



## **MOBILE MONEY CASE STUDY**

A Comparison between Cash and Mobile Payments in Dnet's Aponjon Program (MAMA Bangladesh)

This case study was designed and prepared by Dnet (a non-profit Social Enterprise institution, [www.dnet.org.bd](http://www.dnet.org.bd)) through a grant funded by USAID's mSTAR project (Associate Award AID-OAA-A-12-00073), managed by FHI 360.

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### **DISCLAIMER**

The views expressed in this publication do not necessarily reflect the views of the U.S. Agency for International Development or the U.S. Government

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## 1 | INTRODUCTION

As part of new United States Global Health Initiative, the USAID Bangladesh mission is supporting the implementation of Aponjon service in Bangladesh. Aponjon is a mobile based health information system for expecting and new mother for getting information in the very beginning of the pregnancy until the child turn one.

Aponjon provides health information provided through the Mobile Alliance for Maternal Action (MAMA) to expecting mothers and mothers of new born as well as their gatekeepers (e.g. husbands, mothers and mothers-in-law) who eventually play an important roles in decision making. Since its launch, Aponjon has reached more than 250,000 subscribers across 40 districts in the country through a field force of 3,000 staff provided by its outreach partners: BRAC, NHSDP, Save the Children, SMC, Infolady, UISC and other local NGOs. Aponjon plans to cover all of Bangladesh's 64 districts through its outreach partners by 2015.

The program trains the health workers of partner organization to identify, motivate, and register expecting and new mothers for Aponjon's service. These health workers are known as Community Agents (CAs).

Dnet makes payments to the field for a number of different expenses. It pays CAs an incentive for each subscriber they acquire, as well as payments for yard meetings, data entry costs, Aponjon Fair costs and training costs for the CAs and field focals.

Initially, Dnet disbursed cash payments to CAs and field focals using money orders from the post office, which posed multiple challenges, such as:

- The length of the process for the beneficiaries to receive the cash;
- The distance between beneficiaries' residence to the nearest post office, which is often far; and
- The lack of security provided to beneficiaries who have to carry cash from the post office to their homes.

To overcome these challenges, Dnet decided to transition from using cash to mobile financial services (MFS) with support from USAID's Mobiles Solutions Technical Assistance and Research (mSTAR) project, implemented by FHI 360. This document compares the difference in the payment process between cash and mobile.

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## 2 | PAYMENT PROCESS FLOW IN APONJON PROGRAM (MAMA) USING CASH

Prior to receiving an mSTAR grant to transition to mobile payments, Dnet's accounting department processed cash disbursements for incentives, data entry costs, yard meetings, Aponjon Mela costs, training costs and other training related expenses.

Aponjon's Community Agents received cash incentives for subscriber acquisition from their Upazilla Managers (UMs) / Upazilla Focals. UMs received the cash from their District Mangers (DMs), and the DMs received the cash from Dnet through post office money orders. The step by step cash flow procedure is diagramed on the following page.

## Cash

Steps (with days required for completion)	Activities	HR Engagement	HR Hours	Cost (BDT)
STEP 1 3 days	Payment calculated by beneficiary	3	9	1591
STEP 2 3 days	Payment calculation check and approval process	2	6	1061
STEP 3 2 days	Payment check issued after approval	1	2	354
STEP 4 1 day	Aponjon accounts team withdraws funds from bank	1	2	554
STEP 5 1 day	Aponjon accounts team sends funds via Post Office money order	1	2	554
STEP 6 2 days	District level managers collect money order as cash when they have time	1	3	431
STEP 7 10 days	District managers hold onto the cash for 10-15 days, and then hand it over to Upazilla managers at their monthly meeting	1	1	77
STEP 8 15 days	Upazilla managers hold onto the cash for 10-15 days, and then hand it over to Community Agents at their monthly meeting	1	2	144
STEP 9 3 days	Upazilla managers courier payment receipt signatures from CAs to Aponjon accounts team	1	3	321
STEP 10 1 day	Aponjon accounts team receive the receipts and file them	1	2	354
<b>Process completed</b>				

Figure 1: Payment Process Flow Using Cash

**Note** | “HR engagement” refers to the number of staff engaged per step. “HR hour” refers to the number of hours required for engaged staff to calculate beneficiary level payments. HR engagement and HR hours were calculated based on activity wise requirements. The cost is calculated based on HR hours and travel where required.

