

# OPTIMIZING FAMILY HEALTH NURSE FOR OVERCOME OLDER AGE DISEASE BY USING HOMECARE24 SMART TECHNOLOGY APPLICATION

<sup>1</sup>NI LUH DWI INDRAYANI, <sup>2</sup>THERESIA LUMBAN GAOL, <sup>3</sup>MONICA LUMBAN GAOL

<sup>1</sup>Nursing Coordinator Homecare24, PT. Homecarindo Global Medika, 12810, Indonesia

<sup>2</sup>Chief Executive Officer, PT. Homecarindo Global Medika, 12810, Indonesia

<sup>3</sup>President Director, PT. Homecarindo Global Medika, 12810, Indonesia

E-mail: <sup>1</sup>indrayani@homecare24.id, <sup>2</sup>theresia@homecare24.id, <sup>3</sup>moniclumbangaol@gmail.com

---

## Abstract –

**Background and objectives:** Phenomenon of elderly's disorder in urban area is neglected and tend to be masked by other physically complain (Miller, 2012), the impact is increased mortality. Nevertheless, number of caregiver either from family or professional nurse based on survey estimate are about 44 million (one in 5 adults). This opportunity guides to the good solution which involving family health nurses to be part of solving the issues. Methods: Descriptive survey research method is used during the observation within interviews to family as user and nurse as service provider. Results: 137 clients in family are treated by Homecare24, most of them are suffered physical health problems. The majority of patients is elderly with the need for recoveries, physical and psychological assistance. The number of nurse particularly family health nurses. Interpretation and conclusion: Family is allowed to pick out nurse according to their need by using the mobile application. This program will be developed to enhance the role of family and synergy with elements that exist in the community and it is expected in order to overcome the occurrence of elderly disorder by involving family and nurses.

---

**Keywords** - Homecare24, Smart Technology Application, Family Health Nurse

---

## I. INTRODUCTION

Elderly will increase year by year. In several countries, the fastest-growing age group consists of people in their eighties and older. Recently, 19 percent of the world's population estimated to increase 233 percent between 2008 and 2040. The most rapid increase will be in developing countries (Papalia & Feldman, 2012).

Some physical changes typically associated with aging are obvious to casual observer, though they affect some older people more than others. Elderly have variety disease in their age due to physical changes. Another typical of change is a decrease in brain function, slowed response as the result. Lack of functioning in vision and hearing, older eyes need more light to see, are more sensitive to glare and may have trouble locating and reading signs (Miller, 2012; Papalia & Feldman, 2012). This is causing a majority number of elderly fall for risk. Role of health care is important to reduced number of incident of unproductivity elderly during their age. It enhances older age ability to catch their self-actualization.

Type of nurse that appropriate to handle this case is family health nurse. Family health nurse is Indonesia actually have primary health care which nurse used to be one health care that observe family door to door. (Ministry of Health RI, 2017)

Every year nurses is born in Indonesia. However, still there is not enough health services that can accommodate all the nurse. Hence, still there are lots

of nurses are not getting the chance to take care for patients in hospital.

In this era, technology became familiar in the worldwide. Result survey from The Statistic Portal (2017) said total numbers of smartphone user worldwide from 2014 to 2020 is forecast to reach 2.1 billion. It means that lots of people aware about future technology. Majority people comes from urban community. Urban areas people are not much gracious to their guests because of their busy life. The areas have got fast rate of change because of education and modern technology.

The availability of family health nurse and urban community in using smart technology leads to better quality of healthcare services in family. It is because family itself could take a trust to nurse and efficiently use their mobile phone to pick out appropriate nurse. Actually, some countries have long developed nursing care in homecare services, some are using the website and some are still conventional.

To deal with problems of the elderly and to maintain the productivity of the elderly. It needs a qualified family health nurse role and technology utilization to provide maximum service to the community. Homecare24 smart technology application is a platform to tackle towards this phenomenon.

## II. METHODS

Descriptive survey research method is used during the observation within interviews to family as user

and nurse as service provider on this study. Focus of the study is emphasizes subjectivity and the meaning of experiences to individuals (Allender & Spradley, 2004). One effort to do is to optimize mobile health application. Based on this problem, the authors propose a concept which is optimizing family health nurses program through mobile application.

