ABSTRACT

Information technology has enabled tertiary health care providers to improve patient access to preventive and post-discharge care transition services. When such services are supported by facilities that are under the control of the hospital, hospitals can still influence the delivery and overall quality of patient care services. However, for a variety of reasons, many hospitals rely on external care providers who operate relatively independently from the hospital to deliver these services. As such, service delivery intended to create efficiency and value to patients can become complex, challenging to deliver, and resource intensive—especially if the service delivery spans a prolonged time horizon. This chapter discusses one case of an intermediary who helps hospitals address the smoking cessation needs of patients. Using service dominant logic research, the service exchanges among three different ecosystems (healthcare providers, intermediary, and patients) are modeled and intelligence needed to align their goals using blockchain architecture is highlighted.

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INTRODUCTION

With the rapid evolution of the Worldwide Web, social media, wearables and telehealth technologies, potential for patient engagement in preventive and post-discharge care transition has increased, bringing with it the resources providers, patients and other actors found within patient ecosystem can employ to improve access to care. This has motivated healthcare organizations to evolve their care delivery models to reduce costs and address both regulatory (e.g. reimbursement penalties and patient satisfaction, etc.) and administrative challenges (e.g. congestion in hospitals, distributed nature of clinical competencies such as counseling and rehabilitation, etc.). These emerging care models promote patient engagement of care extenders outside a hospital setting where a patient can receive the continued care hospitals plan for them to receive after they discharge from an acute care setting. Examples of services care extenders can provide include physical and speech therapy, dialysis, and chronic disease and pain management interventions. Each of these service exchanges can influence the overall care provided to patients initially within a hospital that is then extended outside the hospital over time (i.e. value created or cocreated).

One of the resources healthcare systems have been utilizing over the past decade to connect services provided within an acute care setting to those provided within community is the electronic health record, or EHR (Shiver & Cantiello, 2016). Using electronic health records to extend care is a relevant and meaningful exercise as doing so improves access to care, reduces duplication of effort, and as a result improves patient outcomes and saves costs, i.e., Triple Aim (Weber, Bloom, Pierdon, & Wood, 2008). Harnessing the power of the electronic medical record to achieve a lofty goal such as the Triple Aim comes at a cost. Developing, implementing, and maintaining electronic records can present a significant financial barrier for those wishing to incorporate EHRs into their workflow (Soumeri & Koppel, 2012), particularly among providers who do not have necessary economies of scale that large hospital and insurance providers may have, and have limited trust in the resources they share among each other.

As a result, the use of alternative technologies must be sought and used to gain intelligence on collective performance of stakeholders across multiple ecosystems. This chapter highlights the need to address gaps in alignment among stakeholders when patient care is managed by a mix of public and private enterprises and discusses the role intelligence in performance tracking to bridge the gaps using blockchain technology. Transparency in resource sharing and trust in the architecture used to support communication and coordination is essential if patient care is the shared goal of all involved. The next section discusses the organizational context and the third section discussed the model used to analyze the service exchanges among multiple stakeholders. Section four develops strategies to address some of these challenges.
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