

UNSW SYDNEY

Client-Led Early Medical Abortion Follow-up: A Model of Care Evaluation

PROJECT MANUSCRIPT

MDCN8889 Medicine Honours

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Abstract

Background

Early medical abortion (EMA) follow-up has traditionally relied on clinician-led face-to-face models. International evidence suggests client-led follow-up models can be safe, acceptable, and reduce unnecessary clinical contact; however, Australian evidence remains limited. Evaluating post-EMA follow-up models may inform future models and research.

Objectives

To evaluate the engagement, feasibility, safety and acceptability of client-led EMA follow-up using a low-sensitivity urine pregnancy test (LSUPT) and self-assessment questionnaire.

Methods

A retrospective observational study design evaluated consecutive participants attending a rural private clinic for EMA between March and August 2026. No randomisation or alteration to standard clinical care occurred during the evaluation period. Engagement rates, demographic data including age and rurality, and open extended responses were collected during evaluation follow-up calls.

Results

During the study period, 72 participants undertook the client-led follow-up model, 11.11% (n=8) were lost to follow-up. Of the remaining 64 participants, 90.62% (n=58) engaged with the model and followed recommendations. Only 9.38% (n=6) of participants did not engage with the model. Further surgical intervention was required for 4.69% (n=3/64) participants. Participants reported the model provided comprehensive and clear guidance, enhanced comfort, privacy and discretion, reduced time and travel burden, and was cost-effective.

Conclusion

Client-led follow-up after EMA demonstrated high engagement and was feasible, acceptable and no less safe than face-to-face or telehealth models. Offering patients a choice of follow-up options may accommodate individual preferences and improve equitable access to reproductive healthcare, particularly for women in regional and rural settings.

Statement of Contribution

Dr Trudi Beck led the development and design of the study, drawing on her extensive clinical expertise to provide project oversight and support data collection and analysis. Dr Shannon Pike provided critical support in refining the study design and guidance throughout ethics application and amendments, as well as data collection and analysis. Dr Chiara Lamond provided guidance, editorial support and proofreading.

Caitlin Wheeler was responsible for data collection, entry, management and storage and contributed to ethics application, data analysis, manuscript preparation and dissemination of research findings. She was the primary author of the manuscript, with her supervisors providing editorial and proofreading support.

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I would also like to thank the participants who consented to participate in the study. Their participation made this research possible.

AI Declaration

During the preparation of this assessment, I did not use any AI tools, services or software.

1 Introduction

1.1 Early Medical Abortion

Early medical abortion (EMA) refers to the termination of an intrauterine pregnancy using pharmacological agents[1]. In Australia, EMA is approved to terminate an early pregnancy up to 63 days of gestation, and involves a combination of mifepristone followed 24-48 hours later by misoprostol[2]. Mifepristone is a progesterone receptor antagonist that causes decidual necrosis and detachment from the uterine wall. Misoprostol is a prostaglandin analogue that induces uterine contractions and cervical dilatation to facilitate expulsion of the pregnancy tissue[3]. Surgical intervention may be required if retained products of conception remain.

Provision of EMA requires confirmation of gestational age and exclusion of an ectopic pregnancy. Guidelines also recommend non-directive pregnancy counselling, informed consent, and provision of clear instructions regarding expected symptoms and any signs of concern post EMA[1]. EMA can be provided by appropriately qualified and trained health practitioners including general practitioners, nurse practitioners and endorsed midwives[4]. EMA follow-up is recommended to confirm completion of the abortion and identify complications, with varying models employed internationally and nationally[1]. Simplifying EMA follow-up models provides an opportunity to reduce inequities and improve access to essential reproductive health care[2].

1.2 Standard Follow-up Protocols in EMA

Follow-up after EMA aims to exclude ongoing pregnancy and to identify complications and is recommended at 14-21 days post. Recommended components of follow-up include pelvic ultrasonography, serum beta human chorionic gonadotropin (β-hCG) testing, or low-sensitivity urine pregnancy test (LSUPT) which targets a urine threshold of β-hCG >1000 IU/L[4]. Although LSUPTs have been implemented and evaluated in several international settings since 2009, including the United Kingdom, India and South Africa, LSUPTs were only approved in Australia by the Therapeutic Goods Administration (TGA) in 2019[5–7]. Whilst Australian guidelines provide evidence-based recommendations to exclude ongoing pregnancy and timing of follow-up, there are no standardised delivery models for follow-up after EMA in Australia, with options of face-to-face review, telehealth or patient self-assessment suggested[1].

Follow-up post EMA is completed via face-to-face, clinic-led telehealth, or client-led models. Face-to-face follow-up is considered the most traditional follow-up model used and is conducted within the clinic setting using urine or serum β-hCG testing (≥80% decline) with ultrasound if clinically indicated to

exclude ongoing pregnancy[8]. However, it has been suggested that this model can result in increased detection and overtreatment of clinically insignificant retained products of conception due to routine ultrasound follow-up[2]. Thus, there has been a shift towards a symptom-guided model, which may reduce unnecessary surgical intervention without compromising clinical outcomes. MSI Australia, formerly Marie Stopes Australia, a specialist non-profit provider of reproductive health who services approximately 25 million people each year, subsequently simplified and replaced the face-to-face review through the implementation of clinic-led telehealth follow-up. Their model evaluated 2,223 participants undergoing EMA, which involved the clinic using follow-up calls to prompt the use of an at-home LSUPT and questionnaire, with further investigation arranged if LSUPT results were positive or symptoms were identified[8]. Melville *et al.* evaluated this follow-up model, the only currently available Australian evidence, which found it to be safe and effective in an Australian setting. Specifically, in addition to offering convenience and privacy for follow-up, significantly reduced surgical intervention for incomplete abortion was found, thereby reducing unnecessary intervention and pressures on healthcare systems. This telehealth model also reduced the number of patients requiring unnecessary clinic appointments, minimising travel and associated inconveniences including time off work, with over 90% of patients completing their follow-up at home[2]. Despite positive findings Melville *et al.* did observe a 67.7% follow-up rate. Whilst falling within the highly variable reported rates ranging from 50-84%, the model did consume costly clinic staff time with failed telehealth follow-up attempts[9–11]. Whilst findings provide insights and align with international evidence, only 8.6% of the sample were regionally based, limiting generalisability beyond the metropolitan setting[2,5,12,13].

