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### Authors

Czaicki, Nancy L  
Mnyippembe, Agatha  
Blodgett, Madeline  
et al.

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## ***It helps me live, sends my children to school, and feeds me: A qualitative study of how food and cash incentives may improve adherence to treatment and care among adults living with HIV in Tanzania***

**Nancy L. Czaicki, MSPH<sup>a</sup>, Agatha Mnyippembe<sup>b</sup>, Madeline Blodgett, MPH<sup>a</sup>, Prosper Njau, MD, MSc<sup>c</sup>, and Sandra I. McCoy, MPH, PhD<sup>a,\*</sup>**

<sup>a</sup>Division of Epidemiology, School of Public Health, University of California, Berkeley, 779 University Hall, MC 7360, Berkeley, CA 94720 USA

<sup>b</sup>Regional Medical Office, Shinyanga, Tanzania

<sup>c</sup>Ministry of Health and Social Welfare, Dar es Salaam, Tanzania

### **Abstract**

Financial and in-kind incentives have been shown to improve outcomes along the HIV care cascade, however the potential pathways through which they work remain unclear. To identify the pathways through which incentives improve retention in care and adherence to antiretroviral therapy (ART), we conducted a qualitative study with participants in a trial evaluating conditional food and cash incentives for HIV-positive food insecure adults in Shinyanga, Tanzania. We found that the incentives acted through three pathways to potentially increase retention in care and adherence to ART: 1) addressing competing needs and offsetting opportunity costs associated with clinic attendance, 2) alleviating stress associated with attending clinic and meeting basic needs, and 3) by potentially increasing motivation. Participants did not report any harmful events associated with the incentives, but reported myriad beneficial effects on household welfare. Understanding how incentives are used and how they impact outcomes can improve the design of future interventions.

### **Keywords**

Tanzania; HIV infection; ART Adherence; Retention; Incentives; Cash transfers; Food assistance; Qualitative

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\*Corresponding author: Sandra McCoy, PhD, MPH, Assistant Adjunct Professor of Epidemiology, University of California, Berkeley, 779 University Hall MC7360, Berkeley, CA 94720, smccoy@berkeley.edu.

**Disclosure statement:** The authors declare they have no conflicts of interest.

**Compliance with Ethical Standards:** This study was approved by the Committee for Protection of Human Subjects at University of California Berkeley and by the National Institute for Medical Research in Tanzania.

**Dedication:** This manuscript is dedicated to the late Dr. Nancy Czaicki. The work described herein was part of Dr. Czaicki's doctoral dissertation in Epidemiology at the University of California, Berkeley. She was an outstanding young scientist dedicated to improving the lives of people living with HIV. While she is deeply mourned around the world, we remember the brilliant happiness with which she lived her life and the sunshine she exemplified to the world.

## Introduction

It is increasingly recognized that financial incentives can change behaviors that lead to increased HIV testing (Haukoos, Witt, Coil, & Lewis, 2005; S. I. McCoy et al., 2013; Thornton, 2008), linkage to care after diagnosis (Solomon et al., 2012), ART adherence (Chaiyachati et al., 2014; Galarraga, Genberg, Martin, Barton Laws, & Wilson, 2013), and reduce HIV incidence (Baird, Garfein, McIntosh, & Ozler, 2012; Björkman-Nyqvist, Corno, de Walque, & Svensson, 2013; D. de Walque et al., 2012). However, not all studies have found positive effects of financial incentives, and reasons for heterogeneity often remain unexplored (A. Pettifor, Wagner, R. Twine, Xing, & Townley, 2015; Kohler & Thornton, December 22, 2009; Q. Abdool Karim, Ntombela, & Karim, 2015). For example, it is unclear why cash incentives reduced sexually transmitted infections among young girls in Malawi (Baird et al., 2012) and young adults in Tanzania (D. de Walque et al., 2012), but a cash incentive conditional on school attendance did not prevent HIV infection among young women in South Africa (A. Pettifor et al., 2015). Without knowing how or why incentives work, and for whom they work best, we are unable to explain conflicting results, prevent undesirable effects, and maximize additional positive effects.

