

## Adoptability of Digital Payments for payment of Community Health Workers in Wakiso district, Uganda

**Authors:** | **Veronica Kembabazi<sup>1</sup>, Arnold Tigaiza<sup>1</sup>, Andrew Tusbira<sup>1</sup>**

<sup>1</sup> Makerere University School of Public Health

### Background

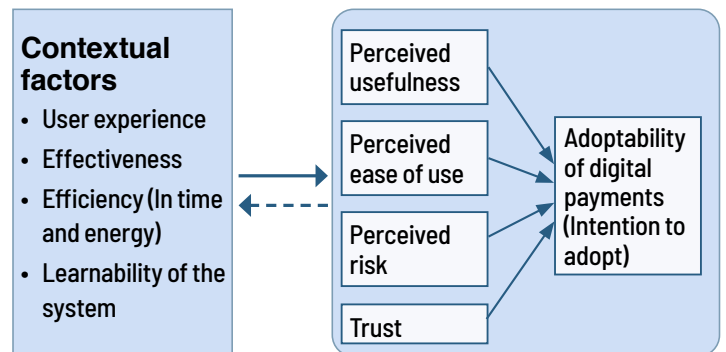
Globally, the wider access to and use of internet and mobile devices have played a prominent role in boosting digital payments. Furthermore, the unprecedented consequences of the COVID-19 restrictions and need for cashless money transfers has led to an escalated popularity and need for digital payments in the last two years. In Uganda, the use of digital payments for remunerating health workers has been championed mainly by non-Governmental organizations. The Uganda Ministries of Health (MoU), and Finance, Planning and Economic Development (MoFPED) embarked on using digital systems for the payment of Community Health Workers (CHWs) only in the most recently completed booster dose mass campaign that was conducted in December 2022. Whereas digital payments have been branded as key in solving health payment challenges, evidence on their adoptability is still limited especially among CHWs, yet vital for ensuring sustainability – we therefore assessed the adoptability of digital payments for CHWs in Wakiso district, Uganda.

### Methods

We adopted the Technology Acceptance Model (TAM) framework to assess the adoptability of digital payments among community health workers in Wakiso through a convergent parallel mixed methods study design which involved collection of both quantitative and qualitative data synonymously. A digitized structured questionnaire was used to elicit quantitative data. In-depth interviews were conducted among CHWs and Key informant interviews among the Digital payment coordinators. Quantitative data was analyzed using STATA while qualitative data was transcribed verbatim and analyzed using ATLAS.ti software. Factor analysis was performed in order to extract composite variables from the original constituting variables where only one factor was retained for each construct. KMO statistics were assessed for each construct to determine appropriateness for data reduction and linear regression to assess the association between adoptability constructs and the CHW intention to adopt digital payments. Adoptability was defined as the intention to use digital payments of payment. The main adoptability constructs

assessed in the study included perceived usefulness, perceived ease of use, perceived risk and perceived trust. The conceptual framework for the study is displayed below. In this model, adoptability or intention to adopt digital payment systems is directly influenced by perceived usefulness of payments, perceived ease of use, perceived risk and trust in the digital payment systems. All these four factors, however, can either influence or be influenced by contextual factors including user experiences, effectiveness of the payment systems, efficiency of the systems in terms of time and energy and learnability of the system. Learnability in this model refers to how easy it is to learn how to use the different digital payment systems.

### Conceptual Framework



Adapted from Technology Acceptance Model by Abd Malik and Syed Annuar (2019); (Lin, 2013)

### Findings

Overall, 150 respondents were interviewed. Of these, 88.0% (132/150) were female; 33.3% (50/150) were aged 41-50 years (mean age (SD) 45.38 (10.73)); while 82% (123/150) had secondary education; and nearly all participants 98.0% (147/150) had ever received payments through mobile money. Most CHWs in Wakiso district intend to adopt digital systems to pay for health activities. The key factors that were associated with adoptability included (a) Perceived usefulness (Regression coefficient = 0.206, p-value < 0.05, 95%CI = 0.045 - 0.367) (b) Perceived ease of use (Regression Coefficient = 0.190, p-value < 0.005, 95%CI = 0.070 - 0.309) (c) Perceived risk of the digital payments (Regression Coefficient = -0.548,

p-value < 0.001, 95%CI = -0.733 - 0.362). The Perceived trust in digital payments (Regression Coefficient = 0.06, p-value < 0.378, 95%CI = -0.079 - 0.208) was not statistically significant, and therefore not associated with adoptability of digital payments among CHWs in Wakiso.

