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HEALTH FOR LIFE **TECHNICAL BRIEF**

STRONGER SYSTEMS, HEALTHIER LIVES

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Reaching Pregnant Women in Marginalized/ Disadvantaged Communities to Increase Utilization of Maternal, Newborn and Family Planning Services

Background

In spite of its mountainous Himalayan terrain and high rates of poverty, Nepal has experienced two decades of steady improvement in health and has seen significant reductions in child and maternal mortality. That said, there is room for improvement, especially since the gains in health are not evenly distributed: traditionally marginalized and disadvantaged groups are particularly likely to experience poorer health and low rates of health service utilization.¹

For example, although the 2011 National Demographic and Health Survey (NDHS) reports that about half the pregnant women in the country attended at least four antenatal (ANC) visits, the average dropped as low as 23.4 percent among untouchable castes - known as *Dalits*, in the southern plains of the Terai.² Similarly, delivery at health facilities is increasing significantly in Nepal but disparities persist between castes and ethnicities.³ Marginalized and disadvantaged groups (M/DAGs) are also much less likely to have postnatal (PNC) checkups or use family planning.⁴ A recent study found that PNC visits in the regions where the majority of Health for Life's project sites are located are particularly low.⁵

Health for Life, a USAID-funded system strengthening project, operates in 28 districts throughout Nepal, working collaboratively with the Ministry of Health to improve health service quality and utilization. One of the challenges has been getting accurate and timely information on pregnant women and increasing their utilization of services. To reach pregnant women, especially from marginalized groups, Health for Life introduced a mobile tracking system in early 2015 to collect data directly from pregnant women and remind them when to visit a health facility for ANC, delivery, PNC and family planning counseling. Preliminary results indicate that utilization of maternal and newborn health services has increased equitable utilization in areas where mobile tracking has been employed.



How community promoters are using mobile technology to improve the lives of mothers and babies in rural Nepal

Approach

Health for Life's approach departs from other mHealth efforts in that rather than sending text messages to remind pregnant women to visit local clinics, the mobile technology is used to supplement local health workers' efforts rather than replace them. Apart from being more effective at increasing utilization of health services, in theory, this approach also addresses the fact that the target population is unlikely to be literate,⁶ have access to mobile technology or have access to a reliable mobile phone network.

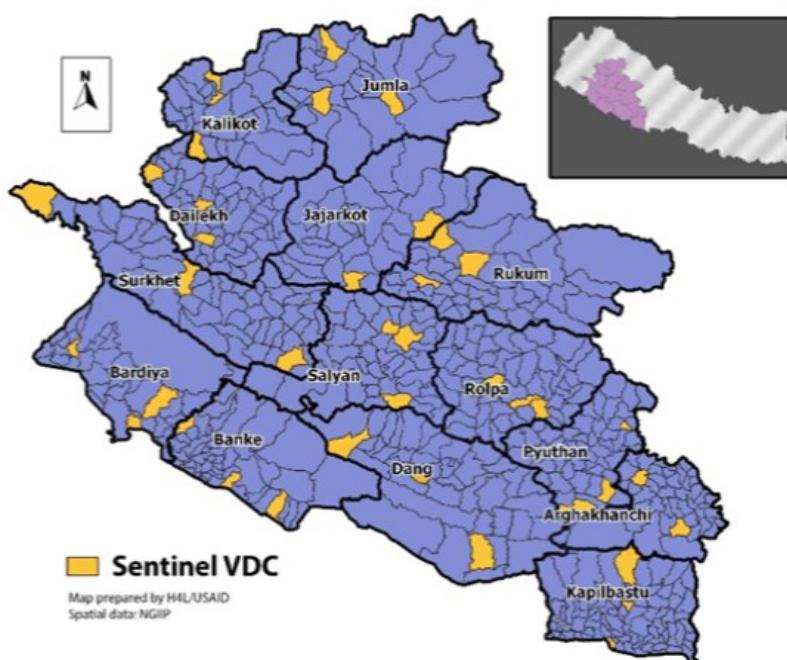
Through a cost-sharing scheme with Health for Life, 39 Community Action Promoters/Researchers (CAP/Rs)—14 men and 25 women with a variety of academic backgrounds—were hired by Health Facility Operations and Management Committees (HFOMCs) to visit households and women's groups to register pregnant women on a mobile phone. Each CAP/R has been given a smartphone preinstalled with data tracking software and was trained on its use. Review and refresher meetings are held every six months. Households in Village Development Committees (VDCs) vary from a few hundred to 2,000 households. Cases are uploaded in real time if the CAP/R is connected to the Internet. If not online when visiting households, CAP/Rs are encouraged to upload data at the end of the day—reliable access to the Internet is not always available, so it is not uncommon for data to be uploaded to the server only every few days.

The software itself is a web-based tracking system developed by Health for Life using the Android-based CommCare application developed by Dimagi, Inc. It is an open-source, mobile health platform designed for data collection, client management, decision support, and behavior change communication. For this particular project, the Health for Life platform is based on the CommCareHQ component of the application, the online web portal for mobile application management, reporting and building forms.