- Step 1 |** Aponjon staff calculates the payment amount for any particular month (3 days).
- Step 2 |** The accounting team checks the calculation and starts the approval process (3 days).
- Step 3 |** Following approval, the accounting team issues a payment cheque (2 days).
- Step 4 |** The accounting team withdraws the payment amount from the bank (1 day).
- Step 5 |** The accounting team sends the money to the District Managers via money orders at the post office (1 day).
- Step 6 |** District Managers receive a confirmation call and go to the post office to collect the cash (2 days). Note: there is an additional travel cost associated with this step.
- Step 7 |** District Managers hold the cash until they can disburse the money to Upazilla Managers at the monthly meeting (10 days).
- Step 8 |** Upazilla Managers hold the cash until the end of the month when they meet with their Community Agents (15 days).
- Step 9 |** At the monthly meeting with CAs, Upazilla Managers disburse the cash and collect signatures. UMs then send the documentation to Dnet’s accounting department by courier (3 days).
- Step 10 |** Dnet accounting receives and files the signature sheet (1 day).

The costs associated with Steps 1-10 above are summarized in the following table:

<b>STEP</b>	<b>COST</b>	<b>HR ENGAGEMENT</b>	<b>HR HOURS</b>	<b>PROCESS DAYS</b>
<b>1</b>	1,591	3	9	3
<b>2</b>	1,061	2	6	3
<b>3</b>	354	1	2	2
<b>4</b>	554	1	2	1
<b>5</b>	554	1	2	1
<b>6</b>	431	1	3	2
<b>7</b>	77	1	1	10
<b>8</b>	144	1	2	15
<b>9</b>	261	1	3	3
<b>10</b>	354	1	2	1
<b>TOTAL</b>	<b>5,379</b>	<b>13</b>	<b>32</b>	<b>41</b>

The entire process takes approximately one and a half months, or 6 weeks. By using cash, the accounting department is required to complete extensive paper work and track multiple documents, which increases their workload. Meanwhile, CAs the length of time it took CAs to receive their incentive was negatively impacting their motivation.

### 3 | PAYMENT PROCESS FLOW USING MOBILE FINANCIAL SERVICES

mSTAR introduced Dnet’s Aponjon Program to mobile financial services in early 2014 as a way to decrease the time required for payment disbursements. After several discussions with outreach partners, they agreed to transition to using mobile financial services for their field level health workers and focal persons. The mobile payment disbursement process is illustrated below.

