

The Role of Patient Engagement in the Adoption and Use of a Mobile Application (Health Storylines) Among Men with Prostate Cancer



BACKGROUND

Prostate cancer is the second leading cause of cancer death among men in the U.S. Digital health tools can capture the holistic experience of patients and facilitate personalized treatment; however, it is important to take differences in behaviors and outcomes among patient into account when developing digital programs.

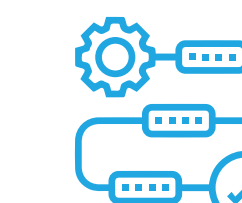
With respect to the adoption and use of digital health interventions, men have been shown to be less likely to engage in consistent self-monitoring compared to women, and when they do to focus explicitly on specific goals and features^{1,2}. This difference has the potential to affect the diversity of men who participate, and the data quality generated by digital health programs.



OBJECTIVES

The objective of this research were three-fold:

- Evaluate the use of the mobile health app Health Storylines™ as a tool to capture data relevant to patient experience and treatment effectiveness among men diagnosed with prostate cancer
- Assess the impact of collaboration with a patient advocacy partner (Veteran's Prostate Cancer Awareness) on the nature and quality of engagement with the app to educate patients and support their treatment journey.
- Explore the nature of app engagement among existing prostate cancer patients to inform future development of research programs, educational tools and patient support programs.



METHODOLOGY

Data from Health Storylines™ entered by men who reported a prostate cancer diagnosis between 2015 and 2021 was retrospectively analyzed to identify patterns of engagement with self-care tools.

Data includes quantitative tracking and free text entries from tools designed to support patients with a variety of health conditions, including prostate cancer. Number of users, patient demographics, frequency of tool use, and patient-reported data within quantitative tools was described.

RESULTS



The Health Storylines™ app is a disease agnostic app that supports patients in the management of their condition(s) by offering health tracking tools, education, opportunities to connect to their circle of support for accountability and social connection, as well as opening opportunities to participate in research. Patients that experience a variety of conditions organically download and use the app of their own accord, and in other cases, partnerships with patient advocacy organizations or specific acquisition activities recruit and engage patients based on a specific diagnosis or set of patient characteristics.

Patients with Prostate Cancer were not specifically recruited or engaged until the fall of 2021, when the Veteran's Prostate Cancer Awareness organization (VPCA) partnered to offer a tool to provide support to men with prostate cancer with a repository of educational resources regarding prostate cancer screening, diagnosis, stages of cancer, information regarding prostate cancer clinical trials, as well as the native health tracking tools in Health Storylines.

Among over 100,000 patients using Health Storylines™ to manage their health and participate in research, 343 users reported a prostate cancer diagnosis between 2015 and 2021. Over half of users (58%) were over the age of 65.

Over 90% of patients reported having at least one additional condition to manage.

The **most common comorbid conditions** were:

- High blood pressure
- Type II diabetes
- Atopic dermatitis
- Arthritis and Depression.

