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BRIEF COMMUNICATION

LEGALISATION OF ABORTION AND MATERNAL MORTALITY IN ETHIOPIA

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ABSTRACT

It is commonly assumed that legalisation of abortion leads to reduced maternal mortality both generally, and from abortion specifically. This paper surveys the available literature on maternal mortality and its causes in Ethiopia before and after legalisation of abortion in 2005, finding that abortion mortality had already fallen to low levels before legalisation, and did not drop noticeably further after legalisation. These findings are then compared with abortion mortality in other African contexts. Explanations for these findings are offered.

INTRODUCTION

Abortion was legalised in Ethiopia in 2005 as a means of reducing maternal mortality from abortion as well as more generally. Although abortion was not legalised on demand, it was legalised on broad socio-economic grounds: the Center for Reproductive Rights place it in the same category as the UK and Finland which, while not strictly allowing abortion on demand, do allow something close to that in practice.[1] While the received wisdom is that legalising abortion contributes to these aims, examples are rare, as most countries follow the same trajectory of abortion deaths and maternal deaths as before. In some countries, such as the Netherlands [2] and Rwanda,[3] deaths from abortion even increased proportionately on legalisation. In Poland [4] and Chile,[5] deaths from abortion and maternal deaths in general fell after prohibition of abortion in 1993 and 1989. Poland now has the lowest maternal mortality ratio in the world, and Chile has the second lowest in the Americas.[6] The impact of legalisation in Ethiopia cannot be assumed on the basis of theory, therefore; we must look at the evidence.[a]

FALLING MORTALITY PRIOR TO LEGALISATION

Prior to 2005, mortality from abortion had already dramatically declined to 6-7% of maternal deaths, as shown by at least four systematic reviews, meaning it had declined in absolute terms and even relative to other causes of maternal death.[8-11] 'Abortion' in reviews of maternal mortality typically refers to both induced abortion and spontaneous abortion, so the proportion of maternal deaths due to induced abortion was smaller still.[b]

This is in line with the experience of almost all developed countries, in which deaths from abortion fell to very low levels before abortion was legalised, as a result of safer illegal methods and better post-abortion care. In the 21st century, these factors are even more salient, with the widespread availability of misoprostol, manual vacuum aspiration, and better antibiotics.

NO FURTHER REDUCTION AFTER LEGALISATION

In the decade following legalisation, the proportion of maternal deaths due to abortion did not fall beyond the prior trajectory, and arguably did not fall at all. It is even possible, in light of evidence below, that it increased. The same reviews discussed above[c] all offer figures around 6-7% for the years after 2005. Mekonnen[11] has the most complete data and cites figures between 2 and 9%, with a median of 6%. The most recent three studies gave figures of 2, 8, and 9%. Gebrehiwot specifically looked at the impact of legalisation and found no statistically significant decrease in abortion mortality or maternal mortality. He did find, however, that 'the severity of abortion complications and the case fatality rate increase during the transition of legal revision.' The case fatality more than tripled.[12]

If abortion legalisation had a significant impact on mortality, we would expect a disproportionate decrease in deaths from abortion (especially since the proportion of maternal deaths due to abortion naturally declines over time regardless of the law). The data as described above do not support this. Tessema has shown how abortion mortality decreased exactly in line with other

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[a]See Miller (forthcoming)[7] for a fuller treatment of empirical evidence relating to the legalisation of abortion and maternal deaths in other countries.

causes of maternal mortality.[13]

COMPARISON WITH OTHER COUNTRIES

We would also expect Ethiopia to have significantly fewer maternal deaths due to abortion than other comparable countries with restrictive laws. But the Ethiopian figures are about average for, or higher than, East Africa generally. The Kenyan Confidential Enquiry into Maternal Deaths recently estimated 8.3% of maternal deaths due to abortion, but only 1.7% were demonstrably induced abortions.[14] The Ugandan Ministry of Health recorded that 5% of maternal deaths were due to abortion,[15] while a study in 2013 found that abortion was responsible for 3.8% of maternal deaths and only 1.1% of non-life-threatening complications[16]. Rwandan data showed only 3% prior to legalisation in 2012 (subsequently increasing to 7% after legalisation),[17] and already twenty years ago abortion complications constituted only 6% of maternal deaths in Malawi,[18] with a more recent study suggesting 1.9-3.8%.[19] Hence, the proportion of maternal deaths attributable to abortion in Ethiopia is comparable to, if not higher than, other countries in East Africa with more restrictive laws. In North Africa, where abortion is prohibited everywhere except for Tunisia, the proportion was only 2.2%.[20] Other studies from West and Southern Africa show percentages as low as 3.5% (Burkina Faso [21] and Benin[22]), 1.9% (Sierra Leone[23]), or 1% (Angola[24]). In some cases, abortion is not even mentioned as a cause of death.[25] In all of these countries, abortion is still prohibited.

