

## Chapter 57

# Online Learning and Instruction in Health: Addressing the Demands for Education and Training through Computer-Based Technologies

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### ABSTRACT

*Online learning and instruction are important components of adult education in the field of health. This chapter describes how computer-based technologies are being applied in the training and continuing education of health professionals and in health promotion. Curriculums previously thought to be inappropriate for web-based delivery are now being offered online. Innovations in online learning and instruction have improved delivery of web-based education and have provided educational opportunities for many that were “unreachable” by traditional classrooms. An example of how a solely face-to-face course was revised and delivered in three formats including face-to-face, blended and completely online is provided, as well as examples of best practices and future trends for online learning and instruction.*

### INTRODUCTION

How to improve the health of Americans may be the most salient and controversial problem in today's society. With rising health care costs, an aging population and the need to treat increasing numbers of people with chronic health conditions, the United States health care system is in desper-

ate need of reform. Whatever route to health care reform is taken, adult health education will play a significant role in meeting increased demands for the training and continuing education of health professionals and in health promotion. This chapter will explore how online learning and instruction is used to educate health professionals and how online delivery is applied in health promotion.

Distance education, e-learning, computer mediated, web-based, and online instruction are

DOI: 10.4018/978-1-61692-906-0.ch057

terms used to describe education delivered through computer-based technologies. Whatever term is utilized, it is clear that computer-based technologies are essential components of the preparation and continuing education of health professionals and in the promotion of health among corporations, communities, organizations, and individuals. For many health professions, formal education, as well as continuing education, includes some type of web-based learning, with some programs completely online. In this chapter, health promotion refers to all education and programming relating to health that is intended to promote positive health outcomes. The American Journal of Health Promotion (2009) recently revised their definition of health promotion to the following:

*Health Promotion is the art and science of helping people discover the synergies between their core passions and optimal health, enhancing their motivation to strive for optimal health, and supporting them in changing their lifestyle to move toward a state of optimal health. Optimal health is a dynamic balance of physical, emotional, social, spiritual, and intellectual health. Lifestyle change can be facilitated through a combination of learning experiences that enhance awareness, increase motivation, and build skills and, most important, through the creation of opportunities that open access to environments that make positive health practices the easiest choice.*

There are a variety of health promotion interventions and programs conducted online. Health care professionals and health educators are using online instruction to teach patients. Higher education courses that promote lifelong wellness, including physical activity-based courses, are also using online learning formats.

Health promotion initiatives that utilize technology have been described as e-health and telemedicine. Like the definition of health, the field has had a difficult time establishing a universal definition of e-health. In a systematic review of

the term e-health, Oh et al (2005) stated that all definitions reviewed included disparate concepts, including health, technology, and commerce with varying degrees of emphasis on each. Another term used to describe technology-based health promotion is telemedicine. The United State Distance Learning Association (2009) defines telemedicine as “The application of information technology (and infrastructure) in the healthcare industry in support of patient care and patient related activities. Usually used to let a physician in a remote location assist with a medical procedure or diagnosis or consultation” (Distance learning: Key terms you might want to know, para. 4).

Another emerging term, which has no accepted definition in the area of technology and health promotion, is Health 2.0. Health 2.0 refers to self-directed learning about health that is completed online through accessing websites, podcasts, and social networking like chat rooms and discussion boards. In our view, e-health and telemedicine represent health promotion initiatives that are educational interactions and activities driven by health professionals and instructors, while Health 2.0 is health-related education directed by the individual. It is clear that in this evolving field of technology and health, terms and definitions, as well as uses and innovations, will continue to evolve.

The purpose of this chapter is to understand how computer-based technologies are meeting the demands for education and training in health through online learning and instruction. The specific objectives are to: 1) understand the benefits, quality indicators, and use of online learning and instruction in health, 2) discuss the effectiveness of online learning and instruction in health, 3) provide strategies for blended and online instruction in health in higher education, 4) provide recommendations for the facilitation of blended and online learning and instruction, and 5) discuss future trends for online learning and instruction in health.

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