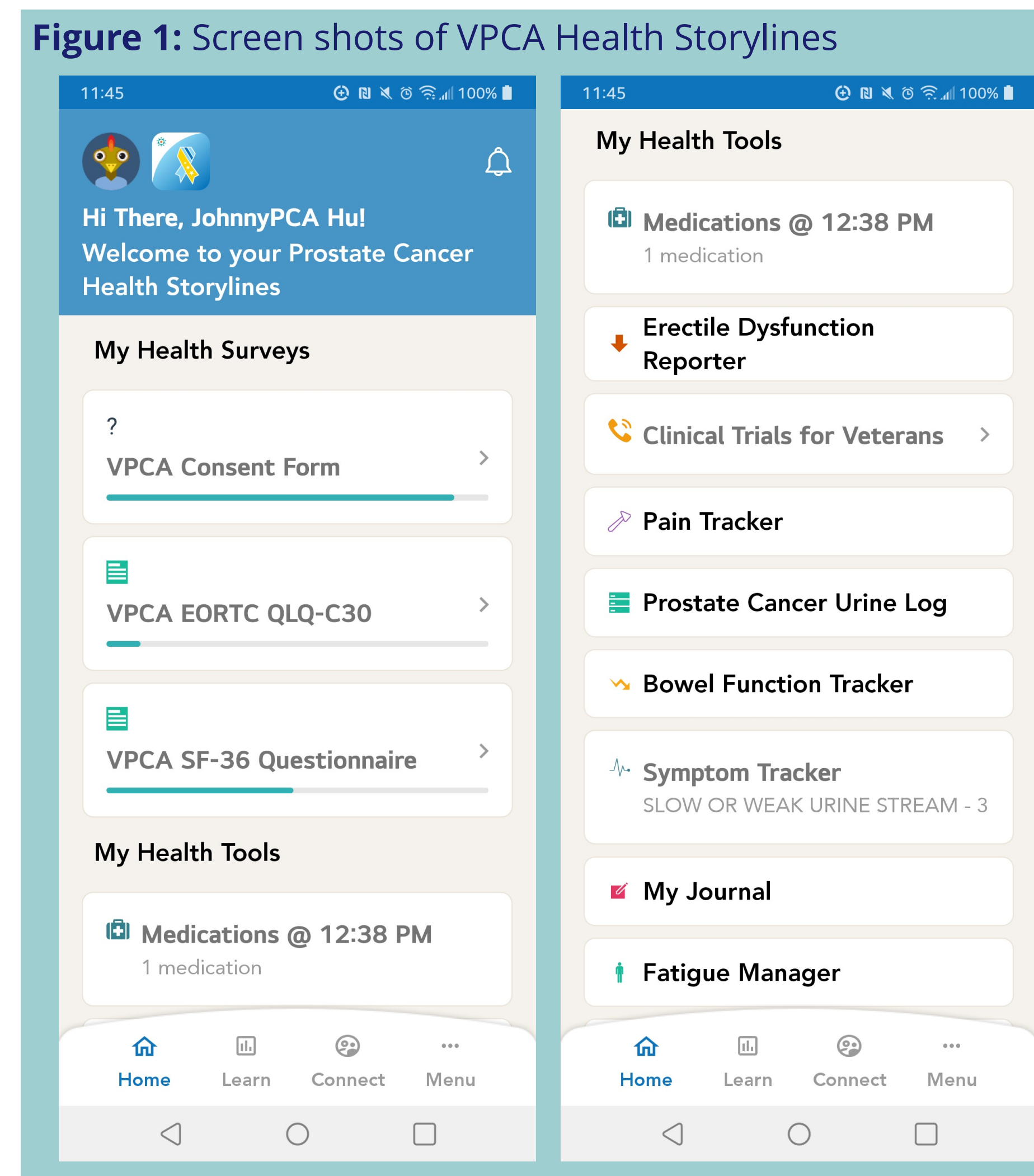
The **most used tools** were:

- Medication Tracker
- Daily Moods
- Symptom Tracker

The **most reported moods** were:

- Happy
- Relieved
- Determined
- Proud

New registrations and frequency of the use of the app both increased in fall of 2021 when Health Storylines was adopted by VPCA.



CONCLUSIONS

While men are typically less likely to participate in digital health interventions relative to women, collaboration with a relevant patient advocacy organization impacted access and engagement with the Health Storylines™ app.

Customized tools to capture condition-specific data created opportunities for enhanced shared decision making between patients and their treating physicians. These tools are also candidates to engage men in specific goals and features that resonate with their experience. Advocacy organizations can help inform these capabilities and features based on their interaction with relevant users and associated stakeholders such as the treating physicians.

Patient generated data from mobile apps such as Health Storylines™ results in valuable repositories of patient-generated RWE to understand behavioral patient characteristics and identify differences between cohorts that can be leveraged to impact the patient journey and experience.

These real-world findings that include greater access to the emotional and psychosocial experience of men with prostate cancer can enhance traditional forms of RWE to inform market access, defining value from a patient perspective and the development and execution of patient support programs.

REFERENCES



1. Antezana G, Venning A, Smith D, Bidargaddi N. Do young men and women differ in well-being apps usage? Findings from a randomised trial. Health Informatics Journal. January 2022. doi:10.1177/14604582211064825
2. Mano, R. Use of Mobile Health Applications and the Self-Management of Cancer: A Gendered Approach. Open Journal of Preventive Medicine, 9, 126-139. 2019. doi: 10.4236/ojpm.2019.910012.

AUTHORS & FOLLOW UP

Renee Willmon¹, Shameni Selvarajah², Nicole Jardine³, Jared Adams⁴

1. Senior Director, Evidence and Outcomes, Self Care Catalysts, an Alira Health Company
2. Associate Manager, Scientific Evidence, Self Care Catalysts, an Alira Health Company
3. Associate Manager, Patient Journey Analytics, Self Care Catalysts, an Alira Health Company
4. Chief Science Officer, Self Care Catalysts, an Alira Health Company

For more information contact renee.willmon@alirahealth.com