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Commentary

An article critique on a publication about Ethiopia's safe abortion law and maternal mortality

Tesfaye H. Tufa[1]*, Mekdes D. Feyissa[1], Demeke Desta[1], Getachew Bekele[1], Yirgu Gebrehiwot [1]

[1] Department of Obstetrics and Gynecology, Saint Paul's Hospital Millennium Medical College, Addis Ababa, Ethiopia
[2] Ipas Ethiopia
[3] Independent Consultant
[4] Department of Obstetrics and Gynecology, School of Medicine, Addis Ababa University

Corresponding author*: tesfayehurisa50@gmail.com

Abstract

Ethiopia is considered one of the early reproductive health champions in Africa by making huge reproductive health and rights reforms including changing its safe abortion law. A recent publication in Ethiopian Medical Journal by Calum Miller has presented a flawed argument on Ethiopia's safe abortion law and maternal mortality trend over the period following legal reform. Miller claimed that abortion related mortality has already decreased before the legal reform in 2005 and the legal reform has only increased abortion incidence and abortion-related morbidity and mortality. Our review has shown that abortion related mortality was a leading cause of maternal mortality before the legal reform while currently contributing only less than 10%. We have selected outstanding arguments and presented a critique of Miller's article

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Introduction:

A commentary entitled "Legalization of abortion and maternal mortality in Ethiopia" was recently published in the Ethiopian Medical Journal by Calum Miller (1), a medical doctor and researcher with previous similar antiabortion comments evidenced in his publications and interviews (2–4). Unfortunately, his commentary misrepresented the evidence it cited and downplayed the public health successes of abortion law reform in Ethiopia. Ethiopia's safe abortion law was changed in 2005 in an effort to curb the high maternal mortality, a major part of which is contributed by complications from unsafe abortion.

Below, we refute four deeply flawed arguments in Miller's commentary: (1) Miller misrepresents the data on access to safe abortion services and maternal mortality prior to the change in abortion law, (2) Miller inaccurately states that the law reform in Ethiopia has caused an increase in abortion rates, morbidity, and potentially abortion-related mortality, without reducing overall maternal mortality, (3) Miller misrepresented Ethiopia's safe abortion law as "Liberal" and made an inappropriate comparison with other countries, (4) Miller inaccurately associated the increase in abortion rate to the change in safe abortion law. Miller's misrepresentation and distortion of local and regional evidence could result in adverse outcomes on individual and policy levels. Furthermore, it could negatively impact Ethiopia's reproductive health strategic plan and health sector transformation plan that aim to reduce maternal mortality and morbidity through accelerating existing reproductive health service efforts, including improving access to safe abortion services (5,6).

Based on the standards of different local and international journals, this publication has potentially violated the ethical standards of scientific journals (7,8).

Main Body

Flaw 1: Miller misrepresents the data on access to safe abortion and maternal mortality prior to the change in abortion law.