### **Experiences of CHWs with Digital Payments**

- Many CHWs had been receiving payments from other organizations using digital payment methods, particularly Mobile Money/E-cash.
- Although they did not find Mobile Money/E-payment to be a bad system, almost all CHWs mentioned that payments through these methods delay.
- A few organizations don't actually pay the CHWs for activities done.
- The CHWs also were not happy with the fact that some organizations do not include withdraw charges on their payments. However, it was noted that even with cash payment, the CHWs may have to incur transport charges to pick the money from the district office or another central place.
- Some CHWs have a greater guarantee of receiving the right amount of money with Digital payment methods unlike with cash payments where the money received would undergo unofficial deductions along the various levels of payments.
- The CHW payment coordinators also reported having a good experience with digital payment methods. They found digital payments faster to process than cash payments, with a greater preference for bank transfers over MM payment methods.
- Most CHWs prefer MM while some CHW supervisors did not because the digital payment methods did not allow them to pay their relatives and friends other than the intended CHWs and yet this was possible with cash payments.
- MM payments delayed sometimes due to the verification processes of the organization especially when some payments bounced.

### **Perceived usefulness of Digital Payments among Community Health Workers**

- Some CHWs found the Mobile Money payment system useful: it allowed them to access and send money easily, manage their spending and save time and money that would otherwise be spent on going to pick money from a central point.
- The payment provider coordinators found digital payments usefulness since they grant certainty about receipt of money by registered CHW.
- Payment provider coordinators experience less bounced payments with bank transfers, than with MM payments due to the accuracy of the CHW bank account information. Furthermore, when opening bank accounts, the identification information is checked and verified rigorously hence the account holder is usually legitimate.

- According to the Payment provider coordinators, extra charges for bank transfers are catered for by the donor whereas with MM payment withdraw charges are not included ordinarily.

### **Perceived ease of use of Digital Payments among Community Health Workers**

- For many CHWs, MM systems are easy to use and learn.
- Older CHWs may find it hard to learn how to navigate the digital systems especially due to poor sight.
- For organizational payment providers, digital payment methods are easy to use and learn.
- Ease of use of digital payments like Mobile Money is not a strong determinant of adoptability among CHWs in Wakiso probably due to previous exposure to MM for other purposes.

### **Perceived risks associated with use of Digital Payments by Community Health workers**

- Most of the CHWs do not fear using the digital payment systems, particularly, the MM payment system and consider their information confidential.
- Some CHWs find that there is a risk of being conned through MM agents. However, this risk is very low for CHWs who follow recommended security measures stringently.
- Some CHWs fear using cash payment systems for fear of being robbed of their money.
- The payment providers reported that although there are risks of double payment when digital methods are used, this risk of losing funds is low because of the verification process and the other avenues of recovery that exist.
- Payment providers find cash payments to be associated with higher possibilities of fraud and robbery.

### **Trust in digital payment systems**

- CHWs had some fears about the possible risks of using digital payments and this affected their trust in these systems.
- Many CHWs do not trust some Mobile Money agents since they have heard cases of people being conned and money being taken from their MM accounts.

### **Conclusions**

- CHWs in Wakiso district intend to adopt digital payments for their payment for health activities.
- The most used and preferred payment for community health workers in Wakiso district is Mobile Money/E-cash. However, bank transfers are generally the preferred mode of digital payment among payment providers.
- The key factors that were associated with adoptability included perceived usefulness (Regression coefficient = 0.206, p-value < 0.05, 95%CI = 0.044 – 0.367), perceived ease of use (Regression Coefficient = 0.19, p-value < 0.005, 95%CI = 0.070 – 0.309) and perceived risk of the

digital payments (Regression Coefficient = -0.548, p-value < 0.001, 95%CI = -0.733 – -0.362).

- ➔ The main obstacle/downside of digital payments is the payment delays. In spite of the payment delays, CHWs appreciate the convenience provided by Mobile Money Payments in easing access to money and allowing for money saving and control.
- ➔ Synergy between different organization players of the digital payment system ensures its efficiency.

## Recommendations

- ➔ Implementing organizations, in collaboration with digital payments service providers, should improve the timeliness of payments and specify details of the paying organization whenever money is sent to the CHWs.
- ➔ Implementing organizations, in collaboration with the digital payments service providers should work hand in hand to eliminate fraudulent actions through digital systems that threaten safety of money and disclosure of personal information.
- ➔ Implementers who are using digital payments should ensure clear and early communication of expectations on both sides, in terms of account registration details, amount to be expected and duration of payment processing. This is critical for facilitating the smooth operation of digital payments.
- ➔ To increase transparency and accountability during the payment process, Organizations/institutions wishing to utilize services of CHWs should ensure terms of payment such as the inclusion or not of withdraw charges, period within which payment will be made, are agreed upon with the CHWs in advance. This should be done under the observation of appropriate supervisors from the district health administration offices.



### DHPI-R in a nutshell


*We are health professionals that have come together with the goal to identify how, and under what circumstances digital worker payments can support effective campaign delivery, enhancing efforts to digitize payments for health workers by fostering and supporting evidence-based and evidence-driven decision-making in Sub-Saharan Africa.*

#### For more details about DHPI-R, contact:

Makerere University School of Public Health,  
College of Health Sciences  
P.O.BOX 7072, Kampala- Uganda

Tel: 0414 543 872 | **Website:** <https://dhpri.mak.ac.ug/>

**Email:** [dhpri@musph.ac.ug](mailto:dhpri@musph.ac.ug)

 @AfricaDigitalH