Building on the positive clinical outcomes and proposed increased accessibility, convenience and privacy via the clinic-led telehealth model, MSI Australia then introduced and trialled a client-led follow-up model in March 2022[2]. The adapted model uses the LSUPT and a self-assessment questionnaire. They adopted this approach to improve the accessibility and efficiency of follow-up procedures for EMA, essentially providing the same quality of care with less appointments and less intervention such as ultrasound scans. Under this model, patients independently complete follow-up at home using a LSUPT and questionnaire. Patients are provided with the LSUPT and questionnaire and are educated on use and interpretation of results at their initial appointment. The questionnaire directs patients to seek review in the clinic for positive or invalid test results or persisting symptoms[1]. MSI Australia, have found no change in the rate of serious adverse events, and importantly, a reduction in surgical intervention for incomplete abortion, from unpublished research (Dr P Goldstone, personal communication). This model is yet to be formally evaluated and limited evidence currently exists regarding the comparative effectiveness, safety or acceptability of different EMA follow-up models[14]. Internationally, a systematic review with

meta-analysis by Baiju *et al.* found that self-assessment for EMA follow-up was not inferior to routine clinic follow-up in terms of effectiveness, safety, and acceptability[4]. Together, these findings suggest that client-led follow-up may be a safe and acceptable alternative to routine clinic-based follow-up, with further research needed to evaluate the model within the Australian context, particularly in rural areas where there is increased inequity accessing EMA. Therefore, our study aims to investigate the engagement, safety, feasibility, and acceptability of client-led follow-up for EMA in a regional and rural context, contributing to the growing evidence base.

1.3 Access to EMA

Globally, approximately 73 million induced abortions occur each year with EMA increasing by 129% from 2013 to 2022[15,16]. Australian trends are consistent with international trends[17]. Many low-income regions globally do not systematically collect data on the method of abortion, and many may occur outside of formal healthcare settings. Thus, the true numbers are likely to be greater[16]. However, access to abortion care remains inconsistent across the country. The availability of both EMA and surgical abortion within the Australian public health system is limited, poorly coordinated, and when available, restricted to a small number of facilities in major metropolitan areas[18].

The introduction of EMA to the Pharmaceutical Benefits Scheme (PBS) in 2013, including streamlined authority, expanded access and reduced financial costs to the patient[17]. Despite these gains, specific to EMA, most women are still required to source and access private providers. Subsequently, cost and access remain the greatest barriers, which are particularly problematic in rural and remote communities of Australia. The median upfront cost of an EMA is $560[18]. While Medicare cardholders can access a rebate, they still incur out-of-pocket costs, with major providers such as MSI Australia stating an upfront cost of $495 and out-of-pocket cost of $320.80 for EMA telehealth follow-up[3]. Despite this advance in access, historical challenges persist with the provision of EMA dependent on the availability of certified prescribers[16]. Prior to August 2023, EMA medication could not be prescribed by nurse practitioners, or untrained community-based doctors. Pharmacists were also required to register to provide the medication, further limiting EMA service availability[17]. Existing evidence reported that only 1345 of 35,000 practicing GPs were certified to prescribe EMA, leaving an estimated 30% of Australian women of reproductive age residing in a geographical area without a registered EMA provider[17].

Although restrictions regarding MS-2Step, Mifepristone and Misoprostol, have since been lifted, including the requirement for registered prescribers, and the extension of prescribing rights to nurse practitioners and endorsed midwives, women living in rural Australia continue to experience additional barriers to access. These include limited availability of local services with consequent travel and

accommodation costs, and the social stigma associated with seeking abortion care[1,4]. Stigma, in particular, is an identified barrier to accessing EMA in rural settings as medical termination is often positioned as an exceptional form of healthcare. This is compounded by high levels of conscientious objection among rural General Practitioners (38%), as well as secrecy and institutional obstruction which further limit access to care[19,20]. Although telehealth has been introduced to address barriers such as travel and associated costs, telehealth alone does not negate other logistical, financial and social barriers faced by women from rural and remote areas.

Despite improved availability, financial accessibility and client-led follow up options, inequities persist for rural Australian women. Client-led EMA follow-up may reduce identified barriers and enable patients to self-manage their care in a flexible and responsive way that accommodates their individual circumstances. The client-led model may also improve safety by reducing the need for surgical intervention when presenting for retained products of conception, and, consequently, the risk of associated complications[21]. However, given the paucity of evidence evaluating client-led EMA follow-up, robust recommendations regarding its adoption into clinical practice cannot yet be made. Addressing this evidence gap is important to inform future EMA follow-up models of care that are safe, effective, accepted by patients, and responsive to the needs of women living in rural Australia.

2 Research Questions

This research aims to evaluate the engagement of rural patients with the client-led follow-up model and its feasibility and safety. This follow up model involves clients independently completing a pregnancy test and structured self assessment, with results guiding their subsequent actions. Specifically, this study aimed to answer the following research question:

1. What proportion of rural women engage with the client-led model for EMA follow-up?
2. What is the feasibility and safety of the client-led EMA follow-up model in routine rural service delivery?
3. What is the acceptability of the client-led EMA follow-up model in routine rural service delivery?

