Impact of Voluntary Community Health Workers on Reproductive, Maternal & Child Health in Ethiopia

John Snow, R&T Inc. Ethiopia

JSI - L10K The Last Ten Kilometers

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Introduction

- Ethiopia has one of the highest maternal and child mortality rates in sub-Saharan Africa
- The initial health sector development program failed to reach the rural population—before 2003, 50 percent of the population lived more than 10 kilometers away from a health facility
- Health extension program (HEP) was launched in 2003 to ensure universal access to promotive, preventive and select curative health services
- Till date, over 11,000 health posts are constructed
- Over 30,000 female health extension workers (HEWs) trained—one for every 500 households
- HEP provides communicable disease prevention and control, family planning, maternal and child health, immunization, nutrition, adolescent reproductive health, first-aid and emergency measures, hygiene and environmental sanitation, and health education and communication
- Families are trained to adopt healthy practices and serve as 'models' in their neighborhood
- New and existing vertical health programs are imposing extra tasks to the HEWs
- Voluntary community health workers (vCHWs)—who are 'model family' members—assist the HEWs to provide the HEP package of services in their neighborhood; i.e., shifting 'doable' tasks from the HEWs to the vCHWs
- HEWs supports and mentors the vCHWs
- The Bill & Melinda Gates-funded Last Ten Kilometers (L10K) Project supplements and complements the HEP in 115 districts (18% of the total population) in four regions of the country—Amhara, Oromia, SNNP and Tigray
- The L10K baseline survey conducted in December 2008–January 2009 gives the opportunity to assess the impact of vCHWs on **reproductive, maternal, and child health (RMCH)** services utilization and behaviors

Study Design

- The cross-sectional variability in the intensity of the vCHWs activity in communities is correlated with the variability in RMCH services utilization and behaviors—effect of the vCHW is measured by the magnitude of "dose-response" relationships between intensity of vCHW activity to the outcomes of interest

Data

- **Two-stage cluster sampling**
  - **1st Stage**
    - 243 primary sampling units/communities
  - **2nd Stage: parallel sampling**
    - 7,490 total respondents that included
      - 4,860 women in reproductive age
      - 2,916 women with children 0 to 11 months
      - 2,530 women with children 12 to 23 months
- **Representation:** Tigray region and L10K areas in Amhara, Oromia and SNNP regions

Measurements

Exposure to vCHW activity is measured as a contextual variable

- For every respondent it is the percentage of other women in the community who were visited by a vCHW during the 6 months preceding the survey

RMCH outcome indicators

- Contraceptive prevalence rate; receipt of at least two antenatal care; neonatal tetanus protected childbirth; delivery attended by skilled health professional; postnatal care within 48 hours; breastfeeding; and immunization

Results

Figure 1: Percentages of respondents who heard of vCHWs, whose households were visited by a vCHW during the 6 months preceding the survey (n=7,490), and the information provided during the household visit (n=1,438), L10K survey 2008/09

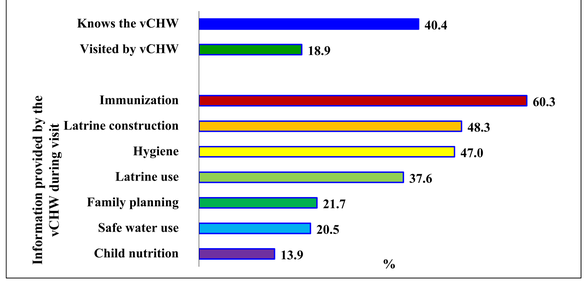

Figure 2: Selected reproductive, maternal and child health care services utilization and behaviors in Tigray and L10K areas in Amhara, Oromia and SNNP regions, 2008/09

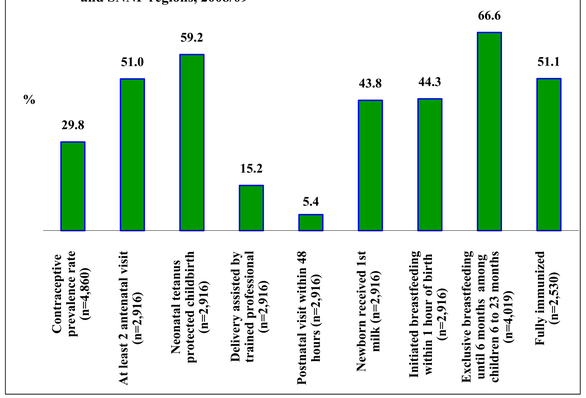

Figure 3: Percentage of women in the community who were visited by a vCHW during the 6 months preceding the survey, according to quintile (n=7,490), L10K survey 2008/09

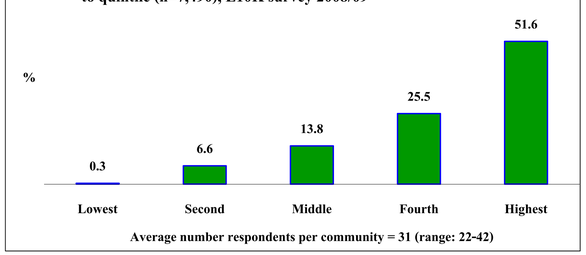

Table 1: The impacts of vCHWs' household visits in a community on selected RMCH care services utilization and behaviors are simulated from logit models (controlled for survey design effect, age, education, marital status, number of children, religion, listens to radio, years at current residence, distance to water source and health facility, wealth quintile, urban settings, and survey domains), Tigray and L10K areas in Amhara, Oromia and SNNP regions, 2008/09

RMCH outcomes	Impact of vCHW (in percentage-points)
Contraceptive prevalence rate	No impact
At least 2 antenatal visit	3.5
Neonatal tetanus protected childbirth	3.3
Delivery assisted by trained professional	No impact
Postnatal visit within 48 hours following birth	2.0
Newborn received 1st milk	No impact
Initiated breastfeeding within 1 hour of birth	No impact
Exclusive breastfeeding until 6 months	No impact
Fully immunized	3.2

Conclusions

- Significant proportion of the women knew the vCHW in her community
- However, the intensity of the vCHW activities widely vary between communities
- vCHWs mainly provide information on immunization, latrine construction, hygiene, and latrine use
- The vCHWs can assist the HEWs to improve RMCH services: vCHWs contributed towards improving the coverage of antenatal care, tetanus toxoid immunization , postnatal care, and childhood immunization

Implications

- Program should expand its effort to engage vCHWs to further improve household and community RMCH practices
- The vCHWs should be encouraged to inform communities regarding the importance of breastfeeding