The mobile phone entry form was developed by Health for Life based on existing questionnaires used by health workers.

Sites

In each of Health for Life's 14 core project districts, Health for Life designated a number of VDCs 'sentinel sites' based on their development (as defined by the Government of Nepal), concentration of marginalized populations, accessibility from the district headquarters, and health statistics. Because of these factors, sentinel sites were the ideal place to start the first phase of mobile tracking. The mobile tracking system will be expanded to 30 more sentinel sites in Health for Life's 10 earthquake-affected districts early in FY 2016-17 because of promising results over the past 15 months of implementation.



Caste, ethnicity and health in Nepal

Health lies at the foundation of development, and has been recognized by the Government of Nepal as a basic human right. To effectively develop as a nation, all sectors of society must realize their potential as citizens. However, in virtually every indicator of development from health to education to political voice, traditionally excluded groups in Nepal continue to fall at the very bottom, despite laws designed to eliminate discrimination:

...*Dalits*, Muslims and disadvantaged *Janajatis* have the poorest health outcomes and immunization coverage is lowest among Muslim and Dalit children. Women in these groups marry early and have the lowest levels of access to pre- and post- natal care, family planning and knowledge about HIV/AIDS... Women from all groups also face additional social barriers in getting access to health care. These facts suggest that since women and excluded social groups represent the population with the largest 'health deficit', targeting basic health and family planning services to them should be a central element⁶...

As is so often the case, social exclusion leads to economic discrimination, with the result that poverty is rampant among these groups. RTI's analysis of NDHS 2006 data revealed severe and worsening disparities in access to and use of health services between wealth quintiles. The combination of economic hardship, social discrimination and poor educational achievements make these groups particularly vulnerable to poor health.

Operations

The CAP/R at each project site visits households and community meetings held by local civic organizations such as Mother's Groups, Citizen Ward Forums and meetings held by female community health volunteers. These gatherings present an opportunity for the CAP/Rs to identify pregnant woman, register them via smartphone after getting consent, and inquire about antenatal care (ANC) visits or post-natal care (PNC) and family planning, according to the stage of pregnancy. Each subsequent module is completed during follow-up consultations. For example, if a woman estimates that she is six months pregnant, the CAP/R would begin with the second ANC visit module, following up two months later with the third ANC visit module. Once all modules have been completed, ending with family planning counselling and the third PNC visit seven days after delivery, the woman's registration is marked "closed."

Each CAP/R has an account with CommCareHQ allowing them to upload the latest data through their mobile phone. As data is submitted at each point in the process, it is transmitted to CommCareHQ, a cloud-based server. From the server, the data may be downloaded to a spreadsheet for further analysis. Health for Life analyzes the data quarterly.

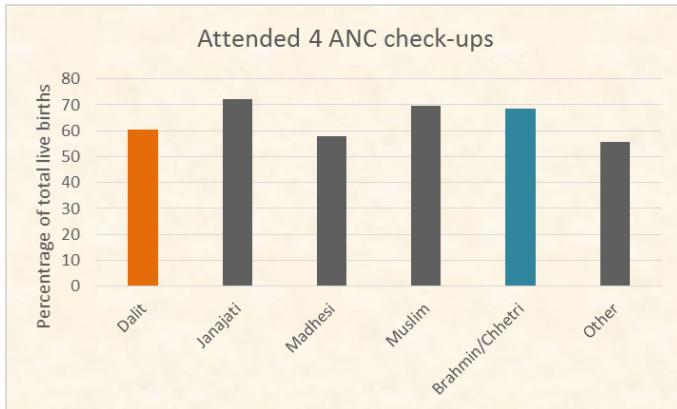
Challenges

One of the initial challenges was gaining the HFOMCs' trust and convincing them to share the cost of hiring the CAP/Rs. Subsequently, contracting each HFOMC to ensure compliance was time consuming for Health for Life, such that it may be more productive to contract with a local personnel management firm to engage the HFOMCs.

In general, CAP/Rs have found the mobile software easy to use. The smartphones were locked to prevent changes to the installed software prior to being distributed. Some CAP/Rs however, have tried to unlock their phones, sometimes requiring re-installation of the CommCare software. It is perhaps inevitable that despite explicit instructions not to do so, the temptation to use the smartphones for personal use can prove irresistible. In addition, as can happen, two CAP/Rs lost their phones and had them replaced by Health for Life.

