

# Evaluation of Telehealth use in Home Care: A Proposed Study

Ting-Ting Lee

Department of Nursing, National Taipei College of Nursing, Taipei, Taiwan

## Abstract and Objective

*As chronic diseases have become prevalent and care resources are still limited, telehealth has been proposed as an alternative in addition to traditional treatments in the aging population. Although the benefits of technology use have been studied in recent years, the evaluation of telehealth has not been explored extensively. This study proposed a framework to evaluate the impact of telehealth use from different perspectives. Clients and care professionals from a long term care facility where telehealth has been implemented will be invited for this study. Individual interviews will be conducted to explore the impact of this technology use. Data of emergency visits and medical appointments will be obtained prior to and after the technology use to compare the differences. It is hoped that the technology use could benefit the client, their families, the care provider and the organization.*

### Keywords:

Telehealth, Technology, Long term care, Evaluation.

## Introduction

As technology has been developed to improve our daily life, elderly populations and chronic diseases have increased as well. Healthcare services are facing the difficulties of providing individualized and home-based care under the constraints of limited care resources. However, the impact of a technology use evaluation framework has seldom been proposed and the comparison of interdisciplinary perspectives has been researched rarely either. Thus, this study proposed the following research questions to explore the impact of telehealth use from patients, families, nurses and administrators' perspectives in technical, economical, social and ethical considerations.

1. What is the impact of telehealth use on patients' daily life?
2. What is the impact of technology use for families' interaction with patients?
3. What is the impact of telehealth use on nurses' practice pattern?
4. What is the impact of telehealth use on organizations' cost-effectiveness?

## Methods

### Setting and subjects

This descriptive qualitative and quantitative study will be conducted in an area where a community hospital provides telehealth support to its client for virtual home visits. A purposive sampling will be applied to those who are willing to use the technology for more than 3 months to express their perception of the telehealth use. The telehealth applications include the vital sign parameter measurement and audio-video teleconsultation implemented in the client's home. The contrast group will be those who refuse to initiate use or do not want to continue to use the technology.

### Data collection process

The study will be approved both by the academic and the clinical institutions. Data collection will include the emergency visits and medical appointments 3 months prior and after the telehealth technology implementation. Individual interviews will be conducted for patients, families, nurses and administrators to explore the impact of the technology use. The interview guide will include usability, economics, confidentiality, privacy, legal and ethical concerns. It is estimated that data collection will be continued for 3 months.

### Data analysis

Qualitative content analysis will be applied for data analysis to explore the emerged themes. Inferential statistics such as the t-test will be used to test the differences between pre- and post emergency visits and medical appointments.

## Results

It is expected that the pilot study will be completed by September 2010 and results will be presented.

## Study Limitations

Users who agree to use telehealth and those who do not may have different attitudes toward technology use. This could impose different perspectives from interview content and should be taken into considerations for result interpretations.