Women's pathways to medication abortion in Oromia state, Ethiopia: A qualitative study

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Abstract

Background: Despite having one of the more liberal abortion laws in Africa, approximately half of abortions in Ethiopia continue to take place outside of health facilities. Use of medication abortion (MA) has increased dramatically however there remains a lack of data on women's experiences using MA, including both those who received MA in a facility setting, and those who took MA without clinical supervision (i.e. had a self-managed abortion). Our study aimed to explore women's experiences using MA in Oromia, Ethiopia.

Methods: We collected data from August through October 2021 via in-depth interviews with 20 post-abortion care clients in seven public health facilities across Oromia. Healthcare providers trained in qualitative research led the interviews, which followed a semi-structured interview guide and were conducted in Amharic or Afan Oromo. Transcripts were translated into English for data analysis, and all coding was done using NVivo.

Results: Women took several different pathways to accessing MA: most went directly to a private sector facility (either a clinic or pharmacy) where they obtained MA and took it at home or in a non-clinical setting (i.e. had a self-managed abortion, n=18), while one woman took it at the clinic (n=1). Only one woman received MA from a public health facility. Of our 20 participants, 17 used a combipack of mifepristone/ misoprostol, while 3 took misoprostol alone. Nearly all participants received minimal information or counseling on how to properly take MA and all of the women in our study ultimately sought postabortion care due to concerns about symptoms they were experiencing after taking MA, most commonly heavier than expected bleeding.

Conclusion: Our study offers some of the only available evidence on women's pathways to MA and experiences of self-managed abortion in Ethiopia. Our findings suggest that more information and counseling is needed to improve women's MA experiences, including symptoms to expect after taking MA. These findings provide useful learnings for clinical and programmatic stakeholders aiming to improve MA access, efficacy, and safety in Ethiopia, and beyond.

Key words: medication abortion; self-managed abortion; Ethiopia; reproductive health; sexual health

Background

Ethiopia has one of the more liberal abortion laws in Africa, due to a 2005 amendment that legalized abortion among minors and in cases of rape, incest, fetal impairment, or maternal disability (1). In the intervening years, the government has made efforts to improve access to abortion care in health facilities, and the number of public health facilities offering abortion care has increased across the country. The most significant rise has been in Oromia state, where the number of abortion-providing facilities increased nearly 300% between 2008 and 2014 (2). Subsequently, more women are accessing facility-based abortion care, with an increase from 27% to 53% between 2008 and 2014 (3). Yet disparities in access persist, and over 70% of health centers in Oromia, among other states, do not provide first trimester abortion care due to lack of trained staff, equipment, or supplies (2).

Knowledge of the circumstances under which abortion is legal is low across the country, with just 5% of women having complete knowledge of the abortion law (4). Approximately half of abortions continue to take place outside of health facilities, and unsafe abortion and related complications remain common (3,5). Abortion stigma can be one of the leading factors in perpetuating unsafe abortion, even in less restrictive legal contexts like Ethiopia (6). Women seeking abortion can experience isolation or judgment from their social support network, harassment and criticism from healthcare providers, and psychological distress due to pervasive stigma within their communities (6,7). Stigma can have a wide-ranging impact on women seeking abortion care, affecting their decisions on when, where, and how they may access an abortion.

As many women seek to manage their abortion care in private and with minimal involvement from the healthcare system, access to and use of medication abortion has become increasingly important. Use of medication abortion (MA) in Ethiopia has increased dramatically from 0-36% of abortion procedures from 2008-2014 (5). Data since the start of the COVID-19 pandemic suggests this number could now be higher, as more providers shifted to prescribing this method (8). The available evidence has shown that women who receive MA report high satisfaction with their experience; survey research in Northwest Ethiopia found that 91% reported satisfaction with their method choice, 83% would choose it again, and 94% would recommend it to a friend (9). However, evidence from a range of settings has found that how MA is used can vary widely depending on location and provider, with potential consequences for the safety and efficacy of the medication; deviation from evidence-based MA protocols can be particularly pronounced among people who self-manage their abortion and receive abortion pills from pharmacies, online vendors, or their social networks (10). Thus, access to accurate information about how to properly use MA is essential for ensuring people can safely self-manage their abortion. People may choose to self-manage their abortion due to personal preference, as well as geographic barriers to facility access, challenges taking time off work or finding childcare, financial constraints, and legal restrictions (10). There remains a lack of data on women's experiences using MA in Ethiopia, including both those who received MA in a facility setting, and those who took MA without clinical supervision (i.e. had a self-managed abortion).

