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Pharmacy workers' knowledge and provision of medication for termination of pregnancy in Kenya

Kate Reiss,[1] Katharine Footman,[2] Vitalis Akora,[3] Wilson Liambila,[4] Thoai D Ngo[5]

[1]Researcher, Research, Monitoring and Evaluation Team, Health Systems Department, Marie Stopes International, London, UK
[2]Research Consultant, Research, Monitoring and Evaluation Team, Health Systems Department, Marie Stopes International, London, UK
[3]Research Officer, Research, Monitoring and Evaluation Team, Marie Stopes Kenya, Nairobi, Kenya
[4]Senior Programme Officer, Population Council, Nairobi, Kenya
[5]Head of Research, Research, Monitoring and Evaluation Team, Health Systems Department, Marie Stopes International, London, UK

Correspondence to
Miss Kate Reiss, Research, Monitoring & Evaluation Team, Health Systems Department, Marie Stopes, International, 1 Conway Street, London W1T 6LP, UK; kate.reiss@mariestopes.org

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ABSTRACT

Objective To assess pharmacy workers' knowledge and provision of abortion information and methods in Kenya.

Methods In 2013 we interviewed 235 pharmacy workers in Nairobi, Mombasa and Kisumu about the medical abortion services they provide. We also used mystery clients, who made 401 visits to pharmacies to collect first-hand information on abortion practices.

Results The majority (87.5%) of pharmacy workers had heard of misoprostol but only 39.2% had heard of mifepristone. We found that pharmacy workers had limited knowledge of correct medical abortion regimens, side effects and complications and the legal status of abortion drugs. 49.8% of pharmacy workers reported providing abortion information to clients and 4.3% reported providing abortion methods. 75.2% of pharmacies referred mystery clients to another provider, though 64.2% of pharmacies advised mystery clients to continue with their pregnancy. Pharmacy workers reported that they were experiencing demand for abortion services from clients.

Conclusions Pharmacy workers are important providers of information and referrals for women seeking abortion, however their medical abortion knowledge is limited. Training pharmacy workers on medical abortion may improve the quality of information provided and access to safe abortion.

Key message points

- Pharmacy workers in Kenya play an important role in providing medical abortion (MA) information and referrals.
- Pharmacy workers' knowledge of MA drugs and registration status is limited, and there are gaps in the information they provide to clients.
- Training is required to ensure effective and high-quality MA information and drug provision and to expand access to safe abortion.

INTRODUCTION

Twenty-two million pregnancies are terminated unsafely each year, nearly all in developing countries.[1] Rates are highest in East Africa; unsafe abortions in Kenya result in 2600 deaths of women and girls annually, accounting for 35% of maternal deaths.[2] In 2010, Kenya passed a new constitution that made abortion permissible if "in the opinion of a trained health professional, there is need for emergency treatment, or the life or health of the mother is in danger, or if permitted by any other written law".[3] Although the law does not provide the definition of a trained health care professional, the constitution is generally taken to refer to medical doctors, nurses, clinical officers and trained midwives. However, the Kenyan Penal Code has yet to be revised in line with the new constitution and many health practitioners may be uninformed about their legal status and hesitant to provide abortions.[2]

Medical abortion (MA), using mifepristone and misoprostol, is a safe, effective alternative to surgical abortion.[4] Misoprostol can also be used on its own when mifepristone is not available, though it is a less effective option. Availability of these drugs in Kenya is largely limited to private clinics and pharmacies. Pharmacy workers, including pharmacists, can inform clients of methods and offer referrals, but abortion medications can only be legally obtained when supplied against a valid prescription.

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Globally, evidence demonstrates that men and women go to pharmacies to seek abortion, as pharmacies are relatively easy to access and offer anonymity.[5 6] Pharmacies in Kenya therefore have an important role in ensuring clients are aware of available options, providing referrals, and dispensing MA products safely when presented with a prescription.

Previous studies have examined pharmacy provision of health services in Nairobi[7–9] but little is known about pharmacy provision of MA across Kenya. This study sought to generate evidence on pharmacy workers' (including pharmacists, technicians, assistants and any pharmacy worker providing customer support) knowledge and provision of abortion services in Kenya. The specific objectives were: (1) to assess pharmacy workers' knowledge of mifepristone and/or misoprostol for MA and (2) to examine self-reported and actual provision of abortion information and methods among pharmacy workers.

METHODS

Data collection

In April and May 2013, two methodologies were used to collect data on MA knowledge and provision among pharmacy workers in the three largest cities in Kenya: Nairobi, Mombasa and Kisumu. First, a structured survey was conducted among pharmacy workers. In each city, 100 pharmacies were sampled from a list of all registered private pharmacies yielding a total sample of 300 pharmacies. Selection criteria for study participants included dispensing medicines and having worked at the pharmacy for at least 6 months. Pharmacy workers were asked to give informed consent prior to being interviewed by a trained research assistant. One interview was conducted per outlet, during which pharmacy workers were asked about their training, knowledge of abortion services and the information and methods they provide.

