



Published in final edited form as:

Reprod Health Matters. 2018 December ; 26(52): 1522195. doi:10.1080/09688080.2018.1522195.

Comparing women's financial costs of induced abortion at a facility vs. seeking treatment for complications from unsafe abortion in Zambia

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Abstract

Although abortion is legal in Zambia under a variety of broad conditions, unsafe abortion remains common. The purpose of this project was to compare the financial costs for women when they have an induced abortion at a facility, with costs for an induced abortion outside a facility, followed by care for abortion-related complications. We gathered household wealth data at one

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Authors' contributions

AM contributed to the design of the study, secured IRB approval from the Guttmacher Institute, trained the first set of interviewers, monitored the fieldwork remotely, collaborated on the analysis, and led the write-up of the results. MD secured IRB approval from the University of Zambia and Population Council, trained the second set of interviewers, coordinated and supervised fieldwork including implementation of the study protocol including data cleaning, conducted a portion of the analysis, and collaborated on writing up the results. RA coded most of the data, conducted a portion of the analysis and collaborated on writing up the results. AB conceived of the original design of the study and contributed to various modifications to the study design, assisted in securing IRB approval, contributed to the study instruments, and participated in data interpretation. AA helped with the fieldwork supervision and implementation, conducted a portion of the analysis, and contributed to the write-up of the results. GG helped design the instrument, contributed to the analysis and to the write-up of the results. BV contributed to the study design, instruments, analysis and write-up.

Disclosure statement

No potential conflict of interest was reported by the authors.

Ethical approval

The project received approval from the Institutional Review Boards of Population Council, the Guttmacher Institute (USA), and the University of Zambia Biomedical Research Ethics Committee.

†The gross domestic product (GDP) per capita in Zambia in 2015 was USD 1305 (World Bank. World Development Indicators. 2016. <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>). The reason we chose to use GDP was because income data are not very reliable in a country where there is a large informal economy such as Zambia.

point in time (T1) and longitudinal qualitative data at two points in time (T1 and T2, three-four months later), in Lusaka and Kafue districts, between 2014 and 2015. The data were collected from women (n = 38) obtaining a legal termination of pregnancy (TOP), or care for unsafe abortions (CUA). The women were recruited from four health facilities (two hospitals and two private clinics, one of each per district). At T2, CUA cost women, on average, 520 ZMW (USD 81), while TOP cost women, on average, 396 ZMW (USD 62). About two-thirds of the costs had been incurred by T1, while an additional one-third of the total costs was incurred between T1 and T2. Women in all three wealth tertiles sought a TOP in a health facility or an unsafe abortion outside a facility. Women who obtained CUA tended to be further removed from the money that was used to pay for their abortion care. Women's financial dependence leaves them unequipped to manage a financial shock such as an abortion. Improved TOP and post-abortion care are needed to reduce the health sequelae women experience after both types of abortion-related care.

Résumé

Bien que l'avortement soit légal en Zambie au titre de différentes larges conditions, l'avortement à risque demeure fréquent. L'objet de ce projet était de comparer les coûts financiers pour les femmes quand elles avaient avorté dans une structure de santé avec les coûts d'un avortement provoqué en dehors d'un centre, suivi de soins pour des complications liées à cet avortement. Nous avons recueilli des données sur la richesse du ménage à un moment donné (M1) et des données qualitatives longitudinales à deux moments précis (M1 et M2), dans les districts de Lusaka et Kafue, entre 2014 et 2015. Les données ont été obtenues auprès de femmes (n=38) ayant obtenu une interruption volontaire de grossesse (IVG) ou un traitement des complications d'un avortement à risque. Les femmes ont été recrutées dans quatre établissements de santé (deux hôpitaux et deux dispensaires privés, un de chaque par district). Au moment M2, les soins des avortements à risque avaient coûté aux femmes, en moyenne, ZMW 520 (\$US 81), alors qu'une IVG leur coûtait, en moyenne, ZMW 396 (\$US 62). Près des deux tiers des coûts avaient été engagés au moment M1, alors qu'un tiers supplémentaire des coûts totaux était occasionné entre les moments T1 et T2. Les femmes des trois tertiles de richesse avaient demandé une IVG dans une structure de santé ou un avortement à risque en dehors d'un centre de santé. Les femmes qui avaient obtenu des soins pour avortement à risque tendaient à être plus éloignées de l'argent utilisé pour payer leurs soins après avortement. Par conséquent, la dépendance financière des femmes ne les prépare pas à gérer un choc financier tel qu'un avortement. Une amélioration de l'IVG et des soins après avortement est nécessaire pour réduire les séquelles de santé dont souffrent les femmes après les deux types de soins en rapport avec l'avortement.

