

The Role of Digital Financial Services in

ACCELERATING USAID's HEALTH GOALS



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ACRONYMS

CHWs Community Health Workers

DFS Digital Financial Services

HSS Health Systems Strengthening

KSH Kenyan Shilling

M-SIMU Mobile Solutions for Immunization

MNOs Mobile Network Operators

MSM Marie Stopes Madagascar

NERC National Ebola Response Center

NHIF National Hospital Insurance Fund

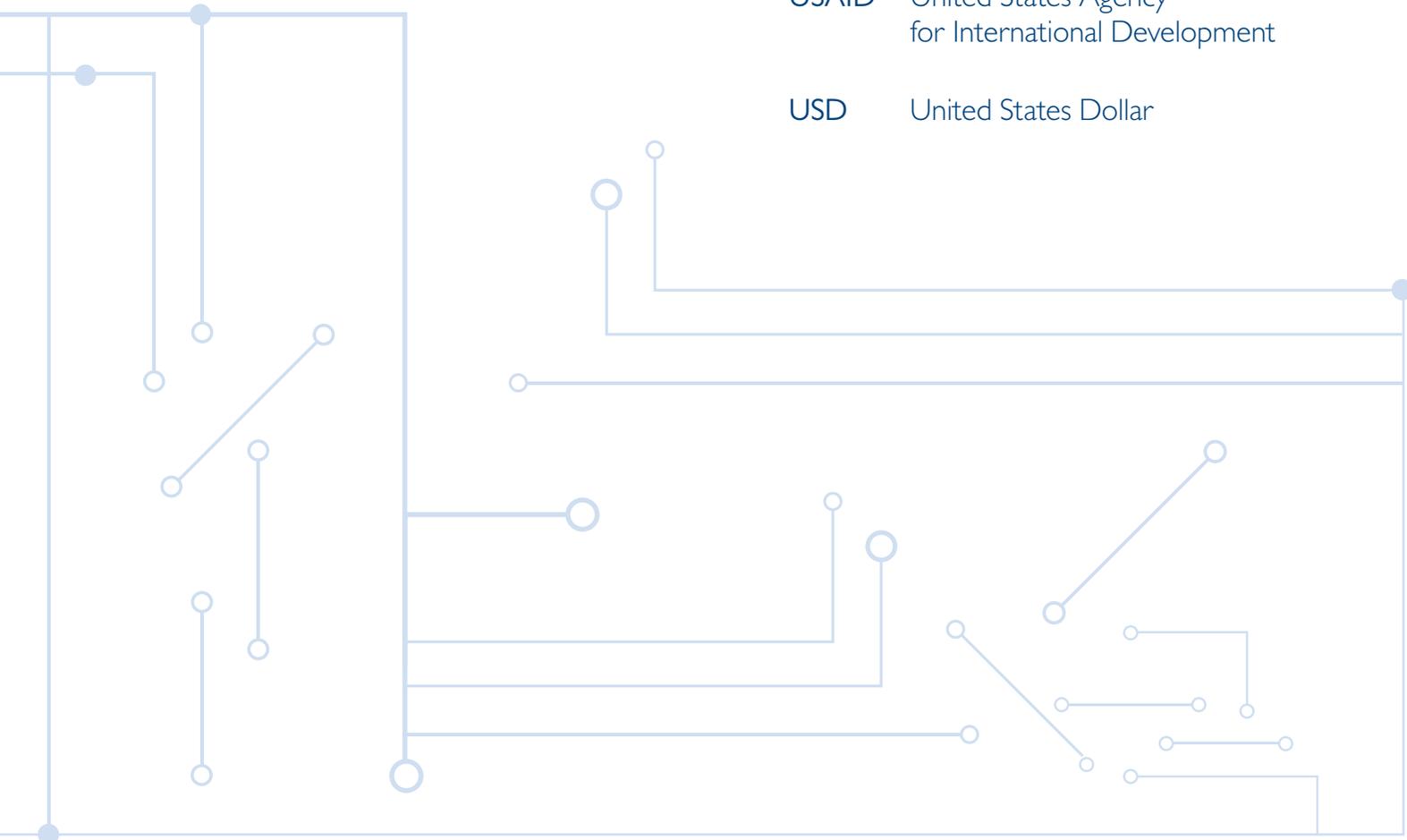
NHIF Protecting Communities
from Infectious Diseases

SMS Short Message Service

UHC Universal Health Coverage

USAID United States Agency
for International Development

USD United States Dollar



INTRODUCTION

Digital financial services (DFS) provide health programs with opportunities to accelerate progress toward global health goals and outcomes. By leveraging DFS, United States Agency for International Development's (USAID) global health program managers can improve health systems performance and support programmatic outcomes such as financial protection for vulnerable groups, delivery of essential health services, improved reach to marginalized communities, and increased health service demand and responsiveness.

Vulnerable households, communities, and countries face many challenges to better health and economic outcomes. Barriers to health, education, and livelihoods must be managed or overcome to identify pathways to resilience and prosperity. USAID defines resilience as “the ability of people, households, communities, countries, and systems to mitigate, adapt to, and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth.” Simply, resilience is the ability of households, communities, and countries to manage and adapt to adversity without compromising their well-being.¹ Research identifies sources of resilience that transcend sectors, underscoring the importance of a holistic approach to programming. Financial inclusion is one such source of resilience. It is defined as a state where individuals and businesses have access to useful and affordable financial products and services—transactions, payments, remittances,² savings, credit, and insurance—that meet their needs, delivered in a responsible and sustainable way.³ Financial services contribute to resilience through investments that build assets that households and communities draw on in times of need.⁴ They also help speed recovery.⁵

The importance of DFS is increasing in many contexts due to the availability of mobile phones and mobile money agents, reduced transaction costs, and increased ease of sending remittances.⁶

For example, according to [FSP MAPs](#), which maps financial access points in six African countries, there are a total of 45,417 financial access points in Uganda, of which 41,794 are mobile money agents.

This brief is intended for global health practitioners and implementing partners and demonstrates how DFS catalyzes health results by supporting USAID's Health Systems Strengthening (HSS) core functions and strategic outcomes. This brief also shows how financial inclusion protects households and communities against financial shocks and catastrophic expenditures. Lastly, this brief asserts that the rising use of DFS is transformative and presents opportunity for development actors to use DFS to advance social outcomes.



Digital financial services (DFS) refers to banking (including savings, loans), insurance, and payment services (remittances, and bill payments). These services can be accessed by digital channels such as mobile phones, electronic cards (credit, debit, and prepaid), vouchers, computers, and other electronic instruments.



Mobile money is a type of digital financial service. Mobile money lets users store value in an electronic account associated with their mobile phone's SIM card and conduct transactions from their account using their mobile phone. Users can deposit and withdraw cash from their mobile money account from a mobile money agent.



Mobile money agents are businesses who provide deposit and withdrawal services. An agent can be a shopkeeper, bank branch, retail store, medical store (e.g., pharmacy), or other formal entity authorized to conduct mobile money transactions. Agents play a key role in DFS outreach (especially in rural areas) as educators, ambassadors for enrollment, and critical human intermediaries for people unfamiliar with mobile money services.