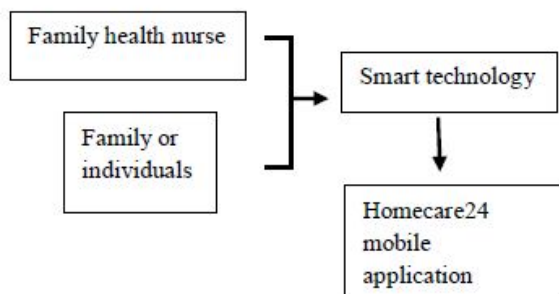


Figure 2. Homecare24 mobile application Concept

Household sample survey (Notoatmodjo, 2010) and use randomized research design. Medical team homecare24 look after for client over Jakarta, Bogor, Depok, Tangerang, and Bekasi City. These location is choose because of the availability nurse among the place, most of the residence is urban community. This is the systematic selection of research subjects so that each one has an equal probability of selection. Family members will use the application to select the nurse and the type of treatment required.

After a month, nurses have responsibility to report their treatment. Nurses should hand in the client's health report to family members and medical team in homecare24. Nurses create a nursing intervention and outcome (Bulecheck, Dotcherman, Buthcer, & Wagner, 2013). Medical team homecare24 have an obligation to give feedback and provide training and development to improve nursing skill and deliver award for nursing achievement.

### III. RESULT

According to data, 137 individuals in family use homecare24 for total use for services approximately 350 transaction during 6 months. Majority user comes from Indonesia, Malaysia, and Singapore. Several diagnoses that treated by nurse (medical personal homecare24) are diabetic, cancer, tumor, fracture, Alzheimer, mental disorder, stroke, lung infection, pregnancy, Parkinson, gastritis, chirrrosis liver, colostomy, cardiovascular disease, meningitis, chronic kidney disease, hypertension, spine injury, kidney failure, and arthritis. With the need of services such as wound care, medication administered, personal hygiene, nutrition management, psychological management, and medical surgical nursing. 127 of 137 client did not complain about medical personal services. It must be several factors. Based on interview family members feel comfortable with the medical personal through

some reasons such as medical personal delivered intervention as client's need, provide consultation for client's health, advocate when client off went to doctor, and family member given a health report based on homecare24 procedure.

Enrichment of both income and knowledge particularly in nursing family setting. It is what nurse's interviewed result. Half of them come from rural area, therefore nurse perceives the income that they earned. In order to plan the nurse's quality improvement, planning on career paths and training and development is well considered.

### IV. DISCUSSION AND CONCLUSSION

#### Older age

Aging is a biological reality process which has its own dynamic. According to Craig (1986) in Papalia, Olds, & Feldman (2007) elderly based on chronological age grouped into elderly by category age 60-69 years old (young age), age 70-79 years (middle old), age 80-89 years (old old) and 90 years old or older (very old). Characteristics of elderly young old is the period of the elderly begin to adjust to the new inner role structure solve the problem of income and lose friends or relatives who loved. Elderly middle age category has the characteristic of condition decline health and loss of a spouse that will affect the relationship intimacy. Elderly old old category has a distinctive characteristic, where the elderly experience decreased ability to adapt and interact with the environment social. And the elderly category of very old has the characteristics that depart back with competitive things and more enjoying the enjoyment of his old age. Due to their decreased of physical function, they need assistance in fulfilling their physiological basic to support their physical functioning. Thing that should be given to elderly is assistance in activity and exercise management, elimination management, immobility management, nutrition support, physical comfort promotion and self-care facilitation for those who need total care handling (Bulecheck, Dotcherman, Butcher, & Wagner, 2013; Stanhope & Lancaster, 2004; Meiner, 2006).

#### Family health nurse

They have four major types of intervention. Firstly, primary prevention is a level they assess the possible presence of harmful stressors or threats to health and work pro-actively to prevent these. It may help the family build up their resistance resources. Nurse could provide health education and support, assist them to mobilize other resources, monitor the integrity of the system proactively by identifying potentially harmful stressors. Secondly, level of prevention is in involving screening and vaccination program. Nurse will detect the onset of health problems at an early stage. Thirdly, nurse involves in

rehabilitation and rebuilding the family's resistance resources. Lastly, nurse intervention is provision of direct care in traditional role of nurse when the family or individual coping mechanism has been breached. In this context family and nurse works in partnership with the goals to build up family or individuals better, cure, as appropriate, rehabilitation and support (World Health Organization, 2000). According to medical personal homecare24 services, the majority of nursing intervention that has been implemented is in fourth level. Nurses support individual to build up their health involving family as close person to the individuals.