Resumen

A pesar de que el aborto es legal en Zambia por una variedad de causales, continúa siendo común. El propósito de este proyecto fue comparar los gastos financieros de las mujeres cuando tienen un aborto inducido en un establecimiento de salud, con los gastos por tener un aborto inducido fuera de un establecimiento de salud, seguido de atención por complicaciones relacionadas con el aborto. Recolectamos datos sobre riqueza familiar en un momento (T1) y datos cualitativos longitudinales en dos momentos (T1 y T2), en los distritos de Lusaka y Kafue, entre 2014 y 2015. Los datos fueron recolectados de mujeres (n=38) que obtuvieron una interrupción legal del embarazo (ILE), o tratamiento por complicaciones de un aborto inseguro. Las mujeres fueron reclutadas de cuatro establecimientos de salud (dos hospitales y dos clínicas privadas, uno de cada

uno por cada distrito). En T2, el tratamiento del aborto inseguro (TAI) costó, en promedio, 520 ZMW (USD 81), mientras que la ILE costó, en promedio, 396 ZMW (USD 62). Aproximadamente dos tercios de los gastos habían sido incurridos para T1, y un tercio adicional de los gastos totales fue incurrido entre T1 y T2. Las mujeres en las tres terciles de riqueza buscaron una ILE en un establecimiento de salud o un aborto inseguro fuera de un establecimiento de salud. Las mujeres que obtuvieron TAI eran más propensas a estar más distanciadas del dinero utilizado para pagar por su servicio de aborto. Por lo tanto, las mujeres con dependencia financiera no están preparadas para manejar un shock financiero tal como un aborto. Se necesitan mejores servicios de ILE y atención postaborto para disminuir las secuelas de salud que sufren las mujeres después de ambos tipos de servicios relacionados con el aborto.

Keywords

safe abortion; post-abortion complications; financial costs; Zambia; mixed methods; qualitative methods

Background

Zambia is relatively unique in sub-Saharan Africa for having an abortion law that allows abortions to be legally performed under broad circumstances. Abortion, also called termination of pregnancy (TOP), can be legally provided in Zambia on the grounds of health, economic distress and rape, when three registered medical practitioners have signed off that these conditions have been met.¹ Yet, there exists a lack of awareness among providers and women alike about the situations in which abortion can be legally provided.^{2–5} In addition, negative social attitudes about abortion, and difficulties reaching facilities, inhibit women's access to safe services.^{4–6} Therefore, women take significant risks to terminate unwanted pregnancies. Zambia has an estimated maternal mortality ratio of 398 deaths per 100,000 live births,⁷ with 30% estimated to be due to unsafe abortion.⁸

According to the 2013–2014 Zambian Demographic and Health Survey (DHS), Zambia's total fertility rate was 5.3 whereas the wanted total fertility rate was 4.7.⁷ Modern contraceptive use stood at 33% for all women, 45% for married women and 38% for never-married sexually active women.⁷ Unmet need for family planning among married women (that is, women who do not want a pregnancy in the next two years and are not using a modern method of family planning) stood at 21%; 14% had an unmet need for spacing while 7% had an unmet need for limiting family size.⁷ Unmet need among never-married sexually active women aged 15–19 years was 64%.⁷ Within this population at risk for experiencing an unintended pregnancy, some will get pregnant and some will choose to abort.

Induced abortion within the limit of the law is meant to be offered free of charge at public health facilities in Zambia. Yet, facilities are underequipped to provide adequate services. A census of 153 facilities (hospitals and health centers) conducted in 2016 found that only 12% reported that they would be able to perform a medical or surgical first trimester abortion procedure.⁶ Medical abortion (MA) using mifepristone and misoprostol was officially introduced in Zambia in 25 public health facilities in 2009.² Misoprostol is more accessible although not frequently used in health facilities in Zambia. Expansion of MA

services has been slow,²⁻⁹ but it is becoming increasingly available. Pharmacists are legally allowed to sell it only with a prescription, but a study that interviewed a non-independent sample of 76 pharmacies in 2009 and 80 pharmacies in 2011 in Lusaka, Kafue and Copperbelt provinces found that 58–60% of pharmacists were willing to sell a mystery client misoprostol without a prescription.⁹ In 2009, no pharmacists provided the correct dosage of misoprostol and in 2011, only 21% of pharmacists provided correct dosage information.⁹ There are no studies on misoprostol use and its efficacy outside of health facilities in Zambia; information is lacking about how women use misoprostol. Nevertheless, not all abortions performed outside health facilities will result in complications which require medical care and conversely, not all legal abortions are safe.¹⁰

Women use various pathways to obtain abortions in Zambia. Some methods are less safe than others and can result in health sequelae which require financial resources to address. In settings such as Zambia where women theoretically have the choice to have a safe abortion (challenges of inadequate health facilities notwithstanding), what motivates a woman to choose an unsafe abortion over a safe abortion? One possible reason is the cost of different ways of inducing an abortion.

