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Full Length Research Paper

Reproductive health providers' willingness to provide comprehensive abortion services and knowledge of the abortion law in Addis Ababa, Ethiopia

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In Ethiopia, the maternal mortality ratio is 676/100,000 live births with complications from unsafe abortion being the leading cause. The current study was conducted to assess the knowledge of reproductive health practitioners of the law governing abortion in Ethiopia, the willingness of providers to perform abortion procedures, and current comprehensive abortion care (CAC) practice patterns of physicians, midwives, and nurses at one teaching hospital in Addis Ababa, Ethiopia. All currently practicing obstetric/gynecologist faculty and residents, midwives, and nurses working on the obstetrics and gynecology ward at one public teaching hospital in Addis Ababa were invited to participate in this cross-sectional survey. A total of 50 participants completed the survey. 68% of the sample, reported being willing to provide abortion services, if offered the appropriate training. Participants who believe unsafe abortion is a large contributor to poor health of Ethiopian women are almost seven times more likely to be willing to provide CAC services, and physicians are more likely than non-physicians to report being comfortable currently providing CAC services. Obstetric and gynecological providers at St. Paul's are supportive of providing abortion services, if they are trained in the procedure. Ensuring proper clinical training, as well as sensitization to the recent law change and the burden of unsafe abortion, is of the upmost importance to ensure Ethiopian women have access to safe abortions, as allowed by law.

Key words: Ethiopia, abortion, family planning.

INTRODUCTION

Of the nearly 300,000 maternal deaths each year, the World Health Organization (WHO) estimates 47,000 are attributable to unsafe abortion, making abortion a leading cause of maternal mortality worldwide (WHO, 2011). Unsafe abortion is defined by WHO as a procedure for terminating an unintended pregnancy carried out either

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by persons lacking the necessary skills or in an environment that does not conform to minimum medical standards, or both (WHO, 1997). WHO, estimates approximately 21.2 million unsafe abortions occur each year in developing regions of the world (WHO, 2011; Aahman and Shah, 2004). The morbidity and mortality associated with unsafe abortion depend on the method used, the skill of the provider, the cleanliness of the instruments and environment, the stage of the woman's pregnancy and the woman's overall health (WHO, 2011).

Almost all unsafe abortions occur in low- and middle-income countries (Grimes et al., 2006). The health consequences and burdens from unsafe abortion disproportionately affect women in Africa more than any other developing regions (Shah and Ahman, 2009). The risk of death is the highest in sub-Saharan Africa where one in 150 women will die from complications related to the procedure (WHO, 1997). Further, an estimated one quarter of women who undergo an unsafe abortion will require hospitalization for treatment of complications, stretching already limited healthcare resources (WHO, 2012). It is estimated 5 million women per year from the developing world are hospitalized for complications resulting from unsafe abortions, resulting in long and short-term health problems (Singh, 2006), and straining resource-poor health systems where, in some countries, treating abortion complications exhausts 60% of gynecological health budges (Johnston et al., 2007). Deaths from unsafe abortion significantly impact the united nation (UN) millennium development goal (MDG) number 5, to reduce by three quarters the number of maternal deaths. Without addressing unsafe abortion, MDG 5 will not be reached (WHO, 2012; Hu et al., 2012).

According to the Ethiopian demographic and health survey 2011 (Central Statistical Agency, 2012), the maternal mortality ratio is 676 per 100,000 live births, with complications from unsafe abortion being the leading cause of maternal death. Unintended pregnancy rates are high, as are induced abortions, due in part to low uptake of modern contraception (Gebreselassie et al., 2010; Worku et al., 2006). Approximately six in 10 abortions carried out in Ethiopia are conducted under unsafe conditions. Ethiopian health professionals estimate 58% of all women undergoing an unsafe abortion experience serious complications, while only 25% of these women receive treatment (Guttmacher Institute, 2010). Although less than half of all women experiencing an abortion complication seek treatment, it remains the leading cause of hospital admissions in Ethiopia (Gessessew, 2010).