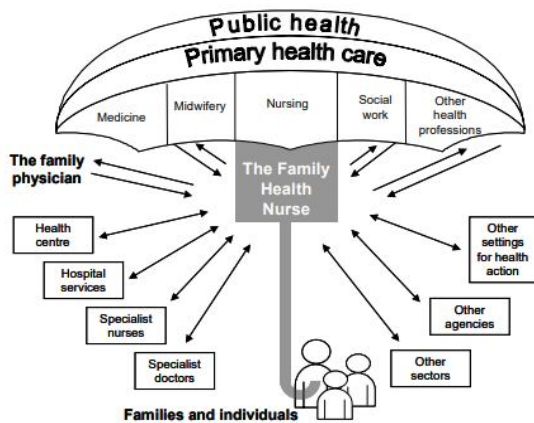


Figure 1. Family health nurse concept

(WHO, 2000)

Method to established home health care is actually use in India, London and others. Now, it is still running. This must be due to importance of family health nurse in its family. The research survey the market of home health care will grow at a progressive 8.1% CAGR during forecasting horizon from 2014 to 2020 (Transparency Research Market, 2016). Based on the experienced homecare24 established to combined family health nurse and family member who do not have enough time to look after their family member but need someone professional to take handle all of it.

Family allowed pick out nurse according to their need by using the mobile application. This program will be developed to enhance the role of family and synergy with elements that exist in the community. Skill and expertise's nurse are attached in the application, so family easily to pick out. It's also beneficiary for nurse due to flexibility time of work because they only need to work as they want.

Homecare24 team will send medical personal profile after individuals or family first ordered. Individuals or family (client) have a chance to pick out one of them. Medical personal will come to client's house along with nursing coordinator. Then, nursing coordinator will assess client's condition, risk for injury, environment as well. Both nursing coordinator and medical personal will organize monthly target for individual in family.

Medical personal homecare24 have a responsibility to write down the daily report to maintain individual's health. In the end of treatment, individual report should be given to family members to be known as well. At the end, it should be reminded that it is necessary to conduct researched investigating to optimizing home health care in urban area. It is hoped that start of establishing concept of home health care in Indonesia through mobile application spreading positive concepts in health care climate of our country. This program is expected in order to overcome the occurrence of elderly mental disorder by involving family and nurses.

## REFERENCES

- [1] Allender & Spradley .(2004). Community health nursing: Promoting and protecting the public's health. 6th Ed. Lippincott William & Wilkins
- [2] Bulechek, M. G., Dochterman, M. J., Buthcer, H. K., & Wagner, C. M. (2013). Nursing intervention classification. 6th Ed. Mosby: Elsevier
- [3] Meiner, S. E. (2006). Gerontology nursing. 3rd Ed. Missouri: Mosby, Inc.
- [4] Miller, C. A. (2012). Nursing for wellness in older adults: Theory and practice. 6th Ed. Philadelphia: Lippincott William & Wilkins.
- [5] Ministry of Health RI. (2017). "Perawat mendominasi tenaga kesehatan" Available at: <http://www.depkes.go.id/article/view/1505/perawat-mendominasi-tenaga-kesehatan.html>
- [6] Notoatmodjo, S. (2010). Metodologi penelitian kesehatan. Jakarta: Rineka Cipta
- [7] Papalia, D. E & Feldman, D. R. (2012). Experience human development. 12th Ed. New York: McGraw Hill Companies.
- [8] Stanhope, M. & Lancaster, J.A. (2004). Community nursing public health nursing. St. Louis, Missouri: Mosby
- [9] The Statistic Portal. (2017). "Number of smartphone users worldwide from 2014 to 2020 (in billions). Available at: <https://www.statista.com/statistics/330695/number-of-smartphone-users-worldwide/>
- [10] Transparency Market Research. (2016). "Global home healthcare is estimated to reach a market revenue of USD 303.609 million by 2020". Available at: <https://www.prnewswire.com>
- [11] World Health Organization. (2000). "The family nurse context, conceptual framework and curriculum" Available at: <http://www.euro.who.int>

★★★