

# Expert Feedback on the Adaptation and Translation of Spanish Version of WiseApp

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**Abstract.** HIV-related disparities also exist in developing countries, such as the Dominican Republic, where minority groups and/or those with low socioeconomic status experience higher disease burdens and worse health outcomes than those with higher socioeconomic status. We used a community-based approach to ensure the WiseApp intervention is culturally relevant and addresses the needs of our target population. Expert panelists made recommendations on how to simplify the language and features of the WiseApp to accommodate Spanish-speaking users who may have lower levels of education, or color or vision deficiencies.

**Keywords.** mHealth, HIV, Spanish, usability, community-based participatory research

## 1. Introduction

Marked deficits remain in antiretroviral therapy (ART) adherence and viral suppression among persons living with HIV (PLWH) particularly among Spanish-speaking Latinos in the US and the Caribbean [1]. To that end, our team conducted extensive formative work with PLWH and their providers to identify the content, features, functionalities, and interface of a mobile app (WiseApp) to improve health outcomes, including ART adherence. Building on the findings, the Agency for Healthcare Research and Quality provided support to build this app and integrate it with a smart pill box, enabling PLWH to self-monitor their medication adherence in real-time. The WiseApp supersedes current approaches to ART adherence using a self-management mobile app linked to an electronic pill box and was found to be efficacious for improving medication adherence in a randomized controlled trial (NCT03205982) [3]. At the same time, HIV disproportionately affects Latinos who experience later diagnoses and face more barriers to testing and treatment than their White counterparts [2]. The goal of this study was to conduct requirements engineering for a mHealth app.

## 2. Methods

To achieve this, we convened 6 expert panelist groups of Spanish-speaking stakeholders from the US (N=5) and the Dominican Republic (N=6) to review the Spanish translation

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and cultural adaptation of the WiseApp. Stakeholders included clinicians, public health experts, clinic staff, and informaticians. Expert panels were conducted with a focus group format and lasted between 1-2 hours. Panelists reviewed the WiseApp and commented on the strengths and limitations of the app. Focus group questions were focused on the following areas: design, content, usability, functionality, privacy and security of the app. In addition, panelists discussed ways to simplify the language and features to accommodate Spanish-speaking users who may have lower levels of education, or color or vision deficiencies.

### 3. Results

Five major themes (see Table 1) emerged from these expert panels that were summarized. Findings were shared with the app developers who incorporated the feedback into an updated Spanish version of the WiseApp.

**Table 1.** Summary of Findings from Expert Panels

Themes	Description	Example(s)
Language/ Grammar	Syntax and sentence structure in Spanish Accurate translations in Spanish	- “manera fácil” instead of “rápida y eficiente” - “a tiempo” instead of “horario apropiado” - “administrar” instead of “manejar.”
User Interface Design	Images, colors, design Formatting	- Increase button(s) size to support users with vision deficiencies - Label measurement units on tables
Usability	Features and tools to improve usability	- Provide encouraging statements to motivate users to continue taking their medication
Privacy and Security	Limitation of personal data	- Limitations of identifiers with information shared via the group forum - Login and password functions
Support	Help functions	- Videos to teach users how to use the app - A FAQ section answering common questions about the app and CleverCap unit

### 4. Conclusions

Findings from these stakeholder groups were integrated with findings from cognitive interviews and usability testing with end-users to improve the WiseApp and will be tested in a randomized clinical trial with Spanish-speaking patients.

### References

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