mHealth for Safer Deliveries: The role of mobile money in increasing facility deliveries in Zanzibar

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Better Decisions Save Lives

What D-tree does

- Provide decision support tools for use by frontline health workers **to improve quality of care**
  - Develop clinical/community protocols
  - Design, test and deploy applications
  - Partner with MOH and other health NGOs
- Focus areas:
  - Maternal and Child Health
  - Chronic Disease
  - Facility and community health workers

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Types of mHealth interventions

1. Client education & behaviour change communication (BCC)
2. Sensors & point-of-care diagnostics
3. Registries / vital events tracking
4. Data collection and reporting
5. Electronic health records
6. Electronic decision support — Information, protocols, algorithms, checklists
7. Provider-to-provider communication — User groups, consultation
8. Provider workplanning & scheduling
9. Provider training & education
10. Human resource management
11. Supply chain management
12. Financial transactions & incentives

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Safer Deliveries in Zanzibar

Overarching goal: To reduce maternal and neonatal morbidity and mortality

Aim (Primary): To increase facility delivery and skilled attendance at birth
Secondary: Increase postnatal care

A busy home visit during pregnancy
Photo credit: Mark Leong/WHO

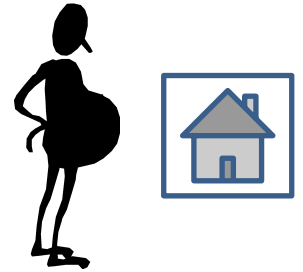Addressing the 'three delays' to facility delivery:
- The decision to seek care
- The transfer to a facility
- Treatment at the facility

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All on one device

Using a mobile phone, CHWs:

- **Register pregnant women and permissions** from decision makers at home

- Agree on an **birth plans** based on established risk factors

- **Counsel mothers and families** on healthy behaviors and danger signs

- **Screen pregnant mothers** to identify danger signs and refer as needed

- **Coordinate** transport, call facility staff, escort mother

- **Pay for transport** to health facilities using mobile banking for labor and complications

- **Monitor mother and baby** up to 10 days after delivery to ensure a continuum of care

How we use mobile money

- Transfer funds from D-tree to Community Health Worker (CHW) accounts
- CHW organizes transportation and pays drivers from account using mobile money
- CHW withdraws their incentive at end of month
- Audit transactions using application records, mobile money accounts and sign-in books at health facilities
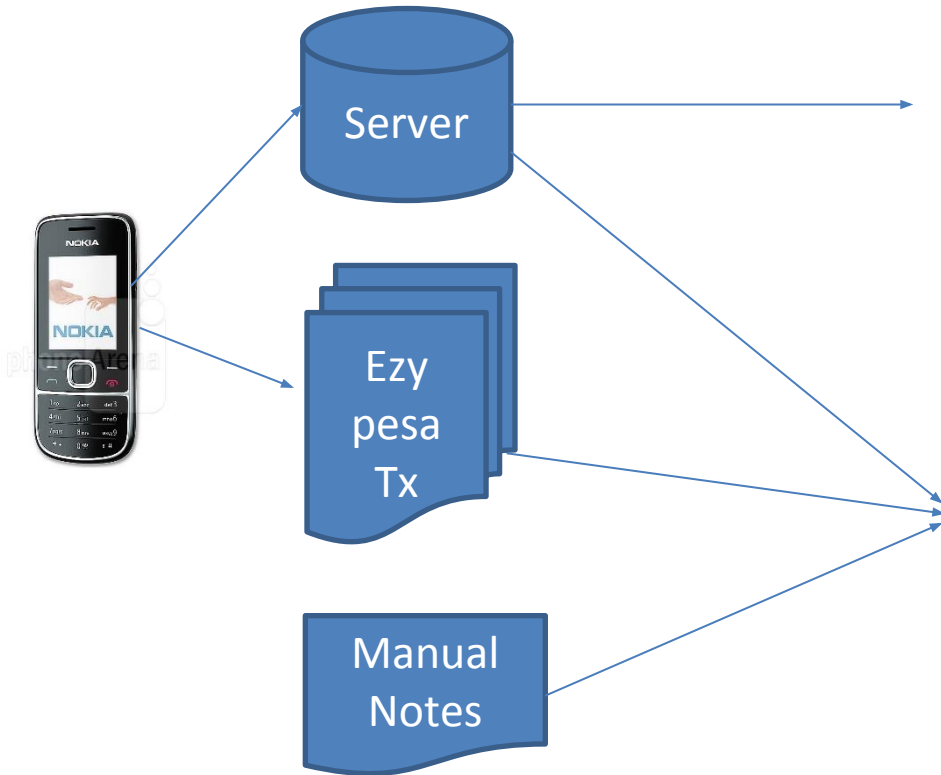
Additional Systems

Zenji Dashboard

Financial Tracking

Server

Ezy pesa Tx

Manual Notes

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Tracking: Referrals

Action needed

DISTRICT	USERNAME	TYPE	TRANSPORT	DATE	ROUTE1_CODE	ROUTE1 PRICE	ROUTE2_CODE	ROUTE2 PRICE	MOTHER_FIRSTNAME	MOTHER_FAMILYNAME	ALERT	DELETE
Micheweni	hamida.suleiman	pregnancy	taxi	27 Apr 2014	TUM-CHA	45,000		0				Delete
Chake	asha.abdala	pregnancy	taxi	14 Apr 2014	CHG CHA	25,000		0				Delete
Central	asha.khamis	pregnancy	taxi	14 Apr 2014	GHA-MWE	34,000		0				Delete
Central	asma.yussuf	L/D	taxi	14 Apr 2014	KAB-MNA	43,000		0				Delete
Micheweni	awena.kombo	L/D	taxi	14 Apr 2014	MAZ-MAZ	7,000		0				Delete
Micheweni	awena.kombo	pregnancy	taxi	14 Apr 2014	MAZ-MAZ	7,000		0			REF_COUNT	Delete
Micheweni	awena.kombo	pregnancy	taxi	14 Apr 2014	MAZ-MAZ	7,000		0				Delete
Micheweni	awena.kombo	pregnancy	taxi	14 Apr 2014	MAZ-MAZ	7,000		0				Delete
Wete	biyumbe.othman	L/D	other	14 Apr 2014		0		0				Delete

Apr 2014

Export to CSV

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Results

- Worked with 223 CHWs, 51 supervisors and 200 community drivers
- Coverage area: 45% of rural population of Zanzibar
- **75% facility delivery rate** for 13,323 women who delivered compared to 35% baseline
- Increased use of primary facilities, from 4% (HMIS) to 44% of deliveries
- Post-partum follow up rates from 36% to 88%
- More than 40,000 mobile money transactions

Mobile Money Challenges

- Forecasting transport costs
  - *Use Burn rate vs EDD*
- Tracking funds
  - *Develop tracking system*
- Limited financial reports from MNO
  - *Continued dialogue with Zantel*
- Limited penetration of pay points in rural areas

Next steps

- Scale up program to all of Zanzibar and pilot in mainland Tanzania
- Continue efforts to mainstream into MOH
- API connectivity/centralized payments
- Design systems for automatic verification of referrals (NFC tokens, barcodes, biometrics)
- Explore various financial models
  - District funding
  - Mobile maternity wallets
  - Digital community savings groups

Thank you!

For more information:

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