

# Provision of Emergency Contraceptive Pills in Kinshasa's Informal Drug Shops: Results from a Mystery Client Study

**CONTEXT:** Despite the prominence of informal drug shops as sources of contraceptives in Kinshasa, Democratic Republic of the Congo, evidence on the quality of services they provide is scant. Given efforts to leverage the private sector to increase contraceptive access, evaluating the contraceptive knowledge, attitudes and practices of these providers is warranted.

**METHODS:** In April–May 2018, a mystery client study on the provision of emergency contraception (EC) was conducted in 854 informal drug shops in Kinshasa. Twelve mystery clients, presenting as younger or older than 18 and married or unmarried, visited the outlets to request something to “avoid getting pregnant” after unprotected sex, and to purchase the recommended medicine. Frequencies of key outcomes were calculated, and chi-square testing assessed associations between client age and marital status and the methods and counseling received.

**RESULTS:** Overall, providers recommended EC in 77% of visits, and in 54% of visits, clients left with the method. In 62% of the visits in which providers recommended EC, they specified a time frame for taking the pill; the correct window of efficacy was indicated in 75% of these visits. In 18% of visits, other (noncontraceptive) drugs were provided, and in 7% of visits, providers did not help the client. Regardless of the visit outcome, providers were nearly always deemed respectful (96%).

**CONCLUSIONS:** Leveraging informal outlets to increase contraceptive provision will require identifying quality outlets, strengthening supply chains and advocating for policy changes that recognize them as effective contraceptive providers without decreasing their perceived advantages for women.

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Efforts are underway to increase the use of family planning in several low-income countries as a result of such initiatives as FP2020; however, leveraging the private sector to improve access to modern contraceptives remains a key challenge.<sup>1,2</sup> While government-run facilities often do not offer sufficient coverage, or can create barriers because of costs, lack of anonymity and providers' attitudes,<sup>3,4</sup> a growing body of evidence suggests that private-sector pharmacies and drug shops might be able to address some of these barriers, and effectively act as modern contraceptive sources—especially for young clients.<sup>5,6</sup>

In Kinshasa, Democratic Republic of the Congo (DRC), modern contraceptive prevalence remains low at 27% for all women in 2018, and especially so for women aged 15–24 (24%),<sup>7</sup> who face multiple barriers to accessing family planning services at public facilities.<sup>8</sup> In addition, analysis of the family planning supply environment reveals formidable challenges to ensuring continuous and quality provision of adequate counseling and contraceptive methods throughout the national public health system.<sup>9</sup> Recurrent stockouts, lack of trained personnel, costs and distances to facilities limit the capacity of government-run facilities to support and increase contraceptive use.<sup>10</sup> In this context, private,

local pharmacies may be especially promising for youth living in Kinshasa, who largely (68%) cite “pharmacies” as their principal source of contraceptives.<sup>7</sup> Indeed, leveraging the private sector—along with mobile- and community-based distribution—are all strategies recommended in the DRC National Strategic Plan for Family Planning 2014–2020.<sup>11</sup>

In other Sub-Saharan African countries, the private sector is integrated into national health systems via registration and supervision efforts with a clearly established classification of “pharmacies,” followed by second-tier but formally recognized “drug shops” or “chemists.”<sup>12</sup> In contrast, out of the estimated 5,000–6,000 retailers operating in Kinshasa alone in 2015, only 105 were officially registered as pharmacies with the Ministry of Health; all others are considered informal drug shops.<sup>13</sup> The government considers these outlets to be illegal, and therefore does not engage in any capacity-building, supply or monitoring activities with them.<sup>14</sup> These drug shops tend to be perceived as outlaw operations, overflowing with counterfeit medicines<sup>15</sup> and “run by nonexpert hands, fake pharmacists who enjoy manipulating medicines like simple shopkeepers.”<sup>16</sup> The FPwatch survey conducted in 2015 confirmed the largely unregulated status of these drug

shops—operating without a license and most commonly run by staff with no health qualifications.\*<sup>17</sup>

However, that survey also found that providers at informal drug shops represented 79% of those offering at least one modern contraceptive besides condoms—while the public sector represented only 11%—and recommended that these informal drug shops be integrated into the national health system with training, monitoring of stock and supervision.<sup>17</sup>