Our study aimed to address this gap in the literature in Oromia Regional State. Specifically, the objectives of our study were to:

1. Document the abortion pathways of women who used medication abortion and ultimately sought post-abortion care from a public health facility in Oromia.

2. Explore the experiences of women who self-managed their abortion using medication abortion without clinical supervision.
3. Identify and understand gaps in the provision of medication abortion in Oromia state.

Methods

Study setting

Our study took place in Oromia Regional State, the largest region in Ethiopia. More than 37 million people reside in Oromia, representing at least 65 different ethnic groups (11). Nearly the entire population (90%) resides in rural areas. For this study, we targeted public health facilities located in seven towns across four administrative zones in Oromia, namely Finfinnee Special, East Shoa, North Shoa, and West Arsi Zones. Past research on abortion in Oromia has documented significant barriers to safe abortion access, including financial constraints, lack of awareness, stigma, religious beliefs, sexism, family pressure, poorly equipped rural health facilities and a weak referral system (12). In a nationally representative study, Oromia had one of the lowest levels of knowledge of the abortion law in the country; 30% of women were aware of the abortion law, but just 4.5% had comprehensive knowledge of the abortion law (4). Minimal research has explored women's pathways to medication abortion in this region, including experiences of self-managed abortion.

Data collection

In this paper we report on qualitative data on women's pathways to medication abortion, collected from August to October 2021 by Ipas Ethiopia, a non-profit reproductive health organization that focuses on abortion and contraceptive services. Ipas Ethiopia provides technical support to numerous public health facilities to expand comprehensive abortion care and contraceptive services, with the aim of addressing challenges such as lack of trained providers, negative attitudes among some providers, and lack of facility-preparedness in terms of physical space, supplies and equipment. For this study, we recruited participants from seven public health facilities (five hospitals and two health centers) that serve as Ipas intervention sites; these facilities were purposively selected due to their high postabortion caseloads and their pre-existing relationship with Ipas. Ipas intervention sites are health facilities where one or more health professionals are trained on comprehensive abortion care or comprehensive contraceptive services, and which regularly receive technical support from the organization.

We recruited 20 women receiving postabortion care (PAC), who reported having taken medication abortion prior to coming to the facility for PAC. Seven data collectors (one from each study site) who were trained in qualitative research led the in-depth interviews, with supervision from experienced qualitative research coordinators with backgrounds in public health. The data collectors were all health care workers who were not involved in the provision of abortion-related services to ensure that interviewers had a base-level of knowledge regarding healthcare but were not directly involved in the provision of the participants' PAC. Abortion providers and interviewers screened PAC clients and invited eligible women to take part in an in-depth interview about their experience. Women were eligible to participate in the study if they had taken MA prior to seeking postabortion care at the facility, were between 15 to 49 years of age, able to speak and understand Afan Oromo or Amharic, and able to give informed verbal consent.

The interviewers followed a semi-structured in-depth interview guide which was originally developed in English and translated into Afan Oromo and Amharic by a research coordinator. The guide covered several topics including: reasons for choosing MA, decision-making about where to take MA (within or outside the formal health system), nature of their interaction with whomever provided them with MA and the information received from them, sources of information about MA, support required for self-managing abortion using MA, experience after taking MA, and their experience obtaining post-abortion care. Interviews lasted for an average of 40 minutes and were audio-recorded with the consent of participants.

To ensure participants' privacy, interviews were conducted in private rooms within the health facility where both auditory and visual privacy could be maintained. Interviewees were informed that information obtained in this study will be kept confidential, and their name or other identifying information will not appear on any materials related to the study.

Data analysis

A member of the study team transcribed and translated interviews into English for analysis. The study team developed a codebook based on the objectives of the study and the content of the interview guide, which we added to as new codes were identified during analysis. Two study team members (BMC and BR) coded all interview data using the software NVivo, with support from a consultant who helped identify preliminary codes. The team then used Microsoft Excel to organize excerpts according to key categories and themes (e.g. to capture and organize different aspects of abortion pathways). We then used an inductive thematic analysis to identify patterns and themes in our data.

Ethics

This study received ethical approval from the Oromia Health Office Ethics Committee. Interviewers read consent forms out loud to participants, and all participants provided informed verbal consent to participate. Interviewers informed participants about the purpose of the study, what their participation entailed, the risks and benefits of participating, and reminded them that participation is voluntary and that there would be no consequences for withdrawing from the study at any time. Data collectors were paid for their time spent conducting interviews, and participants did not receive remuneration for participating in the study.

