

SHORT COMMUNICATION

Examining service delivery patterns before and after implementation of a direct-to-patient telehealth service providing medication abortion in Australia

Jane W. Seymour¹ , Catriona Melville², Daniel Grossman³ and Terri-Ann Thompson⁴

¹Collaborative for Reproductive Equity, School of Medicine and Public Health, University of Wisconsin – Madison, Madison, Wisconsin, USA

²MSI Australia, Melbourne, Victoria, Australia

³Advancing New Standards in Reproductive Health, University of California San Francisco, Oakland, California, USA

⁴Ibis Reproductive Health, Cambridge, Massachusetts, USA

Correspondence: Dr. Jane W. Seymour, Collaborative for Reproductive Equity, School of Medicine and Public Health, University of Wisconsin – Madison, Madison, WI, USA.
Email: jwseymour@wisc.edu

Conflicts of Interest: Dr. Catriona Melville, a co-author of this paper, has been employed by MSI Australia since January 2018. In this role, Dr. Melville provides clinical care, including direct-to-patient telehealth provision of medication abortion. The other authors do not report any potential conflicts of interest.

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In August 2016, MSI Australia (MSIA) brought to scale a direct-to-patient telehealth medication abortion service. We used MSIA's patient management systems from January 2015 to December 2018 to assess changes in the proportion of abortion patients obtaining care after 13 weeks' gestation, proportion of abortion patients obtaining medication abortion versus procedural abortion and proportion of abortion patients from regional and remote versus metropolitan areas. The proportions of abortion patients obtaining care before 13 weeks' gestational duration and those from regional and remote residents did not change between the pre- and post-periods. We observed an increase in medication abortion use that was greater among those in regional and remote areas than those in metropolitan areas.

KEYWORDS

delivery of healthcare, health services research, induced abortion, reproductive health service, telemedicine

INTRODUCTION

In Australia, access to abortion is limited due to long travel distances, particularly for the 28% of the population living in regional and remote areas.^{1,2} MSI Australia (MSIA), a non-profit organisation, is one of the largest abortion care providers in Australia. In 2015, MSIA took the first steps to implement a direct-to-patient telehealth service, in part to expand abortion access to regional and remote areas. The first direct-to-patient services were offered in November 2015, and the service was considered fully implemented in August 2016; between November 2015 and

August 2016, less than 1% of abortion patients were seen via the direct-to-patient telehealth service. All abortion patients, including direct-to-patient telehealth patients, received an ultrasound and serum human chorionic gonadotropin before the abortion. Additional details of the MSIA direct-to-patient telehealth model are provided elsewhere.³ During our study period, the majority of MSIA abortion patients self-funded their care.

Although direct-to-patient telehealth medication abortion services, including MSIA's, are safe and effective,³ there are a few studies on how such services impact abortion access, particularly in regional and remote contexts. There is qualitative

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evidence from both Australia and the USA that patients perceive direct-to-patient telehealth medication abortion services as improving their abortion access.⁴⁻⁶ There are limited quantitative data from Australia, indicating that a direct-to-patient telehealth service is often used by those outside city settings.^{3,7} However, to our knowledge, there is no documentation of how the implementation of direct-to-patient telehealth for medication abortion services affects system-level healthcare delivery patterns, including in the Australian context. Therefore, we assessed what, if any, impact the implementation of a direct-to-patient telehealth medication abortion model had on abortion services delivered by MSIA.

MATERIALS AND METHODS

We collected data from MSIA's patient management systems for all abortions, both medication and procedural, from January 2015 to December 2018. Our main outcomes of interest were the proportion of abortion patients obtaining care before 13 weeks' gestation (i.e., in the first trimester of pregnancy), the proportion of abortion patients obtaining medication abortion versus procedural abortion, and the proportion of patients from regional and remote areas.