3 Materials and Methods

3.1 Study Design

This study was a retrospective, observational, single-centre study design. Ethics approval was obtained from the UNSW Human Research Ethics Committee (iRECS7788).

3.2 Research Setting

This study was conducted at Nova Health Co, a private multidisciplinary women's healthcare centre located in rural southern New South Wales. Nova Health Co provides holistic multidisciplinary care for women and their families through an integrated team of medical, nursing and allied health professionals. The clinic delivers care across reproductive health, women's and fetal ultrasound, antenatal and postnatal care, gynaecological services, and allied health services such as pelvic floor physiotherapy, nutrition and dietetics. Within the geographically vast local health district, which spans more than 250,000 km² across regional, rural and remote communities, Nova Health Co is one of only seven EMA service providers, five of which are privately operated[22]. The cost of EMA at Nova Health Co is $475 with a rebate of $116.20.

3.3 Participants

Participants were eligible for inclusion in the study if they had attended Nova Health Co clinic for their initial EMA appointment between March and August 2026, had a confirmed intrauterine pregnancy, were 16 years of age or older, able to speak and understand English without an interpreter present, and provided informed consent for their information to be used within research. There were no exclusion criteria.

3.3.1 Consent

Patients referred to Nova Health Co provide informed consent for their information to be used as part of research as part of the registration process at their initial clinic presentation. Participants also provided consent for the follow-up phone call to be documented in clinical notes.

3.3.2 EMA Procedure

The routine EMA procedure involved an initial in-person clinic appointment with a general practitioner. During this consultation, participants underwent ultrasound assessment to confirm an intrauterine pregnancy and gestational age of ≤63 days, received non-directive counselling regarding EMA, and were prescribed MS-2 Step. Participants were also provided with standardised resources, based on the MSI

Australia ‘follow-up self-assessment instructions’, to guide when to take mifepristone and misoprostol, and how to complete their own (client-led) management.

3.3.3 EMA Follow-Up Model

EMA follow-up care was delivered via a structured client-led model, whereby participants independently completed the ‘follow-up self-assessment instructions’ provided at the initial clinic appointment. The client-led model directs self-assessment to determine the completion of the EMA, including when and how to complete a LSUPT and interpret the result, identify if symptoms are present and recommended action; seek additional clinical contact or nil further action required. As this client-led model of EMA follow-up had recently been adopted, participants were contacted by a Nova Health Co staff member by telephone 28 days following the initial EMA appointment to monitor the transition. This phone call assessed participants' self-reported completion of the self-assessment process and collected information regarding their experience of the client-led model, including their satisfaction or concerns. The EMA process and client-led follow-up model used is outlined in **Figure 1**.

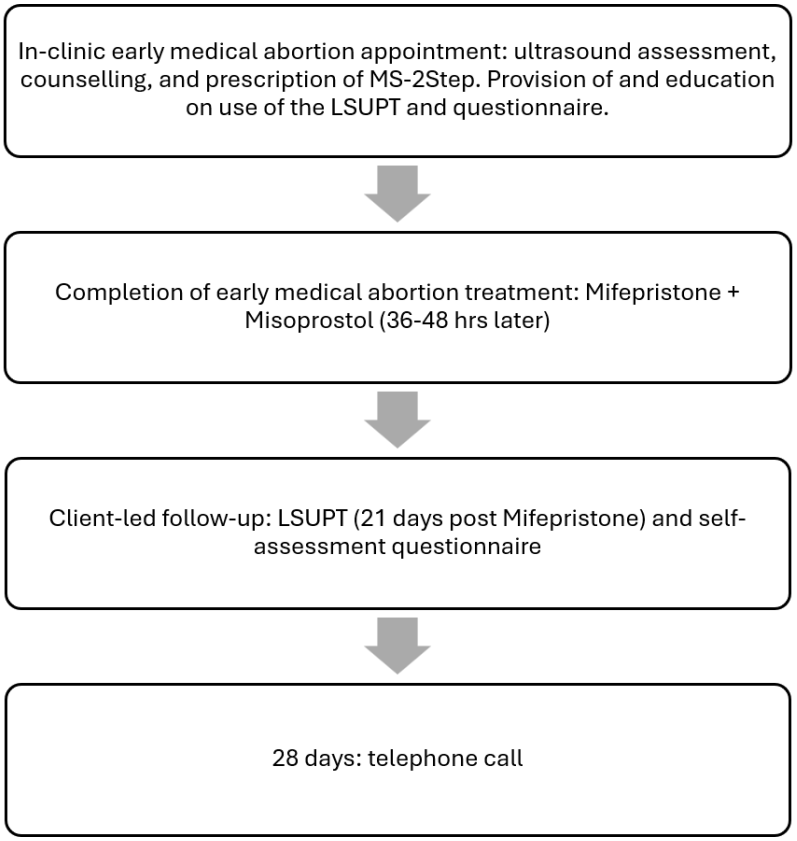


Figure 1. Early medical abortion process and client-led follow-up model used. LSUPT = low-sensitivity urine pregnancy test.

3.4 Data Collection

Data was collected as part of routine clinical care and entered into a de-identified database by Nova Health Co. Collected data included demographics and participant's responses to the follow-up telephone call. Living residence was captured via categorisation of postcode using the Modified Monash Model and kilometres from living residence to clinic[23]. Clinical data collected as part of follow-up phone calls included self-reported completion of LSUPT and the result, completion of the self-assessment questionnaire, actions taken by the participant as guided by the protocol, need for additional clinical contact, client reported satisfaction or concerns, and reasons for not contacting Nova Health Co despite self-assessment findings and recommendations **(Appendix 1)**. **Table 1** summarises the primary and secondary research outcomes for client-led EMA follow-up.