ABORTION RATES HAVE INCREASED

Part of the argument for legalisation is that prohibition of abortion does not reduce the number of abortions. This has been proven false in many different contexts, and now in Ethiopia. According to the Guttmacher Institute's own estimates,[d] the abortion rate has gone up from 22 to 28 per 1000 women between 2008 and 2014. While there has been an increase from 103,000 to 326,000 legal abortions, this has not simply been a replacement of illegal abortions. In fact, the number of abortions performed outside of facilities (an index of illegal abortions) was estimated to have also increased from 280,000 to 294,000.[26] The proportion of women presenting for post-abortion care who reported self-inducing abortions increased by 40% over the same period.[27] This increase in illegal abortions is consistent with the experience of various other countries.[7,28]

ABORTION COMPLICATIONS HAVE INCREASED

While there is somewhat conflicting evidence on increased abortion mortality after legalisation, morbidity clearly increased. Over the period of legalisation, the proportion of women with septic shock more than doubled, with the same result for organ failure.[e] The proportion admitted to intensive care nearly tripled.[12] Between 2008 and 2014, the percentage of women receiving post-abortion care who have *severe* complications increased by over 50%, from 7% to 11%. During this time, the proportion of women presenting with organ failure quadrupled, the proportion with peritonitis quintupled, and the proportion with shock nearly doubled.[27]

Overall, complications doubled between 2008 and 2014, from 53,000 to 104,000. This is despite greatly improved reproductive healthcare, increased contraception,[f] and 'major progress' in safe abortion provision. Only a small proportion of this can be attributed to population growth.[26] Notably, there was a steep drop in physician involvement during the time period.[27] Gebrehiwot summarises, 'Overall, the frequency and severity of abortion-related morbidity for which women sought care increased between 2008 and 2014'.[27]

LONGER TERM DATA

It is harder to relate longer term declines in abortion mortality to the legalisation of abortion, since the proportion of maternal deaths attributable to abortion (including miscarriage) varies dramatically over time in general,[18,29] and since the 1980s has declined over time regardless of legal change in most countries, including – as shown above – in Ethiopia prior to legalisation. While figures of 20-70% were cited not uncommonly in previous decades,[29] such estimates are virtually unheard of anywhere in the world today, almost universally being under 10% and often, as shown above, well below 5%.[20,30] The reasons why are discussed below.

Still, it is worth examining some of the more recent literature on maternal deaths and near-misses in Ethiopia. Data from 2008-2014 suggested that abortion caused 9.3% of maternal deaths.[31] Tessema et al.'s review[32] suggested that 19.6% of maternal deaths were from abortion in 2013, though this was not a primary study. Data from 2016 found abortion responsible for 1.5% of deaths.[33] Data from 2016-2017 in one hospital show 'safe abortion' being responsible for 2.5% of deaths, though with a sample size of only 40 so a wide margin of error.[34]

[b]For this reason, all mentions of 'abortion' in this article refer to both spontaneous and induced abortion. Although we can never say with much certainty what proportion of maternal deaths result from either cause specifically, we can look at the trend of both taken together.
[c]Except Gaym (2009)[8], which does not contain studies from after 2005.

Data from 2018 found that abortion was responsible for 4.9% of maternal near misses at one hospital.[35] At another hospital in 2018-2019, abortion was responsible for 12.5% of maternal deaths.[36] 2020 data from two major hospitals found that abortion was responsible for 6.5% of maternal near-misses.[37] Finally, Tariku in 2019 did not estimate abortion near-misses or maternal deaths as a percentage, but found that 'Severe acute maternal morbidity and maternal near miss related to abortion are high despite the availability of safe termination'.[38] Hence the data in more recent years are incredibly variable, and show no clear sign of an improvement from the legalisation of abortion, even if trends from 10-15 years later could be credibly attributed to the law of 2005.

