to 63 days' gestation. The model required a referral from the patient's general practitioner (GP), an ultrasound to determine gestational age and pregnancy location, and human chorionic gonadotropin (hCG) and blood group testing, including Rhesus status. The patient consulted with an MSA nurse and doctor by web conference or telephone and received the medications via courier. Patients could obtain medications from a local pharmacy if they had an issue with the courier service or concern with privacy. To confirm successful abortion, 2 weeks after taking the medication, patients obtained a follow-up hCG test at a local laboratory and consulted with an MSA nurse via telephone. Throughout the process, a 24-hour helpline was available to patients.

To understand the effect of MSA's telehealth service, we sought to compare the experience of accessing medical abortion in-clinic to accessing care via telehealth.

METHODS

Between April 2017 and December 2018, medical abortion patients who received care at one of 18 MSA clinics or through MSA's telehealth service were invited to participate in an online survey. Clinics were in six of the eight states and territories (no MSA clinics were in Tasmania and South Australia at the time of the study). Both in-clinic and telehealth patients were informed about the study through a flyer, survey link, and research coordinator contact information that accompanied their medications. During their follow-up telephone visit, patients could express interest in the study and provide contact information to receive a link to the survey. Patients were eligible if they had a medical abortion, were 16 years or older, could read English, and provided informed consent. Interested patients confirmed eligibility, gave consent, and completed the self-administered online survey approximately 2 weeks after their abortion. Patients who completed a survey were emailed an AUD\$20 gift card. Convenience sampling was used for this exploratory study. We recruited over the entire pre-set study period.

To assess the impact of telehealth on access, we focused on patient perceptions of acceptability and accessibility, as recommended by the Institute of Medicine's Committee on Evaluating Clinical Applications of Telemedicine. Our measures captured and compared accessibility of the service (eg, time to care and distance travelled) and care acceptability (eg, satisfaction with the service overall and the provider interaction). A full set of the measures is included in online supplemental appendix 1.

We summarised demographic characteristics and conducted bivariate analyses to assess differences in

acceptability and accessibility by delivery model. We tested for differences using chi-square, Fisher's exact and t-tests. Analyses were performed using Stata 16.0 (College Station, TX, USA). Two members of the research team performed a content analysis of free-text responses¹⁰ to better understand quantitative findings on acceptability of telehealth. Illustrative comments are included.

Post hoc power analyses indicated that with 200 respondents in each study arm, we would be sufficiently powered (80%) to detect a 7 percentage point difference in satisfaction with the overall service and a 13 percentage point difference in recommending the service to a friend between the two groups; our study was significantly underpowered at 62% and 5% to detect the smaller differences observed in these measures between the two arms with an alpha of 0.05.

RESULTS

Some 14% (n=173) of those who had a telehealth medical abortion and 1.4% (n=216) of those who had an in-clinic medical abortion during the study period participated in the study. Respondents' average age was 28 years, similar to the average age (29 years) of all women who accessed a medical abortion at MSA during the study period. In both groups, most respondents reported that they were partnered, nulliparous and of English ancestry (table 1). Most telehealth and in-clinic respondents (68% and 59%, respectively) reported that they strongly desired a medical abortion and that the most important factor in deciding "where and what type of abortion they would have" was "wanting to have an abortion as soon as possible".

Telehealth experience

Of the provided "factors that made them choose to have their abortion by telemedicine", telehealth respondents most frequently cited "long distance to visit a provider in person" (42%), "could be scheduled around my responsibilities" (38%) and "it was more comfortable" (35%). Most telehealth respondents (92%) reported that they "received enough information about what to expect from the telehealth visit when they called to schedule their appointment".

Among telehealth respondents who connected via web conference (n=94), 72% reported that they could easily hear the doctor compared with 99% of those who connected by telephone (n=79). Almost all telehealth respondents received medications via courier service (n=169, 98%). One respondent reported receiving the medications at the pharmacy and data were missing for the others (n=3, 2%) (table 2). A minority experienced a delay in receiving the medications via courier service (n=23, 13%).