To understand the costs incurred by women and their families of a safe abortion, compared to an unsafe abortion after which a woman seeks care for complications, we gathered data on the financial costs of women's abortion-related experiences in Zambia. This longitudinal study assesses the costs of abortion for the woman and her family, comparing women who obtained an abortion at a facility with those who arrived at a health facility experiencing abortion complications. This work is part of a larger project which assessed women's abortion-related behaviour in Zambia through a community-based household survey,⁴ a policy analysis, an economic analysis of women's abortion-related costs, an assessment of near-miss cases of abortion-related maternal mortality occurring in health facilities,¹¹ and an assessment of the capacity of health facilities to perform signal functions for abortion services.⁶

Methodology

Our recruitment sites were two public hospitals and two private clinics, one each in Lusaka and in Kafue districts in Zambia. We selected these facilities because we wanted to capture women with severe (usually in hospitals), and less severe (in clinics), complications. We chose facilities in Lusaka because the population size resulted in high client flows and increased the probability of reaching our desired sample size within the time period we were able to conduct fieldwork. We chose Kafue district to represent a rural area where women may have greater difficulty reaching the health facility. We selected public facilities to capture women with comparatively less ability to pay for care and private facilities to capture women with more ability to pay. In public facilities, costs are not zero. Women must pay to "open a file," but TOP services are supposed to be provided at no cost. At private facilities, clients are expected to pay for both the consultation and the procedure.

Household wealth was established via a quantitative survey at Time One (T1) and abortion-related costs established via semi-structured in-depth interviews (IDIs) at T1 and Time Two

(T2). T1 interviews took place in a private location within the facility before discharge. T2 interviews were conducted three to four months after the initial interview to assess further costs that the woman had incurred as a result of the abortion. The timing of the T2 interview was chosen to reduce attrition between T1 and T2, and because we felt we could capture most consequences within this window. Furthermore, we wanted to reduce the possibility that respondents might forget costs they had incurred shortly after T1.

A household wealth index was created by a health economist (GG) using standard DHS data: household's ownership of selected assets such as mobile telephones, televisions and bicycles; materials used for housing construction; and types of water access and sanitation facilities. Principal component analysis (PCA) was used to derive the wealth scores and the population was then divided into three household wealth tertiles.

Providers of abortion care recruited participants into the study if women fit the selection criteria. This protocol has been used in studies attempting to ascertain the same information in other African contexts.¹² Refusal took the form of women either insisting that they had a miscarriage (making them ineligible to participate in the in-depth interview), or saying they needed to depart from the health facility as soon possible and therefore could not stay for the interview. Fieldworkers regularly consulted the registries to identify potential respondents, but because of the incompleteness of the facility registries, it was not possible to obtain a refusal rate from the registries.

It was difficult to recruit respondents for IDIs. As the objective of this study was to assess the consequences of safe vs. unsafe abortion, we could not enrol women who insisted that their visit was related to a spontaneous abortion (miscarriage). Because of this, we lost the opportunity to interview many potential respondents who presented with visible signs of an induced abortion but would not acknowledge they had done anything to interfere with the pregnancy.

The sample was designed to include equal numbers of women who experienced a TOP, and who obtained care for unsafe abortion (CUA). Among women who underwent a TOP, the sample was evenly split between women who had a surgical abortion and women who had an MA. Among those obtaining CUA, the sample was evenly split between women who had low vs. moderate/severe complications, as assessed at T1. Severity classifications were taken from another component of the parent project, the abortion near-miss morbidity component. This severity classification is a modification of the WHO maternal morbidity severity classification,¹³ limiting the variables to those captured regularly on Zambian women's medical records. Anaemia was added to the near-miss operational definition.¹¹ Women aged 16–17 years were treated as emancipated by virtue of the fact that they had been recently pregnant. Respondents were paid 35 ZMW* (<USD 5.50) at T1 for their time.

A first fieldwork attempt had to be abandoned due to lack of interviewer engagement. New interviewers were hired and a new supervisory structure was put in place. This second set of

*The exchange rate on 1 January 2015, the midpoint of our data collection, was 6.43 ZMW = 1 USD. This is the exchange rate that we use to convert kwacha, ZMW, into dollar amounts.

interviewers were trained by three of the co-authors (MD, AA and GG). At the T1 interview, respondents were asked,

Please tell me about the costs you or anyone supporting you has incurred to date to obtain this termination, including monies you or anyone supporting you spent on any step(s) you took before getting to this facility. (Probe on out-of-pocket costs of medical care, medical supplies woman had to bring with her, food and accommodation that possibly had to be purchased for her or anyone who may have accompanied her, as well as transport/transfers.)

At the T2 interview, the question was,

Since we last met, what other costs have you or someone else had to pay to treat any health consequences that you experienced related to your termination?
Altogether, how much would you say your household has had to spend on this since we talked with you last?

with additional probes. Halfway through fieldwork, an assessment was conducted by an external consultant who advised on the improvement of recruitment procedures. As we were failing to recruit women who came in at night and were discharged very early the following morning, we asked providers to call the project phone when a case presented after hours or during the weekend, so that an interviewer could be sent to the facility. Registers were also checked more frequently; and more health providers were trained to mitigate against staff turnover, so recruitment could be maximised.