We used gestation at the time of abortion in weeks, as determined by ultrasound. We determined region by postcode and a measure based on the Australian Bureau of Statistics' five-class Australian Geography Standard Remoteness Structure. We collapsed the 'Inner Regional Australia', 'Outer Regional Australia', 'Remote Australia', and 'Very Remote Australia' classes for a two-class region measure: metropolitan or regional and remote. Those missing a postcode or with a P.O. box were missing region.

We used descriptive statistics (i.e., proportions, means, and 95% confidence intervals (CI)) to assess differences by time, before or after August 2016 (i.e., pre- and post-direct-to-patient telehealth service implementation). The MSI Reproductive Choices Ethics Review Committee (020-16) approved this study, and we registered it with the Monash University Human Research Ethics Committee (8295).

RESULTS

From January 2015 through December 2018, MSIA provided 92 989 abortions, 60 374 (64.9%) procedural abortions, 29 975 (32.2%) in-clinic medication abortions, and 2640 (2.8%) direct-to-patient telehealth abortions. During the study period, 18.1% (*n* = 16 802) of all abortions were provided to individuals living in regional and remote areas. In total, 153 patients (55 pre-implementation and 98 post-implementation) were missing a postcode or had a P.O. box and were therefore missing region.

There were more abortions provided each month after the direct-to-patient telehealth service was implemented compared with before it was implemented; on average, MSIA provided 1771 (95% CI: 1701-1841) abortions per month pre-implementation and 2045 (95% CI: 1976-2115) abortions per month post-implementation.

We observed corresponding increases in the number of medication abortions provided, abortions provided before 13 weeks' gestation and abortions provided to those living in regional and remote areas (data not shown). Whereas absolute numbers of total abortions provided by MSIA increased between our two time periods of interest, the proportion of abortions that occurred before 13 weeks' gestational duration and the proportion of abortions to regional and remote residents did not change between the pre- and post-implementation periods (see Table 1).

We did, however, observe an increase in the proportion of patients who obtained medication abortion comparing the pre- and post-implementation periods (28.4 and 38.9%, respectively) (see Table 1). Relatedly, there were shifts in the type of abortion obtained, stratified by area of residence. Before full-scale direct-to-patient telehealth implementation, most regional and remote patients (78.6%, *n* = 4803) were provided procedural abortion, and some were provided medication abortion via an in-clinic appointment (20.5%, *n* = 1254). Fifty-seven (0.9%) telehealth abortions were provided to those living in regional and remote areas during this introductory period. After implementation, a smaller proportion of regional and remote patients (65.4%, *n* = 6996) obtained procedural abortions, whereas a greater proportion obtained medication abortion in clinic (23.6%) and via direct-to-patient telehealth (11.0%, *n* = 1173). Among MSIA patients living

TABLE 1 Abortion provision pre- and post-direct-to-patient telehealth abortion implementation in MSI Australia system

	Pre-direct-to-patient January 2015–July 2016 % (95% CI) <i>n</i> = 33 658	Post-direct-to-patient August 2016–December 2019 % (95% CI) <i>n</i> = 59 331
Medication abortion	28.4 (27.9–28.9)	38.9 (38.5–39.3)
Abortion at >13 weeks' gestation	4.1 (3.9–4.3)	4.0 (3.8–4.2)
Patients living in regional and remote areas	18.2 (17.8–18.6)	18.1 (17.7–18.4)

MSIA patient management data, January 2015–December 2019. CI, confidence interval.

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TABLE 2 Abortion type by regional and remote status pre- and post-direct-to-patient telehealth abortion implementation in the MSI Australia system

	Metropolitan areas		Regional and remote areas	
	Pre-period	Post-period	Pre-period	Post-period
	January 2015–July 2016	August 2016–December 2019	January 2015–July 2016	August 2016–December 2019
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
	<i>n</i> = 27 489	<i>n</i> = 48 538	<i>n</i> = 6114	<i>n</i> = 10 695
Procedural abortion	70.0 (69.5–70.6)	60.2 (59.6–60.6)	78.6 (77.5–79.6)	65.4 (64.5–66.3)
In-clinic medication abortion	29.9 (29.4–30.4)	36.9 (27.2–30.2)	20.5 (19.5–21.5)	23.6 (22.8–24.4)
Direct-to-patient telehealth medication abortion	0.05 (0.03–0.08)	2.9 (2.7–3.0)	0.9 (0.07–0.12)	11.0 (10.4–11.6)

MSIA patient management data, January 2015–December 2019.

