

# Medical abortion practices among private providers in Vietnam

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**Objective:** To describe medical abortion (MA) practices among private providers in Vietnam.

**Methods:** The study subjects were women (n = 258) undergoing early MA through 12 private providers in Hanoi during February–June 2012. The women were interviewed on the day of their procedure and were followed up by telephone 14 days after mifepristone administration.

**Results:** Of the 258 women in the study, 97% used a regimen of mifepristone plus misoprostol; 80% were instructed to administer misoprostol at home. MA resulted in a complete termination in 90.8% of cases. All women were provided with information on potential complications and were instructed to return for a follow-up visit. We successfully followed up 77.5% (n = 200) of participants by telephone, while nearly two-thirds of women returned to the clinic for a follow-up visit. At follow-up, 39.5% of women reported having used a Help line service, while 7% had sought help from a health provider. A high unmet need for postabortion family planning was identified.

**Conclusion:** Follow-up of women, postabortion care, and the provision of family planning have been identified as important areas to address for strengthening MA services in the private sector in Vietnam.

**Keywords:** misoprostol, mifepristone, abortion, mhealth, Vietnam

## Introduction

Medical abortion (MA) provides an important alternative to surgical methods for the termination of pregnancy.<sup>1</sup> The combination of 200 mg oral mifepristone followed by 0.8 mg misoprostol administered vaginally, buccally, or sublingually 24–48 hours later (or 0.4 mg oral misoprostol for pregnancies  $\leq 49$  days) has been recommended by the World Health Organization (WHO) for the termination of pregnancies of up to 63-days gestational age.<sup>2</sup> In previous studies, this regimen has been shown to result in complete abortion in more than 96% of cases.<sup>3</sup>

MA was introduced into sexual and reproductive health services in Vietnam in 1992,<sup>4</sup> and the regimen of 200 mg mifepristone and 0.4 mg oral misoprostol has subsequently been shown to be effective (complete abortion >93%) and acceptable (>90%) among Vietnamese women, in clinical trials.<sup>5,6</sup> The administration of misoprostol at home has been shown to result in similar rates of complete abortion and acceptability to those of clinic-based procedures,<sup>6</sup> indicating that home-based MA is a safe and feasible option in the Vietnamese health care setting.<sup>7</sup>

In Vietnam, MA can be legally administered by trained physicians in public hospitals for pregnancies of up to 9-weeks gestation (different gestational limits apply

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at different levels of the health system).<sup>4</sup> Private providers with appropriate training may provide MA services for pregnancies up to 6-weeks gestation. Poor perceived quality of services in the public sector means that Vietnamese women often access the private sector for reproductive health services.<sup>8</sup> For example, Marie Stopes International Vietnam (MSIVN), a nonprofit organization specializing in sexual and reproductive health services, provided MA services to an estimated 88,500 clients in 2011, through its clinics and BlueStar social franchising network.<sup>9</sup> However, there is no centralized system for monitoring the number and quality of MA procedures that take place in the private sector, and services are largely unregulated.<sup>4,10</sup> Therefore, despite the widespread nature of private provision, little is known about the current practices and support mechanisms in place for women using MA, particularly those administering misoprostol at home.

We conducted an evaluation to describe MA practices among private providers in Vietnam. A secondary objective was to assess whether women using home-based MA can be followed up using telephone.

## Methods

We followed up women undergoing MA at 12 private health providers in Hanoi, Vietnam. The providers were identified through MSIVN's network of BlueStar social franchisees. Of the 40 clinics identified in Hanoi that provided MA services and that were willing to participate in the evaluation, 12 were randomly selected for inclusion in the study (using a random number generator and a prespecified list). The study clinics were located in the Ba Dinh, Dong Da, Tu Liem, Gia Lam, Ha Dong, and Hai Ba Trung districts in Hanoi. All women aged 18–49 years seeking MA for first trimester pregnancies at these clinics between February 2012 and June 2012 were invited to participate in the study. Women who met the following criteria were included: gestational age <9 weeks, no medical contraindications or allergies to MA medication, intrauterine pregnancy, willing to be followed up, and able to provide informed consent. The research protocol was approved by the Ethics Review Committee at the Hanoi School of Public Health.

## Study procedure

Informed consent was sought from all women who were eligible for participation in the study. Clinic staff interviewed consenting women prior to the MA procedure (baseline) using a structured questionnaire, to collect information on sociodemographic characteristics and reproductive history.