1. Resilience Evidence Forum Report, USAID. April 2018. Retrieved from: https://www.usaid.gov/sites/default/files/documents/1867/0717118_Resilience.pdf
2. Remittances are money transfers or payments. In the development context, this often refers to money sent home by migrants in payment for goods, services or as gifts. Remittances can be sent via bank wire, mail, online transfer and increasingly via mobile money.
3. Resilience Evidence Forum Report, USAID. April 2018. Retrieved from: https://www.usaid.gov/sites/default/files/documents/1867/0717118_Resilience.pdf
4. Building Resilience: Integrating Climate and Disaster Risk into Development. Retrieved from: http://www.worldbank.org/content/dam/Worldbank/document/SDN/Full_Report_Building_Resilience_Integrating_Climate_Disaster_Risk_Development.pdf
5. Resilience Evidence Forum Report, op. cit.
6. Ibid

USAID'S HEALTH SYSTEMS STRENGTHENING (HSS) & DIGITAL FINANCIAL SERVICES

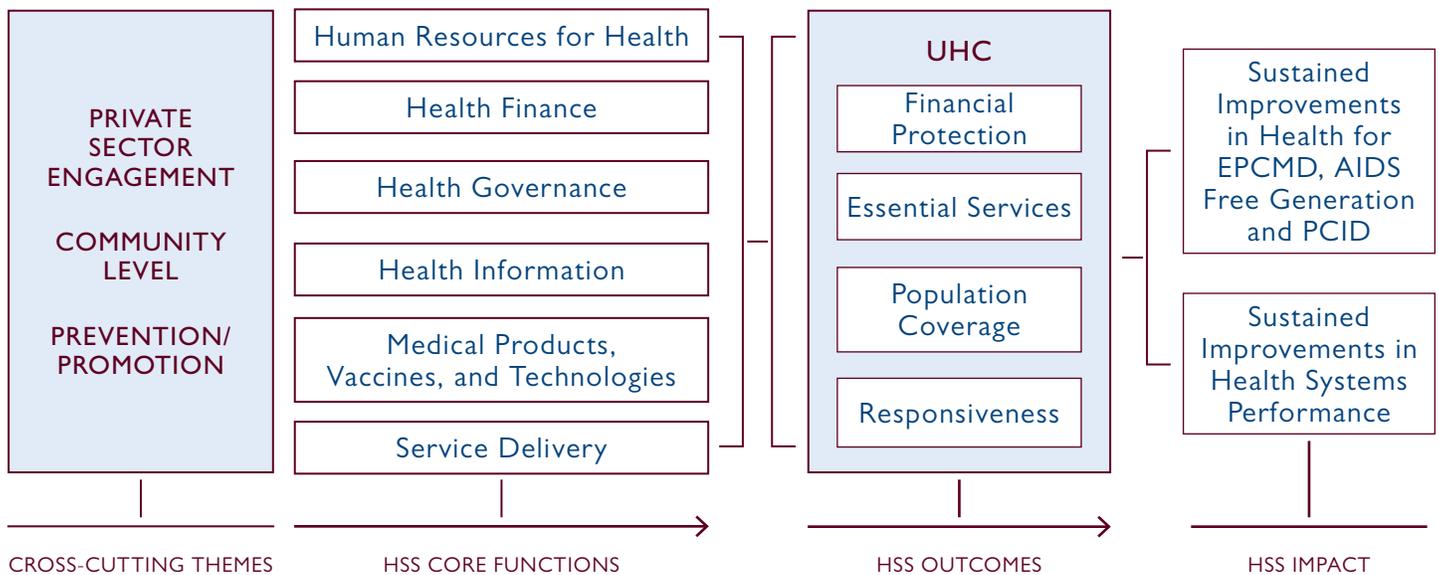
Health Systems Core Functions & Digital Financial Services

[USAID's Vision for Health Systems Strengthening](#) aims to invest in health systems that promote country ownership and sustainability, scale up solutions, and drive greater efficiencies.⁷ To ensure quality, affordable health services for people everywhere, USAID's vision focuses on strengthening six core functions and achieving four strategic health outcomes (See Figure 1). This paper demonstrates how integrating DFS into HSS core functions will assist USAID and its partners to better implement their activities and improve health outcomes.

Human Resources for Health

Effective health systems enable a well-deployed health workforce that provides essential services. DFS supports health workers by facilitating remuneration such as payments of stipends, incentives, and salaries. A performance-based finance program in Pakistan ([IIRD's Zindagi Mehfooz Project](#)) used mobile money to pay community health workers (CHWs) incentives for administering vaccines and providing referrals. The Zindagi Mehfooz system, in addition to implementing initiatives that seek to improve health system quality (through accurate data collection and health record maintenance) and health worker motivation (through incentives based on total children vaccinated), used a combination of reminders and incentives to encourage parents to make the trip with their child to a vaccination facility multiple times over the course of the first 2 years of their infant's life.⁸ The organization [Living Goods](#) has country offices in both Uganda and Kenya, which use mobile money to provide low-cost loans to community health promoters and entrepreneurs who provide health care support and sell health-related products.

Figure 1 USAID Health Systems Strengthening Core Functions and Outcomes



(Source: USAID Vision for HSS)

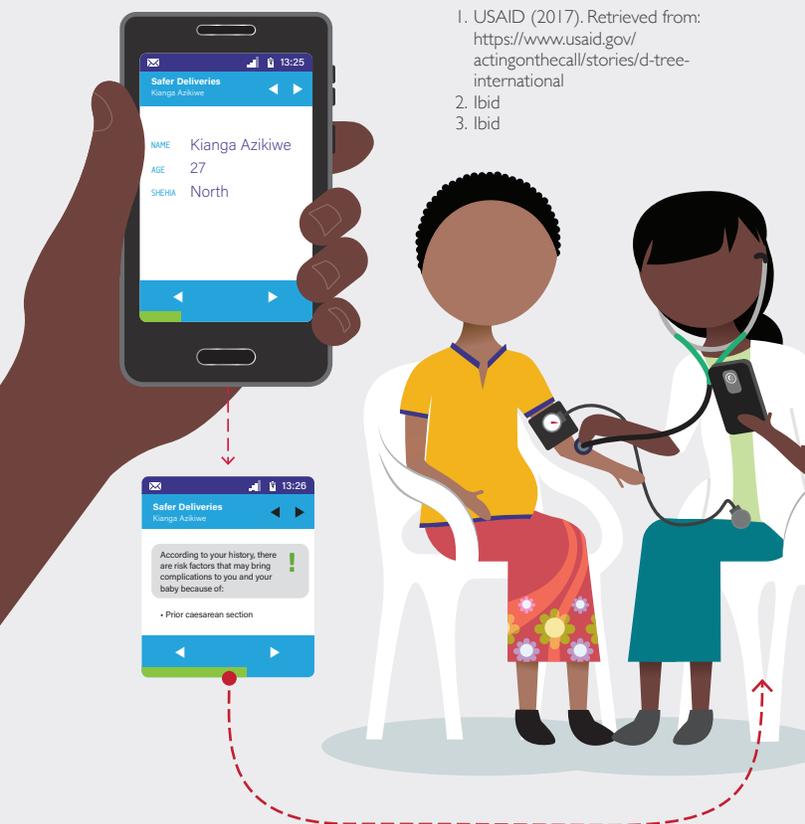
7. USAID's vision for Health System Strengthening. Retrieved from: <https://www.usaid.gov/sites/default/files/documents/1864/HSS-Vision.pdf>

Case Study I

Mobile Phones and Digital Financial Services Support Safe Deliveries

In Zanzibar, D-tree International's Safer Deliveries program used mobile technology to address multiple obstacles that pregnant women face when trying to go to a facility for delivery.