Literature examining the pathways through which incentives operate is sparse, and quantitative data from impact evaluations often cannot explain these complex mechanisms of action that may elucidate observed heterogeneity. In contrast, qualitative research can provide a deeper understanding of how incentives may work – information that could be widely applicable to the myriad cash and in-kind assistance programs currently being implemented (Galarraga et al., 2013; Pettifor, MacPhail, Nguyen, & Rosenberg, 2012). To address this gap, we used qualitative methods to examine how incentives may work in the context of a study evaluating the effect of conditional food and cash incentives given to people living with HIV (PLWH) in Tanzania. The goal of this research was to identify the pathways through which incentives may act to improve retention in care and ART adherence, and to evaluate whether economic and psychological theories support these pathways.

## Methods

### Study Setting and Population

This study was ancillary to a randomized controlled trial evaluating the effectiveness of conditional food and cash incentives to improve adherence to ART among food-insecure HIV patients who recently initiated ART in Shinyanga, Tanzania (NCT01957917) (S. I. McCoy et al., 2015). Patients were eligible if they were at least 18 years of age, had started ART within the past 90 days, were food insecure according to the Household Hunger Scale (Ballard, Coates, Swindale, & Deitchler, 2011), and were not severely malnourished. In total, 805 patients were recruited from two government hospitals and one government health clinic and randomized into one of 3 arms: nutritional assessment and counseling (NAC; control), NAC plus monthly food incentive, or NAC plus cash incentive. Participants in the food or cash arms were eligible for up to 6 monthly incentives of equivalent value conditional on attending routine appointments (within a 4-day window). Both medication

and visit adherence were higher in the incentive groups versus control group at 6 months (Sandra I. McCoy et al., 2016; S. I. McCoy et al., 2017).

Eligible participants for the qualitative study were enrolled in the parent study, randomized to the food or cash incentive group, and had received 3 possible incentives. Previous studies suggest differential incentive usage by gender, head of household, and incentive type (food/cash) (Ahmed, Quisumbing, Nasreen, Hodinott, & Bryan, 2009; Gentilini, 2007), so participants were purposively selected from these joint strata. Interviews were distributed across study sites roughly in proportion to total study enrollment.

### **Theoretical Framework and interview guide development**

Three theories directed the development of the in-depth interview guide: 1) neoclassical microeconomic theory, which suggests that incentives help overcome economic constraints to positive health behaviors either through a price effect, income effect, or both (Ahmed et al., 2009; de Walque, Dow, Medlin, & Nathan, 2012; Galarraga et al., 2013); 2) behavioral economic theory, which posits that individuals fail to engage in healthy behaviors due to systematic biases or shortcuts such as choosing behaviors with immediate rewards over those with long-term rewards and immediate costs, thus discounting long-term benefits of the behavior (Frederick, Loewenstein, & O'Donoghue, 2002; Galarraga et al., 2013; Loewenstein, Brennan, & Volpp, 2007); and 3) Self Determination Theory, which distinguishes between intrinsic motivation, engaging in an activity because it evokes positive feelings, and extrinsic motivation, engaging in an activity for a separate consequence or reward (Deci & Ryan, 2008). As a result, the semi-structured guide (Ulin, Robinson, & Tolley, 2005) included questions to explore how incentives were used, the decision making process around incentive use, present bias, and motivation.

### **Data Collection**

**Recruitment**—We created lists of eligible patients participating in the parent study within joint stratum of gender, incentive group, and head of household status based on the baseline survey from the trial. Permission for repeat contact with the research team was granted in the consent process for the parent study. At their next clinic visit, potentially eligible patients were approached by a researcher (A.M.) who explained the study. Patients interested in participating in the qualitative study provided written informed consent and completed the interview on the same day. Participants were compensated for their time with a small gift valued at approximately \$5.

**In-depth interviews**—Interviews were conducted between February and May 2015. Each in-depth interview lasted 30–60 minutes, took place at a private space at the health facility, and was conducted in Kiswahili by a Tanzanian interviewer. The interviews were audio recorded, transcribed verbatim, and translated into English by local staff. Written memos were created after each interview to record non-verbal attributes, emerging ideas, and suggestions for improvement. The interviewer and investigator debriefed in weekly meetings to discuss emerging themes (Ulin et al., 2005). The target sample size was 32, and the final sample size was determined by examining theme saturation overall and within strata.