Results

Characteristics of Study Participants

Our 20 study participants ranged in age from 18 to 38 years old, with an average age of 24 years. Participants represented a range of educational backgrounds: some women had completed primary school (n=5) or secondary school (n=5), while a few were currently attending secondary school (n=3) or university (n=3). Four participants did not have any formal education. Most of the participants were employed (n=15) while the remaining participants were students or considered themselves unemployed. Five participants were married while the majority were unmarried – either single, divorced, or in a relationship. Only two women indicated that they lived alone in a rental home while the rest of the participants lived with partners/husbands, family members, or other relatives.

Additional details on the study participant demographics can be found in Table 1.

Pathways to Medication Abortion

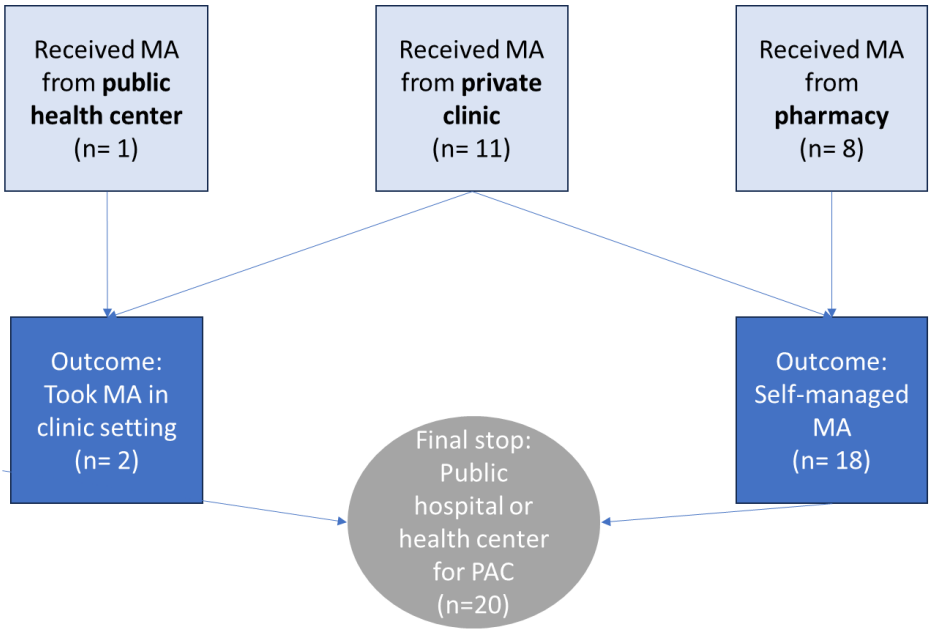

Figure 1. Women's pathways to MA

A majority (n=16) of participants had an abortion before 15 weeks, with an average gestational age of 12 weeks. The remaining four participants received an abortion at 16 weeks (n=2), 18 weeks (n=1), and 24 weeks (n=1). Seventeen participants received a combipack (i.e. mifepristone and misoprostol) while three participants received misoprostol only. Additional details can be found in Table 2.

Among participants, several different pathways to MA emerged through our interviews (see Figure 1). Approximately half of our sample (n=11) went directly to a private clinic to seek MA; this decision was often made for reasons of accessibility and convenience. One of these women took MA within the clinical setting, while the remaining 10 took MA outside of the facility, ultimately self-managing their abortion. The decision of which private facility to visit was made based on considerations of stigma, confidentiality, and privacy, as well as recommendations from friends or relatives.

> *"After getting consultation from my friend on where to get abortion services, I chose to visit a private clinic which is far away from the place where I live. You know I did not want anyone to see or recognize me seeking abortion service in a public health facility. Many people from our community visit public health facilities and they can notice me getting abortion service. In a private clinic, I was sure no one would be there and recognize me getting the service."* – 39-year-old woman.

Just one woman successfully sought and received MA from a public health center. Four women first sought care in the public sector, where they were turned away for various reasons, including not meeting the legal criteria for abortion or, most often, a provider refusing to provide abortion services. Reasons for refusal to provide care included personal, religious, or cultural reasons, and these providers frequently failed to make a referral to another provider who would be willing to provide abortion care.

After being turned away from the public sector, these women all sought abortion services from the private sector, where they ultimately received their MA drugs.