D-tree uses clinical protocols to develop clinical decision support software that can be loaded onto mobile phones for use by clinic staff and CHWs to help them accurately assess, diagnose, and treat patients. Zanzibar has high rates of antenatal care and relatively good access to facilities, yet over half of deliveries were at home, leading to preventable deaths. Rather than using a siloed approach, Safer Deliveries works to address all barriers to accessing care simultaneously through a mobile application.¹ The program empowers women to understand why a facility delivery is better for them and their baby, to develop a birth plan for where they will deliver; and to save money through a mobile savings system to pay for transport and other birth-related costs. It empowers CHWs to provide effective advice to women and support the birth planning process, and it supports a community transport system using local drivers and vehicles to take women in labor to health facilities (think “Uber for mothers”).³



1. USAID (2017). Retrieved from: <https://www.usaid.gov/actingonthecall/stories/d-tree-international>
2. Ibid
3. Ibid

According to Living Goods, community health promoters have reduced child mortality by more than 25 percent and decreased the sale of counterfeit drugs, by both raising awareness of the existence of such drugs and reducing the average price of legitimate antimalarial drugs by 15–20 percent.⁹ Using DFS for health worker payments is an opportunity to support health systems. Establishing DFS payment mechanisms in both emergency-prone and stable environments improves efficiencies and transparency while supporting health system performance.

Health Finance

Countries mobilize and pool domestic resources to fund health systems and provide essential health services to all. DFS supports domestic resource mobilization efforts by providing channels through which people can contribute to national health services. Specifically, in addition to traditional channels, governments can use mobile money to collect domestic resources to fund national health programs. For example, citizens can pay insurance premiums to government health plans using mobile money. Currently in Rwanda, people can pay [Community Based Health Insurance](#) premiums using mobile money, among other digital channels. By 2020, the Rwandan government will only accept premium payments via digital channels. Governments can facilitate national inflow via mobile money, and diaspora communities can contribute using international remittance services offered by some Mobile Network Operators (MNOs).

Health Governance

Effective health governance requires oversight that prevents corruption and broadens accountability and transparency. DFS enables health governance by providing traceability—the ability to identify and verify the history, location, and application of funds. DFS systems record all transactions, which inhibits leakage—or diversion of funds—and strengthens oversight, accountability, and transparency. To account for all funds and to better trace the funds distributed to clients and users, finance managers of implementing partners often seek to incorporate DFS systems in their projects.

8. Center for Health Market Innovations. Zindagi Mehfooz (Safe Life) Program. <https://healthmarketinnovations.org/program/zindagi-mehfooz-safe-life-program>
9. World Bank Group (2017). Profile: Living Goods. https://www.innovationpolicyplatform.org/system/files/1_Health%20Community%20Health%20Workers_Profile%20Living%20Goods.pdf

Health Information

Countries collect, analyze, disseminate, and use health information to create evidence for informed decision making. In complement to existing health information systems, DFS transaction data provide valuable insights into beneficiary utilization (e.g., client financial behavior in a health system) and cost of health products and services. Health program administrators can disseminate information and influence behavior using mobile phones. For example, health program managers can communicate about the importance of saving for health or share information on financial incentives for health seeking behaviors, voucher details, etc. Integrating health information with DFS channels supports information collection and dissemination at both the program administrator and client levels.

Medical Products, Vaccines, and Technologies

Sustained access to essential medical products, vaccines, and technologies is vital to efforts to end preventable child and maternal deaths, attain an AIDS-free generation, and prevent infectious diseases. DFS products and services can support medical providers to accept payment for services via digital channels such as mobile money, vouchers, and prepaid cards. More broadly, DFS can be used to track payment within supply chains and enhance institutional capacity to manage health systems and services. Read [Case Study 1](#) for more information.

Service Delivery

Quality service delivery requires access to effective, safe, and high-caliber public and private sector services, when and where required, and in a patient-centered manner. When designed effectively, DFS supports health service delivery by providing safe, high-quality financial products and services that facilitate access to health products and services. Examples of health programs that have successfully integrated DFS to improve access and enhance service delivery include D-tree International, M-TIBA (refer to [Annex](#)), and Telenor Health. When health programs use DFS to enable access and enhance service delivery, clients can more safely make and receive payments, as they do not need to handle cash.

Health Systems Strengthening Outcomes & Digital Financial Services

Global health practitioners and implementing partners can use DFS to reach USAID's strategic HSS outcomes, resulting in sustained improvements in health systems performance for targeted communities ([Figure 1](#)). **Financial protection** for vulnerable individuals and households is strengthened by remittances, payments, and financial products such as savings and insurance, as financially included people are less susceptible to catastrophic health care expenditures.¹⁰

Remittances, digital payments, vouchers, and incentives can facilitate **access to essential services**. For example, financial incentives delivered digitally can be designed to drive or encourage demand for health services. Likewise, DFS can facilitate payments in public-private partnerships to extend the reach of health services, especially among rural communities.

DFS enables **population coverage** and equitable access to health services by leveraging channels, products, and services designed to reach the masses. These include mobile phones—which have become ubiquitous in low- and middle-income countries—and mobile money agents who serve as outlets in urban and rural settings.

Finally, DFS supports **health service responsiveness** and quality service standards by providing confidentiality. When using DFS, clients can access their savings accounts and insurance products—and receive and send remittances, incentives/ payments, and vouchers—knowing that only the sender and recipient of funds are privy to financial transaction information. Additionally, DFS can provide instant payments, which supports health care provider responsiveness.

10. Geng, Xin; Janssens, Wendy; Kramer, Berber; and van der List, Marijn. (2018). Health insurance, a friend in need? Impacts of formal insurance and crowding out of informal insurance. *World Development* 111 (November 2018): 196-210. <https://doi.org/10.1016/j.worlddev.2018.07.004>

Case Study 2

Digital Financial Services Promote Access to Essential Services

Since October 2010, Marie Stopes Madagascar (MSM) has contributed to national maternal health targets by establishing a subsidized voucher programme to increase access to voluntary family planning services.

MSM trained CHWs to raise awareness about the voucher programme, to provide family planning counselling that help clients make an informed choice about which contraceptive method to use, and to distribute vouchers to eligible clients. Clients could give the voucher to one of MSM's 42 social franchisees in exchange for family planning services.¹ MSM used mobile money instead of traditional payment methods to reimburse service providers. In doing so, MSM's voucher programme demonstrated that mobile money can successfully reimburse health service providers in remote, rural, and urban settings. MSM reimbursed all of the unique codes submitted by social franchisees. Furthermore, MSM's voucher programme demonstrated that this method of reimbursement could be adopted by end-users and that, in some settings, mobile money can significantly strengthen the reach, efficiency, and sustainability of health services. MSM would have had to reimburse social franchisees for each voucher in cash if it had not used mobile money. This would have significant disadvantages, as cash payments involve considerable travel costs and risk of fraud, theft, or personal injury to MSM staff.²

1. USAID and Marie Stopes International. Using mobile finance to reimburse sexual and reproductive health vouchers in Madagascar. Retrieved from: http://www.who.int/woman_child_accountability/iERG/reports/2012_21N_MarieStopes_Mobile_Finance_FINAL.pdf
2. Ibid



PRACTICAL APPLICATIONS OF DFS IN HEALTH PROGRAMS

As this brief previously outlined, when applied in a health programming context, DFS supports HSS core functions and outcomes. The case studies in this section provide examples and lessons learned from initiatives that used mobile money and other types of DFS in human resource for health, service delivery and for financial protection.

Human Resources for Health: Strengthening the Health Systems Workforce

Digital platforms enable cost-effective and efficient delivery of salary and incentive payments. Dnet's Aponjon program, for example, received USAID funding to digitize incentives to 1,500 agents for referring subscribers to a mobile health service to reduce maternal and child mortality in Bangladesh. Dnet saved a staff-time equivalent of seven full-time employees per year. Transaction processing costs fell by 85 percent, and time and cost of agents to collect payments fell by more than 65 percent.¹¹

In Sierra Leone, inefficient cash payment processes led to health and frontline response worker strikes during the Ebola crisis (2014–2016), crippling efforts to provide critical care and containment.¹² Summarized in the following sections are results of digitizing salary payments for health and frontline response workers.