Table 1. Primary and secondary outcomes for client-led EMA follow-up

Outcome	Definition
Primary Outcome 1: Completion of the client-led EMA protocol	● Number of participants who completed the client-led EMA protocol as instructed including completing the LSUPT as directed. ● Number of participants who completed the self-assessment. ● Number of participants who completed the recommended actions based on their individual self-assessment results.
Primary Outcome 2: Loss to follow-up	No contact after 3 telephone call attempts.
Secondary Outcome 1: LSUPT result	Number of women with a 1. positive test result 2. negative test result 3. unclear test result*
Secondary Outcome 2: Patient satisfaction/concerns	Direct quotes from participants during telephone calls.

*Unclear test result is defined as any self-reported test result that participants were unable to confidently interpret as either positive or negative. LSUPT = low-sensitivity urine pregnancy test; EMA = early medical abortion

3.5 Sample Size

The sample size necessary to power an estimate of the proportion of women who successfully engage with the client-led model of EMA follow-up was determined to be 104 participants using confidence intervals for one proportion procedure in PASS 2020 v20.0.10[24,25].

3.6 Data Analysis

Descriptive statistics were provided for participant demographics and follow-up results. Participant extended responses were analysed independently by the author and one supervisor using content analysis to examine the responses for similar words and phrases. Words and phrases identified were then grouped into categories to aggregate responses that described the patient's perspectives. Participant quotes are presented to further describe categories. Quantitative data was analysed using Microsoft Excel.

4 Results

A total of 72 women attended Nova Health Co for EMA between March and August 2026. Only 11.11% (n=8) participants were lost to follow-up, defined as the inability to contact a participant after three telephone contact attempts. The remaining 64 participants were successfully contacted and constituted the evaluable sample for the client-led follow-up model **(Figure 2).**

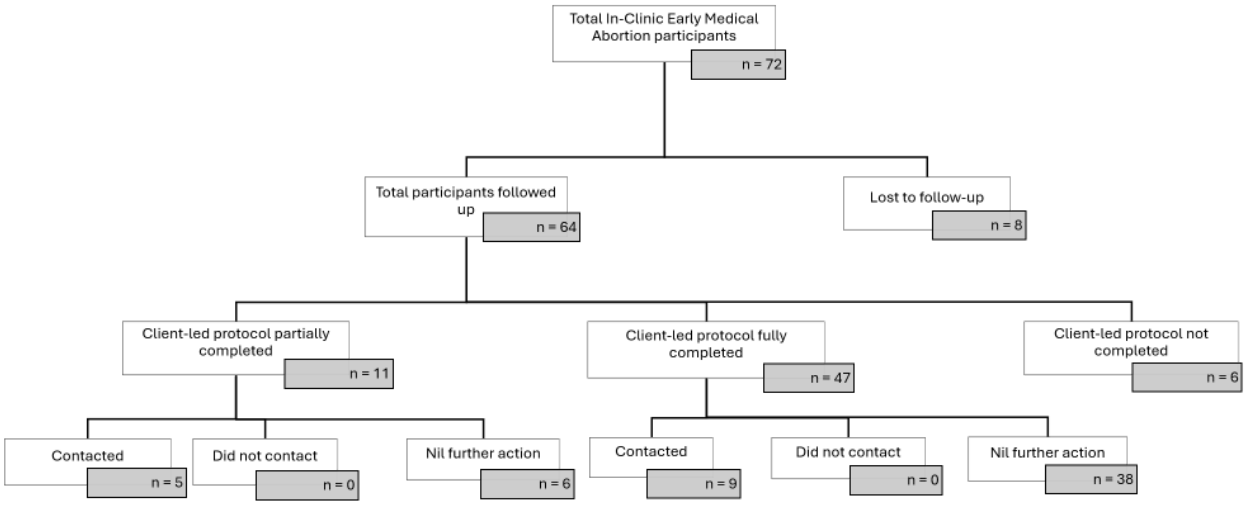


Figure 2. Flow of participants through the client-led early medical abortion follow-up model. Contacted represents participants who made contact with the clinic or emergency services as recommended, did not contact represents participants who did not make contact with the clinic or emergency services as recommended, and nil further action represents participants who followed recommendations to take nil further action.

4.1 Demographics

The overall sample (n=72) included participants who primarily resided in a large rural town (n=54, 75.00%) and travelled less than 50 km to attend the clinic (n=53, 73.61%). Most women were aged between 25-29 years (n=22, 30.56%). Of the 64 women who were able to be contacted, the majority engaged with the client-led model, with 73.43% (n=47) completing both the LSUPT and the self-assessment questionnaire and only 9.38% (n=6) not engaging. For participants who were lost to follow-up (n=8), 37.5% of women were aged between 20-24 years (n=3), 75.00% resided in large rural towns (n=6), and 62.50% travelled less than 50km to attend their initial clinic visit (n=5). Further demographic results are presented in **Table 2**.

