Chapter 20
e-Health Technologies in Home Care Nursing:
Recent Survey Results and Subsequent Ethical Issues

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ABSTRACT

The innovative impact of advancing e-Health technologies is more frequently being discussed in nursing science. Nurses play an important role in collecting data and giving support to other users, especially in home care. Since issues of acceptance play a major role, the following article, which presents findings based on a focus group consisting of the elderly, caretaking relatives and professional nurses, is discussed from an ethical point of view in the context of international debate. It is interesting to note, that to some extent there is substantial ambivalence in the willingness to integrate such technologies into daily care. A need for technical assistance is clearly recognizable, however, limits as well. The authors' findings indicate that a fundamental discussion on the relevance of e-Health methods in professional nursing needs to be held. It should address the ethical questions of often conflicting interests and rights (protection of identity, privacy and safety) in situations of high vulnerability.

INTRODUCTION

The implementation of innovative information and communication technology (ICT) in healthcare provision has been going on for the past 40 years. Today, this development has led to the term "e-Health" being found on every level of the institution of healthcare. "E-Health is the transfer of health resources and health care by electronic means. It encompasses three main areas: The delivery of health information, for health professionals and health consumers, through the Internet and telecommunications. Using the power of IT and e-commerce to improve public health services,

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e.g. through the education and training of health workers. The use of e-commerce and e-business practices in health systems management" (WHO, 2009). The development of e-Health applications in daily health care illustrates a central goal of international health politics, in this way organizing healthcare more efficiently and thereby guaranteeing a high level of quality (EU, 2007). In this context, the concept of "e-Care" focuses primarily on the integration of ICT in the area of (professional) nursing care and treatment. The increasing attraction of these methods, even in the area of professional care, is justified on several levels: on the one hand from the possibility of offering care services through telematic support to regions with a low concentration of medical care provision over large distance. On the other hand, it can be seen as a reaction to the well-established social transformation regarding demographical and epidemiological development in western industrialized countries. This is accompanied by an increasing demand for professional support and at the same time an expected shortage of professional nurses. The standpoint of health politics is to increasingly integrate professional nursing into the system of healthcare provision through the systematic exchange of data. In political as well as professional discourse, cross-social advantages are observed by the preparation of an institutionally-comprehensive electronic flow of information. In this way, health statistics and nursing data from individual cases can be converted into relevant data for operative management on an administrative meso-level. In turn, these data present the basis for analysis and control of the healthcare system on a scientific and political macro-level. The recipients of home care profit from this in various ways: care services in the form of continuous monitoring of vital statistics could be utilised without having to engage a nursing service. Moreover, ongoing care service for consultation or instruction is available electronically over great distances at any time if needed. This requires that the data are collected directly at the point of care. In addition to the numerous e-Health applications of E-Learning for healthcare education and E-Government for managing performance figures and documentation, the modern methods of Telecare and E-Surveillance are providing for an increasing diversity of computer-supported services in healthcare. Accordingly, the American Nurses Association has recognized telenursing as a specific form of care practice (ANA, 1999). In light of this, the following article addresses questions of needs and acceptance of care-relevant e-Health applications which make data collection in the home environment of the elderly possible. The basis is the findings of a qualitative, explorative study carried out in the framework of an interdisciplinary research network for the development of AAL technologies in the home environment of the elderly. Data was acquired through focus group interviews with elderly people, care-taking relatives and professional nurses. The rounds of discussion aimed at questions of acceptance and needs in connection with the development of a sensor-based activity determination in the homes of the elderly. In this context, the sensitive questions of balancing the need to protect identity and privacy with the safety of life and limb in situations of high vulnerability were posed. In a further step, the survey results are integrated into the current state of discussion by international acceptance research in order to finally debate the findings in the perspectives of nursing science and ethics.

BACKGROUND

For many years, computer supported information and communication technologies have been successfully integrated into professional nursing, for example in carrying out electronic care planning and documentation. Taking international development into consideration, increasingly innovative types of computer supported care are being used, especially in outpatient care. In the context of home care, the conventional,