11. mSTAR Bangladesh. (2014) Infographic: Cash vs Mobile Payments in Bangladesh - The Case of Dnet's Aponjon Initiative. Retrieved from: https://www.microlinks.org/sites/default/files/resource/files/Dnet_Payments_infographic_August2015.pdf
12. Bangura, Joe Abass. (2016). Saving Money, Saving Lives A Case Study on the Benefits of Digitizing Payments to Ebola Response Workers in Sierra Leone. Better Than Cash Alliance. Retrieved from: https://btca-prod.s3.amazonaws.com/documents/186/english_attachments/BTCA-Ebola-Case-Study.pdf?1502739794

Key Takeaway 1:

Use Digital Payments to Support Human Resources for Health

Use digital payments to disburse health worker salaries and incentives, reducing transaction costs and improving transparency and program governance.

Service Delivery: Delivery Incentives, Vouchers, and Subsidies More Efficiently

Digital platforms such as mobile money can enable large-scale distributions of health payments to beneficiaries by improving the speed, efficiency, and transparency of payments delivery; the reach of incentives; and the availability of data for program monitoring and management. Remittances are positively correlated with improved household outcomes, such as nutritional status:

Results show that adults in emigrant households were significantly less susceptible to being underweight than those in non-migrant households....The improved nutritional status was restricted to people in households with labor migrants, highlighting the role of remittances in improving nutritional intake. The health gain also was concentrated among women, increased with the number of out-migrants, and was revealed over time as remittances arrived. Overall, this study demonstrates the beneficial role of household migration, specially the resulting remittances, in the health status of household members in resource-constrained settings. Improving transfers of remittances would be helpful in reducing the problem of under nutrition in poor migrant-sending areas.¹³

13. Lu, Y. (2013). Household Migration and its Impacts on Health in Indonesia. National Institute of Health. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3818083/>

14. Demircug-Kunt (2015) op. cit.

Case Study 3

Digitizing Salary Payments during the Ebola Crisis in Sierra Leone

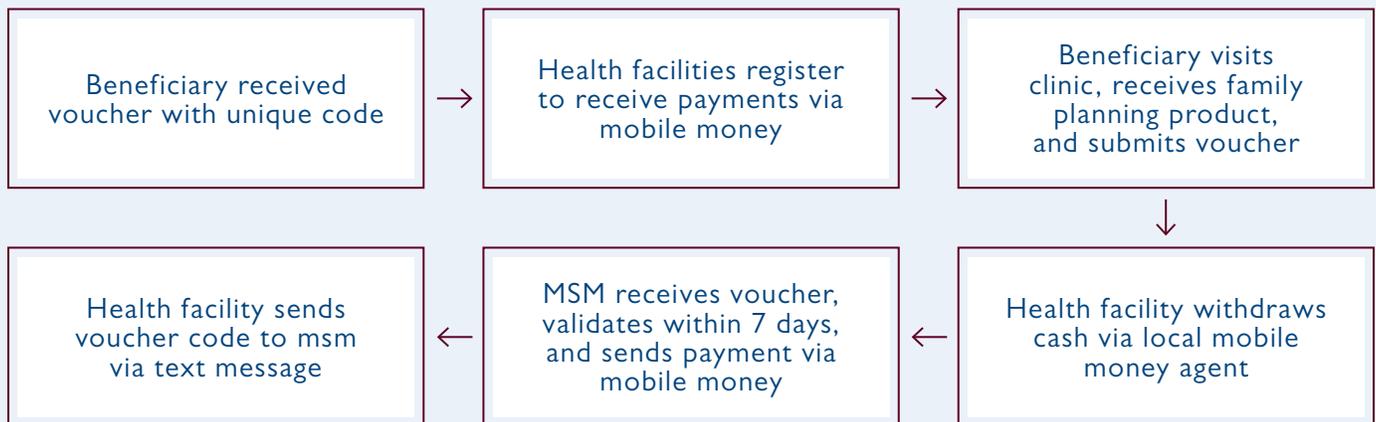
The United Nations Capital Development Fund, in collaboration with the Government of Sierra Leone's National Ebola Response Center (NERC) and with contributors from USAID and other partners, implemented the Payments Program for Ebola Response Workers (Payments Program) to digitize hazard payments for health and frontline response workers during the height of the crisis. Health and frontline response workers had to travel long distances to pay collection points, which was costly and took time away from their work. Weak systems for checking identification meant payments were claimed fraudulently, while managers sometimes also took a cut of worker compensation, resulting in a demotivated health workforce.

NERC and the Payments Program introduced mobile money payments to increase the speed, efficiency, and transparency of hazard payments to health and frontline response workers. To make digital payments, the administrators registered 30,000 response workers across 14 districts and 1,000 medical units into a digital identification system, which eliminated over 3,000 ghost workers from payment rosters. NERC also established processes to regularly audit and update the list because the turnover among response workers was high (estimated at 30 percent).

Digital payments reached 98 percent of the 30,000 response workers. Salary digitization saved an estimated \$10 million USD in security and other costs associated with moving cash. It also eliminated ghost workers and duplicate payments and reduced time and expense for health workers collecting pay. Digital payments reduced payment time for health workers from 1 month to 1 week, preventing the loss of an estimated 800 working days and saving over 2,000 lives by eliminating response worker strikes.

Source: Bangura, Joe Abass. (2016). Saving Money, Saving Lives A Case Study on the Benefits of Digitizing Payments to Ebola Response Workers in Sierra Leone. Better Than Cash Alliance. Retrieved from: https://btca-prod.s3.amazonaws.com/documents/186/english_attachments/BTCA-Ebola-Case-Study.pdf?1502739794





Source: USAID (2015) op. cit.

Improved speed and efficiency of payments

Multiple studies show that digital payments reduce costs and risk associated with cash delivery and leakage due to fraud. They also achieve significant savings.¹⁴ Organizations making payments save on transportation, security, and other costs associated with physical cash delivery to payees, while beneficiaries save travel time and cost, and reduce the risk of carrying cash.

Cost reduction can similarly be achieved by digitizing health vouchers, subsidies, and incentives, promoting efficiency and transparency, freeing up human and financial resources which can be re-directed toward achieving programmatic outcomes. For example, MSM ([Case Study 2](#)) used mobile payments for a voucher program. The program's goal was to subsidize access to family planning services for women, particularly in remote areas.¹⁵ MSM moved to digital payments to reduce risks and inefficiencies associated with delivering cash reimbursements to 118 health facilities across 12 regions. Health care facilities submitted vouchers received from beneficiaries via SMS and received reimbursement via mobile money instead of cash. MSM saw significant efficiency gains after moving to digital payments. Reimbursement timelines fell from weeks or months to days, provider motivation and satisfaction increased, and financial and administrative efficiency improved.¹⁶

Improved reach and effectiveness of health services

Health program administrators can use digital payments to deliver timely incentives for hard-to-reach populations and motivate behavior change in environments where cash distribution is not feasible or too slow. For example, the Mobile Solutions for Immunization (M-SIMU) cluster-randomized controlled trial in Kenya used the extensive reach of mobile money to deliver beneficiary incentives at scale. M-SIMU tested whether SMS reminders and incentives motivated beneficiaries to get their children immunized. They successfully improved the timeliness of immunizations with SMS reminders coupled with monetary incentives delivered digitally.¹⁷ Fifty-four percent of incentives were delivered within 48 hours of the immunization date.¹⁸ M-SIMU achieved these results despite over half of participants sharing a mobile phone with another caregiver, demonstrating that digital payments can deliver behavior change incentives even among populations that may not own their own mobile phones.