Table 2. Participant Demographics

Participant Demographics	**In-clinic EMA participants (n=72)**	**Followed up (n=64)**	**Lost to follow-up (n=8)**
Age (*yrs),* n (%)			
Category 1 (16-19)	4 (5.56)	3 (4.69)	1 (12.50)
Category 2 (20-24)	18 (25.00)	15 (23.48)	3 (37.50)
Category 3 (25-29)	22 (30.56)	21 (32.81)	1 (12.50)
Category 4 (30-34)	20 (27.78)	18 (28.12)	2 (25.00)
Category 5 (35-39)	7 (9.72)	6 (9.38)	1 (12.50)
Category 6 (40-44)	1 (1.39)	1 (1.56)	0 (0)
Category 7 (45+)	0 (0)	0 (0)	0 (0)
Modified Monash Model Classification, n (%)			
MM1 Metropolitan	0 (0)	0 (0)	0 (0)
MM2 Regional centre	0 (0)	0 (0)	0 (0)
MM3 Large rural town	54 (75.00)	48 (75.00)	6 (75)
MM4 Medium rural town	4 (5.56)	3 (4.69)	1 (12.50)
MM5 Small rural town	13 (18.06)	12 (18.75)	1 (12.50)
MM6 Remote community	1(1.39)	1 (1.56)	0 (0)
Distance travelled to clinic, (*km),* n (%)			
0-49	53 (73.61)	48 (75.00)	5 (62.50)
50-99	8 (11.11)	7 (9.72)	1 (12.50)
100-149	7 (9.72)	6 (9.38)	1 (12.50)
150-200	4 (5.56)	3 (4.69)	1 (12.50)
200-300	2 (2.78)	2 (2.78)	0 (0)

MMM = Modified Monash Model. EMA = Early Medical Abortion

4.2 Engagement with client-led model

The flow of participants through the client-led EMA follow-up model is summarised in **Figure 2.** Among the 47 participants who fully completed the client-led model, 97.87% (n=46) of participants reported a negative LSUPT result, while one participant reported an unclear result (**Figure 2**). Based on the LSUPT result and self-assessment questionnaire, all participants completed the recommended follow-up actions.

Among the 11 participants who partially engaged with the client-led model, 8 completed the LSUPT (**Figure 2**). Of these 8 participants, 75.00% (n=6) reported a negative result, 12.50% (n=1) a positive result, and 12.50% (n=1) an unclear result. All 11 participants followed the recommended instructions.

4.3 Safety and feasibility

Of the 64 participants contacted, 9.38% (n=6) did not engage with the client-led model, not completing either the LSUPT or self-assessment questionnaire. Of these 6 participants, the client-led model would have recommended contacting the clinic for one participant. Although the participant did not engage with the model, they independently sought healthcare. Among all 64 participants, 12.50% (n=8) participants reported adverse events including vomiting 1.56% (n=1), light bleeding 4.69% (n=3), heavy bleeding 4.69% (n=3) and fainting 4.69% (n=3), with some participants experiencing more than one adverse event. Subsequent surgical intervention following EMA was required by 4.69% (n=3) participants, of whom all had followed the recommendation to either contact the clinic or present to the nearest Emergency Department for urgent concerns.

4.4 Patient acceptability

Content analysis of the free extended responses relating to participant acceptability of the client-led model identified five key themes including; comprehensive and clear guidance, enhanced comfort, privacy and discretion, reduced time and travel burden, cost-effectiveness and reduced reassurance.

4.4.1 Comprehensive and clear guidance

The majority of participants (n=56, 87.5%) highlighted that the self-assessment questionnaire provided all necessary information and was clear, straightforward and easy to follow. Participants voiced that they had a clear understanding of what to do and expect post EMA due to being equipped with the required knowledge and resources **(Table 3)**.

Table 3. Participant quotes for clarity of client-led model

'Helpful and easy to follow, able to track dates. Reassuring as all information is available on handout' (Participant 15)
'Quite clear, easy to navigate and understand what to expect [and] when to contact the clinic' (Participant 42)

4.4.2 Enhanced comfort, privacy and discretion

Participants also expressed that the client-led follow-up model provided a greater sense of comfort and offered discretion (n=22, 32.81%). The ability to complete the follow-up at home rather than attend a follow-up clinic based appointment was perceived to create a less confronting and more private experience **(Table 4)**;

Table 4. Participant quotes for comfort, privacy and discretion of client-led model

'A lot easier in the comfort of own home - less stressful' (Participant 20)
'More privacy being able to do process in your own home' (Participant 34)
'Less invasive being able to do at home' (Participant 33)
'A very confronting thing to go through, so better not to have to attend additional appointments. Also felt well informed and knew it was very easy to seek additional care if needed. Made a very uncomfortable situation much easier to cope with' (Participant 40)
'Makes it easy to be discrete about the process too' (Participant 48)

4.4.3 Reduced time and travel burden

Beyond valued comfort and privacy, 39.06% (n=25) of participants reported that being able to complete the follow-up independently in their own home was more convenient. Many participants voiced having limited time, a need to balance follow-up with caring responsibilities, and found the model reduced significant travel required to attend the clinic in person **(Table 5)**;

Table 5. Participant quotes for convenience of client-led model

'Much prefer being able to do at home particularly with a busy family - no time for appointments' (Participant 13)
'Don't need to make time for appointments that aren't necessary' (Participant 29)
'Easier to do at home. I live 2 hours away from the clinic so it is hard to travel for appointments' (Participant 44)

4.4.4 Cost-effectiveness

The advantage of not having to pay for additional appointments was noted by only 2 (3.13%) participants **(Table 6)**;

Table 6. Participant quotes for cost-effectiveness of client-led model

'Really convenient and cheaper to not have to pay for an additional appointment' (Participant 66)
'It was easy, simple and straightforward to do at home. More appointments would cost more money' (Participant 70)

4.4.5 Reduced reassurance

Whilst many perceived advantages were reported by participants, the reduced opportunity for in-clinic reassurance experienced during the client-led model proved to be a challenge for some participants (n=7, 10.94%). A preference for clinic-based follow-up was voiced by a small number of participants **(Table 7)**.