Table 1 shows the breakdown of participants by various characteristics. Of the 51 respondents who participated in T1, the study team was able to successfully recontact 38 respondents at T2. At T2, respondents were paid 35 ZMW for their time in addition to 100 ZMW for transportation reimbursement (all together USD 21). The deliberate sampling balance that was sought at T1 could not be retained within the sample at T2. The sample we were able to retain remained balanced between respondents receiving TOP and CUA, but between T1 and T2 we lost more women who had an MVA than those who had used MA; we also lost proportionally more women with moderate/severe complications between T1 and T2.

Those lost to follow-up were comparatively younger women who had a TOP. During the T1 interview, many of these women had expressed worry about their family finding out about the abortion; it is possible that they did not consent to the second interview because of this concern. About half of those lost to follow-up were in the highest socioeconomic (SES) group. These women may have been less incentivised by the remuneration than women in the other SES categories to participate in the second interview. We include only the 38 respondents for which we had in-depth interviews from both T1 and T2 in this analysis; cost questionnaires were not administered to 6 of these respondents since the quantitative data collection ended before the qualitative data collection did. We treat that data as missing.

T2 interviews took place at a location of the respondent's choosing, usually at the health facility because this was the best way to protect the woman's confidentiality. Both interviews took place in the language most comfortable for the respondent (English, Nyanja,

Bemba or Tonga). Each interviewer was fluent in some of these languages and so we paired respondents with interviewers who spoke the language that the respondent preferred to use for the interview. The project received approval from the Institutional Review Boards of Population Council, the Guttmacher Institute (USA), and the University of Zambia Biomedical Research Ethics Committee. All participants signed a consent form before they were interviewed at T1 and again at T2.

Data collected through the cost questionnaires were double-entered into a database. Stata (Statacorp, College Station, USA) was used to analyse the cost questionnaires; Excel was used to calculate the simple means of the quantitative data captured in the IDIs. All IDIs were audio-recorded on digital recorders; the recordings were simultaneously translated and transcribed into English by the interviewers. The transcripts were then checked for accuracy of translation and cleaned by members of the study team to ensure the transcripts were clear. The study team also removed all local names from the transcripts. Coding of the cleaned transcripts took place in NVIVO 10 (QSR International, Melbourne, Australia), using a predetermined coding structure capturing relevant analytic concepts.

We wanted to examine the following questions:

- Do women from wealthier households have safer abortions?
- Do safer abortions cost more than unsafe abortions?
- How do women pay for the abortions that they have and the post-abortion care they received?

We matched women on SES status and compared women who received a TOP with women who came in for care after experiencing an abortion-related complication. Respondents' experiences at T1 and T2 are analysed as part of a complete narrative for one individual. We present illustrative quotes along with age, marital status, SES and TOP or severity of post-abortion complications of the respondents. In our analysis, we refer to women who had an abortion at a health facility as a woman who had a TOP, and women who were getting treated at health facilities for complications as CUA cases. The label of "CUA" in this paper is shorthand for representing the experience of obtaining an unsafe abortion, experiencing complications and then seeking care for those complications. We have included a few vignettes to give a fuller picture of the complex ways that economic costs of an abortion reverberate across many dimensions of women's lives. We use the word "procedure" to indicate the actual abortion (safe or unsafe).

Results

Direct and indirect costs of a TOP vs. CUA

Not all respondents were able to identify the direct costs associated with the abortion procedure or care for complications. Younger patients were less likely to know the costs that were paid. One woman reported not wanting to know for fear of learning the answer. Among women who knew what had been cumulatively spent in the process of obtaining an abortion, both on the procedure and on ancillary expenses, approximately one-third of the respondents had spent less than 300 ZMW (<USD 47); two-thirds had incurred expenses between 300

KWZ and 1000 ZMW (USD 47–155); and just 2 patients (1 TOP and 1 CUA) had incurred over 1000 ZMW in expenses (>USD 155) (Table 2). These costs do not include lost wages. Women getting TOP and CUA were represented in equal measure within these three expense categories.

Women who had CUA spent on average, 30% more than women who obtained a TOP. The average cost spent on a TOP for all services was 396 ZMW (USD 62) while for CUA it was 520 ZMW (USD 81). This cost represents 5–6% of per capita GDP[†]. About two-thirds of the costs had been incurred by T1, while for women who had experienced either a TOP or CUA, an additional one-third of the total costs was incurred between T1 and T2 (Table 3).

Looking at a breakdown of where women spent money in the process of obtaining an abortion, women who had CUA paid for both the unsafe procedure and follow-up care whereas those obtaining a TOP paid for the termination. Some women in both groups were charged 80 ZMW (USD 12) which they report as the cost of opening a file at the facility, a necessary step for obtaining any kind of health care at a public facility. Care is supposed to be provided free of charge and no fee is meant to be taken from the woman for “opening a file,” but some institutions do charge. Usually, this does not exceed 50 ZMW (<USD 8). Compared to women who had a TOP, women obtaining CUA spent more money with informal providers for medicine and less money on treatment at a formal medical facility. In some cases, women were still cared for at a facility even if they did not have the money that the provider initially requested.