Accessibility

There was no difference in median time from discovering pregnancy to first contact with MSA between

Table 1 Demographic characteristics of the study sample								
		Type of medical abortion (n (%))						
Characteristic	Overall (n (%)) (N=389)	Telehealth (N=173)	In-person (N=216)					
Age (years) (mean (SD))	28.3 (6.5)	28.3 (6.7)	28.4 (6.1)					
Marital status								
Single	103 (26.5)	42 (24.3)	61 (28.2)					
Partnered	157 (40.4)	73 (42.2)	84 (38.9)					
Married	101 (26.0)	42 (24.3)	59 (27.3)					
Separated, divorced or widowed	22 (5.7)	12 (6.9)	10 (4.6)					
Missing data	6 (1.5)	4 (2.3)	2 (0.9)					
Ancestry*								
Aboriginal	13 (3.3)	7 (4.1)	6 (2.8)					
Australian	145 (37.3)	68 (39.3)	77 (35.7)					
English	203 (52.2)	103 (59.5)	100 (46.3)					
Chinese	10 (2.6)	5 (2.9)	5 (2.3)					
German	27 (6.9)	16 (9.3)	11 (5.1)					
Indian	26 (6.7)	4 (2.3)	22 (10.2)					
Irish	52 (13.4)	24 (13.9)	28 (13.0)					
Italian	7 (1.8)	3 (1.7)	4 (1.9)					
Scottish	42 (10.8)	21 (12.1)	21 (9.7)					
Other	75 (19.3)	32 (18.5)	43 (19.9)					
Parity								
0	198 (50.9)	74 (42.8)	124 (57.4)					
1	68 (17.5)	30 (17.3)	38 (17.6)					
2	71 (18.3)	41 (23.7)	30 (13.9)					
3+	48 (12.3)	27 (15.6)	21 (9.7)					
Missing data	4 (1.0)	1 (0.6)	3 (1.4)					
Method of abortion desired								
Strongly desired medication abortion	244 (62.7)	117 (67.6)	127 (58.8)					
Leaning toward medication abortion	89 (22.9)	34 (19.7)	55 (25.5)					
Neutral	40 (10.3)	18 (10.4)	22 (10.2)					
Leaning toward surgical abortion	6 (1.5)	3 (1.7)	3 (1.4)					
Strongly desired surgical abortion	3 (0.8)	1 (0.6)	2 (0.9)					
Missing data	7 (1.8)	0 (-)	7 (3.2)					
Prior abortion	96 (24.7)	49 (28.3)	47 (21.8)					
Missing data	162 (41.7)	53 (30.6)	109 (50.5)					
Student	84 (21.6)	39 (22.5)	45 (20.8)					
Missing data	2 (0.5)	0 (–)	2 (0.9)					
			Continued					

Table 1 Continue	ed					
		Type of medic (n (%))	cal abortion			
Characteristic	Overall (n (%)) (N=389)	Telehealth (N=173)	In-person (N=216)			
Level of education completed						
Year 11 and below	53 (13.6)	26 (15.0)	27 (12.5)			
Year 12	83 (21.3)	39 (22.5)	44 (20.4)			
Certificate III/IV	66 (17.0)	32 (18.5)	34 (15.7)			
Undergraduate degree	127 (32.7)	55 (31.8)	72 (33.3)			
Postgraduate degree	43 (11.0)	14 (8.1)	29 (13.4)			
Missing data	17 (4.4)	7 (4.1)	10 (4.6)			
Values are percentages unless stated otherwise. *Reported percentages are not out of 100; participants could provide multiple responses for ancestry.						

Table 2	Details of the	medical	abortion	process	for t	eleheal	th-
at-home	respondents						

Medical abortion process parameter	Telehealth (N=173) (n (%))
Received enough information about telehealth service	
Yes	159 (91.9)
No	4 (2.3)
Missing data	10 (5.8)
Telemedicine appointment type	
Telephone	79 (45.7)
Could easily hear doctor	78 (98.7)
Missing data	1 (1.3)
Web conference	94 (54.3)
Could easily hear doctor	68 (72.3)
Missing data	16 (17.0)
Comfortable asking the provider questions	
Yes	154 (89.0)
No	7 (4.1)
Missing data	12 (6.9)
Access to medication	
How medications were received	
Mail	169 (97.7)
Pharmacy pick up	1 (0.6)
Missing data	3 (1.7)
Experienced difficulties in receiving or picking up medications	28 (16.2)
Delay in receiving medication	23 (13.3)
Medication sent to wrong address	3 (1.7)
Missing data	2 (1.2)

 Table 3
 Accessibility of medical abortion services among telehealth and in-clinic respondents.