In 2005, following recommendations from the international community on strategies to reduce the negative impact of unsafe abortion on women's health (Gebrehiwot and Liabsuetrakul, 2008), the government of Ethiopia decriminalized abortion in cases of rape or incest, where the pregnancy endangers the health or life of the mother, if the child has a gross malformation or if the mother is unfit to raise the child (Gebrehiwot and Liabsuetrakul, 2008). The law sanctions a skilled provider working at a healthcare facility equipped with the appropriate supplies and equipment to perform abortions if the gestation period is less than 12 weeks.

Ethiopia has a limited number of obstetricians/gynecologists, general medical practitioners (GMPs), midwives, health officers, and nurses trained to legally perform abortion (up to the 12th week of gestation), as the country's current health professional curricula do not include any formal training in abortion and contraception services for students. Moreover, an estimated 70% of these healthcare providers are unfamiliar with the revised abortion laws (Gebreselassie et al., 2010). In a 2001 to 2002 study in a major university hospital in Addis Ababa, post-abortion complications were one of the three leading causes of maternal mortality (Berhan and Abdela, 2004) suggesting there is a need to train providers in this service. The abortion rate in Addis Ababa has been estimated to be the highest in the country, perhaps because women from rural areas come to the city where it is known that abortion services are more available (Singh et al., 2010).

As part of a larger initiative to improve the pre-service training of reproductive health providers abortion care training, the current study is conducted to assess the knowledge, willingness, and current comprehensive abortion care (CAC) practice patterns of obstetrician/gynecologists (Ob/Gyn) faculty and residents, midwives, nurses, and GMPs at one teaching hospital in Addis Ababa, Ethiopia. For the purpose of this study, CAC was defined as safe, high-quality and accessible first trimester abortion services, treatment of abortion complications, contraceptive services and counseling. This baseline assessment seeks to ascertain the degree to which these practitioners currently provide services as well as their attitudes and willingness to provide abortion and family planning services.

METHODOLOGY

Study setting

St. Paul's Hospital Millennium Medical College is located in Addis Ababa, Ethiopia. Built in 1961, St. Paul's is the second largest public hospital in the country treating over 200,000 patients annually. The mission of the hospital is to provide care to the underserved. Approximately 75% of the patients served are provided care free of charge. The medical school associated with the hospital admitted the first students in 2007 with the mission to produce medical personnel who will meet the country's health care needs. To achieve this, St. Paul's recruits at least 30% of its students from underdeveloped regions (the so-called four emerging regions of the country) and reserves at least 30% of its medical student slots for women. Currently, 29% of its students are female. In July 2012, St. Paul's started a postgraduate training program in obstetrics and gynecology. As part of this new residency, a program

for residents, medical students, nurses, and midwives to receive education and training in comprehensive family planning, including abortion care, has been developed.

Participants

Participants were recruited by department heads at St. Paul's. All currently practicing obstetrics and gynecology faculty (n=4) and residents (n=8), midwives (n=18), and nurses (n=26) working on the obstetrics and gynecology ward were invited to participate. In any day, there are rotating residents from Black Lion Hospital, hence the 8 residents who completed the survey (at the time of this survey, there were 7 SPHMMC residents in training). There are, on any particular day, senior medical students, called interns, working in the gynecology wards providing services. Therefore, the classes of participants were obstetrics and gynecology faculty who are fully qualified specialist physicians, obstetrics and gynecology residents who are specialists in-training, General medical practitioners who are general practice physicians, interns who are senior medical students, general nurses and midwives. Participants were given a written informed consent document explaining the scope of the study. All participants were assured participation was fully voluntary, and their responses would be completely anonymous. No incentives were provided.

Survey tool

This cross-sectional, self-administered survey was developed collaboratively by a team of researchers from St. Paul's Hospital Millennium Medical College and the University of Michigan Medical School, and deployed in May, 2013. An initial draft was based on a survey conducted in Ghana (Gebrehiwot and Liabsuetrakul, 2008), and adapted to meet local context. The survey was assessed for both face and content validity by US and Ethiopian researchers familiar with family planning research in Ethiopia in particular, and sub-Saharan Africa in general. The survey consisted of 3 general sections; demographics, current self-reported provision of family planning services, and questions regarding the participants' views and willingness to provide family planning and abortion. The survey was written in English and then translated to Amharic for those participants who do not read English. The Amharic translation was back-translated to English to ensure it was translated appropriately.