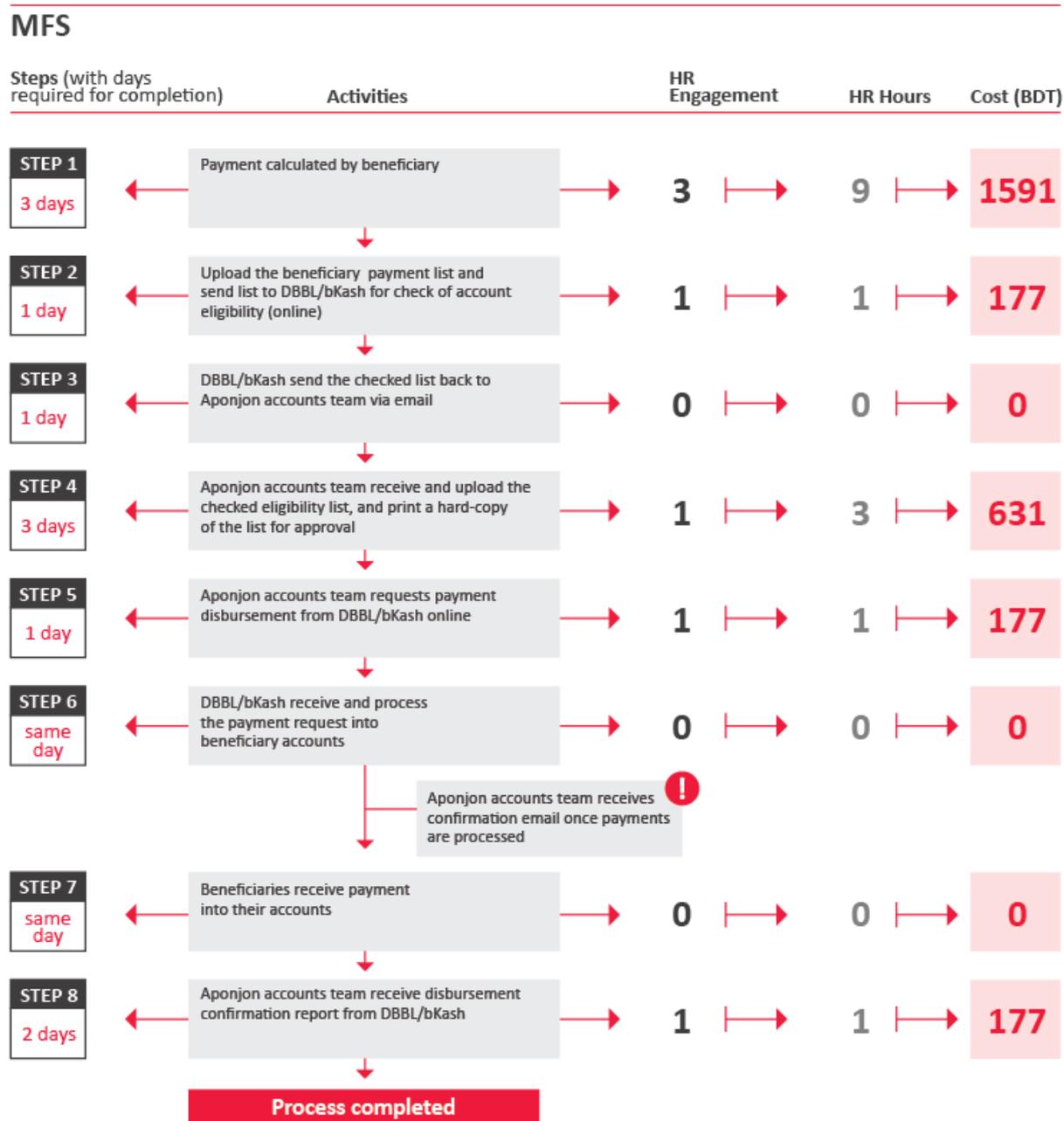


Figure 2: Payment Process Flow Using Mobile Financial Services

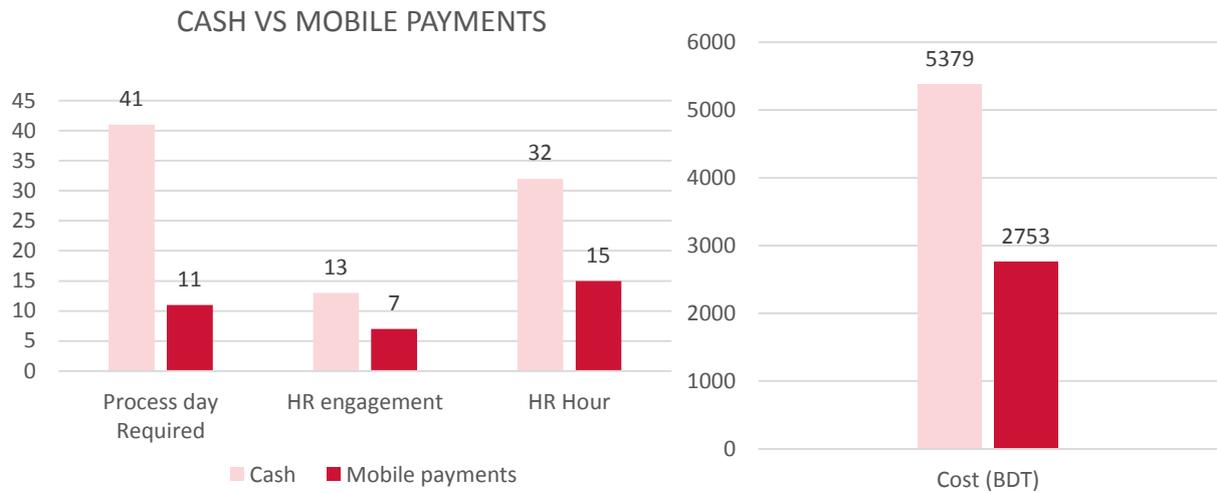
**Note:** “HR engagement” refers to the number of staff engaged per step. “HR hour” refers to the number of hours required for engaged staff to calculate beneficiary level payments. HR engagement and HR hours were calculated based on activity wise requirements. The cost is calculated based on HR hours and travel where required.