Women who went to a public hospital for a TOP incurred expenses which, on average, were less than half (210 ZMW, USD 33) the expenses of women who went to a private clinic (463 ZMW, USD 74). CUA, on the other hand, resulted in more expenses, on average, at the public hospital (542 ZMW, USD 84) than a private clinic (450 ZMW, USD 70). This finding is likely a result of women with more serious complications going to public hospitals and less serious complications getting treated at private clinics (Table 4). Women who sought either a TOP or CUA at a private clinic paid about the same (463–474 ZMW, USD 72–73). There was no distinct pattern in the outlay of expenses between T1 and T2 among the four subgroups.

In addition to the costs paid to the provider, costs incurred for TOP and CUA included transport (20–40 ZMW, USD 3–6) for the bus and more if fuel was needed); medical supplies (sanitary pads, bleach and unspecified medications/painkillers purchased at the health facility or at the behest of the health care provider), and other ancillary expenses related to being away from home (food and talk time for their mobile phones). Some women reported that providers recommended that they change their diet after the procedure and this resulted in incurring costs related to purchasing more expensive food. A few women reported no additional costs beyond what was spent for care. These women were able to walk to the facility and they did not purchase food or talk time.

The costs incurred between T1 and T2 were usually from follow-up care for the abortion procedure such as medicine, particular food that was advised by the provider such as fruit, medical fees for treatment, transportation to and from the health facility, and other supplies

to address postabortion complications. One respondent who had expenses of 100 ZMW (USD 16) at T1 (60 ZMW for a scan and 40 ZMW for food) and another 100 ZMW at T2 described post-abortion complications which prompted her to visit a private doctor to have her implant removed: 25 ZMW for medication and 75 ZMW fees for the private doctor. The hospital where it was inserted refused to take it out because she had the implant for less than a year. In some cases, other costs were opportunity costs which were incurred as the news of the abortion spread and stigma was enacted on the woman in her social or professional life. One woman described being “chased” from her job because of her abortion:

Interviewer: What did you tell them at your place of work when you were [admitted at the hospital]?

Respondent: They knew that the pregnancy has been terminated. They are even the ones who brought me here. [...]

Interviewer: Eh, what happened where you were working?

Respondent: They chased me from there, in [residential area], I am now working in [another residential area].

Interviewer: They chased you?

Respondent: Yes.

Interviewer: Why?

Respondent: That because I terminated the pregnancy.

Interviewer: But how did they know?

Respondent: I think they knew because a lot of blood came out [at work], a lot of it came out. Then they took me to [clinic] and then that’s when they brought me here.

Interviewer: Oho ... so after you got better and then when you went back for work, that’s when they chased you?

Respondent: Yes.

(18 years old, unmarried, SES unknown, CUA, low severity, T2 interview)

Economic factors related to whether women access safe abortion vs. unsafe abortion and subsequent care for complications

The people who paid for the expenses related to securing the abortion (the woman securing money on her own, even if she had to borrow; the man responsible for the pregnancy; or the couple splitting costs, all of which occurred in equal measure in our sample) did not influence whether a TOP or CUA was obtained. Women who used their own money voiced that they did not want others to know about the termination. Having their own financial

resources meant that they were able to control who found out about the termination. This protected them from unwanted social reactions and possible sanctions.

Women across all three wealth tertiles spoke about financial constraints which affected their abortion choices, be it their own financial constraints or that of the man responsible for the pregnancy. There were respondents in each of the wealth tertiles having a TOP in a health facility or an unsafe abortion outside a health facility. This appeared to be the case at least in part because household wealth did not translate into the woman (or her partner who was sometimes not living in the same household, i.e. when the woman was unmarried) having access to money. Even if the household had items that are only available to those with more income, it did not mean that a woman or a man residing in that household had any discretionary money that they could spend. This could be because the items were purchased by others in the household; or it could be that the woman or couple may have spent all their income on these household items, retaining nothing in savings; or it could be that the household depended on (nearly) all of the income coming into the household to function and therefore any income spent on an abortion would have been missed by the household.

This young woman, a high SES respondent who was in school, reported spending a total of 150 ZMW (USD 23) on abortion-related expenses, which she borrowed because her access to disposable income was constrained:

Interviewer: Ok. Where did you get the money that you have paid altogether here including MVA, medicine and transport?

Respondent: I borrowed money from my sister ... from my cousin.

Interviewer: Is she the one who lent you the money?

Respondent: Yes.

Interviewer: Will you pay it back?

Respondent: Yes I will look for it.

Interviewer: In which way are you going to look for it?

Respondent: I will go to the village and ask for money.

Interviewer: You will beg?

Respondent: Yes.

Interviewer: How are you going to tell them at the village?

Respondent: [Silence] Mm, I will pretend that I want some school fees.