Data analysis

To examine the understanding of the legality of abortion services in Ethiopia, participants were asked: "To your knowledge, what is the legal status of abortion in Ethiopia (choose all that apply)?" The answer options included: it is illegal under all circumstances; it is legal to save the life of the mother; it is legal if the pregnancy is the result of rape or incest; it is legal to preserve the mental or physical health of the mother or; it is legal under all circumstances.

Questions regarding how often participants provide family planning services, such as implants, intrauterine device (IUD) insertion, and contraception counseling, as well as comprehensive abortion care, were answered on a Likert scale ranging from 1 (most days) to 5 (never). Questions concerning participants willingness to provide family planning services, such as implants, IUD insertion and contraception counseling, as well as comprehensive abortion care if they were offered training, were also answered on a Likert scale ranging from 1 (very unwilling) to 5 (very willing). A question to assess how supportive participants were to establishing safe abortion services in Ethiopian hospitals was also asked on a Likert scale from 1 (not at all supportive) to 5 (fully supportive). A further question asked, "How big of a health problem is unsafe abortion for Ethiopian women?" Answers were reported on a Likert scale ranging from 1 (no problem at all) to 5 (one of the biggest health problems).

Participants were next asked about services they feel comfortable providing. They were asked to indicate which of the following they currently feel comfortable providing: comprehensive abortion care, post-abortion care, referral to abortion provider, assisting with comprehensive abortion care, none—I do not wish to provide abortion services, IUD insertion, family planning counseling, abortion counseling, and termination.

All study procedures and documents were reviewed and approved by the Ethical Review Board, St. Paul's Millennium Medical College and the University of Michigan Institutional Review Board.

Statistical analyses

All data were double entered into an Excel spreadsheet and checked for consistency. Where inconsistencies were found, the original data were consulted and the entered data were corrected. Once data entry was complete, data were uploaded to statistical package for the social sciences (SPSS) V. 20 (SPSS Company, Chicago, Il). Descriptive statistics were generated on current position (job classification), participant's age, willingness to provide family planning services, and knowledge of the law governing abortion.

Each answer option for knowledge of the law was entered into the dataset as a separate variable. As written, the law allows abortion if it is to save the life of the mother, the pregnancy is the result of rape or incest, to preserve the mental or physical health of the mother (Central Statistical Agency, 2012). As such, a summation variable was created for respondents who answered the three options. Participants for whom the value of the summed variable was 3 were deemed to have complete knowledge of the abortion law in Ethiopia. Participants whose summed variable was less than 3, or who answered that either option 1 (abortion is illegal under all circumstances) or option 5 (abortion is legal under all circumstances) were deemed to have incomplete or limited knowledge of the law.

Cross tabulation with chi-squared analysis was performed to assess factors associated with willingness to provide comprehensive abortion care and current comfort with providing termination services. Significance was set at 5%. Factors assessed included position, age, complete knowledge of the law, and currently providing CAC as part of regular activities. Position was initially assessed as asked (Ob/Gyn resident, Ob/Gyn faculty, other faculty, general practitioner, Intern, nurse, midwife, other) and then a dichotomized variable for physician (Ob/Gyn resident, Ob/Gyn faculty, GP, intern) was created and assessed against willingness to provide comprehensive abortion care (CAC) as well as knowledge of the current law governing abortion.

The original question regarding the health burden associated with unsafe abortion was dichotomized to those who believe it is a big problem (originally answered "a big problem" or "one of the biggest health problems) being coded with a 1 and those who believe it is a small problem (originally answered "no problem at all", a "small problem" or "a problem") being coded 0. A logistic regression with this new health problem dummy variable as the independent variable was performed against willingness to perform CAC. Those variables that were found to be significant in bivariate analysis were entered into the logistic regression model. Only those variables which continued to be significantly related to the outcome variable in the multivariable regression were included in the final model.

RESULTS

A total of 50 participants took part in the survey. Over half of the participants in this study (n=25) were nurses, 18.4% (n=9) midwives, and 16.3% (n=8) Ob/Gyn residents (Table 1). The participants ranged in age from 22 to 56 with a mean
age of 31.1 years (standard deviation 9.8 years).