As interview responses do not always reflect real-life practice, mystery client surveys were also conducted. Twelve women aged between 17 and 31 years visited pharmacies posing as clients seeking an abortion service without a prescription. The fieldworkers received 2 days of training in which they practised role-playing and giving standardised responses. Informed consent was obtained from the proprietor of each pharmacy for mystery client visits in the ensuing 6 months. A total of 138 pharmacies were visited by mystery clients, including 104 pharmacies that participated in the pharmacy worker survey. In total, 401 mystery client visits were conducted. Each pharmacy was visited an average of three times, by different mystery clients on different dates at least 3 days apart and at least 1 week after the pharmacy worker survey. Within 1 hour of each visit, the mystery client completed a structured questionnaire.

Ethical approval

Ethical approval was obtained from the Ethics Review Committee of the Kenya Medical Research Institute, the Institutional Review Board of the Population Council and the Marie Stopes International Ethics Review Committee.

Data analysis

Data were analysed descriptively. Pharmacy workers were asked about the type of information provided to clients seeking abortion services, and were then categorised as non-providers or providers of information. Non-providers included individuals who did not provide any information other than advising against termination, while those who referred clients to health facilities, gave information on abortion methods, and/or advised clients to seek counselling were counted as providers of information, whether or not they also advised against termination. In the mystery client survey, pharmacy workers were considered to be providers of information or methods if they provided MA information or methods to any of the mystery clients that visited their pharmacy.

RESULTS

Pharmacy worker survey respondents

Out of 300 pharmacies sampled, 26 could not be traced because they had closed or moved premises. The remaining 274 pharmacies were invited to participate in the survey; 235 structured interviews were completed. Pharmacy workers at 39 sampled outlets declined to participate, yielding a response rate of 86%.

The mean age of respondents was 31 years, and 51.5% of respondents were male (Table 1).

Knowledge and training of pharmacy workers on MA

A higher proportion of pharmacy workers had heard of misoprostol than mifepristone (87.5% vs 39.2%) and were able to report a correct misoprostol-only regimen than a combined mifepristone-misoprostol regimen for medical termination (19.3% vs 9.2%). Among respondents who reported having heard of misoprostol, 18.3% were unable to name any side effects and 17.8% were unable to name any complications of its use for abortion. Some 72% mentioned excessive bleeding as a complication, but only 15.3% mentioned infection and 22.8% mentioned the risk of incomplete abortion. Respondents were also asked for which conditions misoprostol is registered; respondents named peptic ulcers (72.3%), labour induction (34.7%), pregnancy termination (30.2%), postpartum haemorrhage (14.4%) and post-abortion care (6.9%).

The proportion of pharmacy workers who had received abortion training was low (13.7%). Training on misoprostol-only was more common (53.1%) than mifepristone-misoprostol combined (three respondents; 6.3%). Abortion training was received from a university or medical college (71.9%) or

Table 1 Characteristics of pharmacy workers in the structured survey (*n*=235)

Characteristic	Total [*n* (%)]
Location	
Urban	80 (34.3)
Peri-urban	130 (55.8)
Rural	23 (9.9)
Gender	
Male	120 (51.5)
Female	113 (48.5)
Age (years)	
22–27	66 (29.6)
28–34	115 (51.6)
35+	42 (18.8)
Education	
Secondary education	15 (6.5)
College	190 (81.9)
University	27 (11.6)
Training received to dispense medicines	
No training received	11 (4.8)
Training received	217 (95.2)
Abortion training received*	
No training received	202 (86.3)
Training received	32 (13.7)
Medical methods	17 (53.1)
Surgical methods	22 (68.8)
Clinic size (staff) (*n*)	
1–2	54 (23.3)
3–5	122 (52.6)
6+	56 (24.1)

*Including a one-to-one discussion on the topic or a group training event.

non-governmental organisation (25.0%). Nearly half (45.5%) the respondents wanted more information or training on abortion services. The most commonly requested training topics among this group included training on MA methods (66.7%), legal and policy provisions around abortion (49.5%), and recognition and management of complications (31.4%).

Provision practices of pharmacy workers

Just under half (49.8%) of pharmacy workers reported providing information on abortion to clients during the structured survey. The most common information provided was a referral to a health facility (41.3%). Ten pharmacy workers reported providing information on methods (two medical, six surgical, two not specified). Only 10 (4.3%) pharmacy workers reported that they provided MA methods. Of these, data was missing for one pharmacy worker; the remaining nine (3.8%) reported offering misoprostol-only MA. Seventy-four pharmacy workers (31.5%) reported that they stocked MA drugs, but more commonly misoprostol (100%) than mifepristone (2.7%).