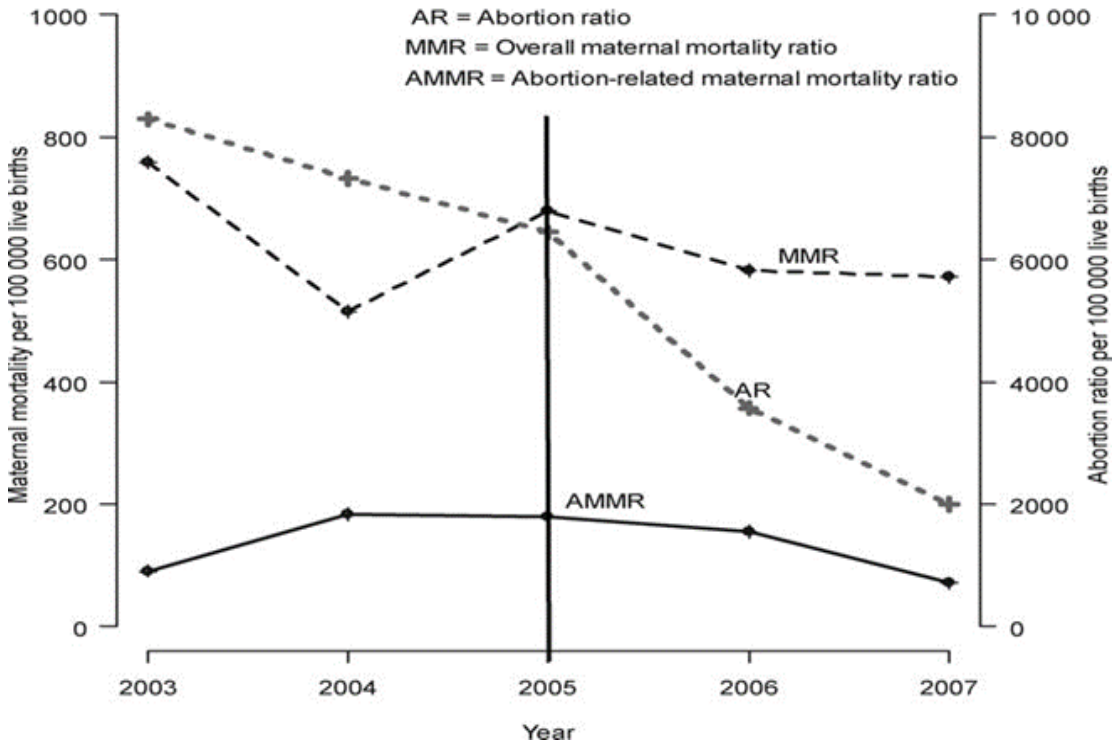

Fig. 1. MMR, AMMR, and AR trends before and after 2005. (Taken from Gebrehiwot et al., 2008).

Miller claims that mortality from abortion (in absolute terms and relative to other causes of death) declined in Ethiopia prior to 2005, when the abortion law was reformed, citing four systematic reviews (9–12). In fact, most of these reviews do not support Miller's claim. For instance, Gaym 2009 concluded that maternal mortality did not change between 1995 and 2005 and showed that during this period, the major contributor to maternal death (according to eleven of twelve included studies) was unsafe abortion (9). Another cited review by Miller, Abdella 2010, has several limitations and mixed findings that need to be critically evaluated before using its results as evidence. Abdella 2010 reported mixed results on maternal mortality patterns before the law reform: the maternal mortality ratio (MMR) from hospital-based studies and national Demographic Health Survey (DHS) data decreased between 1982 and 2005, but community-based studies showed an increase in MMR during the same period. Miller took only the first part of this result and failed to elaborate or explain these differences. So, the generalization that maternal mortality has decreased before the legal reform is questionable. The other major limitation of this review (Abdella 2010) is that the pattern of abortion-related mortality is described without having proper studies that justify it (13–16). Individual studies used in Abdella's review are retrospective chart reviews of the delivery registration book of all laboring mothers admitted to the labor ward in a single hospital from April 1, 1993, to March 30, 2003.

From these data, the author captured the sepsis rate of 12.5% as abortion-related maternal death. Otherwise, abortion-related maternal death is not directly captured in this review. Moreover, the studies in the review have major methodological limitations, including the retrospective nature of the study and the use of medical records as a source of data in a time when abortion was illegal and medical records could be potentially inaccurate. The other two systematic reviews mentioned by Miller are aimed at evaluating the pattern of causes of maternal mortality (case fatality rate) over the period between 1980 to 2016 (11,12). The main conclusion of these two reviews is that causes of maternal mortality have changed over the years from unsafe abortion and obstructed labor/uterine rupture to hemorrhage and hypertensive disorders. Therefore, because these reviews solely address the causes of maternal mortality, they cannot possibly support Miller's claim that abortion-related mortality declined prior to legal reform. According to a systematic review of 18 studies done by Berhan et al. (17), which included nationally representative surveys, small-scale community-based studies, hospital studies, and secondary data analysis, maternal mortality in Ethiopia did not change significantly over three decades between 1980 to 2008.