The study presented here is, to our knowledge, the first to go beyond an inventory of family planning methods available at these informal outlets to measure the quality of service that can be expected by adolescent and young women who will typically walk through their doors seeking contraceptives. Our mystery client study design builds on a large body of literature using this approach to collect unbiased evidence on the performance of health care providers from the perspective of the service user.<sup>18–21</sup>

The focus of the scenario enacted by the mystery clients was emergency contraception (EC). Five key factors supported this choice: First, this study was conceptually a follow-up to a previous mystery client study conducted in Kinshasa, in which women explicitly asked for EC at 73 registered pharmacies.<sup>22</sup> Findings from this study indicated that registered pharmacists overall provided decent quality services: Seventy-four percent of the clients received EC, and 65–77% of the pharmacists were able to correctly describe the method's time frame of effectiveness and possible side effects. Feedback from family planning stakeholders during the results presentation, however, suggested that this study did not reflect the typical experience of young women living in Kinshasa who, when at risk for unintended pregnancy following unprotected sex, were more likely to visit their nearest drug shop and might not know the exact name of the methods they needed. The design of the study presented in this article addresses these shortcomings.

Second, because EC is an emergency method that requires timely provision and counseling on delays, possible side effects and alternative family planning methods, and is frequently requested by young people in the midst of a potentially embarrassing predicament, it has often been used in research to evaluate providers' capacity to deliver adequate, respectful and confidential services. Third, EC is one of the three methods (along with the pill and male condoms) most commonly sold by drug shops in Kinshasa.<sup>17</sup> Fourth, a high proportion of young women in Kinshasa report EC as their primary contraceptive method (23%).<sup>23</sup> And finally, national guidelines on reproductive health services recommend that EC providers also counsel clients on other regular contraceptive methods, making

EC provision a possible entry to measure additional family planning counseling offered by drug shop staff.

The objectives of this research are twofold. First, it evaluates access to EC among young women at risk for unintended pregnancy at the outlets to which they are most likely to turn. Second, it seeks to assess the quality of service provided at these outlets, in terms of providers' technical knowledge, attitudes and practices. This second objective will contribute to building evidence on the integration of informal drug shops into the national health system.

## METHODS

### Drug Shop Sample

In the absence of an official registry of all informal drug shops in Kinshasa, the research team relied on a census conducted by the Ministry of Health in 2011, which listed 1,763 small outlets, 98% of which had not received authorization to operate from the government.<sup>24</sup> Drug shops in the difficult-to-access military health zone (Kokolo) and a very distant rural health zone (Maluku 2) were excluded for convenience reasons, leaving a sampling frame of 1,694 drug shops.

To obtain a confidence level of 95% (with a confidence interval of 3), the research team calculated a required sample size of 655 out of the known population of drug shops; however, as we were expecting a large number of outlets to not be found during the data collection phase, we oversampled by 30% (195 outlets), for a minimum of 850 randomly selected drug shops to be visited in April and May 2018. In all, 854 drug shops were visited.

An issue emerged almost immediately during the test visits conducted during the mystery client training phase; nearly half of the outlets recorded in the Ministry of Health census could not be located, because they had either closed or moved since the census had been completed. In addition, buildings in the capital city may not have a full or any address designation, which further complicated the location of specific shops. To avoid having too many drug shops recorded as “not found” in the sample, the researchers decided that if the mystery client could not locate the exact outlet listed, she would walk (always starting with her right hand facing the street) until she found a similar outlet to replace it. The mystery clients were dispersed enough throughout the city to ensure that no drug shops would be visited twice by different people. In total, 60% of the drug shops included in this study were replacements that did not appear in the original listing. Thus, the 854 drug shops visited by the mystery clients in 33 of the 35 health zones of Kinshasa form a large convenience sample; its representativeness is unknown.

Due to both the difficulty of locating the outlets and the anticipated reluctance of providers to give information to researchers associated with the Ministry of Health, the research team did not notify the outlets selected for the study in advance, nor were they debriefed after the visits were completed.

\*Staff operating informal drug shops in Kinshasa range from degreed pharmacists to “the owner's second cousin,” with a wide range of profiles in terms of education levels (including medical and nursing education). We use the term “providers” generically to describe their function (to provide EC pills).

