

Chapter XIII

Women's Health and Health Informatics: Perinatal Care Health Education

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ABSTRACT

Information and communication technologies include computers, telecommunication, digital networks, and television. Using informatics in healthcare systems can improve the quality of healthcare through the effective use of information systems. Nursing Informatics (NI) is a component of health informatics, and it has become a widely used tool in the nursing profession. Information technology has begun to be employed in the field of women's health. The perinatal period is one of the topics related to women's health, as well as to that of their newborn infants. Information technology in patients' health education process empowered patients, and enhanced their self-management skills. However, applications of health informatics in perinatal care for women and their newborn infants have not been reported widely in research studies and projects. Thus, there is a gap of knowledge related to this topic on the Internet.

INTRODUCTION

Everywhere in the world the Internet has entered homes, schools, universities, work places, and hospitals, becoming as wide spread as television. Furthermore, the World Wide Web is visited by millions of people daily for various purposes.

Many people use the Internet to search for health information or to provide health education from the health care professionals and organizations.

Using informatics in the health care systems can improve the quality of health care through the effective use of information systems; the facilitation of knowledge and information management

by on-line and on-site databases and electronic medical records (EMR); the enhancement of decision making by using computerized decision support systems; and improvements to the communication between patients and providers by sharing access to electronic medical records and using e-mails to further exchange information.

In this chapter, an overview of health informatics and nursing informatics will be presented. Major main concepts of health informatics will be discussed. Then women's health and perinatal care through health informatics will be focused on. After that the relationship between health education and health informatics will be discussed. Finally the major barriers against using health informatics applications in perinatal care area will be highlighted.

HEALTH INFORMATICS/ NURSING INFORMATICS: GENERAL VIEW

Information and communication technologies-computers, telecommunication, digital networks, and television etc.- enhanced the dissemination of information and knowledge through multiple disciplines, such as education, medicine, business, research, and entertainment in many countries of the world (Arunachalam, 2002). E-Health technology is a term used to describe different activities that include any electronic exchange of health-related data, voice, or video. It is defined as an emerging field in the intersection of medical informatics, public health and business. It refers to health services and information delivered or enhanced through the Internet and related technologies (Cashen et al, 2004). However, health informatics (health information system) is defined as the systematic application of information management and technology (IM &T) to the planning and delivery of high-quality and cost-effective health care (Norris, 2002). It is also the application of information processing involving both hardware and software that deals

with the storage, retrieval, sharing, and use of health care information, data, and knowledge for communication and decision-making (Jenkins et al, 2006). The application of computer information systems in the health sector means: a goal system of data gathering, the development of professional terminology, prompter documentation, a way of measuring the work done, support for statistical and analytical work, a facility for financial evaluation, support evidence based studies research, support of the education process in the overall healthcare of patients (Habjanic et al, 1999).

Nurses are the members of the health care team who are most responsible for the education of patients, a role they fulfil in addition to their task of direct patient care in order to improve the quality of patient care.

An informatics nurse can play a key role in the area of patient education and consultation (Meadows, 2002).

Nursing Informatics (NI) is a component of health informatics, and it has become a part of the nursing professional activities. Nursing Informatics has been defined as a combination between three different sciences: computer science, information science and nursing science to manage and communicate data, information and knowledge in nursing practice (American Nurses Association (ANA), 2001; cited in Meadows, 2002). The integration between the three sciences produced a new specialty in nursing that was recognized in 1992 by the American Nurses' Association (ANA) (Meadows 2002). Using computer science to manage the information and knowledge in nursing means that nurses are involved in the application of computer information systems. Therefore nurses are required to use computers daily in the health care environment to access the health information and to utilize it appropriately and efficiently to deliver the health care services. By using clinical information systems, the nurses understand the informational and cognitive foundations of their profession. Additionally, the nurses will have the ability to synthesise nursing knowledge and

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