Table 7. Participant quotes for reduced reassurance of client-led model

'Easy process to do at home but in the future would want to do at the clinic for reassurance - would feel safer and less scary' (Participant 24)
'Feels very odd doing the self-assessment follow-up alone at home. Can see how it can be confronting and confusing as there is less reassurance' (Participant 36)

5 Discussion

The principal findings of this study demonstrate that this client-led follow-up model engages women, is feasible, safe and acceptable for rural women accessing EMA via a private clinic. This is the first study to evaluate a client-led follow-up model specifically among women living in regional and rural Australia. Findings from this study suggest that a client-led EMA follow-up model may help overcome barriers to accessing essential reproductive healthcare for regional and rural women.

5.1 Engagement

This study demonstrates a high level of patient engagement with 90.62% (n=58) of participants engaging with the client-led follow-up model. This follow-up rate exceeds those reported in existing research for telephone follow-up (67.7%) and traditional face-to-face follow-up models, with reported completion rates ranging from 50% to 84%[2,9–11]. However, it is important to note that 8 participants could not be contacted in this study. If we assume that these participants did not engage with the follow-up model, the overall follow-up completion rate would decrease to 80.56%. Shifting the follow-up to be client-led resulted in high levels of participant engagement.

Difficulty contacting women for follow-up post EMA is a well reported challenge[2]. In our study, the proportion of participants who were lost to follow-up was 11.11%, which is lower than the rates reported for both telehealth (32.3%) and face-to-face review (38.8%)[2]. Although this finding should be interpreted with caution due to differences across service delivery models, our findings suggest that a client-led follow-up model may reduce barriers to completing EMA follow-up. It is also important to note that the true client-led model will not involve a follow-up call component. Participants had already engaged in the follow-up process prior to the telephone call, demonstrating that the call itself did not facilitate or prompt completion of follow-up. Thus, the telephone call is unlikely to have influenced the low loss-to-follow-up rate.

Participant extended responses indicated that the follow-up instructions were comprehensive yet clear, straightforward and easy to interpret. This may enhance patient autonomy thereby improving patient engagement with follow-up. Further to this, the client-led model may be particularly beneficial for women living in regional and rural areas where access to follow-up care is limited and requires travel. Whilst there are some limitations in the generalisability of findings, our novel evidence suggests that this model is highly beneficial for rural women with routine additional face-to-face appointments avoided and consequent barriers such as cost and time required for travel, taking leave from work and arranging care for children reduced.

5.2 Safety & Feasibility

Although some participants did not complete both the LSUPT and self-assessment questionnaire, all participants who did engage with the model, either fully or partially, implemented the recommended follow-up actions. These findings suggest that women were able to accurately interpret the follow-up instructions and appropriately identify when clinical contact was required. This indicates that the client-led follow-up is a safe and feasible model. The safety of this model is consistent with growing international evidence demonstrating that self-led follow-up using a LSUPT and symptom assessment is a safe alternative to routine face-to-face review following EMA[1]. Existing literature reports no increase in adverse events or ongoing pregnancies for the telehealth follow-up[2]. The findings of this study further reinforce existing evidence that routine in-person follow-up is not necessary following EMA.

A further key finding of this study was the low rate of adverse events, suggesting safety is not compromised within a client-led follow-up model. Consistent with existing research, this study found a low rate of surgical intervention following EMA 4.69% (3/64)[2]. This finding suggests that client-led follow-up does not increase the need for subsequent surgical intervention. Our findings may support the potential for reduced detection of clinically insignificant retained products of conception as a result of no longer routinely using ultrasound follow-up as required in previous follow-up protocols[2]. This is a particularly important advantage, as emerging evidence supports minimising surgical intervention following medical abortion given the associated risks and long term reproductive consequences such as Asherman Syndrome[21,26]. However, our study wasn't adequately powered to suggest this.

5.3 Acceptability

Findings from this study indicate that client-led follow-up post EMA is an acceptable model for rural women. Participant responses suggested that independently completing the LSUPT and self-assessment questionnaire was straightforward, with many reporting the protocol as convenient, comfortable and private. This is consistent with existing evidence demonstrating the acceptability of simplified EMA follow-up in both high and low resource settings internationally[24,25]. Thus, similar to previous research, the majority of participants expressed a preference for completing follow-up at home rather than returning to the clinic for an appointment[4,5,27].

For women living in regional and rural areas, the acceptability of client-led follow-up is particularly important. Stigma is an identified barrier to accessing EMA in such settings, with women describing concerns about judgement, secrecy and feelings of shame surrounding medical termination[28,29]. Importantly, by enabling follow-up to occur privately at home, client-led follow-up may offer a model that is experienced as more discrete, less invasive and with less judgement. This study extends on

existing evidence by demonstrating that a client-led follow-up model may also help reduce social barriers that affect women living in regional and rural Australia[19].

Existing research has identified cost-effectiveness as an additional benefit of the client-led follow-up model[30]. This is largely because it does not require additional appointments, repeat blood tests, or repeat imaging, which are required in other follow-up models. Participants who needed to travel to the clinic highlighted the benefit of avoiding travel and the associated cost for additional appointments. A small number of participants also identified cost-effectiveness of the client-led model, avoiding the need to pay for additional appointments and associated investigations, as a significant advantage in their extended responses.

5.4 Factors Influencing High Engagement and Acceptability

Our observed higher levels of engagement exceed those reported in existing evidence for telephone follow-up and face-to-face follow-up models and may be explained by several factors. High engagement may reflect a participant's ability to understand and apply the instructions to their individual circumstances. In particular, despite greater socioeconomic disadvantage among rural populations, and the likelihood of lower health literacy, a high proportion of rural women in the study followed the recommended actions[31]. This potentially suggests that the model is user-friendly while remaining comprehensive, thereby meeting the needs of a vast range of women. Methodological factors with the clear, structured follow-up instructions may have also supported greater participant engagement with the model. Further, reducing the practical burden associated with traditional face-to-face follow-up may have also contributed to greater engagement. Whilst the evaluation was conducted at a private clinic, which may limit the generalisability of the findings to other settings, the high level of engagement with recommended follow-up is notable.