## Training and Data Collection

The research team recruited and trained 12 young women aged 16–26 in April 2018 to act as mystery clients. Five of them had previously been involved in data collection activities, and seven were nursing students who had participated in community-based contraceptive distribution projects; the research team directly contacted young women who had performed well in those activities and had shown commitment and resourcefulness. In keeping with similar studies conducted in Sub-Saharan Africa,<sup>25–27</sup> the three-day training included information on EC and other methods; presentation of mystery client methodology and objectives; learning and practice of predetermined scripts; and practice in the use of the digital data collection tool, Open Data Kit, to record visit reports. Trainees also practiced their role in drug shops (excluded from the sample) close to the research office in downtown Kinshasa.

For the visits, each mystery client was assigned two basic characteristics (younger or older than 18, and married or unmarried) and trained to perform the same scenario to obtain comparable data from each visited outlet.<sup>28</sup> The research team assigned profiles equally between the 12 mystery clients (three clients for each married/unmarried and younger/older than 18 combination), trying to align them as much as possible with their actual age and marital status.

Mystery clients had to pose as a young woman who had had unprotected sex “the other night” (without specifying the exact date) and wanted a solution to “avoid getting pregnant.” The research team specifically instructed the mystery clients not to mention EC by name unless the provider mentioned it first. The project provided them with money to purchase any medicine they were offered, and they subsequently returned the drugs to the project.

Also, mystery clients were trained to wait for specific questions or additional information the drug shop personnel may spontaneously provide (about the time frame for EC use, dosage, possible side effects and other family planning methods) before asking questions that might prompt the provider to give this information. Aside from this predetermined scenario, the young women were free to define other elements of the character they would play (e.g., whether they were in school, whether their parents were very strict, if they were timid or bold), but were instructed to remain consistent with those details during all of their visits. Finally, mystery clients were trained to observe the provider’s attitude during the interaction, both through their own evaluation of the provider’s helpfulness and respectfulness, and through systematic recording of such specific incidents as providers asking intimate questions, lecturing the client or raising their voice. The training and field practice helped the clients prepare for observing and evaluating provider attitudes, including possibly hostile reactions or prying questions. Mystery clients were instructed to not let the provider know that they were, in fact, nursing students (and as such, very knowledgeable about family planning methods), and to stay in character

at all times, with the exception of situations in which they might feel unsafe or forced to take the provided medicine on site.<sup>29</sup>

To reduce recall bias, the clients recorded the results immediately after each visit on a smartphone, using the Open Data Kit application. The application was programmed to automatically skip questions on the basis of previous answers to cover all possible scenarios (e.g., EC pill received or not, and if not, what happened instead). All mystery clients recorded basic descriptive characteristics of the drug shop visit, such as size of the shop and the gender of the provider, and the visit’s outcomes (EC or other drug received, and counseling). If the clients received counseling for EC during their visit, they also recorded the quality of counseling provided. In keeping with the World Health Organization (WHO) guidelines on EC provision, we defined quality counseling to include recommending the client take EC as soon as possible and before 72 hours† after unprotected sex; listing the main possible side effects (irregular period, nausea, dizziness, headache) and indicating that they will most likely be mild; and counseling about additional contraceptive methods, such as pills, injectables and condoms (either for contraception or STI prevention). All clients, regardless of the visit outcome, recorded all questions asked, other family planning methods mentioned and overall friendliness, patience and discretion of the provider.

Service provision was deemed adequate if the provider recommended using EC and sold the correct product to the client. A visit was considered successful if the mystery client left the drug shop with a dose of EC.

## Data Analysis

The research team analyzed all visit reports using STATA 14 to calculate the frequencies of key outcomes and to assess, using chi-square tests, potential associations between client profile (age and matrimonial status) and the methods and counseling received during the visit.

The study protocol was approved by the Tulane University Institutional Review Board and by the Ethics Committee of the Kinshasa School of Public Health.

## RESULTS

### Drug Shop and Provider Characteristics

Almost all of the visited drug shops (99%) consisted of at least one room (as opposed to directly opening on the street), and 16% sold nonpharmaceutical products, such as canned food and drinks or hygiene and cleaning supplies. Based on the mystery clients’ observations, 49% had electricity at the time of the visit. Fifty-six percent of the providers at the drug shops were female, and 44% were male.

†Revised WHO guidelines for EC provision indicate that EC pills can be effective up to 120 hours (five days) after unprotected sex. However, most EC brands sold in the DRC are still labeled “up to 72 hours,” and providers have not received updated training on the 120-hour period of efficacy. Thus, for the purpose of this study, we considered providers recommending clients take the pill “before 72 hours/three days” or “before 120 hours/five days” to be technically correct.