			Type of	medical abortion	1		
	Overal (N=38		Telehea (N=173		In-clin (N=21		
Accessibility parameter	n	%	n	%	n	%	P value
Timeline to receiving abortion (median (IQR))							
Days between discovering pregnancy and first contact with clinic	375	4 (2-14)	168	4 (2–9)	207	4 (1–14)	0.27
Days between first contact with clinic and first prescribed abortion medication	368	10 (7–14)	169	14 (9–21)	199	7 (4–14)	<0.01
Distance travelled to clinic (median (IQR))							
Median kilometres travelled to clinic (in-person) or GP (telehealth), one way	314	10 (5–25)	120	5 (1–10)	195	15 (10–30)	0.16
Barriers to abortion appointment(s)							
Time from work	203	52.2	76	43.9	127	58.8	<0.01
Missing class	28	7.2	10	5.8	18	8.3	-
Paying for overnight stay	8	2.1	6	3.5	2	0.9	-
Paying for childcare	14	3.6	3	1.7	11	5.1	_
Paying for public transportation	29	7.5	5	2.9	24	11.1	-
Having to make other arrangements	23	5.9	8	4.6	15	6.9	_
No barriers	131	33.7	78	45.1	53	24.5	<0.01
Missing data	-	-	-	_	_	_	_
Method of travelling to clinic (in-person) or GP (telehealth)							
Private car	309	79.4	136	78.6	173	80.1	0.72
Bus	13	3.3	2	1.2	11	5.1	-
Taxi	17	4.4	6	3.5	11	5.1	-
Aeroplane	3	0.8	2	1.2	1	0.5	-
Bicycle or motorcycle	5	1.3	1	0.6	4	1.9	_
Walking	4	1.0	2	1.2	2	0.9	-
Missing data	18	4.6	13	7.5	5	2.3	_

Values are percentages unless stated otherwise.

telehealth and in-clinic respondents (4 days (IQR 2–9) vs 4 days (IQR 1–14)) (table 3); however, median time from first contact with MSA to when they took the first prescribed medication was 7 days longer for telehealth respondents than in-clinic respondents (14 days (IQR 9–21) vs 7 days (IQR 4–14)).

We asked respondents to estimate the distance travelled, one way, in kilometres to get care or a referral. The median distance from the respondent's home to the clinic they visited (in-person) or to the referring GP's clinic (telehealth) was 5 kilometres for telehealth and 15 kilometres for in-clinic respondents. Most respondents (75%) travelled to the clinic or GP's office using a private car.

From a list of barriers they faced to attend their abortion appointment, the majority of respondents selected "taking time off of work", with more in-clinic respondents (55%) experiencing this barrier than telehealth respondents (42%). More telehealth respondents

indicated experiencing no barriers to receiving abortion care compared with in-clinic respondents (45% vs 24%) (table 3). Finally, telehealth respondents appeared to be getting the service they desired, as 68% reported "strongly desiring" a medical abortion and less than 1% reported "strongly desiring" a surgical abortion.

Acceptability

Most respondents rated themselves as "very satisfied" with the abortion service (82% of each group). In open-text responses, both in-clinic and telehealth respondents cited "lack of judgement", "supportive environment" and "efficiency of the process" as their favourite parts of the service, while in-clinic respondents also mentioned "privacy" and "professionalism of the clinic". Two telehealth respondents indicated that they were "somewhat dissatisfied" with the service. Three respondents who had an in-clinic medical

^{*}Percentages are not out of 100; participants could report multiple answers.

GP, general practitioner.

Table 4 Acceptability and satisfaction of medical abortion services among telehealth and in-clinic respondents.