Provision of information on abortion methods was more common in mystery client visits than in self-report; 62.1% of pharmacies gave information about surgical methods in one or more of the encounters, and 53.7% gave information about medical methods. Information about medical methods was usually limited to misoprostol-only (51.5%) rather than mifepristone-misoprostol combined (6.3%) (Table 2).

Misoprostol was offered to mystery clients by a total of 28 pharmacies (25.7%) and mifepristone-misoprostol combined was offered by three pharmacies (2.8%). Additionally, surgical methods were offered by 25 (26.6%) pharmacies. While information on how to use the medication was provided by 89.3% of these 28 pharmacies, they were less likely to inform clients about side effects (59.8%), complications (55.1%), when (31.1%) and where (31.5%) to seek help in case of complications, and effectiveness of the drug (50.6%). The option of family planning was discussed or recommended to clients in only five encounters.

Demand for abortion services

Of the 119 (50.6%) pharmacy workers who reported providing abortion information or methods, the mean reported monthly number of women seeking abortion was 12. Of 101 (42.9%) pharmacy workers who reported not providing information or termination methods to women seeking abortion, 74% reported that clients ask for these services.

DISCUSSION

Pharmacy workers often serve as frontline providers of health care, and those who participated in the study reported that they experienced a demand for

Table 2 Medical abortion provision practices

Methodology	Structured survey (Total *n*=235) %	Mystery client pharmacies (Total *n*=138) Total n*	%
Do not provide any information or advice	49.4	136	16.9
Provide information or advice on abortion services	49.8	136	83.1
Gave information on abortion methods	4.3	130	61.5
Provide methods of abortion	4.3	97	42.3

*Total *n* supplied for each variable due to missing data in the mystery client survey.

abortion services. It is important that pharmacy workers have adequate knowledge of MA so that they can correctly inform clients without a prescription of their options, and can provide clients with a prescription with the information and products they need. The survey revealed a lack of knowledge among pharmacy workers about correct regimens for MA drugs, their registration status, potential side effects and abortion complications. This is not surprising considering the low proportion of pharmacy workers who had received any form of abortion training.

Pharmacy workers offered MA methods without prescription to mystery clients on some occasions. Most mystery clients who were offered misoprostol for MA were not informed about side effects, abortion complications or about contraceptive methods. These findings are consistent with a mystery client survey undertaken in Nairobi in 2008, which found that 12% of pharmacy workers were willing to dispense misoprostol for abortion but instructions for its use were very poor.[7] The findings also reflect practices in other locations: provision of inaccurate, incomplete MA information by untrained pharmacy workers has been documented globally.[10–15]

In Kenya, training pharmacy workers on MA methods and information, and contraceptive counselling for MA clients, may be an effective strategy to reduce the incidence of unsafe abortion. Almost half the pharmacy workers interviewed wanted more training on abortion. Pharmacy workers should also receive training on referrals, to ensure adequate collaboration between pharmacy workers and medical practitioners. Finally, training could cover the registration status of MA drugs and the legal framework for providing MA. This may prevent women being turned away from pharmacies and resorting to unregistered vendors, where the risk of receiving inadequate information is likely to be higher.[16] Further research is needed to better understand the barriers that prevent pharmacy workers from providing MA services and to evaluate the effectiveness of different training regimens in encouraging safe, high quality pharmacy provision of abortion information and methods within existing legal standards.

This study is the first to use pharmacy worker interviews and mystery client surveys to triangulate evidence on MA knowledge and service provision in multiple locations across Kenya. The study has a number of limitations. Registered pharmacies were sampled, thus excluding informal drug sellers who may be more likely to provide abortion services. Some of the pharmacies that were sampled for each component (survey and mystery client visit) were not the same. In addition, where the same pharmacy was included in both components, it is possible that the pharmacy worker interviewed was the not the one who interacted with the mystery clients. The number of mystery clients varied by pharmacy, meaning that detection of provision of abortion was more likely in those pharmacies that received a higher number of visits. The information gained from the pharmacy worker survey may be subject to recall bias and under-reporting due to the sensitive nature of the topic. Additionally, it was not possible to determine whether the practices of interviewees were based on personal practice or the wider policy of the pharmacy. There was also potential for misreporting or recall bias on the part of the mystery client, although this was minimised through immediate completion of a structured survey after the encounter. It is possible that pharmacies amended their practices because they were aware that a mystery client would be visiting, though this risk was minimised as pharmacy workers were not told of the exact date when such visits might occur within a 6-month period.

In conclusion, pharmacy workers have the potential to expand access to safe MA in Kenya and they play an important role in providing abortion information and referrals. Knowledge of MA drugs and their registration status is limited, and provision of MA methods is low, although this could be at least in part due to under-reporting for fear of legal repercussions. Training is required to ensure effective and high-quality MA information and method provision and to expand access to safe abortion within existing legal standards.

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Competing interests None declared.

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