

Chapter VII

Nurses and Telehealth: Current Practice and Future Trends

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ABSTRACT

Nurses play a pivotal role in the provision of healthcare. Home telehealth, the use of information and communication technologies to deliver and support healthcare directly to the home, is emerging as an important application for nurses. This chapter provides an overview of home telehealth and how it may be applied to the practical challenges nurses face everyday. We provide a summary of the evidence available to support its use in specific areas and a guide for those thinking of implementing telehealth in their own practice. The future of home telehealth lies in carefully considered and designed research, ongoing education and training and a multidisciplinary approach. This chapter aims to stimulate the consideration of home telehealth as an application that may improve nursing care and ultimately patient outcomes.

INTRODUCTION

The increasing incidence of chronic diseases (such as cancer, coronary heart disease, diabetes and dementia) and the growing aged population have added to the pressure on health care systems worldwide. The World Health Organization (WHO) predicts that chronic disease will be the leading cause of disability by 2020 and will be the most expensive problem facing health care systems (Belfield & Colin-Thome, 2004). For example, type II diabetes mellitus is becoming the most common chronic disease in the United States, affecting 7% of the adult population. Congestive heart failure affects about 5 million Americans each year and accounts for around 20% of hospitalised patients over 65 years (ATA, 2007). Studies show that caring for people with chronic diseases consumes approximately 78% of all health care spending in the United States – more than \$1 trillion annually (ITAA e-Health Committee, 2004). The Centres for Medicare and Medicare Services estimated that total national health expenditure for home care was \$40 billion in 2003, an increase of almost ten percent over the previous year. An additional \$111 billion was spent on nursing home care (National Health Expenditures). With the ageing of the population, this rate of growth will increase.

Undoubtedly, these tendencies have put additional pressure on the already overburdened nursing community around the world. Nurses form the largest professional health care group and their role as a care provider has changed significantly since the last century. The lack of nursing professionals is a global phenomenon (Kingma, 2006). Producing more nurses is one answer that requires long term investment and policy implementation. Finding other complementary mechanisms to address these urgent needs is also required.

THE ROLE OF NURSES IN HEALTH CARE

Nurses play an important role in almost every sphere of health care from primary to tertiary care. Nurses have rapidly evolving roles and responsibilities. Terms such as district nurse, health visitor, school nurse, GP practice nurse, nurse consultant, clinical nurse specialist and nurse practitioner reflect just some of the diversity of nursing practice.

Among other roles, nurses are also responsible for delivering care to patients at home, especially elderly patients. There is a continuing demand for such a role. However, statistics show that the lack of nursing professionals and the growing aged population is a prime concern for health systems around the world (Flesner, 2004). Despite these challenges nurses have shown remarkable flexibility and adaptability. The nursing profession has been an early group to embrace home telehealth which offers an alternative to providing face-to-face care.

WHAT IS HOME TELEHEALTH?

Home telehealth is the use of information and communication technologies to deliver and support health care in a non-institutional setting – that is, at home or in an assisted-living facility (Wootton, Kvedar & Dimmick, 2006). Home telehealth applications may include real time techniques, for example videoconferencing (Figure 1) as well as store and forward techniques, for example email or web-based applications (Figure 2).

In addition, various devices such as alarms, sensors and monitoring equipment are being used in home telehealth applications (Darkins, et al, 1996). Telehealth gives an opportunity to contact

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