## Analysis

We developed an initial list of deductive codes representing key aspects of the theoretical framework and hypothesized pathways. English transcripts of the interviews were independently read and coded by two researchers (NC and MB) in either Atlas.ti or Dedoose qualitative data analysis software, and coded transcripts were compared. Intercoder agreement was computed by Dedoose software for a set of 13 codes representing the main themes and theoretical frameworks and a randomly selected set of transcript excerpts (pooled Cohen's kappa = 0.81). The two coders met weekly to resolve coding and interpretation differences and to identify emerging themes and codes.

To examine narratives within and across themes, code sorts were evaluated and compared to the theoretical framework (Ulin et al., 2005). Once incentive pathways and themes emerged, we considered the consistency of cases within those pathways and themes through systematic review, reduction and interpretation of the data (Miles & Huberman, 1994). The transcripts were revisited once codes were finalized to fully develop the observed pathways and compare findings to the theoretical frameworks. Narratives corresponding to each pathway were further analyzed to examine patterns or inconsistencies.

## Results

### Participant Characteristics

The 29 study participants included 16 women and 13 men, of whom 17 had received food incentives while 12 had received cash (Table 1). Only one person refused.

All participants receiving food incentives reported using it for personal and household consumption; no one reported selling the food. A strong sense of obligation to consume the food was common in the participant narratives (Table 2, incentive usage). Participants receiving cash incentives reported that they were used for food and basic needs, entrepreneurial and livelihood activities, savings, and children's health or education (Table 2).

### Potential action pathways of the incentives

We found that the incentives acted through two primary pathways and one potential pathway to increase retention in care and adherence to ART: 1) addressing competing needs and offsetting opportunity costs associated with clinic attendance, 2) through a mental health pathway whereby the incentives reportedly alleviated stress associated with attending clinic, reduced worry about providing for oneself and one's family, and provided hope for a better future (Figure 1), and 3) by potentially increasing motivation.

**How food and cash incentives address competing needs and offset opportunity costs**—Incentives may increase retention and adherence by alleviating economic barriers to attend clinic. This pathway had the strongest support in participant narratives. In many instances, this manifested as a price effect reducing opportunity cost, meaning that individuals could attend clinic instead of spending time looking for food or money, which was a commonly reported reason for missing clinic visits [Quote 14]. For

example, one woman who received food assistance emphasized that the incentive was enough to offset the time, inconvenience, and actual cost of coming to clinic even for those who hated coming [Quote 15]. Analogously, others gave specific examples of how receiving the incentive enabled them to pay expenses associated with clinic attendance, such as transportation, and explicitly cited the incentives' ability to help provide for their families [Quote 16]. Another woman reported using the cash to purchase cotrimoxazole and another prescription that the clinic was unable to provide. Thus, the incentives likely act through a price effect pathway by addressing opportunity cost imbalances to effectively reduce the price of attending clinic.

Given that most participants reported using the incentives for food and other basic needs, the incentive also appeared to act through an income effect by relieving broader economic constraints not directly related to clinic costs. Many participants reported using the transfers to meet immediate basic needs such as food or rent [Quotes 8, 9, and 13], and/or to start or support entrepreneurial activities that would provide sustained income to meet these basic needs in the long term [Quotes 10,11]. These participants reported that the incentive allowed them to fulfill basic needs and expenses unrelated to clinic costs, and kept them coming to clinic [Quote 17]. Thus, the incentives seemed to reduce economic constraints and meet basic non-clinic needs at home to facilitate clinic attendance and ART adherence, behaviors in which they were already motivated to engage.

**How incentives may reduce mental health barriers to adherence**—Many participants reported that receiving the incentives reduced stress, worry, and depression, and fostered a sense of peace because they were able to meet basic needs. These results suggest that mental health may have improved temporarily among transfer recipients, although this topic was not included in the interview guide. No participants were able to explicitly link this mental health improvement with increased adherence or clinic attendance, but we infer this as a likely pathway given the strong association between mental health and adherence present in the existing literature (Anuradha et al., 2013; Huynh, Kinsler, Cunningham, & Sayles, 2013; Nel & Kagee, 2011; Safren et al., 2015; Starace et al., 2002). Participants such as this woman [Quote 23] reported that a sense of happiness and mental freedom arose from the ability to attend clinic without worrying where the next meal would come from because they would be receiving the incentive, or had cash/food remaining from the previous visit. In addition, others, like this man and his wife, simply expressed relief knowing the incentive would help meet their basic needs [Quote 24]. In addition to stress relief, improved physical condition also inspired positive thoughts and a sense of hope and direction among some, like this man who received food baskets [Quote 25] and ultimately wanted to do HIV outreach to educate others. Given the established relationship between mental health and adherence, this data suggests that improvement of mental health is another pathway through which incentives may act.