This finding aligns with the Lancet maternal survival series that suggested no significant change in the maternal mortality ratio in Sub-Saharan countries between 1995 and 2005 (18). So, the argument that maternal mortality is dropping before 2005 is false and none of the cited evidence strongly supports Miller's claim.

Flaw 2: Miller inaccurately states that the law reform in Ethiopia has caused an increase in abortion rates, morbidity, and potentially abortion-related mortality, without reducing overall maternal mortality.

We agree with Miller in that law reform may have preceded increases in documented abortion-related morbidity, though, unlike Miller, we posit that this is due to improved detection of such morbidity. Gebrehiwot 2009 offers compelling evidence for an increase in complications due to unsafe abortion in hospitals following legalization, as does a study by Yifru et al. 2014 (19) (11). This suggests that reported and treated abortion complications did increase after abortion law reform, which we posit is due to massive improvements and increased resources for post-abortion care services, which occurred concurrently with increased access to safe induced abortion services (20). This increased access (including greater geographic proximity to services) and availability likely improved people's trust in services, leading to greater service utilization and ultimately resulting in increased detection of minor and moderate morbidity as more women seek care earlier and fewer women die from unsafe abortion-related mortality. A recent report by the Guttmacher Institute on Sub-Saharan Africa showed that abortions are severely underreported in countries where safe abortion services are restricted (21).

Studies across many countries have noted that without decreasing abortion-related stigma, disseminating reliable information about abortion, and fostering trust among communities to seek services, legalization of abortion cannot reach its full potential in protecting public health (22–24). Despite safe abortion law reform in 2005, illegal and unsafe induced abortions remain common in Ethiopia (25). Legal reform does not guarantee access to or use of safe abortion services, and restrictive abortion laws also do not reduce the prevalence of abortion which is also been demonstrated in other countries (26). Miller cites Gebrehiwot et al. 2009 (19) as a basis for his claim that case fatality from abortion has increased and no change in maternal mortality occurred following the liberalization of abortion law in Ethiopia. But Gebrehiwot excluded community deaths in his analysis. – making it impossible to draw any conclusions about national maternal mortality patterns. Furthermore, the data used to justify this claim is only two years into the new safe abortion law. The data in the figure (Fig.1) were used to justify Miller's claim that MMR did not decrease after abortion was legalized in 2005. But the two years of data are insufficient to support this claim.

In addition to Miller's selectively picked findings of this study, Gebrehiwot and colleagues also noted that within the two years following legal reform, the trend of abortion-related maternal mortality has declined and suggested further longitudinal study for a longer period to have a firm conclusion on the effect of safe abortion legal reform in Ethiopia (19). Twelve years after the legal reform, the MMR in Ethiopia, according to a report by the world bank in 2017, is 401 per 100,000 live births (27). This is significantly lower than the maternal mortality of the country in 2000, which was 1030 per 100,000 live births (27).

Flaw 3: Ethiopian safe abortion laws were never been fully "liberal" and therefore Miller's comparisons are inappropriate

The third outstanding argument by Calum Miller is that the same or higher rates of abortion-related maternal mortality exist in Ethiopia compared to other countries with more restrictive abortion laws. The author presented this statement as if Ethiopia has a more liberal law while other countries have restrictive abortion laws. As a justification for this, he listed countries like Kenya, Rwanda, Uganda, and other countries in North Africa. This assumption is wrong for multiple reasons. One of the fundamental points missed by the author is that abortion is far from liberal in Ethiopia. He misrepresented the country's law as "legalization" in his title and in multiple places in his commentary. Abortion is illegal in Ethiopia unless performed under the circumstances mentioned in the penal code (28). So, in terms of abortion law, there is not much difference between Ethiopia, Kenya, Rwanda, and Uganda (29). Miller cited Say L et al. in his statement about the low abortion rate in prohibitive states in North Africa (30). In this same reference, the challenges of having accurate abortion-related data, particularly in restrictive settings, is mentioned. Abortion-related data could be underreported for political reasons in some of these restrictive countries. But this is not mentioned anywhere in Miller's commentary.