### Visit Outcomes

After hearing the mystery clients' story, providers in 80% of visits asked additional questions, including the exact date of the unprotected intercourse (79% of visits), the date of their last period (27%) and whether they had ever used a contraceptive method before (5%), which are relevant to the adequate provision of EC (Table 1). Overall, providers in only a few visits asked additional personal or irrelevant questions, such as the client's age (8%), marital status (6%) or whether their partner would allow them to use EC (5%).

In 77% of visits, providers recommended EC; in 70% of those, providers had at least one valid EC product in stock. Thus, 54% of all visits were deemed successful. Also, in all of the visits in which providers did not have EC in stock (23%), they were able to recommend another point of sale to the client. Mystery clients who were referred to other outlets did not visit them.

• *EC products received.* During the 460 successful visits, the providers offered a wide range of brands and prices, reflective of the complexities of the private pharmaceutical market in the DRC (Table 2). All except for one small manufacturer (Pharmaceuticals Limited) had current Good Manufacturing Practice approval from the WHO, and all of the products sold were labeled as

**TABLE 1. Outcomes of mystery client visits to informal drug shops, Kinshasa, Democratic Republic of the Congo, 2018**

Outcome	N	% (N=854)
<b>Provider asked additional questions</b>	684	80.1
Exact date of unprotected intercourse	670	78.5
Exact date of last menstrual period	230	26.9
Previous contraceptive use	41	4.8
Client's age	65	7.6
Marital status	47	5.5
Partner will allow use of EC	45	5.3
<b>Provider recommended EC</b>	658	77.0
<b>Provider sold valid EC product to client</b>	460	53.9
<b>Provider did not have EC in stock, but gave referral</b>	198	23.2
<b>Provider offered additional information about EC†</b>	636	96.7
Effectiveness time frame	405	61.6
Possible side effects	243	36.6
Referred to instruction leaflet	67	10.2
<b>Provider recommended something other than EC</b>	196	22.9
Taking some other (noncontraceptive) medicine	157	18.4
Taking a different contraceptive method (without mentioning EC)	73	8.5
Consulting a doctor at a health center	42	4.9
Go to another pharmacy	32	3.7
Contact someone about an abortion	4	0.5
Other	18	2.1
<b>Provider did not help client</b>	56	6.6
Said nothing could be done	27	3.2
Did not know what to do	18	2.1
Said there were solutions, but refused to help	11	1.3

†Among the 658 providers who recommended EC. Note: EC=emergency contraception.

**TABLE 2. Percentage distribution of successful mystery client visits, by brand of emergency contraceptive product sold; and average price of products**

Brand (manufacturer/country)	% (N=460)	Average price
Pilule S (Synokem Pharmaceuticals, India)	33.4	CDF 2,370 (US\$1.45)
G Nancy (Alliaance Biotech, India)	30.2	CDF 2,101 (US\$1.29)
Alèze (Jai Pharma, India)	10.7	CDF 2,370 (US\$1.45)
Pilule du Lendemain (Synokem Pharmaceuticals, India)	9.8	CDF 2,244 (US\$1.38)
Planfam (Par Laboratories, India)	9.3	CDF 2,216 (US\$1.36)
Norlevo (Delpharm Lille, France)	6.3	CDF 4,959 (US\$3.04)
Contraception d'Urgence (Pharmaceuticals Limited, India)	0.2	CDF 3,000 (US\$1.84)
Total	100.0	na

Notes: A visit was considered successful if the mystery client left the drug shop with a dose of EC. Figures may not total 100.0 because of rounding. CDF=Congolese francs. na=not applicable.

1.5 mg levonorgestrel formulation, which is the drug officially approved and recorded on the DRC List of Essential Medicines (regardless of brand); the research team did not test for the quality or exact composition of the drugs obtained during this study. The least expensive brand was G Nancy (2,101 Congolese francs [CDF]; US\$1.29), while Norlevo was the most expensive (CDF 4,959 [US\$3.04]). The most commonly recommended brands were Pilule (CDF 2,370 [US\$1.45]; in 33% of all successful visits) and G Nancy (in 30%).