> *First, I went to a government health center to terminate my pregnancy because the pregnancy was unplanned, and my income is not sufficient to raise an additional child. However, the provider who I talked to was unwilling to provide or referred me to the abortion service. He told me that terminating pregnancy is not allowed just because it's unplanned. I did not have information about legal indications of abortion. Then after I returned home, I went to a nearby pharmacy to seek a solution. The pharmacist was very supportive and respectful. After a brief information of my case, I managed to buy MA pills like any other drugs. This pharmacy was the place where we generally buy all other medicines. However, after taking these tablets I suffered from heavy bleeding, vomiting and headache. Then, I reconsulted the pharmacist for a solution and he told me to visit this health facility for further care.* – 26-year-old woman.

The third pathway included 8 women who went to a pharmacy to access MA and ultimately took the abortion pills on their own, either at home or in another setting without clinical supervision, which we categorized as self-managing their abortion. All of them received MA from the first pharmacy they went to. Similar to women's reasons for choosing to receive care from a private clinic, women who sought MA from pharmacies often did so to ensure their privacy and at the recommendation of close friends or relatives:

> *I had prior information I got from my relatives where to get MA drugs for abortion. Before getting into this pharmacy, I walked by another drug store too, but there were two customers there. This one didn't have any customers at the time of my visit and the pharmacist was alone. So, I thought it would be better to get the drug as I could ensure my privacy here. I consulted him to take MA drugs to terminate my pregnancy and after a short dialogue he gave me 5 tablets. The pharmacist did not ask me any reasons for termination, duration of my pregnancy and my age. He also didn't inform me about side effects of MA drugs, but I had only little prior information from my friend.* – 35-year-old woman.

Regardless of their pathway to receiving MA, women overwhelmingly received inadequate or incorrect information about how to properly take MA – the majority of participants did not receive sufficient or correct information on proper dosage and administration, possible side effects, or warning signs that follow-up care may be required. Participants were confused about the information they received, unclear what to expect once they had taken the pills and what measures they should take in case of significant side effects; in particular, many experienced more pain or heavier bleeding than they expected. Most were dissatisfied with the information or counseling received from pharmacists or providers from private clinics. As one 18-year-old participant described:

> *I feel the information provided for me was not adequate since he did not give me the expected signs, symptoms, and danger signs after taking abortion drugs.*

Some women sought additional information from friends and family or asked their male partner to seek further information on their behalf. Several women who had relatives or trusted contacts with a health background verified the information they received from pharmacists or providers with them. Ultimately, only two women received proper counseling on the correct dosage and administration of MA. Because

some women received no information or inaccurate information about the correct dosage and administration of MA, some had incomplete abortions which led them to require PAC. The number of MA pills taken ranged from one to five. Women administered the pills orally and/or vaginally, with time intervals between doses ranging from 30 minutes to three days.

> *The provider gave us MA drugs with a cost of 500 birr. But he did not inform us how to take tablets. We did not know how much I should take at a time. First, I took one, then three more and then two more until the package was empty.* – 27-year-old woman.

> *The first MA drugs did not work. I thought it might take time to work. I told the person who brought it (female friend) and she said that abortion will be completed after 2-3 days. But abortion has not been completed by the stated time. So, the same person bought 4 additional tablets for me. It was not terminated even with additional doses of MA drugs… I thought it would be easily aborted but it did not happen.* – 30-year-old woman.

Most participants said they would not seek MA from a private provider again in the future and would not take it without first consulting with a public sector doctor.

> *Formerly I thought that taking MA drugs by myself was convenient and safe but now, I learnt from my experience that any wrong dosage can have very serious consequences. I suffered a lot when I was bleeding–so much pain and weakness! And all that blood loss was scary! Fortunately, I underwent my abortion safely at this hospital, but it was really the most dreadful experience of my life. I now believe that one should not take MA without consultation of a doctor or provider from public health facilities. - 21-year-old women.*

Decision to Seek Abortion

Study participants were asked to discuss their decision to seek an abortion. The main reasons participants provided were unplanned or mistimed pregnancy, lack of resources (particularly financial), and fear of the social stigma of having a child outside of marriage. For many participants, multiple factors co-existed and contributed to their decision-making process.

A lack of existing or reliable resources and the resulting financial implications of an unintended pregnancy was noted as a key motivator in the abortion decision-making process for nine participants. This concern was particularly elevated for women who reported a lower socioeconomic status or income insecurity. One participant shared her experience of financial insecurity and the impact this experience had on her decision to have an abortion:

> *"I did not want any more children; I have a son and a daughter… we are poor people, we should rather manage ourselves to get adequate food for the living children. I tried to do my own small business, but I have no sufficient income to add more children. Giving birth is not enough, we must care for and educate them and provide the essential things they require like food, clothes, and medical services. That is why I decided to terminate this pregnancy…"* - 30-year-old woman.