**How incentives affected motivation to attend clinic**—Enhanced motivation is a potential pathway through which incentives may improve ART adherence and retention in care. Many patients expressed high motivation to take ART, rooted in belief of the effectiveness of ART based on both clinic messaging [Quotes 18 and 19] and witnessing

dramatic improvements in health after initiating ART [Quote 20]. Very few explicitly reported that the incentive changed their desire or motivation to come to clinic. For example, one man said that the incentives did not motivate him to come to clinic and that he had to come regardless of the incentive or his ability to afford transportation [Quote 16]. On the other hand, participants linked the incentives to clinic attendance [Quote 21], and thus it is difficult to infer that the incentive *did not* impact motivation to come to clinic, even if such an effect was not explicitly stated. The interviewer reported non-verbal cues when discussing the incentives, suggesting that participants were excited about the incentives. It is important to note that despite linking the incentive to coming to the clinic and interacting with research staff, most participants had a limited understanding of the specific conditionality of the incentive. For example, one man reported knowing that he had to check in with the research assistant, but did not know he had to come to his visit on time to receive the incentive [Quote 22]. Though these individuals did not clearly understand or remember the conditionality, the incentive may act as a motivator by giving people an additional reason to go to clinic when they might otherwise have not.

## Discussion

This qualitative study identified pathways through which cash and food incentives may improve short-term retention in care and adherence to ART among PLWH. Participant narratives suggested that patients receiving food primarily consumed the food whereas those receiving cash reported myriad uses including purchasing food, entrepreneurial activities, paying school fees, and saving. We found that these incentives act through one or a combination of three interrelated pathways: 1) offsetting opportunity costs and competing needs; 2) reducing mental health barriers associated with adherence, and 3) by potentially providing motivation to attend clinic. Overall, participants did not report harmful events associated with the incentives, and instead, reported myriad beneficial effects on health and household welfare.

Offsetting opportunity costs and meeting basic economic needs had the most support of the three pathways. The incentives had both a price and income effect, by offsetting opportunity costs of attending clinic for many, and meeting basic needs not directly related to clinic attendance for others. The reduction in opportunity costs is consistent with other studies (Adato, Roopnaraine, & Becker, 2011; Heise, Lutz, Ranganathan, & Watts, 2013; Pettifor et al., 2012; Young, Wheeler, McCoy, & Weiser, 2013) and with the context of a food-insecure population; local and regional health officials reported needing to work or find food as the most common reason that patients become lost to follow-up (personal communication with Regional Medical Officer). Furthermore, the incentive usage here is consistent with prior studies reporting that people receiving food incentives have higher food consumption while those receiving cash have greater freedom of choice for use, including investments in productive assets and businesses (Ahmed et al., 2009; Gentilini, 2007). This suggests that although food incentives may have a short-term effect while the incentive is in place, cash incentives may have longer term effects due to the availability of more options for their use, investments which have the potential to more sustainably offset future opportunity costs and support basic needs. This hypothesis is consistent with the quantitative results from the trial. (S. I. McCoy et al., 2017)

The mental health pathway had the second highest level of support and is consistent with prior work linking mental health to ART adherence (Nel & Kagee, 2011), food insecurity (Weiser et al., 2011), poverty (Lund et al.), and cash incentives (Kilburn, Thirumurthy, Halpern, Pettifor, & Handa, 2016; Ozer, Fernald, Weber, Flynn, & VanderWeele, 2011). Many participants reported feeling “free” because they knew they had food or money to buy food and pay other expenses, highlighting the interrelatedness of the two primary pathways. Previous research found that receipt of cash incentives was associated with a significant reduction in depression symptoms among households receiving incentives in Kenya’s cash incentive program for orphans and vulnerable children (Kilburn et al., 2016), and among mothers receiving incentives through the *Oportunidades* program in Mexico (Ozer et al., 2011). In our study, participants not only reported that a mental burden had been removed as a result of receiving the incentives, but also reported a renewed sense of hopefulness and gratitude that the clinic cared about their struggles. Many study participants were concurrently managing poverty, food insecurity and a recent HIV diagnosis; thus, it is not surprising that many reported characteristics of improved mental health as a result of receiving the incentives. These data suggest that the interaction between the mental health effects of poverty and HIV could be a key area for intervention.