In an additional 82 visits in which providers recommended EC, mystery clients received Duogynon, a pill manufactured across the Congo River in Brazzaville (Republic of Congo). Duogynon is sold in crude paper packaging with faded labels marked GYNAKOSID, and has a composition of 5 mg of methylestradiol. Although not approved by international standards as an EC method, Duogynon is sold as such in drug shops, and is widely popular among Congolese women, who often use the brand name to mean EC.<sup>30</sup> Very little is known about its market and supply chain into the DRC, but its low price (CDF 664 [US\$0.41])—about a quarter of the average price for a dose of EC sold in these outlets (CDF 2,451 [US\$1.50])—might explain its popularity. For the purpose of this study, we did not consider a visit in which clients received Duogynon as successful.

• *Quality of counseling on EC.* During visits in which providers recommended EC, additional information on the method was offered to the mystery clients 97% of the time. Specifically, in 62% of visits in which providers recommended EC, the providers specified a time frame for taking EC (30% spontaneously and 32% when prompted). In visits in which a time frame was specified, three-quarters of providers indicated a correct 72-hour window (as labeled on the packages in Kinshasa), and an additional 2% mentioned the current WHO recommendation for five days/120 hours of efficacy. In 14% of visits, providers did not give accurate information but nonetheless said it was imperative to take EC “as soon as possible,” while in the remaining 9% of visits, providers gave erroneous recommendations (e.g., “the morning after,” “before the intercourse,” “no more than 48 hours after intercourse”).

In only 37% of visits in which providers recommended EC did they give any information on possible side effects (3% spontaneously and 34% when prompted). WHO guidelines for EC indicate that side effects are not common, typically mild and normally resolved without further treatment; during visits in which providers discussed side effects, a majority suggested as much (76%; not shown). During visits in which providers discussed possible side effects, the following were specifically mentioned: irregular or intermittent periods (in 10%), nausea (9%), dizziness (5%), headache (3%) and abdominal pain (2%); those were also in line with WHO recommendations for EC counseling. In 4% of visits in which side effects were discussed, however, providers erroneously indicated that repeat use of EC may cause infertility or cancer, a common myth circulating about most hormonal methods in the DRC.

• **Recommendations other than EC.** During 23% of all visits, providers did not recommend EC (Table 1). Overall, in 18% of visits, providers recommended taking another (noncontraceptive) medicine, and in 9%, providers suggested taking a different contraceptive method, most often the monthly pill. In others, the provider recommended consulting a doctor at a health center (5%) or visiting another drug shop (4%). Finally, in a small proportion of visits, providers did not help the client, either by suggesting that there was nothing to do (3%), or that they did not know what to do (2%). In very few visits (1%), providers explicitly refused to help the client.

In 59% of visits in which providers recommended a medicine other than EC to clients, they suggested taking a deworming drug, such as Decarys or Tanzol (not shown). Providers also recommended the antibiotic tetracycline, quinine and various anti-inflammatory or vitamin cocktails. In addition, in nine visits, providers suggested taking misoprostol (which can be used as an abortifacient), with five of them identifying the drug by name and four describing its effects without naming the product. Finally, in four visits, providers either explicitly indicated that the client should seek an abortion or alluded to the procedure.

In the majority (71%) of visits in which providers recommended taking one of the aforementioned medicines, they had it in stock, with prices averaging CDF 736 (US\$0.45). The most expensive—quinine—cost CDF 1,871 (US\$1.15) per dose, while the cheapest and most commonly provided—Decarys—cost CDF 243 (US\$0.15). In total, 143 clients purchased a medication other than EC from the visited outlet. Additional qualitative notes recorded by the clients suggest that recommended dosage for all of these medicines varied greatly by provider, with some exceeding potentially toxic doses.

Finally, in only 11 out of 854 visits (1%) did providers explicitly refuse to provide the mystery client with an EC solution; reasons invoked included that a doctor's note was necessary and that it was illegal to sell EC to young women and unmarried women.

• **Counseling on additional contraceptives and health services.** Regardless of the outcome of the visit, mystery clients

recorded whether their provider mentioned other contraceptive methods during the visit. In most visits (70%), providers never mentioned or suggested using another contraceptive method. During the visits in which providers recommended using another method, the most commonly mentioned methods were the pill (in 40% of these visits), condoms (28%), injectables (22%) and calendar method (13%). When providers recommended a specific contraceptive, they nearly always (96–100% of visits) had the method in stock.

