

Correlates of Health Extension Program Outreach Activities with Maternal Healthcare Seeking Behaviors in Ethiopia

The Last Ten Kilometers (L10K) Project supports the Ethiopia Health Extension Program (HEP) by strengthening linkages between households, communities and the HEP and ultimately improves household and community health practices and outcomes. The HEP—the Government of Ethiopia’s flagship program in the health sector—supports the goal of universal primary health care coverage, giving priority to the prevention and control of communicable disease with active community participation. The main strategy of the HEP is to expand physical health infrastructure, training, and the deployment of a cadre of female Health Extension Workers (HEWs) who will provide basic curative and preventive health services throughout the country.

The L10K project works in 115 woredas (i.e., districts) covering 13.8 million people in Amhara, Oromia, Tigray and the Southern Nations, Nationalities and Peoples Region. The project examines community solutions that help mobilize families and communities in these woredas to improve household and community reproductive, maternal, neonatal, and child health practices. Much of this work is done by supporting the HEW to extend their reach through mobilizing communities, utilizing a geographically spread network of vCHWs, and to promote health messages and practices to families residing in every part of the kebele (i.e., smallest administrative units).

baseline survey is used to correlate HEP outreach activity intensity with maternal health indicators. The analysis controlled for non-programmatic confounding factors including age, education, marital status, number of children ever born,

Background

Considerable achievements of the health extension program (HEP) have been recorded since its inception in 2003. The baseline survey conducted by the Last Ten Kilometres Project (L10K) between December 2008 and January 2009 in 115 intervention woredas of Amhara, Oromiya, Southern Nations, Nationalities and People’s Region (SNNPR) as well as Tigray found that 92 percent of kebeles had at least one health extension worker (HEW) while 76 percent of kebeles had the planned two HEWs in place. The survey also found that 69 percent of kebeles had the health post physically in place.

Maternal healthcare utilization was seen to improve, with the expansion of HEP. Between 2005 and December 2008, the contraceptive prevalence rate increased from 15 to 32 percent; antenatal care (ANC) coverage increased from 26 to 54 percent; tetanus toxoid injection (TTI) coverage among pregnant women increased from 24 to 42 percent; deliveries assisted by health professional increased (DAHP) from 5 to 12 percent; and postnatal care (PNC) coverage remained unchanged at about 5 percent. This paper assesses whether some of the improvements in the maternal health indicators can be explained by HEP outreach activities.

Methods

This study takes advantage of the natural variability in the intensity of the HEP activities across kebeles in L10K project areas and measures the impact by using “dose-response” relationships between exposure to HEP outreach activities, intensities and the outcomes of interest — i.e., maternal health indicators are expected to be higher where the HEP outreach activity intensity is higher. The HEP intensity measures are: (1) the prevalence of household (HH) visits by HEWs during six months in a kebele, (2) the prevalence of model families in a kebele, and (3) the prevalence of HH visits by voluntary community health workers (vCHWs) in a kebele. Regression analysis of 2,916 women with children of 0 – 11 months from L10K

1 Educated by HEWs to adopt desirable health practices and serve as ‘models’ in their neighborhood.

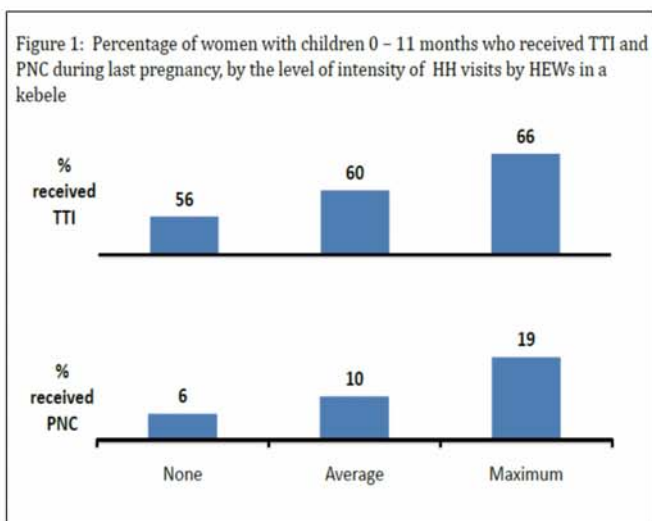
2 VCHWs are model family members who assist the HEWs to provide health education and mobilize households and communities in their neighborhood to adopt desirable health practices.

religion, access to radio messages, household wealth, access to water sources, access to health facilities, urban settings and survey domains.