Another potential pathway through which incentives may act is by motivating patients to attend clinic, through the incentive’s effect as external motivation. Although patients did not directly express that the incentives motivated them, potentially due to social desirability bias, most participants clearly linked receiving the incentives with checking-in with research staff at the clinic, or more generally, coming to clinic. However, most did not fully understand the conditionality nor how it was enforced despite the thorough informed consent process. Thus, this pathway, though plausible and likely for a few participants, appears to be the weakest pathway of effect. We hypothesize that the behavior change observed in the parent study (i.e., higher retention in care) likely occurred in combination with either or both of the stronger pathways described here.

There were important limitations to this study. All participants were recent ART initiates, so it is difficult to disentangle the incentive’s effect from the positive impact of ART on quality of life (Wouters, Meulemans, Van Rensburg, Heunis, & Mortelmans, 2007). This, however, does not detract from any of the identified pathways. Social desirability bias is also an important consideration; since patients are told the importance of clinic attendance, they may not have felt comfortable reporting that the incentive motivated them despite confirmation of confidentiality and probes directed at this specific issue. Motivation often has a strong sub-conscious characteristic, and being able to articulate reasons for a given behavior is limited by not only by what can be comfortably admitted, but also by self-awareness of the source of motivation.

This study also had several strengths. Trial results were unknown at the time of data collection and analysis which limits interviewer or investigator bias. Furthermore, conducting this study within a trial context allows us to directly examine both incentive types in otherwise identical circumstances. This is the first qualitative study we are aware of that examines incentive uses and potential pathways of action among PLWH.



## Conclusion

Food and cash incentives may impact retention in care and adherence to ART through one, or a combination, of several pathways, the knowledge of which can be leveraged in future intervention design by varying amount, conditionality, and target population to increase effectiveness. For example, if the motivation pathway is assumed at the outset, conditionality may be crucial to the intervention. However, if the dominant pathway is through offsetting opportunity costs, conditionality may be less important or unnecessary. Additionally, in this case, other non-incentive based interventions (e.g., shortening clinic wait time) may also be highly effective; however, such interventions likely won't also help patients to meet basic needs. Since different pathways may be more or less active for a given patient, interventions such as incentives that give patients some freedom to choose how to address their multiple barriers are more desirable on a population level. Further consideration of the specific economic and opportunity cost barriers to a desired health behavior and also mental health status of the target population should be a focus when implementing an incentive-based intervention.

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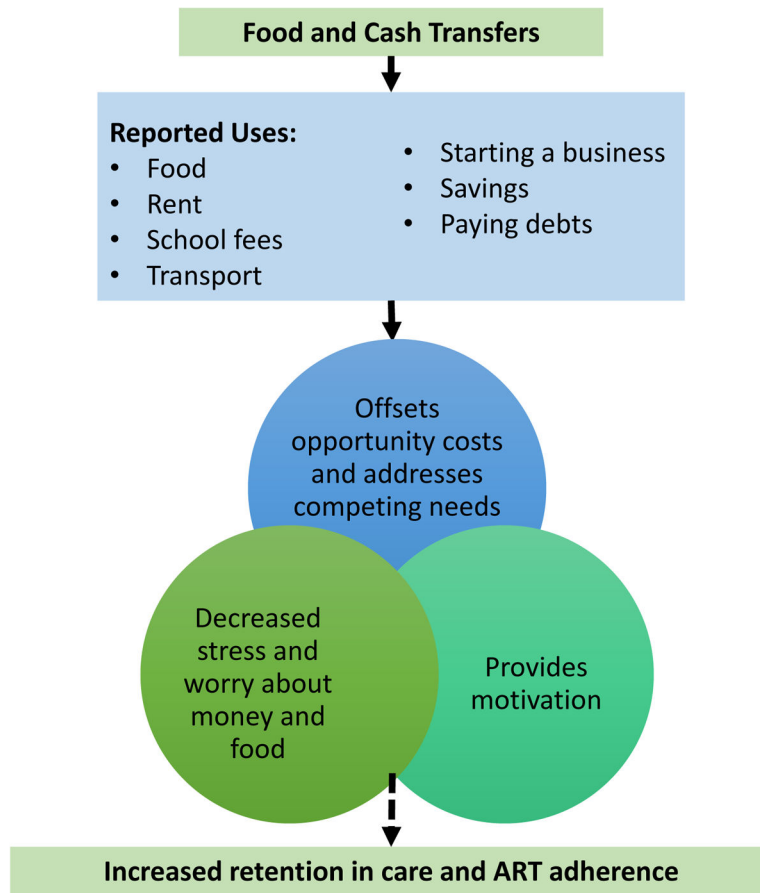
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**Figure 1.** Proposed pathways through which food and cash incentives may impact clinic attendance and ART adherence

