

# Chapter 11

## Implementation of Digital Health Tools to Support Patient Care Journey

**David Bobryk**

*Trinity Health, USA*

**Erin Collins**

*Trinity Health, USA*

**Mohan R. Tanniru**

 <https://orcid.org/0000-0002-9584-0090>

*Oakland University, USA*

### **ABSTRACT**

*The process of transforming healthcare to support population health where care is transitioned into the patient ecosystem has been a challenge for health systems. While health systems interact with patients to co-create or co-produce value to address preventive care or treat specific health conditions in a provider ecosystem, the rest of the patient care journey that includes decision making to seek care and adherence to care practices designed are done in the patient ecosystem, often influenced by multiple social, cultural, and environmental factors. In this chapter, we will look at how one health system that is designing a mix of digital tools to influence patient care journey both inside and outside the provider ecosystem.*

DOI: 10.4018/979-8-3693-9641-4.ch011

Copyright © 2025, IGI Global. Copying or distributing in print or electronic forms without written permission of IGI Global is prohibited.

# 1. INTRODUCTION

Businesses have been undergoing digital transformation to address the evolving needs of customers throughout their purchase journey, which includes the decision to purchase a product (includes service products), the act of purchase itself, and the post-purchase use of the product [Desmet, et al, 2015]. Service dominant logic argues that all firms need to use multiple customer touchpoints throughout the customer journey to learn about changing customer expectations and design new value propositions quickly to meet these expectations, using both internal and partner resources to stay competitive [Vargo et al, 2008, Lusch and Nambisan, 2015].

Like the customer journey, the patient care journey includes three major phases: 1) patients seeking information to make decisions to address their healthcare goals, 2) engage in treatment practices inside and outside the health system and 3) provide feedback during engagement when they face barriers to adhere to treatment practices and post-engagement when their health conditions change. Health systems, like other organizations, are using value cycle activities to support patient care journey and these activities include value creation, value fulfillment, and value-in-use assessment to gather feedback prior to repeating the value cycle when patients face barriers to gaining access to care or when their health conditions change.

Health systems are asked not to just create value (diagnosis and treatment for a patient health condition) in isolation or with minimal consultation with patients, but co-produce value by engaging patients and their family and community when appropriate all through the patient care journey [Betalden, et al, 2016]. Such co-production of value during patient decision making includes designing awareness services that inform and educate patients on their health condition, and decision support services that help patients evaluate treatment options to address their health condition against their decision criteria such as costs and ability to engage in treatment practices within their ecosystem. These two services are often designed to support the intelligence and design/choice phases of decision making [Simon, 1957].

Co-production of value fulfillment services includes both the engagement of patients in their care plan both in the hospital or clinic often using clinical staff, and outside the hospital often using multiple clinical and non-clinical partners. Co-production of value-in-use services includes those who will help collect feedback on patient progress both during their engagement in the care plan as well as any engagement post-care plan. The post-engagement care plan may include services that will help patients continue to stay healthy and seek care from health systems when there are changes in their health conditions. The services co-produced to support the patient care journey are illustrated in Figure 1.

18 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/chapter/implementation-of-digital-health-tools-to-support-patient-care-journey/362460](http://www.igi-global.com/chapter/implementation-of-digital-health-tools-to-support-patient-care-journey/362460)

## Related Content

---

### Research on multi-view clustering algorithm on epileptic EEG signal

(2022). *International Journal of Health Systems and Translational Medicine* (pp. 0-0).

[www.irma-international.org/article//282705](http://www.irma-international.org/article//282705)

### Digitization of Paper Electrocardiogram: A Review

Priyanka Gautam, Ramesh Kumar Sunkariaand Lakhan Dev Sharma (2019). *Design and Implementation of Healthcare Biometric Systems* (pp. 212-228).

[www.irma-international.org/chapter/digitization-of-paper-electrocardiogram/219961](http://www.irma-international.org/chapter/digitization-of-paper-electrocardiogram/219961)

### AI in Mental Healthcare: Exploring Technology Acceptance, Emotional and Cognitive Innovation, and Cultural Influences

Vishnu Achutha Menon (2025). *Chatbots and Mental Healthcare in Psychology and Psychiatry* (pp. 87-106).

[www.irma-international.org/chapter/ai-in-mental-healthcare/371640](http://www.irma-international.org/chapter/ai-in-mental-healthcare/371640)

### Bag-of-Features in Microscopic Images Classification

Samsad Beagum, Amira S. Ashourand Nilanjan Dey (2017). *Medical Imaging: Concepts, Methodologies, Tools, and Applications* (pp. 435-456).

[www.irma-international.org/chapter/bag-of-features-in-microscopic-images-classification/159724](http://www.irma-international.org/chapter/bag-of-features-in-microscopic-images-classification/159724)

### Telehealth as an Innovative Supply Chain and Logistics Management Approach

Darrell Norman Burrell (2022). *International Journal of Health Systems and Translational Medicine* (pp. 1-9).

[www.irma-international.org/article/telehealth-as-an-innovative-supply-chain-and-logistics-management-approach/306971](http://www.irma-international.org/article/telehealth-as-an-innovative-supply-chain-and-logistics-management-approach/306971)