Results

a) Effect of Household Visits by HEWs

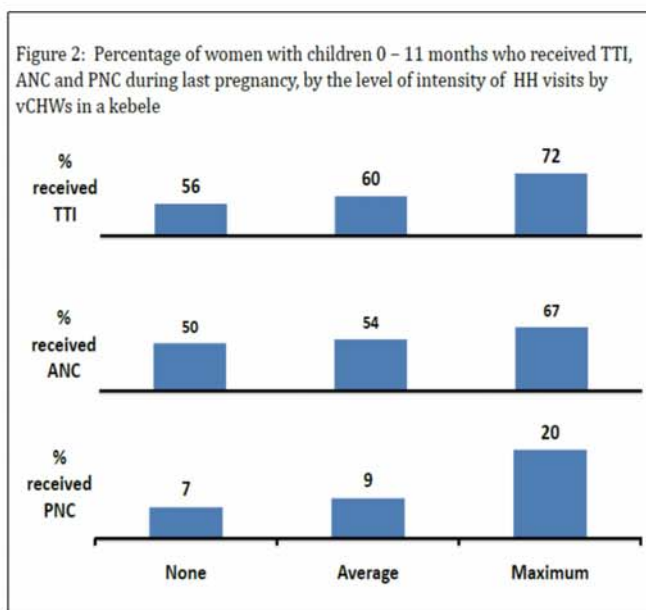
The average prevalence (or intensity) of HH visits by HEWs in a kebele during the six months preceding the survey was 34 percent, which ranged between 0 to 87 percent. Regression analysis indicates that higher prevalence of HH visits by HEWs in a kebele is associated with better TTI and PNC coverage. However, the prevalence of HH visits by HEWs was not associated with ANC or DAPH. The predicted values from regression analysis given in Figure 1 indicate that TTI coverage in kebeles with no HH visits by HEWs is 56 percent, which increases to 60 percent when the prevalence of HH visits by HEWs is at the average level (i.e., 34 percent) and can potentially reach 66 percent if the prevalence of HH visits by HEWs reaches 100 percent (i.e., maximum possible level). Therefore, the impact of the prevalence of HH visits by HEWs is 4 percentage-points (60% – 56%), which has the potential to improve by another 6 percentage-points (66% – 60%). Similarly, the impact of HH visits by HEWs on PNC coverage is 4 percentage-points (10% – 6%), which can potentially improve by another 9 percentage-points (19% – 10 %) if HHs were visited by HEWs reached the maximum.



b) Effect of Household Visits by vCHWs

The average prevalence of HH visits by vCHWs in a kebele during the six months preceding the survey was 20 percent, which ranged between 0 to 71 percent.

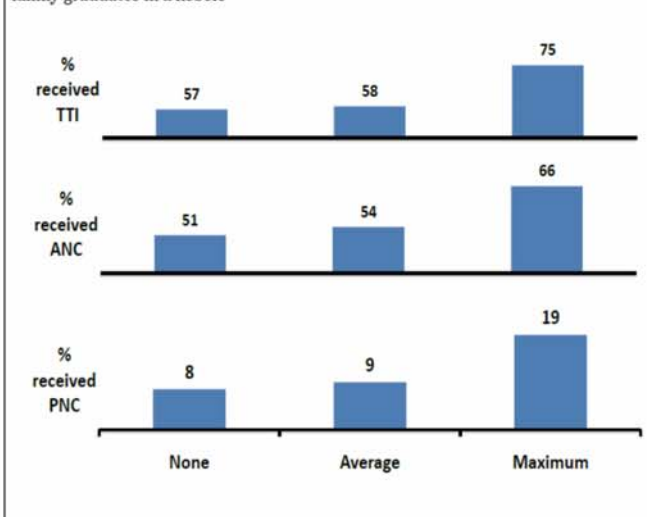
Regression analysis indicates that higher prevalence of HH visits by vCHWs in a kebele is associated with higher ANC, TTI and PNC coverage, but not DAPH coverage. Predicted values from the regression models given in Figure 2 indicate that the impact of HH visits by vCHWs on ANC coverage is 4 percentage-points (54% – 50%), which could be increased further by 13 percentage-points (67% – 54%) if the maximum intensity of HH visits by vCHWs in reached. Similarly, the impacts of HH visits by vCHWs on TTI and PNC coverage are 4 and 2 percentage-points, respectively, which have the potential to increase by 12 and 11 percentage-points, respectively, if the prevalence of HH visits by vCHWs increases to the maximum.



c) Effect of Model Families

The average prevalence of model family HHs in a kebele was 10 percent, which ranged between 0 to 96 percent. Higher prevalence of model family HHs in a kebele is associated with higher ANC, TTI and PNC coverage, but not with DAPH coverage. Figure 3 indicates that the impact of prevalence of model families on ANC coverage is 3 percentage-points, which could be potentially increased further by 12 percentage-points if 100 percent of the HHs in a kebele were model families. Similarly, the impacts of model families on TTI and PNC coverage are 1 percentage-point each, which has the potential to increase by 17 and 10 percentage-points, respectively.

Figure 3: Percentage of women with children 0 – 11 months who received TTI, ANC and PNC during last pregnancy, by the level of intensity (prevalence) of model family graduates in a kebele



Implications

The results show that the HEP outreach activities, i.e., HH visits made by HEWs and vCHWs and the graduating model families improved ANC, PNC and TTI coverage, which can be further enhanced if the HEP outreach activities, were maximized. The HEP should take initiatives to achieve it, accordingly.

Clearly the HEP outreach activities were promoting deliveries assisted by trained health professionals, which is deemed essential to combating maternal and newborn morbidity and mortality. Therefore, there is a dire need to develop and implement strategies to provide skilled delivery services to the rural population.



PNC within 48 hours of childbirth, preferable within 24 hours, may prevent maternal deaths because most of the maternal deaths take place during that time. Early post-natal visits are also beneficial for improving neonatal survival. Although the current HEP outreach strategies are associated with improved PNC coverage, the current level is far less than optimum (only 10 percent) with more than two-thirds of the PNC visits taking place after 48 hours of childbirth. The HEP will need to review its community outreach strategy to ensure PNC visits occur within 48 hours of childbirths. Alongside promoting HEW assisted deliveries and PNC, the program also needs to develop referral linkages with emergency obstetric services to tackle delivery and postpartum complications that are not managed by HEWs.

Lastly, it would be important to note that the intensification of the HEP outreach strategies to increase demand for maternal healthcare services should be complemented by maintaining the quality of the healthcare services to sustain the created demand.

References

For details of this study please see Ali Karim, Wuleta Betemariam and Samuel Yalew et al., 2010, Programmatic correlates of maternal healthcare seeking behaviours in Ethiopia, *Ethiopian Journal of Health Development*, 24 Special Issue 1:92-99; available at <http://ejhd.uib.no/ejhd-v24-sn1/ejhdv24-Spes-no1-cover.html>



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