In-depth interview participants stratified by gender, incentive group, and head of household (HoH) status in Shinyanga Region, Tanzania (N = 29)

**Table 1**

		Men (N = 13)				Women (N = 16)			
Food (N = 8)		Cash (N = 5)		Food (N = 9)		Cash (N = 7)			
HoH	non-HoH	HoH	non-HoH	HoH	non-HoH	HoH	non-HoH	HoH	non-HoH
4	4	4	1	4	5	4	4	4	3

**Table 2**  
Selected quotes from in-depth interviews illustrating categories of incentive uses and pathways of action

Category	Gender	Head of Household Status	Incentive type	Quote Number	Quote
<b>Incentive Usage</b>					
Food consumption	F	HoH	Food	1	"I ate it by myself. I just can't disburse it to others because I have not planned it. I ate and finished it by myself."
Food consumption	M	Not HoH	Food	2	"You must be insane to sell the food that was given to you."
Food consumption	M	HoH	Food	3	"I came to a conclusion by myself that the food was given to me because of my health, body and my inability to get food. I thought that the food was to help me with the condition that I had... This food didn't come to me for business purposes and that's why I ate it together with my family and the children."
Food consumption	F	Not HoH	Food	4	"I used it well because we were given food that we can use daily... we are supposed to eat daily so I did my best..."
Entrepreneurial Activities	M	HoH	Food	5	"I have bought six goats since I have started to take the medications... I was not able to buy goats before because every amount of money I was getting was finished in buying food... things have changed since I started to receive food because the money that was supposed to buy food is now used of other family uses."
Food offsetting other costs	F	HoH	Food	6	"I was taking flour, beans and groundnuts to my house whenever I received them... This means that they have reduced the amount of money that I would have used to buy flour so I can use it for paying my child's school fees."
Buy food with money	F	Not HoH	Cash	7	"The amount we were receiving was so little so I thought that I couldn't use it for other things apart from caring for my health. Sometimes I was not able to work to get any money so I had to use the little that I had to strengthen my health. I had to buy little food and keep it in the house. It was impossible to distribute it for other uses."
Buy food with money	F	HoH	Cash	8	"[The money] has helped me because, when I was receiving that money, I bought food, I could live peacefully. I was able to pay the house rental fee. I was also sleeping peacefully because I knew that I was going to receive money in the next month."
Buy food with money, includes children	F	HoH	Cash	9	"The money was sent when I was in need, I would struggle for two months but was relieved with the money that was sent, it helped me in buying food for myself and my two little children. The food I was buying was helpful and the money was also helpful because I could get my other needs too and that would have been different if I were to receive food only."
Entrepreneurial Activities	F	Not HoH	Cash	10	"I started to buy fruits after receiving the money, I bought a lot of oranges and stored them at home, and I was eating one orange per day. I started that business after feeling better; I was able to buy at least three fruits for use at home. [Money from the project and my new business] helped me in paying my child's school fee. I was able to make thirty-eight thousand shillings to pay for my child who is in standard five... I was also able to send my last born child to standard one. I also paid thirty eight thousand for his primary education."
Entrepreneurial Activities	M	HoH	Cash	11	"I received that amount of money for six months; it has helped me to buy my own cart... I just saved it in my MPESA account until I bought a cart... I no longer rent other people's carts. I was paying five thousand shillings weekly to the cart owner. I have my own cart now. That money has helped me.... My wife is running a food kiosk. I gave her a capital. That money comes from the amount