Drug shop personnel suggested going to see another provider to discuss family planning issues, whether spontaneously or prompted, in only 7% of all visits; among those visits, the provider recommended a visit to a health center in 94%, directed the client toward another drug shop in 11% and suggested they should see a community health worker in 1% (multiple responses were possible).

### **Evaluation of Providers' Knowledge and Attitudes**

Overall, the clients reported the attitudes of the providers to be positive. Ninety-two percent were greeted when entering the outlet, 98% indicated that the provider gave them time to carefully explain their problem and 82% felt that the provider had taken sufficient time to explain the possible solutions.

The clients were somewhat more nuanced in their evaluation of providers' technical knowledge of EC. Only 42% judged their provider to be very knowledgeable, and 56% said they appeared to be very comfortable explaining important aspects of method use, such as time frame and side effects (not shown). Conversely, about one-fifth of providers were deemed “not really” (14%) or “not at all” (6%) knowledgeable on these topics; these subjective outcomes were consistent with the visits' actual outcomes.

However, nearly all mystery clients reported that providers were completely discreet and respectful throughout the visit (93% and 96%, respectively). The clients recorded 35 negative incidents over 854 visits (4%). The majority of these incidents had to do with receiving a “moral lesson” on safe sexual behaviors (17 cases), being asked intimate questions (14) and being asked to bring their boyfriend or parents to the drug shop (11). In nine cases, providers yelled at the young women, and in five cases, they brought additional people into the conversation. Two providers forced the client to leave their outlet on the spot.

We conducted additional analysis of potential associations between client profile (age and marital status) and visit outcomes, using chi-square tests, and only one significant difference appeared: A greater proportion of clients presenting as younger than 18 than of those presenting as older received drugs other than EC (17% vs. 11%;  $p=.01$ ).

### **DISCUSSION**

Local drug shops are regularly acknowledged as the preferred source of contraceptives for women living in Kinshasa, because of their accessibility, affordability and

discretion.<sup>30</sup> Yet despite growing interest in total market approaches and the work of some social marketing organizations to expand access to contraceptives,<sup>8,31,32</sup> little is known about the quality of service that can be expected of these outlets, and the opportunities they present to expand contraceptive counseling and provision at the community level. National public health programs and Ministry of Health officials are typically reluctant to engage with these providers and consider their unregistered status as a marker of indiscriminately poor service quality.

Findings from this study, however, show that there is a large subset of these unlicensed drug shops that are capable of adequately responding to the contraceptive needs of women living in their community, thus representing an opportunity for expanding contraceptive access. In fact, when compared with a simulated client study conducted in 2016 at registered pharmacies in Kinshasa,<sup>22</sup> unlicensed drug shops present a very similar profile: About three-quarters of providers in both categories offered EC to clients and were able to adequately counsel them on time frame and dosage, but not necessarily on side effects (65% at registered pharmacies and 45% at drug shops). In other words, the level of contraceptive services, in terms of both technical knowledge and attitude (clients judged more than 90% of all providers in both studies to be helpful and respectful), is not fundamentally different between most registered pharmacies and unlicensed drug shops.

Our study also highlights troubling issues with informal drug shops' provision of EC, such as their recommending noncontraceptives or giving inaccurate information concerning EC's effects on future fertility, in about 20% of the visits. This is in line with results from similar studies conducted in Kenya<sup>26</sup> and Nigeria,<sup>27</sup> and may compound the fears of many national and international officials when it comes to engaging with the private sector in the DRC. Regardless of legal status, a minority of pharmacy and drug shop providers are indeed partially responsible for perpetuating the use of noncontraceptives (such as deworming or antimalarial medicines), sustaining negative myths about family planning methods and circulating unauthorized pharmaceutical products in the community (such as Duogynon), thus casting a negative shadow on the majority of outlets that offer appropriate information and medications to women seeking contraceptive solutions.

Results from this study suggest that the thousands of unlicensed drug shops currently operating in Kinshasa may represent an enormous opportunity to expand contraceptive access in the communities. Some international family planning nongovernmental organizations (NGOs) in the DRC already support informal drug shops with trainings, contraceptive supplies and sales monitoring, but fully leveraging these outlets' potential would require efforts from the national health authorities to create a legitimate status for these outlets, define and share guidelines and norms, and monitor their activities through the national health information system. This could prompt resistance from the drug shops themselves, who may see

the registration process—even in a less-constraining form than the one existing for licensed pharmacies—as placing additional administrative and financial burdens on their operation. The key challenge would thus be to ensure that minimum standards are met for contraceptive provision and that sales are recorded as part of national family planning programs, without expecting these providers to fully act as clinical providers.