15. USAID (2015) op. cit.

16. Ibid.

17. Gibson D., Ochieng B., Kagucia W., Were J., Hayford K., Moulton L., Levine O., Odhiambo F., O'Brien K. & Feikin D. (2017, April 5). Mobile phone-delivered reminders and incentives to improve childhood immunization coverage and timeliness in Kenya (M-SIMU): a cluster randomised controlled trial. Retrieved from: [http://www.thelancet.com/pdfs/journals/langlo/PIIS2214-109X\(17\)30072-4.pdf](http://www.thelancet.com/pdfs/journals/langlo/PIIS2214-109X(17)30072-4.pdf)

18. Ibid.

Improved monitoring and program management

Digital incentive dissemination platforms can help program managers track beneficiary utilization of health services and CHW performance in real time. For example, [Triggerise](#), a Netherlands-based nonprofit with operations in 11 countries in sub-Saharan Africa and India, developed a technology platform that enables program managers to monitor whether interactions between CHWs and beneficiaries result in uptake of targeted health products and services.¹⁹ To motivate behavior change, the platform can virtually reward beneficiaries and CHWs when a beneficiary seeks medical care.

In a Triggerise program in India, agents who sell fast-moving consumer goods²⁰ in their communities also promote a basket of discounted health, pregnancy, and family planning services. Every time beneficiaries go to a clinic, they validate a service using their phone or a Triggerise-issued membership card. The Triggerise platform uses this data to immediately generate insights into service uptake, optimize implementation, and personalize offerings. Beneficiaries may also rate service quality, providing continuous feedback. As beneficiaries redeem more services, they accrue more rewards (called Tiko Miles). The agent who sells the card also earns rewards when the beneficiary redeems a service. Beneficiaries can use rewards to purchase products from an agent or at participating shops. Agents can use rewards to stock more products. In India, an average of 650 agents use the platform to stock products or refer beneficiaries for services every month (as of May 2018). In 2017, agents sold 34,324 pregnancy services membership cards over the course of 1 year, with over 89 percent of sales resulting in clinic visits. As this brief previously outlined, when applied in a health programming context, DFS supports HSS core functions and outcomes. The case studies referred to in this section provide examples and lessons learned from initiatives that used mobile money and other types of DFS in human resource for health, service delivery and for financial protection.

Key Takeaway 2:

Use Digital Incentives and Vouchers to Promote Demand for Health Services

- Use digital payments with mobile SMS reminders to disburse beneficiary incentives and generate demand for health services, promoting behavior change.
- Partner with digital payment platforms that enable digitized tracking and fulfillment of vouchers for greater efficiency and improved monitoring and evaluation (e.g., tracking beneficiary utilization of health products and services and CHW performance).

Financial Protection: Health Savings Enable Clients to Access Health Care

Savings help clients accumulate funds for anticipated and unexpected health expenses, enhancing financial protection. Digital savings products can be designed in a number of ways, including standard saving and commitment health savings accounts,²¹ which incentivize savings over time and discourage early withdrawal. With savings, clients may access health services and medical products, and pay for other health expenses. Digital channels provide convenience and efficiency for clients and health service providers. [The Kenya Financial Diaries](#), a 12-month qualitative research effort designed to deepen understanding of the financial lives of low-income Kenyans conducted the study of approximately 350 households and found that lack of savings was an inhibitor to health care access. Researchers discovered that households often defer or forego health care because they do not have sufficient funds to access services.²²

19. Information on Triggerise is based email exchanges with Sam Lewin and Benoit Renard, May 2018.

20. Fast-moving consumer goods are products that sell quickly at relatively low cost – items such as milk, gum, fruit and vegetables, toilet paper, soda, beer and over-the-counter drugs like aspirin.” (source: Investopedia)

21. Commitment savings accounts are “locked” savings with built-in saving incentives designed to encourage periodic savings. Commitment savings accounts carry withdrawal deterrents, such as fees, to support savings or other types of behavior. Examples of commitment savings products are pensions, education savings funds, and medical savings funds. Source: Klapper, L., El-Zoghbi, M., & Hess, J. (2016). Achieving the Sustainable Development Goals: The Role of Financial Inclusion. CGAP. Retrieved from: http://www.cgap.org/sites/default/files/researches/documents/Working-Paper-Achieving-Sustainable-Development-Goals-Apr-2016_0.pdf

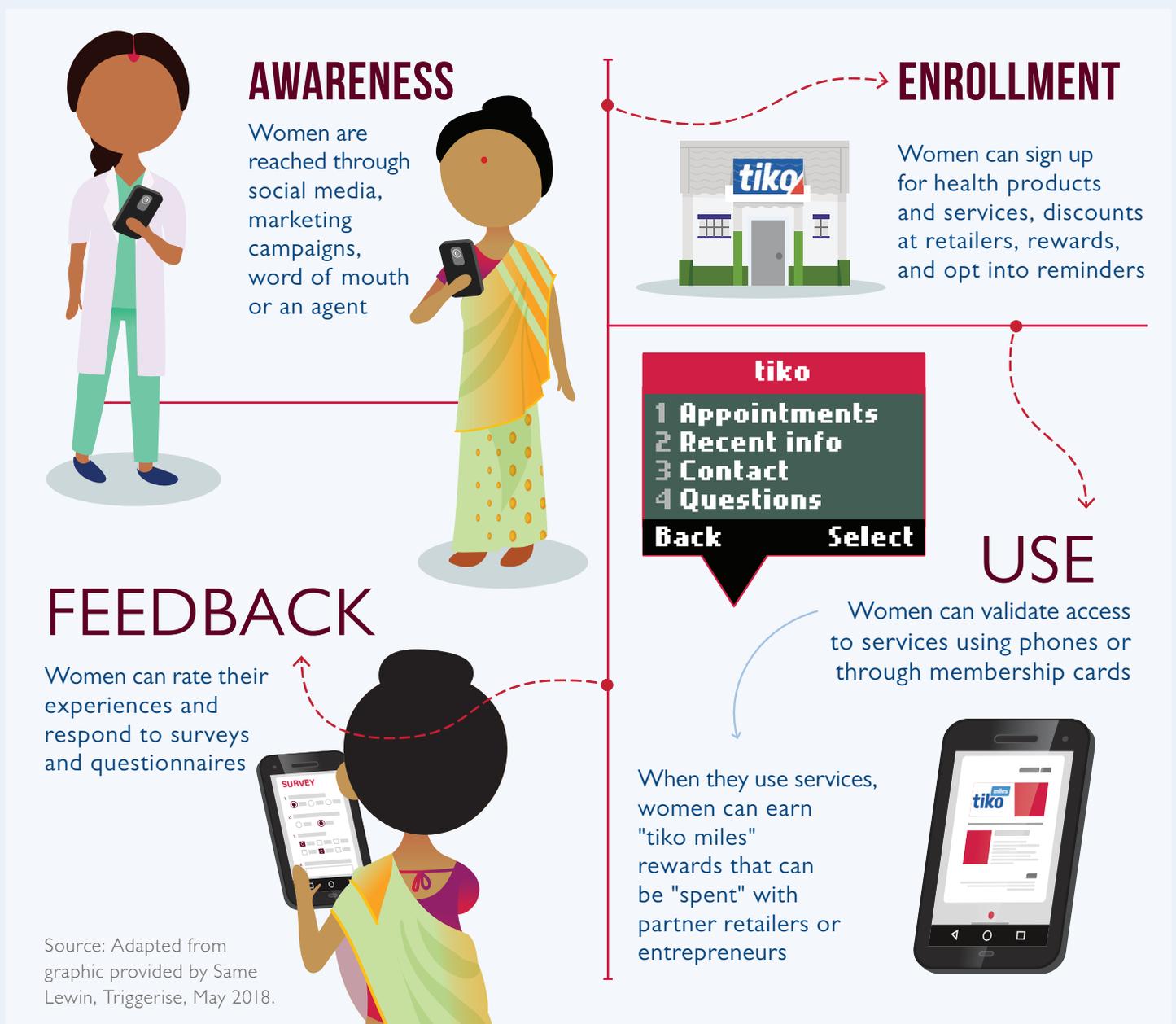
22. Zollmann, J, Ravishankar N. (2016) Struggling to Thrive: How Kenya's Low-Income Families (Try To) Pay for Healthcare. Financial Sector Deepening (FSD) Kenya. <http://fsdkenya.org/publication/struggling-to-thrive-how-kenyas-low-income-families-try-to-pay-for-healthcare/>