In general, this study sample was willing to provide comprehensive abortion care; almost 71% of the sample reported being either “very willing” or “willing” to provide CAC services, if offered the appropriate training with only 22.8% reporting being either “unwilling” or “very unwilling”. Over 77% of the sample identified unsafe abortion as either “a big problem” or “one of the biggest health problems” facing Ethiopian women. The majority of respondents (79.2%) reported being either “supportive” or “very supportive” of establishing safe abortion units in Ethiopian hospitals.

Only 18.4% of this study sample reported not wanting to provide abortion services. Only 12.2% currently feel comfortable providing these services. The results of cross tabulations (not shown) revealed all Ob/Gyn residents (n=8) and faculty (n=1) report being willing to provide CAC services. Further, a majority of nurses (9/15, 60%) and almost half (4/9, 44%) of midwives are supportive of providing CAC, if provided with training in the procedure. Chi squared analysis indicates that physicians and non-physicians have a differential willingness to provide CAC. When grouped together, physicians are more likely to report being willing to provide CAC services than non-physicians (p=.014).

Physicians were not more knowledgeable about the law than non-physicians. Physician status, as opposed to non-physician status, was not significantly related to complete knowledge of the law governing abortion, and complete knowledge of the law was not significantly associated with willingness to provide CAC services (analysis not shown).

This study sample is generally comfortable providing many aspects of family planning, including family planning counseling (83.7% are comfortable with providing this service) and IUD insertion (53.1% are comfortable). However, assisting with an abortion was reported as less comfortable by participants (30.1%), with only 18.3% of those surveyed reporting being comfortable making a referral to an abortion provider.

Those participants who believe unsafe abortions are a big health problem in Ethiopia (n=37) report being more willing to provide CAC services (Chi-squared = 5.02) than those participants who believe unsafe abortions are not a problem or a small problem (n=11). When entered into a logistic regression, participants who believe unsafe abortion is a large contributor to poor health of Ethiopian women are almost seven times more likely to be willing to provide CAC services (OR 6.89, 95% CI, 1.08 to 43.9) (Table 2). While only 24% (n=12) of this study participants correctly answered the questions regarding the law governing abortion, 44% (n=22) reported that all parts of the law were clear to them.

Physicians were more likely than other cadres of health workers to answer in the affirmative to the question, “I currently feel comfortable providing CAC services”. When entered into a logistic regression, physicians were over six times as likely to feel comfortable providing comprehensive abortion care services than their non-physician counterparts (OR: 6.4; 95%CI: 1.02-40.3) (Table 3).

DISCUSSION

34 of the 49 (70.8%) respondents reported being “very willing” or “willing” to provide comprehensive abortion services if adequately trained in the procedure. While this is in contrast to the findings of Abdi and Gebremariam (2011) indicating only a quarter of their participants in Addis Ababa were willing to participate in pregnancy termination, the limited sample size in the current study hinders the ability to generalize to the population. However, only six of the 49 participants (12.2%) currently feel comfortable providing terminations. The finding of the necessity of increased training supports those of Mekbib et al. (2007), where the vast majority of post-abortion complications in 9 of the 11 regions of Ethiopia were treated using evacuation and cutterage, as opposed to manual vacuum aspiration (MVA), despite MVA being the current safe method advocated by experts. These findings point to the urgent need for training in safe abortion techniques among health providers in Ethiopia. Given the high rates of induced abortion in Addis Ababa as found by Singh et al. (2010), providing safe and affordable access to high quality abortion care is a necessity.

Similarly to the survey of health providers in Addis Ababa by Abdi and Gebremariam (2011), this study sample identifies unsafe abortion as a large problem in Ethiopia with 74% of the study participants noting it is either “one of the biggest problems” or “a big problem”. However, contrary to their findings, this study sample reported being much more willing to provide these services themselves if they are given proper training. This study finding of perception of the health burden represented by unsafe abortion as being predictive of willingness to provide CAC services underscores the importance of teaching this topic. Providers need to be made aware of the huge contributor of unsafe abortion to maternal mortality and morbidity.