Income insecurity along with fear of social stigma for continuing a pregnancy outside of marriage were frequently mentioned by participants as reasons for deciding to terminate a pregnancy. Together, these factors had a key influence in the decision-making process for most of the participants:

"I am not legally married; I live with my boyfriend and this pregnancy was unplanned. My family will never accept this, they will discriminate against me because in our community it is unacceptable to get pregnant outside of marriage. We don't even have a plan to get married in the near future. Furthermore, I have no trust in my boyfriend to have a child with him. We argue and disagree with one another every now and then. He is a daily laborer. With all this, if I decide to give birth, he might not accept it or financially support me to raise the child. I don't have my own income to raise a child. Hence, it was a challenge for me to continue the pregnancy and I decided to terminate it using MA tablets which I heard from my friend." – 24-year-old woman.

Role of Social Support

Many of the study participants described abortion as a private topic and a personal experience, which is often considered too taboo to discuss openly. Despite the social stigma surrounding the topic of abortion, a majority of the study participants made decisions with and sought out information through trusted members of their social support network – including friends, family members, partners or husbands, and neighbors.

Of the 20 women interviewed, 12 women spoke with their husbands/partners to help make the decision to have an abortion. However, only five women were supported by their husbands/partners in their decision. Of the seven women who were not supported in their decision, two reported receiving pressure from family members to continue seeking an abortion.

Almost all the participants (n=18) sought out information on abortion or self-managed abortion from at least one member of their social support network. Friends were a particularly important source of information about abortion, particularly for those who sought to self-manage their abortion.

> *"I was worried about how to terminate my pregnancy. I talked with one of my female friends and she informed me that she has another friend who had previous experience of using MA drugs. She connected me with her friend to get heard of her previous experience. So, I got in touch with her friend and convinced me take MA pills."* – 27-year-old woman.

In addition, some participants reached out to partners/husbands, family members, or neighbors for information as well. Four of the youngest participants, who were all students, confided in family members (mostly their mothers) for support.

> *"Upon realizing I was pregnant, I was very worried. I am a university student, so it is difficult for me to continue the pregnancy. First, I informed the case to my female friend, and she advised me to terminate it immediately. Then I went to my home and consulted my mother before going to a clinic. She is not only a mother but also my best*

friend. After lengthy discussion, she agreed with terminating the pregnancy..." – 22-year-old woman.

Most of the women interviewed (n=18) appreciated the presence of close members of their social support network when visiting the pharmacy or clinic to obtain MA. Those that were accompanied valued having someone with them to ensure they were understood and helped by the provider. In contrast, some women preferred managing their abortion on their own to keep their decision private, and appreciated the option of taking MA because they were able to maintain confidentiality.

In seeking out information, women generally felt confident about the advice shared by trusted family, friends, and partners. However, they noted feeling concerned when different sources didn't offer the same information, or when they felt that the information they received was unreliable or inaccurate. For some women the knowledge they were able to gather gave them the confidence to proceed with using MA, however some participants reported feelings of uncertainty when they felt that they had not received sufficient information to self-manage their abortion.

Decision-making on Abortion Method and Location

Women described several factors that influenced their decision to choose medication abortion. Many women perceived MA as safe, effective, and less invasive than a procedural abortion. For some women, taking abortion pills felt more akin to taking contraceptive pills or painkillers, which made it seem like a simpler and more familiar option:

I chose abortion drugs since its simple to use. – 18-year-old woman.

Use of MA allowed 18 out of 20 women in our study to self-manage their abortion (i.e. they took MA without clinical supervision, in contrast to two participants who took MA in a facility setting). Women were motivated to self-manage their abortions largely due to a desire for privacy and confidentiality; many considered abortion to be a private event and they preferred for it to take place in the privacy and comfort of their own home. They did not want to be among strangers or in an unfamiliar health facility setting while having an abortion, or risk being identified by someone they knew:

I decided to have abortion outside of a government hospital because of my fear of being identified by other people at the hospital who may know me. – 26-year-old woman.

Many participants perceived health facilities to be uncomfortable, and unwilling or unable to protect women's reputation, privacy, and dignity. Fear of judgment, being seen by people in their community, or past experience of being mistreated by public health facility staff deterred many women from seeking abortion services there, compared to the private sector where many women perceived the care to be more respectful. Long wait times and travel distances to the public sector were also a concern, especially compounded by requirements for multiple appointments, compared to more consistent, proximate availability in the private sectors.