Pharmacies and drug shops, regardless of their licensing status, are fundamentally for-profit businesses whose principal objective is to sell products. This means that while they have enormous potential to increase contraceptive use if market incentives are in place for them to stock and offer methods, they have limited time and resources to invest in counseling or following up clients (and little incentive to do so). Counseling materials strategically placed within drug shops and pharmacies, such as flyers or self-service visual and audio messages approved by national programs and produced with NGO support, could help optimize the family planning transaction and counseling opportunities at these outlets.<sup>28</sup>

Existing literature confirms the limited capacity of drug shops and pharmacies to serve as points-of-entry to facility-based family planning service provision,<sup>26–28</sup> even in environments in which policies are in place to ensure pharmacy and drug shop clients are referred for full contraceptive counseling.<sup>33,34</sup> In addition, women often chose small, informal, private providers because they offer convenience, expediency and anonymity, which would decline if these providers were to take on counseling and referral responsibilities beyond recommending a visit to a health facility in case of problematic side effects. In other words, what family planning authorities may see as incomplete contraceptive services is precisely what will facilitate women's decision to use contraceptives if they have access to informal providers: a quick, anonymous interaction in which the minimum useful information is provided, and one's preferred method can be purchased as needed and at an affordable price. As health programs strive for client-centered approaches to quality, any successful effort to leverage these providers will thus need to preserve their perceived value for women as much as possible.

### Limitations

This study has certain limitations—first and foremost, the inherent instability of the population of small, informal drug shops. In the absence of a full census of private providers in Kinshasa, and given the difficulties in locating the listed outlets, our sample cannot be considered truly representative of all such drug shops. In addition, as the initial sample was drawn out of a census compiled by the Ministry of Health, there may have been a bias toward better-quality outlets in the initial universe. However, since more than half of the drug shops visited were replacement outlets that did not appear in the initial census, the data collection process is likely to have corrected this issue. As a result, the high number of drug shops visited and their

distribution across 33 health zones of Kinshasa make it very likely that the findings capture the typical experiences of young women in the capital city.

Second, presenting the drug shop staff with entirely naïve clients, who represented themselves as having no prior knowledge of EC solutions, was a departure from other studies in which women specifically asked for EC pills.<sup>22,35,36</sup> Thus, the research design does not provide information on the type of services and drugs received by women more experienced with this method. This also limits the results comparison between this study and the previous one conducted in Kinshasa's registered pharmacies,<sup>22</sup> since the latter used non-naïve clients. However, given the low awareness of the method across much of Kinshasa,<sup>11</sup> the researchers consider the choice of using young, inexperienced women as mystery clients to be justified.

Third, the use of seven out of 12 mystery clients with at least some medical background may have introduced bias into the visit results, either because they were more articulate than the average youth living in Kinshasa or because their technical knowledge may have made them more critical in evaluating the providers' responses and attitude. Significance testing on clients' responses, however, revealed no association between the clients' level of education and their assessment of the providers' attitude or willingness to provide EC.

## Conclusions

This study sheds some light in the black box of unlicensed drug shops operating in Kinshasa in terms of their ability to provide EC to young women facing the risk of unwanted pregnancies. It revealed a situation not as dire as initially expected by family planning stakeholders operating in the DRC. We found that the large majority of staff in these local drug shops gave useful, accurate and respectful information to young women. This result contradicts the widespread perception—especially among governmental authorities—that such locations are incapable of providing appropriate contraceptive services.<sup>15,16</sup> A major programmatic implication of this research is the need for family planning programs in the DRC to identify and develop partnership models with drug shops providing adequate contraceptive services for the methods they are typically offering, while recognizing that these outlets may not be willing to become fully registered as pharmacies. The “chemist” and similar categorizations used throughout Sub-Saharan Africa to designate this second tier of drug providers could serve as a model for structuring such a partnership, which could be leveraged through market incentives, such as social marketing programs, strengthened supply chain, and demand-creation activities at the community level. The key challenge, however, will be to reposition those drug shops in the contraceptive provision landscape by ensuring an acceptable level of quality without burdening them with tasks they may not be able to perform and that may, in fact, decrease their perceived advantages from a client-centered perspective.