Given the recent change in the law governing abortion in Ethiopia, provider education on the revised law is necessary. Few of the study participants were fully knowledgeable of the law, although almost half (44.9%)

Table 1. Selected demographic information and survey responses.

Question	Response	Frequency	%
What is your current position?	Ob/Gyn resident	8	16.3
	Ob/Gyn faculty	1	2.0
	GP	1	2.0
	Midwife	9	18.4
	Nurse	25	50.0
	Intern	5	10.2
	Missing	1	-
If you had training in comprehensive abortion care, how willing are you to provide CAC?	Very willing	17	35.4
	Willing	17	35.4
	Neither willing nor unwilling	3	6.3
	Unwilling	4	8.3
	Very unwilling	7	14.5
	Missing	2	-
How big of a problem is unsafe abortion in Ethiopia?	No problem at all	1	2.1
	Small problem	5	10.4
	A problem	5	10.4
	A big problem	18	37.5
	One of the biggest health problems	19	39.6
	Missing	2	-
How supportive are you of establishing safe abortion services in Ethiopian hospitals?	Not at all supportive	2	4.2
	Not supportive	4	8.3
	Neither supporting nor	4	8.3
	Unsupportive	-	-
	Supportive	17	35.4
	Fully supportive	21	43.8
	Missing	2	-
How often do you provide comprehensive abortion care as part of your everyday activities?	Very often	15	30.0
	Some days	10	20.0
	Not many days	5	10.0
	Few days	6	12.0
	Never	14	28.0
Knowledge of the abortion law	Complete knowledge	12	24.0
	Incomplete knowledge	38	76.0
Are all portions of the abortion law clear to you?	Yes	22	44.9
	No	27	55.1
I do not wish to provide abortion services	Yes	9	18.4
	No	40	81.6
I currently feel comfortable providing termination	Yes	6	12.2
	No	43	87.8
I currently feel comfortable providing post-abortion care	Yes	19	38.8
	No	30	61.2
	Missing	1	-

Table 1. Cont'd

I currently feel comfortable providing referral to an abortion provider	Yes	9	18.3
	No	40	81.7
	Missing	1	-
I currently feel comfortable assisting with complete abortion care	Yes	15	30.1
	No	34	69.4
	Missing	1	-
I currently feel comfortable providing IUD insertion	Yes	23	46.9
	No	26	53.1
	Missing	1	-
I currently feel comfortable providing family planning counseling	Yes	41	83.7
	No	8	16.3
	Missing	1	-
I currently feel comfortable providing abortion counseling	Yes	12	24.5
	No	37	75.5
	Missing	1	-

Table 2. Logistic regression of willingness to provide CAC versus health problem.

Variable	Odds ratio	95% CI
Health problem	6.89	1.08-43.9

CI: Confidence interval; *p < 0.05.

Table 3 Logistic regression of comfort with providing termination versus physician.

Variable	Odds ratio	95% CI
Physician	6.4	1.02-40.3

CI: Confidence interval; *p < 0.05.

felt the law was clear to them. This survey did not assess patient knowledge of the law however previous studies have demonstrated that even in countries where restrictive laws are liberalized, changing the law is not sufficient to imparting this knowledge on citizens. For example, Gebrehiwot and Liabsuetrakul (2008) found non-significant reductions in post-abortion complication rates following liberalization of the law in Ethiopia. If the providers of these services are not aware of the legality of the services, it is not altogether surprising that unsafe abortion rates are not falling more quickly.

This study has several limitations. With only one faculty member answering the survey, it is hard to draw conclusions about this cadre of health worker. The overall limited number of surveys is also a limitation. The survey did not ask about whether participants have received training in abortion services. Further, for those participants who reported being unwilling to provide these services, the survey did not ask about reasons for being unwilling to provide services. Further, this study relied completely on self-report and did not objectively assess the current extent to which participants provide family planning services. Lastly, surveys were distributed to shift manager at the beginning of each day, who then approached participants to complete the survey during downtime while on duty. All completed surveys were returned via shift managers (that is, midwives gave their completed surveys to the midwife in charge) who then returned completed surveys to the study team. Although, this ensured the study team was not informed of who did or did not complete the survey, completing a survey while on duty and being supervised by the manager may have

have affected completion rates.

