



Exploring the Use of Mobile Money to Strengthen Health Systems

Case Study: D-TREE



Updated: May 7, 2014

Background

D-tree International is a non-profit organization committed to improving the quality of healthcare with the use of innovative technology. D-tree established a program in Zanzibar, Tanzania to help frontline community health workers provide high quality maternal health care and adequately refer women with high-risk conditions and obstetric emergencies to health facilities. The program currently has 208 trained traditional birth attendants (TBAs) and community health workers (CHWs) who serve a network of 4,500 women who have enrolled in the program. TBAs in Zanzibar are typically paid to assist deliveries. It is therefore a financial disincentive for TBAs to refer their patients to health facilities, since this represents a loss of income.

Mobile Money

In November 2011, D-tree was awarded a grant through Grand Challenges Round 1 and launched a program in Zanzibar that offers mobile-enabled clinical guides to TBAs to help them treat women and identify women who should be referred to health facilities. D-tree also forged a partnership with Zantel, the largest mobile phone operator in Zanzibar, and Etisalat to incorporate an SMS-mobile money payment system into the program. Phase II started with a Round II grant in late 2012. The mobile money payment system used by D-tree incentivizes timely and appropriate referrals. TBAs conduct home visits, screen each pregnant woman for risk factors and danger signs, identify need for referrals and accompany the woman to the health facility, and provide follow-up care for both mother and baby after delivery. D-tree uses mobile money so the TBAs are able to make prompt payment for transport for the woman to deliver in a health facility or in case of any complications for both mother and baby that require medical attention. Transfers are made from the TBAs' mobile money accounts to the drivers' accounts at pre-negotiated rates to the appropriate facility, costing an average of US\$30USD per referral. After

Use of mobile money: payment of incentives to TBAs and emergency transport costs for pregnant and post-partum women

Date launched: November 2011

Scale: scale-up

Size: 208 TBAs, expected 350-400 by end of 2014

Country: Tanzania

Area of the country: Zanzibar

Funding: The Bill and Melinda Gates Foundation Grand Challenges Round 1 and Round 2

Key partners: The Bill and Melinda Gates Foundation, Zantel, Etisalat

the TBA's last follow-up visit to the family, D-tree pays each TBA US\$6 per facility delivery through mobile money as well.

As of October 2013, more than 1,720 financial transactions had been sent to TBAs to pay incentives. For emergency transport, the program performed 781 transfers from D-tree to TBAs for transport, while TBAs made more than 3,000 payments to drivers for transport to health facilities. The use of mobile money in the D-tree enables rapid referrals and contributes to increased rates of institutional deliveries among program beneficiaries, and reduced administrative costs and improved accountability and oversight for program administration.

Lessons Learned

- **Establish strong partnerships with local actors.** D-tree invested in building relationships with the Ministry of Health, district health officials, and local health institutions to ensure buy-in and local ownership of the program. D-tree worked with local health facilities and district staff to identify and establish a network of car owners to provide emergency transport services for the program at fair rates. D-tree also met with village leaders to sensitize them about the project and the importance of facility delivery for the women in their community.



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- **Provide adequate training and follow up for mobile money.** D-tree provides a comprehensive training on the use of mobile money. The initial training covers basic functions of mobile money (e.g. typing letters into phones, remembering passwords, conducting transactions, and checking balances). In the subsequent months, D-tree monitors mobile money use by newly trained TBAs to ensure that they have a strong understanding of the mobile payment system. This training and oversight process is essential to ensure that the TBAs have a strong enough understanding of mobile money use in order to use it while managing complicated emergencies.
- **Offer a cash payment option for community health workers.** There is a strong “cash culture” in Tanzania, and some TBAs initially took time to become accustomed to using mobile money instead of cash. Over time, D-Tree drivers and TBAs have become comfortable using mobile money.
- **Building an agent network.** D-tree uses Zantel’s agent network, which is spread across the country, to allow drivers to cash their money out. When working with an agent network, it is important for the program to verify that all the listed agent locations are fully operational to ensure that the coverage of the agent network meets the programs’ needs. This is particularly important in rural areas, where there tend to be fewer agents, and so it is important to work with the mobile provider to ensure they can bring pay points where you need them.

Challenges

- **Integrating mobile payments with existing information technology (IT) systems.** D-tree initially had to manually reconcile its payments to TBAs using combined information from the network provider on D-tree’s corporate mobile money account and the referral forms from the phone application that showed what the TBAs should spend on each referral. This was a challenging

and tedious administrative task because D-tree could only see payments sent to TBAs—not from TBAs to drivers. In 2013, D-tree established a web-based platform that synthesizes payment information in one place, thus providing a running balance for each TBA through an automated system, but with the added ability to manually edit payments if needed. It also flags duplicates, incorrect payments, and low balances so that D-tree can better control the flow of money and track the referral activity for each TBA.

- **Measuring impact specifically of mobile money.** The benefits and impacts of mobile money are difficult to quantify and to isolate from other program effects. In the case of D-tree, this difficulty is partly because mobile money consists of a bundled package of services. The costs of not using mobile money, however, would be very significant and would include costs for staff time, vehicle rental, and fuel to arrange visits to complete payment in-person for 1,000 transactions a month (at current scale) or 1,800 transactions a month (at the full expected scale). There is also a security risk associated with cash-payments that is eliminated with the use of mobile money.

Looking Forward

D-tree is successfully scaling up the use of mobile money as it expands its program. Currently, 208 TBAs are enrolled in the program, as well as 32 Community Health Workers using the same application, and this project will scale up to 350-400 users by the end of 2014. D-tree is also seeking other opportunities to implement mobile money to eliminate cash-barriers in its projects.

Sources

- <http://www.globalgiving.org/projects/safedelivery/>
- Interview in October 2013. Steve Ollis, Chief Operating Officer, D-tree International. (+1.410.443.3916, sollis@d-tree.org)
- <http://www.D-tree.org/>

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A flagship project of USAID’s Office of Health Systems, the Health Finance and Governance (HFG) Project supports its partners in low- and middle-income countries to strengthen the health finance and governance functions of their health systems, expanding access to life-saving health services. The HFG project is a five-year (2012-2017), \$209 million global health project. The project builds on the achievements of the Health Systems 20/20 project. To learn more, please visit www.hfgproject.org.

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