Women underwent the MA procedure according to the clinic's standard practice (a separate study protocol was not specified in order to enable the assessment of the existing clinic practices). Information about the procedure and additional clinical information was extracted by clinic staff (in most cases, the clinic receptionist) from medical records, using a predesigned paper-based form. The following data were extracted: the method used to determine gestational age, the gestational age, and the MA drug regimen. Information on the provider experience was assessed using a short, self-administered questionnaire that was completed by doctors participating in the study. Women were followed up at 14 days after the administration of mifepristone, with a telephone questionnaire conducted by trained interviewers. If a woman could not be reached on day 14, daily attempts (one telephone call per day) were made to contact her, up to day 20; as specified in the study protocol, women were reminded at each contact that they had the right to refuse or to stop the interview at any time, without any implications for the services they received from MSIVN or the government. Participants were offered a small incentive in the form of mobile phone credit (1 USD) for participation in the follow-up interview. The follow-up interview collected information on the MA procedure, outcome of the procedure, side effects, postabortion services, and women's satisfaction with services. On day 20, information from any follow-up visit to the clinic was extracted from clinic records (outcome of procedure and any interventions used, eg, additional MA drugs administered or surgical intervention for incomplete abortion).

## Data analysis

Descriptive statistics (frequencies, proportions, means, and standard deviations) were used to summarize the procedures used by the private providers, the proportion of women followed up by telephone and at the clinic, and the clinical outcomes of MA (complete termination, retained products or ongoing pregnancy, and side effects and other complications). Differences in the outcomes, by women's sociodemographic and reproductive characteristics, were assessed using chi-squared tests for categorical variables and *t*-tests for continuous variables. All statistical analyses were carried out using Stata 12.1 (StataCorp LP, College Station, TX, USA).

## Results

A total of 330 women were invited to participate in the study. Of these, 258 women (response rate 78%) responded

to the baseline questionnaire. At the telephone follow-up 14–20 days later, 200 women (77.5%) responded. The remaining 58 women could not be contacted, despite daily attempts up to day 20.

The baseline characteristics of the study population are presented in Table 1. There were no statistically significant differences in the sociodemographic or reproductive characteristics between the women who were followed up and those who were not (at conventional levels of significance,

**Table 1** Baseline characteristics of women accessing early medical abortion services at 12 private clinics in Hanoi, Vietnam, between February and June 2012

Characteristic	Baseline % (n) <sup>a</sup> n = 258
Age (years)	
Range	18–48
Mean (SD)	26.4 (± 5.59)
Highest education level	
Middle school	14.3 (37)
High school	37.2 (96)
Vocational training	26.7 (69)
University and above	21.7 (56)
Occupation	
Housewife or farmer	14.3 (37)
Small sales or services	11.2 (29)
Student	14.3 (37)
Worker	27.9 (72)
Clerical or business	28.7 (74)
Other	3.5 (9)
Marital status	
Married and living with husband	67.8 (175)
Separated/divorced/widowed	0.4 (1)
Single	31.8 (82)
Number of pregnancies	
Range	1–10
Mean (SD)	2.6 (± 1.82)
Previous termination	48.1 (124)
Previous surgical abortion	34.9 (90)
Previous medical abortion	21.7 (56)
Method used to determine gestational age	
Bimanual examination	1.2 (3)
Ultrasound	98.8 (255)
Gestational age in weeks	
Range	4–7
Mean (SD)	5.3 (0.79)
Medical abortion drug regimen	
Mifepristone + misoprostol	96.9 (250)
Methotrexate + misoprostol	3.1 (8)
Place of misoprostol administration	
Clinic	20.2 (52)
Home	79.8 (206)
Analgesics prescribed	82.6 (213)

**Note:** <sup>a</sup>Unless specified.

**Abbreviation:** SD, standard deviation.

$P < 0.05$ ). However, 82% of women who were prescribed painkillers ( $n = 175$  of 213) were followed up compared with just 55% of women who were not prescribed painkillers ( $n = 25$  of 45) ( $P < 0.001$  from chi-squared test for the difference in proportions).