[I had] no means of transportation to go to the hospital or health center so, the best option at that time was to go to the nearby private clinic. – 21-year-old woman.

However, some women were willing to travel even farther to access private health care in a place where they would not be recognized:

> *If I was to visit a government health facility, there is a possibility to see people whom I know. So, I preferred to go to a private clinic where I felt my privacy could be maintained. To keep my privacy to the highest level, we even traveled to another town, which is very far away from where we live* – 28-year-old woman.

> *"After getting consultation from my friend where to get abortion pills, I chose to visit a private pharmacy which is far away from the place where I live–you know I did not want anyone to see me or recognize me in a health facility or clinic setting. While so many people visited the health facilities for various health problems, in a private pharmacy no one would recognize or notice me, and the pharmacist would also not remember me once he gave me the pills."*- 29-year-old woman.

For some women, the choice of medication abortion was not optimal, yet for most women in our study it was the only method they were offered. Most women were unaware of the legal provisions for abortion, and there was a widespread perception that abortion was completely illegal, including in public health facilities. This led some women to choose to self-manage their abortion or seek abortion care from the private sector, even though they may have preferred seeking care in a hospital.

> *Based on the information I got from my colleague this service is allowed at public health facility only for those women who become pregnant from relatives, underage and fetal problem. That is why I decided to have abortion outside of public health facility*. – 18-year-old woman.

> *I did not have any information that this service was given in public health facilities. That is why I decided to have an abortion outside of the public health facility.* – 32-year-old woman.

One frequently cited challenge to seeking MA outside the public healthcare system was the high fees charged by private sector providers, some of whom exploited women's lack of knowledge of abortion legality. The range of fees paid for abortion services was very broad (500-3500 birr) (approximately $9-64 USD). Most women chose MA because it was the only option they were presented with, not because it was their ideal choice, as described by a 21-year-old participant who sought care from a private clinic: *The health provider took 1500 birr and gave me 4 abortion pills and informed me to put them under my tongue at home. I did not know any other methods for abortion to choose.*

For some women, their perceptions of MA changed after their experience using it; all women in this study sought post-abortion care for real or perceived complications, which shaped many of their perceptions of the safety and efficacy of MA. Most participants received inadequate information and counseling about possible side effects, warning signs, and when to seek follow-up care, and thus many felt uneasy about prolonged or heavy bleeding, cramps, nausea, and headaches that they experienced during the abortion process.

> *"The pharmacist did not say anything about the side effects of MA drugs … Now I wish he had provided me more information about the signs and symptoms and complications which may arise after abortion. The prolonged bleeding was scary. We wondered what had happened, whether the abortion was complete or not, and unsure what could come next."* – 25-year-old woman.

Just five out of 20 women reported they were satisfied with their choice of abortion method and pathway, while the remainder felt dissatisfied with their experience and ultimate need to seek PAC from a public facility, which they felt had opened them up to public judgment.

Experience Seeking PAC

For some women in our study, fear and anticipation that their use of MA would fail or lead to complications led them to seek PAC rapidly upon signs of potential or perceived concern, such as heavy bleeding. Six women believed their abortion had failed because they did not bleed as quickly or as much as they expected to. The remainder of women (n=14) believed they were experiencing a serious complication when their bleeding was heavier or lasted longer than they expected. Prolonged and heavy bleeding was the most commonly reported complication among participants, which some women took to mean their life was at risk. Many women did not anticipate the quantity or duration of bleeding they experienced due to a lack of counselling from providers, which made it especially concerning for them.

> *I came [to the hospital] because my bleeding couldn't stop. It continued for 20 days after taking the pills. I felt weak and was really scared. I told my neighbor about my condition, and she suggested that I should visit the health facilities and consult a doctor. She had experience of consulting the doctor previously. She informed me the doctor was very good at helping patients.* – 23-year-old woman.

> *The whole process to get an MA requires costs but you need to manage on your own. As the bleeding did not stop and continued for more than 10 days, I felt very weak, and couldn't even perform household chores properly. My children read my feelings and kept on asking, "What happened to you?" That's when I decided to visit the health facilities and see the doctor. That is why I came to this hospital.* – 30-year-old woman.

> *It was horrible, I'll never do this again. The first pill was more difficult and heavier which was painful and had more bleeding compared to the other (vaginal medication).* - 32-year-old woman.