Even in environments with free public health services, beneficiaries face costs associated with travel, purchasing medication, and lost income from missing work. Families may be forced to sell income-generating assets to meet immediate, significant health payments, plunging them further into poverty. Other research studies also show that health expenses are a driver of poverty.²³

Access to financial services helps people manage risk and be more resilient in the face of financial shocks. The Kenya Financial Diaries found that households rely heavily on savings and social networks to meet health care costs.²⁴ Digital channels enable beneficiaries to safely accumulate savings and quickly mobilize remittances, a critical source of funds for health payments.

23. Klapper, L., El-Zoghbi, M., & Hess, J. (2016). Achieving the Sustainable Development Goals: The Role of Financial Inclusion. CGAP. Retrieved from: http://www.cgap.org/sites/default/files/researches/documents/Working-Paper-Achieving-Sustainable-Development-Goals-Apr-2016_0.pdf
 24. Zollman (2016), op. cit.

Figure 2
 Triggerise Digital Incentive Platform



Key Takeaway 3:

Use Digital Payment Platforms to Strengthen Financial Protection with Health Savings

- Use DFS platforms to strengthen financial protection. Mobile money helps people receive remittances more quickly—and from a wider social network—when hit by a negative financial shock. Access to mobile money allows individuals to protect themselves against financial and health risks.¹
- Mobile money can create a safe place to accumulate greater savings, which smoothes consumption for households hit by unexpected expenses.²

1. Suri, T. & Jack, W. (2016). The Long-run Poverty and Gender Impacts of Mobile Money. *Science*. Vol. 354: Issue. 6317. Retrieved from: http://www.microfinancegateway.org/sites/default/files/publication_files/new_jack_and_suri_paper_1.pdf

2. Klapper (2016), op. cit.

Financial Protection: DFS Supports Health Insurance Expansion

Aligning closely with the Sustainable Development Goal Target 3.8, “achieve universal health coverage, including financial risk protection, access to quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all,” digital channels support universal health coverage initiatives by expanding the reach and scale of health insurance. Digital platforms aid insurance uptake by facilitating efficient digital registration, premium collection, and claims processing. Mobile payments help unbanked clients make insurance payments more conveniently and in small increments, facilitating insurance access.

Private insurance providers have begun using mobile channels to expand their client base with simple health products. In 2013, Tigo Family Care in Ghana provided mobile-based life insurance coverage for over one million clients, doubling the size of the insurance market in the country over a 3-year period.²⁵ Globally, micro-insurance via mobile channels is growing steadily, with 93 live services in 27 emerging markets as of 2018.²⁶ In 2017, 39 percent of mobile insurance products were for life insurance, and 26 percent were health-related.²⁷ DFS channels can be used to distribute payments (such as targeted subsidies or vouchers) and insurance claims and collect premiums.

Public and private insurance providers are using mobile payment channels to extend insurance to new markets and population segments at scale in the following ways.

Making premium payments convenient

The Kenya National Hospital Insurance Fund (NHIF) used mobile money to facilitate premiums collection among informal sector populations.²⁸ To accommodate the irregular incomes of informal sector workers, NHIF used M-PESA²⁹ to allow incremental payments for monthly premiums, which helped reduce penalty charges for missed payments. M-PESA also lets family and friends send remittances to cover premium payments.

Lowering costs and improving efficiency with end-to-end digitization

MicroEnsure partnered with mobile operators to provide products including their mobile-based hospital cash insurance product and scaled to 63 million enrolled customers across 11 countries within 4 years.³⁰ The hospital cash product provides a simple cash payout for a hospital stay of 3 nights or more and is paid directly to the patient instead of the provider. This allows the patient to use the funds to cover non-medical expenditures such as travel costs that can be as much as 40 percent of the total cost associated with hospitalization.³¹

25. Tellez, Z., & Zetterli, P. (2014). The Emerging Global Landscape of Mobile Money. Washington, DC.: CGAP. Retrieved from: <http://www.cgap.org/sites/default/files/Brief-The-Emerging-Global-Landscape-of-Mobile-Microinsurance-Jan-2014.pdf>

26. GSMA (2018) Spotlight on mobile-enabled insurance service. Retrieved from: <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2018/09/2017-SOTIR-deep-dive-Spotlight-on-mobile-enabled-insurance-services.pdf>

27. GSMA (2018), op. cit.

28. USAID. (2015). Mobile Money for Health Case Study Compendium. Bethesda, Maryland: Abt Associates. Retrieved from: https://www.hfgproject.org/wp-content/uploads/2015/10/HFG-Mobile-Money-Compendium_October-2015.pdf

29. M-PESA is a mobile phone-based money transfer, financing and microfinancing service, launched in 2007 by Vodafone for Safaricom and Vodacom, the largest mobile network operators in Kenya and Tanzania

30. Interview with Richard Leftley, MicroEnsure, September 2017

31. Ibid

Simple digital registration, digital claims processing, and MNO partnerships facilitate digitized claims payouts and premium collections and allow MicroEnsure to serve its entire global customer base with only 181 staff. MicroEnsure has call centers but uses WhatsApp to allow customers to submit pictures of their receipts. Claims are processed in as little as 4 hours. Computer-generated questions enable delivery of services and detection of fraud by asking the same question multiple times. MicroEnsure can also track claims rates across various hospitals to detect fraud and flag areas where there is an unusually high number of claims.

Using freemium models to motivate sign-up

Private insurers are partnering with MNOs to extend free and low-cost insurance to customers, helping MNOs increase loyalty among their customer base. According to GSMA, there are currently 93 mobile micro-insurance products across 27 emerging markets.³² In 2014, the mobile micro-insurance products offered by MNOs in partnership with insurance companies mostly used a “freemium”³³ model with options to purchase additional features of the insurance.³⁴ However, the mobile insurance landscape evolved and in 2017, nearly 81 percent of providers used a premium or freemium commercial model.³⁵

Some mobile insurance service providers offer free trial periods, while others link free insurance to voice and/or data top-up targets. Many provide more extensive benefits with subscription packages. The introduction of freemium pricing models may help to increase awareness and insurance uptake. MicroEnsure sees free-to-paid conversion rates as high as 80 percent in Ghana,³⁶ while other digital insurance providers have seen conversion rates as high as 90 percent.³⁷

MicroEnsure sees free-to-paid conversion rates as high as 80 percent in Ghana.