CI, confidence interval.

in metropolitan areas, the pattern of abortion provision was the same: a smaller proportion of metropolitan residents obtained procedural abortion, and a larger proportion obtained in-clinic and telehealth medication abortion after telehealth implementation compared with before implementation. There was a greater increase in medication abortion use among those living in regional and remote areas than among those living in metropolitan areas (13.2 percentage points vs 9.5 percentage points) (see [Table 2](#)).

DISCUSSION

According to our data, although MSIA's implementation of a direct-to-patient telehealth service to provide medication abortion coincided with an increase in the total number of abortions provided monthly, implementation of this service did not appear to affect the proportion of abortions occurring before 13 weeks' gestational duration or the proportion of abortions provided to people residing in regional and remote versus metropolitan areas. This finding indicates that there may be other factors, including barriers to care other than the distance to services and health-related factors identified later in pregnancy, that affect the proportion of patients presenting for care at or after 13 weeks' gestation and/or the proportion of patients from regional and remote versus metropolitan locations. At the time of the study, there was no universal access to abortion care in any jurisdiction in Australia, and the direct-to-patient telehealth service was the least expensive abortion option provided by MSIA. Although MSIA has implemented a philanthropic fund (the Choice Fund) for people experiencing financial hardship and other healthcare barriers, including family, domestic, or sexual violence and homelessness, only a small proportion of the study population would have had access to these funds. Additionally, because all patients were required to have a pre-abortion ultrasound, some may have chosen in-person abortion care that could occur at the same visit as the ultrasound; we imagine this might be disproportionately true for regional and

remote patients who had to travel longer distances to obtain an ultrasound. It is also possible that patients preferred an in-person care delivery model or prioritised aspects of care other than the delivery model, such as cost, in their decision-making; recent data from the USA context indicate that cost and time to appointment may matter more to abortion care decision-making than abortion method, delivery model, or distance to care.⁸

Our findings also indicate that after the direct-to-patient telehealth service was implemented, there was a move away from procedural abortion towards medication abortion services. This increase in medication abortion use coincides with those in other contexts, including the USA,⁹ these data do not allow us to determine whether increases in medication abortion use were the result of the implementation of this telehealth service or other factors. Our data also indicate that, perhaps due to the implementation of the telehealth service targeted towards those living in regional and remote areas, there was a greater shift towards medication abortion among patients living in those areas than among patients living in metropolitan areas. It is possible that this differential shift in care provision by geography was due to the telehealth model being particularly recommended for those far from MSIA clinics and/or because those far from physical locations found this delivery model particularly convenient.^{4,6}

Future research should further explore what factors motivate patients to select direct-to-patient telehealth for medication abortion over in-person care provision models across geographic contexts. These data were collected before a widespread increase in direct-to-patient telehealth for medication abortion services in Australia due to the addition of Medicare Benefits Schedule item numbers for sexual and reproductive health telehealth services, which were implemented during the COVID-19 pandemic and have resulted in additional providers offering services. Therefore, there have likely been shifts in patient experiences with and preferences for telehealth services after these changes. More recent data will be important to improving the scope and reach of such services. However, these data provide evidence of the potential impact of the

implementation of this telehealth service in the absence of other changes to the care landscape. Additionally, there is limited evidence examining how medication abortion and/or telehealth services could be made more accessible to populations facing structural oppression, including people living with low incomes, those with low literacy and those who experience systemic racism in healthcare settings. Future work should aim to address these gaps in the literature to ensure this safe, effective, and acceptable model of care is widely accessible, both across geographies and across other individual and structural factors that impact access to healthcare.

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