(20 years old, unmarried, high SES, TOP, T1 interview)

One low SES respondent who paid for the abortion herself related how costs impacted her choice. She originally went to a chemist to try to obtain an MA, but didn't have the money it cost so she went to a traditional healer to terminate the pregnancy. The traditional healer was willing to sell her medicine for less than the chemist, and performed a procedure with sticks and cotton balls, causing severe complications (26 years old, unmarried/divorced, low SES, moderate/severe complications).

Sources of money for abortion-related expenses

Identifying the source of funds women use to pay for abortion-related care enriches our understanding of the financial consequences for women of having to spend that money on abortion-related care. Women having TOPs differed in how they paid for their abortions depending on their education level. More educated women paid for the abortion with their personal funds whereas less educated women relied on families or partners to raise the funds. When men denied paternity or responsibility, the woman was left with fewer options to pay for the abortion and manage any complications which arose.

It was more common among women getting TOP (compared to those who had CUA) for her, the husband, a relative, or a friend, to borrow money or sell items to provide funds to pay for the abortion. Respondents reported selling a sister's old school books, a brother-in-law's bed, the respondent's or the boyfriend's phones, and in one case, a respondent reported selling her shoes. One high SES respondent reported selling a dress for 100 ZMW (USD 16) to pay for the abortion. Some respondents reported borrowing money from someone who was wealthy enough to provide a loan. In some of these situations, the amount borrowed was beyond what the respondent felt she could ever pay back, leaving her and sometimes her family in a cycle of debt.

When funds were harder to come by, women in all wealth categories were more likely to have an unsafe abortion. Women who obtained CUA tended to be one to three people removed from the money that was used to pay for their abortion. (One person removed would mean that the woman had to ask for help from someone who lent her the money; three people removed would mean that she asked someone who asked someone who asked someone else and that third person provided the assistance.) In our sample, younger, less educated women experiencing post-abortion complications were most likely to be furthest from the money source; money for their abortion-related expenses came from family members borrowing money on their behalf. School-going girls often used money previously allocated for food or school-related expenses provided by their families to cover the abortion-related costs. In contrast, older women found ways to access money themselves, or borrowed directly from family. Delays in raising the funds increased the cost as well as the risk of the procedure. Women expressed frustration and anxiety about the duration of time it took them to raise the money. A 19-year-old, unmarried woman obtaining CUA explained:

“But I have been looking for the money which has been so hard to find, which I just found. [The procedure] should [have been] last week. [I was only able to get the procedure] after it had already grown and everything”.

Discussion/conclusion

Congruous with the results of a cross-sectional qualitative research project with 112 women at a tertiary hospital in Lusaka,¹⁴ the costs to women and their families when a woman needed CUA were 30% higher than the costs for a TOP. The average cost for TOP in our study is about USD 10 more than what Leone et al. (2016) found women had to spend at a tertiary hospital in Lusaka. This could be because we included private facilities in our sample. The costs for CUA are almost identical to what was found in that study. Recent data gathered from a household sample of women in Zambia showed that there is a low level of knowledge about the legality of abortion,⁴ so it is plausible that women do not know they can access abortion legally. As was found in South Africa,¹⁵ public services cost women money, not just to open a file, but additional costs can be demanded of the woman. Whether these costs are being charged to the woman exploitatively or whether facilities lack the supplies needed to provide services and therefore must pass on costs to the user to be able to provide services is not known in this study. This ambiguity notwithstanding, these results lend further support to the recommendation that Zambia needs to better disseminate information about the country's abortion law so that women know their rights to demand safe (and, if going to a public facility, free) abortion services.^{4,15}

Women's narratives demonstrate that in many cases, they were trying to access safer services, but financial constraints hampered their ability to do so. The pathways that women followed which resulted in getting a TOP vs. an unsafe abortion followed by treatment for complications were shaped by how easily they could access funds. The lack of a relationship between women's SES and the safety of the abortion may be because, while the household has items of value in it, the woman or the couple did not have access to cash, pointing to a weakness in the household wealth tool we used. Additionally, cost barriers prevented women from seeking follow-up care to resolve outstanding health issues post-abortion. Therefore, women and households appear ill prepared to weather the financial shock of an unexpected expense such as an abortion. In view of these findings, the costs being charged at public facilities need to be queried. When these services are not free of charge, women who are able to access funds are being taken advantage of. Women unable to access funds are being driven to unsafe procedures. As most costs incurred were those directly paid to the provider, if providers reduced the charges being passed on to women for providing abortion care like Burkina Faso has done,¹² this would also lessen the barriers faced by women in receiving abortion-related care. However, this must be done at the same time as disseminating information to let women know about their right to access services free of charge.

