

## Chapter 13

# Exploring Linkages between Quality, E-Health and Healthcare Education

**Christopher L. Pate**  
*St. Philip's College, USA*

**Joyce E. Turner-Ferrier**  
*St. Philip's College, USA*

### ABSTRACT

*This chapter explores the concept of e-health as it relates to healthcare delivery, healthcare quality and education. Although the concept of e-health is emerging and lacks clear definition, a body of literature in healthcare policy and organization has focused on many of themes and ideas that are relevant to the study of e-health. This chapter introduces several frameworks and concepts that are essential for an inquiry into the relationships between e-health and quality-related outcomes in healthcare and educational settings. This chapter addresses these relationships by discussing and defining the concept of e-health, discussing central linkages between e-health and quality-related healthcare outcomes, and highlighting key themes between health education, technology and quality.*

### INTRODUCTION

Changes in healthcare delivery have become so widespread and frequent that the idea of change in healthcare has become one of anticipation and expectation rather than interruption and surprise. Consumers, providers, organizations and societies have seen changes in the definitions of vital concepts related to healthcare delivery, like health and quality, which have in turn altered the methods by which healthcare organizations

and communities align and create the structures and processes necessary to provide healthcare services to supported populations. In addition to changing definitions, the healthcare sector remains influenced by changing expectations and interests of the numerous and diverse set of stakeholders found within the healthcare sector.

The concept of e-health is one of the more recent concepts to emerge in the healthcare sector and, like many other aspects of healthcare delivery, is a concept that clearly embodies a combination of ideas and theoretical approaches. Eysenbach defines the concept as:

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*...an emerging field in the intersection of medical informatics, public health and business, referring to health services and information delivered or enhanced through the Internet and related technologies. In a broader sense, the term characterizes not only a technical development, but also a state-of-mind, a way of thinking, an attitude, and a commitment for networked, global thinking, to improve health care locally, regionally, and worldwide by using information and communication technology (2001).*

Harrison and Lee (2006) provide a similar definition with a leaning towards the structural aspects of e-health applications. Harrison and Lee refer to e-health as:

*...an all encompassing term for the combined use of electronic information and communication technology in the health sector...this term refers to the that technology used for clinical, education, research, and administrative purposes, both at the local site and across wide geographic regions (p. 283).*

Although the literature provides no definitional consensus on the concept, a great deal can be learned about the implications of e-health through an existing literature that has focused on innovations, information technology, quality, and healthcare education. These subjects can guide our understanding of the growth and importance of this concept as it relates to the larger goals of healthcare, particularly the goal of improving and understanding healthcare quality. In considering e-health a recent innovation, we also turn to theoretical frameworks related to systems, quality and diffusion of innovations. The use of specific theoretical frameworks provide meaningful ways to understand the complexity and potential of e-health as a significant tool in improving healthcare and as a powerful enabler to improving education in healthcare, which ultimately will have an impact on healthcare outcomes.

After completing this chapter, readers should be to:

1. Provide a definition of the concept of e-health and the relationship between e-health and the larger healthcare system
2. Evaluate potential relationships between e-health, healthcare, education, and quality.
3. Discuss the concept of quality and how the concept relates to e-health initiatives
4. Describe the linkages between e-health, technology and healthcare education

## **BACKGROUND**

The fact remains that the healthcare industry remains in a state of flux. Communities, nations, political leaders, system beneficiaries, healthcare providers and other important stakeholders continue to influence and alter the way that healthcare operates. Not only do these stakeholders influence how healthcare systems are planned, but they also influence the way that healthcare is and will be delivered. Perhaps most importantly, these stakeholders help establish the larger strategic goals, which in turn drive the development of objectives as well as the means by which these goals are achieved. Innovations, like e-health, can provide the procedural and technological means to further health system goals.

Innovations in healthcare are naturally designed to improve one or more aspects of healthcare delivery.

The characteristics frequently discussed include the costs of care, access to healthcare services, and quality of care. Certainly, the variety of normative positions held by leaders and other stakeholders of healthcare systems may also drive innovations. For example, viewing equity as the foremost priority of healthcare systems may call for innovations that identify and potentially alleviate health disparities that are strictly the result of way that healthcare is delivered. Holding ef-

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