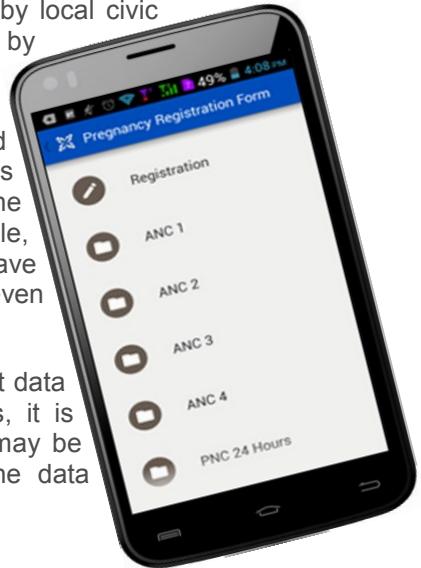
Findings

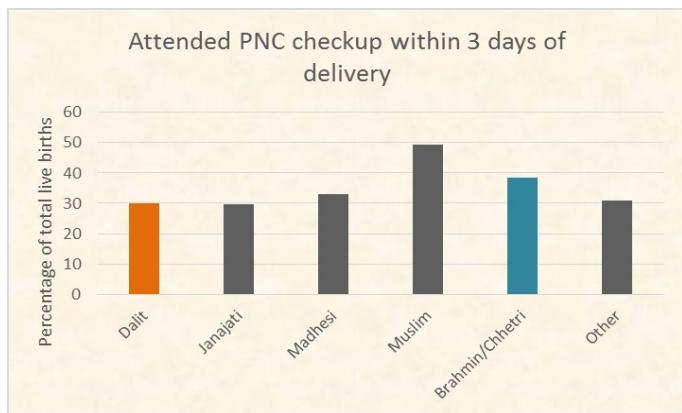
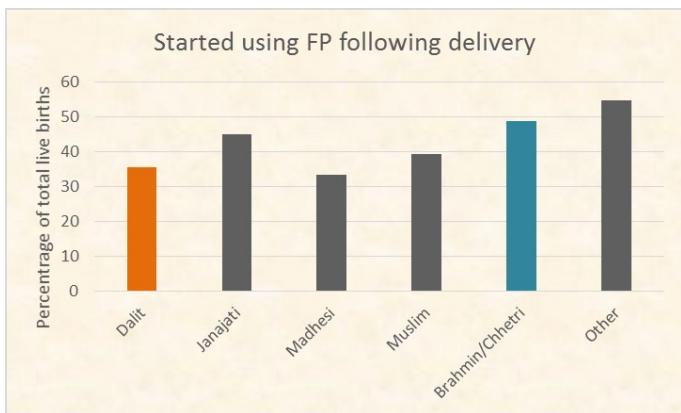
With just over a year of the pilot, it is too soon to draw any conclusions from the data. Nonetheless, a comparison to national data,^{5,7} suggests there is reason to be hopeful.



ANC visits: For completing 4 ANC visits, the national average is 50.1 percent, while for *Dalits* it is 39.9 percent and 63.5 percent among *Brahmins/Chhetris*, according to the Nepal Demographic and Health Survey (NDHS) from 2011. A more recent study, the Multiple Indicator Cluster Survey (MICS) from 2014, while not disaggregated by caste/ethnicity, shows a national average of 59.5 percent of women completing at least four ANC visits. At Health for Life sentinel sites, *Dalit* women attended at least four ANC visits around 60 percent of the time, while among *Brahmins/Chhetris* it is at 78 percent.

Institutional delivery: Institutional delivery, as noted earlier, is increasingly common, with 55.2 percent of births taking place in an institution according to the more recent MICS data, as opposed to 35.3 percent as revealed in the NDHS. Among *Dalits*, that rate drops to a national average of 26.4 percent, according to the NDHS. *Dalits* at Health for Life sentinel sites are having their babies at institutions at a rate nearly double the national average for *Dalits*; among Muslim mothers at sentinel sites, the number is nearly triple the national average for Muslims.





Family planning counselling: Nationally, the use of modern contraceptive methods has plateaued in recent years at 49.7 percent of married women of reproductive age.^{5,7} NDHS data shows that rate to be 43.2 percent among *Dalits* and 52.9 percent among *Brahmins/Chhetris*. When looking specifically at adoption of contraception following delivery, the number appears to be relatively low among all groups at sentinel sites.

PNC visits: Nationally, PNC checkups in the two days following delivery occur 45 percent of the time for mothers, and 30 percent of the time for newborns, according to the NDHS. When disaggregated by caste, those numbers are 37 percent (mothers) and 24 percent (newborns) for *Dalits*, and 54 percent (mothers) and 37 percent (newborns) among *Brahmins/Chhetris*. MICS only examined data on newborns, finding that 57.6 percent of get a PNC checkup within two days of delivery. At Health for Life's sentinel sites, the rate of women completing at least one PNC visit with their newborns within three days is 24 percent of *Dalit* mothers and 37 percent of *Brahmin/Chhetri* mothers.

Conclusion

At this point, this approach to increasing health services utilization and collecting better data is in its pilot phase, having been conducted for one year. Nonetheless, initial results are encouraging and suggest that the approach is effective. As of May 2016, CAP/Rs had registered an estimated 84 percent of pregnant women at the 39 sites, and of those who registered, a disproportionate number are from historically underrepresented/marginalized groups.

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