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## RESUMEN

**Contexto:** A pesar de la importancia de las farmacias informales como fuente para obtener anticonceptivos en Kinshasa, República Democrática del Congo, la evidencia sobre la calidad de los servicios que prestan es escasa. Ante los esfuerzos para aprovechar al sector privado con el fin de aumentar el acceso a los anticonceptivos, se justifica evaluar los conocimientos, las actitudes y las prácticas anticonceptivas de esos proveedores.

**Métodos:** Entre abril y mayo de 2018, se realizó un estudio de cliente simulado acerca de la provisión de anticoncepción de emergencia (AE) en 854 farmacias informales en Kinshasa. Doce clientas simuladas que se presentaron como menores o mayores de 18 años y como casadas o solteras, visitaron los puntos de venta para solicitar algo para “evitar quedar embarazadas” después de haber tenido relaciones sexuales sin protección y para comprar el medicamento recomendado. Se calcularon las frecuencias de los resultados clave, y las pruebas de chi-cuadrado evaluaron las asociaciones entre la edad de la clienta, el estado conyugal, los métodos y el asesoramiento recibido.

**Resultados:** En general, los proveedores recomendaron AE en el 77% de las visitas; y, en el 54% de las visitas, las clientas llevaron el método. En el 62% de las visitas en las cuales los proveedores recomendaron AE, especificaron el tiempo adecuado para tomar la píldora; el 75% indicó la ventana correcta de eficacia en esas visitas. En el 18% de las visitas, se proporcionaron otros medicamentos (no anticonceptivos) y en el 7% de las visitas, los proveedores no ayudaron a la clienta. Independientemente del resultado de la visita, se consideró que los proveedores casi siempre fueron respetuosos (96%).

**Conclusiones:** Aprovechar los puntos de venta informales para aumentar la provisión de anticonceptivos requerirá identificar puntos de venta de calidad, fortalecer las cadenas de suministro y abogar por cambios en las políticas que los reconozcan como proveedores efectivos de anticonceptivos sin disminuir sus ventajas percibidas para las mujeres.

## RÉSUMÉ

**Contexte:** Malgré l'importance des dépôts de vente de médicaments informels en tant que sources de contraceptifs à Kinshasa (République démocratique du Congo), il n'existe guère de données sur la qualité de leurs services. Étant donné les efforts déployés pour mettre le secteur privé à contribution

dans l'élargissement de l'accès à la contraception, l'évaluation de la connaissance, des attitudes et des pratiques de ces prestataires à son égard est justifiée.

**Méthodes:** En avril-mai 2018, une étude par clientes fictives sur la fourniture de la contraception d'urgence (CU) a été menée dans 854 dépôts de vente de médicaments informels kinoïsis. Douze clientes fictives, se présentant comme ayant moins ou plus de 18 ans et comme mariées ou célibataires, se sont rendues dans les dépôts pour y demander quelque chose qui leur permette de « ne pas tomber enceintes » après un rapport sexuel non protégé et pour acheter le médicament recommandé. Les fréquences des principaux résultats ont été calculées et les associations entre l'âge et la situation matrimoniale de la cliente et les méthodes et le conseil reçus ont été évaluées par tests chi carré.

**Résultats:** Globalement, les prestataires ont recommandé la CU dans 77% des cas et, dans 54%, les clientes ont obtenu la méthode. Dans 62% des cas où les prestataires avaient recommandé la CU, ils ont spécifié un délai de prise de la pilule. La période correcte d'efficacité a été indiquée dans 75% de ces cas.

Dans 18% des cas, d'autres médicaments (non contraceptifs) ont été fournis et dans 7%, les prestataires n'ont pas aidé la cliente. Indépendamment du résultat de la visite, les prestataires ont presque toujours été qualifiés de respectueux (96%).

**Conclusions:** La mise à contribution des dépôts informels pour l'accroissement de l'offre contraceptive nécessitera l'identification des dépôts de qualité, le renforcement des chaînes d'approvisionnement et le plaidoyer en faveur de changements de politique qui reconnaissent ces dépôts comme prestataires efficaces de la contraception sans réduire leurs avantages perçus pour les femmes.

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