	Overall	Type of medica		
Acceptability and satisfaction parameter	(n (%)) (N=389)	Telehealth (N=173)	In-person (N=216)	P value
Overall satisfaction				0.12
Very satisfied	317 (81.5)	141 (81.5)	176 (81.5)	
Somewhat satisfied	58 (14.9)	30 (17.3)	28 (13.0)	
Somewhat dissatisfied	7 (1.8)	2 (1.2)	5 (2.3)	
Very dissatisfied	3 (0.8)	-	3 (1.4)	
Missing data	4 (1.0)	_	4 (1.9)	
Satisfaction with conversation with physician about medical abortion				0.03
Very satisfied	341 (87.7)	160 (92.5)	181 (83.8)	
Somewhat satisfied	37 (9.5)	10 (5.8)	27 (12.5)	
Somewhat dissatisfied	3 (0.8)	2 (1.2)	1 (0.5)	
Very dissatisfied	2 (0.5)	-	2 (0.9)	
Missing data	6 (1.5)	1 (0.6)	5 (2.3)	
Satisfaction with information about contraception*				0.20
Very satisfied	322 (82.8)	137 (79.2)	185 (85.7)	
Somewhat satisfied	40 (10.3)	21 (12.1)	19 (8.8)	
Somewhat dissatisfied	1 (0.3)	_	1 (0.5)	
Very dissatisfied	-	-	-	
Missing data	26 (6.7)	15 (8.7)	11 (5.1)	
Would recommend method to friend				0.21
Yes	282 (72.5)	126 (72.8)	156 (72.2)	
No	25 (6.4)	10 (5.8)	15 (6.9)	
Depends	58 (14.9)	27 (15.6)	31 (14.4)	
Not sure	15 (3.9)	9 (5.2)	6 (2.8)	
Missing data	9 (2.3)	1 (0.6)	8 (3.7)	
Would have preferred to be in same room with the provider (rather than using telephone/web conference)	-	2 (1.2)	-	

^{*}Among those who received information about contraception during their appointment.

abortion reported being very dissatisfied because of their experiences with clinic staff.

Over half of the respondents (61%) reported "receiving information about having an abortion via telehealth when they called to schedule an appointment" (9% (n=34) reported that they were unsure and 1% (n=4) did not provide a response). Among those informed of the telehealth option (n=238), 92% (n=219) reported receiving enough information, 3% (n=7) did not receive enough information and 5% (n=12) did not respond. When asked to rate their satisfaction with "the conversation they had with the doctor who spoke with them about the abortion pill", most respondents were "very satisfied" (93% telehealth and 84% in-clinic) (table 4). Only two, both in-clinic respondents, reported being "very dissatisfied" with the provider conversation. Most respondents (96%) reported that they received information about contraception and were "very satisfied" with the

conversation (86% of in-clinic vs 79% of telehealth respondents).

Two telehealth respondents (1%) indicated that they "would have preferred to be in the same room with the doctor" (table 4). Both had connected to the provider via web conference; one could not easily hear the doctor because their internet connection was slow. In open-text responses, both respondents reflected that having the provider in the same room may have been more comforting, saying "Sometimes it's just easier to open up in front of the doctor face to face" and "I find being in the same room more comforting and reassuring than over the phone".

Some 73% of telehealth and 72% of in-clinic respondents reported that "if they had a friend who was in a similar situation and who had decided to have an abortion, that they would recommend that she have a medical abortion (the abortion pill) the same way they did" (table 4). Roughly 15% in each group noted

in open-ended responses that their recommendation would depend on the friend's "tolerance for pain", "circumstances" or "abortion preferences", including preference for medical or surgical abortion. Among respondents who would not recommend the service (n=25, 6%), the main reasons were the pain associated with medical abortion and a belief that surgical methods were more likely to result in a complete abortion. One telehealth respondent described the lack of face-to-face contact as their reason for not recommending the service. The most common reasons for recommending the service were simplicity of the medical abortion procedure, the ability to complete the abortion at home, and the privacy afforded by the medical abortion.