Analyzing data for health insurance program design and outcome tracking

USAID program administrators can potentially use DFS transaction data to inform the design of national health insurance schemes. M-TIBA, a mobile service in Kenya which allows subscribers to send, save, and spend funds specifically for medical treatment, is working with NHIF to connect payers, providers, and patients to its platform to increase cost transparency, care utilization, and health outcome tracking for beneficiaries at specific health facilities.³⁸ For example, NHIF, like many insurers, pays a fixed fee per enrollee to health care providers, regardless of the number of visits. Transaction data from a platform such as M-TIBA can provide more granular information on actual number of visits and cost per visit so NHIF can determine whether the fee is fair. In April 2017, NHIF partnered with M-TIBA to pilot a program of outpatient care for its Supa Cover insurance enrollees via M-TIBA's platform. More than 20,000 families living in Nairobi and Kakamega Counties will use the M-TIBA platform to access the Supa Cover package, which includes coverage for outpatient and inpatient care, maternity, and chronic ailments.³⁹

32. GSMA (2018) Spotlight on mobile-enabled insurance service. Retrieved from: <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2018/09/2017-SOTIR-deep-dive-Spotlight-on-mobile-enabled-insurance-services.pdf>

33. Freemium is a pricing strategy by which a product or service (typically a digital offering or an application such as software, media, games, or web services) is provided free of charge, but money (premium) is charged for additional features, services, or virtual (online) or physical (offline) goods. Users initially get basic features at no cost and can access richer functionality for a subscription fee. Source: Harvard Business Review

34. Tellez & Zettereli, (2014) op. cit.

35. GSMA (2018) op.cit.

36. Interview with Richard Leftley, MicroEnsure, September 2017.

37. Leach, J., Tappendorf, T., & Ncube S. (2015). Can the Digitization of Microinsurance Make All the Difference? Assessing the Growth Potential of Digital Microinsurance. Somerville, Massachusetts: Bankable Frontier Associates. Retrieved from: <http://cenfri.org/documents/microinsurance/2015/Can%20the%20digitalization%20of%20microinsurance%20make%20all%20the%20difference%20-%20Assessing%20the%20growth%20potential%20of%20digital%20microinsurance.pdf>

38. M-TIBA information based on Interview with Sicco Van Gelder, PharmAccess, October 2017.

39. Task Force Health Care (TFHC). (2017, May 3). PharmAccess partners with NHIF to increase access to care for Kenyans through M-TIBA. Retrieved from: <https://www.tfhc.nl/pharmaccess-partners-nhif-increase-access-care-kenyans-M-Tiba/>

Integrating health education services with digital insurance

USAID programs can potentially form partnerships with mobile operators and insurance providers to deliver education information. In June 2016, Telenor Group's subsidiary Telenor Health launched a mobile-based health and wellness service platform called Tonic for customers of its local Bangladesh-based operator Grameenphone.⁴⁰ Tonic's initial package includes free health information, insurance, and telemedicine services. In April 2017, Telenor unveiled a three-tiered package that modifies existing free services delivered to their customers: Tonic Free, Tonic Advanced (approximately \$1.53 USD monthly), and Tonic Premium (approximately \$3.55 USD monthly). The free service includes:

- **Tonic Doctor:** the ability to speak with a doctor⁴¹
- **Tonic Discount:** discounts at over 200 hospitals, diagnostic centers, and other health-related outlets
- **Tonic Cash:** insurance coverage up to TK 1,000 (approximately \$11.91 USD) per claim, with up to four claims per year for three consecutive nights at government hospitals in case of hospitalization

The Advanced and Premium packages offer increasing levels of insurance coverage; SMS tips; access to health channels via Facebook, SMS, app, or website; free telemedicine services; appointment bookings; and access to renowned doctors.⁴²

Telenor Health's endeavors in mobile insurance are nascent and have yet to reach profitability. Though since the company launched the Tonic product line, the demand for mobile insurance in Bangladesh has grown steadily. Since launching in December 2016, Tonic has added more than 4.5 million subscribers, made more than 100,000 phone-based consultations, approved 25,000 discounts on medical services, and paid 350 claims.⁴³ Telenor Health is also partnering with the Government of Bangladesh to launch an initiative to use digital technologies to facilitate health care access.

Global health program managers advising national health insurance schemes can adapt aspects of private sector business models—convenient digital payments, “freemium” pricing models, digitized claims management and payment processes, simple product constructs, and use of data for program design and management—to lower cost and improve customer uptake in health insurance schemes.

Key Takeaway 4:

Use of Digital Insurance Platforms

- Use digital platforms to facilitate premium collection for national public health insurance schemes among informal sector workers with irregular incomes.
 - Allow smaller, more frequent payment to increase access for low-income populations.
 - Improve efficiency using digital channels for national health insurance schemes along the entire insurance value chain (claims filing, processing, payments to providers, premium collection, disbursement of claims) to lower the cost of offering insurance.
 - Use transaction data for national health insurance schemes generated by digital platforms to better structure insurance offerings, monitor outcomes, and manage cost.
 - Consider “freemium” models with the opportunity to upgrade to entice hard-to-reach populations to sign up for insurance.
 - Partner with MNOs, digital savings and insurance providers to embed health education and telemedicine services into their product offerings to reach a broader population without added cost.
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40. GSMA. (2017). Scaling digital health in developing markets: Opportunities and recommendations for mobile operators and other stakeholders. Retrieved from: <https://www.gsmainelligence.com/research/?file=c581aa43bdb7b7d236bb937698c2d6fd&download>

41. Standard carrier charges apply

42. Tonic. (2017). PACKAGES. Retrieved from: <https://mytonic.com/en/packages>

43. GSMA (2017) op. cit.

CONCLUSION

This brief shows the great potential of DFS to improve HSS functions and outcomes. Results from the interventions featured suggest opportunities to integrate DFS into digital and non-digital health programs to reduce systemic inefficiencies, expand beneficiary access, and support health systems in various contexts.

More thoughtful design, testing, and piloting—coupled with documentation on the impact of DFS on health outcomes in future projects—will inform innovative use of DFS and drive progress towards achieving USAID global health goals.



SUGGESTED RESOURCES:

Principles for Digital Development – <https://digitalprinciples.org/>

Global Digital Health Network – <https://www.mhealthworkinggroup.org/>

mHealth Evidence – <https://www.mhealthevidence.org/>

mhealth Knowledge – <https://mhealthknowledge.org/>

WHO Classification of Digital Health Interventions – <http://apps.who.int/iris/bitstream/handle/10665/260480/WHO-RHR-18.06-eng.pdf?sequence=1>