The statement about high abortion-related maternal mortality in Ethiopia compared to these countries is also not supported by strong evidence. A recent report from Ethiopia has shown that abortion-related maternal mortality contributes only less than 3% of total maternal deaths (31). This is much lower compared to abortion-related maternal mortality in Kenya (17%), Uganda (5%), and Rwanda (8%) (32,33).

Flaw 4: Miller inaccurately associated the increase in abortion rate to the change in abortion law.

The fourth argument by the author is an increase in abortion rate in Ethiopia after the legalization of abortion in 2005. As we have outlined in the previous argument (Flaw 2), we agree with Miller on the increase in the rate of abortion and abortion-related morbidity following the legal reform. But this change in the abortion rate and abortion morbidity is mainly related to improved detection and reporting of abortions by health facilities, rather than the legal reform (21). So, this is mainly due to more detection and reporting than an actual increase. Similar findings are reported by other studies A comprehensive report from Sub-Saharan Africa by the Guttmacher institute gives a clear picture of abortion legality and incidence of abortion (21). According to this report, abortion occurs at a similar rate regardless of abortion law in the country. Abortion incidence cannot be reduced by restricting abortion. Instead, restrictive laws make abortion more unsafe. In countries or regions where abortion incidence has decreased, increased use of contraception, rather than a change in abortion law, is the main reason. Another recent global and regional estimate of unintended pregnancy and abortion by the Guttmacher institute also shows similar findings and has demonstrated that abortion incidence is not affected by the legality of abortion (34).

In summary, unlike what was expressed in the commentary, some of the facts in the country are as follows.

- The author's notion of “legalized abortion” is wrong. The revised law still criminalizes abortion. The law states, “The intentional termination of a pregnancy, at whatever stage or however effected, is punishable according to the following provisions, except as otherwise provided under Article 551” (35).
- Unsafe abortion has contributed to 32% of maternal death in Ethiopia before the safe abortion legal reform (28), while currently contributing to less than 10% (12).
- Comparing abortion law and abortion-related morbidity/mortality between Ethiopia and other countries is not a good strategy to evaluate the effects of change in abortion law. Crucial factors such as details of the law, implementation of the law, and other health system issues are not captured in such comparisons and this may result in erroneous conclusions.
- Unlike Miller’s commentary that fatally undermines the country’s effort and measures taken to reduce maternal mortality, the maternal mortality ratio in Ethiopia has dropped from 865 to 401 per 100,000 live births between the year 2005-2017 (27).
- Over the past two decades, the world population has increased in number, and so has the abortion rate. This increase in abortion rate has no linear relationship with the abortion law. Studies have shown that restricting abortion access makes abortion less safe rather than reducing its occurrence (21).

Conclusion

Ethiopia has suffered a huge burden of maternal death from unsafe abortion before the legal reform with 1 out of 3 women dying from the complications of unsafe abortion (10). This unprecedented occurrence unified this highly religious and conservative society to think as one and address the issue. Ten years after the legal reform, abortion-related maternal mortality has decreased to less than 5 % (31). Health financing, task shifting/ sharing, and continuous professional development for mid-level health care providers working in the area of abortion are some of the interventions introduced in the country that contributed to this achievement. Building upon this achievement, the Ethiopian Federal Ministry of Health has developed a health sector transformation plan and reproductive health strategic plan, which incorporate the elimination of unsafe abortion as one strategy to eliminate abortion-related maternal mortality (5). Access to quality sexual and reproductive health in general and safe abortion service, in particular, is still a challenge, especially in the rural regions of the country. The country is working on the missing elements and building upon its strengths to expand access to safe and quality sexual and reproductive health services. Ethiopia is not in a position to look back on those years of clandestine abortion that took the lives of many women and girls.

Miller’s commentary has overlooked the country’s commitment to improving reproductive health and the achievements made through a brave struggle of health care providers, policymakers, partner organizations, researchers, and other relevant stakeholders in the country and beyond. He used superficial information without an in-depth analysis of the studies to justify his flawed narrative. Similar publications in scientific journals should be critically analyzed before publication, and we are optimistic that the journal will retract this paper after examining the evidence presented in this commentary.

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