DISCUSSION

Findings from this study align with prior evidence on telehealth for medical abortion services in Australia, ¹² 13 the United States ¹⁴ and countries that use other direct-to-patient telehealth models (eg, online platforms). ¹⁵ Similar to previous studies, we observed that the telehealth abortion model was highly acceptable to patients. ¹⁵

To date, only four studies have assessed patient perceptions of telehealth for medical abortion services in Australia: three qualitative studies ¹³ ¹⁶ ¹⁷ and one retrospective analysis. ¹² Our study provides greater context to measures of satisfaction and acceptability for telehealth delivery of medical abortion, information on the telehealth experience, and data on accessibility of medical abortion services provided via in-clinic and telehealth.

Our findings demonstrate that the in-clinic and telehealth delivery models used by MSA were acceptable to patients. Additionally, telehealth respondents rated their level of comfort asking questions of the provider, and satisfaction with the information given by the provider similarly highly to in-clinic respondents, suggesting that the patient-clinician relationship was not impacted by the lack of face-to-face contact. These findings of similar levels of acceptability across delivery models may be explained by factors outside of the delivery model, such as staff service attitude and environment.¹⁸ Lack of judgement and supportive environment were the most liked aspects of care among both telehealth and in-clinic respondents. Additionally, respondents revealed that the ease of the medical abortion process (ie, the non-invasive nature of the pills and the ability to take the pills at home) greatly influenced their decision to recommend the service, regardless of delivery mode.

Only 1% of survey respondents indicated a preference for being in the same room as the provider. This is in stark contrast to findings from evaluations of clinic-to-clinic telehealth for medical abortion provision models in the United States, where roughly 25% of survey respondents indicate this preference. ¹⁹ ²⁰

This difference may be due to a greater familiarity with telehealth service provision in Australia, because Australian telehealth patients are receiving the entire service at home and therefore are less inclined to desire in-person contact, or differences in the convenience samples.

The telehealth abortion service appears to be accessible. An internal analysis of all telehealth patients seen at MSA clinics during 2017 and 2018 found that telehealth patients would have had to travel on average 160km in 2017 and 499km in 2018 to access the closest MSA clinic. In our study, both in-clinic and telehealth respondents reported a median travel distance of less than 20 km access the medical abortion. Importantly, since our study, the MSA telehealth service has evolved and a GP referral is no longer required in all but one state (Western Australia), further reducing the travel time for patients accessing that service. Additionally, commonly reported barriers such as paying for an overnight stay, childcare or transportation were absent for many telehealth respondents, corroborating findings from a recent qualitative study of telehealth patients' experiences. 13

Limitations

There are limitations to this study. First, we used a convenience sample, limiting our ability to generalise the study findings. Additionally, most participants were Australian or English with few identifying as Aboriginal, which limits the applicability of our findings. While we detected no differences in acceptability across delivery models, the study was underpowered to detect smaller differences across the groups. Furthermore, because we asked respondents to fill out the survey following the completion of their abortion, there may be selection bias, with patients who were either "very satisfied" or "very dissatisfied" being more likely to complete the survey differentially by abortion delivery model. Technical difficulties, outside of those related to audio, were not captured by the survey. Finally, the data collected do not allow us to assess whether telehealth patients accessed the medical abortion at earlier or later gestational ages or to determine the distance to the nearest clinic for telehealth patients. Given the changes to the MSA telehealth model since this study was undertaken, findings on acceptability and accessibility may be different for newer iterations of the model.

CONCLUSIONS

As telehealth provision of medical abortion grows in Australia, more research is needed to understand the ways in which patients engage with and experience the service. This is especially salient during the pandemic, which saw shifts in telehealth use and clinical protocols. While our study focused on measures of accessibility and acceptability, larger quantitative studies that collect patient geographical information are needed to

understand the impact of telehealth on medical abortion provision and to determine whether underserved populations are being reached by this delivery model.

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Contributors TT, CM, DM and DG were responsible for study conceptualisation and design. JWS and TT coordinated data collection. ZK and TT analysed the data. TT, ZK, CM and JWS interpreted the data and drafted the manuscript. All authors reviewed and approved the manuscript.

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Patient consent for publication Not required.

Ethics approval Ethical approval was obtained from Marie Stopes International Ethics Review Committee (020–16) and the study was registered with the Monash University Human Research Ethics Committee (8295).

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