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Reducing Maternal Mortality: mHealth for Safer Deliveries in Zanzibar

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Problem: Low rates of in- facility deliveries and access to post-partum care

During and after childbirth, mothers face informational, logistical, and financial barriers to care.

More than 1,000 women die every day in the developing world as a result of complications in childbirth. While women are encouraged to deliver in a health facility, **in Zanzibar half of all births still take place at home, far from skilled care**. Main obstacles to in-facility deliveries are: an insufficient understanding of the benefits of delivering in the facility; delays in decision-making to get there in time; and lack of available finances for transport. Further, only one-third of Zanzibari mothers and newborns receive post-natal check-ups within 42 days after birth, locking them out of opportunities to access post-partum care, family planning, infant vaccinations and other services that will ensure their healthy future.

The purpose of our project is to reduce maternal deaths by providing a safety net for mothers who deliver at home through the use of mobile technology. The sooner that risks and/or danger signs are recognized and discussed with family members, the sooner that necessary resources can be mobilized for referral during labor, immediately after home delivery, or in the days after childbirth -- resulting in healthier maternal and child health outcomes and saving lives.

Through a generous grant from the Bill and Melinda Gates Foundation, D-tree International is addressing this problem in Zanzibar together with Etisalat, JHPIEGO and the Ministry of Health and Social Welfare.

Traditional door in Stone Town, Zanzibar.

Solution: mHealth tool for community-based birth attendants
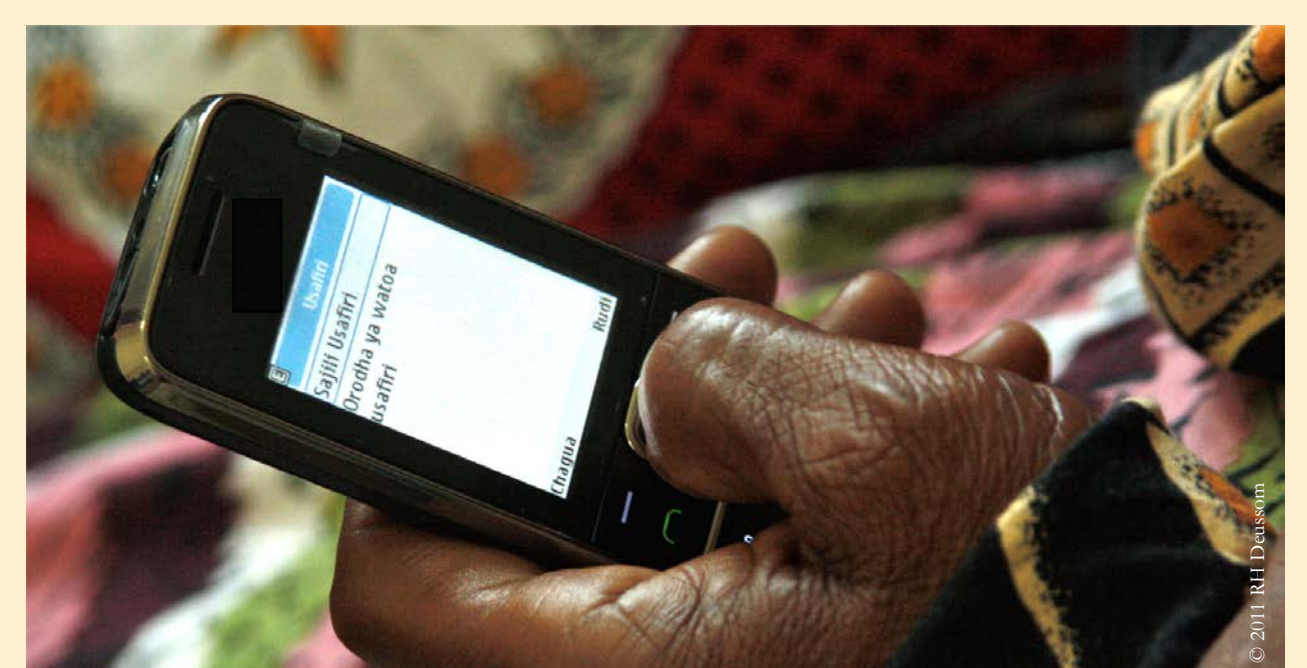
D-tree has developed an mhealth tool for traditional birth attendants (TBAs), who are well-respected in their communities and have considerable influence and access over the mothers that are most likely to give birth at home. Using an open source, java-enabled application, the protocol follows the Zanzibar Ministry of Health guidelines and allows TBAs to:

• **Screen pregnant mothers to: identify risks or danger signs**, discuss birth plans, secure permissions, and promote the community-based referral system
• **Establish community-based referral systems** to transport laboring mothers to health facilities in time by calling reliable drivers and alerting on-call facility staff
• **Using mobile banking, coordinate mother's transport to health facilities and hospitals**
• Within 2-3 days after delivery, **follow-up with the family to ensure a continuum of care**, including post-partum and post-natal care

Focused on prevention and integrated with the health system, the tool harnesses community actors to help mothers with high-risk health conditions access the right care at the right time.

Siti of Nungvi uses D-tree's mHealth application during a role play to screen a pregnant mother for health risks in November 2011.

Tatu Juma and Saumu of Kidoti participate in D-tree's mHealth training in the North A District of Zanzibar in October 2011.

D-tree's Mariam Mapande leads an mHealth training in the North A District of Zanzibar in October 2011.

Tatu Haji, trained birth attendant and community health worker, uses D-tree's mHealth application in November 2011.

chronic disease ■ child health

reproductive health ■ prevention

For more information: info@d-tree.org

RESULTS: High demand for integrated mHealth tool

Traditional birth attendants, community health workers, and primary health care staff are using D-tree's mHealth application for safer deliveries in the North A District of Unguja, Zanzibar. Based on high community demand for use of D-tree's mHealth application, strong partner commitment, and promising initial results, the project has potential to extend across Zanzibar.

D-tree's mHealth application for safer deliveries aims to:

• **Improve identification of pregnant mothers' risks**
• **Improve decision-making for critical referrals** during labor
• **Improve coordination of community and health facility actors** to provide high-quality labor, delivery & post-partum care
• **Increase percentage of high-risk deliveries assisted by skilled caregivers in facilities**
• **Increase percentage of mothers and newborns attending postpartum care** within the first 7 days after delivery

Birth attendants and community health workers in the North A District, Zanzibar, with D-tree's mHealth application for safer deliveries in October 2011.

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