## MA provision characteristics

Doctors had an average of 3.9 (± 2.26) years of experience in the provision of MA (range 1–10 years) and carried out 61.1 abortion procedures (medical or surgical) per month. A combination of mifepristone (Mifestad® 200; STADA, Bad Vilbel, Germany) and misoprostol was used in 97% of cases (routes of misoprostol administration were: 43% sublingual, 34% oral, 23% buccal, and 20% vaginal). The combination of methotrexate and misoprostol was used among the remaining 3%. The majority of women (80%) were instructed by the provider to administer misoprostol at home. Two-thirds of providers (65%) required the woman to live within 30 minutes travel time from the clinic in order to be eligible for MA, and all providers advised women to return for a follow-up visit within 2 weeks. All the facilities had postabortion family planning services; all facilities offered intrauterine device (IUD) insertion, 88% also offered the oral pill, 65% had condoms, 43% injectables, and 18% implants. Just 3% of facilities offered male sterilization, while none offered female sterilization.

## Advice and counseling

Among the participants ( $n = 200$ ), 94% reported that they were provided with information about the signs of complications following their MA procedure, and all respondents received a contact number for a Help line. The majority of women (81%,  $n = 162$ ) were informed about where to go in case of complications. Of these, 84.6% were told to return to the clinic, while the remaining women were advised to go to the nearest hospital or health care facility. Nearly two-thirds of women (64%) received advice on postabortion family planning.

## Outcomes of MA procedure

The outcomes of the MA procedure are shown in Table 2. The most common self-reported side effects of MA were bleeding, pain, diarrhea, fever/chills, and vomiting. More than a third of women reported using the Help line number; the reasons for calling the Help line included heavy bleeding (34.2% of 79 women), pain (34.2%), not observing signs of MA as described by the doctor (13.9%), vomiting (11.4%), discomfort (10.1%), and prolonged bleeding (7.6%). A small number

**Table 2** Outcomes and side effects reported by women following early medical abortion at 12 private clinics in Hanoi, Vietnam, between February 2012 and June 2012

Outcomes	% (n) n = 200
Self-reported side effects of misoprostol	
Heavy or prolonged bleeding	90.0 (180)
Pain	82.5 (165)
Diarrhea	29.0 (58)
Fever/chills	15.0 (30)
Vomiting	13.5 (27)
Used contact number for Help line	39.5 (79)
Sought help from a health provider	7.0 (14)
Returned to clinic for follow-up	65.5 (131)
Method used to determine outcome of MA procedure	
Pregnancy test at clinic	2.0 (4)
Ultrasound at clinic	68.0 (136)
Pregnancy test at home	28.5 (57)
Have not checked	1.5 (3)
Outcome of MA procedure	
Complete termination	90.8 (177)
Retained products	8.7 (17)
Ongoing pregnancy	0.5 (1)
Has adopted a family planning method since MA procedure	40.5 (81)
Among those who did not adopt family planning (n = 118), would have liked one	93.2 (110)

**Abbreviation:** MA, medical abortion.

of women reported seeking help from a health provider, mostly for heavy or prolonged bleeding and pain. Just one woman reported seeking help for a fever. Of the women who sought help, 43% underwent a surgical procedure, while 21% were given additional doses of misoprostol; the remaining women did not report receiving any additional intervention.

Women who had a previous termination were less likely to return for their follow-up visit than were women who had not had a previous termination (58% versus 72%) ( $P = 0.041$ ), as were women who had misoprostol administered at the clinic (42%) versus women who administered misoprostol at home (71%) ( $P = 0.001$ ). However, there was no difference in follow-up according to the type of abortion (medical or surgical) that the woman had experienced previously.

MA resulted in a complete termination in 90.8% of cases; the MA outcome was not associated with any sociodemographic or clinical characteristics. In the cases of incomplete abortion ( $n = 18$ ), 80% of women went on to have a surgical intervention, while 11% were given additional doses of misoprostol.

After the MA procedure, 40% of women reported that they had adopted a family planning method. The uptake of postabortion family planning was not predicted by any of the sociodemographic, reproductive, or clinical characteristics

listed in Table 1. However, 48% of women who were counseled on postabortion family planning adopted a method compared with just 26% of women who did not receive any counseling ( $P = 0.002$ ). Of the women who did not adopt a family planning method ( $n = 118$ ), 93% reported that they would like one.

## Acceptability of MA procedure

Nearly all respondents (97%) reported that they were satisfied or very satisfied with their MA procedure, 77% stated that they would use the method again if they needed another termination, and 87% would recommend the method to a friend if she needed a termination.