EXPLANATORY FACTORS

As powerful as the empirical evidence from Ethiopia and elsewhere is,[7] a theoretical basis is needed to explain why legalisation of abortion does not lower the abortion mortality rate or the maternal mortality ratio – at least, in some countries. A few reasons can be given:

1. The abortion mortality rate was already low, reducing the opportunity for large decreases.
2. Many deaths from abortion result from spontaneous abortion, i.e., miscarriage, and hence could never be prevented by legalising abortion.[30]
3. Illegal abortion is far safer than it used to be, because of widespread safer techniques such as misoprostol and manual vacuum aspiration.[39-42] Some have suggested that even without accurate information provided, self-managed medical abortion can be relatively safe.[43]
4. While in illegal settings, women are at risk of being given the wrong dosage and instructions regarding misoprostol, the same is often true where abortion is legal.[39,44,45]
5. Abortion in legal settings is also moving towards self-managed abortions, reducing the disparity in technique between legal and illegal abortions.[42,46]
6. Quality post-abortion care is sufficient to prevent most deaths from abortion;[47-51] this is one of the major reasons developed countries almost universally had minimal abortion mortality prior to legalisation. Conversely, where emergency care is unavailable, abortions which would otherwise be safe can become unsafe.
7. Women seek illegal abortions even when abortion is legal, often at similar or even higher rates (as in this case).[7,28,52] Reasons include lack of access as well as women's preference: many women deliberately seek abortion outside the recommended facilities, often for reasons of privacy.[53-55]

One major reason there may be a compensatory increase in abortion deaths is that when abortion is legalised, more abortions occur (as in this case); this has been a virtually universal trend and can no longer be reasonably denied.[56,57] Hence, more women are liable to the risks of abortion. Even if legalisation leads to a lower case fatality rate, this may be offset by an increase in cases. But in many countries, there has been either no change in illegal abortions at all, or even an increase[7,28,52] – perhaps partly because criminal abortionists may feel emboldened by the new leniency of the law.[28]

Another reason for an increase in abortion deaths is the opportunity cost of diverting funding from emergency obstetric care to safe abortion lobbying or funding. This has been shown in the past to limit women's access to emergency obstetric care, which ironically could cause women to die from complications of both safe and unsafe abortions.[30,58,59]

There are further reasons we may expect an increase in maternal mortality in general from the legalisation of abortion:

1. Abortion is associated with a higher mortality rate than continued pregnancy.[60-62] Most of this is due to an increased risk of suicide,[63] which is not counted among post-abortion complications/deaths.
2. Abortion is likewise associated with increases in alcohol and drug misuse compared to completing an unwanted pregnancy, with their various impacts on health.[63]
3. Abortion has similarly been associated with increased mortality from homicide and accidental injuries relative to completing a pregnancy.[60-62]
4. Some have argued that abortion is associated with heart disease, perhaps relating to the psychosocial stress of abortion as well as the higher levels of alcohol and drug misuse.[61,62]
5. The legalisation of abortion has been linked with a large increase in prevalence of sexually transmitted diseases, with their various consequences, including death from cervical cancer or HIV/AIDS.[64-66]
6. The legalisation of abortion has also been linked with increased family breakdown and poverty,[67] which in turn have a variety of effects on mental and physical health outcomes, including mortality risk.[68]
7. The legalisation of abortion has likewise been linked with male delinquency and crime, which likely contribute to pregnant women's risk of being the victim of

[d]These estimates are open to challenge, since they rely on the controversial Abortion Incidence Complication Method, which has considerable shortcomings. Nevertheless, the shortcomings will likely bias the results in the same direction (upwards) in both years.
[e]Latter result not statistically significant due to small sample size.
[f]Incidentally, the proportion of unplanned pregnancies decreased only marginally and insignificantly during that time, from 42 to 38%.

homicide.[69]

8. Abortion availability may contribute to delayed childbearing, which is associated with increased maternal mortality.[60]
9. More speculatively, societies restricting abortion may place a higher value on, and invest in, maternity services, perhaps explaining Poland and Malta's anomalously low maternal mortality ratio.

Importantly, some of these ways in which maternal mortality may be increased can have intergenerational effects - for example, insofar as mental health problems, poverty and family breakdown are more prevalent among individuals who have experienced those in their families growing up.

CONCLUSION

Gebrehiwot comments: 'These results also show the difficulties that remain in eliminating unsafe abortion, even in countries where the procedure is legal… Since 1972, only Ethiopia, Ghana, Mozambique, Rwanda, South Africa and Zambia have changed their abortion laws… None of these countries has eradicated unsafe abortion, and many—like South Africa—have spent decades trying'.[27]

The evidence offered here suggests that the same is true for Ethiopia. Rather than being a silver bullet to reduce deaths from abortion, abortion legalisation has resulted in a vast increase in the number of abortions, without any appreciable decrease in abortion mortality or maternal mortality. There is some evidence mortality, and certainly morbidity, have even increased since legalisation.

Ethiopia's progress in reducing maternal deaths has been considerably less than expected,[13] especially with respect to abortion. It is possible that, as in other countries, a disproportionate focus on family planning based on inflated claims of abortion mortality has diverted resources from emergency obstetric care and thereby failed to reduce maternal mortality more significantly.[30, 58, 59]

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