

Chapter 12

Telenursing: Nursing Informatics in Practice

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ABSTRACT

Evidence is emerging that the use of the information and communication technologies (ICT) in health-care settings facilitates better quality care. In general terms telenursing is the use of technology for delivering nursing care at distance. Evidence suggests that telenursing applications can be effective in both healthcare and non-institutional settings. Nurses' readiness to utilize telenursing applications is an important prerequisite for the wider use of this tool. This chapter examines the best evidence for telenursing practices and reviews the studies relating to the nurses knowledge, perceptions and expectations on using technology in their routine practice.

INTRODUCTION

Like other human activities, healthcare has been impacted by new technologies. Nurses are the largest group of healthcare professionals and the increasing role of technology in nursing care is apparent. The role of the modern clinical nurse is closely linked with information and communication technologies (ICT) (Fetter, 2009). In some cases, technology is already part of daily nursing practice. This can only increase in the future with the expectation that nurses are to use

ICT in their care processes. With the expanding role of nurses to play in clinical care (particularly in chronic diseases and public health matters), telehealth is expected to play a significant part (Clark, Freyberg, Heath, Savard, McDonald & Strain, 2008). Accordingly, the adoption of ICT in health sector has given priority in various industrialized countries.

Evidence is emerging that the use of ICT in healthcare settings facilitates better quality care. Studies have shown that the ICT offers opportunity for more efficient care and cost savings (Meyer, Raman, Hemmen, Obler, Zivin, Rao, Thomas, & Lyden, 2008; Graves, Barnett, Halton, Veerman,

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Winkler, Owen, Reeves, Marshall, & Eakin, 2009). Professional nursing groups including the American Academy of Nursing Commission on Workforce and American Nurses Association have called for exploring the potential of technology for safe work place and improved quality of care (McClure & Bolton, 2003; American Nursing Association, 1999).

The focus of this chapter is to identify how prepared nurses are to use information and communication technologies in their routine practice, as reflected in the questions we posed- Are nurses prepared to engagement with new technologies? The first part of this chapter addresses some of the workforce issues driving the need to introduce ICT into nursing practice. The second section summarizes evidence as to the efficacy of telenursing. In the final part we will attempt to answer the question whether nurses are ready to use technology in their practice and the challenges to the adoption of telenursing.

TELENURSING AND WORKFORCE ISSUES

The role of nurses in health care settings is rapidly evolving. The diversity of nursing responsibility is reflected in the many terms attached to the profession i.e. district nurses, health visitors, school nurses, GP practice nurses, nurse consultants, clinical nurse specialists and home health care nurses just name few. Nurses play a critical role in every sphere of healthcare. They treat patients, educate patients and the public about various medical conditions, and provide advice and emotional support to patient's family members. Nurses are responsible for recording patients' medical histories and symptoms, help perform diagnostic tests and analyse results, operate medical machinery, administer treatment and medications, and help with patient follow-up and rehabilitation. Teaching patients and their families how to manage their illness or injury, explaining post-treatment home

care needs, diet, nutrition, and exercise programs and self-administration of medication and physical therapy are also some important duties of nurses.

Among others, providing care to people at home is also one of the traditional roles of nurses. Research has shown that there is a clear relationship between the number of nurses and the quality of care. Studies have also revealed the co-relation between nursing care and the speed of healing process, length of hospitalisation and stress level of patients and families (Weinert, Cudney & Wade, 2008; Chaudhry, Phillips, Stewart, Reigel, Matterna, Jerant & Krumholz, 2007).

While the importance of nurse's role has been widely reported, alarming signs are emerging about the implications of shortage of nurses. According to recent statistics, all Organisation of Economic Cooperation and Development (OECD) countries have a growing shortage of nurses. A US Federal Government study predicts that hospital nursing vacancies will reach 800,000, or 29 percent, by 2020 (Health Resources and Services Administration). Australia projects a shortage of 40,000 nurses by 2010 (Global Shortage of Registered Nurses, 2005). The shortage of nurses in developing countries is daunting, with the lack of resources to produce qualified nurses aggravated by the rapid exodus of nursing staff (Kingma, 2004). According to The World Health Organisation (WHO) statistics, Sub Saharan Africa is short of 60,000 nurses to meet Millennium Development Goals (The World Health Report, 2005).

In addition to the shortage, mal-distribution of nurses is a serious problem. Disproportional distribution of nurses within and among countries is a problem. Mal-distribution among countries is significant. For example, while the United States have 773 nurses per 100,000 population, the number of nurses in Uganda for the same size population is 6 (Global Shortage of Registered Nurses, 2005). Disparity of nurses in urban and rural communities is a significant problem in both developing and developed countries. The lack of nurses is also related the rapid ageing of nursing

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