## Discussion

This evaluation has shown that the combination of mifepristone and misoprostol, with the home-based administration of misoprostol, is the most commonly used MA regimen among the private providers included in this study. The MA prescribed by these providers resulted in a complete termination of pregnancy in 91% of cases. More than three-quarters of women who accessed these services could be followed up by telephone, and nearly two-thirds returned to the clinic for a follow-up visit. Women were less likely to attend the follow-up visit if they had had a previous termination (medical or surgical) or a clinic-based MA procedure.

This study has some limitations that influence the interpretation of the findings. The clinics that were recruited to the study were part of a social franchise network with standardized procedures and quality requirements. It may be the case that the services provided at these clinics are not typical of other private providers, and the measures of safety and acceptability may be more variable than were indicated by our findings. Additionally, this study was conducted among a small number of providers located in urban settings in Hanoi; therefore, it is not possible to generalize our findings to rural settings, where health providers and women may be more difficult to access. We assessed clinic outcomes up to 3 weeks after the MA procedure; although it would be expected that most women would attend the clinic within this time, a longer period of follow-up might have captured data on more women. Furthermore, the women who could not be contacted for a follow-up interview may have attended another clinic for an in-person visit, which would not have been captured in our study.

Due to the difficulties in regulating MA procedures in the expanding private sector in Vietnam, there has been concern about the quality of services available to women, including

reservations about training and safety.<sup>11</sup> The effectiveness of MA observed in this study (91%) is low in comparison with the efficacy rates reported in trials of clinic-based MA regimens.<sup>3</sup> However, the effectiveness is comparable with rates reported in previous studies of home-based MA regimens.<sup>12</sup> It may be the case that rates of incomplete abortion are relatively high because when women present at clinics with concerns, providers prefer to intervene using surgical or medical methods rather than having women wait for the procedure to complete itself. The high proportions of women who experienced side effects are similar to those observed in other studies<sup>3</sup> and highlight the importance of counseling to prepare women for what MA procedures entail. Our study has shown that most women were informed about what to do in the case of complications, and sources of advice, such as the MSIVN Help line appear to be important resources for women.

Telephone consultation has been identified as an alternative to follow-up visits after MA,<sup>13</sup> which may reduce the barriers to service access and provision. We have shown that a moderately high proportion of women (78%) can be reached by telephone in this setting, where the majority of MA procedures have involved the home-based administration of misoprostol. Women who previously had an abortion were less likely to attend the clinic for follow-up; one explanation for this may be that women with prior experience were aware of the usual progression of a medical termination procedure and the signs of complete abortion, and did not feel the need for confirmation from a clinician. The lower rate of follow-up among women who underwent a MA procedure with clinic-based administration of both mifepristone and misoprostol lends further support to this interpretation, as women may have been more reassured about the outcome of the procedure if administered under medical supervision. Although we have no data on the MA outcomes for women lost to follow-up, other studies have indicated that women's observations, together with a pregnancy test or other method of clinical examination, can be used for accurate assessment of MA outcomes.<sup>13,14</sup> Further qualitative research may identify the reasons why women do not wish to attend follow-up visits after MA and suggest alternative methods of follow-up that are more acceptable to women.

We have identified a low provision of postabortion family planning and a large unmet need for family planning among women seeking MA through these private providers; nearly all of the women who did not go on to adopt a family planning method after their MA procedure expressed a desire to

use a method. The women who received counseling on family planning were more likely to adopt a method than those who did not have counseling. This indicates that postabortion family planning services should be strengthened among these providers, with MA counseling providing an opportunity for the discussion of family planning options and services.

The findings of this study indicate that women using MA services offered by private providers can be reached by telephone, while a telephone Help line is an important support mechanism for women undergoing MA. Telephone-based systems of monitoring are likely to be particularly important where a high number of procedures involve the administration of misoprostol at home. There is increasing evidence from Latin American countries<sup>15,16</sup> and anecdotal evidence from Vietnam that women frequently access and self-administer MA drugs through pharmacies; pharmacies and other providers could feasibly use telephone services to provide support to and monitor women who might otherwise be lost to follow-up.

Even in a country such as Vietnam, where legal abortion is available on request, women experience structural barriers to accessing services;<sup>17</sup> therefore, the provision of MA through private providers is one important way of expanding access to safe abortion. Improving the follow-up of women, MA counseling, and postabortion family planning services have all been identified as important areas for strengthening MA services in the private sector.

## Disclosure

The authors (MHP, THN, AND, and TDN) work for Marie Stopes International, an organization that provides medical abortion procedures in the United Kingdom and globally. The authors report no other conflicts of interest in this work.

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