Advancing Hormone Therapy Adherence Among Latinas: A Mobile App and Navigation Strategy to Improve Outcomes

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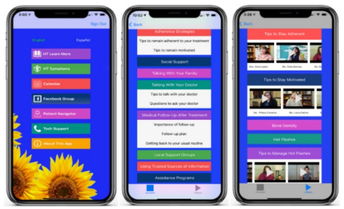
INTRODUCTION

Hormone therapy (HT) significantly lowers the risk of recurrence and mortality for patients with hormone receptor-positive breast cancer, which accounts for roughly 80% of all breast cancer cases.[1,2,3] Long-term adherence to HT can cut recurrence rates by nearly 50%. Yet, about one-third of women prescribed HT are non-adherent, taking less than 80% of the recommended daily dose. Latina patients are disproportionately affected by Non-Medical Drivers of Health (NMDoH), such as socioeconomic and access-related barriers, that hinder adherence and contribute to poorer outcomes.[4,5]

STUDY OBJECTIVE

This three-arm randomized controlled trial evaluates the comparative effectiveness of a bilingual, culturally tailored mobile app (*HT Helper*) combined with Patient Navigation (PN), PN alone, and standard care on improving HT adherence. The study also examines how these interventions influence self-efficacy in recognizing and managing side effects and enhancing communication with healthcare providers.

This work builds on earlier pilot findings that confirmed the *HT Helper* app's feasibility and acceptability. We present key findings from the formative phase, including usability testing, focus group feedback, and final app modifications.



Screenshots of the previous version of the *HT Helper* app

METHODS

Betatesting and Focus Groups

We conducted betatesting of the *HT Helper* app with 12 Latina breast cancer patients experiencing non-medical drivers of health (NMDoH) barriers (6 English- and 6 Spanish-speaking). The mean age was 49.6 years; 41.2% had CareLink insurance, and 49.7% had a high school education or less.

Participants used the *HT Helper* app for one week and then joined focus groups (conducted in their preferred language, English or Spanish) to provide in-depth feedback. Participants reviewed and commented on all app components, including navigation, educational videos, symptom-tracking tools, motivational messaging, the Chat with a Doctor feature, and the User Guide. Their insights were used to refine the app, followed by a second review round to confirm that updates aligned with their recommendations.

General Feedback

Patients recommended refreshing the app's homepage layout (colors, graphics) and expanding the educational library to better reflect their priorities. They emphasized the need for a design that felt trustworthy, visually appealing, and clearly connected to breast cancer awareness.

Participants responded positively to the concept of the new "Chat with a Doctor" feature, noting it would allow them to ask questions, learn about chosen topics, and interact with Breast Clinic providers and fellow patients in a supportive space.

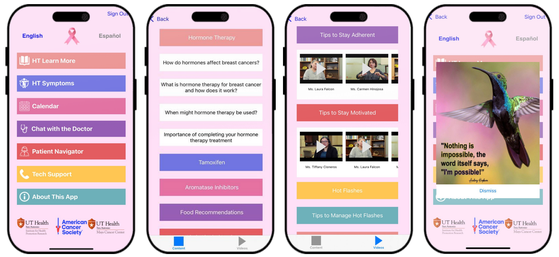
They also praised the bilingual, culturally tailored educational content and videos, describing them as relatable and helpful. Betatesters later confirmed that their suggestions had been incorporated, which strengthened their confidence in the app.

Methods

App Design and Visual Appeal

Focus group participants reviewed several homepage mock-ups and offered specific recommendations. Although many liked the calming look of the original blue background with sunflowers, they felt it did not reflect breast cancer identity.

Pink-based designs were consistently preferred, along with placing a breast cancer ribbon on both the app icon and homepage to increase relevance. Participants also recommended including institutional logos (UT Health San Antonio and the American Cancer Society) to reinforce the app's credibility and signal an official, trusted resource.



Screenshots of the updated version of the *HT Helper* app

App Content

Participant feedback drove substantial content changes. The little-used Facebook Group feature was removed and replaced with the more interactive "Chat with a Doctor" tool.

This feature provides twice-monthly Zoom sessions with Breast Clinic physicians where participants can learn about user-selected topics, ask individualized questions, and engage in supportive conversations with others. Patients noted that this approach would provide direct, reliable medical guidance in an accessible format.

In addition, new content and videos on Sleep Problems were added to address a common challenge among breast cancer patients, expanding the app's ability to support day-to-day symptom management.

After completing the app refinements, betatesters conducted a final review and reported no further changes. With the formative research phase concluded, the study was recently launched, and to date, we have enrolled 11 breast cancer patients.

CONCLUSION

A patient-driven, iterative refinement process was critical to ensuring the *HT Helper* app is user-friendly, relevant, and responsive to the needs of Latina patients. The resulting multi-component intervention has strong potential to improve breast cancer outcomes by enhancing medication adherence, promoting better self-management, and ultimately supporting longer-term survival. The intervention is designed to be scalable, evidence-based, and suitable for broader use among patients prescribed oral anticancer therapies.

EXPECTED OUTCOMES

This multi-level intervention, integrating mHealth technology with comprehensive patient navigation support, has the potential to significantly enhance adherence to hormone therapy by addressing key non-medical drivers of health and reducing avoidable barriers to care. In doing so, it aims to promote more equitable breast cancer outcomes, including lower recurrence rates, improved quality of life, and meaningful gains in overall survival and long-term life expectancy among Latina patients. The anticipated outcome is a scalable, evidence-based, and readily disseminated intervention with the capacity for broad implementation across diverse clinical settings and among patients prescribed oral anticancer medications.

ACKNOWLEDGEMENTS

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