Category	Gender	Head of Household Status	Incentive type	Quote Number	Quote
Savings	F	Not HoH	Cash	12	that I was offering to the cart owner weekly. I now give five thousand to my wife every weekend. She has used that for the food kiosk so that we develop.”
					“You have to save some money as you keep receiving it... I took twenty thousand and put it aside. You can fall sick someday, can't you? You will use money in such a situation.”
Children	M	HoH	Cash	13	“I think it's good if this project continues because it empowers me, my family and helps in my child's schooling. My child's school requirement is for each child to attend extra classes so I need to have money for that, for examinations and other school contributions. There are a lot of needs that are relieved by that money so I will keep on thanking God if this project continues.”
<b>Pathway</b>					
<b>1. Addressing competing needs and offsetting opportunity costs to attend clinic</b>					
Reduction in opportunity cost	M	HoH	Food	14	“The food has helped me this way, in the beginning I had to first go look for food and then go to the clinic, but I can now go to the clinic knowing that I have left something at home and I am going to receive another thing at the clinic.”
Reduction in opportunity cost	F	Not HoH	Food	15	“They would have come even if they hate it... you know you may spend the whole day here at the clinic so you know that the whole day routine has been destroyed if you come here and it's much more difficult when you don't have something to eat. We always come here early in the morning and leave at 3 pm, so going home at that time not knowing what to eat and where to get it is so sad. There are a lot of troubles when you come here even if you are very early you won't leave that early, that's how the clinic is. He will not be bothered by spending the whole day at the clinic because he knows that he will find food at home [due to the incentive] and that's different if one was to stay here for the whole day not knowing what to eat and where to get it.”
Motivated by how incentive addresses needs	M	HoH	Cash	16	“I was away for sometime so I had to borrow some money from someone for transport fare so that I can attend the clinic on time and then would return the loan after receiving money from the project so it has somehow motivated me... Receiving money doesn't motivate me to use my medications, I am using medications for my health, the money I receive motivates me through the services that it provides for my family and not in my medications... I am supposed to come to the clinic when my medications are finished, I have to come to the clinic whether it's there or not.”
Meeting basic needs motivates clinic attendance	F	Not HoH	Cash	17	“This project is really helping me, I can't stop coming here. It helps me live, sends my children to school, and feeds me”
<b>2. Reduce mental health barriers to adherence</b>					
Reduced stress worrying about resources	F	Not HoH	Cash	23	“My heart was soothed, I felt like some of my problems were taken away. I was able to get help in transport and food. There were moments in which I was coming here with an empty stomach but I was able to eat and get transport to home.”
Sense of Relief	M	HoH	Cash	24	We were so relieved both I and my wife after receiving that money because we knew it will cater for our little needs. It helped us in a lot of ways.
Renewed direction and hope	M	HoH	Food	25	“I was so happy and went home with comfort [after receiving the first installment]. I still have that comfort to this day and I am happy. It was different from other days in which I had no direction... I started to see changes in my body after I have used that food... the changes brought hope.”
<b>3. Motivating patients to attend clinic</b>					
Strong motivation to take ART	F	HoH	Food	18	“I can't stop taking my medications, I can't forget to take them. I will be devaluing my children if I don't take the medications intentionally or forget to take them. That will not be fair to them. I will

Category	Gender	Head of Household Status	Incentive type	Quote Number	Quote
					<i>leave them with their grandmother while they are still young, why shouldn't I continue with my medications so that I can pull them until they are grown up? They are saying that we can live long if we continue to use the medications"</i>
<i>Strong motivation to take ART</i>	F	HoH	Cash	19	<i>"We were told that we should take these medications for life and at the same time daily... I was also scared [when I forgot to take ART] because we were taught that the virus will awaken with an abnormal speed if we stop taking the medications."</i>
<i>Strong motivation to take ART</i>	M	HoH	Cash	20	<i>"I was in a very bad state, I didn't believe that I could get healed, I was in despair. I am feeling well right now that I have used the medications and followed the nurse's instructions and advice. I can even do a casual labor if there is any...I couldn't even carry a five-liter jerry can during those days. All I could do was eat and sleep only."</i>
<i>Linked incentive with clinic</i>	M	Not HoH	Food	21	<i>"I come here for my medications and my [food] certificate."</i>
<i>Understanding of study</i>	M	HoH	Money	22	<i>Respondent: He told me that I will be receiving it through MPESA; I really received money through it. (MPESA is the mobile money system by the Vodacom mobile network) Interviewer: Did he tell you that you will be receiving money without doing anything? Were you supposed to do something to receive that money? Respondent: I was supposed to pass there after taking my medications.</i>