Due to lack of proper counseling, some women did not take a correctly administered dose of MA, which led to incomplete abortion and required procedural care to address:

> *I continued bleeding, I had an intense hemorrhage and suddenly I was hospitalized and cleaning [curettage] was inevitable. The reason for the bleeding was that there were some remnants left inside of me.* – 34-year-old woman.

Seeking PAC from a public health facility was a difficult decision for many women, who delayed seeking care or attempted to seek PAC from a lower-level facility before ultimately resorting to a hospital; eight women sought PAC first from a public health center, before going to a public hospital. Four women postponed seeking PAC by up to a week in the hopes their symptoms would resolve on their own. However, once they sought care from public health facilities, most women felt the staff they encountered were skilled and well-trained in providing PAC.

Discussion

Our study offers some of the only available evidence on women's pathways to medication abortion (MA) and experiences self-managing abortion in Ethiopia. We find that women took several different pathways to accessing MA in Oromia state: most women went directly to a private source (clinic or pharmacy), where some procured MA and took it under clinical supervision, while the majority self-managed their abortion. Some women first attempted to obtain MA from the public sector, but only one was successful. Despite the varied levels of clinical supervision experienced by our participants, most received inadequate or incorrect information about how to properly take MA, and all the women in our study ultimately sought postabortion care due to concerns about symptoms they were experiencing after taking MA, suggesting that they received either incorrect information about dosing or administration, or inadequate information about signs and symptoms requiring follow-up medical care. These findings provide useful learnings for clinical and programmatic stakeholders aiming to improve MA access, efficacy, and safety in Oromia state, Ethiopia, and beyond.

Lack of sufficient information was a key obstacle to women's abortion pathways in this study, both in terms of information on the proper dosage and administration of MA and information on their right to abortion care in the public health system. Inadequate counseling about how to use MA and what to expect afterwards likely contributed to stress and anxiety among women that could have been avoided with proper counseling and may have led women to seek unnecessary medical treatment post-abortion. When taken according to WHO guidelines, MA is incredibly safe and results in few complications: research in Argentina, Nigeria and Southeast Asia found that 98% of people who used a misoprostol-only MA regimen with support from a safe abortion hotline or an accompaniment group had a complete abortion without further intervention, and potential adverse events were reported for just 0.9% of participants (13). These findings are similar to those from a US-based sample of people who self-managed an abortion using MA via an online telemedicine service, among whom 96.4% had a successful abortion and just 1% received treatment for serious complications (14).

While our qualitative sample is small and not representative of women who have had a medication abortion in this setting, the range in MA regimens coupled with the lack of information women received suggest that their experience using MA was likely not in accordance with evidence-based guidelines (15). The number of pills taken by participants ranged from 1-5. Along with inaccurate dosage, women also had inconsistent experiences of pre-screening and guidance on complications, which were important factors in their experience. A systematic review drawing on literature from 16 countries similarly found that pharmacy workers and drug sellers often have poor knowledge of evidence-based MA regimens (16). Women in our study overwhelmingly preferred receiving abortion information from providers, thus it is of vital importance that those selling and providing MA have accurate information on effective MA regimens. Proper counseling on MA is essential across all levels of the healthcare system, including in pharmacies, to ensure women receive the optimal regimen and do not receive unnecessary interventions, and more training tailored toward different types of providers and medication vendors is needed. There are a number of evidence-based interventions demonstrating that training pharmacy workers and drug sellers on the proper administration of MA can be effective in improving their knowledge (16,17). Proper counseling on expected symptoms after taking MA could

have greatly improved the abortion experiences of women in our study and could have reduced the stress and anxiety many faced when their bleeding was heavier or lasted longer than they expected, and potentially meant they could have avoided seeking post-abortion care.

While all of our participants were able to access MA eventually, only one was able to access MA from a public facility, while the rest purchased MA from the private sector. Several women were turned away from public health facilities even though MA should be legally available in these settings in Ethiopia. This suggests a potential lack of information among public health providers on the legal indications for abortion, a lack of willingness to provide or refer for abortion care, and/or lack of information among women on their right to legal abortion care in public health settings. Nearly all the women we interviewed either did not know the conditions under which abortion is legal according to Ethiopia's abortion law, or they believed abortion was completely illegal in Ethiopia; this may have contributed to so many women in our sample obtaining abortion in the private sector. These findings align with prior research in Ethiopia and numerous other countries where abortion is partially decriminalized, which has found that knowledge of the legal indications for abortion is often low among women, and many perceive abortion laws as being more restrictive that they are in reality (18). Misinformation about abortion legality can also contribute to greater abortion stigma; research has shown that there is a potential for more favorable views on abortion when there is greater knowledge of the abortion law (19), which demonstrates the importance of improving access to abortion-related information among abortion seekers and providers alike.