5.5 Clinical Implications

These findings have important implications for clinical practice, particularly in regional and rural Australia where access to EMA follow-up services may be limited. A client-led model that enables patients to identify when they require further clinical review, and avoids unnecessary appointments for those who do not, has the potential to benefit both patients, clinicians and the health system more broadly. For patients, client-led follow-up can promote patient autonomy, comfort, convenience and reduce invasiveness. For clinicians and healthcare systems, reducing routine clinic visits and unnecessary ultrasound examinations may allow for healthcare services to allocate resources more effectively whilst also providing timely care for follow-up for women who require appropriate additional clinical support.

5.6 Strengths & Limitations

A strength of this study is the focus on access to EMA services for women in regional and rural Australia, a population that is underrepresented in existing EMA data despite known barriers to reproductive healthcare. This study provides specific evidence regarding the implementation of simplified EMA client-led follow-up in a setting where improved access to care is critical. The proportion of participants who were lost to follow-up in our study was lower than existing rates for telehealth and face-to-face models, which gave us greater confidence in our safety results. Additionally, the study was informed by MSI Australia's previous evaluation of telehealth follow-up among 2,223 participants undergoing EMA, and examined the client-led model within routine clinical practice. This increases the direct practical generalisability of findings to day-to-day service delivery.

A limitation of this study is the small sample which failed to meet the prior calculated sample size, drawn from a single site thereby limiting the generalisability of findings to a broader population. This study is not adequately powered so findings must be interpreted with caution. However, the sample remains representative of patients accessing EMA in the rural health district. Another limitation of this study is that participants were recruited from a single, private rural centre. Thus, only participants able to pay for an EMA appointment with a gap fee were included in the study. This limits generalisability of findings to different public and private service settings. However, this study was conducted in a rural region where EMA services are limited, with five of seven providers being private. Therefore, the findings are most applicable to similar rural settings. The study did not include some of the most vulnerable populations including culturally and linguistically diverse (CALD) people and those under 16 years of age. Thus, these findings cannot reflect engagement, feasibility and safety of client-led EMA follow-up for these populations. A methodological limitation of the study was the brevity of telephone calls which reduced our ability to construct a rich and contextualised description of experience for all participants. Findings do, however, provide novel insights into experiences that due to timing of phone calls limits participant recall bias.

5.7 Future Recommendations

Whilst this study is the first to evaluate a client-led model and the experiences of rural Australian women to the authors knowledge, future studies should implement a prospective mixed methods study design to gain a broader perspective of EMA self-assessment from a larger, diverse, rural and metropolitan sample. Increased reach of care may be improved with further funding opportunities to improve EMA delivery across a broader range of locations and practices, particularly given the limited number of LSUPT providers and the cost of LSUPTs, which may present a financial barrier for both clinics and patients. Further research into the acceptability of client-led follow-up for remote women, CALD and

those under 16 years of age is critical, as these populations were not evaluated in our study. Finally, standardisation of national guidelines for EMA follow-up may promote consistency, clarify appropriate follow-up pathways, and facilitate the safe implementation of client-led models.

6 Conclusion

This study is the first to evaluate a client-led follow-up model among women living in regional and rural Australia. This study showed that client-led follow-up after EMA has a high engagement rate and is both feasible and acceptable. Furthermore, the study demonstrated that client-led follow-up is no less safe than existing face-to-face and telehealth follow-up models and can therefore be recommended as a standard follow-up model for EMA. Future models of care may offer patients a choice between client-led and face-to-face follow-up to support individual preferences, particularly for those who would prefer additional clinical reassurance through in-person review. Overall a simplified follow-up approach for EMA may help reduce inequities and improve access to essential reproductive healthcare for women living in regional and rural settings.

Reference List

1. Royal Australian and New Zealand College of Obstetricians and Gynaecologists. *Clinical Guideline for Abortion Care*. https://ranzcog.edu.au/wp-content/uploads/Clinical-Guideline-Abortion-Care.pdf.
2. Melville, C., Goldstone, P. & Moosa, N. Telephone follow‐up after early medical abortion using Australia's first low sensitivity urine pregnancy test. *Aust. N. Z. J. Obstet. Gynaecol.* **63**, 797–802 (2023).
3. MSI Australia. *Medical Abortion Services*. https://www.msiaustralia.org.au/abortion-services/medical-abortion/ (2023).
4. Baiju, N., Acharya, G., D'Antonio, F. & Berg, R. Effectiveness, safety and acceptability of self‐assessment of the outcome of first‐trimester medical abortion: a systematic review and meta‐analysis. *BJOG Int. J. Obstet. Gynaecol.* **126**, 1536–1544 (2019).
5. Cameron, S. T., Glasier, A., Dewart, H., Johnstone, A. & Burnside, A. Telephone follow-up and self-performed urine pregnancy testing after early medical abortion: a service evaluation. *Contraception* **86**, 67–73 (2012).
6. Iyengar, K. *et al.* Self-assessment of the outcome of early medical abortion versus clinic follow-up in India: a randomised, controlled, non-inferiority trial. *Lancet Glob. Health* **3**, e537–e545 (2015).
7. Constant, D., Harries, J., Daskilewicz, K., Myer, L. & Gemzell-Danielsson, K. Is self-assessment of medical abortion using a low-sensitivity pregnancy test combined with a checklist and phone text messages feasible in South African primary healthcare settings? A randomized trial. *PLOS ONE* **12**, e0179600 (2017).
8. Cameron, S. T. Early medical abortion. *Best Pract. Res. Clin. Obstet. Gynaecol.* **99**, 102588 (2025).
9. Jones, R. K. & Henshaw, S. K. Mifepristone for early medical abortion: experiences in France, Great Britain and Sweden. *Perspect. Sex. Reprod. Health* **34**, 154–161 (2002).
10. Grossman, D., Ellertson, C., Grimes, D. A. & Walker, D. Routine follow-up visits after first-trimester induced abortion. *Obstet. Gynecol.* **103**, 738–745 (2004).

