

8-10-2020

Application Design to Incentivize Medication Adherence for Chronic Care

Alan T. Yang
University of Nevada Reno, alany@unr.edu

Mala Kaul
University of Nevada, Reno, mkaul@unr.edu

Upkar Varshney
GSU, uvarshney@gsu.edu

Follow this and additional works at: https://aisel.aisnet.org/treos_amcis2020

Recommended Citation

Yang, Alan T.; Kaul, Mala; and Varshney, Upkar, "Application Design to Incentivize Medication Adherence for Chronic Care" (2020). *AMCIS 2020 TREOs*. 45.
https://aisel.aisnet.org/treos_amcis2020/45

This material is brought to you by the TREO Papers at AIS Electronic Library (AISeL). It has been accepted for inclusion in AMCIS 2020 TREOs by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

AMCIS: Application Design to Incentivize Medication Adherence for Chronic Care

TREO Talk Paper

Alan Yang

University of Nevada Reno
ayang@unr.edu

Mala Kaul

University of Nevada, Reno
mkaul@unr.edu

Upkar Varshney

Georgia State University
uvarshney@gsu.edu

Abstract

This research is motivated by the current trend towards utilization of mobile technology in healthcare interventions. Despite academic and practitioner efforts, lack of medication adherence continues to be a leading indicator of poor health outcomes and increased hospitalizations worldwide especially for chronic care patients (McQuaid and Landier 2018; Sweeney and Venable 2016; Yang and Varshney 2016). Our focus area is on gamification-based mobile application design to incentivize and improve patient medication adherence. We have conducted an initial survey of mobile applications in the medication adherence space and their features, **Table 1** is a comparison of 5 popular apps and their incentive-based design features.

Application	Progress Tracking	Gamification	Reward Mechanism	Social Connectivity	Physician Connectivity
Dosecast	Last pill taken	Not present	Not present	Not present	Present in paid version
Pill Reminder	Daily tracking	Not present	Not present	Not present	Not present
iPatient Care	Daily tracking	Not present	Not present	Not present	Not present
Carezone	Weekly updates	Not present	Present for routine tasks	In-app community	Present
Memo Health Pill	Daily tracking	Not present	Not present	Not present	Not present

Table 1. A Feature Comparison of 5 Popular Medication Adherence Apps on the Apple Store

Our analysis of the current academic literature and review of existing medication adherence applications indicates a research gap and an opportunity to create a significant contribution through the research-based design of an application that provides a solution to the complex practical problem of medication adherence in chronic disease management. We propose the design and evaluation of an application to improve medication adherence for patients with chronic disorders through incentives. The contribution of this research is a novel design comprising a combination of multiple intervention and incentive types to improve medication adherence. While the initial design and development will adopt a means-end, idiographic approach to the solution design, further iterations will be used to derive nomothetic design knowledge on the design of incentivizing applications. Our practical contribution addresses the problem of medication adherence by applying technology to behavioral incentives in a planned, user-centric way.

References

- Mcquaid, Elizabeth L., And Wendy Landier. Cultural Issues in Medication Adherence: Disparities and Directions. *Journal of General Internal Medicine* 33.2: 200-206. (2018).
- Sweeney, S.M., Venable, P.A. The Association of HIV-Related Stigma to HIV Medication Adherence: A Systematic Review and Synthesis of the Literature. *AIDS Behavior* 20.1, 29–50 (2016).
- Yang, Alan, and Upkar Varshney. A Taxonomy for Mobile Health Implementation and Evaluation. Proceedings of the Twenty-Second Americas Conference on Information Systems, SIGHEALTH. (2016).