
CONFERENCE ABSTRACT

Understanding Patient Attrition: Exploring Usage Patterns of Electronic Patient-Reported Outcome (ePRO) Users

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Farah Tahsin¹

1: Sinai Health System, Toronto, OntarioCanada

Introduction:

The “electronic Patient Reported Outcome” (ePRO) technology is a patient-centred mobile phone app that was designed to promote goal-setting by patients with complex care needs and to facilitate goal-oriented care discussions between patients and their primary care providers. This study aims to examine patients’ adherence to the technology and level of attrition throughout the study period.

Theory/Methods:

To study the phenomenon of user attrition among complex patients, we adopt Eysanbach’s law of attrition model. Participants’ (N=42) usage logs (participants’ interactions that were automatically collected by the ePRO system) were analyzed using descriptive statistics. Based on each participant’s continuance in using the tool, participants were categorized into non-users, short-term users and long-term users.

Results:

There were n=17 (39%) non users, n=5 (12%) short-term users and n=20 (47%) long term users. Most participants of the study had used the technology at least once. There were n=9 (21%) participants who were active all 12 months of the study, who we categorized as super users. There was no statistical significance found in the demographic difference among the categorized users.

Discussions:

The ePRO tool has experienced lower attrition rates when compared with similar eHealth studies (50% vs. 70%). The reasons for lower attrition rates could be explained by the adopted co-design method to develop ePRO, direct engagement of health professionals in goal-setting conversation and multidisciplinary nature of the participated health teams.

Conclusions:

The result of this study indicates that in spite of being a small cohort of users, the longevity of continuance and level of engagement among ePRO users is wide-ranging. This novel method of analyzing patient’s logs demonstrates the potential of utilizing device-generated data to better understand how participants engage in a digitally delivered intervention over time.

Lessons Learned:

Digital devices often generate erroneous data of logged activities (i.e. duplication of singular activity). A standardized quality control method should be included in the study design to develop a reliable dataset. From a usability perspective, health technology users should be able to customize the device settings to ensure the functionality of the device aligns with patients' evolving health and social needs.

Limitations:

Due to the small sample size, this study is statistically underpowered to assess the variability within and between participant's usage, or correlation between usage patterns and demographic data.

Suggestions for future research:

Further research should be conducted to identify the determinants and outcomes of sustained and non-sustained users of digital health solutions.