The richness of the longitudinal data is that we were able to capture additional expenses women continued to incur, related to their abortion after they leave the health facility, thereby better understanding the medium-term financial impact of obtaining abortion care. Limitations of these data include the following. Our sample was recruited entirely within health facilities. The experiences of women with post-abortion complications who did not seek care are therefore not included in this analysis. Our sample underrepresents respondents who came in late at night and left early in the morning. In addition to missing some women, others arriving for abortion care may have been classified in the register in a way that we could not identify as abortion-related. Furthermore, many women who insisted they had a

miscarriage may have interfered with their pregnancy, which adds further uncertainty as to what our sample bias is. We have a relatively high loss to follow-up: those younger and more likely to have an unsafe abortion which requires care for complications were the most likely to be lost to follow-up and so their experiences are not as well represented in this analysis as the experience of other women. Better off women were also less likely to be retained in our sample and their experiences are underrepresented here as well. In addition, conducting the T2 interviews 3–4 months after the TOP or CUA may have resulted in not being able to entirely capture the full financial consequences of the abortion, as some women were still experiencing health complications at T2 that might have led to further financial costs. The household wealth tool did not capture financial measures meaningful to women seeking an abortion. Due to recall bias, we may have inaccuracies in our data although we did try to minimise this by having a relatively short interval between T1 and T2. We were unable to consistently capture gestational age which would have helped us understand complications reported, as later gestation abortions would be more likely to have complications. Another potential source of error is that women could have identified symptoms unrelated to their abortion as being associated with it, thereby exaggerating the physical symptoms they experienced from the abortion. Some respondents' lack of familiarity with the costs prevented us from being able to gather data from all respondents on all of the measures. Lastly, the conclusions draw on a small sample size, so the findings should not be extrapolated to the country as a whole.

The Zambian Ministry of Health published a set of standards and guidelines in 2009 for reducing unsafe abortion. It clarifies which factors should be considered when determining whether continuing a pregnancy poses a risk to the woman's health and well-being and specifies that mid-level providers may conduct first trimester abortions.¹⁶ In addition, some pharmacists have been trained to provide referral information to women seeking an abortion.^{6,9,17} To reduce the risk that a woman and her family experience harmful financial consequences associated with an unsafe abortion, greater use of family planning and provision of safe abortion services through the dissemination of accurate and reliable information must be promoted in Zambia. Unsafe abortion not only places a woman at greater risk of severe health consequences but also has a negative economic consequence because of the costs associated with seeking CUA and the treatment or untreated effects of long-term health consequences. Given the conservative attitudes towards reproductive health services in Zambia, particularly for younger and unmarried women, the greatest challenge is to address the stigma attached to sexual activity in these groups and to empower all women to seek services for the prevention of unintended pregnancy.^{4,18,19} A recent vote in Zambia on 11 August 2016 included a referendum on whether abortion should be made more restrictive. The referendum did not pass due to low voter participation but the abortion law, as it stands now in Zambia, remains under threat. Greater education about the benefits of access to safe abortion would perhaps serve to increase popular support for ideally improving the legal framework to make safe abortion care a reality for all Zambian women.

Acknowledgements

We would like to thank the respondents; the interviewers in Zambia; Onikepe Owolabi for her assistance with the morbidity classification; Angel Chelwa, Global Health Corp Fellows at the Population Council-Zambia at the time

of the study for her assistance in fielding the study, cleaning the transcripts, and contributing to analysis; Paul Hewitt of the Population Council for his project facilitation and strategic support; Veronique Filippi for reviewing an earlier draft of this paper and providing useful comments; and Meghan Ingrid, Guttmacher Institute, who coded some transcripts.

Funding

Funding for the study was provided by the UK Department for International Development [EPIDHC18].

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Vignette A: An unmarried woman who obtained a TOP; her sister lent her the money but by T2, she had to stop attending school to make money

The 20-year-old respondent became pregnant with her boyfriend during a sexual encounter in which he told her that he “knew what to do” to avoid a pregnancy, thus persuading her not to use a condom. When she told him she was pregnant, he denied responsibility and paternity.

She was the only one in her family who attended school and the desire to continue her education and not burden her family with a baby were the primary factors in her decision to seek an abortion. Her boyfriend had been paying her school fees but stopped once the pregnancy dispute arose. She had plans to make the money herself to pay for the abortion with “piece work.” But that plan didn’t generate enough income fast enough and her sister lent her the money for the abortion which came to 300 ZMW (USD~47) including all related expenses.

At the time of the second interview, she was working but no longer in school. While she felt supported by her friends and family, she describes a lot of religious guilt as a result of her decision. She did not experience any health consequences from the abortion. She did not anticipate that there was any effect on her fertility from the abortion and felt that some of her relationships had in fact improved since the abortion. At the time of the second interview, she was not in a relationship and not sexually active. She was not using any contraception but expressed interest in using a long-term implant so that she would not have to think about a daily method such as the pill.

(20 years old, unmarried, high SES, TOP).

Vignette B: An unmarried woman obtained an unsafe abortion because she didn’t want to tell her family she was pregnant (again)

This 28 year old, unmarried, unknown SES, respondent had difficulty accessing any resources to pay for an abortion and had an unsafe abortion. She believed that abortion in Zambia is illegal. She had previously experienced an unintended pregnancy and had the child and her parents disowned her as a result. It had taken her a very long time to repair her relationship with her parents.