Conclusion

Obstetric and gynecological care providers at this tertiary care teaching hospital in Addis Ababa, Ethiopia are generally willing to provide comprehensive family planning once they are properly trained in these procedures. Training on safe abortion services and family planning services both pre-service and in-service settings is the first step in addressing the high rates of maternal mortality attributable to unsafe abortion.

Conflict of interest

The authors have none to declare.

REFERENCES

Aahman E, Shah I (2004). Unsafe abortion: global and regional estimates of unsafe abortion and associated mortality in 2000, 4th edition. Geneva: WHO, 2004.

Abdi J, Gebremariam MB (2011). Health providers perception towards safe abortion services at selected health facilities in Addis Ababa. Afr. J. Reprod. Health 15(1):31-36.

Central Statistical Agency (2012). Demographic and Health Survey 2011. Central Statistical Agency, Addis Ababa, Ethiopia. ICF International Calverton, Maryland, USA. Available at: http://dhsprogram.com/pubs/pdf/FR255/FR255.pdf

Gebrehiwot Y, Liabsuetrakul T (2008). Trends of abortion complications in a transition of abortion law revisions in Ethiopia. J. Public Health (Oxf) 31(1):81-87.

Gebreselassie H, Fetters T, Singh S, Abdella A, Gebrehiwot Y, Tesfaye S, Geressu T, Kumbi S (2010). Caring for women with abortion complications in Ethiopia: National estimates and future implications. Int. Perspect. Sex Reprod. Health 36(1):6-15.

Gessessew A (2010). Abortion and unwanted pregnancy in Adigrat zonal hospital, Tigray, North Ethiopia. Afr. J. Reprod. Health 14(3):183-188.

Grimes DA, Benson J, Singh S, Romero M, Ganatra B, Okonofua FE, Shah IH (2006). Unsafe abortion: the preventable pandemic. The Lancet 368(9550):1908-1919

Guttmacher Institute (2010). Facts on Unintended Pregnancy and Abortion in Ethiopia. Available at: https://www.guttmacher.org/pubs/FB-UP-Ethiopia.pdf

Hu D, Grossman D, Levin C, Blanchard K, Adanu R, Goldie SJ (2010). Cost-effectiveness analysis of unsafe abortion and alternative first-trimester pregnancy termination strategies in Nigeria and Ghana. Afr. J. Reprod. Health 14(2):85-103.

Johnston HB, Gallo MF, Benson J (2007). Reducing the costs to health systems of unsafe abortions: a comparison of 4 strategies. J. Fam. Plann. Reprod. Health Care 33(4):250-257.

Mekbib TA, Hiwot YG, Afework FM (2007). Survey of unsafe abortion in selected health facilities in Ethiopia. Ethiop. J. Reprod. Health 1(1):28-43.

Shah I, Ahman E (2009). Unsafe abortion: global and regional incidence, trends, consequences and challenges. J. Obstet. Gynecol. Can pp. 1149-1158.

Singh S (2006). Hospital admissions resulting from unsafe abortion: estimates from 13 developing countries. Lancet 368(95550):1887-1892.

Singh S, Fetters T, Gebreselassie H, Abdella A, Gebrehiwot Y, Kumbi S, Audam S (2010). The estimated incidence of induced abortion in Ethiopia, 2008. Int. Perspect. Sex Reprod. Health 36(1):16-25.

Worku S, Fantahun M (2006). Unintended pregnancy and induced abortion in a town with accessible family planning services: The case of Harar in eastern Ethiopia. Ethiop. J. Health Dev. 20(2):79-83.

World Health Organization, WHO (1997). Unsafe abortion. Global and regional estimates of incidence of mortality due to unsafe abortion with a listing of available country data. 3rd ed. Geneva: WHO.

World Health Organization, WHO (2011). Unsafe abortion: Global and regional estimates of the incidence of unsafe

World Health Organization, WHO (2012) Safe abortion: technical and policy guidance for health systems. 2nd ed. Geneva: WHO.