11. Goldstone, P., Walker, C. & Hawtin, K. Efficacy and safety of mifepristone–buccal misoprostol for early medical abortion in an Australian clinical setting. *Aust. N. Z. J. Obstet. Gynaecol.* **57**, 366–371 (2017).
12. Michie, L. & Cameron, S. T. Simplified follow-up after early medical abortion: 12-month experience of a telephone call and self-performed low-sensitivity urine pregnancy test. *Contraception* **89**, 440–445 (2014).
13. Whitehouse, K. C., Shochet, T. & Lohr, P. A. Efficacy of a low-sensitivity urine pregnancy test for identifying ongoing pregnancy after medication abortion at 64 to 70 days of gestation. *Contraception* **110**, 21–26 (2022).
14. Seymour, J. W., Melville, C., Grossman, D. & Thompson, T. Examining service delivery patterns before and after implementation of a direct-to-patient telehealth service providing medication abortion in Australia. *Aust. N. Z. J. Obstet. Gynaecol.* **64**, 647–650 (2024).
15. World Health Organisation. *Abortion*. https://www.who.int/news-room/fact-sheets/detail/abortion (2025).
16. Ramer, S. *et al.* Abortion Surveillance - United States, 2022. *Morb. Mortal. Wkly. Rep. Surveill. Summ.* **73**, 1–28 (2024).
17. Edvardsson, K. *et al.* Time trends and characteristics associated with abortion method used by young Australian women. *Int. J. Epidemiol.* **54**, dyaf028 (2025).
18. Shankar, M. *et al.* Access, equity and costs of induced abortion services in Australia: a cross-sectional study. *Aust. N. Z. J. Public Health* **41**, 309–314 (2017).
19. Noonan, Millar, Tomnay, Luscombe, & Black. 'Imagine if we had an actual service ...': a qualitative exploration of abortion access challenges in Australian rural primary care. *Rural Remote Health* https://doi.org/10.22605/RRH9229 (2024) doi:10.22605/RRH9229.
20. Keogh, L., Croy, S., Newton, D., Hendron, M. & Hill, S. General practitioner knowledge and practice in relation to unintended pregnancy in the Grampians region of Victoria, Australia. *Rural Remote Health* https://doi.org/10.22605/RRH5156 (2019) doi:10.22605/RRH5156.

21. Sevinç, F., Oskovi‐Kaplan, Z. A., Çelen, Ş., Ozturk Atan, D. & Topçu, H. O. Identifying the risk factors and incidence of Asherman Syndrome in women with p OST‐ABORTION uterine curettage. *J. Obstet. Gynaecol. Res.* **47**, 1549–1555 (2021).
22. HealthPathways. *Termination of Pregnancy Referrals*. https://murrumbidgee.communityhealthpathways.org/82377.htm (2026).
23. Australian Government Department of Health. *Health Workforce Locator*. https://www.health.gov.au/resources/apps-and-tools/health-workforce-locator?language=en (2025).
24. Fleiss, J. L., Levin, B. & Paik, M. C. *Statistical Methods for Rates and Proportions*. (Wiley, 2003). doi:10.1002/0471445428.
25. Newcombe, R. G. Two-sided confidence intervals for the single proportion: comparison of seven methods. *Stat. Med.* **17**, 857–872 (1998).
26. Therapeutic Goods Administration. *Asherman Syndrome and Risks Associated with Medical Devices*. https://www.tga.gov.au/safety/safety-monitoring-and-information/medical-device-post-market-monitoring-and-safety-updates/asherman-syndrome-and-risks-associated-medical-devices (2026).
27. Raymond, E. G., Shochet, T. & Bracken, H. Low-sensitivity urine pregnancy testing to assess medical abortion outcome: A systematic review. *Contraception* **98**, 30–35 (2018).
28. Doran, F. & Hornibrook, J. Barriers around access to abortion experienced by rural women in New South Wales, Australia. *Rural Remote Health* https://doi.org/10.22605/RRH3538 (2016) doi:10.22605/RRH3538.
29. Hulme-Chambers, A. *et al.* Australian women's experiences of a rural medical termination of pregnancy service: A qualitative study. *Sex. Reprod. Healthc.* **15**, 23–27 (2018).
30. Wise, M. R. *et al.* Mate Whenua-follow-up after early medical abortion: study protocol for a randomized controlled trial. *Trials* **26**, 305 (2025).
31. Australian Institute of Health and Welfare. *Rural and Remote Health*. https://www.aihw.gov.au/reports/rural-and-remote-health (2025).

Appendix 1: Self-Assessment Follow-up Protocol

1. Completion of LSUPT as directed (yes/no)
2. LSUPT result (positive/negative/unclear)
3. Completion of self-assessment questionnaire (yes/no)
4. Actions taken by patient following the protocol (contacted the service as recommended/did not contact the service as recommended/nil further action taken as recommended)
5. Need for additional clinical contact (yes, specify/no)
6. Client reported satisfaction/concerns
7. Reasons for nil contact with Nova Health Co