In the case of the first pregnancy, the man involved in the pregnancy agreed to provide financial support but refused to marry her; in the case of the second pregnancy, the man involved in the pregnancy denied all responsibility. Her desire to hide the second pregnancy from her parents was her primary motivation for seeking an abortion. She was worried that if they found out she was pregnant again, they would not let any other girl in her household continue school because education would be seen as a waste of time.

She told her sister and her friend about her desire to end the pregnancy. They all had some awareness of using Cafenol [an easily accessible, affordable pain killer, often cited as a method to terminate pregnancy] and Coca-Cola to abort a pregnancy. She went to the market (not a chemist) to buy both items. She boiled the Coca-Cola and combined it with the Cafenol, reporting that she knew this method from “how we play at school, how we tell stories.” As she did not have any money of her own, her sister gave her 20 ZMW

(USD~3) for the Coke and Cafenol, and her friend lent her the 250 ZMW (USD~39) to address the complications. Asked where all the money she was spending came from, she explained:

It's my friend who assisted me with the money. When she saw that the burden I was carrying was too heavy, she had a heart to assist me. She said once the termination worked and when I become fine then I could give her back the money in future.

After taking the concoction, she began that night to bleed and have cramps; she bled for three more days. After she expressed concern about the bleeding to her friend, they walked for two hours to seek care at a private clinic for the complications. She was concerned that they would not help her but rather detain her and report her to the police. She experienced low severity complications; by T2 she had returned to the clinic for a checkup and had no subsequent complications. Her boyfriend tried to reunite with her after the abortion but she refused.

Table 1.

Description of participants at T1 and T2, Zambia 2014–2015

Respondents from T1 sample (n = 51)	Women who had a TOP (n = 24)	Women who received CUA (n = 27)
Age of respondents		
15–19	2	5
20–29	14	15
30–39	5	1
Unknown	3	6
Household wealth status (SES)		
Low	8	3
Mid	10	7
High	6	9
Unknown	-	8
Type of abortion among TOPs		
Manual vacuum aspiration	9	-
Medical abortion	15	-
Severity of Post-abortion Complicatio (PAC)		
Low	-	15
Moderate to severe	-	12
Respondents from T2 sample (n = 38)	TOP (n = 19)	CUA(n = 19)
Age of respondents		
15–19	1	5
20–29	14	13
30–30	4	1
Household wealth status (SES)		
Low	4	3
Mid	10	6
High	5	4
Unknown	-	6
Type of abortion among TOPs		
Manual vacuum aspiration	5	-
Medical abortion	14	-
Severity of Post-abortion Complications (PAC)		
Low	-	11
Moderate to severe	-	8

Table 2. The costs spent by women to obtain a TOP and CUA, by amount spent and overall averages, Zambia 2014–2015

Average cost spent per respondent	Number of respondents who received a TOP (<i>n</i> = 19)	Number of respondents provided CUA (<i>n</i> = 19)	TOTAL (<i>n</i> = 38)
<300 ZMW	7	6	13
300–1000 ZMW	11	12	23
>1000 ZMW	1	1	2
TOTAL N	19	19	38
Average cost	396 ZMW (USD 62)	520 ZMW (USD 81)	916 ZMW (USD 143)

Notes: Please note that the exchange rate on 1 January 2015, the midpoint of our data collection, was 6.43 ZMW = USD 1. Therefore, 300 ZMW = USD 47; 1000 ZMW = USD 156.

Table 3. The costs expended by women at T1 and T2, according to whether they had a TOP or CUA, Zambia 2014–2015

Estimated cost at time of procedure (T1) and follow-up (T2)	Number of respondents who received a TOP (n = 19)	Number of respondents who received CUA (n = 19)	TOTAL (n = 38)
Average cost at T1	279 ZMW (USD 43)	339 ZMW (USD 53)	618 ZMW (USD 96)
Average costs at T2	117 ZMW (USD 18)	181 ZMW (USD 28)	298 ZMW (USD 46)
Average total cost	396 ZMW (USD 62)	520 ZMW (USD 81)	916 ZMW (USD 143)

The estimated expenses incurred by women according to whether they sought care at a public hospital or a private clinic, Zambia 2014–2015

Table 4.

Estimated expenses by public vs. private health facility	Public Hospital (<i>n</i> = 18)		Private Clinic (<i>n</i> = 20)	
	Number of respondents who received a TOP (<i>n</i> = 5)	Number of respondents who received CUA (<i>n</i> = 13)	Number of respondents who received a TOP (<i>n</i> = 14)	Number of respondents who received CUA (<i>n</i> = 6)
Average cost at TI	115 ZMW (USD 18)	396 ZMW (USD 62)	338 ZMW (USD 53)	218 ZMW (USD 34)
Average cost at 72	95 ZMW (USD 15)	146 ZMW (USD 23)	125 ZMW (USD 19)	257 ZMW (USD 40)
Average total cost	210 ZMW (USD 33)	542 ZMW (USD 84)	463 ZMW (USD 72)	474 ZMW (USD 74)