

# "A new hope for women": medical abortion in a low-resource setting in Ethiopia

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Between February 2002 and January 2004 in the Adigrat Zonal Hospital, covering one-fifth of the large Tigray region of North West Ethiopia, there were 907 admissions with a diagnosis of abortion. Among these, 521 were induced by traditional, unsafe methods.<sup>1</sup> Unsafe abortion was the leading cause of admission, accounting for 12.6% of all bed occupancy throughout this general hospital and 60.6% of the gynecological admissions. About 57% of patients admitted with unsafe abortions had serious complications, including tubo-ovarian abscess, vaginal laceration, uterine perforation, generalised peritonitis and renal failure. Three women died from complications of unsafe abortion. Five years later in the same hospital, between July 2009 and September 2010 unsafe abortion cases had declined, becoming the tenth cause of hospital admission. There were no deaths and no severe complications.

This remarkable change in a poor rural area, with a weak infrastructure and where half of all women are illiterate, was the outcome of a pilot project testing whether all levels of health providers could be trained to provide medical abortion and to refer appropriately. The Comprehensive Abortion Care (CAC) project, conducted in the Tigray region of NW Ethiopia, was a partnership between the Regional Health Bureau, Venture Strategies Innovations and the Bixby Center for Population, Health and Sustainability at the University of California, Berkeley, USA.

In most of sub-Saharan Africa abortion remains illegal, but nevertheless abortion abounds, and it is a major cause of maternal mortality and morbidity. In 2005, Ethiopia changed its abortion law to permit termination when a woman's health is endangered, in cases of fetal abnormality, and for pregnancy after rape. In Tigray,

20% of women reported unintended pregnancies were the result of coercive sex.<sup>1</sup> The law permits any woman under the age of 18 years to have an abortion for any reason, with no questions asked. But even so, access to safe abortion has remained limited outside the capital Addis Ababa, and in Ethiopia 30% of maternal deaths continue to be the result of unsafe abortion.<sup>2</sup> Unsafe abortion is estimated to cost the Tigray Regional Health Bureau \$5 million out of an annual health budget of \$30 million. Ethiopia as a whole spends \$7.6 per capita on all aspects of health care. The Tigray CAC project is a landmark because it is the first time safe abortion has been made widely and safely available in a deep rural area.

The Ministry of Health has deployed 1700 female health extension workers (HEWs) who have 18 months' training in the provision of health care. The CAC project is having a rapid impact, and 4354 safe abortions have been provided since the project started in a relatively small area in May 2009. In 20 health posts, the HEWs provided medical safe abortion with misoprostol up to 9 weeks and also treated incomplete abortion with misoprostol (Figure 1). In nine health centres, nurses and health officers provided manual vacuum aspiration together with medical abortion up to the gestational age of 12 weeks. Four hospitals provided a full range of abortion services to the 28th week of gestation. Misoprostol is more readily available and far less costly than mifepristone. During the first course of management with oral misoprostol there was a failure rate of on average 18%, but when another dose of misoprostol for treatment of incomplete abortion was given the failure rate was only 7%. The HEWs are required to refer all continuing pregnancies from health posts to a higher facility.



**Figure 1** Rural health post in Ethiopia. ©2010 Kora Image – Venture Strategies Innovations (VSI).

Ethiopia is a culture in transition. The Tigray region has been a leader in the social and legal empowerment of women, and during the civil war, which ended in 1991, 30% of the soldiers were women. According to the 2007 census, 80% of the 4.3 million population of Tigray live in the rural area where marriage under the age of 18 years was a tradition rather than an exception. The government of Tigray is enforcing a new law that raises the minimum age of marriage to 18 years. In this region where 95% of the population is orthodox Christian, priests approach these matters in different ways. Some tell women they won't go to heaven if they use oral contraceptives, while other priests have been trained to dispense injectable contraception safely and effectively.<sup>3</sup> Some husbands will divorce or beat their wives if they have an abortion, while others will support them.

The CAC project was careful to involve women and community leaders. While abortion will always draw some controversy, there is unanimity among the health professionals who have seen the reality of unsafe abortion, and CAC has been highly successful. The physicians rejoice in the reduction in abortion mortality and morbidity, and the nurse and health extension workers are motivated by the relief they see in the eyes of the women and the pride they take in their own skills.

Evaluation showed the women preferred medical abortion to surgical abortion, and they sought help early in pregnancy (the mean gestational age was 9 weeks). Some 22% of abortion cases attending health posts were unmarried, while 57% in health centres and 59% in hospitals were unmarried. Women placed a high value on confidentiality and some did not tell their husbands they had had an abortion. One woman summed up the impact of CAC saying, "You can have an abortion and raise and educate the kids you already have". Another captured the revolutionary changes

that have taken place in the succinct phrase used in our commentary title, "A new hope for women".

In Ethiopia as a whole in 2005, only 9.7% of women used modern contraceptives and, of these, seven out of ten chose injectables. The unmet need for contraception in 2005 was 30%. Professionals in the field estimate that the contraceptive prevalence may have doubled since 2005. Among those women who were followed up in the CAC project, 90% received contraceptive advice and almost half of these used injectables.

The results of the CAC project were reported at a dissemination meeting held in Mekele, the capital of Tigray, on 9 May 2011. It was an important milestone in an initiative which Venture Strategies for Health and Development had launched with African medical colleagues in the year 2000 to secure the registration and distribution of misoprostol in low-resource settings.<sup>4</sup> The Mekele meeting was attended by physicians from all corners of the country, a group of HEWs, representatives of women's associations, administrators from other regions in Ethiopia, and representatives of the Federal Ministry of Health. Health bureaux in other regions are already making plans to launch similar initiatives, and the Federal Ministry of Health wishes to maximise the health impact of this successful programme throughout all levels of the health care system, and to see the Tigray success scaled up throughout the country.

It is to be hoped that the Ethiopian model will be adopted in other low-resource settings in Africa, as an achievable and effective step in eliminating the scourge of unsafe abortion.

**Competing interests** None.

**Ethics approval** The study was approved by the University of California Berkeley Committee for the Protection of Human Subjects, and the Tigray Health Bureau.

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