Despite the social stigma around abortion, the majority of the women in our study still reached out to their social network for support in various ways. Research from other related studies has found that the availability of social support is an important factor when considering access to abortion as well as stigma reduction (20). Often, social networks were the sole source of information and recommendations for abortion methods and providers. In particular, it was discovered that younger women were more influenced by social networks when deciding to have an abortion outside of public health facilities. Younger women typically sought advice from an older sister or female friend who had experience using the service or had knowledge of it beforehand. These social support networks played an important role in sharing information on abortion services. In addition, nearly all women indicated appreciation of accompaniment to the public facility for support, companionship, and to ensure that their needs were understood by the provider.

This research has implications for those working to advance access to information and support to guide those seeking out medication abortion in Oromia state, in Ethiopia more broadly, and further afield. Efforts to improve knowledge of abortion legality among individuals and communities are important for ensuring people seeking abortion care are aware of and can advocate for their legal right to abortion care. Even in a decriminalized legal environment, abortion stigma significantly impedes access to abortion services and information. There is a need for further investment in community-based interventions, accompaniment models, and social and behavior change strategies to mitigate social stigma around abortion to improve people's comfort and ability to seek information, support, and access to services. Given the important role many male partners make in abortion decision-making,

interventions that seek to increase knowledge and challenge stigma among boys and men are also needed.

There is a clear need to expand knowledge and improve access to information on effective MA regimens, tailored both to people providing and to those seeking to use MA. This must include evidence-based information on dosage, administration, side effects, and warning signs requiring medical attention. Disseminating this information through a variety of methods could help ensure it reaches the widest possible audience, including via informational pamphlets, telehealth services, and social media. Information campaigns should also consider the important role played by social support networks and incorporate wider roles to provide information and support for people who need abortions. Dedicated, comprehensive training is needed for pharmacists and providers working in private and public health facilities is needed as well, and should include information on MA regimens, abortion and contraceptive counseling, and the abortion law. Referral systems between these various components of the health system must also be strengthened so they can better work together to improve reproductive health outcomes.

Finally, expanding the legal framework to ensure that pharmacies can offer legal MA care is imperative for ensuring high-quality services are made available in the private sector. In addition to being able to legally provide MA, pharmacists need training on proper provision of MA regimens, and the role of incentive structures and support from pharmacist associations and regulatory bodies should be further explored. More broadly, expanding the availability of safe and quality abortion services outside the public sector is an important step in enhancing quality of care and choice, and creating a broader, more accessible ecosystem of care for abortion-seekers.

Limitations

Our study has several limitations. Our sample includes only women who sought postabortion care from public health facilities after using MA and is not meant to be representative of women's experiences using MA more broadly. We could not include the perspectives of people who used MA and did not experience post-abortion symptoms that concerned them, and we also do not include perspectives from women who experienced complications but did not come to a public health facility. Our sample does not allow us to explore any relationships between women's pathways to MA (i.e. self-managed or used under clinical supervision) and their likelihood of experiencing complications, since all participants sought postabortion care. Our interview transcripts were translated into English, which was the language they were analyzed in. While we are confident in the quality of our translations, it is possible that some detail or nuance was lost in the process. Finally, as is characteristic with qualitative research, our sample size of 20 is small, but we believe adequate to achieve thematic saturation.

Conclusion

In conclusion, our findings demonstrate several different pathways to MA that women in Oromia state take, and the possible impacts of the lack of adequate and correct information on MA dosage and administration on the safety and efficacy of MA. Women often chose MA due to its accessibility and the privacy with which they could take it. While abortion is heavily stigmatized, women still relied on their social support networks for information, support and resources as they navigated the process of finding

and taking MA. Expanding the availability and accessibility of information about proper dosage and administration of MA is imperative for improving women's abortion experiences and reducing the likelihood of complications.

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Declarations

Ethics approval and consent to participate: This study received ethical approval from the Oromia Health Office Ethics Committee (Approval #: BEFO/HBIFU/116/833). The ethics committee/institutional review board waived the requirement of written informed consent for participation from the participants or the participants' legal guardians/next of kin because all participants provided informed verbal consent to participate.

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