- Step 1 |** Aponjon staff calculates the payment amount for any particular month (3 days).
- Step 2 |** Aponjon staff sends the payment amount list by beneficiary to the MFS provider (bkash/DBBL) to check account eligibility (1 day).
- Step 3 |** The MFS provider (bkash/DBBL) replies and sends the checked list with eligibility status via email (1 day).
- Step 4 |** The accounting team receives the email and uploads the payment according to the list for approval (3 days).
- Step 5 |** The accounting team sends the payment disbursement request to the MFS provider (bkash/DBBL) (1 day).
- Step 6 |** After receiving the payment disbursement request, the MFS provider (bkash/DBBL) disburses the payments to beneficiaries' mobile wallets. After disbursement, the MFS provider (bkash/DBBL) sends a confirmation email to the accounting team.
- Step 7 |** Beneficiaries receive payments to their mobile wallet on the same day as the disbursement request.
- Step 8 |** The accounting team receives the disbursement report from the MFS provider (bkash/DBBL) and uploads it to the application for reporting and documentation purposes (2 days).

Steps 1-8 take approximately 11 working days per month. Using mobile payments, Dnet maintains proper documents, saves time and cost, reduces the risk of handling cash, decreases the accounting workload and motivates the CAs by providing their incentives faster.

STEP	COST	HR ENGAGEMENT	HR HOURS	PROCESS DAYS
1	1,591	3	9	3
2	177	1	1	1
3	0	0	0	1
4	631	1	3	3
5	177	1	1	1
6	0	0	0	0
7	0	0	0	0
8	177	1	1	2
<b>TOTAL</b>	<b>2,753</b>	<b>7</b>	<b>15</b>	<b>11</b>

## 4 | TIME AND RESOURCES SAVED



**Figure 3:** Comparison between cash and mobile financial services

The above graphs clearly demonstrate that the cost and time required to process disbursements has significantly reduced due to the introduction of mobile financial services. In addition to the indirect cost savings from reduced labor, the direct transaction costs are also lower for mobile financial services. Using money orders, Dnet pays 42 taka per transaction based on a 1,200 taka transaction (about US\$15). In addition, Dnet also needs to pay transportation costs for their accounting staff to send the money orders (30 taka/trip) and for District Managers to collect them (40 taka/trip), which amount to about 4,000 taka each month. Considering both the indirect and direct costs, Dnet estimates that it saves between 23,000 and 38,000 taka (US\$300 - \$485) each month using mobile financial services instead of cash for the 1,000 Aponjon agents who they are currently piloting MFS with.

Mobile payments not only save time and money, but they also ensure transparency. Previously, Aponjon was unable to track whether beneficiaries received their payments in full or if their supervisor/organization kept a portion. Using mobile financial services guarantees that the payments are received in full by the individuals who are supposed to receive them because every beneficiary has an individual mobile banking account to which the payments are directly sent.

Transitioning to mobile payments in the Aponjon Program has enabled Dnet to overcome the challenges associated with cash payments. As a result of this pilot, Dnet now plans to extend mobile financial services to all Aponjon agents, as well as other Dnet programs.