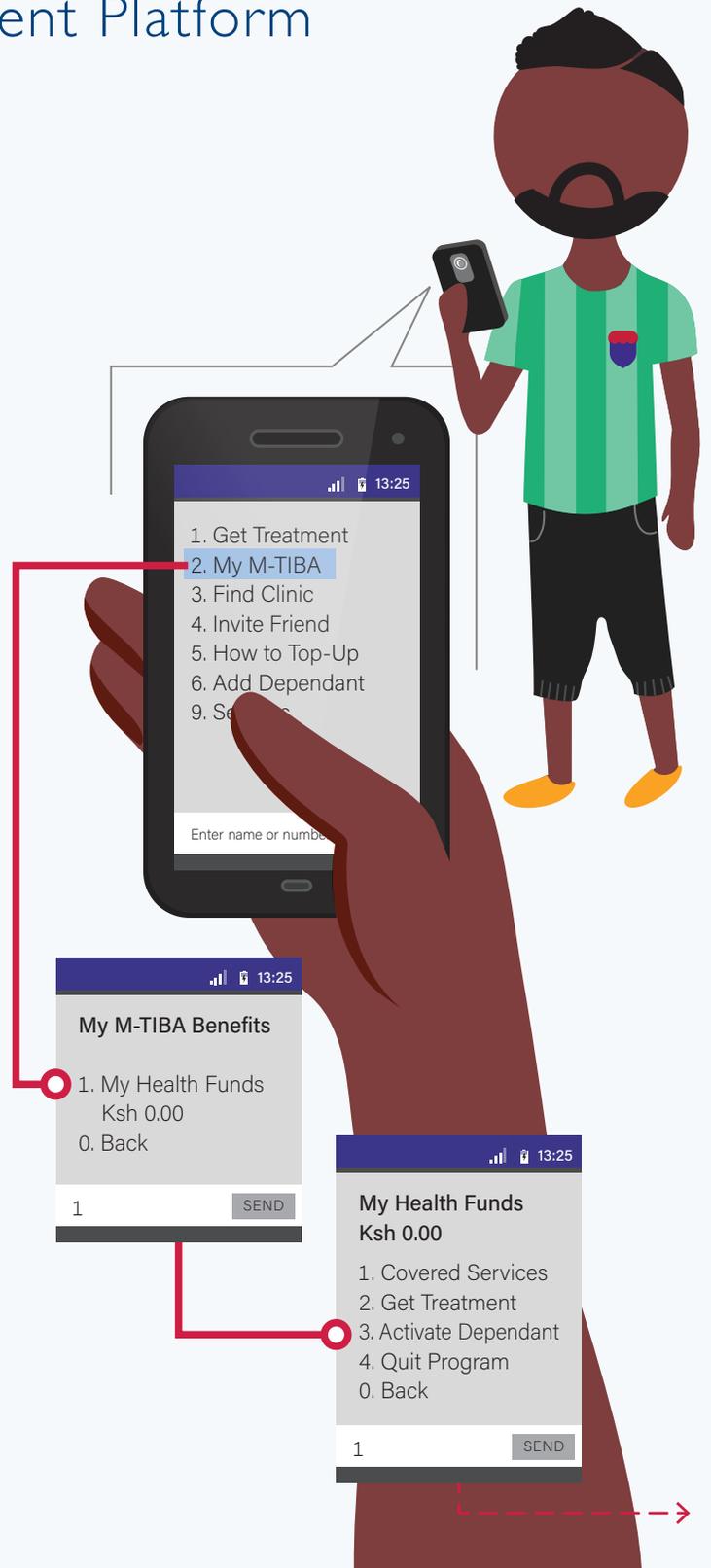
ANNEX: M-TIBA Savings, Insurance, and Health Funds Management Platform

This case study demonstrates how a remittance-enabled health savings product provides incentives, and free insurance and helps customers to access health care.

Safaricom, CarePay, and PharmAccess Foundation partnered to create M-TIBA, a digital health payments platform, with the goal of increasing health care inclusion and empowering low-income Kenyan households to visit a doctor.⁴³ M-TIBA offers financial products, including commitment mobile savings accounts, health insurance for beneficiaries, and health funds and payments management services for donors and clinics.

M-TIBA's platform lets users save, send, and spend funds for medical treatment. Beneficiaries use M-PESA to make deposits into and payments from their M-TIBA savings accounts, increasing convenience for clients by allowing mobile payments on a familiar platform.

Money saved or received on M-TIBA can only be spent at M-TIBA's partner clinics and hospitals (i.e., commitment savings features). To incentivize its users to save money for health expenditures, M-TIBA adds a bonus top-up of KSH 50 (approximately \$0.50 USD) for every KSH 100 saved monthly. M-TIBA also offers free personal accident insurance up to KSH 8,000 (approximately \$80 USD).⁴⁴ M-TIBA is structured as a commitment savings account: beneficiaries forego bonuses if they withdraw funds for other purposes. In addition, M-TIBA enables beneficiaries to mobilize funds for care by requesting remittances directly into their health savings account to cover health care costs. This feature may help beneficiaries more frequently receive remittances for care, because research shows that remittance senders want to ensure their funds are being used for the purpose they intended.⁴⁵



43. M-TIBA. (2017). Sustainable Development Goals. Retrieved from: <http://M-Tiba.co.ke/>

44. Ibid.

45. Klapper (2016), op. cit.

M-TIBA subscribers can also choose and search for nearby in-network clinics using their mobile phones.

M-TIBA affiliated clinics using internationally recognized SafeCare standards and work with enrolled clinics to improve their standards and administration.⁴⁶ This intervention has benefits for individuals and implementing institutions. Institutions benefit from improved transparency and monitoring. Individual beneficiaries see improved well-being and affordability because poor quality of care can increase the frequency of visits, raising the overall cost of care.⁴⁷

Further, M-TIBA allows donors to channel funds meant for health services directly to recipients so they can more effectively track usage.⁴⁸ Ten international donors and corporations are now using M-TIBA for disbursements.⁴⁹ Health care providers, particularly smaller facilities, connected to M-TIBA benefit from increased business and reduced payment leakage.⁵⁰ Smaller providers also gain access to a dashboard with data on health care utilization—including visits, treatments, and costs—without having to invest in their own technology platform.

Aggregated data from the M-TIBA platform can be used to monitor health care quality, impact, and trends. M-TIBA captures each transaction and the associated treatment/diagnoses and uses those data to develop a patient journey tracker (e.g., for HIV and maternal, newborn, and child health) to determine whether treatment adheres to medical protocols. Aggregated data captured on the platform can also potentially help track the emergence of epidemics.

By March 2019, number of people connected to M-TIBA in Kenya has grown to almost 4 million⁵¹ and by November 2018 KSH 205.12 million (approximately \$2 million USD) in medical payouts.⁵²

Four hundred and fifty connected health care providers have treated more than 100,000 patients, generating more than \$1.4 million USD in medical transactions through M-TIBA.⁵³ M-TIBA is still in its infancy, so it is premature to measure health impacts. However, there are some promising early results.

During a pilot in 2015, M-TIBA assessed 5,000 mothers with children under 5 years of age (10,000 beneficiaries in total) living in informal settlements in Nairobi.⁵⁴ The results showed that 63 percent used the health wallet during the first 6 months of the pilot. In 14 percent of cases, users reported that they sought help sooner than they would have without M-TIBA.



46. Wakoba S. (2016, September 19). Mobile health wallet M-TIBA hits 45,000 users | Plans for national roll out. Retrieved from: <http://techmoran.com/mobile-health-wallet-M-Tiba-hits-45000-users-plans-national-roll/>

47. Zollmann (2016), op. cit.

48. GSMA (2015). Mobile Insurance, Savings & Credit Report. Retrieved from: <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/08/Mobile-Insurance-Savings-Credit-Report-2015.pdf>

49. PharmAccess. (2017, June 9). M-TIBA wins 2017 Financial Times/IFC Transformational Business Award. Retrieved from: <https://www.pharmaccess.org/update/m-tiba-wins-2017-financial-times-ifc-transformational-business-award/>

50. Interview with Sicco Van Gelder, PharmAccess, October 2017.

51. Interview with Kees Van Lede, PharmAccess, March 2019

52. Ilako C. (2018, January). M-TIBA makes Sh205 million in medical payouts in two years_c1703313

53. PharmAccess Foundation. (2017, June 9). M-TIBA wins 2017 Financial Times/IFC Transformational Business Award. Retrieved from: <https://www.pharmaccess.org/update/M-Tiba-wins-2017-financial-times-ifc-transformational-business-award/>

54. M-TIBA (2015). Mobile Health Wallet. Retrieved from: <https://www.pharmaccess.org/wp-content/uploads/2016/05/Mtiba-brochure-FINAL1.compressed.pdf>

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